

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

**CUY-77-13.80 (CCG6B)  
BUILDABLE UNIT 4**

**CITY OF CLEVELAND  
CUYAHOGA COUNTY**

**PROJECT DESCRIPTION**

CONSTRUCTION OF A NEW BROADWAY AVENUE STRUCTURE OVER I.R. 77 TO MEET THE MINIMUM VERTICAL CLEARANCE REQUIRED. THIS PROJECT ALSO INVOLVES FULL DEPTH PAVEMENT WORK ON BROADWAY AVENUE, GALLUP AVENUE, ROSEVILLE COURT, AND DILLE AVE.

PROJECT EARTH DISTURBED AREA: N/A ACRES  
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: N/A ACRES  
NOTICE OF INTENT EARTH DISTURBED AREA: N/A ACRES  
(SEE BU-6 FOR PROJECT EARTH DISTURBED AREA)

**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.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT DETOURS WILL BE PROVIDED AS INDICATED IN THE PLANS.

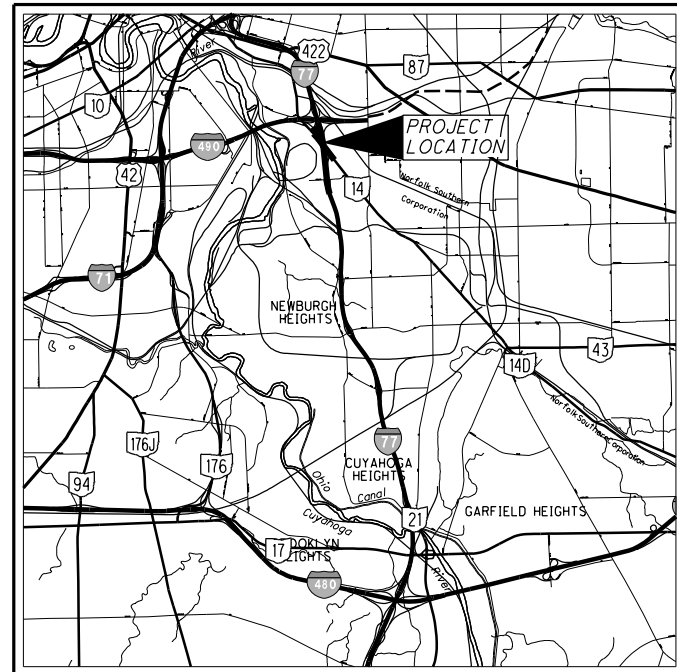
**RELEASED FOR CONSTRUCTION**  
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01/10/2018 Brian.Link

APPROVED \_\_\_\_\_  
DATE \_\_\_\_\_ DISTRICT DEPUTY DIRECTOR

APPROVED \_\_\_\_\_  
DATE \_\_\_\_\_ DIRECTOR, DEPARTMENT OF TRANSPORTATION

BU4 - LOCAL ROADS		
1	1/5/18	SEE SHEETS: 6-9, 14A, 28, 28A, 28B, 30, 34, 36-37, 39-41, 49-51, 56, 59, 67

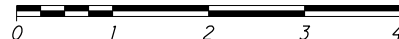
NO.	DATE	DESCRIPTION
1	6/7	ISSUE RECORD



**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:  
FOR SIGNALS

MARK J. HUNTER  
E-56376  
REGISTERED PROFESSIONAL ENGINEER

SIGNED: *Mark J. Hunter*  
DATE: 8/1/2017

ENGINEERS SEAL:  
FOR ENTIRE PLAN SET EXCEPT SIGNALS

JASON THOMAS WISE  
E-72224  
REGISTERED PROFESSIONAL ENGINEER

SIGNED: *Jason Thomas Wise*  
DATE: 1/5/2018

STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-2.1	7/17/15	MT-95.31	7/18/14	TC-12.30	10/18/13	800	7/15/16
BP-2.2	7/18/08	MT-95.32	7/18/14			832	1/17/14
BP-2.4	7/19/13	MT-98.30	7/18/14	TC-21.20	7/15/16		
BP-3.1	7/18/14						
BP-4.1	7/19/13	MT-101.60	7/19/13	TC-41.20	10/18/13		
BP-5.1	7/19/13	MT-101.90	7/17/15	TC-41.30	10/18/13		
BP-7.1	7/18/14	MT-105.10	7/19/13	TC-42.20	10/18/13		
		MT-110.10	7/19/13				
F-1.1	7/19/13			TC-52.10	10/18/13		
F-3.1	7/19/13	HL-50.11	1/16/15	TC-52.20	7/15/16		
F-3.2	7/18/14						
RM-1.1	7/18/14						
RM-4.2	4/18/14						

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



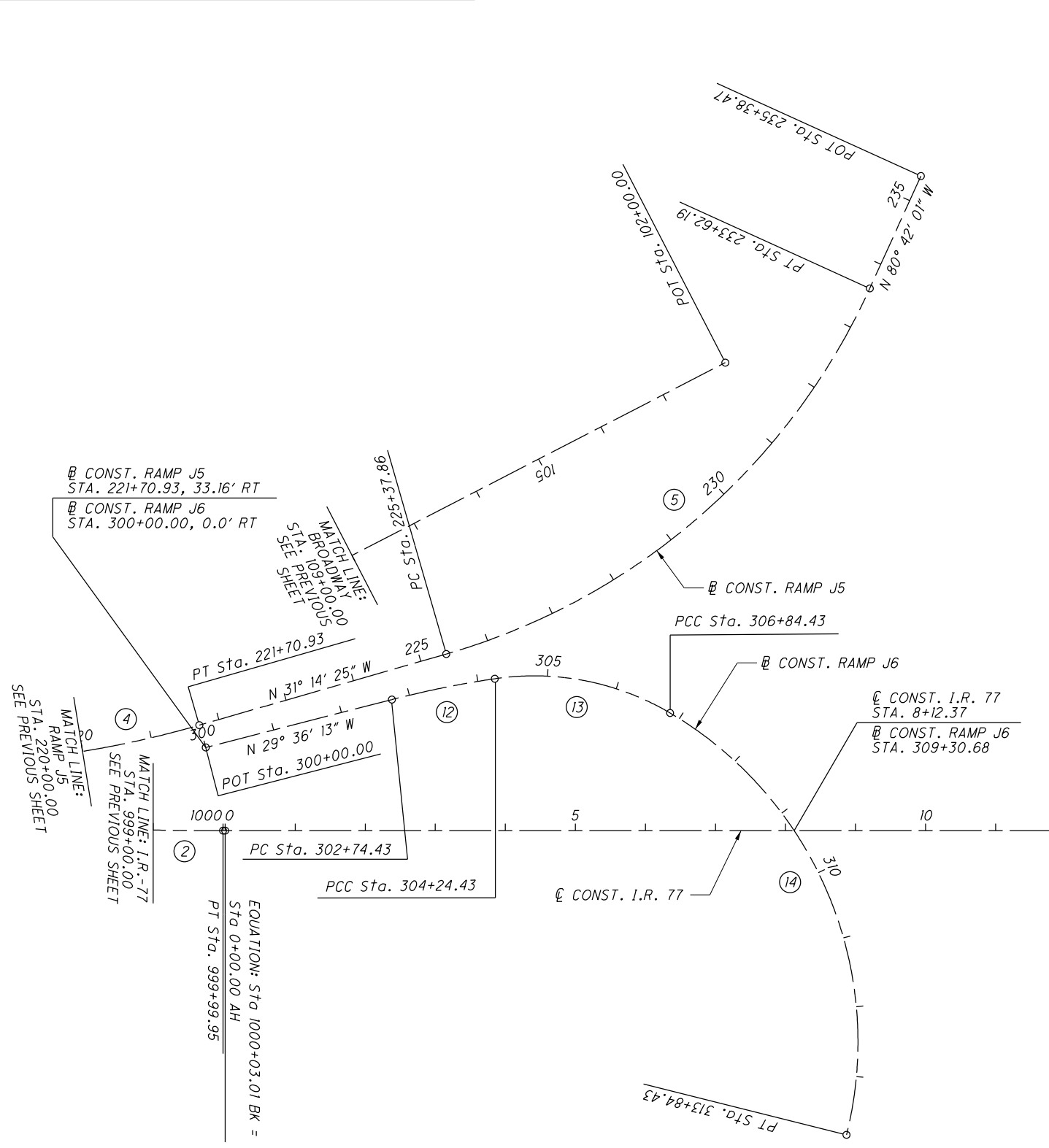




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BU4 - LOCAL ROADS		
NO.	DATE	DESCRIPTION
ISSUE RECORD		

\* RATE WAS BASED ON ORIGINAL CONSTRUCTION PLANS



<p>① I.R. 77 P.I.Sta. 969+34.19 Δ = 15° 46' 13" (RT) Dc = 2° 00' 00" R = 2,864.79' T = 396.76' L = 788.51' E = 27.34' C = 786.02' C.B. = N 13° 25' 55" W emax = 0.065*</p>	<p>② I.R. 77 P.I.Sta. 995+20.27 Δ = 9° 36' 59" (LT) Dc = 1° 00' 00" R = 5,729.58' T = 481.94' L = 961.63' E = 20.23' C = 960.50' C.B. = N 10° 21' 18" W emax = 0.027</p>	<p>③ RAMP J5 P.I.Sta. 215+65.88 T.S. 212+50.25 S.C. 214+50.25 P.C.C 216+81.44 Δ = 3° 28' 04" (LT) Dc = 1° 30' 00" R = 3,819.72' Ls = 200.00' fs = 1° 30' 00" LT = 133.34' ST = 66.67' L = 231.19' E = 1.75' C = 231.15' C.B. = N 9° 55' 35" W emax = 0.028</p>	<p>④ RAMP J5 P.I.Sta. 219+28.60 Δ = 19° 34' 48" (LT) Dc = 4° 00' 00" R = 1,432.39' T = 247.16' L = 489.50' E = 21.17' C = 487.12' C.B. = N 21° 27' 01" W emax = 0.052</p>	<p>⑤ RAMP J5 P.I.Sta. 229+77.68 Δ = 49° 27' 36" (LT) Dc = 6° 00' 00" R = 954.93' T = 439.83' L = 824.33' E = 96.42' C = 798.98' C.B. = N 55° 58' 13" W emax = 0.059</p>
<p>⑥ FRONTAGE RD. P.I.Sta. 45+94.13 Δ = 17° 56' 34" (LT) Dc = 4° 00' 00" R = 1,432.39' T = 226.13' L = 448.57' E = 17.74' C = 446.74' C.B. = N 12° 27' 04" W emax = NC</p>	<p>⑦ FRONTAGE RD. P.I.Sta. 48+79.75 Δ = 12° 35' 12" (RT) Dc = 10° 00' 00" R = 572.96' T = 63.19' L = 125.87' E = 3.47' C = 125.61' C.B. = N 15° 07' 45" W emax = 0.027</p>	<p>⑧ FRONTAGE RD. P.I.Sta. 50+00.21 Δ = 62° 21' 27" (RT) Dc = 59° 59' 44" R = 95.50' T = 57.79' L = 103.94' E = 16.12' C = 98.88' C.B. = N 22° 20' 35" E emax = NC</p>	<p>⑨ BROADWAY AVE. P.I.Sta. 111+29.98 Δ = 6° 00' 19" (RT) Dc = 10° 00' 00" R = 572.96' T = 30.05' L = 60.05' E = 0.79' C = 60.02' C.B. = S 39° 28' 51" E emax = NC</p>	<p>⑩ BROADWAY AVE. P.I.Sta. 120+15.29 Δ = 1° 35' 06" (LT) Dc = 2° 00' 00" R = 2,864.79' T = 39.63' L = 79.25' E = 0.27' C = 79.24' C.B. = S 37° 16' 15" E emax = NC</p>
<p>⑪ DILLE AVE. P.I.Sta. 63+03.32 Δ = 19° 22' 52" (LT) Dc = 23° 00' 00" R = 249.11' T = 42.54' L = 84.27' E = 3.61' C = 83.86' C.B. = N 64° 05' 42" E emax = NC</p>	<p>⑫ RAMP J6 P.I.Sta. 303+49.50 Δ = 6° 00' 00" (RT) Dc = 4° 00' 00" R = 1,432.39' T = 75.07' L = 150.00' E = 1.97' C = 149.93' C.B. = N 26° 36' 13" W emax = 0.034</p>	<p>⑬ RAMP J6 P.I.Sta. 305+59.69 Δ = 39° 00' 00" (RT) Dc = 15° 00' 00" R = 381.97' T = 135.26' L = 260.00' E = 23.24' C = 255.01' C.B. = N 4° 06' 13" W emax = 0.060</p>	<p>⑭ RAMP J6 P.I.Sta. 310+91.90 Δ = 73° 30' 00" (RT) Dc = 10° 30' 00" R = 545.67' T = 407.47' L = 700.00' E = 135.35' C = 652.98' C.B. = N 52° 08' 47" E emax = 0.054</p>	<p>⑮ MULTI-USE PATH P.I.Sta. 70+66.44 Δ = 5° 14' 08" (RT) Dc = 4° 46' 29" R = 1,200.00' T = 54.86' L = 109.65' E = 1.25' C = 109.61' C.B. = N 0° 51' 43" W emax = NC</p>
<p>⑯ MULTI-USE PATH P.I.Sta. 72+15.08 Δ = 13° 22' 55" (LT) Dc = 7° 09' 43" R = 800.00' T = 93.85' L = 186.85' E = 5.49' C = 186.42' C.B. = N 4° 56' 07" W emax = NC</p>	<p>⑰ MULTI-USE PATH P.I.Sta. 74+42.50 Δ = 15° 18' 46" (RT) Dc = 5° 43' 46" R = 1,000.00' T = 134.43' L = 267.26' E = 9.00' C = 266.46' C.B. = N 3° 58' 12" W emax = NC</p>	<p>⑱ MULTI-USE PATH P.I.Sta. 76+79.24 Δ = 11° 51' 52" (LT) Dc = 5° 43' 46" R = 1,000.00' T = 103.91' L = 207.07' E = 5.38' C = 206.70' C.B. = N 2° 14' 45" W emax = NC</p>	<p>⑲ MULTI-USE PATH P.I.Sta. 78+98.67 Δ = 8° 18' 45" (RT) Dc = 3° 34' 52" R = 1,600.00' T = 116.27' L = 232.13' E = 4.22' C = 231.92' C.B. = N 4° 01' 18" W emax = NC</p>	<p>⑳ MULTI-USE PATH P.I.Sta. 82+04.27 Δ = 3° 37' 21" (LT) Dc = 0° 57' 18" R = 6,000.00' T = 189.74' L = 379.35' E = 3.00' C = 379.29' C.B. = N 1° 40' 37" W emax = NC</p>
<p>㉑ MULTI-USE PATH P.I.Sta. 85+59.00 Δ = 23° 19' 26" (LT) Dc = 7° 09' 43" R = 800.00' T = 165.12' L = 325.66' E = 16.86' C = 323.42' C.B. = N 15° 09' 00" W emax = NC</p>	<p>㉒ MULTI-USE PATH P.I.Sta. 88+59.06 Δ = 38° 27' 22" (RT) Dc = 14° 19' 26" R = 400.00' T = 139.51' L = 268.47' E = 23.63' C = 263.46' C.B. = N 7° 35' 02" W emax = NC</p>	<p>㉓ MULTI-USE PATH P.I.Sta. 90+21.12 Δ = 16° 04' 46" (LT) Dc = 57° 17' 45" R = 100.00' T = 14.12' L = 28.06' E = 0.99' C = 27.97' C.B. = N 3° 36' 16" E emax = NC</p>	<p>㉔ MULTI-USE PATH P.I.Sta. 90+24.39 Δ = 57° 57' 25" (RT) Dc = 381° 58' 19" R = 15.00' T = 8.31' L = 15.17' E = 2.15' C = 14.53' C.B. = N 24° 32' 36" E emax = NC</p>	

**RELEASED FOR CONSTRUCTION**  
 BU04\_2017-09-08.BU4\_82388\_CCG6B.RFC Plans.  
 09/08/2017 Brian.Link



CALCULATED SWC CHECKED JTJ

**GEOMETRIC PLAN**

**CUY - 77 - 13.80**

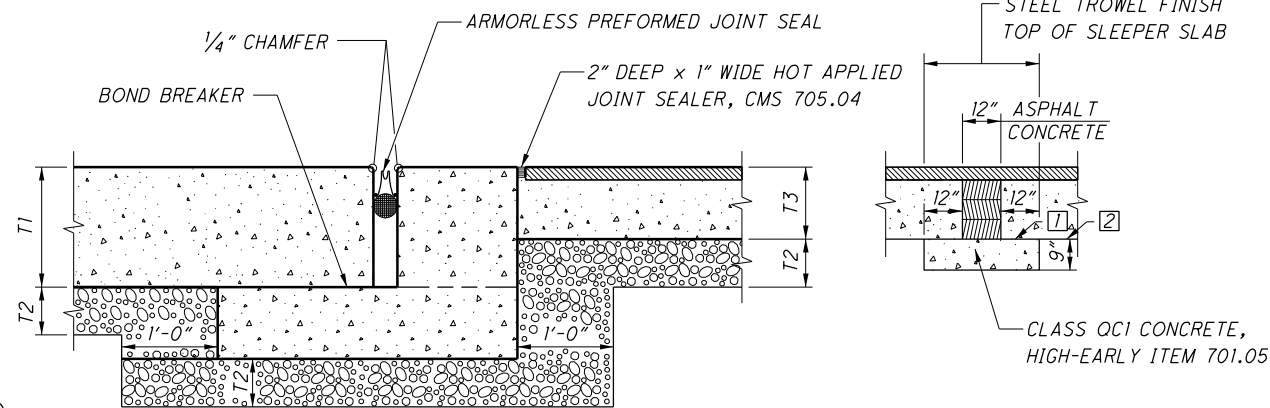
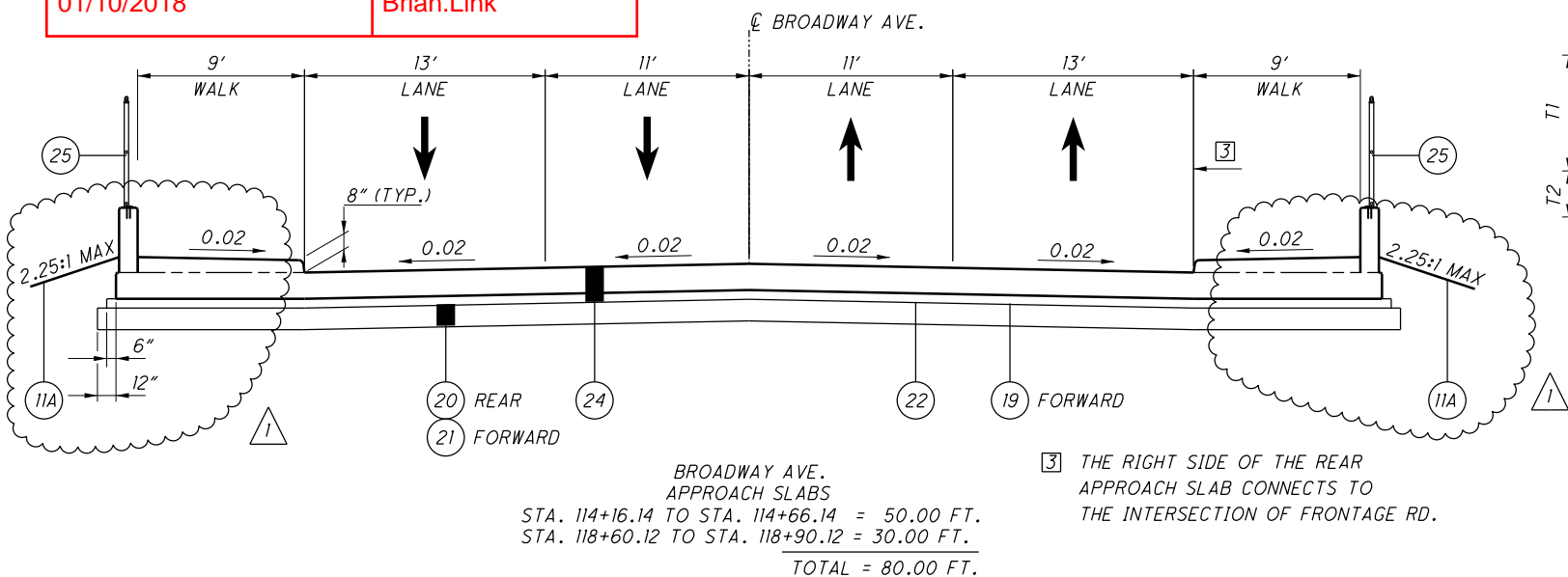


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01/10/2018

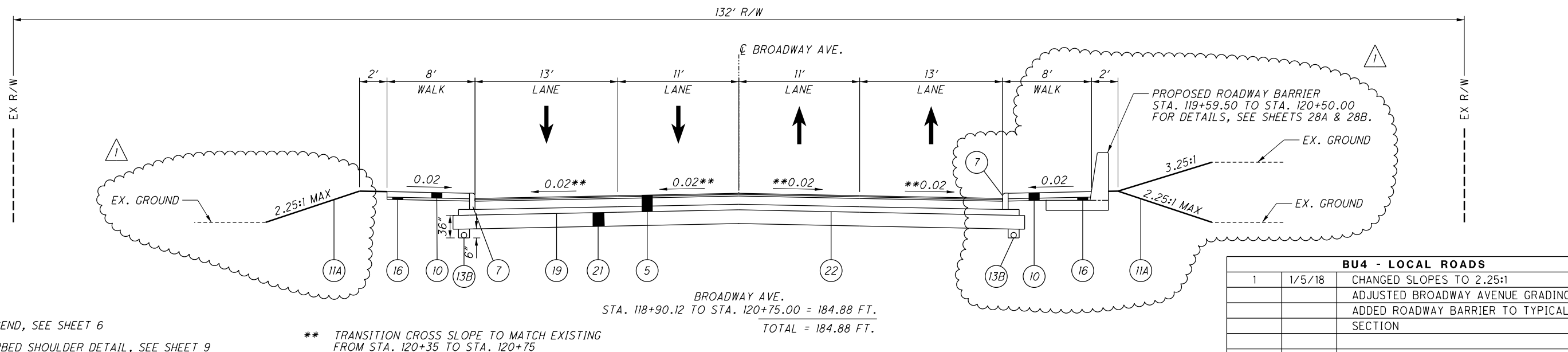
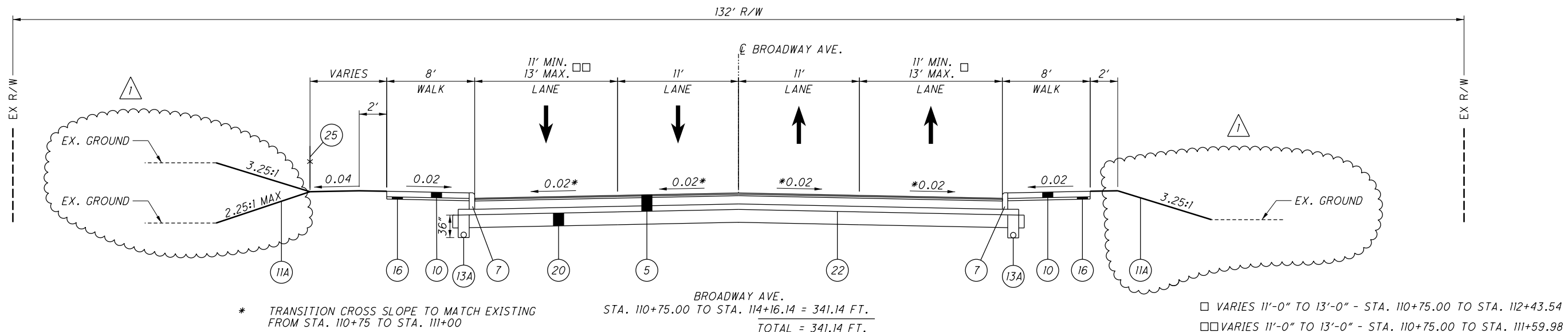
Brian.Link



- T1: THICKNESS OF PROPOSED REINFORCED CONCRETE APPROACH SLAB. (SEE BRIDGE PLANS)
- T2: THICKNESS OF PROPOSED AGGREGATE BASE. (SEE ROADWAY PLANS)
- T3: THICKNESS OF PROPOSED COMPOSITE PAVEMENT. (SEE ROADWAY PLANS)

- 1 A BOND BREAKER, CONSISTING OF TWO 2' WIDE SHEETS OF CLEAR OR OPAQUE POLYETHYLENE FILM, ITEM 705.06, SHALL BE CENTERED ON TOP OF THE JOINT BETWEEN THE SUBBASE AND THE SLEEPER SLAB. THE FILM SHALL HAVE A NOMINAL THICKNESS OF 4 MILS.
- 2 CARE SHALL BE TAKEN TO ENSURE THE SUBBASE OR SUBGRADE SURFACE IS SMOOTH AND CONSTRUCTED AS HIGH AS OR SLIGHTLY HIGHER THAN THE TOP OF THE SLEEPER SLAB.

PRESSURE RELIEF JOINT DETAIL



FOR LEGEND, SEE SHEET 6

FOR CURBED SHOULDER DETAIL, SEE SHEET 9

BU4 - LOCAL ROADS		
NO.	DATE	DESCRIPTION
1	1/5/18	CHANGED SLOPES TO 2.25:1
		ADJUSTED BROADWAY AVENUE GRADING
		ADDED ROADWAY BARRIER TO TYPICAL SECTION
ISSUE RECORD		

TYPICAL SECTIONS

CUY-77-13.80

7  
67







**ROUNDING**

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLIES TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

**UTILITIES**

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

DOMINION EAST OHIO GAS  
ATTN: AARON CONANT  
320 SPRINGSIDE DRIVE  
SUITE 320  
AKRON, OH 44333  
PHONE: (330) 664-2641  
EMAIL: DANIEL.A.EVANS@DOM.COM

CLEVELAND PUBLIC POWER (CPP)  
ATTN: CHRIS HIRZEL  
1300 LAKESIDE AVENUE, ROOM 152  
CLEVELAND, OH 44114  
PHONE: (216) 664-3922  
EMAIL: CHIRZEL@CPP.ORG

CEI THE ILLUMINATING COMPANY  
(OVERHEAD FACILITIES)  
ATTN: TED RADER  
6896 MILLER ROAD  
BRECKSVILLE, OH 44141  
PHONE: (440) 546-8738  
FAX: (440) 546-8773  
EMAIL: RADERT@FIRSTENERGYCORP.COM

CEI THE ILLUMINATING COMPANY  
(UNDERGROUND FACILITIES)  
ATTN: DEAN CHATFIELD  
6896 MILLER ROAD  
BRECKSVILLE, OH44141  
PHONE: (440) 717-6846  
EMAIL: DMCHATFIELD@FIRSTENERGYCORP.COM

VERIZON  
ATTN: AL GUEST  
120 RAVINE STREET  
AKRON, OH 44303  
PHONE: (330) 253-8267  
EMAIL: ALLAN.GUEST@VERIZON.COM

AT&T  
ATTN: JAMES JANIS  
13630 LORAIN AVE, 2ND FLOOR  
CLEVELAND, OH 44111  
PHONE: (216) 476-6142  
EMAIL: PJ8191@ATT.COM

WINDSTREAM  
ATTN: CHERYL SCOTT  
205 S. HAMBDEN ST.  
CHARDON, OH 44024  
PHONE: (440) 285-5528  
EMAIL: CHERYL.SCOTT@WINDSTREAM.COM

TIME WARNER CABLE/CHARTER COMMUNICATIONS  
ATTN: PAUL SILVESTRO  
8179 DOW CIRCLE  
STRONGSVILLE, OH 44136  
PHONE: (216) 575-8016  
EMAIL: PAUL.SILVESTRO@TWCABLE.COM

NORTHEAST OHIO REGIONAL SEWER DISTRICT (NEORS)  
ATTN: MARY MACIEJOWSKI  
3900 EUCLID AVENUE  
CLEVELAND, OH 44115  
PHONE: (330) 926-2407  
PHONE: (216) 881-6600 EX. 6466  
EMAIL: MACIEJOWSKIM@NEORS.ORG

CITY OF CLEVELAND, DIVISION OF WATER  
POLLUTION CONTROL (WPC)  
ATTN: ELIE RAMY  
12302 KIRBY AVENUE  
CLEVELAND, OH 44108  
PHONE: (216) 664-2756  
EMAIL: ERAMY@CLEVELANDWPC.COM

CITY OF CLEVELAND, DIVISION OF WATER (CWD)  
ATTN: FRED ROBERTS  
1201 LAKESIDE AVENUE  
CLEVELAND, OH 44113  
PHONE: (216) 664-2444 EX. 5440  
EMAIL: FRED.ROBERTS@CLEVELANDWATER.COM

CITY OF CLEVELAND, DIVISION OF TRAFFIC  
ENGINEERING  
ATTN: RICH TUTIE  
4150 E. 49TH STREET, BUILDING #4  
CLEVELAND, OH 44105  
PHONE: (216) 857-7032  
EMAIL: RTUTIE@CITY.CLEVELAND.OH.US

ODOT DISTRICT 12  
ATTN: ANTHONY TOTH  
5500 TRANSPORTATION BLVD.  
GARFIELD HEIGHTS, OH 44125  
PHONE: (216) 584-2220  
EMAIL: ANTHONY.TOTH@DOT.OHIO.GOV

LIGHTTOWER  
ATTN: EDWARD DALY  
15565 NEO PARKWAY  
GARFIELD HEIGHTS, OH 44128  
PHONE: (585) 397-5988  
EMAIL: EDALY@LIGHTTOWER.COM

LEVEL 3  
ATTN: DOUG HOLLOWAY  
4000 CHESTER AVE.  
CLEVELAND, OH 44103  
PHONE: (440) 906-6284  
EMAIL: DOUG.HOLLOWAY@LEVEL3.COM

ZAYO  
ATTN: SCOTT HEINLEN  
4199 KINROSS LAKES PARKWAY, SUITE 10  
RICHFIELD, OH 44286  
PHONE: (740) 501-6921  
EMAIL: SCOTT.HEINLEN@ZAYO.COM

CITY OF CLEVELAND COUNCILMAN, WARD 12  
ATTN: ANTHONY BRANCAPELLI  
601 LAKESIDE AVENUE, ROOM 220  
CLEVELAND, OH 44114  
PHONE: (216) 664-4233  
EMAIL: ABRANCAPELLI@CLEVELANDCITYCOUNCIL.ORG

**ASBESTOS ON BRIDGE**

AN ASBESTOS SURVEY OF THE BROADWAY AVENUE BRIDGE (SFN 1806661) WAS CONDUCTED BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST. THE SURVEY DETERMINED THAT NO ASBESTOS IS PRESENT ON THE BRIDGE STRUCTURES.

A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORMS, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER, WILL BE PROVIDED TO THE SUCCESSFUL BIDDER. THE DBT SHALL COMPLETE THE FORM AND SUBMIT IT TO:

CLEVELAND DEPARTMENT OF PUBLIC HEALTH,  
DIVISION OF AIR QUALITY  
75 ERIEVIEW PLAZA, 2ND FLOOR  
CLEVELAND, OH 44114  
ATTN: GEORGE BAKER  
EMAIL: GBAKER@CITY.CLEVELAND.OH.US  
PHONE: (216) 664-4010  
FAX: (216) 420-8047

AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR REHABILITATION, THE DBT SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER.

INFORMATION REQUIRED ON THE FORM WILL INCLUDE:

- 1) THE CONTRACTOR'S NAME AND ADDRESS
- 2) THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REMOVAL
- 3) A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED.

A COPY OF THE OEPA FORM IS AVAILABLE FOR INSPECTION AT THE ODOT DISTRICT 12 OFFICE, 5500 TRANSPORTATION BLVD., GARFIELD HEIGHTS, OH 44125.

THE DBT SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM.

**ASBESTOS IN BUILDINGS**

AN ASBESTOS SURVEY OF THE BUILDINGS WAS CONDUCTED BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST. THE SURVEY DETERMINED THAT ASBESTOS IS PRESENT IN THE BUILDINGS.

A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORMS, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER, WILL BE PROVIDED TO THE SUCCESSFUL BIDDER (AVAILABLE IN EV-05). THE DBT SHALL COMPLETE THE FORM AND SUBMIT IT TO:

CLEVELAND DEPARTMENT OF PUBLIC HEALTH,  
DIVISION OF AIR QUALITY  
75 ERIEVIEW PLAZA, 2ND FLOOR  
CLEVELAND, OH 44114  
ATTN: GEORGE BAKER  
EMAIL: GBAKER@CITY.CLEVELAND.OH.US  
PHONE: (216) 664-4010  
FAX: (216) 420-8047

AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR REHABILITATION, THE DBT SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER.

INFORMATION REQUIRED ON THE FORM WILL INCLUDE:

- 1) THE CONTRACTOR'S NAME AND ADDRESS
- 2) THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REMOVAL
- 3) A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED.

A COPY OF THE OEPA FORM IS AVAILABLE FOR INSPECTION AT THE ODOT DISTRICT 12 OFFICE, 5500 TRANSPORTATION BLVD., GARFIELD HEIGHTS, OH 44125.

THE DBT SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM.

**CONSTRUCTION NOISE**

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, ONLY OPERATE POWER-OPERATED CONSTRUCTION-TYPE DEVICES BETWEEN THE HOURS LISTED BELOW:

DAYS	HOURS
MONDAY - FRIDAY	7:00 A.M. TO 9:00 P.M.
SATURDAY	7:00 A.M. TO 11:00 P.M.
SUNDAY	7:00 A.M. TO 9:00 P.M.

THE FOLLOWING CONDITIONS SHALL APPLY TO THE APPROVED CITY OF CLEVELAND NOISE ORDINANCE (CCO 605.10):

- 1. THE CITY OF CLEVELAND AND RESPECTIVE COUNCIL PERSON(S) SHALL BE NOTIFIED AT THE MINIMUM TWO WEEKS IN ADVANCE OF ACTUAL START DATE AND COMPLETION OF PROJECT.
- 2. THE CITY OF CLEVELAND AND RESPECTIVE COUNCIL PERSON(S) SHALL BE NOTIFIED 72 HOURS IN ADVANCE OF ANY WORK SCHEDULE CHANGES RELATIVE TO THE HOURS/DAYS OF OPERATION.
- 3. THE CITY OF CLEVELAND AND RESPECTIVE COUNCIL PERSON(S) SHALL BE NOTIFIED 72 HOURS IN ADVANCE IF ANY OTHER HEAVY EQUIPMENT IS UTILIZED OTHER THAN THOSE LISTED IN THE ORIGINAL REQUEST DATED 09/02/15.

**PUBLIC NOTIFICATION**

TO ENSURE THE PUBLIC IS NOTIFIED OF CONSTRUCTION ACTIVITIES, THE DBT WILL ADVISE THE PROJECT ENGINEER A MINIMUM OF FOURTEEN (14) DAYS PRIOR TO THE START OF PROJECT CONSTRUCTION ACTIVITIES. THE PROJECT ENGINEER WILL FORWARD THIS INFORMATION TO THE ODOT DISTRICT 12 PUBLIC INFORMATION OFFICER (PIO). THE PIO WILL, IN TURN, NOTIFY THE PUBLIC, THE LOCAL EMERGENCY SERVICES, AFFECTED SCHOOLS AND BUSINESSES AND OTHER IMPACTED LOCAL PUBLIC AGENCIES A MINIMUM OF FOURTEEN (14) DAYS PRIOR TO THE START OF PROJECT CONSTRUCTION ACTIVITIES VIA MEDIA SOURCES.

**RELEASED FOR CONSTRUCTION**

BU04\_2017-09-08.BU4\_82388\_CCG6B.RFC Plans.

09/08/2017
Brian.Link

BU4 - LOCAL ROADS		
NO.	DATE	DESCRIPTION
ISSUE RECORD		

CALCULATED MLL CHECKED JTW

GENERAL NOTES

CUY-77-13.80

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**ENVIRONMENTAL WORK**

PREVIOUS ENVIRONMENTAL STUDIES COMPLETED FOR THE CUY-77-13.80 PROJECT (PID 82388) HAVE SHOWN THAT THERE IS A POTENTIAL OF ENCOUNTERING PETROLEUM CONTAMINATED MATERIALS DURING EXCAVATION FOR THE PROJECT AT THE FOLLOWING LOCATIONS:

- 1. 4427/4579 BROADWAY AVENUE, CLEVELAND, OHIO 44127
- 2. 3950/4020 BROADWAY AVENUE, CLEVELAND, OHIO 44115
- 3. 4100 BROADWAY/4098 AVENUE, CLEVELAND, OHIO 44115
- 4. 4108/4120/4130 BROADWAY AVENUE, CLEVELAND, OHIO 44115

THE ENGINEER WILL INITIALLY DETERMINE IF THE EXCAVATED MATERIAL APPEARS TO BE PETROLEUM CONTAMINATED SOIL BASED ON THE MATERIAL'S APPEARANCE, ODOR, AND THE ENGINEER'S PAST EXPERIENCE. THE DBT SHALL BE RESPONSIBLE FOR ANY TESTING NECESSARY TO DETERMINE IF THE MATERIAL IS IN FACT PETROLEUM CONTAMINATED. ANY POTENTIAL PETROLEUM CONTAMINATED MATERIALS SHALL BE TESTED FOR BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENE (BTX) USING USEPA SW-846, METHOD 8060 AND TOTAL PETROLEUM HYDROCARBONS (TPH) USING USEPA SW-846, METHOD 8015, PER BUSTR GUIDELINES. ONCE LAB ANALYSIS RESULTS ARE RECEIVED FOR THE MATERIAL(S), THE CONCENTRATIONS OF THE CHEMICALS OF CONCERN SHALL BE COMPARED TO BUSTR'S RE-USE ACTION LEVELS IN TABLE 1 UNDER PARAGRAPH (D)(1) OF OAC 1301:7-9-16 TO DETERMINE IF THE MATERIAL IS INDEED PETROLEUM CONTAMINATED SOIL. THIS FINAL DETERMINATION SHALL BE MADE BY THE ENGINEER.

IN THE EVENT PETROLEUM-CONTAMINATED MATERIALS ARE ENCOUNTERED, THE DBT SHALL MANAGE THIS MATERIAL ACCORDING TO THE FOLLOWING GUIDELINES. THE ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PROPOSAL FOR THIS WORK. ALL EXCAVATIONS WITHIN THE AFOREMENTIONED LIMITS SHALL BE PAID FOR UNDER THE ORIGINAL PLAN BID ITEMS. ALL MATERIAL EXCAVATED BY THE DBT AT THIS LOCATION SHALL BE SUBJECT TO TESTING BY AN INSPECTOR PROVIDED BY THE PROJECT SPONSOR.

ALL POTENTIAL PETROLEUM CONTAMINATED SOIL, WITHIN THE AFOREMENTIONED LIMITS, EXCAVATED BY THE DBT WITHIN THE PROJECT LIMITS MAY BE STOCKPILED IN AN AREA PROVIDED BY THE DBT AND APPROVED BY THE ENGINEER. THE ENGINEER MAY PERMIT TEMPORARY STORAGE OF THE EXCAVATED MATERIAL IN A LINED AND COVERED ROLL-OFF BOX. THE ENGINEER MAY PERMIT TEMPORARY STORAGE OF THE EXCAVATED MATERIAL ON AN IMPERMEABLE MEMBRANE. THE MEMBRANE SHALL BE SURROUNDED BY BALES OF STRAW TO PREVENT THE SUSPECTED SOILS FROM COMING IN CONTACT WITH THE ORIGINAL SOILS. AN IMPERMEABLE MEMBRANE SHALL BE PLACED OVER THE STOCKPILE TO PREVENT CONTACT WITH PRECIPITATION AND/OR SURFACE RUN-OFF. THE ENGINEER MAY PERMIT THE DBT TO DIRECT LOAD THE EXCAVATED CONTAMINATED MATERIAL INTO TRUCKS.

THIS MATERIAL SHALL BE PROPERLY TESTED, TRANSPORTED, AND DISPOSED OF IN A LICENSED (BY THE LOCAL HEALTH DEPARTMENT) AND PERMITTED (BY THE OHIO ENVIRONMENTAL PROTECTION AGENCY) SOLID WASTE FACILITY. THE DBT SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS AND TO TRANSPORT THE MATERIAL TO A LICENSED AND PERMITTED SOLID WASTE DISPOSAL FACILITY. THE DBT SHALL CONTACT THE FACILITY TO DETERMINE IF ANY ADDITIONAL TESTING IS REQUIRED FOR DISPOSAL. THE DBT SHALL BE RESPONSIBLE FOR CONDUCTING ANY ADDITIONAL SAMPLING AND ANALYSIS OF THIS MATERIAL.

**RELEASED FOR CONSTRUCTION**  
**BU04\_2017-09-08.BU4\_82388\_CCG6B.RFC Plans.**  
**09/08/2017**     **Brian.Link**

THE DBT SHALL FURNISH ALL THE LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO PROPERLY HANDLE, STORE, TEST (FOR DISPOSAL), TRANSPORT, AND DISPOSE OF REGULATED MATERIALS, INCLUDING ANY REQUIRED PERMITS, APPROVALS, OR FEES WITHIN THE LIMITS IDENTIFIED ABOVE. PAYMENT FOR THE WORK WILL BE MADE ON A UNIT COST BASIS AND AN ESTIMATED QUANTITY HAS BEEN PROVIDED IN THE PROPOSAL. THE BASIS FOR CONVERSION FROM TONS TO CUBIC YARDS IS 1.5 TON/CUBIC YARD.

**MATERIALS MANAGEMENT**

BEFORE BUILDING DEMOLITION OPERATIONS BEGIN, THE DEPARTMENT WILL CONDUCT REGULATED MATERIALS INSPECTIONS OF ALL BUILDINGS SUBJECT TO RENOVATION OR DEMOLITION.

REGULATED MATERIALS CAN INCLUDE BUT ARE NOT LIMITED TO: ASBESTOS, MERCURY SWITCHES, FLUORESCENT LIGHT BULBS, UNDERGROUND STORAGE TANKS (UST), AND OIL PITS.

THE DBT IS RESPONSIBLE FOR ABATEMENT ACTIVITIES REQUIRED FOR THE BUILDINGS DETERMINED TO CONTAIN REGULATED MATERIALS FROM THE DEPARTMENT'S INSPECTIONS. ALL BUILDINGS, WHERE THE DBT IS GRANTED ACCESS TO AND IS IN RECEIPT THE DEPARTMENT'S REGULATED MATERIALS INSPECTION FINDINGS PRIOR TO THE BID SUBMISSION ARE CONSIDERED KNOWN ABATEMENTS. THE COST FOR THESE KNOWN ABATEMENTS SHALL BE INCLUDED IN THE OVERALL LUMP SUM PRICE.

AT LEAST 10 BUSINESS DAYS BEFORE OPERATIONS BEGIN, THE DBT SHALL COMPLETE AN OEPA NOTIFICATION OF DEMOLITION AND RENOVATION FORM AND SUBMIT THIS TO THE LOCAL AIR POLLUTION CONTROL DIVISION, IF DELEGATED, OR OEPA.

THE DBT SHALL ENSURE THAT ALL SUSPECT MATERIALS ARE REMOVED AND PROPERLY DISPOSED OF BY A CERTIFIED ASBESTOS REMOVAL PROFESSIONAL IN ACCORDANCE WITH OAC 3745-20. AN INDIVIDUAL TRAINED IN THE PROVISIONS OF NESHAPS (40 CFR PART 61, SUBPART M) WILL BE ON SITE DURING THE DEMOLITION OR RENOVATION OF ANY STRUCTURE WITH ACM AND EVIDENCE THAT THE REQUIRED TRAINING HAS BEEN ACCOMPLISHED BY THIS PERSON WILL BE AVAILABLE DURING NORMAL BUSINESS HOURS.

IF THE DBT ENCOUNTERS AN UNKNOWN OR KNOWN UST WITHIN THE RIGHT-OF-WAY, THE DBT SHALL DECOMMISSION AND REMOVE THE UST. THIS EFFORT WILL BE PAID UNDER C&MS 109.05 - FORCE ACCOUNT AND IS CONSIDERED AN EXCUSABLE, NON-COMPENSABLE DELAY AS PER ITEM 108.06.B.7. IF A UST IS ENCOUNTERED, ODOT AND THE DBT SHALL FOLLOW ALL APPLICABLE RULES AND REGULATIONS ASSOCIATED WITH UST REMOVAL ACTIVITIES.

THE DBT SHALL MEET ALL REGULATORY CONDITIONS IMPOSED AT PROPERTIES WITH REGULATED MATERIALS ASSOCIATED WITH CONSTRUCTION. THESE CONDITIONS COULD INCLUDE ENSURING THAT THE SURROUNDING PROPERTIES AND POPULATIONS ARE NOT EXPOSED TO THE REGULATED MATERIALS ON THE SITE. THE DBT SHALL ENSURE THAT THE SITE IS PROPERLY CONTAINED DURING CONSTRUCTION SO THAT REGULATED MATERIALS DO NOT MIGRATE OFF SITE; AND SO THAT THE HEALTH AND SAFETY OF ALL ON-SITE PERSONNEL ARE PROTECTED DURING WORK AT THE SITE, THE DBT SHALL PREPARE AN SPILL PREVENTION CONTROL AND COUNTERMEASURES (SPCC) PLAN THAT PROVIDES SPECIFIC GUIDANCE FOR MANAGING REGULATED MATERIALS THAT MAY BE ENCOUNTERED WITHIN THE RIGHT-OF-WAY.

IF UNKNOWN REGULATED MATERIALS ARE DISCOVERED DURING CONSTRUCTION, THE DBT SHALL NOTIFY ODOT IMMEDIATELY AND SHALL FOLLOW THE SPCC PLAN AND ALL APPROPRIATE REGULATIONS.

THE DBT SHALL DISPOSE OF CONSTRUCTION WASTE MATERIAL SUCH AS CONCRETE OR OTHER HARMFUL MATERIALS AT APPROVED SITES IN ACCORDANCE WITH ALL APPROPRIATE REGULATIONS.

THE DBTS SHALL REVIEW THE ENVIRONMENTAL DOCUMENTATION FOR THE PROJECT, INCLUDING THE ENVIRONMENTAL SITE ASSESSMENTS COMPLETED BY THE DEPARTMENT. DBTS SHALL UTILIZE THIS INFORMATION IN ITS MANAGEMENT OF EXCAVATED MATERIALS ON THE PROJECT. DBTS SHALL USE INNOVATIVE AND SUSTAINABLE METHODS TO REUSE AS MUCH OF THE EXCAVATED MATERIALS AS ALLOWED BY APPLICABLE REGULATIONS. EXCESS EXCAVATED MATERIALS THAT ARE REGULATED SHALL BE APPROPRIATELY MANAGED BY THE DBT.

**ENDANGERED SPECIES HABITAT-INDIANA BAT AND NORTHERN LONG-EARED BAT**

THE PROJECT IS LOCATED WITHIN THE KNOWN HABITAT RANGES OF THE FEDERALLY LISTED AND PROTECTED INDIANA BAT AND NORTHERN LONG-EARED BAT. NO TREES SHALL BE REMOVED UNDER THIS PROJECT FROM APRIL 1ST THROUGH SEPTEMBER 30TH. ALL NECESSARY TREE REMOVAL SHALL OCCUR FROM OCTOBER 1ST THROUGH MARCH 31ST. THIS REQUIREMENT IS NECESSARY TO AVOID AND MINIMIZE IMPACTS TO THESE SPECIES AS REQUIRED BY THE ENDANGERED SPECIES ACT. FOR THE PURPOSES OF THIS NOTE, A TREE IS DEFINED AS LIVE, DYING, OR DEAD WOODY PLANT, WITH A TRUNK THREE INCHES OR GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINIMUM HEIGHT OF 13 FEET.

CONTACT PERSON IN OFFICE OF ENVIRONMENTAL SERVICES IS:

MIKE PETTEGREW  
(614) 466-7102

**ENDANGERED SPECIES COMMITMENT - KIRTLAND WARBLER**

THE PROJECT IS WITHIN THE MIGRATION RANGE OF THE FEDERALLY ENDANGERED KIRTLAND'S WARBLER. IN ORDER TO AVOID IMPACTS TO ANY VEGETATION THAT THE KIRTLAND'S WARBLER WOULD USE AS HABITAT DURING MIGRATION, TREES AND WOODY VEGETATION THAT IS GREATER THAN 3-FEET TALL CANNOT BE REMOVED BETWEEN APRIL 22ND AND JUNE 1ST OR BETWEEN AUGUST 15TH AND OCTOBER 15TH.

**STRUCTURE CONCRETE SEALING OPERATIONS**

THE DBT SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT EPOXY-URETHANE SEALER, PAINT, OR OTHER MATERIALS USED TO REPAIR, CLEAN, SEAL, OR TREAT ANY STRUCTURE FROM ENTERING ANY STREAMS, WETLANDS OR OTHER WATERS OF THE UNITED STATES AND TAKE THE APPROPRIATE ACTIONS IN THE EVENT OF A RELEASE.

**BEST MANAGEMENT PRACTICES/SOIL EROSION AND SEDIMENTATION CONTROL**

WATER COLUMN AND SEDIMENTATION IMPACTS SHALL BE KEPT TO A MINIMUM THROUGH THE USE OF BEST MANAGEMENT PRACTICES FOR SOIL EROSION AND SEDIMENTATION CONTROL. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN PLACE PRIOR TO ANY EXCAVATION, GRADING OR FILLING OPERATIONS AND INSTALLATION OF PROPOSED STRUCTURES OR UTILITIES. THEY SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETED AND THE AREA IS STABILIZED AS ACCEPTED BY THE ENGINEER.

**AIR QUALITY MONITORING STATION**

DBT SHALL NOT HAVE STAGING AREAS WITHIN 500 FEET OF THE EXISTING PM2.5 AIR MONITOR LOCATED ON BROADWAY AVENUE.

**AIR QUALITY - NO-IDLE POLICY**

DBT SHALL MAINTAIN A NO-IDLE POLICY FOR UNUSED EQUIPMENT. MAXIMUM TIME FOR IDLING EQUIPMENT SHALL BE NO LONGER THAN 10 MINUTES AS PART OF THE NO-IDLING POLICY.

**AREAS DISTURBED BY EQUIPMENT ACTIVITIES**

ANY AREAS DISTURBED BY EQUIPMENT ACTIVITIES MUST BE SEEDED WITH NATIVE PLANT SPECIES AND MULCHED TO PREVENT EROSION OF SEDIMENTS INTO WATERS OF THE UNITED STATES.

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)**

THE PROJECT WILL DISTURB GREATER THAN 1 ACRE OF EARTHEN AREA. THEREFORE A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) CONSTRUCTION STORM WATER PERMIT FROM THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OHIO EPA) IS REQUIRED FOR THE PROJECT. A STORM WATER POLLUTION PREVENTION PLAN FOR THE PROJECT SHALL BE DEVELOPED AND IMPLEMENTED PRIOR TO PROJECT CONSTRUCTION IN ACCORDANCE WITH ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS.

**AIRWAY/HIGHWAY CLEARANCE FOR AIRPORTS AND HELIPOINTS**

FOR THIS PROJECT AN AERONAUTICAL STUDY WAS CONDUCTED WITH THE FOLLOWING PARAMETERS LISTED BELOW:

- 1. 675 FT SITE ELEVATION (SE)
- 2. 125 FT ABOVE GROUND LEVEL (AGL)
- 3. 800 FEET ABOVE MEAN SEA LEVEL (AMSL)

IT WAS DETERMINED THAT A TEMPORARY STRUCTURE OR CONSTRUCTION EQUIPMENT OF THE PARAMETERS ABOVE DOES NOT EXCEED OBSTRUCTION STANDARDS AND WOULD NOT BE A HAZARD TO AIR NAVIGATION.

IF ANY TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT WILL EXCEED THE HEIGHTS LISTED ABOVE, FURTHER COORDINATION WITH THE FEDERAL AVIATION ADMINISTRATION (FAA), AND ODOT OFFICE OF AVIATION, WILL BE NECESSARY PRIOR TO ERECTING SUCH TEMPORARY STRUCTURES OR OPERATING SUCH EQUIPMENT ON THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT FORM 7460-1 TO THE FAA. NOTIFY THE ODOT OFFICE OF AVIATION WHEN SUBMITTING FAA FORM 7460-1.

NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT SHALL EXCEED THE PERMISSIBLE HEIGHT, UNTIL A COPY OF THE FAA APPROVAL AND THE ODOT OFFICE OF AVIATION PERMIT HAS BEEN FURNISHED TO THE PROJECT ENGINEER.

EXPRESS PROCESSING CENTER  
THE FEDERAL AVIATION ADMINISTRATION  
SOUTHWEST REGIONAL OFFICE  
AIR TRAFFIC AIRSPACE BRANCH ASW-520  
2601 MEACHAM BLVD.  
FORT WORTH, TX 76137-4298

OHIO DEPARTMENT OF TRANSPORTATION  
OFFICE OF AVIATION  
2829 WEST DUBLIN-GRANVILLE ROAD  
COLUMBUS, OHIO 43235  
614-387-2346

BU4 - LOCAL ROADS		
NO.	DATE	DESCRIPTION
		ISSUE RECORD

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GENERAL NOTES

CUY-77-13.80

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**PAVING UNDER GUARDRAIL**

THIS OPERATION SHALL INCLUDE PREPARATION OF THE GRADED SHOULDER USING ITEM 209 - RESHAPING UNDER GUARDRAIL, AS PER PLAN AND PAVING UNDER THE GUARDRAIL USING ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), (UNDER GUARDRAIL), AS PER PLAN.  
ITEM 209 - RESHAPING UNDER GUARDRAIL, AS PER PLAN SHALL CONSIST OF EXCAVATING TOPSOIL OR OLD ASPHALT CONCRETE, COMPACTION AND APPLYING HERBICIDE AS SPECIFIED IN THE PLANS AND IN ACCORDANCE WITH THE FOLLOWING:

ALL COLLECTED DEBRIS AND TOPSOIL, INCLUDING RHIZOMES, ROOTS, AND OTHER VEGETATIVE PLANT MATERIAL SHALL BE REMOVED AND DISPOSED OF AS SPECIFIED IN 105.17.

THE REMOVED MATERIAL SHALL BE REPLACED WITH MATERIAL AS DETAILED ON THE TYPICAL SECTIONS OR AS APPROVED BY THE ENGINEER.

HERBICIDE SHALL BE EPA APPROVED FOR PAVING UNDER GUARDRAIL. IT SHALL BE APPLIED TO THE PREPARED AREA AFTER FINAL LEVELING AND GRADING HAS BEEN COMPLETED. THE APPLICATION SHALL BE JUST PRIOR TO PAVING AND SHALL STRICTLY ADHERE TO THE MANUFACTURER'S INSTRUCTIONS. DO NOT SPRAY WITHIN 1000 FT. OF A STATE SCENIC RIVER.

EACH SUCCESSFUL BIDDER MUST BE LICENSED BY THE OHIO DEPARTMENT OF AGRICULTURE AS A COMMERCIAL APPLICATOR AND ALL PERSONS INVOLVED IN THE ACTUAL SPRAYING SHALL BE LICENSED AS COMMERCIAL OPERATORS IN THE APPROPRIATE SPRAY CATEGORY.

THE DBT SHALL SUBMIT TO ODOT THE INFORMATION REQUIRED FOR PROPOSAL NOTE 651 - HERBICIDAL PRODUCT DATA. HERBICIDE LABEL, MATERIAL SAFETY DATA SHEET AND COPY OF APPLICATORS LICENSES SHALL BE SUBMITTED TO THE ENGINEER FOR VERIFICATION PRIOR TO COMMENCING WORK.

ALL LABOR, EQUIPMENT AND MATERIALS REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 209 - RESHAPING UNDER GUARDRAIL, AS PER PLAN.

PAVING UNDER GUARDRAIL SHALL CONSIST OF PLACING ITEM 441 - ASPHALT CONCRETE TO A DEPTH OF 3" AND A MAXIMUM WIDTH OF 4' USING ONE OF THE FOLLOWING METHODS:

**METHOD A:**

1. SET GUARDRAIL POSTS
2. PLACE ITEM 441

**METHOD B:**

1. PLACE ITEM 441
2. BORE ASPHALT AT POST LOCATIONS (MAY BE OMITTED IF STEEL POSTS ARE USED)
3. SET GUARDRAIL POSTS
4. PATCH AROUND POSTS. THE MATERIALS USED FOR PATCHING SHALL BE AN ASPHALT CONCRETE APPROVED BY THE ENGINEER. PATCHED AREAS SHALL BE COMPACTED USING

**PLANED SURFACES**

THE DURATION OF TIME BETWEEN MILLING AND PLACEMENT OF THE INTERMEDIATE COURSE SHALL BE NO LONGER THAN FOURTEEN (14) DAYS, UNLESS MOT NOTES STATE OTHERWISE. THE TIME LIMIT SHALL BEGIN ON THE FIRST DAY OF PLANING AND SHALL CONTINUE BASED ON CALENDAR DAYS, MINUS ANY BAD WEATHER DAYS, UNTIL COMPLETION OF THE ASPHALT CONCRETE INTERMEDIATE COURSE.

**ITEM 618 - RUMBLE STRIPS, ASPHALT CONCRETE, AS PER PLAN**

FOR ALL FREEWAYS, THE LATERAL POSITION OF EDGE LINE RUMBLE STRIPS SHOWN IN SCD BP-9.1 IS REVISED AS FOLLOWS:

1. MEDIAN AND OUTSIDE SHOULDER OFFSET FOR SHOULDERS LESS THAN 6': DIMENSIONS "A" AND "B" ARE EQUAL TO 6".
2. MEDIAN AND OUTSIDE SHOULDER OFFSETS FOR SHOULDERS 6' TO 12': DIMENSION "A" AND "B" ARE EQUAL TO HALF THE SHOULDER WIDTH MINUS 12".
3. MEDIAN AND OUTSIDE SHOULDER OFFSET FOR SHOULDERS GREATER THAN 12': DIMENSION "A" AND "B" ARE EQUAL TO 5'.

**MAINTAIN EXISTING LIGHTING**

EXISTING ROADWAYS WHICH ARE TO REMAIN OPEN TO TRAFFIC DURING CONSTRUCTION OF THIS PROJECT AND WHICH ARE LIGHTED SHALL HAVE THE LIGHTING MAINTAINED AS DESCRIBED HEREIN:

BEFORE ANY WORK IS STARTED IN THE IMMEDIATE VICINITY OF THE EXISTING LIGHTING CIRCUITS, REPRESENTATIVES OF ODOT, THE CITY OF CLEVELAND, THE MAINTAINING AGENCY AND THE DBT SHALL MAKE A VISUAL INSPECTION OF THE EXISTING ROADWAY LIGHTING CIRCUITS TO BE MAINTAINED. DURING THIS INSPECTION, A WRITTEN RECORD OF THE CONDITION OF EXISTING LIGHTING SHALL BE MADE BY ODOT'S REPRESENTATIVE. THIS WRITTEN REPORT SHALL NOTE INDIVIDUAL LUMINAIRES WHICH ARE NOT IN WORKING ORDER, INDIVIDUAL POLES WHICH ARE STANDING, AND INDIVIDUAL CIRCUITS WHICH ARE NOT IN WORKING ORDER. THE COMPLETED REPORT SHALL BE SIGNED BY THE REPRESENTATIVES OF ODOT, THE MAINTAINING AGENCY AND THE DBT.

IF, AS A RESULT OF THIS INSPECTION, IT IS DETERMINED THAT THE CONDITION OF THE EXISTING SYSTEM IS BELOW THAT REQUIRED FOR THE SAFETY OF THE TRAVELING PUBLIC, THEN THE MAINTAINING AGENCY SHALL MAKE THE REPAIRS NECESSARY TO RETURN THE SYSTEM TO AN ACCEPTABLE CONDITION. FOLLOWING THESE REPAIRS, THE SYSTEM SHALL AGAIN BE INSPECTED AND A REPORT SHALL BE MADE AND SIGNED AS OUTLINED HEREIN.

WHEN THE EXISTING SYSTEM IS IN AN ACCEPTABLE CONDITION, IT SHALL BE TURNED OVER TO THE DBT WHO SHALL THEN BE REQUIRED TO MAINTAIN THE EXISTING LIGHTING TO THE CONDITION OUTLINED IN THIS REPORT WITH THE EXCEPTION OF KNOCKDOWNS DUE TO TRAFFIC ACCIDENTS.

REPLACEMENT OF KNOCKED DOWNED UNITS SHALL BE DONE ONLY WHEN THE ENGINEER HAS DETERMINED THAT THE REPLACEMENT OF THE KNOCKED DOWN UNIT IS NECESSARY AND SHALL BE PAID SEPARATELY THROUGH FORCE ACCOUNT.

WHEN THE SEQUENCE OF CONSTRUCTION ACTIVITIES REQUIRES OR SHOULD THE DBT DESIRE, THE REMOVAL OF THE EXISTING LIGHTING BEFORE THE NEW LIGHTING IS OPERATIONAL, THE DBT SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY LIGHTING OF THIS PORTION OF THE ROADWAY.

A MAXIMUM TIME PERIOD OF TWO NIGHTS WILL BE ALLOWED FOR LIGHTING SYSTEM OUTAGE OF LOCAL STREET LIGHTING BETWEEN TRANSFERS OF THE EXISTING LIGHTING SYSTEM TO THE NEW MODIFIED LIGHTING SYSTEM. THE CITY OF CLEVELAND LIGHTING ENGINEER SHALL BE NOTIFIED A MINIMUM OF 72 HOURS BEFORE, OF THE SPECIFIED AREA TO BE SCHEDULED FOR THE 2 NIGHT OUTAGE.

PRIOR TO INSTALLING SUCH LIGHTING, THE DBT SHALL PREPARE AND SUBMIT FOUR SETS OF THE TEMPORARY LIGHTING PLAN TO THE ENGINEER FOR REVIEW AND APPROVAL.

THIS PLAN SHALL SHOW LOCATIONS OF POLES, LENGTHS OF BRACKET ARMS, STYLES OF LUMINAIRES, MOUNTING HEIGHTS, WIRING METHODS AND OTHER PERTINENT INFORMATION. THE TEMPORARY LIGHTING SHALL PROVIDE AN AVERAGE INITIAL INTENSITY OF 1.2 FOOT CANDLES WITH AN AVERAGE TO MINIMUM UNIFORMITY NOT TO EXCEED 3:1. MOUNTING HEIGHT OF TEMPORARY LUMINAIRES SHALL NOT BE LESS THAN 30 FEET, AND THE MINIMUM OVERHEAD CONDUCTOR CLEARANCE SHALL BE 20 FEET. TEMPORARY OVERHEAD CONSTRUCTION SHALL NOT BE LESS THAN GRADE "A" FOR STRENGTH REQUIREMENTS AS DEFINED BY THE NATIONAL ELECTRIC SAFETY CODE. WOOD POLES WITH OVERHEAD WIRING MAY BE USED. HOWEVER, TEMPORARY LIGHTING SHALL MEET FEDERAL AND STATE SAFETY CRITERIA IF BREAKAWAY POLES ARE USED TO MEET THESE CRITERIA, THEN UNDERGROUND WIRING SHALL BE USED. RECONDITIONED OR USED MATERIALS MAY BE FURNISHED FOR TEMPORARY LIGHTING.

ALL MATERIALS NECESSARY TO COMPLETE THE TEMPORARY LIGHTING SHALL BE FURNISHED AND INSTALLED BY THE DBT. WHEN NO LONGER NEEDED, THE TEMPORARY LIGHTING INSTALLATION SHALL BE REMOVED AND PROPERLY DISPOSED OF BY THE DBT.

THE MAINTAINING AGENCY WILL PAY FOR ELECTRICAL ENERGY CONSUMED BY EXISTING POWER SERVICES AND BY PROPOSED PERMANENT POWER SERVICES AFTER ACCEPTANCE OF THE LIGHTING WORK. THE DBT WILL PAY FOR ELECTRICAL ENERGY, INSTALLATION, REMOVAL AND MAINTENANCE OF ANY TEMPORARY POWER SERVICES.

**ITEM 304 - AGGREGATE BASE, AS PER PLAN**

SLAG SHALL NOT BE USED IN THE AGGREGATE BASE.

**ITEM 305 - CONCRETE BASE, AS PER PLAN**

THE MINIMUM CEMENT CONTENT SHALL BE 650 LBS. PER CUBIC YARD. THE CEMENT SHALL CONFORM TO ASTM C-150-04 OR C-595-04. THE USE OF LIMESTONE MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER UPON REVIEW OF THE SUBMITTAL.

**ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, 448, PG70-22M, AS PER PLAN A**

THE COARSE VIRGIN AGGREGATE FOR THIS ITEM SHALL BE A BLEND OF 60% MIN. AIR COOLED BLAST FURNACE SLAG (ACBFS) OR TRAP ROCK FROM ONTARIO WITH LIMESTONE COMPRISING THE REMAINING PERCENTAGE.

USE A PG70-22M BINDER.

**ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, 448, PG64-22, AS PER PLAN B**

THE USE OF GRAVEL FOR COARSE VIRGIN AGGREGATE IS PROHIBITED. LIMIT RAP BY DRY WEIGHT OF MIX TO A MAX. 10%.

USE A PG64-22 BINDER.

**ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A 446, PG 76-22M, AS PER PLAN**

THE COARSE VIRGIN AGGREGATE AND AT LEAST 50% OF FINE VIRGIN AGGREGATE FOR THIS ITEM SHALL BE LIMITED TO AIR COOLED BLAST FURNACE SLAG (ACBFS) OR TRAP ROCK FROM ONTARIO.

TABLE 442.02-2 APPLIES EXCEPT NO. 4 SIEVE REQUIREMENTS ARE 52 TO 62 TOTAL PERCENT PASSING.

USE PG76-22M BINDER.

**ASPHALT CONCRETE SURFACE COURSE SEALING REQUIREMENTS**

IN ADDITION TO THE GUTTER SEALING REQUIREMENTS SPECIFIED ON SCD BP-3.1 AND IN 401.15, THE CONTRACTOR SHALL SEAL THE FOLLOWING LOCATIONS:

ALL CASTINGS INCLUDING BUT NOT LIMITED TO MONUMENTS, MANHOLES, WATER VALVES, CATCH BASINS, CURB INLETS. BUTT JOINTS AND FEATHER JOINTS INCLUDING BRIDGE APPROACHES. BUTT JOINT BETWEEN PAVED SHOULDER AND DRIVEWAY ASPHALT AND TAPERED EDGE WHEN FEATHERING TO AN EXISTING ASPHALT DRIVEWAY. PERIMETER OF ALL PAVEMENT REPAIRS OR OTHER ASPHALT INLAYS WHEN PAVEMENT REPAIRS/INLAYS ARE NOT OVERLAID WITH AN ASPHALT CONCRETE SURFACE COURSE. ALL COLD LONGITUDINAL JOINTS BETWEEN PAVED SHOULDERS AND GUARDRAIL ASPHALT.

THE MATERIAL USED SHALL BE A CERTIFIED 702.01 PG BINDER. THE WIDTH OF THE SEALER SHALL BE 2-3 INCHES.

ANY ADDITIONAL COSTS ASSOCIATED WITH THE WORK IDENTIFIED IN THIS NOTE SHALL BE INCLUDED IN THE APPROPRIATE ASPHALT CONCRETE SURFACE COURSE ITEM OF WORK.

**CONCRETE SEALING ON CITY OF CLEVELAND FACILITIES**

THIS NOTE APPLIES TO THE FOLLOWING FACILITIES: BROADWAY AVENUE, GALLUP AVENUE, ROSEVILLE COURT, DILLE AVENUE, E 45TH STREET, JEWETT AVENUE, CZAR AVENUE, FINN AVENUE, AND THE APPROACH SLABS ON BROADWAY.

1. ALL EXPOSED CONCRETE SURFACES (INCLUDING BUT NOT LIMITED TO PAVEMENT, CURB, SIDEWALK, DRIVE APRONS, CONCRETE BARRIER) ON CITY OF CLEVELAND-MAINTAINED FACILITIES SHALL BE SEALED PER CITY OF CLEVELAND SEALANT REQUIREMENTS. CITY OF CLEVELAND MAINTAINED FACILITIES ARE DEFINED IN SECTION 1.1.

2. THE APPROACH SLABS FOR THE BROADWAY BRIDGE OVER IR-77 SHALL BE DESIGNED TO ODOT STANDARDS EXCEPT FOR CONCRETE MIX AND CONCRETE SEALANT WHICH SHALL BE PER CITY OF CLEVELAND STANDARDS.

3. SEE SECTION 8.1, GOVERNING REGULATIONS, AND APPENDIX GN-01 FOR ADDITIONAL REQUIREMENTS.

**RELEASED FOR CONSTRUCTION**  
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**WORK LIMITS**

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

**CLEARING AND GRUBBING**

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, ANY TREE OR STUMP REMOVAL REQUIRED TO PERFORM ANY OF THE PROPOSED WORK AS SHOWN IN THE PLANS SHALL BE REMOVED AS PER ITEM 201 IN THE ODOT CMS.

**FENCE LENGTHS**

THE LENGTHS OF FENCE SHOWN IN THE PLANS ARE HORIZONTAL DIMENSIONS. MEASUREMENTS OF THE FINAL QUANTITIES WILL BE IN ACCORDANCE WITH ITEM 607.

**CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL**

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A W-BEAM, BEAM SPLICE AS SHOWN IN AASHTO M 180-12, EXCEPT THE BEAM WASHERS ARE NOT TO BE USED. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

**ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E**

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS FOR TYPE MGS GUARDRAIL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

REFER TO THE MANUFACTURER'S INSTRUCTIONS REGARDING THE INSTALLATION OF, AND THE GRADING AROUND THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 31 INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4 INCHES ABOVE THE GROUND LINE.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, MGS TYPE E, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

**CONTRACTION JOINTS IN CONCRETE PAVEMENT OR BASE WIDENING**

WHERE NEW CONCRETE IS PLACED ADJACENT TO EXISTING CONCRETE, PROVIDE CONTRACTION JOINTS IN THE NEW CONCRETE TO FORM CONTINUOUS JOINTS WITH THOSE IN THE EXISTING CONCRETE.

THE MAXIMUM DISTANCE BETWEEN THE JOINTS IN THE NEW CONCRETE ARE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-2.2, IF NECESSARY, ADDITIONAL JOINTS MAY BE PROVIDED IN THE NEW CONCRETE AT APPROXIMATELY EQUAL INTERVALS BETWEEN EXISTING JOINTS THAT EXCEED THE MAXIMUM SPACING.

**BENCHING OF FOUNDATION SLOPES**

ALTHOUGH CROSS-SECTIONS INDICATE SPECIFIC DIMENSIONS FOR PROPOSED BENCHING OF THE EMBANKMENT FOUNDATIONS IN CERTAIN AREAS, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. BENCH ALL OTHER SLOPED EMBANKMENT AREAS AS SET FORTH IN 203.05. NO ADDITIONAL PAYMENT WILL BE MADE FOR BENCHING REQUIRED UNDER THE PROVISIONS OF 203.05.

**PARKING LOT REMOVAL**

THE DBT SHALL REMOVE THE PAVEMENT ON THE PARKING LOTS ON PARCELS 17 AND 19 AND THE ODOT-OWNED PAVED LAND ABUTTING PARCEL 41.

**DEMOLITION OF 1748 EAST 27TH STREET, CLEVELAND, OHIO**

THE BUILDING AT E. 27TH ST., CLEVELAND, OH (PARCEL 102-34-039) SHALL BE DEMOLISHED BY OCTOBER 1, 2017 AND THE PARCEL RESTORED AS DESCRIBED BELOW BY DECEMBER 31, 2017. THE PARCEL INFORMATION, ENVIRONMENTAL INFORMATION IS CONTAINED IN APPENDIX EV-06. THE DBT SHALL REMOVE AND DISPOSE OF THE BUILDING, VEGETATION, PAVEMENTS, SIDEWALKS, DRIVEWAYS, MINOR STRUCTURES AND OBSTRUCTIONS, FENCING, PIPES, CULVERTS AND UNDERGROUND TANKS. THE USE OF EXPLOSIVES IS FORBIDDEN. SITE RESTORATION SHALL INCLUDE ADDITION OF 6 INCHES OF COMPACTED AGGREGATE TO SITE SURFACE PER CMS 203, WITH MATERIALS MEETING REQUIREMENTS OF 703.16C, TYPE B. FINAL SURFACE SHALL BE GRADED TO DRAIN. PROVIDE PERMANENT FENCING TO SECURE PARCEL ON ALL SIDES, WITH A VEHICULAR GATE, ALL PER CMS 607. THE DBT SHALL BE RESPONSIBLE FOR COORDINATING AND PAYING FOR ALL UTILITY DISCONNECTS.

**SEEDING AND MULCHING**

ALL AREAS WITHIN THE WORK LIMITS, INCLUDING CONSTRUCTION LIMITS AS DEFINED IN SECTION 12 OF THE SCOPE, AND OUTSIDE OF PROPOSED PAVEMENT SHALL BE RESTORED WITH 659 TOPSOIL (4") AND 659 SEEDING AND MULCHING.

AREAS ADJACENT TO CITY STREETS AND MUP SHALL BE SEEDED WITH 659 SEEDING AND MULCHING CLASS 1; AREAS ADJACENT TO INTERSTATE RAMPS, FRONTAGE ROAD, OR MAINLINE WITHIN THE L/A FENCE SHALL USE 659 SEEDING AND MULCHING CLASS 2; AREAS WITH A SLOPE STEEPER THAN 3:1 SHALL USE 659 SEEDING AND MULCHING CLASS 3C. USE OF APPROPRIATE COMMERCIAL FERTILIZER AND/OR LIME FOR ESTABLISHMENT OF VEGETATION SHALL ALSO BE UTILIZED.

ALL IMPERVIOUS OR HARDSCAPE AREAS WITHIN THE RESTORATION AREA SHALL BE REMOVED TO SUBGRADE. THE DBT IS RESPONSIBLE FOR MOWING WITHIN THE WORK LIMITS. ANY VEGETATION EXCEEDING 3 INCHES SHALL REQUIRE MOWING UNTIL SUBSTANTIAL COMPLETION UNLESS DIRECTED OTHERWISE BY THE ODOT PROJECT ENGINEER.

**RIGHT OF WAY MONUMENTATION**

NEW RIGHT OF WAY MONUMENTATION IS REQUIRED AS PART OF THIS PLAN SET. CONTRACTOR SHALL INSTALL THE NEW MONUMENTATION IN THE LOCATIONS LISTED IN THE RIGHT OF WAY PLANS

**MONUMENTATION ON ODOT FACILITIES**

WITHIN THE WORK LIMITS, THE DBT SHALL CONSTRUCT ITEMS ASSOCIATED WITH MONUMENT ASSEMBLIES, REFERENCE MONUMENTS, RIGHT-OF-WAY MONUMENTS, AND ANY OTHER ITEMS ASSOCIATED WITH MONUMENTS ACCORDING TO C&MS 623 AND PER THE ODOT RIGHT-OF-WAY MANUAL. MONUMENTS ON ODOT-MAINTAINED FACILITIES SHALL BE IN ACCORDANCE WITH ODOT STANDARDS.

**CITY OF CLEVELAND MONUMENTS**

THIS WORK SHALL CONSIST OF THE CONSTRUCTION OR RECONSTRUCTION OF MONUMENTS OF THE TYPES AND SIZES SPECIFIED, ADJUSTING THE EXISTING CASTINGS TO GRADE. THE CONTRACTOR SHALL PERFORM THE REQUIRED EXCAVATION AND BACKFILL, FURNISH ALL MATERIALS, AND LABOR NECESSARY.

**MATERIALS AND METHODS OF CONSTRUCTION**

THE CONSTRUCTION OF STRUCTURES SPECIFIED SHALL CONFORM TO THE REQUIREMENTS OF ITEM 623 OF ODOT SPECIFICATIONS OF THE CITY SPECIFICATIONS SUPPLEMENT THERETO. EXCAVATION FOR STRUCTURES SHALL CONFORM TO THE LATEST SAFETY REQUIREMENTS SET FORTH IN SECTION 604.04 OF CITY OF CLEVELAND SUPPLEMENTAL SPECIFICATIONS TO ODOT. CASTING REUSED MONUMENT BOXES REMOVED MAY BE REUSED TO REPLACE BROKEN CASTINGS OR PARTS OF CASTINGS ON EXISTING STRUCTURES WITHIN THE LIMITS OF THIS CONTRACT WHICH ARE DESIGNATED TO REMAIN.

**MONUMENT ASSEMBLIES**

THE CONTRACTOR'S SURVEYOR SHALL MARK THE LOCATION WHERE NEW MONUMENT ASSEMBLIES ARE TO BE CONSTRUCTED. THE CONTRACTOR SHALL NOTIFY THE CHIEF SURVEYOR AT (216) 664-2461, AT LEAST THREE (3) WEEKS PRIOR TO BEGINNING THEIR MONUMENT ASSEMBLY OPERATION IN ORDER TO HAVE THE LOCATIONS CHECKED IN THE FIELD. THE CONTRACTOR SHALL FURNISH THE FOLLOWING FOR EACH ASSEMBLY: ONE (1) CLEVELAND MONUMENT BOX AS DIRECTED ON CITY OF CLEVELAND STANDARD DRAWINGS NO. A-37 AND MB-1C AND ONE (1) ONE INCH DIAMETER EPOXY STEEL DEFORMED REINFORCING BAR THIRTY-SIX INCHES (36") LONG, FLAT ON TOP WITH A ROUND POINTED END. THE CONTRACTOR'S SURVEYOR SHALL INSTALL THE PIN (REBAR) PRIOR TO SETTING THE BOX.

ANY PERSON, CONTRACTOR, UTILITY, OR GOVERNMENTAL AGENCY, HEREIN REFERRED TO AS THE CONTRACTOR, DISTURBING, REMOVING AND/OR REPLACING PAVEMENT IN THE CITY OF CLEVELAND'S PUBLIC RIGHT-OF-WAY SHALL PROVIDE INFORMATION AS TO THE TYPE OF WORK AND THE LIMITS OF THE WORK TO THE CITY OF CLEVELAND CHIEF SURVEYOR PRIOR TO PERFORMING SUCH WORK. THE CHIEF SURVEYOR WILL DETERMINE WHICH MONUMENTS, IF ANY WILL BE AFFECTED BY SUCH WORK.

FOR MONUMENTS LOCATED INSIDE THE CONTRACTOR'S "WORK AREA" THE CONTRACTOR'S SURVEYOR MUST REFERENCE THESE MONUMENTS PRIOR TO ANY OF THE WORK BEING PERFORMED. THE CONTRACTOR SHALL NOTIFY THE CITY OF CLEVELAND CHIEF SURVEYOR AT (216) 664-2461, AT LEAST TEN (10) WORKING DAYS PRIOR TO THE REPLACEMENT OR RELOCATION OF MONUMENTS TO ALLOW THE CHIEF SURVEYOR TO CHECK LOCATIONS IN THE FIELD.

THE CONTRACTOR SHALL PERFORM ALL OTHER OPERATIONS NECESSARY TO COMPLETE THIS WORK ITEM, SUCH AS PAVEMENT REMOVAL, EXCAVATION, SETTING THE BOX TO GRADE, AND PAVEMENT REPLACEMENT.

FOR MONUMENTS OUTSIDE THE CONTRACTOR'S "WORK AREA", BUT NEAR ENOUGH TO THE "WORK AREA" THAT MAY BE DISTURBED FOR ANY REASON, THE CONTRACTOR'S SURVEYOR MUST REFERENCE THESE MONUMENTS PRIOR TO ANY WORK BEING PERFORMED BY THE CONTRACTOR. THE CONTRACTOR, AFTER HAVING COMPLETED THE FINAL PAVEMENT REPLACEMENT, SHALL NOTIFY THE CITY CHIEF SURVEYOR AT (216) 664-2461, TO HAVE THE MONUMENTS INSPECTED FOR DISPLACEMENT. SHOULD THE MONUMENT BE DISTURBED FOR ANY REASON, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT AS IF THE MONUMENT WERE ORIGINALLY INSIDE THE "WORK AREA" AS HEREIN SPECIFIED.

**STAGING AREA ON/WITHIN STATE RIGHT OF WAY**

SPECIFIC AREAS ARE DESCRIBED IN THE SCOPE FOR THE CONTRACTOR TO USE AS STAGING AREAS. NO D-12 PERMIT WILL BE REQUIRED FOR THE CONTRACTOR TO UTILIZE THESE LOCATIONS. THE CONTRACTOR SHALL SUBMIT A WRITTEN DESCRIPTION OF THEIR PLANNED USE TO THE PROJECT ENGINEER FOR CONCURRENCE. ALL USES OF THE R/W SHALL BE COORDINATED BY THE PROJECT ENGINEER. NO CONCRETE OR ASPHALT PLANTS ARE ALLOWED. NO CRUSHING OPERATIONS ARE ALLOWED. THE CONTRACTOR SHALL NOT UTILIZE THIS PROJECT'S STAGING AREA FOR OTHER PROJECTS. THE CONTRACTOR SHALL NOT STOCKPILE MATERIAL ON TOP OF EXISTING DRAINAGE PIPES OR UNDERGROUND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE REGULATORY REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RESTORATION OF THE STAGING AREA(S). IN ADDITION TO SECTION 104.04 OF THE CMS, RESTORATION WORK SHALL INCLUDE, AT NO ADDITIONAL COST TO THE STATE:

- 1. REMOVAL OF AT LEAST 4 INCHES OF MATERIAL AND REPLACEMENT WITH TOPSOIL PER ITEM 659.
- 2. SEED AND MULCH THE AREA PER ITEM 659
- 3. REPLACEMENT OF ALL TREES REMOVED/DAMAGED BY CONTRACTOR ON CALIPER-INCH BASIS WITH ONE (1) YEAR WARRANTY THE PERFORMANCE REQUIREMENTS OF ITEM 659, SPECIFICALLY IN REGARD TO MINIMUM 70% GRASS COVER, WILL APPLY TO ALL STAGING AREAS. IF THE PROJECT ENGINEER DEEMS THAT ALL THE CONDITIONS OF R/W USE ARE NOT MET, THEN 10% OF THE CONTRACT BID AMOUNT FOR MOBILIZATION SHALL BE WITHHELD UNTIL ALL THE CONDITIONS OF THE R/W USE ARE SATISFIED.

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GENERAL NOTES

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**1. SUBMITTALS**

- a. The Contractor shall submit technical information and a certified statement stating that the material to be furnished conforms to the material requirements of this section of the specifications.
- b. Copies of waybills and delivery tickets shall be submitted to the contracting officer during the progress of the work. Before final payment is allowed, the Contractor shall file with the contracting officer certified waybills and delivery tickets for all concrete sealer used in the work.

**2. PORTLAND CEMENT CONCRETE SEALING TREATMENT**

- a. The concrete sealer shall be an approved non-epoxy, non-silicone, non-toxic, non-hydrophobic, non-solvent material, and shall meet the following qualifications and AASHTO and ASTM test performance criteria, based in accordance with the manufacturer's recommended rate of coverage.
- b. The penetrating concrete sealer, after finished application, shall not darken, stain or discolor the treated concrete.
- c. Application of the sealer shall not alter the surface texture or form a film or coating on the surface, and shall be compatible with the concrete pavement joint materials.
- d. AASHTO T 259 Resistance of Concrete to Chloride Ion Penetration

Sealer-treated test specimens shall exhibit the following average values when an average of 0.125 inches of the treated concrete specimen has been abraded from the surface to simulate 10-12 years of traffic wear. Abrasion will be performed after treatment with sealer and before ponding with chloride solution.

**SALT WATER TEST (90 DAY DURATION)**

Average Absorbed CL = 2.50 lbs per cubic yard  
Depth of Measurement = 1/16" to 1/2"\*  
Testing Method: AASHTO T 259

\*Based on abraded concrete specimens

**PONDING TEST (2160 HOUR DURATION)**

Average Absorbed CL = 0.04 lbs per cubic yard  
Depth of Measurement = 1/2" to 1"  
Testing Method: AASHTO T 260

- e. ASTM C 672 Scaling Resistance of Concrete Surfaces

Sealer-treated test specimens shall exhibit a 0 (zero) scale reading, and an improvement over untreated specimens after completion of a minimum of 50 freeze-thaw cycles; or until a difference between treated and untreated specimens develops. Example after 50 cycles:

<u>SPECIMEN</u>	<u>SCALE RATING</u>
Untreated	2+ (light to moderate scaling)
Treated	0 (no scaling)

- f. AASHTO T 161/ASTM C 666 Resistance of Concrete to Rapid Freezing and Thawing

Treated specimens shall demonstrate equal or better durability to surface scaling than the frost resistant concrete used as a control upon completion of the test after a minimum of 300 freeze-thaw cycles.

**EXAMPLE:**

<u>CYCLES</u>	<u>CONTROL</u>	<u>TREATED</u>
146	Slight	None
237	Slight	Slight
480	Slight	Slight

- g. ASTM C 501 Relative Resistance to Wear

Treated test specimens shall meet or exceed the improvement percentages as specified below on nominal 3,000 psi concrete after 1,000 revolutions:

<u>SPECIMEN</u>	<u>AVG. ABRASIVE WEAR INDEX</u>	<u>AVG. DEPTH OF WEAR</u>	<u>AVG. ABSOLUTE WEIGHT LOSS</u>
Treated	27.4	.026 in	3.227 gm
Untreated	19.9	.033 in	4.525 gm
Improvement	37.7%	21.2%	28.7%

- h. ASTM C 882 Bond Strength of Epoxy-Resin Systems Used with Concrete

Test results shall demonstrate bond strength of treated samples equal to untreated samples used as a control.

- i. Depth of Penetration

Depth of penetration shall be a minimum of 1/8 in. as demonstrated by successful testing in accordance with AASHTO T 2590 (based on abroad specimens).

**3. SURFACE PREPARATION**

The Contractor shall prepare surfaces to be sealed by thoroughly cleaning same with mechanical sweepers of an approved type and with wire brooms where necessary. To be clean, the surfaces shall be free of sand, clay, dust, salt, grease, oil and other foreign matter that might adversely affect the penetrating capability of the sealer.

**4. APPLICATION OF CONCRETE SEALER**

- a. Equipment to be used shall be as recommended by the manufacturer and shall include a low pressure airless or gravity type sprayer with an application pressure of approximately 40 psi, using a spray tip large enough to deliver an even fan spray without misting.
- b. Application of the concrete sealer shall be recommended by the manufacturer and in accordance with the following:
  - i. The application shall consist of two coats minimum.
  - ii. Each coat shall be in a light, even coat that shall be allowed to dry completely before continuing application.
  - iii. If a light sheen is visible when the second coat is dry, stop sealer application, and proceed to the water spray application.
  - iv. If no sheen is visible when the second coat is dry, repeat coats until a light sheen is apparent. Immediately after the final seal coat has been applied and allowed to dry, a light, even water-spray shall be applied to all treated surfaces to ensure complete penetration of the sealer.
  - v. If a sheen is still visible after the water coat has dried, additional water coats shall be applied until the sheen is no longer evident and the concrete finish appears dull.

**5. WEATHER LIMITATIONS**

Sealer should not be applied when temperatures are below 40 degrees F or are expected to fall below 32 degrees F within 24 hours or when rain is forecasted within 24 hours.

**6. METHOD OF MEASUREMENT**

The quantity to be paid for will be measured by the actual number of square yards of accepted pavement sealed with concrete sealer in accordance with this section of the specifications.

**7. PAYMENT**

The quantity as provided shall be paid for at the applicable contract price per unit of measurement, which price and payment shall be full compensation for all materials, labor, equipment, tools, and incidentals necessary to complete the work required by this section of the specifications.

**GENERAL NOTES**

**CUY-77-13.80**

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BU4 - LOCAL ROADS		
<u>NO.</u>	<u>DATE</u>	<u>DESCRIPTION</u>
1	1/5/18	ADDED CITY OF CLEVELAND MIX AND CONCRETE SEALANT STANDARDS

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**ITEM 614, MAINTAINING TRAFFIC**

THIS ITEM SHALL CONSIST OF MAINTENANCE OF TRAFFIC ON EXISTING ROADWAYS AND RAMP IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, CURRENT EDITION, LATEST REVISION, THE SPECIFICATIONS, AND THE FOLLOWING:

- 1. BROADWAY AVENUE RAMP TO IR-77SB
  - A. RAMP MAY BE CLOSED ONCE WORK ON FRONTAGE ROAD CONSTRUCTION COMMENCES.
  - B. DETOUR SHALL BE BROADWAY AVENUE TO PERSHING AVENUE TO IR-77 AS SHOWN IN BU 1.

- 2. IR-77NB RAMP TO BROADWAY AVENUE
  - A. RAMP SHALL REMAIN OPEN FOR THE PROJECT DURATION.
  - B. DURING THE CLOSURE OF BROADWAY AVENUE, ERECT DETOUR SIGNAGE AS SHOWN IN THE PLANS.

- 3. BROADWAY AVENUE
  - A. 4-LANES OF BROADWAY AVENUE (2-LANES IN EACH DIRECTION) SHALL BE MAINTAINED PRIOR TO IMPLEMENTATION OF THE TWO-WAY FRONTAGE ROAD DETOUR SHOWN IN BU 3 EXCEPT FOR A MAXIMUM PERIOD OF FORTY-FIVE (45) CONSECUTIVE DAYS IMMEDIATELY PRIOR TO THE IMPLEMENTATION OF THE FRONTAGE ROAD DETOUR WHEN BROADWAY AVENUE MAY BE REDUCED TO TWO (2) LANES, ONE (1) IN EACH DIRECTION.
  - B. BROADWAY AVENUE SHALL HAVE ONE (1) FULL CLOSURE OF NO MORE THAN 270 DAYS, DURING WHICH THE TWO-WAY FRONTAGE ROAD DETOUR SHOWN IN BU 3 MUST BE IN PLACE.
  - C. AFTER THE BROADWAY CLOSURE PERIOD A MINIMUM OF 2-LANES (1 LANE IN EACH DIRECTION) SHALL BE MAINTAINED ON BROADWAY AVENUE UNTIL SUBSTANTIAL COMPLETION, AT WHICH TIME 4 LANES OF BROADWAY SHALL BE OPEN.
  - D. AFTER THE BROADWAY CLOSURE PERIOD, THE FRONTAGE ROAD SHALL BE OPEN TO ONE LANE OF ONE-WAY SOUTHBOUND TRAFFIC EXCEPT FOR A PERIOD OF NINETY (90) CONSECUTIVE DAYS IMMEDIATELY FOLLOWING THE BROADWAY CLOSURE PERIOD TO COMPLETE THE BROADWAY AVE/FRONTAGE RD INTERSECTION CONSTRUCTION.

- 4. PERSHING AVENUE
  - A. NO LANE RESTRICTIONS PERMITTED.

- 5. ROSEVILLE COURT
  - A. MAY HAVE ONE (1) FULL CLOSURE OF NO MORE THAN 30 DAYS. ERECT DETOUR AS SHOWN IN THE PLANS.
  - B. SHALL REMAIN OPEN DURING FRONTAGE ROAD DETOUR OF BROADWAY AVENUE WITH STOP CONTROL AS SHOWN IN BU 3.
  - C. TWO-WAY ACCESS TO THE BUSINESSES SERVED BY ROSEVILLE COURT/E. 45TH ST. FOR THE DURATION OF THE CLOSURE.

- 6. DILLE AVENUE
  - A. MAY HAVE ONE (1) FULL CLOSURE OF NO MORE THAN 14 DAYS. ERECT DETOUR AS SHOWN IN THE PLANS.

- 7. GALLUP AVENUE
  - A. MAY HAVE ONE (1) FULL CLOSURE OF 270 DAYS BETWEEN LESTER AVENUE AND BROADWAY AVENUE, BUT ACCESS TO ALL DRIVEWAYS SHALL BE MAINTAINED AT ALL TIMES. THIS 270 DAY CLOSURE SHALL COINCIDE WITH THE BROADWAY AVENUE CLOSURE. ERECT DETOUR AS SHOWN IN THE PLANS.

- 8. I-77
  - FOR I-77 AND RAMP RESTRICTIONS, SEE BU 2.

9. NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

CHRISTMAS	FOURTH OF JULY
NEW YEARS	LABOR DAY
MEMORIAL DAY	THANKSGIVING

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY OR EVENT FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

DAY OF HOLIDAY OR EVENT	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY
MONDAY	12:00N FRIDAY THROUGH 6:00 AM TUESDAY
TUESDAY	12:00N MONDAY THROUGH 6:00 AM WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 6:00 AM THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 6:00 AM FRIDAY
THURSDAY (THANKSGIVING ONLY)	6:00 AM WEDNESDAY THROUGH 6:00 AM MONDAY
FRIDAY	12:00N THURSDAY THROUGH 6:00 AM MONDAY
SATURDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF \$42 FOR EACH MINUTE THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

5. ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

**NOTICE OF CLOSURE**

NOTICE OF CLOSURE SIGNS (W20-H13), SHALL BE ERECTED BY THE CONTRACTOR PRIOR TO THE SCHEDULED ROAD OR RAMP CLOSURE IN ACCORDANCE WITH THE NOTICE OF CLOSURE TIME TABLE BELOW.

THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD/RAMP FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT OR NEAR THE POINT OF CLOSURE. THE SIGNS MAY BE ERECTED ANYWHERE ON RAMP AS LONG AS THEY ARE VISIBLE TO THE MOTORISTS USING THE RAMP. ON ENTRANCE RAMP, THE SIGN SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTING MOTORISTS.

NOTICE OF CLOSURE SIGN TIME TABLE:

DURATION OF CLOSURE	SIGN DISPLAYED TO PUBLIC
>= 2 WEEKS	14 CA LENDER DAYS PRIOR TO CLOSURE
> 12 HOURS & < 2 WEEKS	7 CALENDAR DAYS PRIOR TO CLOSURE
< 12 HOURS	2 CA LENDER DAYS PRIOR TO CLOSURE

THE SIGN SHALL DISPLAY THE DATE OF THE CLOSURE IN MMM-DD FORMAT AND THE NUMBER OF DAYS OF THE CLOSURE. THE LAST LINE OF THE W20-H13 SIGN LISTS A PHONE NUMBER WHICH A MOTORIST MAY CALL FOR ADDITIONAL INFORMATION. THIS IS TO BE A SPECIFIC OFFICE WITHIN THE DISTRICT RATHER THAN THE GENERAL SWITCHBOARD NUMBER.

**DUST CONTROL**

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER.

**EARTHWORK FOR MAINTAINING TRAFFIC**

WHEN UNDERCUTS ARE NECESSARY FOR MAINLINE PAVEMENT OR EMBANKMENT CONSTRUCTION, EVALUATE THE NEED FOR TEMPORARY ROAD UNDERCUTS IF WITHIN A CLOSE PROXIMITY TO THE MAINLINE UNDERCUTS. A GEOTECHNICAL EVALUATION SHOULD BE CONSIDERED TO DETERMINE IF THE EXISTING SOIL CONDITIONS ARE ADEQUATE TO SUPPORT THE TEMPORARY ROAD. ADDITIONAL SOIL BORING'S ALONG THE TEMPORARY ROAD ARE NOT NORMALLY REQUIRED.

**FLOODLIGHTING**

FLOODLIGHTING OF THE WORK SITE FOR OPERATIONS CONDUCTED DURING NIGHTTIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE ROADWAY. TO ENSURE THE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND THE ENGINEER SHALL DRIVE THROUGH THE WORK SITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIVE PRIOR TO COMMENCING ANY WORK. IF GLARE IS DETECTED, THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS.

**OVERNIGHT TRENCH CLOSING**

THE BASE WIDENING SHALL BE COMPLETED TO A DEPTH OF NO MORE THAN 1.5 INCHES BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORK DAY. NO TRENCH SHALL BE LEFT OPEN OVERNIGHT EXCEPT FOR A SHORT LENGTH (25 FEET OR LESS) OF A WORK SECTION AT THE END OF THE TRENCH. IN CASE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH FOR THE UNCOMPLETED BASE WIDENING SHALL BE BACK-FILLED AT THE DIRECTION OF THE ENGINEER.

**ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL OR BIDIRECTIONAL)**

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING'S APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS, FROM THE ROADWAY STANDARDS WEB PAGE FOR ROADWAY STANDARDS WEB PAGE.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT.

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.

WHEN GATING IMPACT ATTENUATORS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER FOR ACCEPTANCE.

THE COST FOR THE ADDITIONAL BARRIER REQUIRED FOR A GATING IMPACT ATTENUATOR SHALL BE INCLUDED IN THE COST OF THE GATING IMPACT ATTENUATOR.

**ITEM 614, WORK ZONE IMPACT ATTENUATOR, FOR HAZARDS OVER 24" AND LESS THAN 36" WIDE, (UNIDIRECTIONAL OR BIDIRECTIONAL)**

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS, FROM THE ROADWAY STANDARDS WEB PAGE FOR ROADWAY STANDARDS APPROVED PRODUCTS.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT.

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.

<b>RELEASED FOR CONSTRUCTION</b>	
BU04_2017-09-08.BU4_82388_CCG6B.RFC Plans.	
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NO.	DATE	DESCRIPTION

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**WORK-SITE TRAFFIC SUPERVISOR**

SUBJECT TO APPROVAL OF THE ENGINEER, THE CONTRACTOR SHALL EMPLOY AND IDENTIFY (SOMEONE OTHER THAN THE SUPERINTENDENT) A CERTIFIED WORK-SITE TRAFFIC SUPERVISOR (WTS) BEFORE STARTING WORK IN THE FIELD. THE WTS SHALL BE CERTIFIED FROM ONE OF THE FOLLOWING ORGANIZATIONS:

1. AMERICAN TRAFFIC SAFETY SERVICE ASSOCIATION (ATSSA), PHONE NUMBER 1-800-272-8772, CERTIFIED TRAFFIC CONTROL SUPERVISOR (TCS).
2. NATIONAL HIGHWAY INSTITUTE, DESIGN AND OPERATION OF WORK ZONE TRAFFIC CONTROL, PHONE NUMBER 1-703-235-0500.
3. THE OHIO CONTRACTORS ASSOCIATION, TRAFFIC CONTROL SUPERVISOR (OCA/TCS) WORK ZONE CLASS, ONLY IF TAKEN AFTER MAY 5, 2004, PHONE NUMBER 1-800-229-1388.
4. OHIO LABORERS TRAINING, TRAFFIC CONTROL SUPERVISORS CLASS, PHONE NUMBER 1-740-599-7915.

A COPY OF EACH WTSS CERTIFICATION AND 24-HOUR CONTACT INFORMATION SHALL BE PROVIDED TO THE ENGINEER AT THE PRE-CONSTRUCTION CONFERENCE. IF THE DESIGNATED WTS WILL NOT BE AVAILABLE FULL TIME (24/7), THE CONTRACTOR MAY DESIGNATE AN ALTERNATE WTS TO BE AVAILABLE WHEN THE PRIMARY IS OFF DUTY. EACH WTS SHALL HAVE A WTS CERTIFICATION CONTAINING THE DATE OF ISSUE AND SHALL BE FROM ANY OF THE APPROVED ORGANIZATIONS. AT THE TIME OF THE PRE-CONSTRUCTION, THE WTS CERTIFICATION DATE OF ISSUE SHALL BE WITHIN 5 YEARS PRIOR TO THE ORIGINAL COMPLETION DATE OF THE PROJECT.

THE WTS POSITION HAS THE RESPONSIBILITY OF MONITORING TRAFFIC CONTROL DEFICIENCIES FOR THE ENTIRE WORK ZONE. THE DUTIES OF THE WTS ARE AS FOLLOWS:

1. BE AVAILABLE ON A 24-HOUR PER DAY BASIS, AND BE ABLE TO BE ON SITE FOR ALL EMERGENCY TRAFFIC CONTROL NEEDS WITHIN ONE HOUR OF NOTIFICATION BY POLICE OR PROJECT STAFF AND BE PREPARED TO EFFECT CORRECTIVE MEASURES IMMEDIATELY ON EXISTING WORK ZONE TRAFFIC CONTROL DEVICES.
2. ATTEND PRE-CONSTRUCTION MEETING AND ALL PROJECT MEETINGS WHERE TRAFFIC CONTROL MANAGEMENT IS DISCUSSED.
3. BE AVAILABLE FOR MEETINGS OR DISCUSSIONS WITH THE ENGINEER UPON REQUEST OR WITHIN 36 HOURS.
4. COORDINATE A TRAFFIC INCIDENT MANAGEMENT MEETING EACH YEAR BEFORE CONSTRUCTION WORK BEGINS WITH ODOT AND THE SAFETY FORCES THAT WILL RESPOND TO INCIDENTS ON THE PROJECT. ITEMS TO BE DISCUSSED WILL BE THE:
  - A. TRAFFIC INCIDENT MANAGEMENT PLAN (TIMP);
  - B. EMERGENCY RESPONSE AND NOTIFICATION;
  - C. PROJECT WORK/PHASING CONCERNS (E.G., RAMP CLOSURES); AND
  - D. RESPONDERS CONCERNS.
5. BE AWARE OF, AND COORDINATE IF NECESSARY, ALL TRAFFIC CONTROL OPERATIONS, INCLUDING THOSE OF SUBCONTRACTORS AND SUPPLIERS.

6. COORDINATE PROJECT ACTIVITIES WITH ALL LAW ENFORCEMENT OFFICERS (LEOS). A WTS SHALL ALSO BE THE MAIN CONTACT PERSON WITH THE LEOS WHILE THEY ARE ON THE PROJECT.
7. COORDINATE MEETINGS WITH ODOT PERSONNEL, LEOS AND OTHER APPLICABLE ENTITIES BEFORE EACH PLAN PHASE SWITCH TO DISCUSS WORK ZONE TRAFFIC CONTROL.
8. ENSURE COMPLIANCE WITH THE CONTRACT DOCUMENTS FOR SIGNS, BARRICADES, TEMPORARY CONCRETE BARRIER, PAVEMENT MARKINGS, PORTABLE MESSAGE SIGNS, AND OTHER TRAFFIC CONTROL DEVICES ON A DAILY BASIS; AND FACILITATE ANY CORRECTIVE ACTION NECESSARY.
9. NOTIFY THE CONTRACTOR OF THE NEED FOR CLEANING AND MAINTENANCE OF ALL TRAFFIC CONTROL DEVICES, INCLUDING THE COVERING AND REMOVAL OF INAPPLICABLE SIGNS.
10. INSPECT, EVALUATE, PROPOSE NECESSARY MODIFICATIONS TO, AND DOCUMENT THE EFFECTIVENESS OF, THE TRAFFIC CONTROL DEVICES AND/OR TRAFFIC OPERATIONS ON A DAILY BASIS (7 DAYS A WEEK). IN ADDITION, A WEEKLY NIGHT INSPECTION OF THE WORK ZONE SETUP FOR DAYTIME WORK OPERATIONS; AND ONE DAYTIME INSPECTION PER WEEK FOR NIGHTTIME PROJECTS. THIS SHALL INCLUDE (BUT NOT BE LIMITED TO) DOCUMENTATION ON THE FOLLOWING PROJECT EVENTS:
  - A. INITIAL TRAFFIC CONTROL SETUP (DAY AND NIGHT REVIEW).
  - B. DAILY TRAFFIC CONTROL SETUP AND REMOVAL.
  - C. WHEN CONSTRUCTION STAGING CAUSES A CHANGE IN THE TRAFFIC CONTROL SETUP.
  - D. CRASH OCCURRENCES WITHIN THE CONSTRUCTION AREA.
  - E. REMOVAL OF TRAFFIC CONTROL DEVICES AT THE END OF A PHASE OR PROJECT.
  - F. ALL OTHER EMERGENCY TRAFFIC CONTROL NEEDS.
11. COMPLETE THE DEPARTMENT APPROVED LONG TERM INSPECTION FORM (CA-D-8) AFTER EACH INSPECTION AS REQUIRED IN #10 AND SUBMIT IT TO THE ENGINEER THE FOLLOWING WORK DAY. THESE REPORTS SHALL INCLUDE A CHECKLIST OF ALL TRAFFIC CONTROL MAINTENANCE ITEMS TO BE REVIEWED. A COPY OF THE FORM WILL BE PROVIDED AT THE PRE-CONSTRUCTION MEETING. ANY DEFICIENCIES OBSERVED SHALL BE NOTED, ALONG WITH RECOMMENDED CORRECTIVE ACTIONS AND THE DATES BY WHICH SUCH CORRECTIONS WERE, OR WILL BE, COMPLETED. A COPY OF THIS DOCUMENT CAN BE FOUND IN THE CURRENT REVISION OF THE DEPARTMENT OF TRANSPORTATION CONSTRUCTION INSPECTION FORMS MANUAL.
12. VERIFY THAT ALL FLAGGING OPERATIONS ARE BEING CONDUCTED PER THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
13. HAVE COPIES OF THE ODOT TEMPORARY TRAFFIC CONTROL MANUAL AND APPLICABLE STANDARDS AND SPECIFICATIONS INCLUDED IN THE CONTRACT DOCUMENTS AVAILABLE AT ALL TIMES ON THE PROJECT.
14. IDENTIFY AND CONTACT ALL POSSIBLE RESPONSE PERSONNEL; PRE-PLAN AND KEEP AN UPDATED ROSTER WITH PHONE NUMBERS:

- A. FEDERAL, STATE, AND LOCAL TRANSPORTATION AGENCIES (TRAFFIC MANAGEMENT CENTER);
  - B. REGIONAL, COUNTY OR LOCAL 911 DISPATCH; AND
  - C. TOWING AND RECOVERY PROVIDERS.
15. COMPLY WITH THE PROVISIONS OF OMUTCD CHAPTER 61, CONTROL OF TRAFFIC THROUGH TRAFFIC INCIDENT MANAGEMENT AREAS.
  16. PROPOSE A RESPONSE/ACTION PLAN TO:
    - A. ESTABLISH ALTERNATE ROUTE PLANS PER THE PROVIDED ODOT PLAYBOOK;
    - B. REMOVE TRAFFIC DEMAND FROM IMPACTED ROADWAY(S);
    - C. DIVERT TRAFFIC TO ROUTES THAT CAN ACCOMMODATE DEMANDS;
    - D. DETOUR TRAFFIC AWAY FROM SENSITIVE AREAS (SUCH AS SCHOOLS, HOSPITALS, ETC.);
    - E. DISCUSS METHODS OF DETERMINING A STAGING AREA FOR RESPONDERS WITHIN OR NEAR THE CONSTRUCTION ZONE; AND
    - F. DISCUSS METHODS OF DEVELOPING INGRESS AND EGRESS SITES WITHIN THE CONSTRUCTION ZONE.
- THE RESPONSE/ACTION PLAN SHALL BE SUBMITTED TO ODOT.
17. PERFORM, AT A MINIMUM, THE FOLLOWING FUNCTIONS IN INCIDENT DETECTION AND VERIFICATION:
    - A. CALL 911/ NOTIFY TRAFFIC MANAGEMENT CENTER AND PROVIDE THE FOLLOWING:
      - I. DIRECTION OF TRAVEL.
      - II. NUMBER AND TYPE OF VEHICLES INVOLVED.
      - III. ESTIMATED EXTENT OF DAMAGE OR INJURY.
      - IV. ESTIMATED NUMBER OF PATIENTS INVOLVED.
      - V. ANY POTENTIAL HAZARDOUS CONDITIONS.
      - VI. THE PLACARD NUMBER ON ANY HAZARDOUS MATERIALS PLACARD FROM A SAFE DISTANCE.
    - B. INITIATE TRAFFIC MANAGEMENT / PROVIDE TRAFFIC CONTROL.
    - C. ASSIST MOTORIST WITH DISABLED VEHICLES.
    - D. RECOMMEND ROADWAY REPAIR NEEDS.
    - E. PROVIDE REPAIR RESOURCES.
  18. ATTEND POST-INCIDENT DEBRIEFINGS IF REQUIRED.

THE DEPARTMENT WILL DEDUCT THE PRORATED DAILY AMOUNT OF THE UNIT PRICE BID FOR THE WTS FOR ANY DAY ON WHICH THE CONTRACTOR FAILS TO PERFORM THE DUTIES SET FORTH ABOVE. SHOULD THE CONTRACTOR'S FAILURE TO PERFORM ANY OF THE DUTIES DESCRIBED ABOVE RESULT IN A MAINTENANCE OF TRAFFIC SAFETY ISSUE, THE DEPARTMENT WILL DEDUCT THE PRORATED DAILY AMOUNT FOR ITEM 614 MAINTENANCE OF TRAFFIC FROM THE CONTRACTOR'S NEXT SCHEDULED ESTIMATE.

IF THREE OR MORE FAILURES TO PERFORM THE DUTIES SET FORTH ABOVE OCCUR, THE WTS SHALL BE IMMEDIATELY REMOVED FROM THE WORK IN ACCORDANCE WITH C&MS 108.05.

**MOT PHASE CHANGES: NOTIFICATION & COORDINATION REQUIREMENTS**

AT LEAST FOURTEEN (14) DAYS PRIOR TO ANY CONSTRUCTION ACTIVITIES, THE DBT WILL ADVISE THE DISTRICT PI OFFICER AND THE PROJECT ENGINEER OF THE ANTICIPATED START DATE OF ANY CONSTRUCTION ACTIVITIES, INCLUDING BUT NOT LIMITED TO THE PLACING OF WORK ZONE SIGNS. THE NOTIFICATION WILL ALSO INCLUDE THE PROJECT NUMBER, PID, NAME AND PHONE NUMBER OF THE DBT POINT OF CONTACT AS WELL AS THE ANTICIPATED IMPACT ON TRAFFIC. THE DBT WILL IMMEDIATELY INFORM THE PI OFFICER AND THE PROJECT ENGINEER OF ANY AND ALL DELAYS AND/OR CHANGES REGARDING THE CONSTRUCTION INITIATION DATE.

THROUGHOUT THE DURATION OF THE PROJECT, THE DBT WILL NOTIFY THE PROJECT ENGINEER AND THE OTHERS LISTED IN THIS SECTION IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE DBT WILL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW. THIS NOTIFICATION WILL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

INFORMATION WILL INCLUDE BUT IS NOT LIMITED TO ALL CONSTRUCTION ACTIVITIES THAT IMPACT OR INTERFERE WITH TRAFFIC AND WILL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, DETOUR ROUTES IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER AND THE DISTRICT 12 COMMUNICATIONS OFFICE. A SUMMARY OF THE NOTIFICATION TIME FRAME REQUIREMENTS FOR CLOSURES AND RESTRICTIONS IS PROVIDED IN THE NOTIFICATION TIME FRAME TABLE BELOW.

ITEM	DURATION OF CLOSURE	NOTIFICATION TIME FRAME
RAMP & ROAD CLOSURE	>= 2 WEEKS	14 BUSINESS DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	7 BUSINESS DAYS PRIOR TO CLOSURE
	< 12 HOURS	2 BUSINESS DAYS PRIOR TO CLOSURE
LANE CLOSURE/ RESTRICTION	>= 2 WEEKS	7 BUSINESS DAYS PRIOR TO CLOSURE
	< 2 WEEKS	2 BUSINESS DAYS PRIOR TO CLOSURE

ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS WILL ALSO BE REPORTED TO THE PROJECT ENGINEER, THE DISTRICT 12 COMMUNICATIONS OFFICE USING THE NOTIFICATION TIME FRAME TABLE.

THE DBT WILL BE RESPONSIBLE FOR NOTIFYING ALL LOCAL, COUNTY, STATE AND FEDERAL EMERGENCY SERVICES, SCHOOL DISTRICTS, GCRTA AND ADJACENT RESIDENTS AND BUSINESSES OF UPCOMING ROAD AND RAMP CLOSURES. ADVANCE NOTIFICATION WILL OCCUR NO LATER THAN FOURTEEN (14) DAYS PRIOR TO CLOSING THE ROAD. IF, SUBSEQUENT TO THE ADVANCE NOTIFICATION, THE START DATE IS CHANGED, THEN A NEW SEVEN (7) DAY NOTIFICATION WILL BE REQUIRED. THE ROAD/RAMP CANNOT BE CLOSED UNLESS PRIOR NOTIFICATION HAS BEEN ACCOMPLISHED. THE SAME PARTIES WILL BE NOTIFIED WHEN THE CLOSURE HAS CONCLUDED AND THE ROAD IS BACK OPEN TO TRAFFIC. NOTIFICATION OF CLOSURES SHALL BE COORDINATED WITH THE PUBLIC INFORMATION OFFICERS, AMANDA MCFARLAND, PI OFFICER, (216) 584-2005, D12.PUBLIC.INFORMATION@DOT.OHIO.GOV

<b>BU4 - LOCAL ROADS</b>		
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<b>NO.</b>	<b>DATE</b>	<b>DESCRIPTION</b>
ISSUE RECORD		

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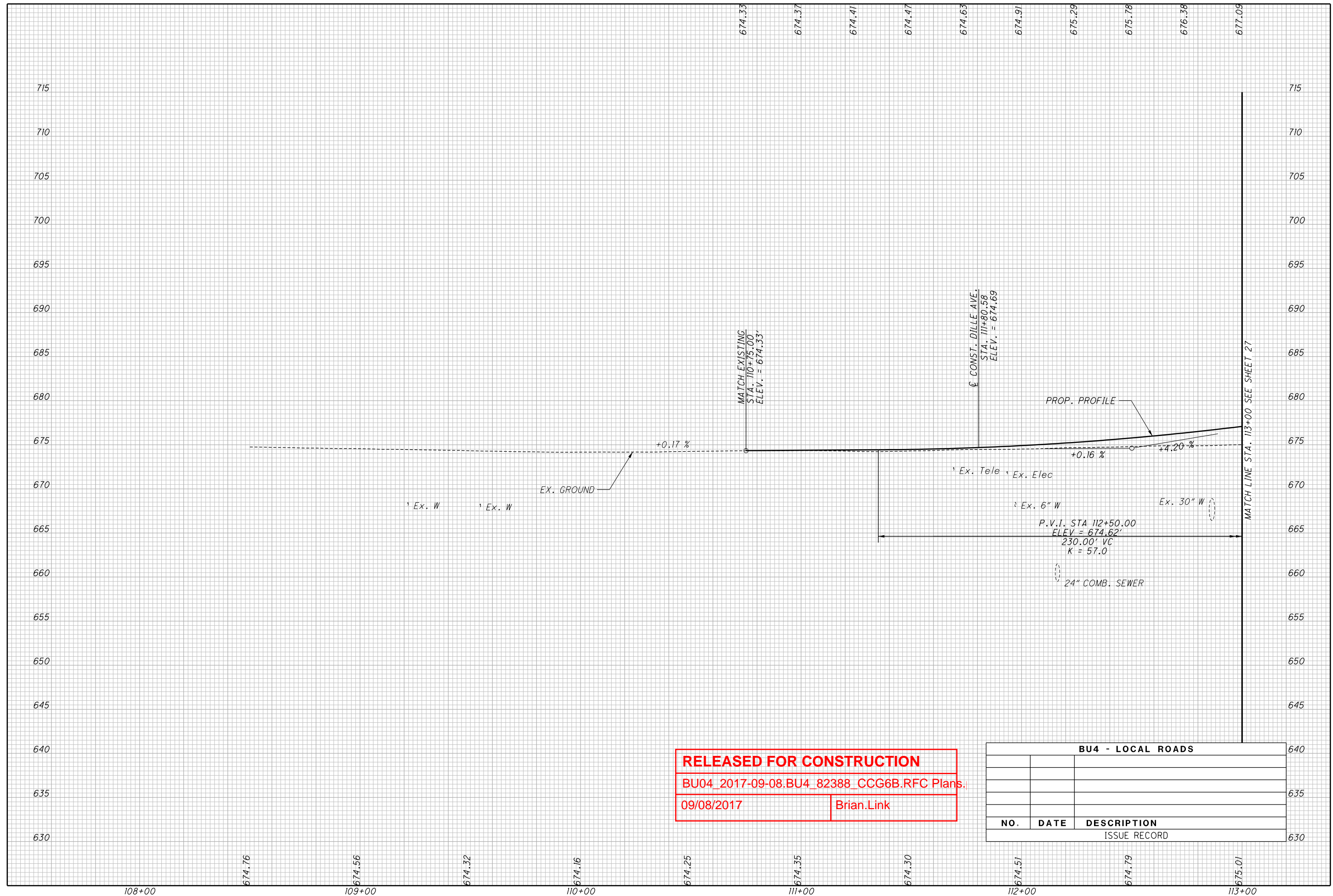








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BU4 - LOCAL ROADS		
NO.	DATE	DESCRIPTION
ISSUE RECORD		

CALCULATED KRF	CHECKED JTW
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**PROFILE - BROADWAY AVENUE**  
**STA. 108+50.00 TO STA. 113+00.00**

**CUY-77-13.80**

25  
67

**RELEASED FOR CONSTRUCTION**  
 BU04\_2017-09-08.BU4\_82388\_CCG6B.RFC Plans.  
 09/08/2017 Brian.Link

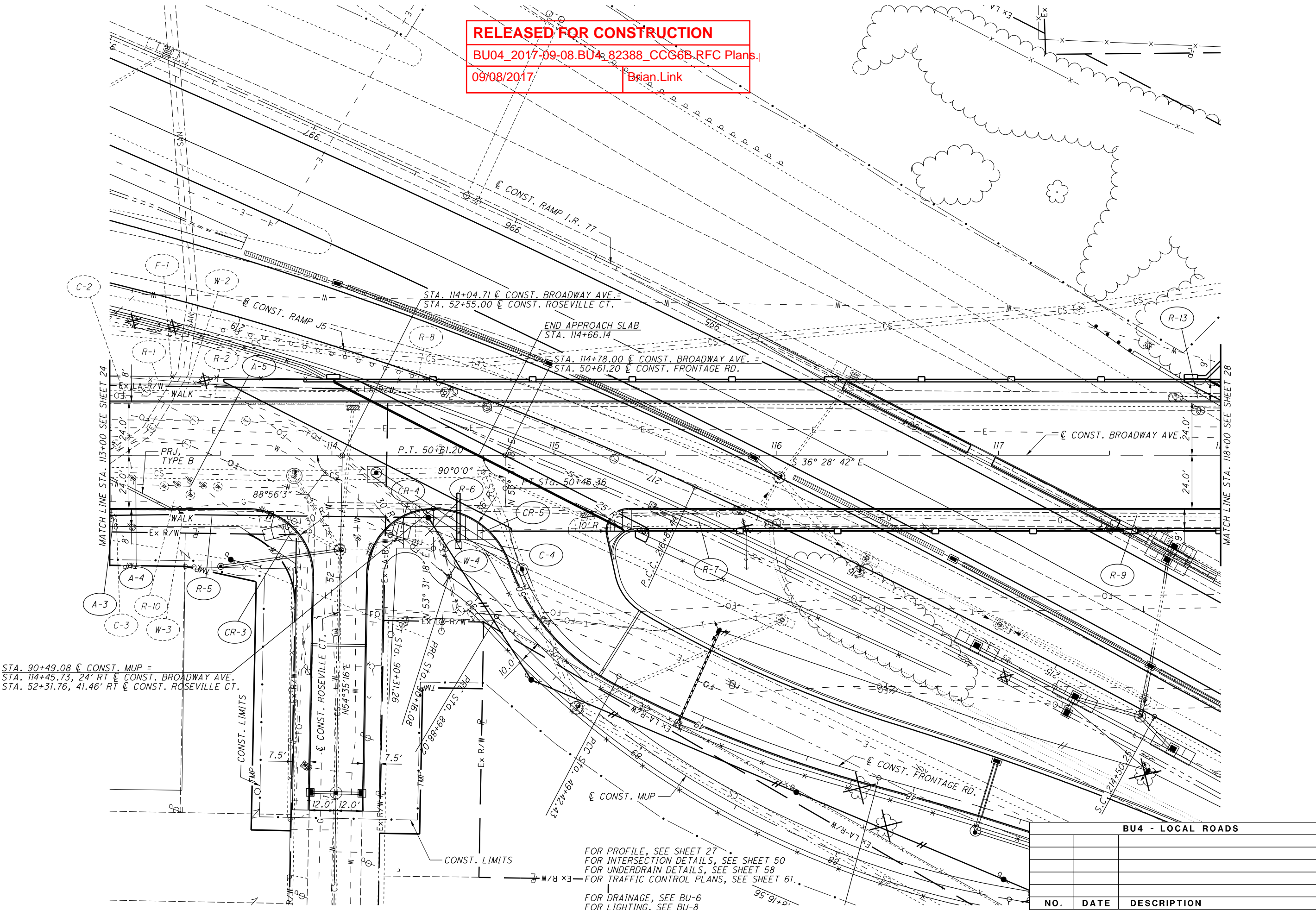
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10  
HORIZONTAL  
SCALE IN FEET

**PLAN - BROADWAY AVENUE**  
**STA. 113+00.00 TO STA. 118+00.00**

**CUY-77-13.80**

26  
67



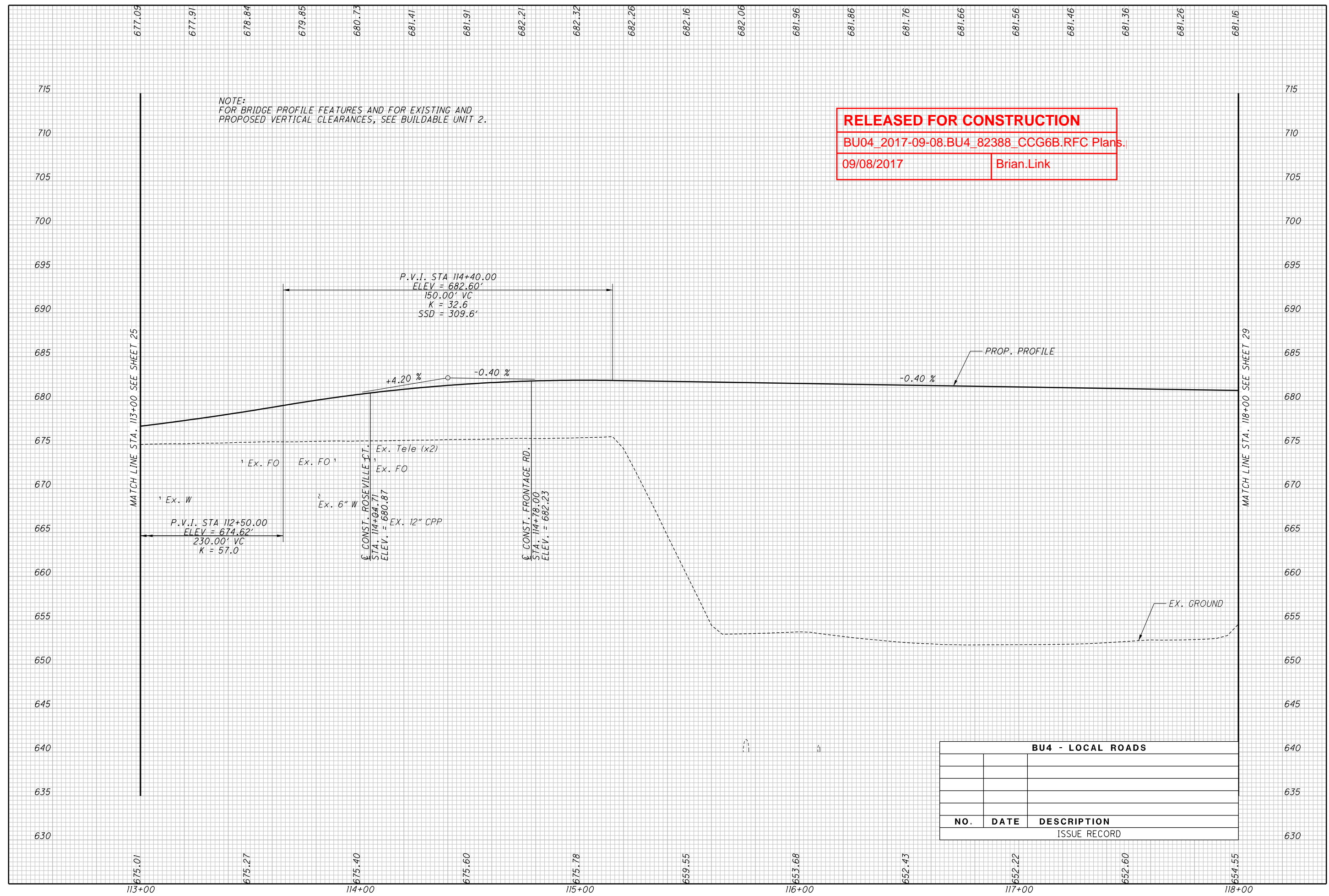
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 STA. 114+45.73, 24' RT @ CONST. BROADWAY AVE.  
 STA. 52+31.76, 41.46' RT @ CONST. ROSEVILLE CT.

FOR PROFILE, SEE SHEET 27  
 FOR INTERSECTION DETAILS, SEE SHEET 50  
 FOR UNDERDRAIN DETAILS, SEE SHEET 58  
 FOR TRAFFIC CONTROL PLANS, SEE SHEET 61.  
 FOR DRAINAGE, SEE BU-6  
 FOR LIGHTING, SEE BU-8

BU4 - LOCAL ROADS		
NO.	DATE	DESCRIPTION

ISSUE RECORD

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BU4 - LOCAL ROADS		
NO.	DATE	DESCRIPTION
		ISSUE RECORD

CALCULATED  
KRF  
CHECKED  
JTW

**PROFILE - BROADWAY AVENUE**  
**STA. 113+00.00 TO STA. 118+00.00**

**CUY-77-13.80**

27  
67

**RELEASED FOR CONSTRUCTION**  
 BU04\_2017.01.09\_CCG6B.BU4.RFC Plans\_FC4.pd  
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BROADWAY AVE.  
 P.I. Sta. 120+15.29  
 $\Delta = 1^\circ 35' 06''$  (LT)  
 $D_c = 2^\circ 00' 00''$   
 $R = 2,864.79'$   
 $T = 39.63'$   
 $L = 79.25'$   
 $E = 0.27'$   
 $C = 79.24'$   
 $C.B. = S 37^\circ 16' 15'' E$   
 $e_{max} = NC$

END WORK  
 STA. 121+38.00 @ CONST.  
 BROADWAY AVE.

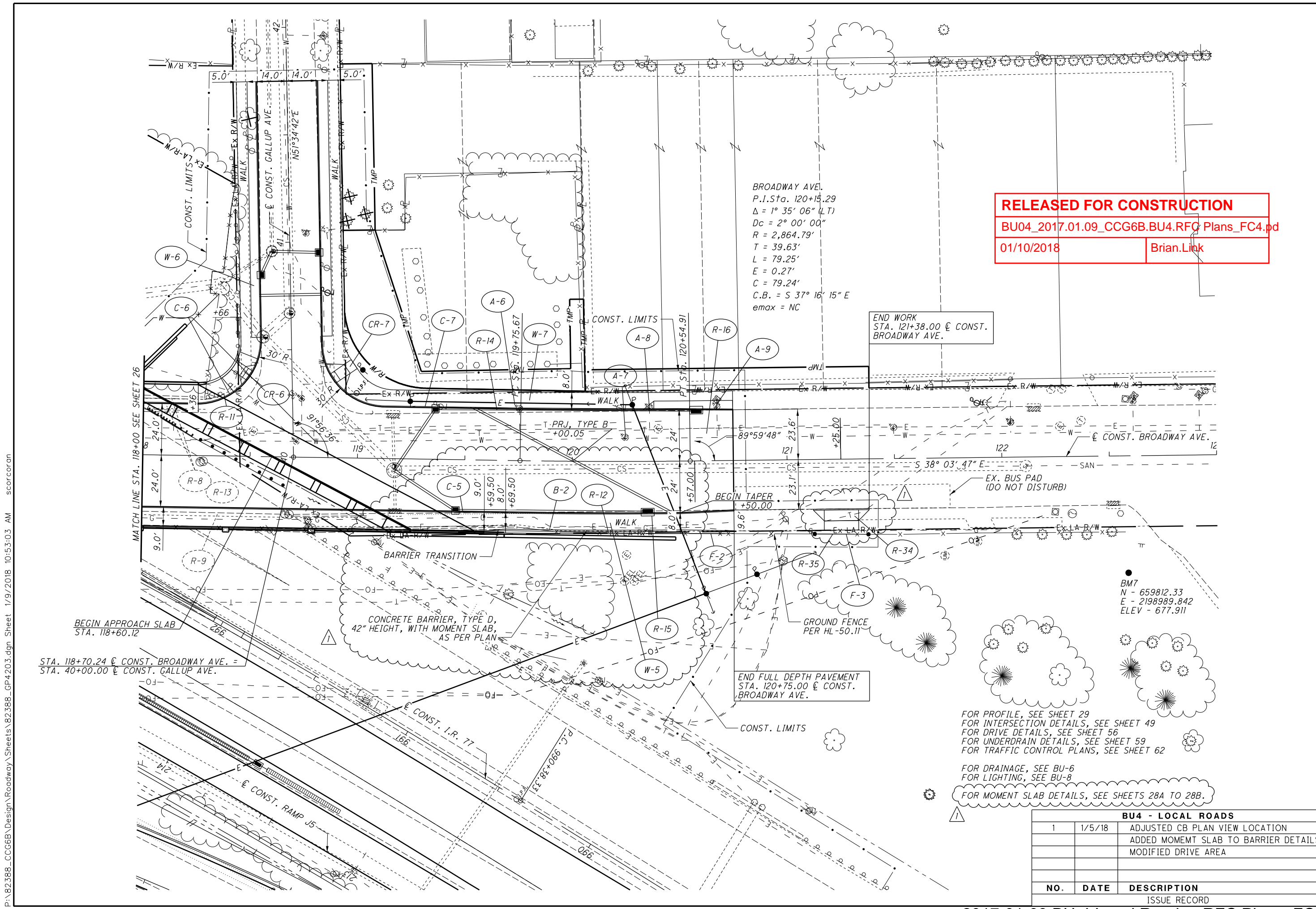
END FULL DEPTH PAVEMENT  
 STA. 120+75.00 @ CONST.  
 BROADWAY AVE.

BM7  
 N - 659812.33  
 E - 2198989.842  
 ELEV - 677.911

FOR PROFILE, SEE SHEET 29  
 FOR INTERSECTION DETAILS, SEE SHEET 49  
 FOR DRIVE DETAILS, SEE SHEET 56  
 FOR UNDERDRAIN DETAILS, SEE SHEET 59  
 FOR TRAFFIC CONTROL PLANS, SEE SHEET 62

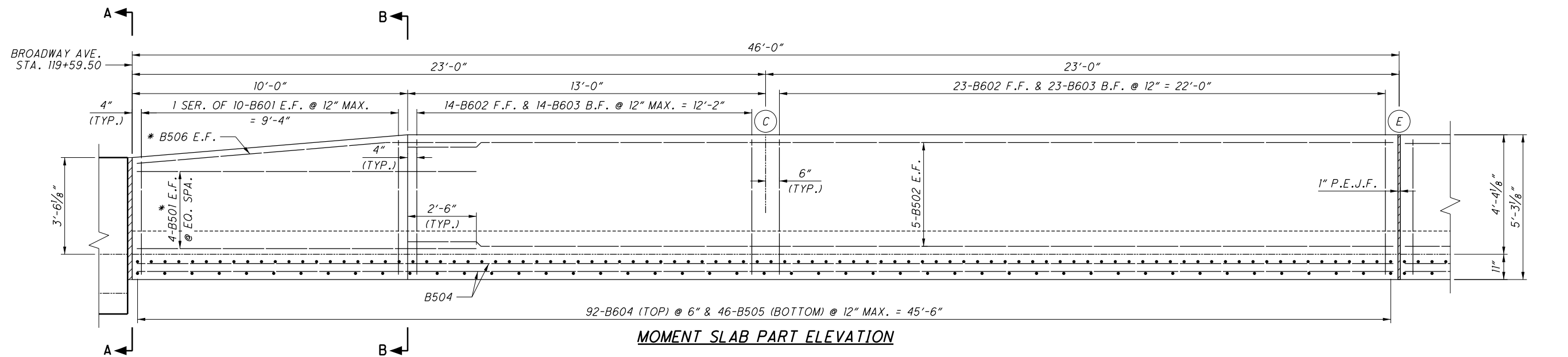
FOR DRAINAGE, SEE BU-6  
 FOR LIGHTING, SEE BU-8  
 FOR MOMENT SLAB DETAILS, SEE SHEETS 28A TO 28B.

BU4 - LOCAL ROADS		
NO.	DATE	DESCRIPTION
1	1/5/18	ADJUSTED CB PLAN VIEW LOCATION
		ADDED MOMENT SLAB TO BARRIER DETAILS
		MODIFIED DRIVE AREA
ISSUE RECORD		

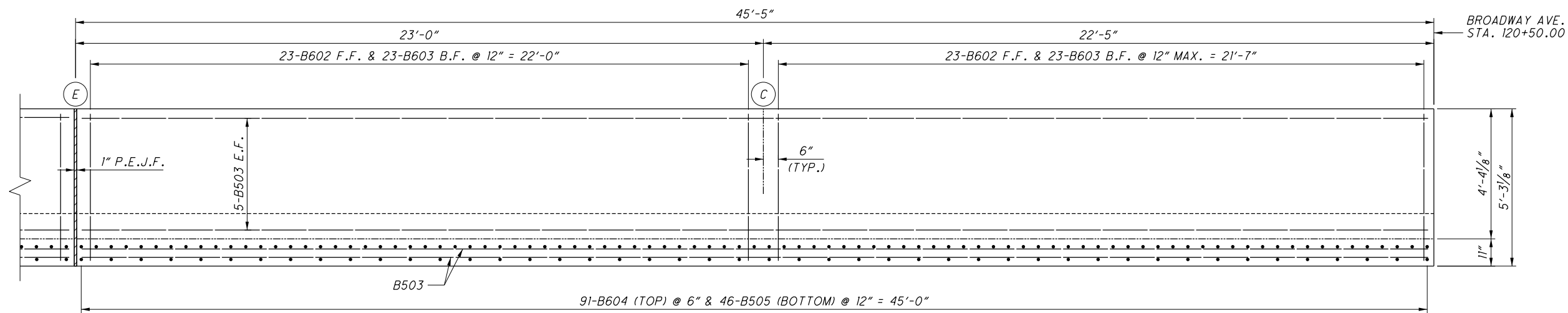


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**MOMENT SLAB PART ELEVATION**



**MOMENT SLAB PART ELEVATION**

**LEGEND:**

- (C) - DESIGNATES CRACK CONTROL JOINT
- (E) - DESIGNATES EXPANSION JOINT
- \* - BEND B501 AND B506 BARS AS NECESSARY TO FIT BARRIER TRANSITION

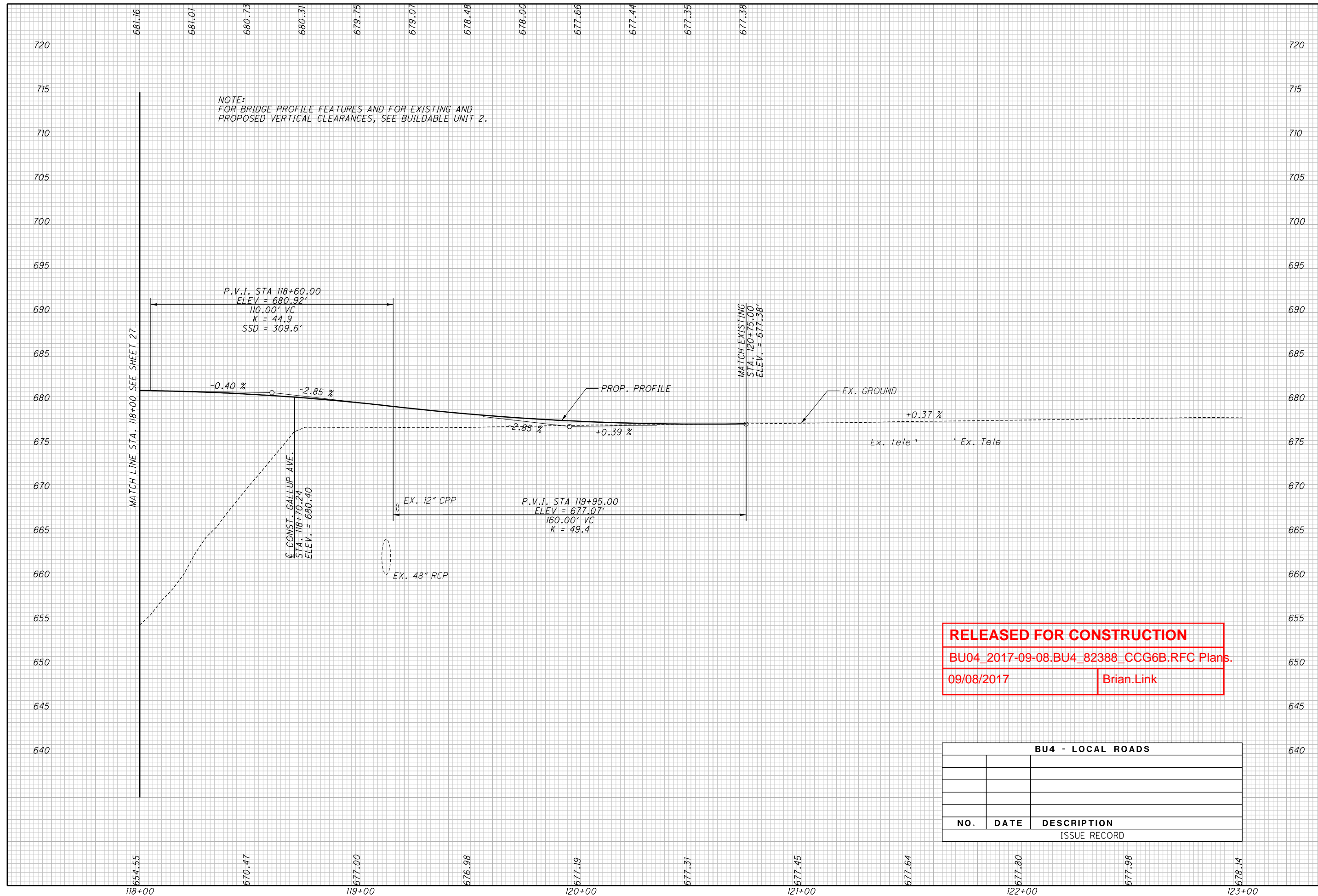
**NOTES:**

1. FOR SECTIONS A-A & B-B, SEE SHEET 28B.
2. FOR REINFORCING LIST, SEE SHEET 28B.

BU4 - LOCAL ROADS		
NO.	DATE	DESCRIPTION
1	1/5/18	ADDED MOMENT SLAB TO BARRIER DETAILS
ISSUE RECORD		

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BU4 - LOCAL ROADS		
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ISSUE RECORD		

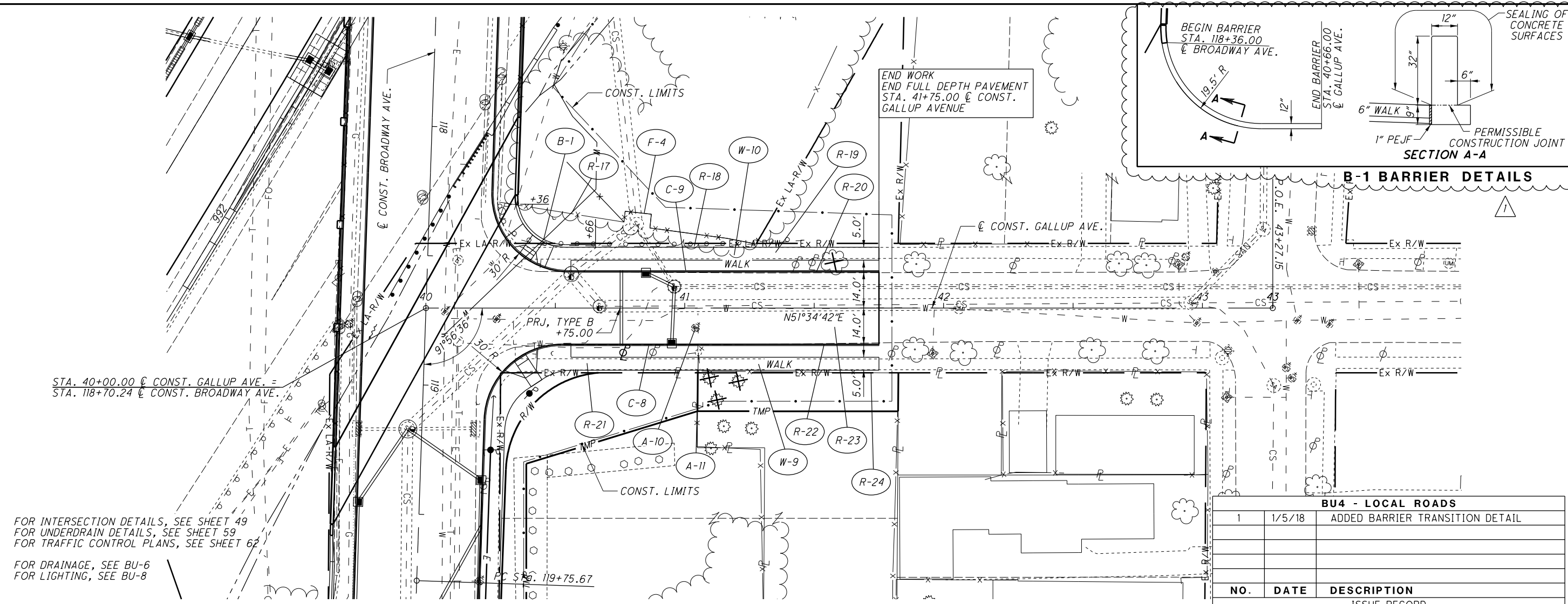
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JTW

**PROFILE - BROADWAY AVENUE  
 STA. 118+00.00 TO STA. 123+00.00**

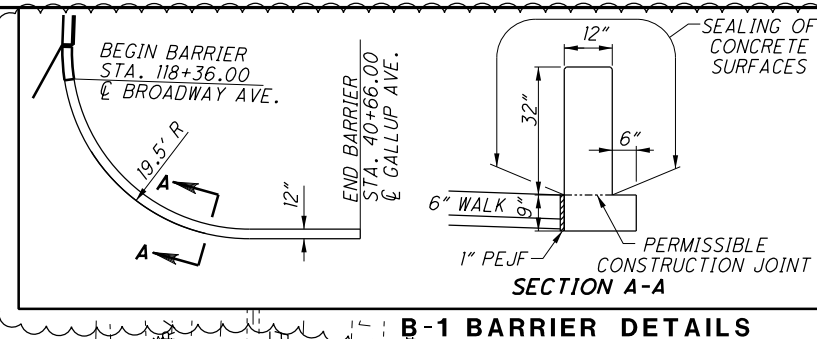
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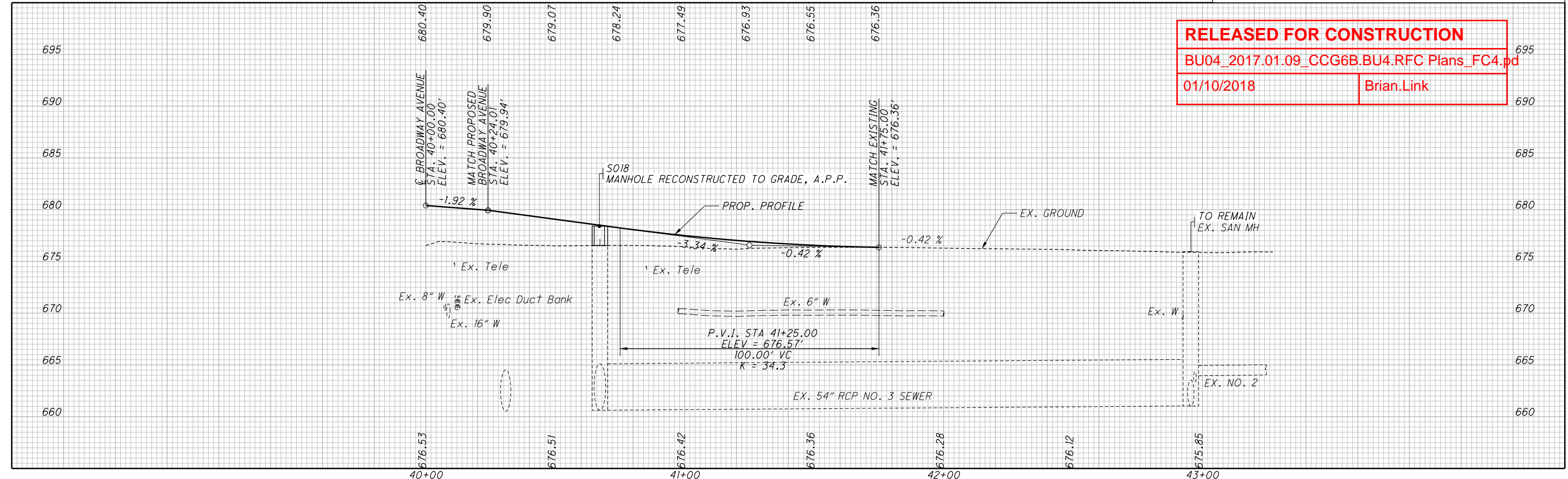
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FOR INTERSECTION DETAILS, SEE SHEET 49  
 FOR UNDERDRAIN DETAILS, SEE SHEET 59  
 FOR TRAFFIC CONTROL PLANS, SEE SHEET 62  
 FOR DRAINAGE, SEE BU-6  
 FOR LIGHTING, SEE BU-8



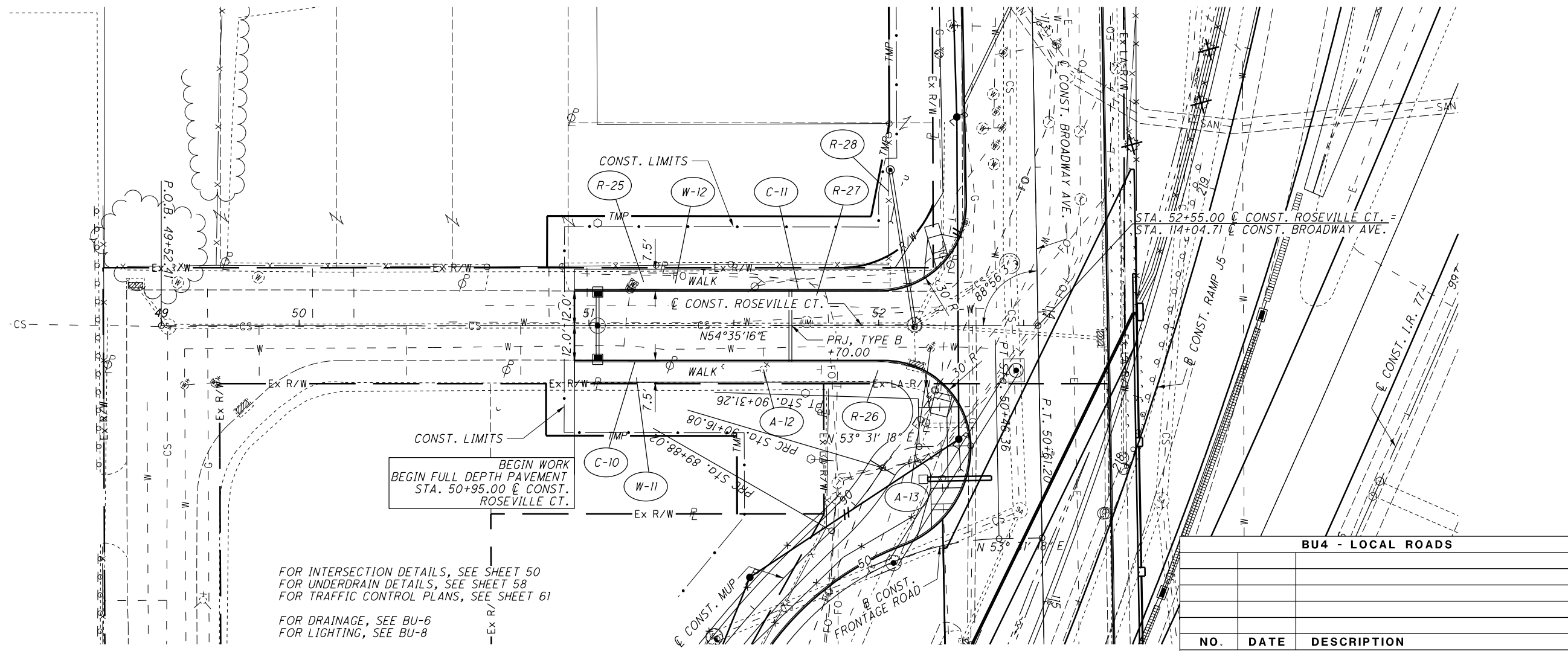
BU4 - LOCAL ROADS		
1	1/5/18	ADDED BARRIER TRANSITION DETAIL
NO.	DATE	DESCRIPTION
ISSUE RECORD		



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PLAN AND PROFILE - GALLUP AVENUE  
 STA. 40+24.01 TO END WORK  
 CUY-77-13.80  
 30  
 67

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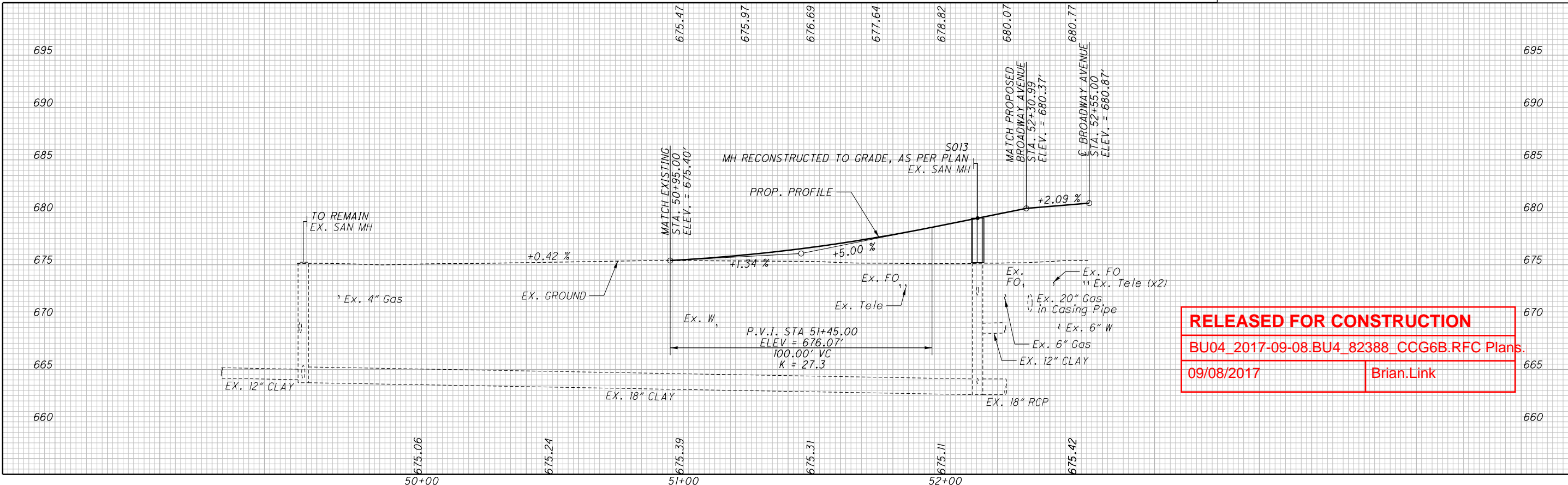


FOR INTERSECTION DETAILS, SEE SHEET 50  
 FOR UNDERDRAIN DETAILS, SEE SHEET 58  
 FOR TRAFFIC CONTROL PLANS, SEE SHEET 61  
 FOR DRAINAGE, SEE BU-6  
 FOR LIGHTING, SEE BU-8

BEGIN WORK  
 BEGIN FULL DEPTH PAVEMENT  
 STA. 50+95.00 @ CONST.  
 ROSEVILLE CT.

STA. 52+55.00 @ CONST. ROSEVILLE CT. =  
 STA. 114+04.71 @ CONST. BROADWAY AVE.

BU4 - LOCAL ROADS		
NO.	DATE	DESCRIPTION
ISSUE RECORD		



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CALCULATED KRF  
 CHECKED JTJW

PLAN AND PROFILE - ROSEVILLE COURT  
 BEGIN WOKR TO STA. 52+30.99

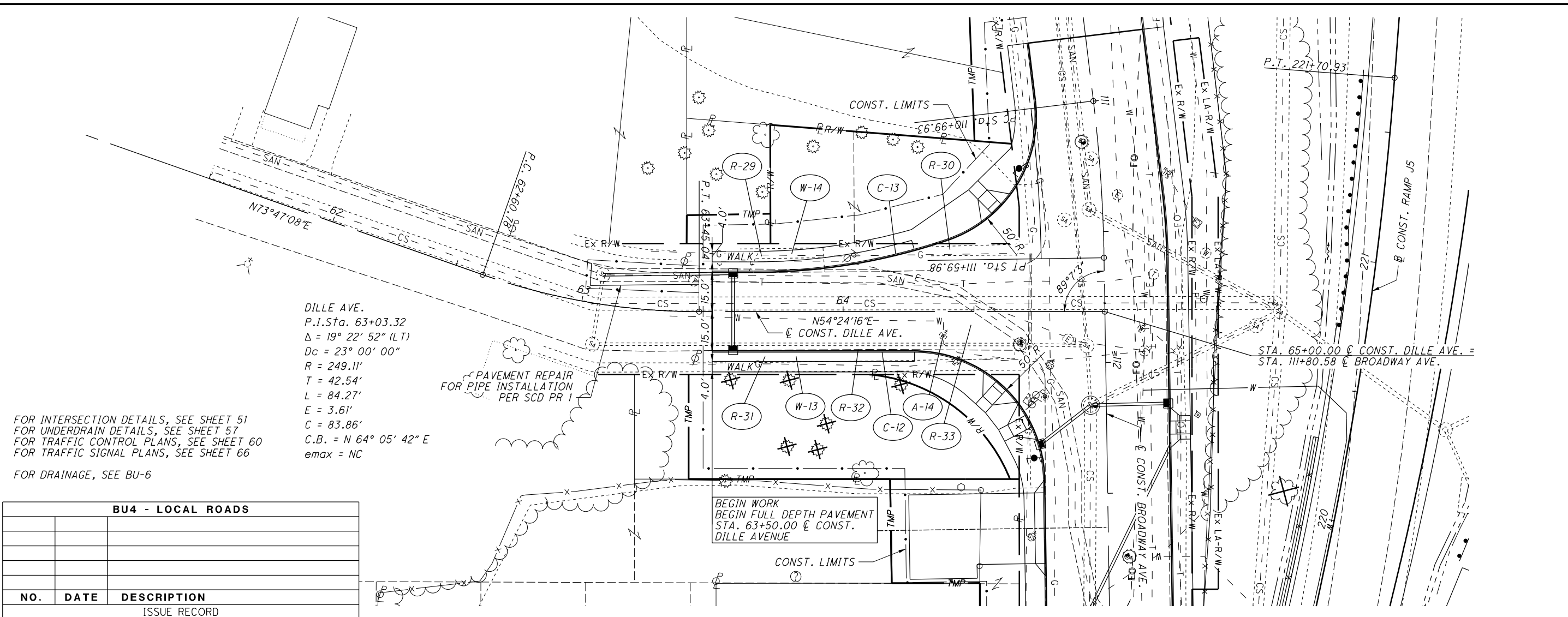
CUY-77-13.80



CALCULATED  
KRF  
CHECKED  
JTW

**PLAN AND PROFILE - DILLE AVENUE  
BEGIN WOKR TO STA. 64+75.99**

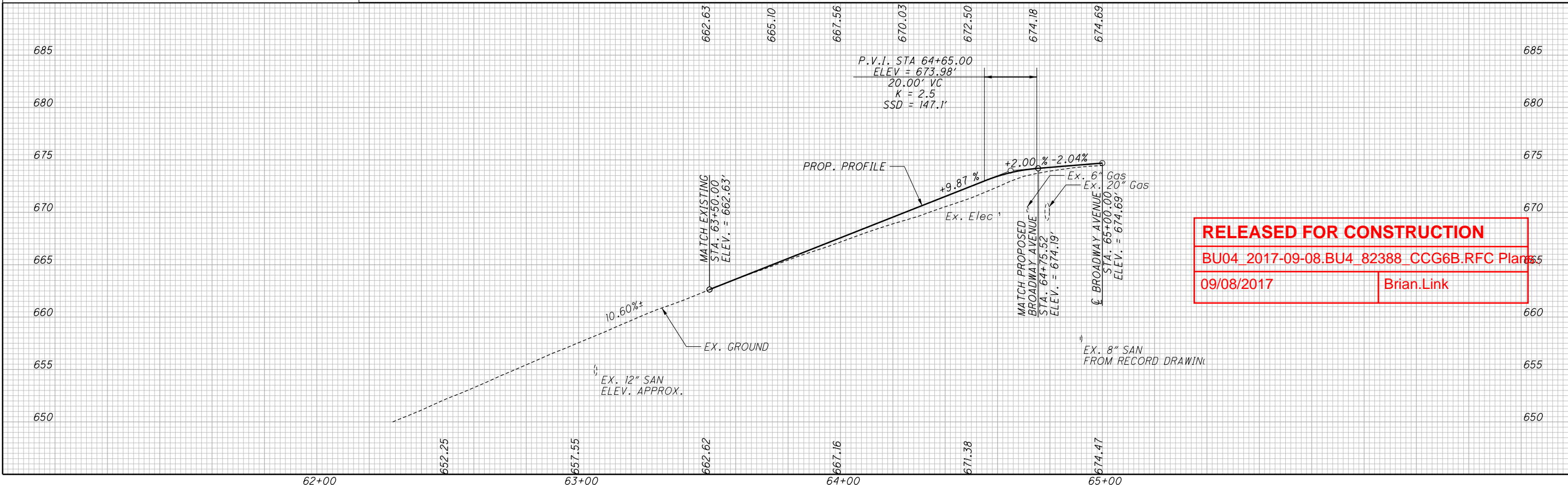
**CUY-77-13.80**



DILLE AVE.  
 P.I. Sta. 63+03.32  
 $\Delta = 19^\circ 22' 52''$  (LT)  
 $D_c = 23^\circ 00' 00''$   
 $R = 249.11'$   
 $T = 42.54'$   
 $L = 84.27'$   
 $E = 3.61'$   
 $C = 83.86'$   
 $C.B. = N 64^\circ 05' 42'' E$   
 $e_{max} = NC$

FOR INTERSECTION DETAILS, SEE SHEET 51  
 FOR UNDERDRAIN DETAILS, SEE SHEET 57  
 FOR TRAFFIC CONTROL PLANS, SEE SHEET 60  
 FOR TRAFFIC SIGNAL PLANS, SEE SHEET 66  
 FOR DRAINAGE, SEE BU-6

BU4 - LOCAL ROADS		
NO.	DATE	DESCRIPTION
ISSUE RECORD		



**RELEASED FOR CONSTRUCTION**  
 BU04\_2017-09-08.BU4\_82388\_CCG6B.RFC Plans  
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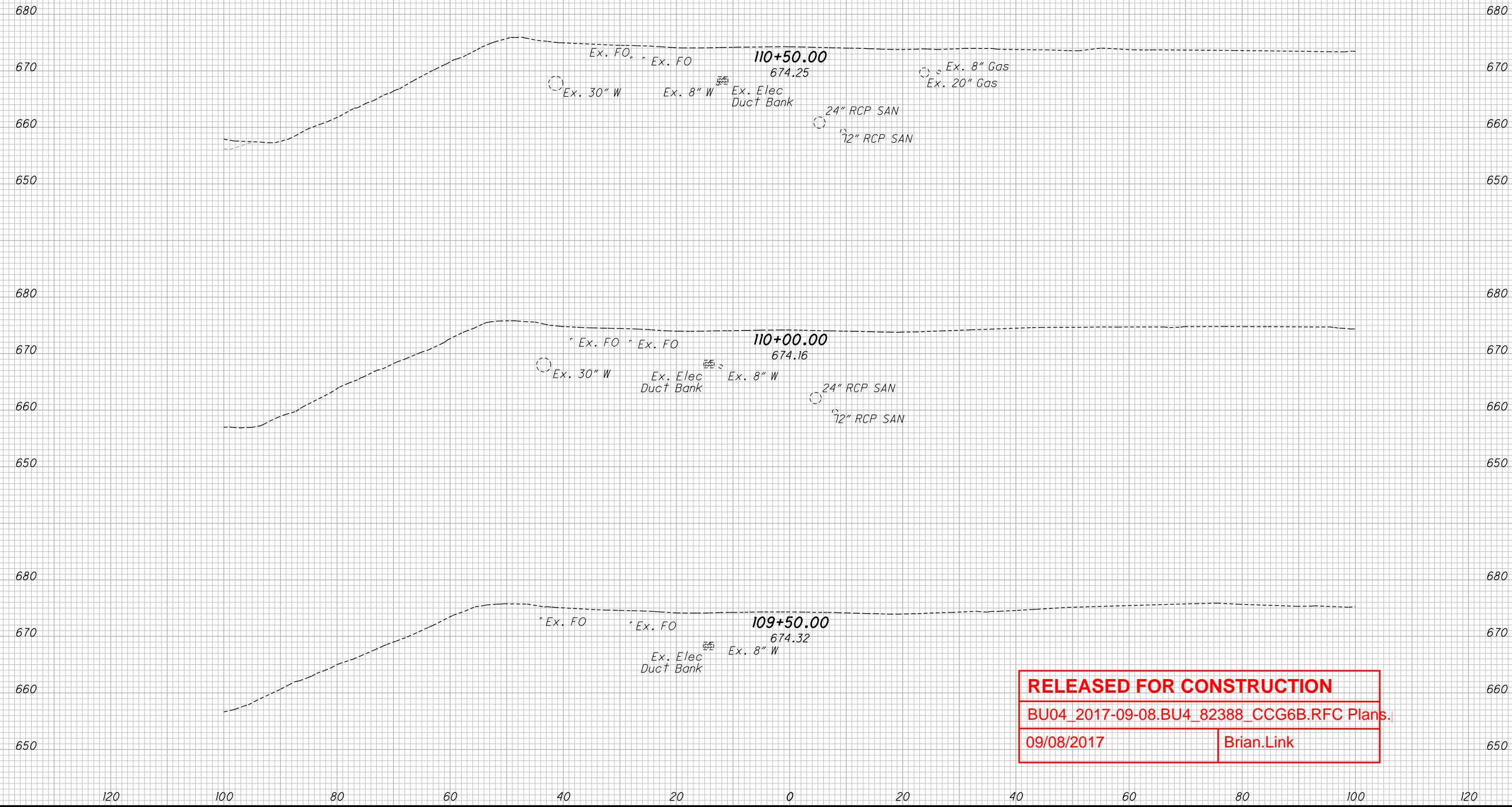
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SEEDING  
END SO.  
WIDTH YDS.

BU4 - LOCAL ROADS		
NO.	DATE	DESCRIPTION
		ISSUE RECORD

END AREA		VOLUME		CALCULATED	DWB	CHECKED	JWT
CUT	FILL	CUT	FILL				



**RELEASED FOR CONSTRUCTION**  
 BU04\_2017-09-08.BU4\_82388\_CCG6B.RFC Plans.  
 09/08/2017 Brian.Link

CROSS SECTIONS - BROADWAY AVE.  
 STA. 109+50.00 TO STA. 110+50.00

CUY-77-13.80

33  
67

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SEEDING	
END WIDTH	SO. YDS.

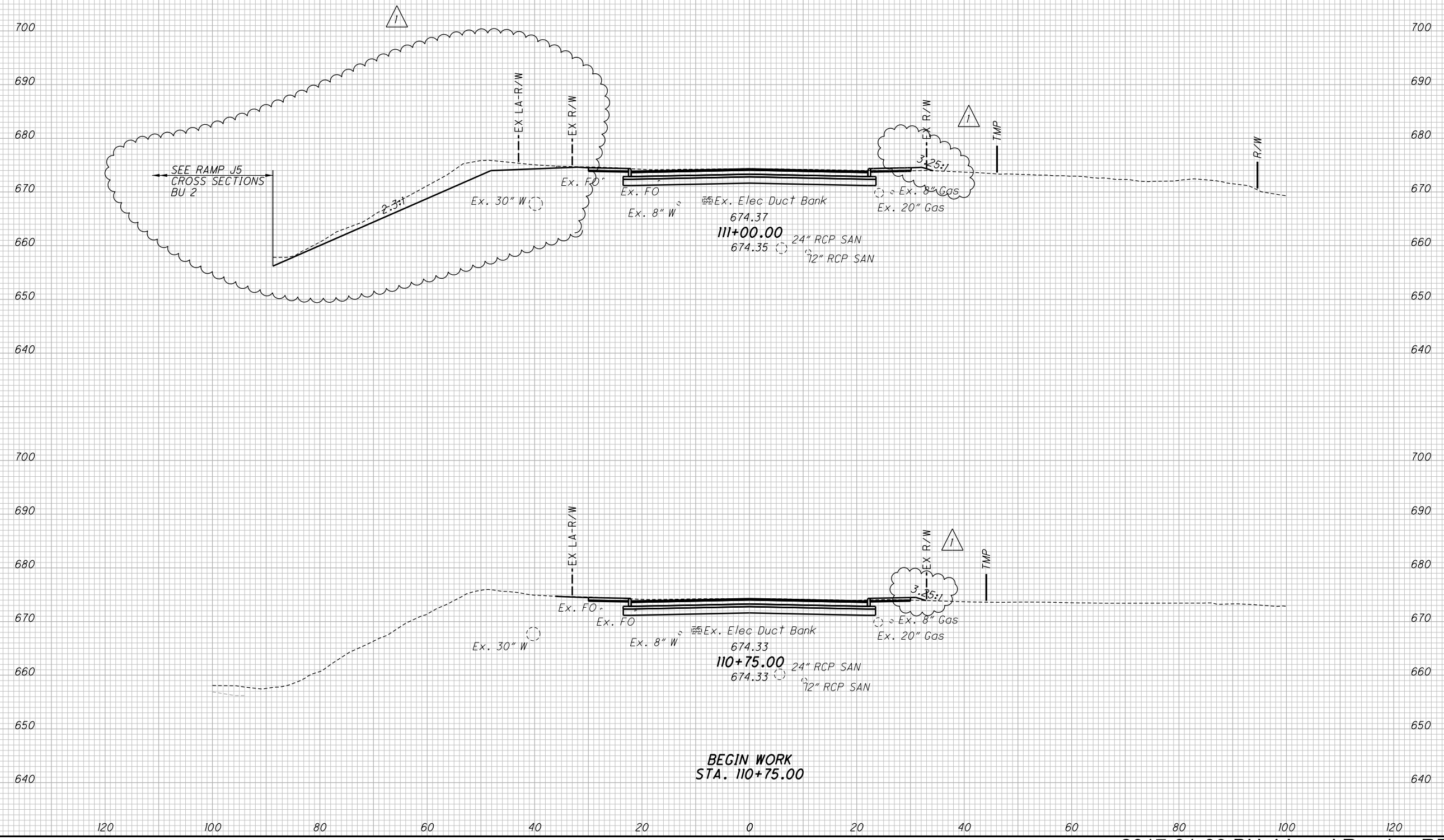
BU4 - LOCAL ROADS		
1	1/5/18	MODIFIED GRADING
NO.	DATE	DESCRIPTION
ISSUE RECORD		

RELEASED FOR CONSTRUCTION

BU04\_2017.01.09\_CCG6B.BU4.RFC Plans\_FC4.pd

01/10/2018      Brian.Link

END AREA	VOLUME	CALCULATED	DWB	CHECKED	JWT		
						CUT	FILL
CROSS SECTIONS - BROADWAY AVE.							
STA. 110+75.00 TO STA. 111+00.00							
CUY-77-13.80							
<table border="1" style="margin: auto;"> <tr> <td style="width: 20px; text-align: center;">34</td> </tr> <tr> <td style="width: 20px; text-align: center;">67</td> </tr> </table>						34	67
34							
67							



**BEGIN WORK  
STA. 110+75.00**

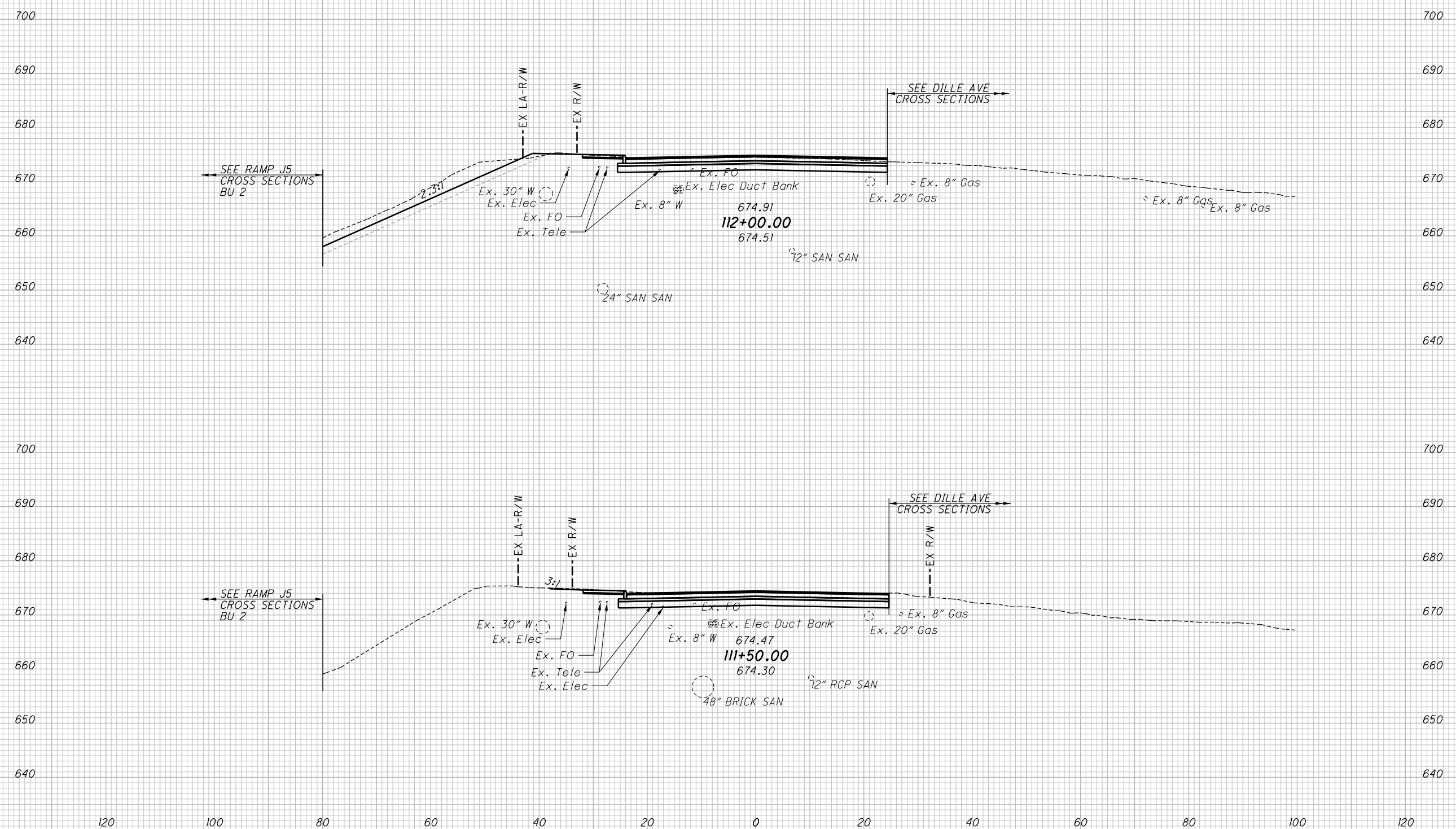
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SEEDING  
END SO.  
WIDTH YDS.

BU4 - LOCAL ROADS		
NO.	DATE	DESCRIPTION
		ISSUE RECORD

END AREA		VOLUME		CALCULATED	DWB	CHECKED	JWT
CUT	FILL	CUT	FILL				

**RELEASED FOR CONSTRUCTION**  
 BU04\_2017-09-08.BU4\_82388\_CCG6B.RFC Plans.  
 09/08/2017 Brian.Link



CROSS SECTIONS - BROADWAY AVE.  
 STA. 111+50.00 TO STA. 112+00.00

CUY-77-13.80

35  
67

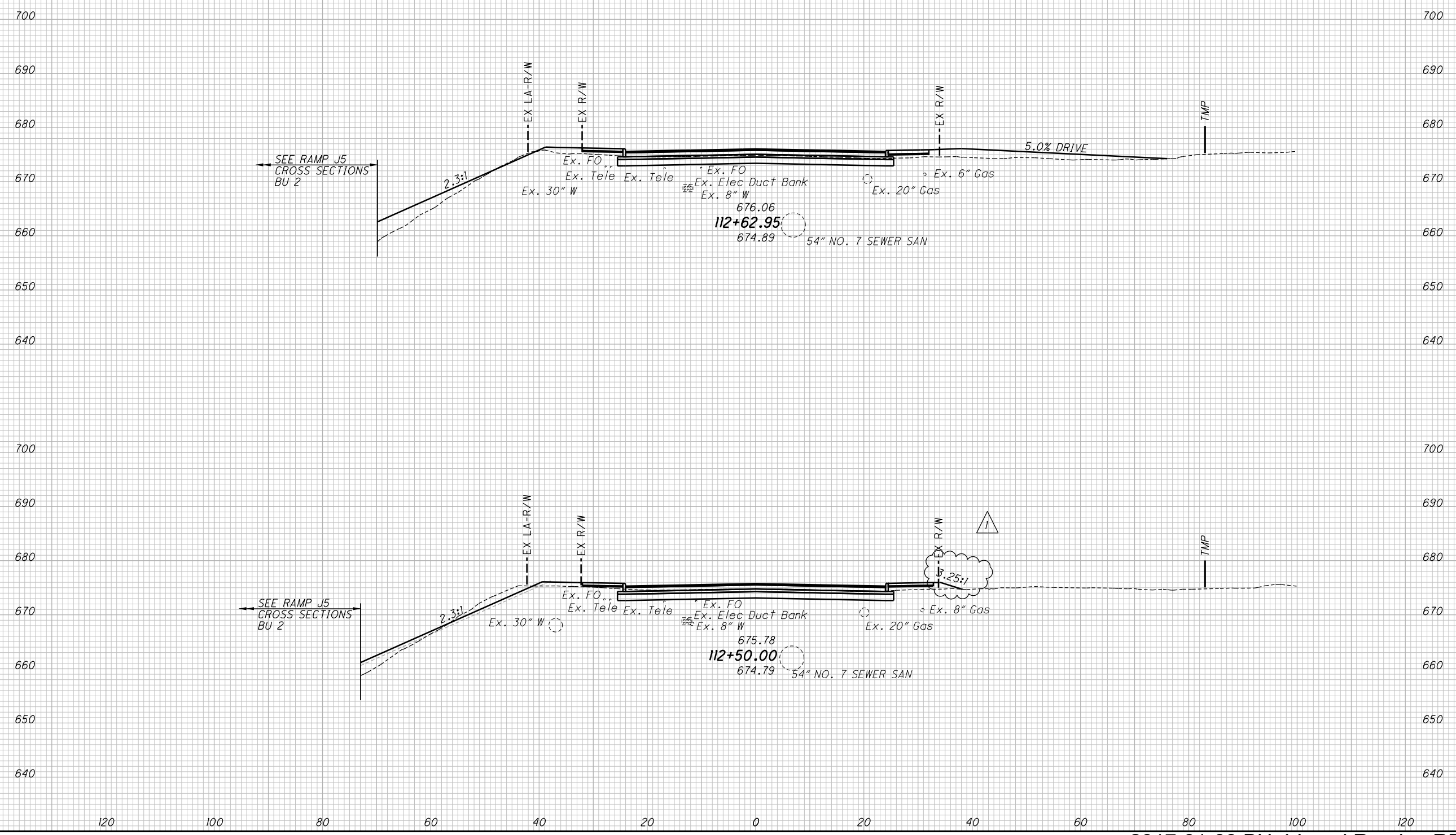
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SEEDING  
END SO.  
WIDTH YDS.

BU4 - LOCAL ROADS		
1	1/5/18	CHANGED 3:1 SLOPES TO 3.25:1
NO.	DATE	DESCRIPTION
ISSUE RECORD		

**RELEASED FOR CONSTRUCTION**  
 BU04\_2017.01.09\_CCG6B.BU4.RFC Plans\_FC4.pd  
 01/10/2018 Brian.Link

END AREA		VOLUME		CALCULATED	DWB	CHECKED	JWT
CUT	FILL	CUT	FILL				



CROSS SECTIONS - BROADWAY AVE.  
 STA. 112+50.00 TO STA. 112+62.95

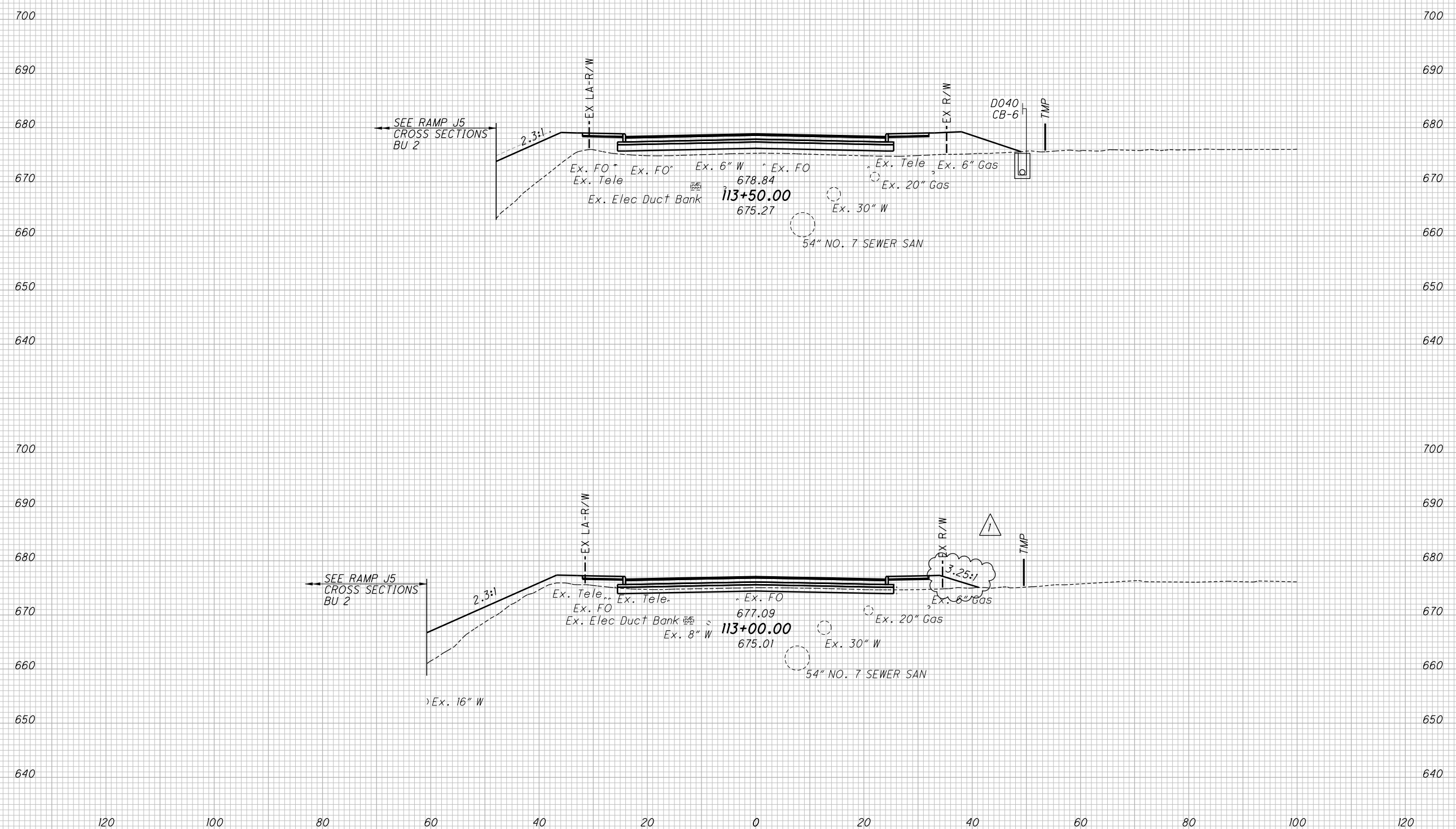
CUY-77-13.80

36  
67

SEEDING  
END SO.  
WIDTH YDS.  
P:\82388\_CCG6B\Design\Roadway\Sheets\82388\_XS3100.dgn XS\_SHEET\_temporary\_model\_name\_5 1/9/2018 10:53:19 AM scorcoran

BU4 - LOCAL ROADS			END AREA		VOLUME		CALCULATED	
NO.	DATE	DESCRIPTION	CUT	FILL	CUT	FILL	DWB	CHECKED
1	1/5/18	CHANGED 3:1 SLOPES TO 3.25:1						
ISSUE RECORD								

**RELEASED FOR CONSTRUCTION**  
 BU04\_2017.01.09\_CCG6B.BU4.RFC Plans\_FC4.pd  
 01/10/2018 Brian.Link



CROSS SECTIONS - BROADWAY AVE.  
 STA. 113+00.00 TO STA. 113+50.00  
 CUY-77-13.80

37  
67





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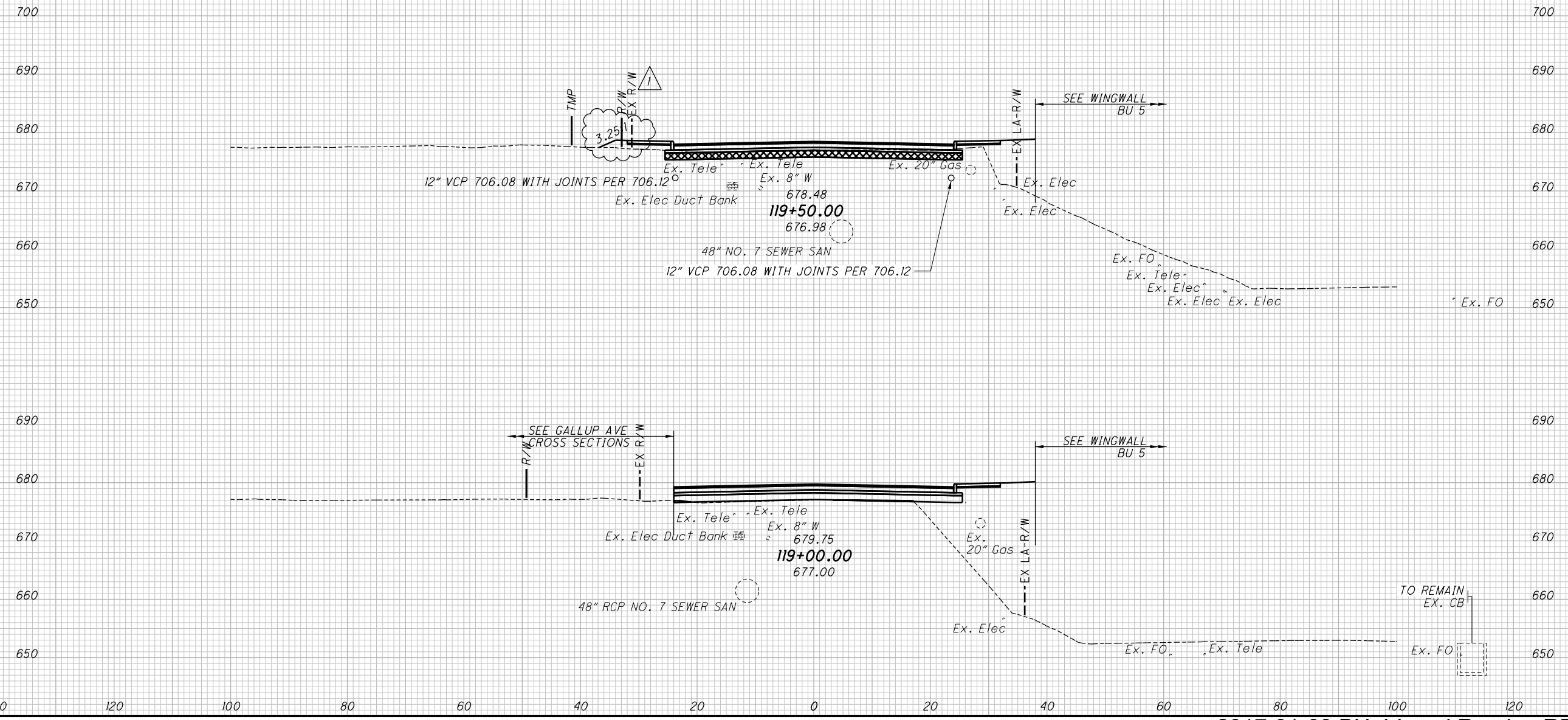
SEEDING	
END WIDTH	SO. YDS.
140	
120	
100	
80	
60	
40	
20	
0	
20	
40	
60	
80	
100	
120	

**RELEASED FOR CONSTRUCTION**  
 BU04\_2017.01.09\_CCG6B.BU4.RFC Plans\_FC4.pd  
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BU4 - LOCAL ROADS		
1	1/5/18	CHANGED 3:1 SLOPES TO 3.25:1
NO.	DATE	DESCRIPTION
ISSUE RECORD		

END AREA	VOLUME	CALCULATED	DWB	CHECKED	JWT
<b>CROSS SECTIONS - BROADWAY AVE.</b> <b>STA. 119+00.00 TO STA. 119+50.00</b>					
<b>CUY-77-13.80</b>					
<span style="border: 1px solid black; border-radius: 50%; padding: 2px 5px;">39</span> <span style="border: 1px solid black; border-radius: 50%; padding: 2px 5px;">67</span>					

ITEM 204 - EXCAVATION OF SUBGRADE



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SEEDING	
END WIDTH	SO. YDS.
140	
120	
100	
80	
60	
40	
20	
0	
20	
40	
60	
80	
100	
120	


**RELEASED FOR CONSTRUCTION**  
 BU04\_2017.01.09\_CCG6B.BU4.RFC Plans\_FC4.pd  
 01/10/2018 Brian.Link

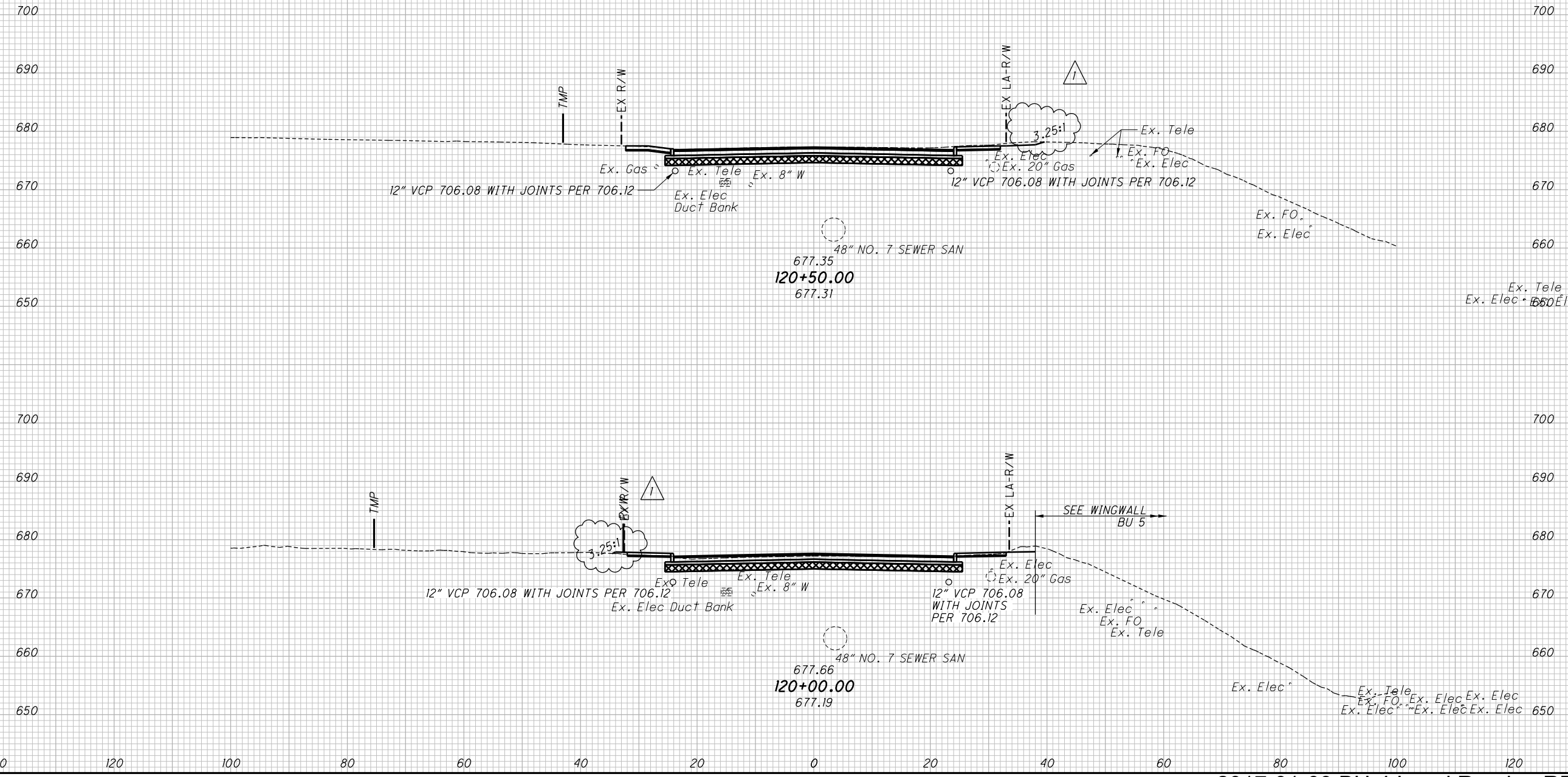
BU4 - LOCAL ROADS		
NO.	DATE	DESCRIPTION
1	1/5/18	CHANGED 3:1 SLOPES TO 3.25:1
ISSUE RECORD		

END AREA		VOLUME		CALCULATED	DWB	CHECKED	JWT
CUT	FILL	CUT	FILL				

<b>CROSS SECTIONS - BROADWAY AVE.</b>	
<b>STA. 120+00.00 TO STA. 120+50.00</b>	
<b>CUY-77-13.80</b>	
40	67

 ITEM 204 - EXCAVATION OF SUBGRADE





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SEEDING  
END SO.  
WIDTH YDS.

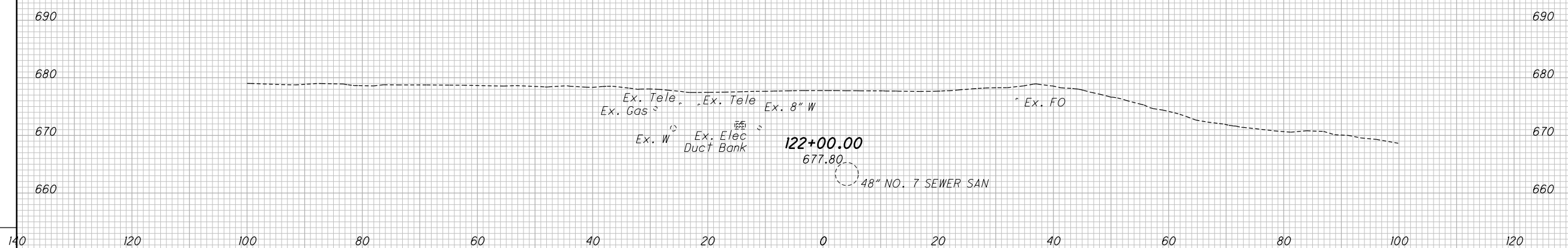
BU4 - LOCAL ROADS			END AREA		VOLUME	
			CUT	FILL	CUT	FILL
NO.	DATE	DESCRIPTION				
		ISSUE RECORD				

**RELEASED FOR CONSTRUCTION**  
 BU04\_2017-09-08.BU4\_82388\_CCG6B.RFC Plans  
 09/08/2017 Brian.Link

CROSS SECTIONS - BROADWAY AVE.  
 STA. 122+00.00

CUY-77-13.80

42  
67











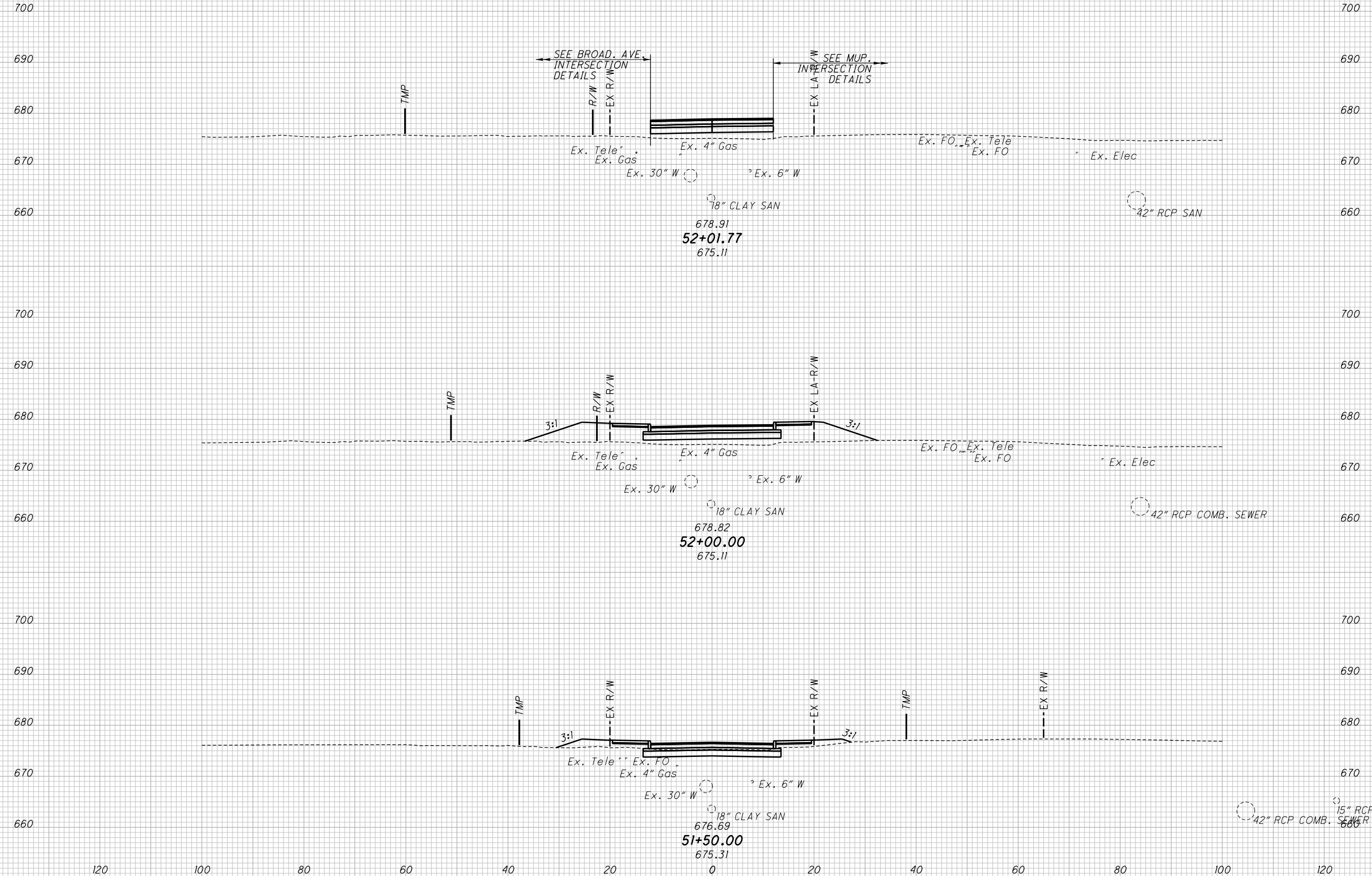
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SEEDING  
END SO.  
WIDTH YDS.

**RELEASED FOR CONSTRUCTION**  
 BU04\_2017-09-08.BU4\_82388\_CCG6B.RFC Plans.  
 09/08/2017 Brian.Link

BU4 - LOCAL ROADS		
NO.	DATE	DESCRIPTION
		ISSUE RECORD

END AREA		VOLUME		CALCULATED	DWB	CHECKED	JTW
CUT	FILL	CUT	FILL				



**CROSS SECTIONS - ROSEVILLE CT.**  
**STA. 51+50.00 TO STA. 52+01.77**

**CUY-77-13.80**

46  
67

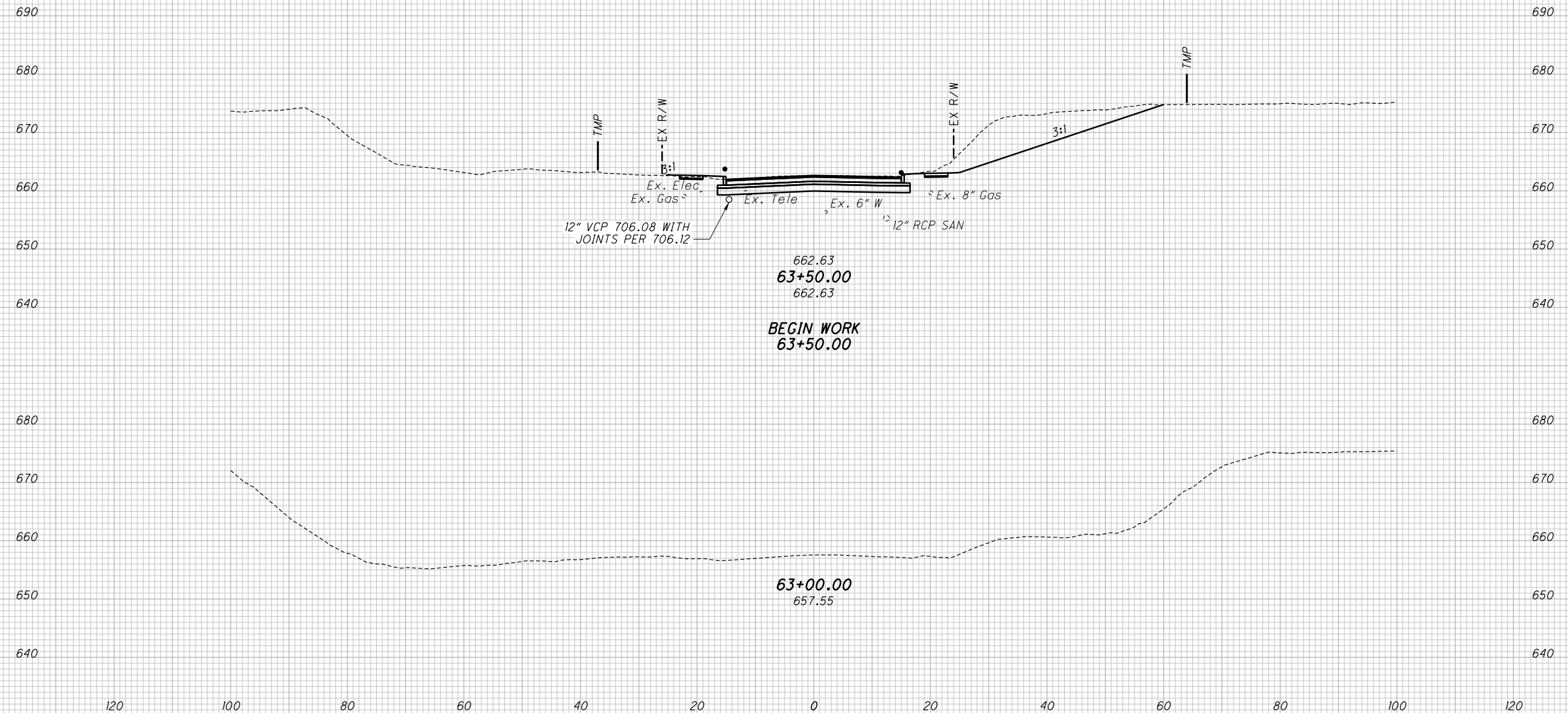
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SEEDING  
END SO.  
WIDTH YDS.

BU4 - LOCAL ROADS		
NO.	DATE	DESCRIPTION
		ISSUE RECORD

END AREA		VOLUME		CALCULATED	
CUT	FILL	CUT	FILL	DWB	JWT

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 BU04\_2017-09-08.BU4\_82388\_CCG6B.RFC Plans.  
 09/08/2017 Brian.Link



CROSS SECTIONS - DILLE AVE.  
 STA. 63+00.00 TO STA. 63+50.00

CUY-77-13.80

47  
67

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SEEDING	
END WIDTH	SO. YDS.

--	--

BU4 - LOCAL ROADS		
NO.	DATE	DESCRIPTION

END CUT	AREA FILL	VOLUME CUT	VOLUME FILL

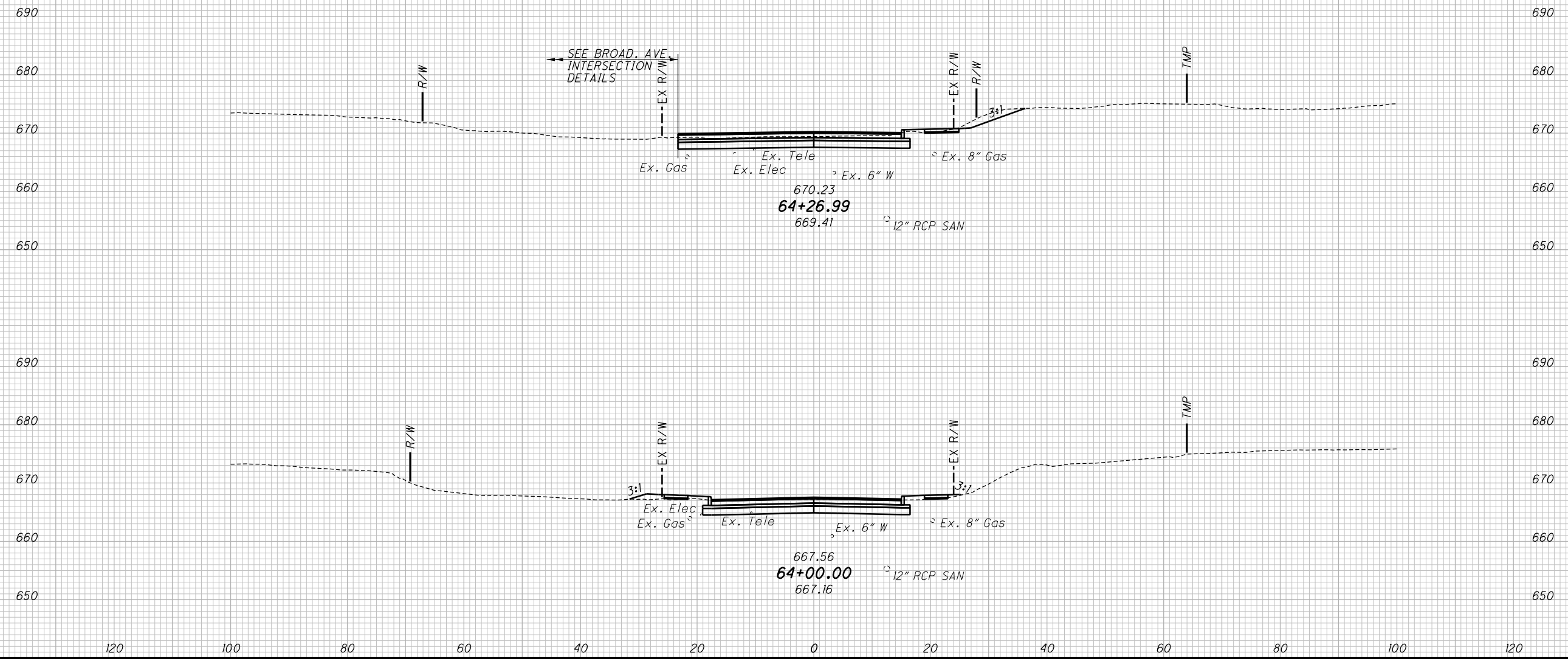


CROSS SECTIONS - DILLE AVE.  
STA. 64+00.00 TO STA. 64+26.99

CUY-77-13.80

48  
67

**RELEASED FOR CONSTRUCTION**  
BU04\_2017-09-08.BU4\_82388\_CCG6B.RFC Plans.  
09/08/2017 Brian.Link



**RELEASED FOR CONSTRUCTION**

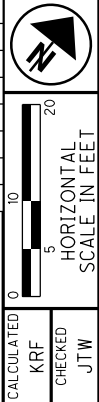
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01/10/2018

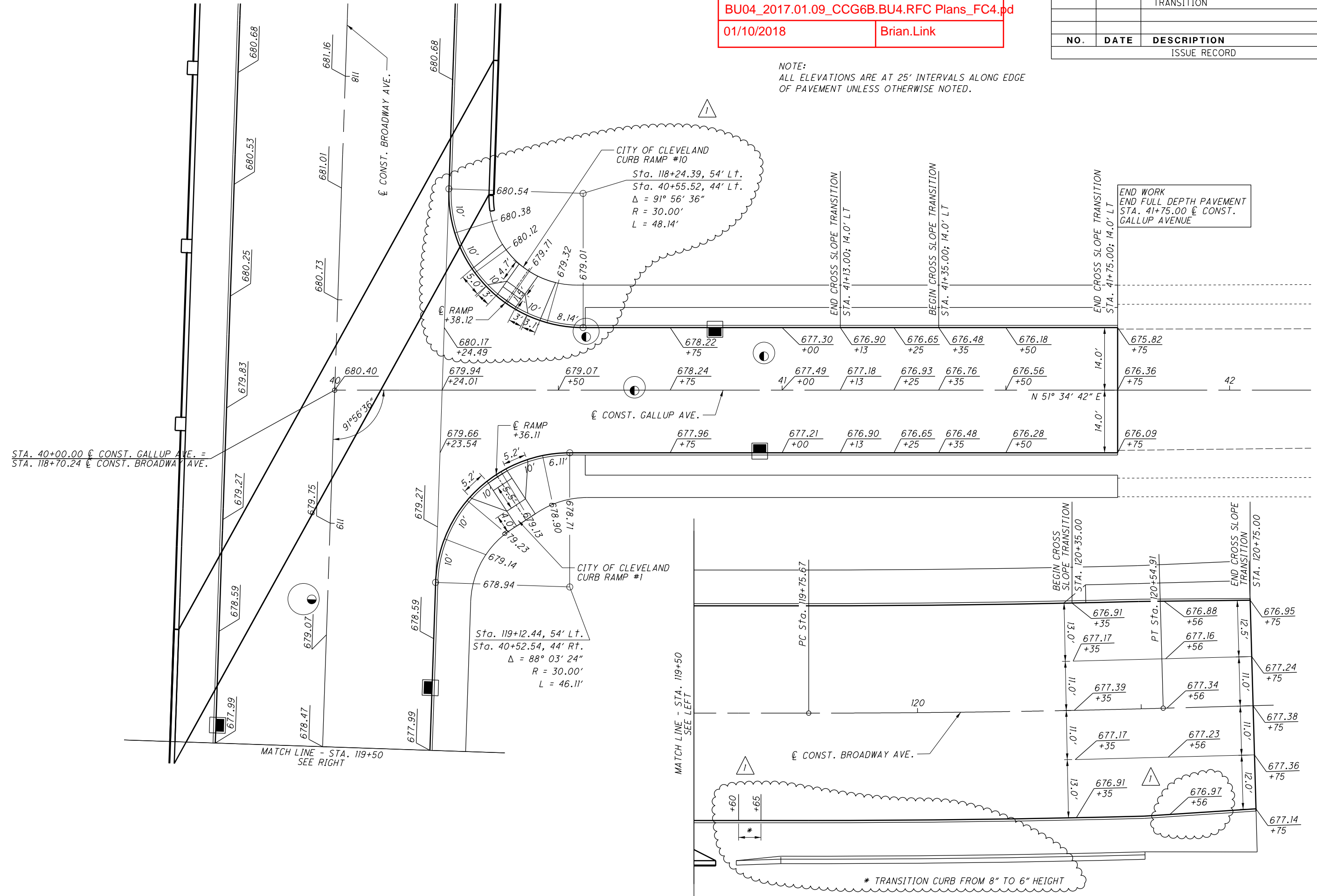
Brian.Link

**BU4 - LOCAL ROADS**

1	1/5/18	ADJUSTED PAVEMENT ELEVATION, CURB RAMP DETAIL, AND ADDED CURB TRANSITION
NO.	DATE	DESCRIPTION
		ISSUE RECORD



NOTE:  
ALL ELEVATIONS ARE AT 25' INTERVALS ALONG EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.



END WORK  
END FULL DEPTH PAVEMENT  
STA. 41+75.00 @ CONST.  
GALLUP AVENUE

STA. 40+00.00 @ CONST. GALLUP AVE. =  
STA. 118+70.24 @ CONST. BROADWAY AVE.

Sta. 119+12.44, 54' Lt.  
Sta. 40+52.54, 44' Rt.  
 $\Delta = 88^\circ 03' 24''$   
 $R = 30.00'$   
 $L = 46.11'$

CITY OF CLEVELAND  
CURB RAMP #10  
Sta. 118+24.39, 54' Lt.  
Sta. 40+55.52, 44' Lt.  
 $\Delta = 91^\circ 56' 36''$   
 $R = 30.00'$   
 $L = 48.14'$

MATCH LINE - STA. 119+50  
SEE LEFT

MATCH LINE - STA. 119+50  
SEE RIGHT

MATCH LINE - STA. 119+50  
SEE LEFT

\* TRANSITION CURB FROM 8" TO 6" HEIGHT

**INTERSECTION DETAIL  
BROADWAY AVENUE & GALLUP AVENUE**

**CUY-77-13.80**

49  
67

P:\82388\_CCG6B\Design\Roadway\Sheets\82388\_C14401.dgn Sheet 1/9/2018 10:53:21 AM scorcoran



CALCULATED  
KRF  
CHECKED  
JTW

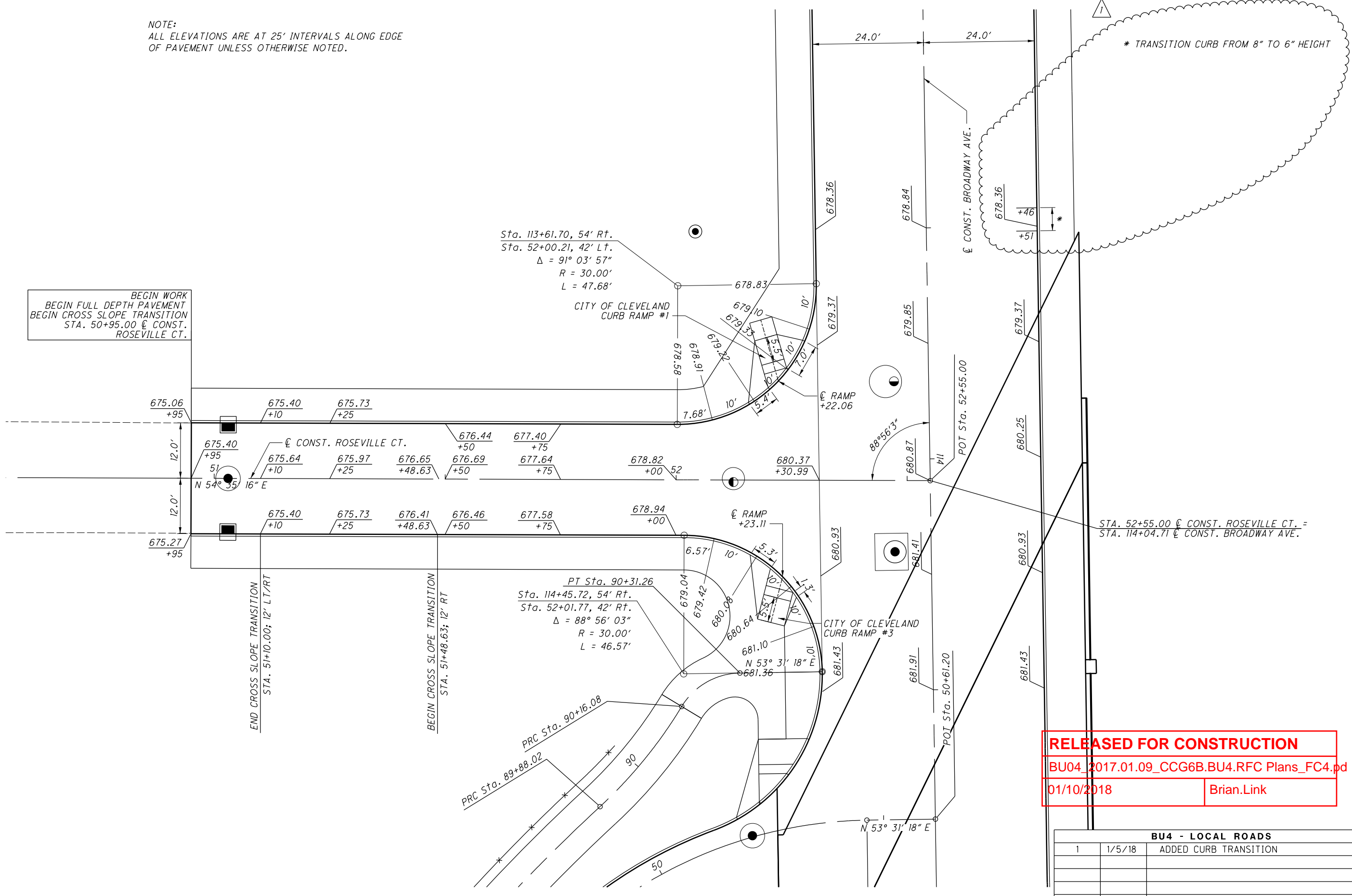
**INTERSECTION DETAIL  
BROADWAY AVENUE & ROSEVILLE COURT**

**CUY-77-13.80**

50  
67

NOTE:  
ALL ELEVATIONS ARE AT 25' INTERVALS ALONG EDGE  
OF PAVEMENT UNLESS OTHERWISE NOTED.

BEGIN WORK  
BEGIN FULL DEPTH PAVEMENT  
BEGIN CROSS SLOPE TRANSITION  
STA. 50+95.00 @ CONST.  
ROSEVILLE CT.



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01/10/2018 Brian.Link

BU4 - LOCAL ROADS		
NO.	DATE	DESCRIPTION
1	1/5/18	ADDED CURB TRANSITION

ISSUE RECORD

NOTE:
   
 ALL ELEVATIONS ARE AT 25' INTERVALS ALONG EDGE
   
 OF PAVEMENT UNLESS OTHERWISE NOTED.

Sta. 110+97.15, 72' Rt.
   
 Sta. 64+23.80, 74.61' Lt.
   
 $\Delta = 78^\circ 04' 59''$ 
  
 $R = 50.00'$ 
  
 $L = 68.14'$

Sta. 109+21.03, 109.17' Rt.
   
 Sta. 63+65.78, 245' Lt.
   
 $\Delta = 18^\circ 48' 17''$ 
  
 $R = 230.00'$ 
  
 $L = 75.49'$

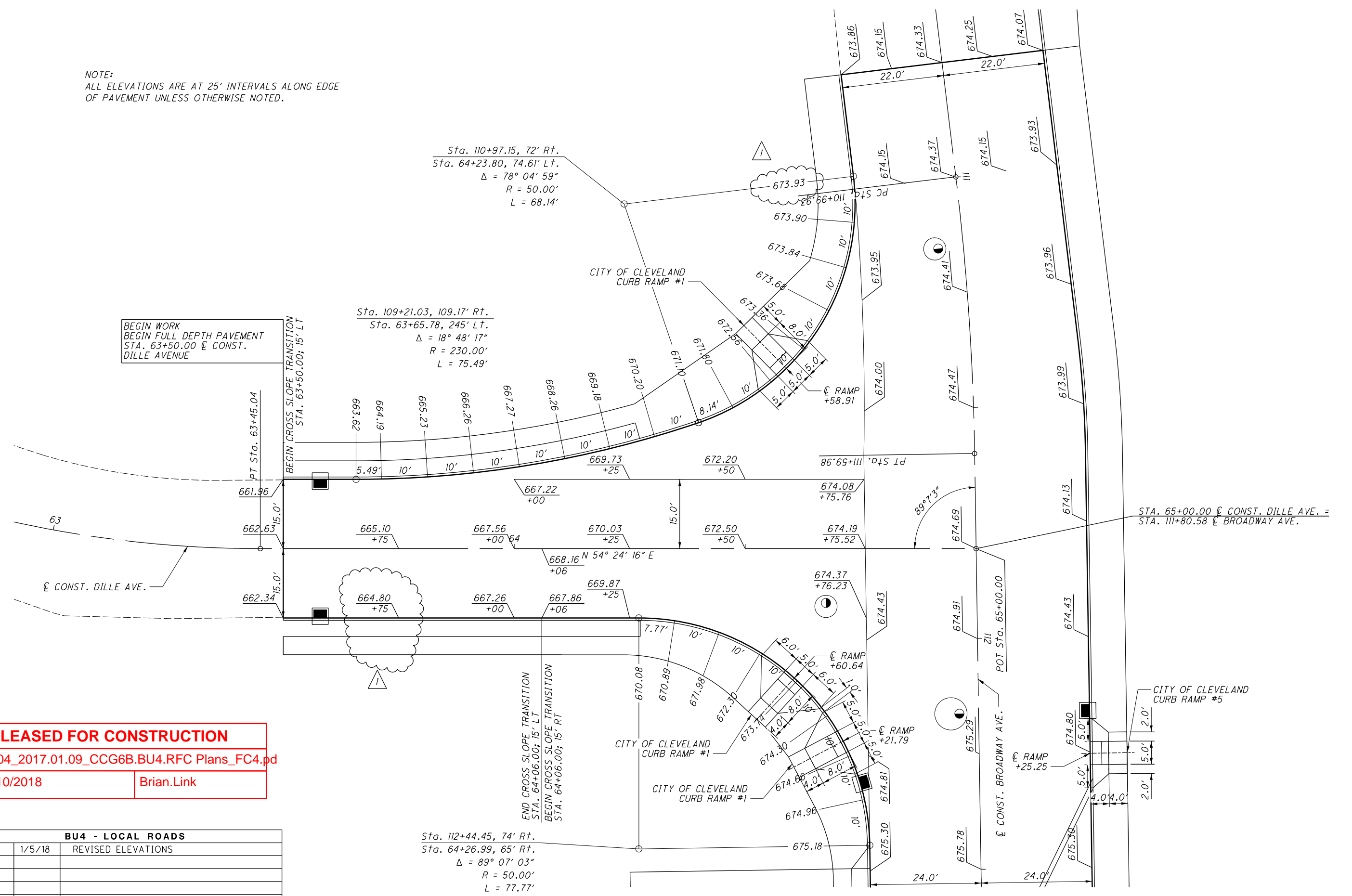
Sta. 112+44.45, 74' Rt.
   
 Sta. 64+26.99, 65' Rt.
   
 $\Delta = 89^\circ 07' 03''$ 
  
 $R = 50.00'$ 
  
 $L = 77.77'$

BEGIN WORK
   
 BEGIN FULL DEPTH PAVEMENT
   
 STA. 63+50.00 @ CONST.
   
 DILLE AVENUE

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**RELEASED FOR CONSTRUCTION**
  
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 01/10/2018      Brian.Link

BU4 - LOCAL ROADS		
NO.	DATE	DESCRIPTION
1	1/5/18	REVISED ELEVATIONS
ISSUE RECORD		



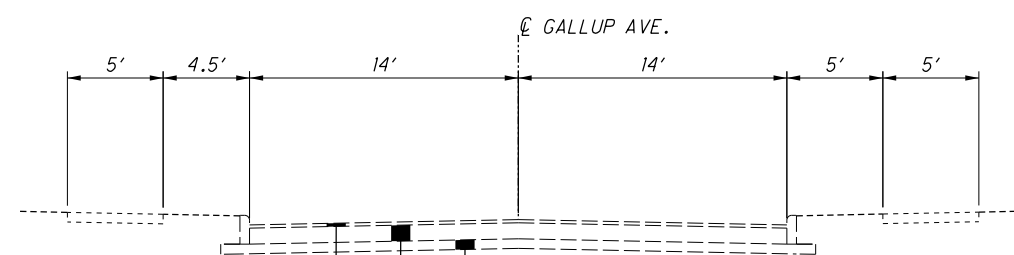
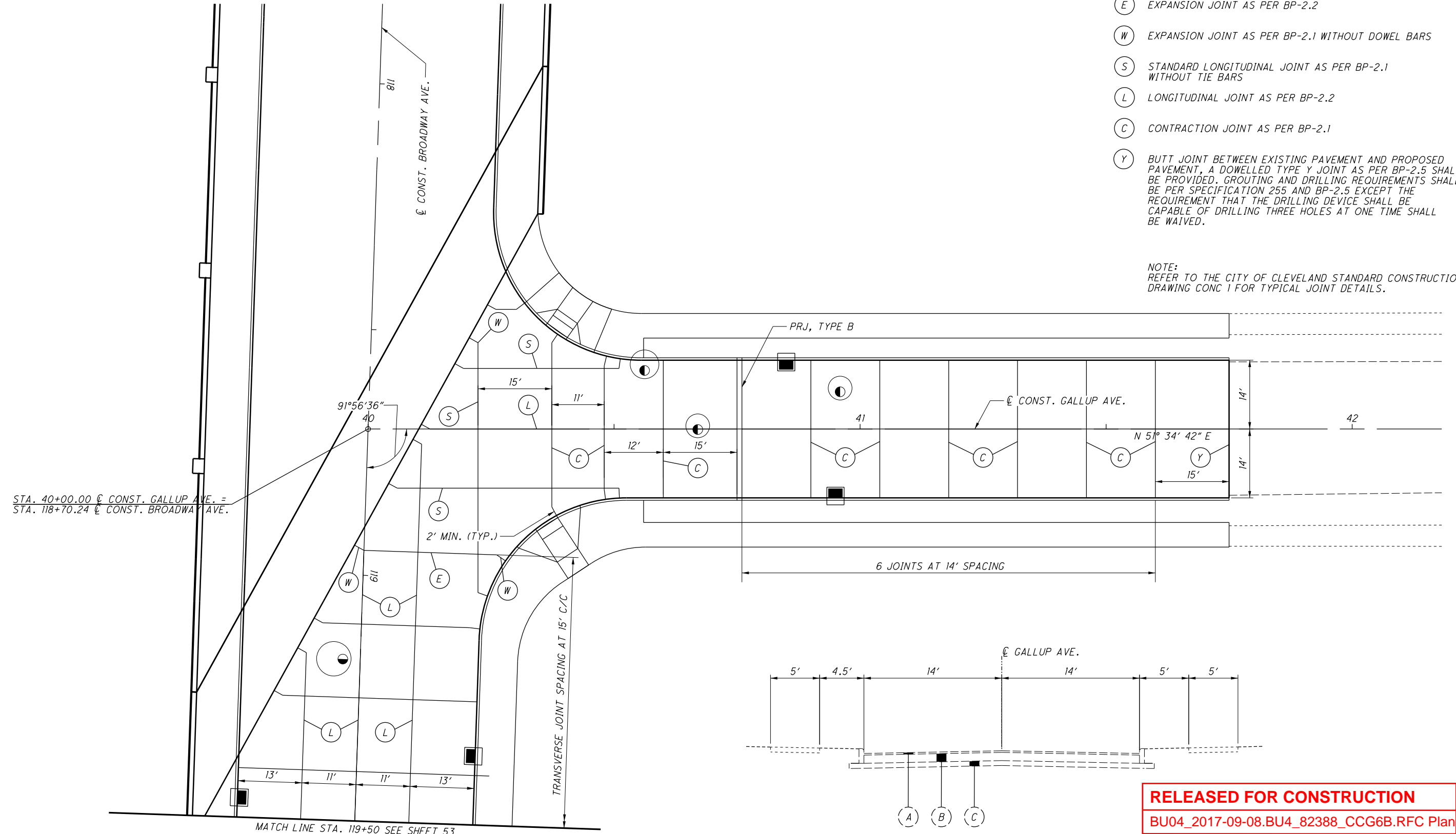


CALCULATED  
KRF  
CHECKED  
JTW

**LEGEND:**

- (E) EXPANSION JOINT AS PER BP-2.2
- (W) EXPANSION JOINT AS PER BP-2.1 WITHOUT DOWEL BARS
- (S) STANDARD LONGITUDINAL JOINT AS PER BP-2.1 WITHOUT TIE BARS
- (L) LONGITUDINAL JOINT AS PER BP-2.2
- (C) CONTRACTION JOINT AS PER BP-2.1
- (Y) BUTT JOINT BETWEEN EXISTING PAVEMENT AND PROPOSED PAVEMENT, A DOWELLED TYPE Y JOINT AS PER BP-2.5 SHALL BE PROVIDED. GROUTING AND DRILLING REQUIREMENTS SHALL BE PER SPECIFICATION 255 AND BP-2.5 EXCEPT THE REQUIREMENT THAT THE DRILLING DEVICE SHALL BE CAPABLE OF DRILLING THREE HOLES AT ONE TIME SHALL BE WAIVED.

NOTE:  
REFER TO THE CITY OF CLEVELAND STANDARD CONSTRUCTION DRAWING CONC 1 FOR TYPICAL JOINT DETAILS.



TYPICAL SECTION ADJOINING PAVEMENT GALLUP AVE.

- (A) 2" ASPHALT CONCRETE PAVEMENT
- (B) 9" CONCRETE BASE
- (C) 6" AGGREGATE BASE

**RELEASED FOR CONSTRUCTION**

BU04\_2017-09-08.BU4\_82388\_CCG6B.RFC Plans.  
09/08/2017 Brian.Link

BU4 - LOCAL ROADS		
NO.	DATE	DESCRIPTION
ISSUE RECORD		

JOINT DETAIL  
BROADWAY AVENUE & GALLUP AVENUE

CUY-77-13.80

52  
67

STA. 40+00.00  $\bar{c}$  CONST. GALLUP AVE. =  
STA. 118+70.24  $\bar{c}$  CONST. BROADWAY AVE.

MATCH LINE STA. 119+50 SEE SHEET 53

TRANSVERSE JOINT SPACING AT 15' C/C

2' MIN. (TYP.)

6 JOINTS AT 14' SPACING

$\bar{c}$  GALLUP AVE.

$\bar{c}$  CONST. GALLUP AVE.

$\bar{c}$  CONST. BROADWAY AVE.

91°56'36"

N 51° 34' 42" E

13'

11'

11'

13'

15'

11'

12'

15'

14'

15'

42

5'

4.5'

14'

14'

5'

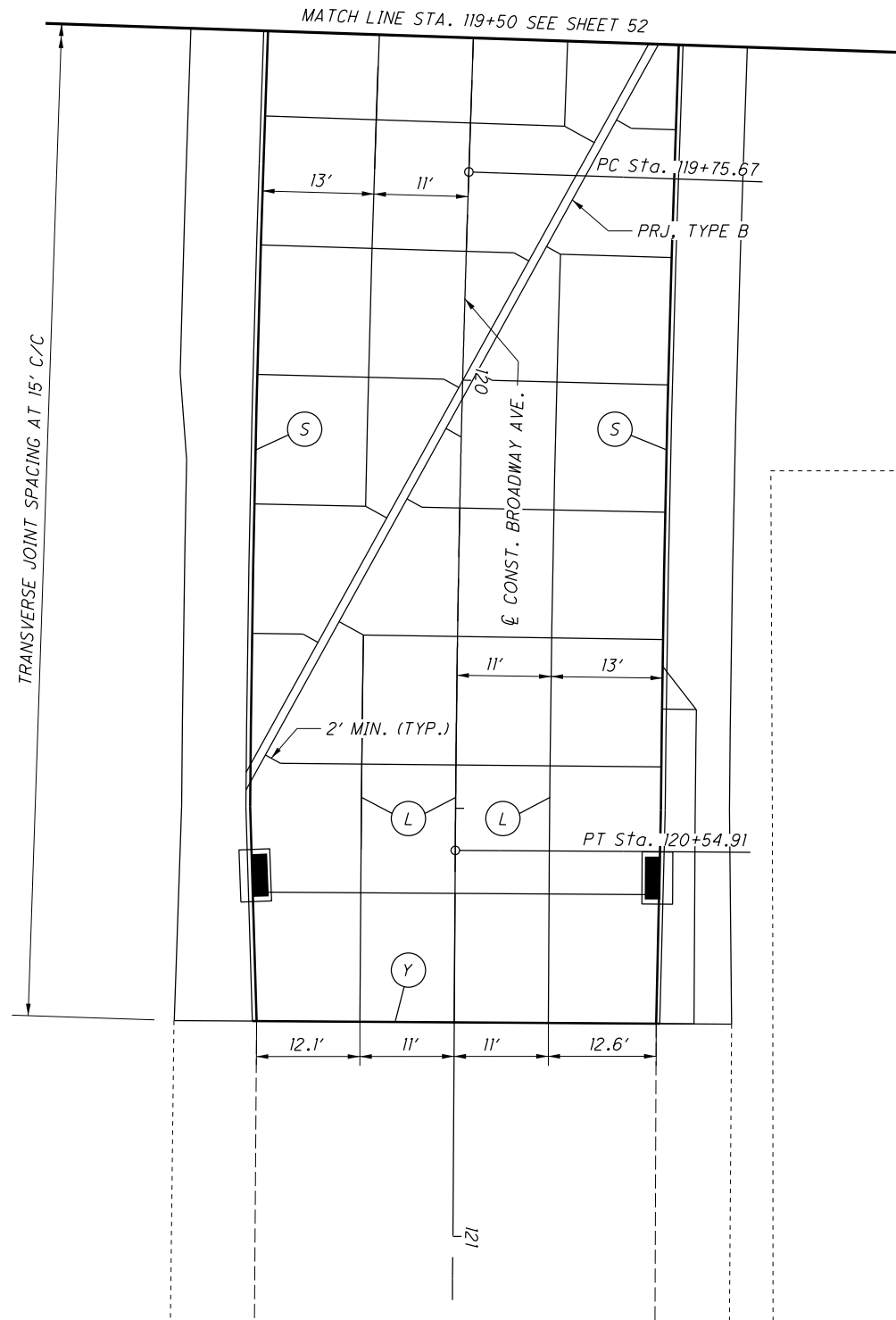
5'

(A)

(B)

(C)

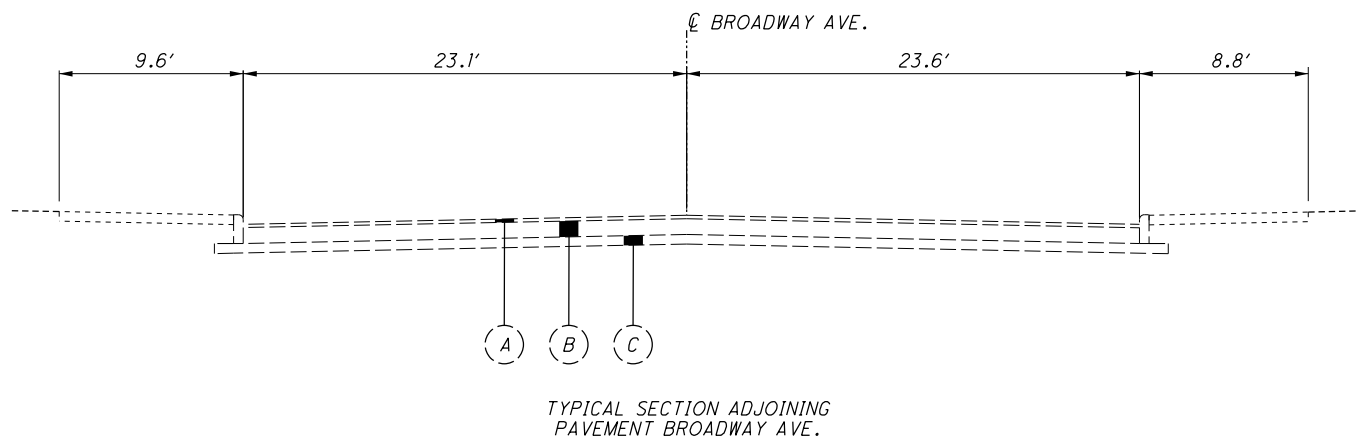
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LEGEND:

- (E) EXPANSION JOINT AS PER BP-2.2
- (W) EXPANSION JOINT AS PER BP-2.1 WITHOUT DOWEL BARS
- (S) STANDARD LONGITUDINAL JOINT AS PER BP-2.1 WITHOUT TIE BARS
- (L) LONGITUDINAL JOINT AS PER BP-2.2
- (C) CONTRACTION JOINT AS PER BP-2.1
- (Y) BUTT JOINT BETWEEN EXISTING PAVEMENT AND PROPOSED PAVEMENT, A DOWELLED TYPE Y JOINT AS PER BP-2.5 SHALL BE PROVIDED. GROUTING AND DRILLING REQUIREMENTS SHALL BE PER SPECIFICATION 255 AND BP-2.5 EXCEPT THE REQUIREMENT THAT THE DRILLING DEVICE SHALL BE CAPABLE OF DRILLING THREE HOLES AT ONE TIME SHALL BE WAIVED.

NOTE:  
REFER TO THE CITY OF CLEVELAND STANDARD CONSTRUCTION DRAWING CONC 1 FOR TYPICAL JOINT DETAILS.



- (A) 2" ASPHALT CONCRETE PAVEMENT
- (B) 9" CONCRETE BASE
- (C) 6" AGGREGATE BASE

**RELEASED FOR CONSTRUCTION**  
 BU04\_2017-09-08.BU4\_82388\_CCG6B.RFC Plans.  
 09/08/2017 Brian.Link

BU4 - LOCAL ROADS		
NO.	DATE	DESCRIPTION
ISSUE RECORD		

CALCULATED KRF  
 CHECKED JTJ

0 5 10 20  
 HORIZONTAL SCALE IN FEET

**JOINT DETAIL  
 BROADWAY AVENUE & GALLUP AVENUE**

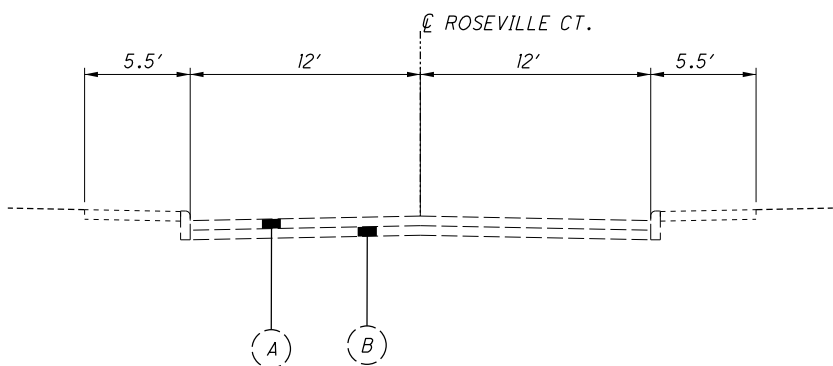
**CUY-77-13.80**



**LEGEND:**

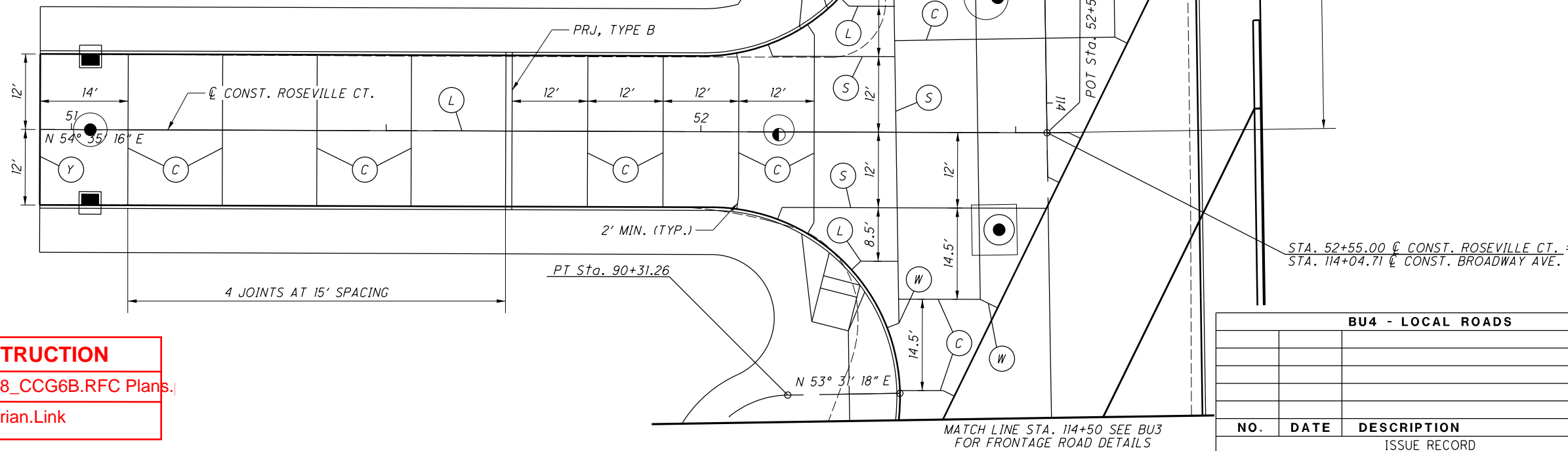
- E EXPANSION JOINT AS PER BP-2.2
- W EXPANSION JOINT AS PER BP-2.1 WITHOUT DOWEL BARS
- S STANDARD LONGITUDINAL JOINT AS PER BP-2.1 WITHOUT TIE BARS
- L LONGITUDINAL JOINT AS PER BP-2.2
- C CONTRACTION JOINT AS PER BP-2.1
- Y BUTT JOINT BETWEEN EXISTING PAVEMENT AND PROPOSED PAVEMENT, A DOWELLED TYPE Y JOINT AS PER BP-2.5 SHALL BE PROVIDED. GROUTING AND DRILLING REQUIREMENTS SHALL BE PER SPECIFICATION 255 AND BP-2.5 EXCEPT THE REQUIREMENT THAT THE DRILLING DEVICE SHALL BE CAPABLE OF DRILLING THREE HOLES AT ONE TIME SHALL BE WAIVED.

**NOTE:**  
REFER TO THE CITY OF CLEVELAND STANDARD CONSTRUCTION DRAWING CONC 1 FOR TYPICAL JOINT DETAILS.



TYPICAL SECTION ADJOINING PAVEMENT ROSEVILLE CT.

- A 6" ASPHALT CONCRETE PAVEMENT
- B 6" BRICK BASE



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BU4 - LOCAL ROADS		
NO.	DATE	DESCRIPTION



**BROADWAY AVENUE & ROSEVILLE COURT**

**JOINT DETAIL**

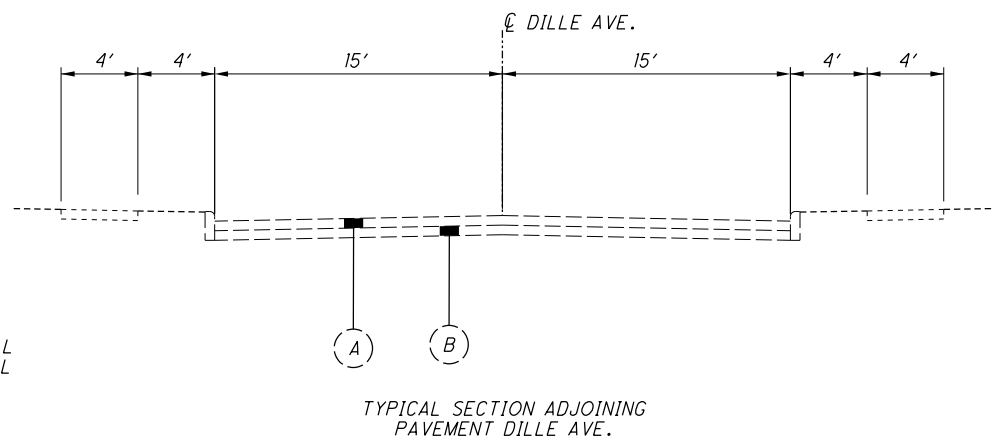
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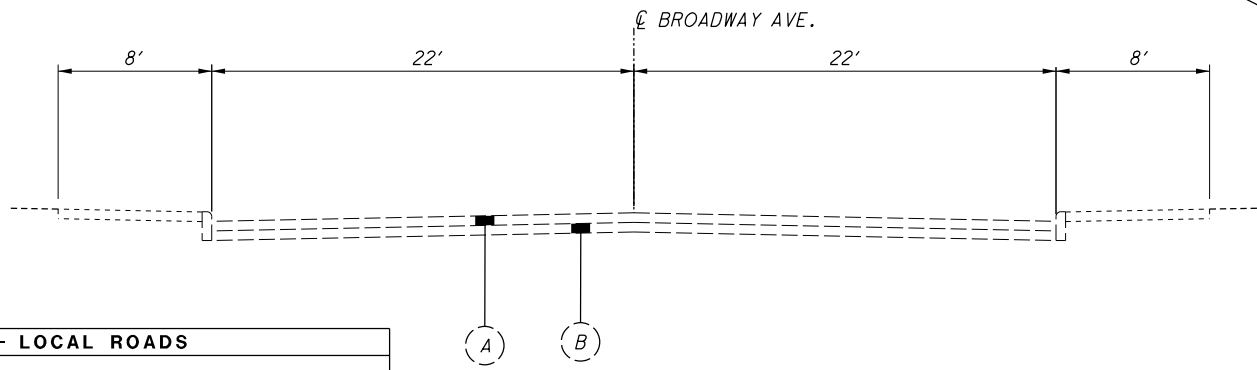
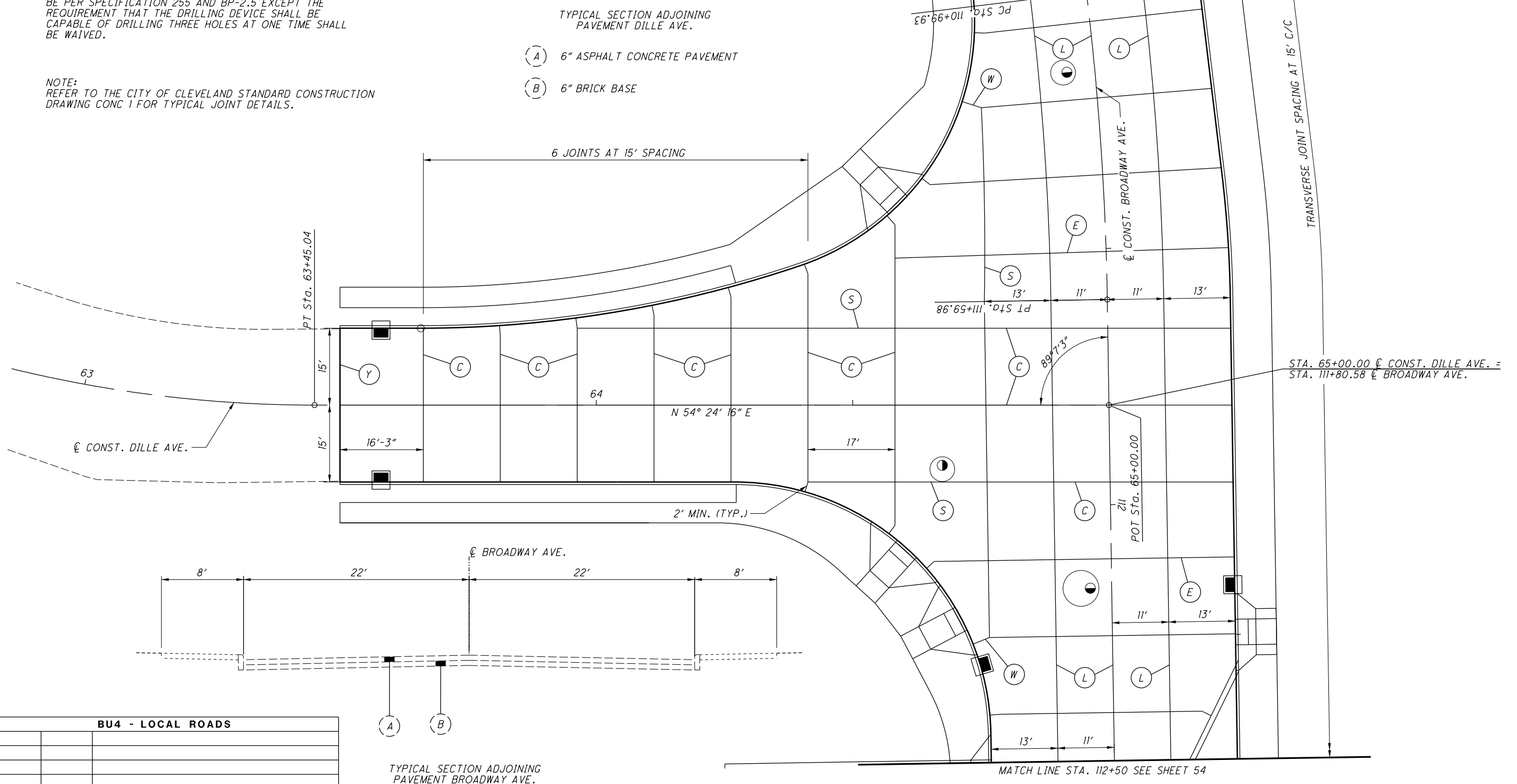
**LEGEND:**

- (E) EXPANSION JOINT AS PER BP-2.2
- (W) EXPANSION JOINT AS PER BP-2.1 WITHOUT DOWEL BARS
- (S) STANDARD LONGITUDINAL JOINT AS PER BP-2.1 WITHOUT TIE BARS
- (L) LONGITUDINAL JOINT AS PER BP-2.2
- (C) CONTRACTION JOINT AS PER BP-2.1
- (Y) BUTT JOINT BETWEEN EXISTING PAVEMENT AND PROPOSED PAVEMENT, A DOWELLED TYPE Y JOINT AS PER BP-2.5 SHALL BE PROVIDED. GROUTING AND DRILLING REQUIREMENTS SHALL BE PER SPECIFICATION 255 AND BP-2.5 EXCEPT THE REQUIREMENT THAT THE DRILLING DEVICE SHALL BE CAPABLE OF DRILLING THREE HOLES AT ONE TIME SHALL BE WAIVED.

**NOTE:**  
 REFER TO THE CITY OF CLEVELAND STANDARD CONSTRUCTION DRAWING CONC 1 FOR TYPICAL JOINT DETAILS.



- (A) 6" ASPHALT CONCRETE PAVEMENT
- (B) 6" BRICK BASE



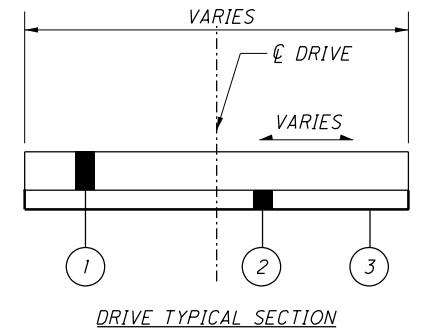
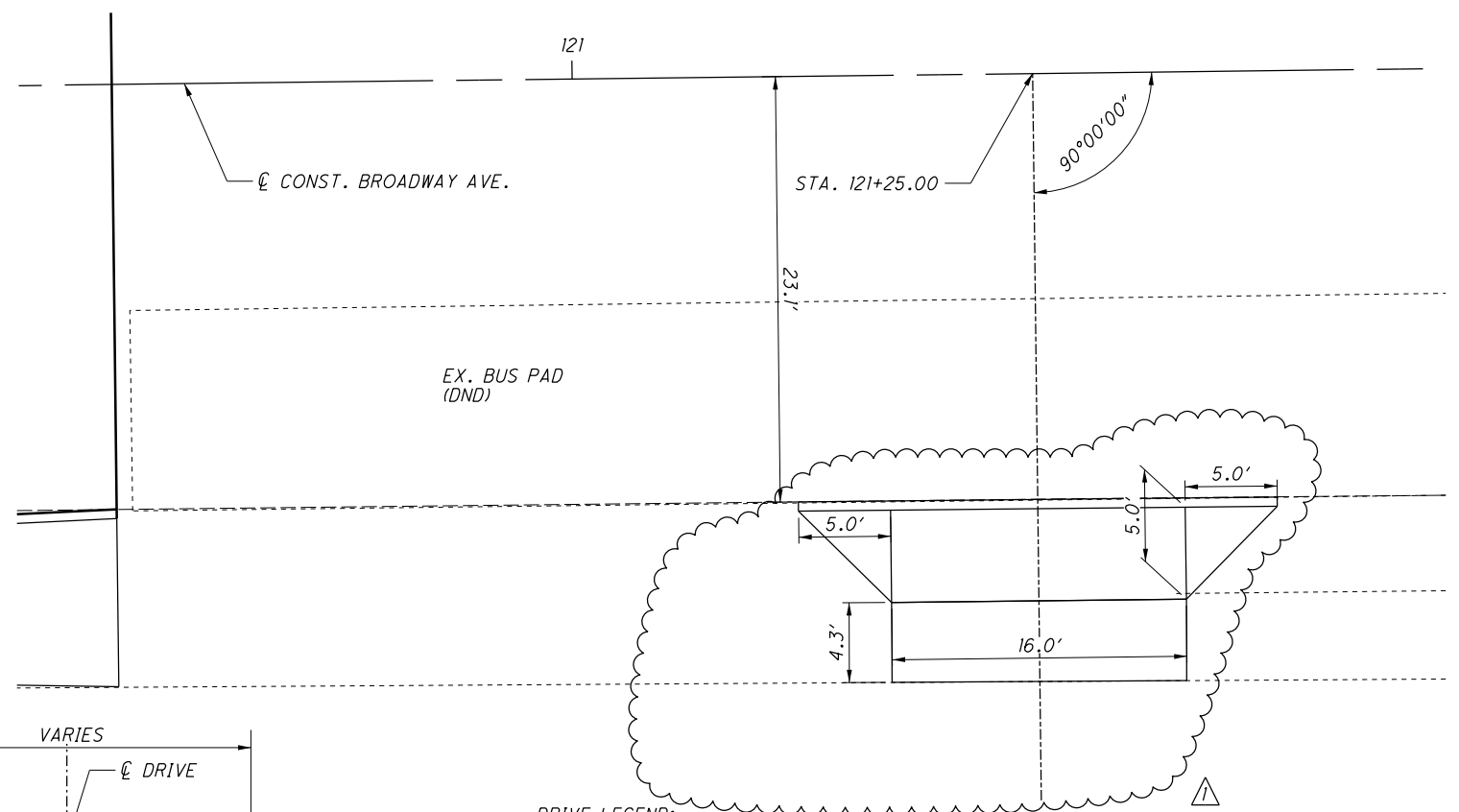
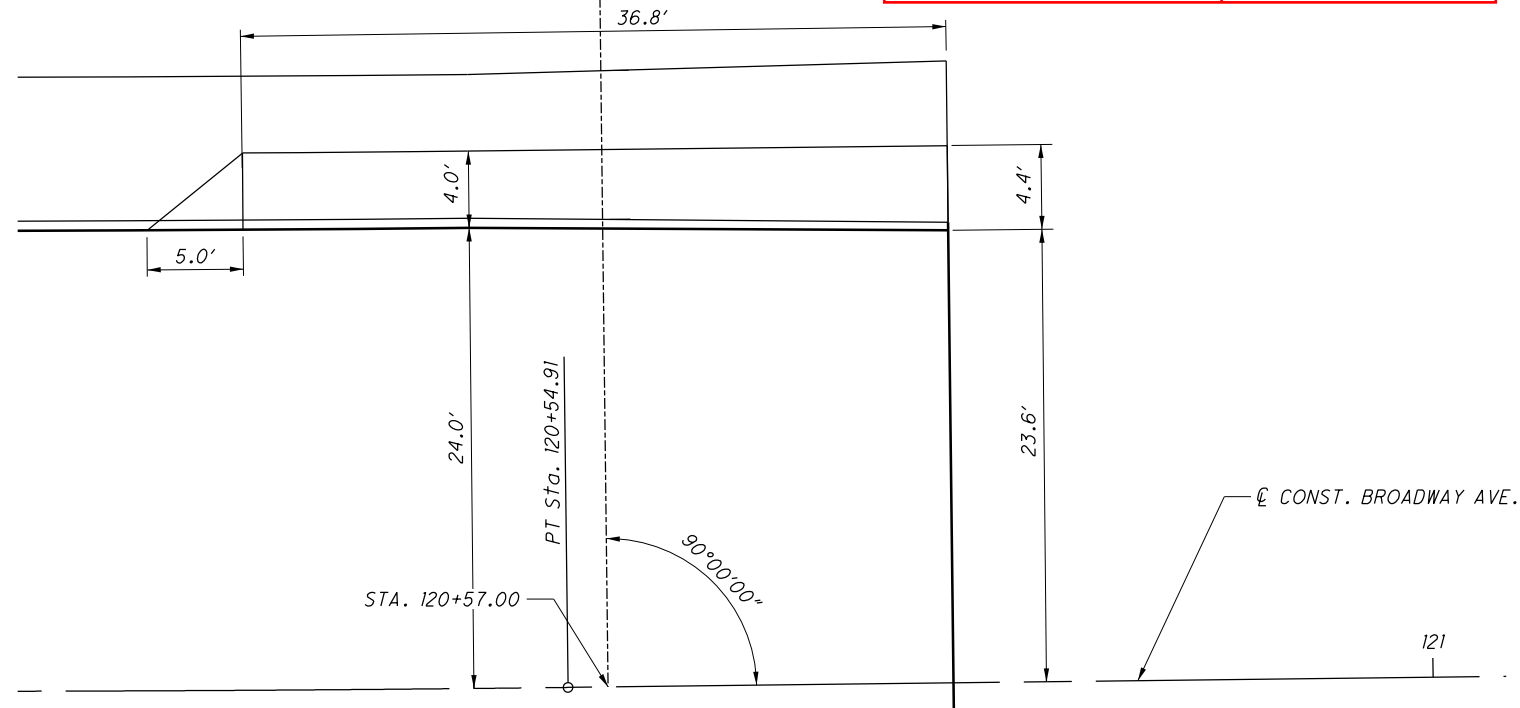
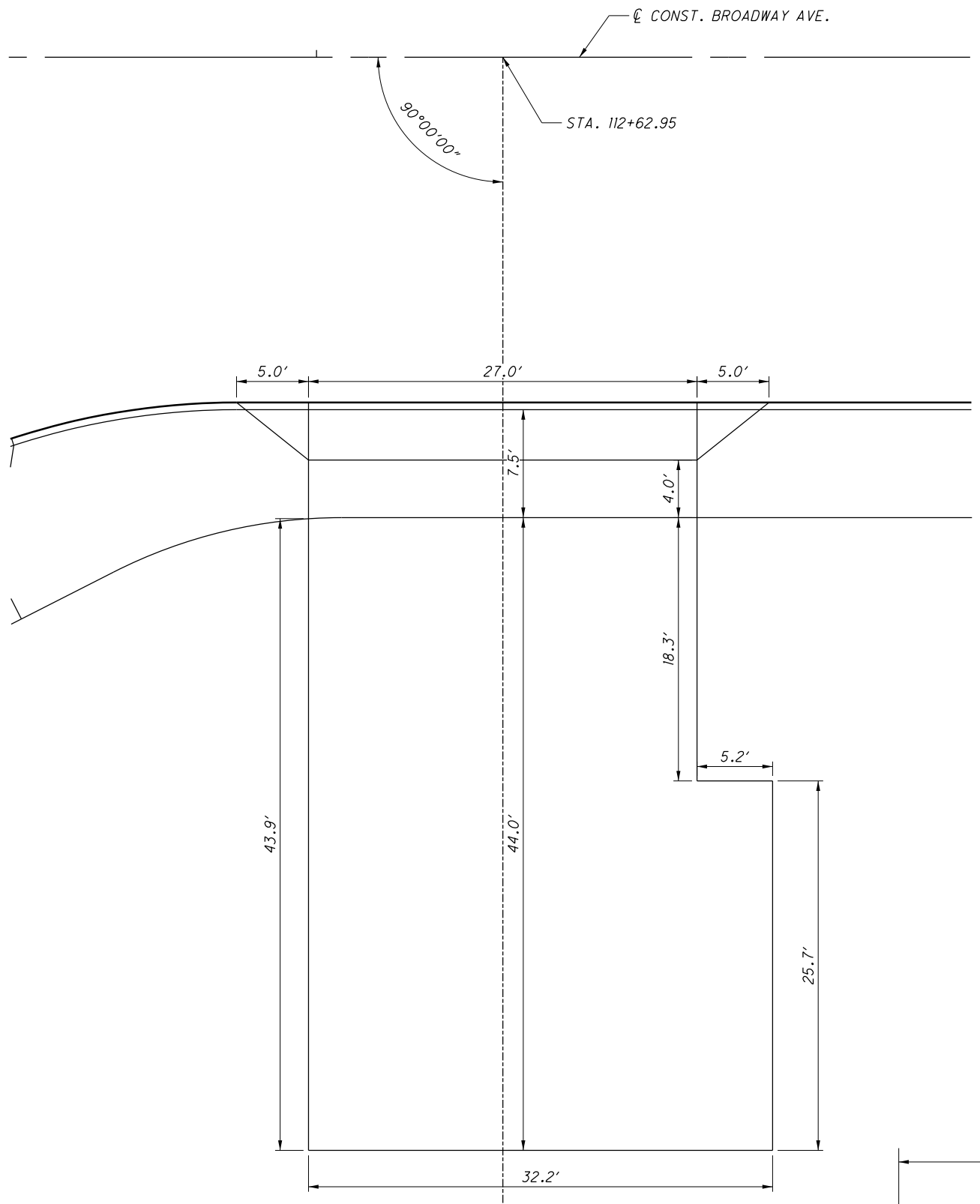
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BU4 - LOCAL ROADS		
NO.	DATE	DESCRIPTION

ISSUE RECORD

**JOINT DETAIL  
 BROADWAY AVENUE & DILLE AVE**

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- DRIVE LEGEND:**
- ① ITEM 452 - 8" NON-REINFORCED CONCRETE PAVEMENT, CLASS OCI
  - ② ITEM 304 - 2.5" AGGREGATE BASE, AS PER PLAN
  - ③ ITEM 204 - SUBGRADE COMPACTION

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BU4 - LOCAL ROADS		
NO.	DATE	DESCRIPTION
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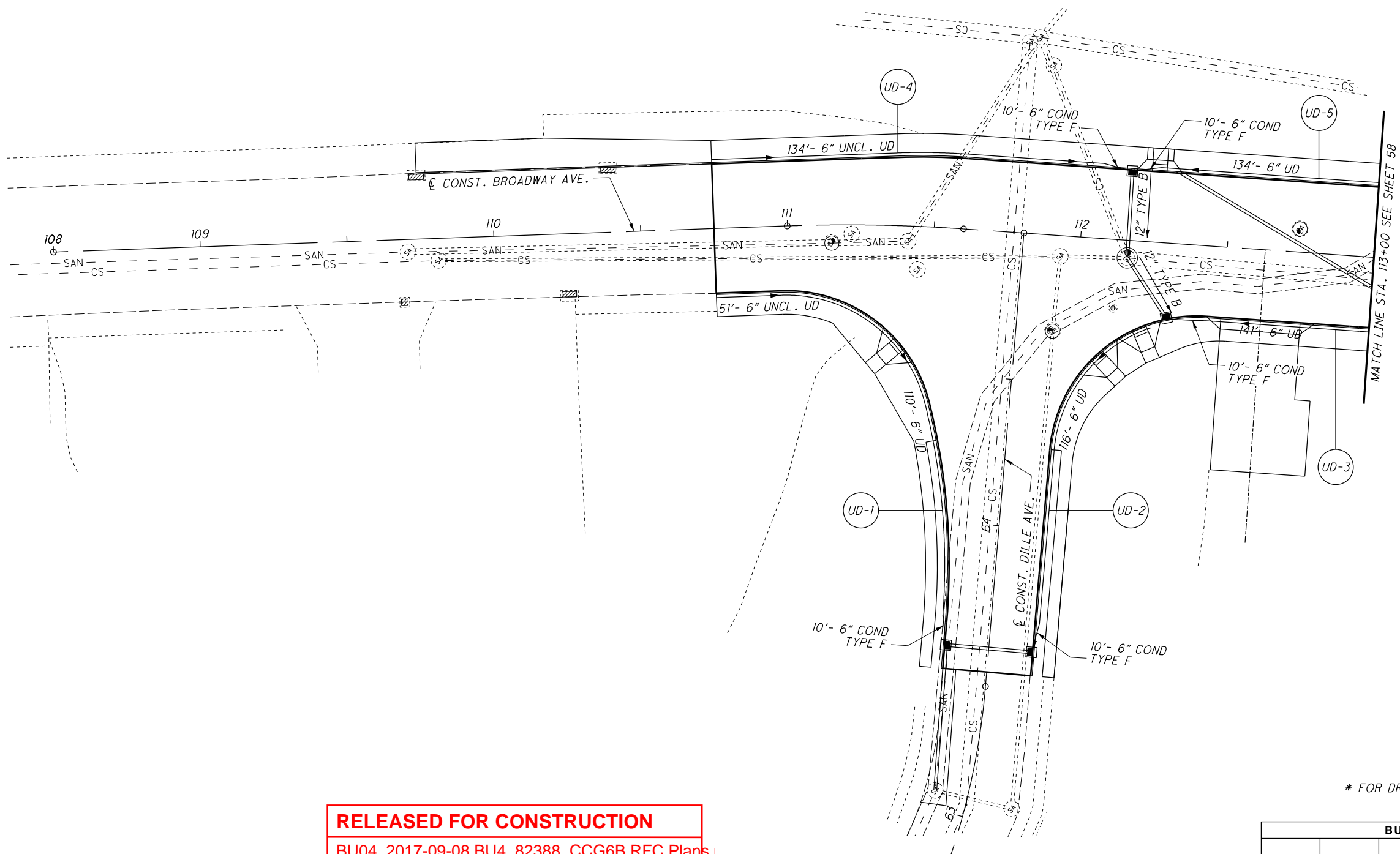
ISSUE RECORD

DRIVE DETAIL

CUY-77-13.80

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\* FOR DRAINAGE, SEE BU-6

BU4 - LOCAL ROADS		
NO.	DATE	DESCRIPTION
ISSUE RECORD		

CALCULATED  
MJT

CHECKED  
MJC

0 20 40  
HORIZONTAL  
SCALE IN FEET

UNDERDRAIN DETAILS - BROADWAY AVENUE  
STA. 108+00.00 TO STA. 113+00.00

CUY-77-13.80

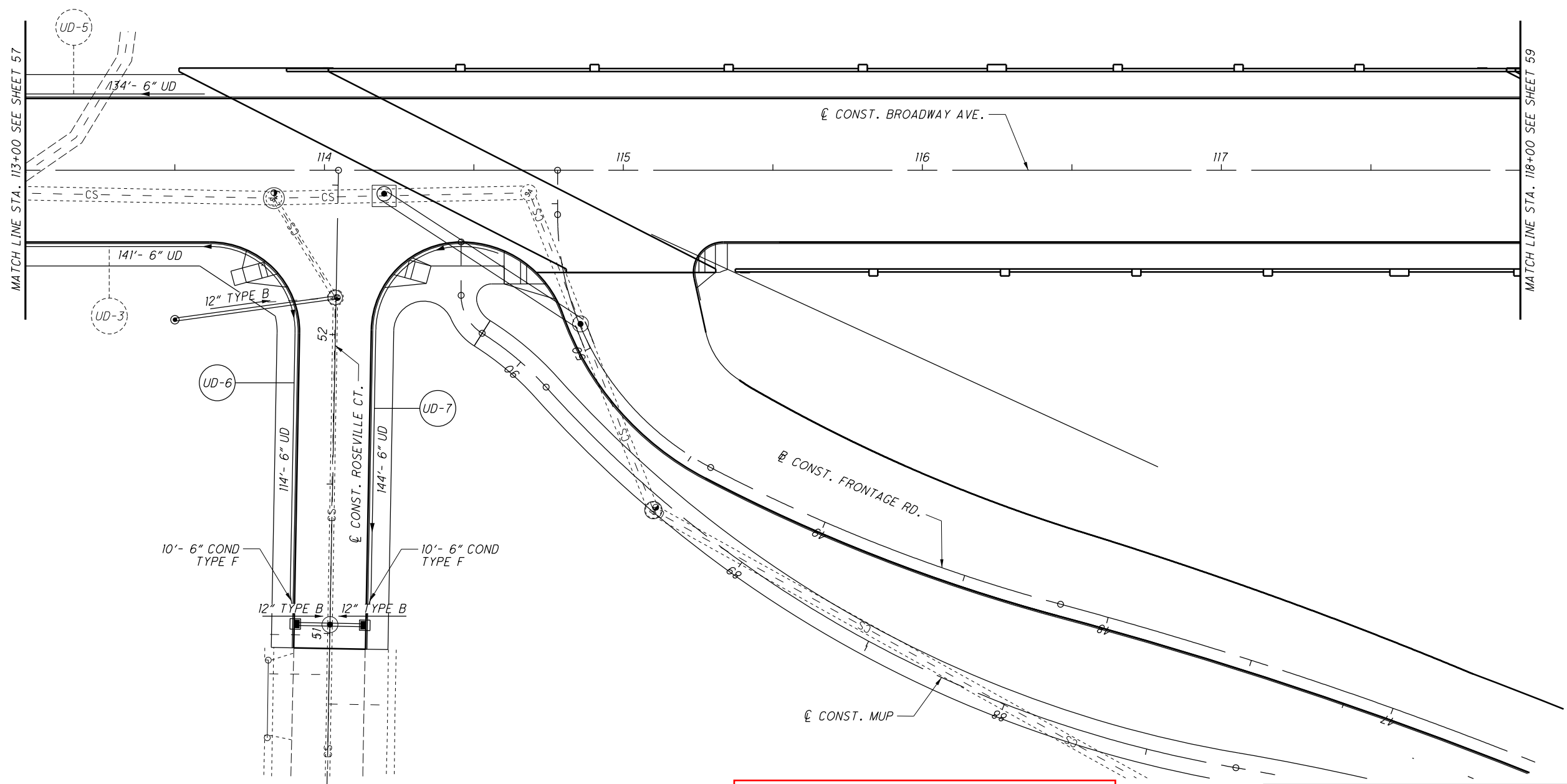
\* FOR DRAINAGE, SEE BU-6

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HORIZONTAL SCALE IN FEET

CALCULATED  
MJT  
CHECKED  
MJC

**UNDERDRAIN DETAILS - BROADWAY AVENUE**  
STA. 113+00.00 TO STA. 118+00.00

**CUY-77-13.80**

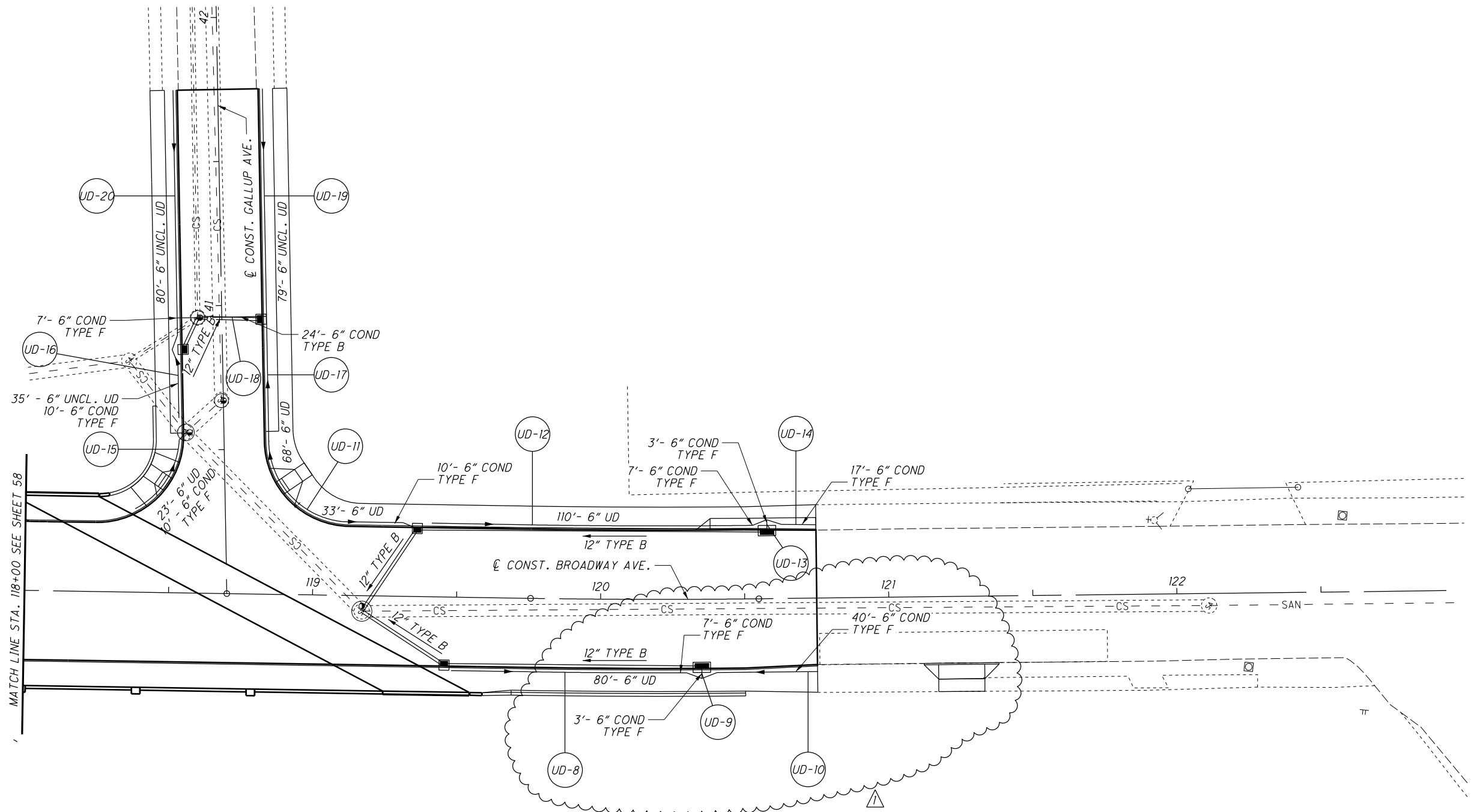


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BU04\_2017-09-08.BU4\_82388\_CCG6B.RFC Plans.  
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BU4 - LOCAL ROADS		
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\* FOR DRAINAGE, SEE BU-6

BU4 - LOCAL ROADS		
1	1/5/18	ADJUSTED UNDERDRAINS BASED ON ADJUSTED CB
		UPDATED DRIVE PLAN VIEW
NO.	DATE	DESCRIPTION
ISSUE RECORD		



0 20 40  
HORIZONTAL SCALE IN FEET

CALCULATED MJT  
CHECKED MJC

**UNDERDRAIN DETAILS - BROADWAY AVENUE**  
STA. 118+00.00 TO STA. 123+00.00

**CUY-77-13.80**

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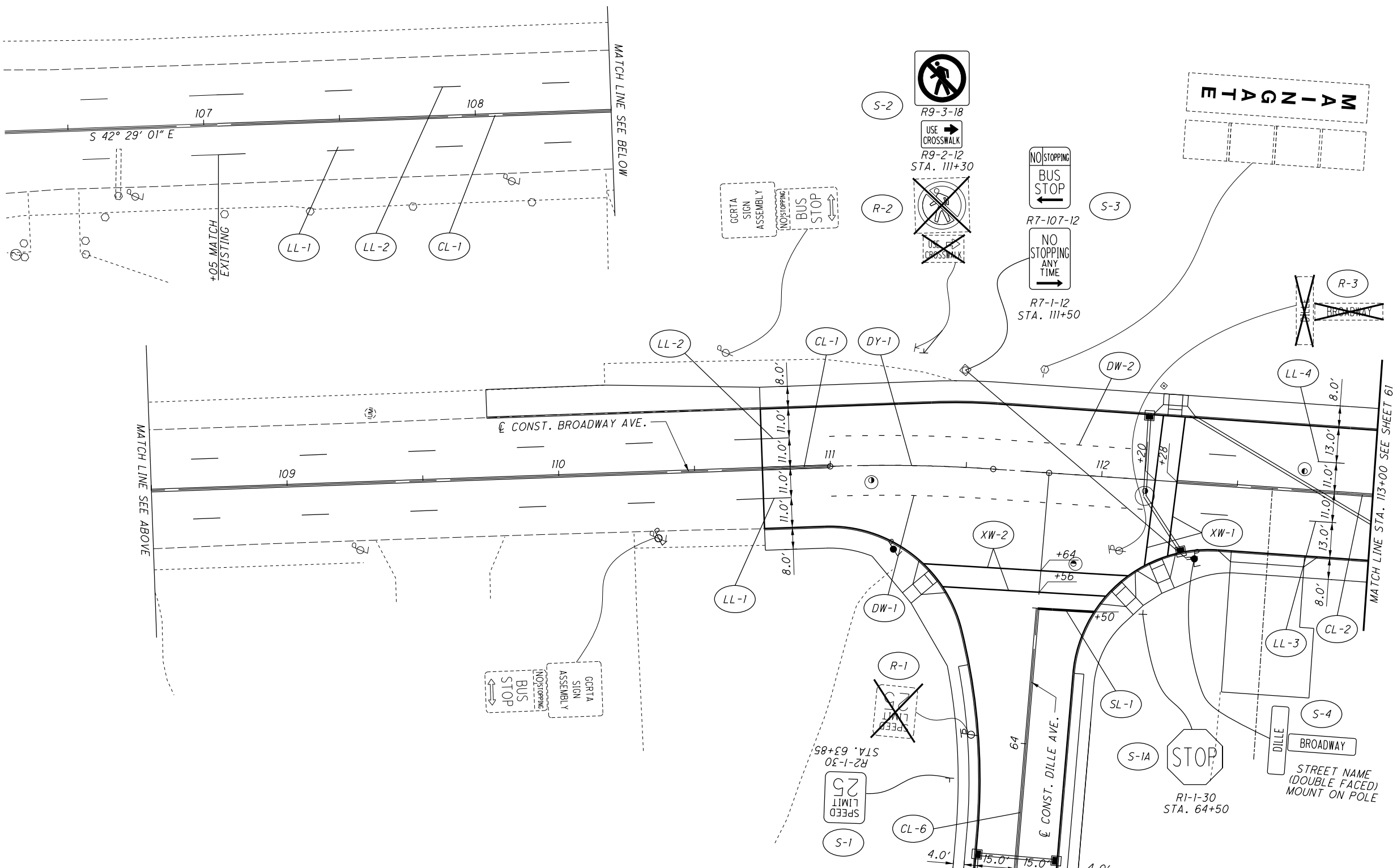


CALCULATED MJT  
CHECKED MJC

**TRAFFIC CONTROL PLAN - BROADWAY AVENUE**  
STA. 108+00.00 TO STA. 113+00.00

**CUY-77-13.80**

60  
67



**LEGEND:**

- CL CENTER LINE, DOUBLE YELLOW
- DW DOTTED LINE, WHITE (2' DASH, 4' GAP)
- DY DOTTED LINE, YELLOW (2' DASH, 4' GAP)
- LL LANE LINE, WHITE, 4"
- SL STOP LINE, WHITE
- XW CROSSWALK LINE, WHITE
- S GROUND MOUNTED SIGN
- OH OVERHEAD MOUNTED SIGN
- R SIGN REMOVED
- EX. SIGN TO REMAIN
- X EX. SIGN TO BE REMOVED
- PROPOSED SIGN

NOTE: ALL MARKINGS ON CITY STREETS SHALL BE ITEM 646.

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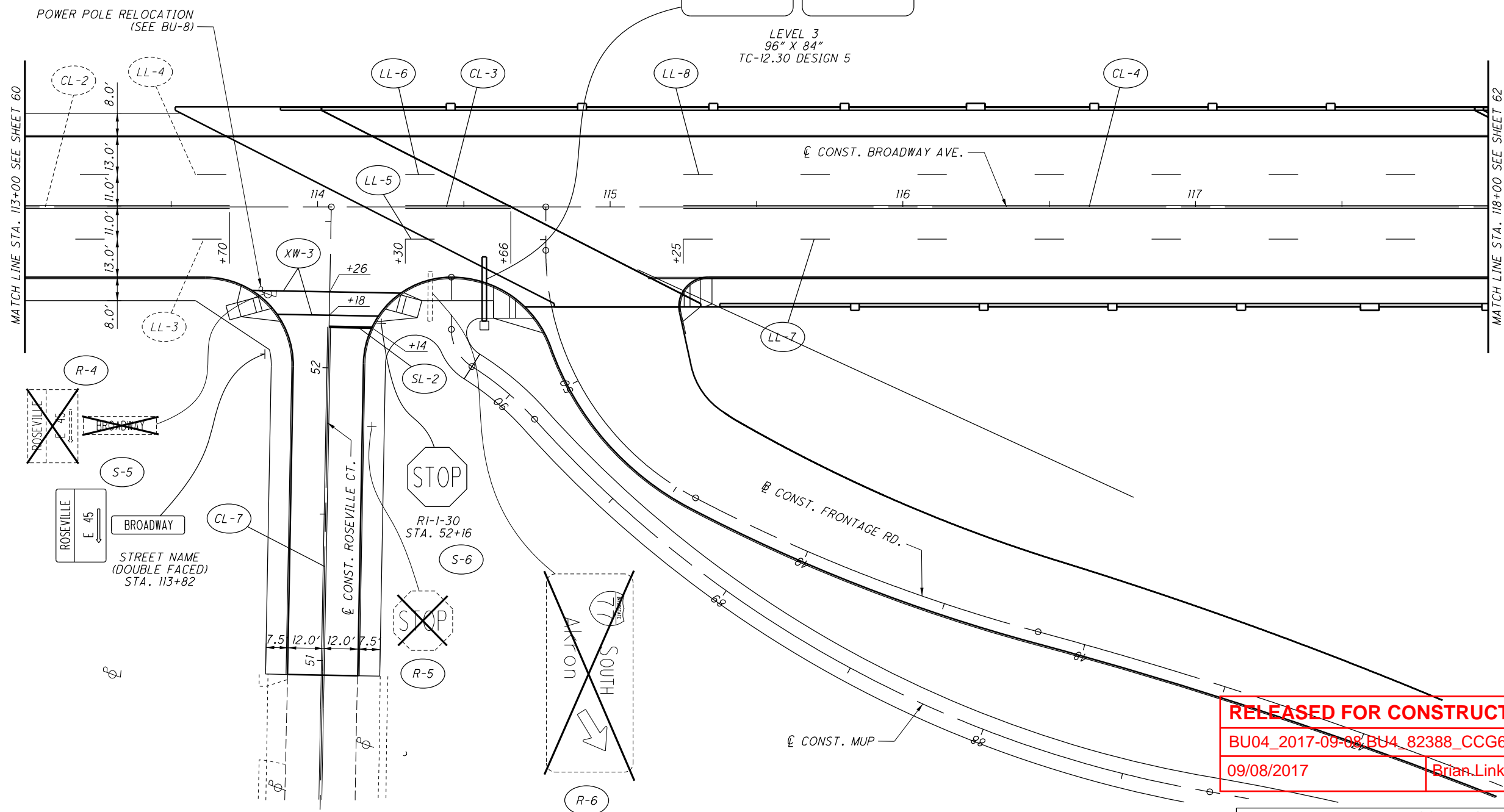
BU4 - LOCAL ROADS		
NO.	DATE	DESCRIPTION

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LEGEND:

- CL CENTER LINE, DOUBLE YELLOW
- LL LANE LINE, WHITE, 4"
- SL STOP LINE, WHITE
- XW CROSSWALK LINE, WHITE
- S GROUND MOUNTED SIGN
- OH OVERHEAD MOUNTED SIGN
- R SIGN REMOVED
- EX. SIGN TO REMAIN
- EX. SIGN TO BE REMOVED
- PROPOSED SIGN

NOTE: ALL MARKINGS ON CITY STREETS SHALL BE ITEM 646.



CALCULATED MJT  
CHECKED MJC

0 0  
HORIZONTAL SCALE IN FEET

TRAFFIC CONTROL PLAN - BROADWAY AVENUE  
STA. 113+00.00 TO STA. 118+00.00

CUY-77-13.80

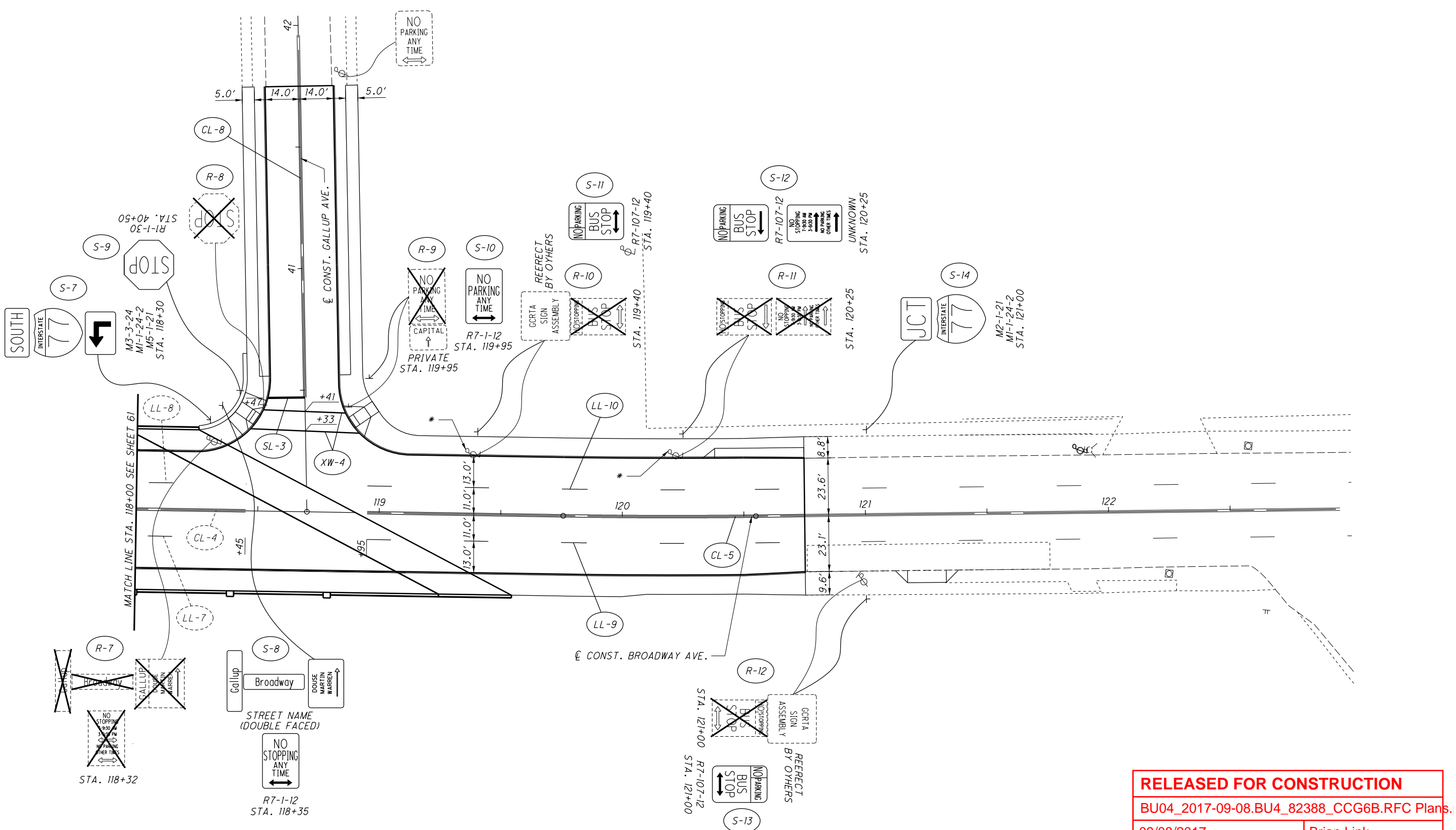
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 09/08/2017 Brian Link

BU4 - LOCAL ROADS		
NO.	DATE	DESCRIPTION

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**LEGEND:**

- CL CENTER LINE, DOUBLE YELLOW
- LL LANE LINE, WHITE, 4"
- SL STOP LINE, WHITE
- XW CROSSWALK LINE, WHITE
- S GROUND MOUNTED SIGN
- OH OVERHEAD MOUNTED SIGN
- R SIGN REMOVED
- EX. SIGN TO REMAIN
- EX. SIGN TO BE REMOVED
- PROPOSED SIGN

NOTE: ALL MARKINGS ON CITY STREETS SHALL BE ITEM 646.

RELEASED FOR CONSTRUCTION

BU04\_2017-09-08.BU4\_82388\_CCG6B.RFC Plans.

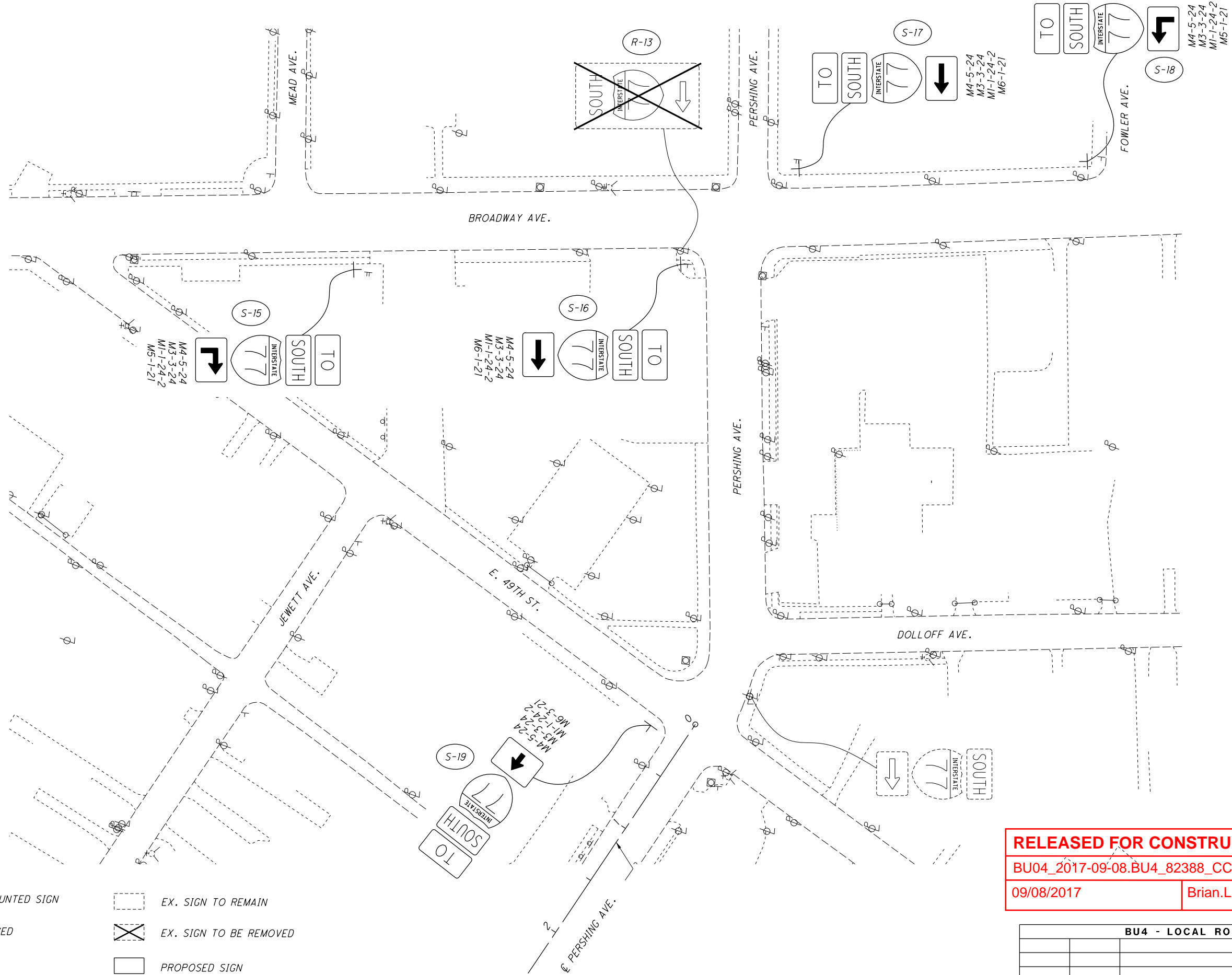
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\* POLE RELOCATION SHOWN IN BU-8

BU4 - LOCAL ROADS		
NO.	DATE	DESCRIPTION
ISSUE RECORD		

**LEGEND:**

- S GROUND MOUNTED SIGN
- R SIGN REMOVED
- EX. SIGN TO REMAIN
- EX. SIGN TO BE REMOVED
- PROPOSED SIGN



RELEASED FOR CONSTRUCTION

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BU4 - LOCAL ROADS		
NO.	DATE	DESCRIPTION
ISSUE RECORD		

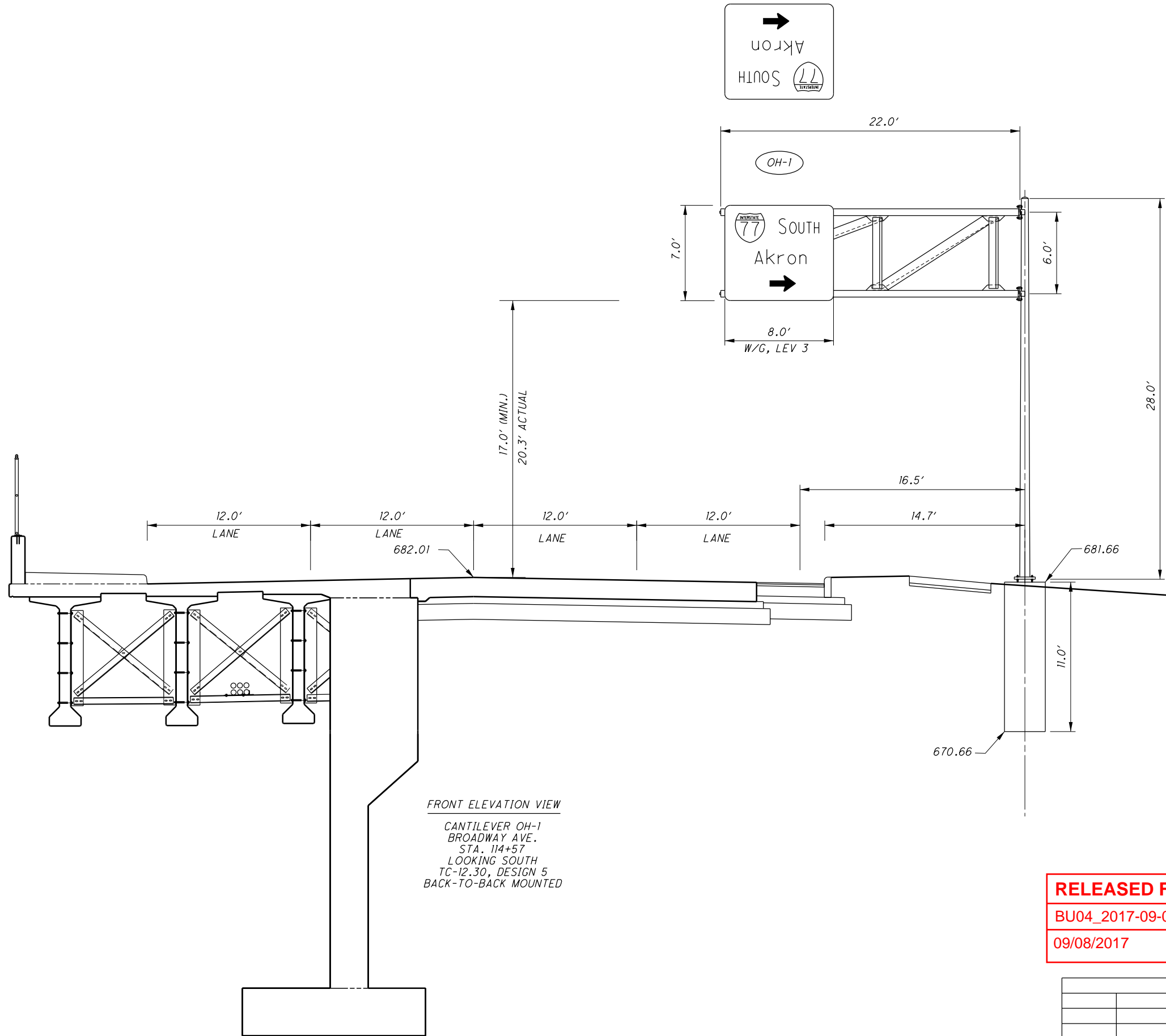
TRAFFIC CONTROL PLAN  
BROADWAY / PERSHING INTERSECTION

CUY-77-13.80

CALCULATED MJT  
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HORIZONTAL SCALE IN FEET

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FRONT ELEVATION VIEW  
 CANTILEVER OH-1  
 BROADWAY AVE.  
 STA. 114+57  
 LOOKING SOUTH  
 TC-12.30, DESIGN 5  
 BACK-TO-BACK MOUNTED

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BU4 - LOCAL ROADS		
NO.	DATE	DESCRIPTION

ISSUE RECORD

CALCULATED MJT  
 CHECKED MJC

SIGN ELEVATION DETAIL - OH-1  
 STA. 114+57, BROADWAY AVE.

CUY-77-13.80

**MAINTENANCE OF TRAFFIC SIGNAL/FLASHER INSTALLATION**

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC SIGNAL INSTALLATIONS WITHIN THE PROJECT UNDER THE FOLLOWING CONDITIONS:

1. NEW SIGNAL INSTALLATIONS OR DEVICES, INSTALLED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THESE FROM THE TIME OF INSTALLATION UNTIL THE WORK IS ACCEPTED.

2. EXISTING SIGNAL INSTALLATIONS OR DEVICES INSTALLED OR MODIFIED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THESE FROM THE TIME OF INITIAL INSTALLATION OR MODIFICATION UNTIL THE WORK IS ACCEPTED.

THE CONTRACTOR SHALL CORRECT AS QUICKLY AS POSSIBLE ALL OUTAGES OR MALFUNCTIONS. HE SHALL PROVIDE THE CITY AND THE ENGINEER SUCH ADDRESSES AND PHONE NUMBERS WHERE HIS MAINTENANCE FORCES MAY BE CONTACTED. THE CONTRACTOR SHALL PROVIDE ONE OR MORE PERSONS TO RECEIVE ALL CALLS AND DISPATCH THE NECESSARY MAINTENANCE FORCES TO CORRECT OUTAGES. SUCH A PERSON OR PERSONS MAY BE USED TO PERFORM OTHER DUTIES AS LONG AS PROMPT ATTENTION IS GIVEN TO THESE CALLS AND A PERSON IS READILY AVAILABLE CONTINUOUSLY 24 HOURS A DAY, 7 DAYS A WEEK. ALL LAMP OUTAGES, CABLE OUTAGES, ELECTRICAL FAILURES, EQUIPMENT MALFUNCTIONS AND MISALIGNED SIGNAL HEADS SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK TO SERVICE WITHIN EIGHT (8) HOURS AFTER THE CONTRACTOR HAS BEEN NOTIFIED OF THE OUTAGE.

IN THE EVENT NEW SIGNALS ARE DAMAGED PRIOR TO ACCEPTANCE ALL DAMAGED EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER. THE SIGNAL SHALL BE BACK IN SERVICE WITHIN EIGHT (8) HOURS AFTER THE CONTRACTOR'S NOTIFICATION OF THE OUTAGE OR MALFUNCTION.

IF POLES AND/OR CONTROL EQUIPMENT ARE DAMAGED AND MUST BE REPLACED, THE CONTRACTOR SHALL MAKE TEMPORARY REPAIRS AS NECESSARY TO BRING THE SIGNAL BACK INTO FULL OPERATION WITHIN THE ALLOWED 8-HOUR PERIOD, AND SHALL MAKE PERMANENT REPAIRS OR REPLACEMENT AS SOON THEREAFTER AS POSSIBLE. NONE OF THE ABOVE SHALL BE CONSTRUED AS COLLECTIVE OR CONSECUTIVE OUTAGE TIME PERIODS AT ANY ONE LOCATION. THAT IS, WHERE MORE THAN ONE OUTAGE OCCURS AT ANY ONE LOCATION, THEN THE ALLOTTED TIME LIMIT SHALL BE FOR THE WORST SINGLE OUTAGE. WHERE OUTAGES ARE THE DIRECT RESULT OF A VEHICLE ACCIDENT, THE RESPONSE OF THE CONTRACTOR SHALL BE AS OUTLINED ABOVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COLLECTION OF ANY COMPENSATION FOR THIS WORK FROM THOSE PARTIES RESPONSIBLE FOR THE DAMAGE.

WHERE THE CONTRACTOR HAS FAILED TO OR CANNOT RESPOND TO AN OUTAGE OR SIGNAL EQUIPMENT MALFUNCTION AT THESE LOCATIONS WITHIN HIS OR HER RESPONSIBILITY, WITHIN PERIODS AS OUTLINED ABOVE, THE ENGINEER MAY INVOKE THE PROVISIONS OF SECTION 105.15 AND ANY SUBSEQUENT BILLINGS BY THE STATE OR THE CITY OF CLEVELAND FOR POLICE SERVICE AND/OR MAINTENANCE SERVICES BY STATE AND/OR CITY FORCES SHALL BE DEDUCTED FROM MONIES DUE OR TO BECOME DUE THE CONTRACTOR IN ACCORDANCE WITH PROVISIONS OF SECTION 105.15.

THE CONTRACTOR SHALL PROVIDE THE MAINTENANCE SERVICE ENTIRELY WITH HIS FORCES OR HE MAY CHOOSE TO ENTER INTO A COOPERATIVE UNDERSTANDING WITH THE LOCAL MAINTAINING AGENCY TO PROVIDE THE MAINTENANCE. THE CONTRACTOR SHALL INFORM THE ENGINEER, IN WRITING, OF THE MAINTENANCE METHOD SELECTED. ANY VEHICULAR TRAFFIC SIGNAL HEAD, EITHER NEW OR EXISTING, WHICH WILL BE OUT OF OPERATION, SHALL BE COVERED IN THE MANNER DESCRIBED IN SECTION 632.25.

**ITEM 625 PULL BOX, 13"x24", AS PER PLAN**

THE PULL BOX SHALL MEET THE FOLLOWING REQUIREMENTS:

- A. THE EXTERIOR DIMENSIONS AT THE TOP SHALL BE 13"x 24" (NOMINAL)
- B. THE BOX SHALL BE 24" DEEP (NOMINAL) AND SHALL TAPER OUTWARD FROM THE TOP TO THE OPEN BOTTOM
- C. THE INSIDE DIMENSIONS AT THE BOTTOM SHALL BE 11-7/8"x 21-3/8" (MINIMUM)
- D. THE BOX, WITHOUT COVER, SHALL WEIGH APPROXIMATELY 64 LBS.
- E. THE COVER SHALL BE 13-3/4" X 23-1/4" X 2" AND SHALL WEIGH APPROXIMATELY 34 LBS.

THE BOX AND COVER SHALL BE CAPABLE OF SUPPORTING A LOAD OF 20,000 LBS. ON A 10"x10" AREA, TESTED IN ACCORDANCE WITH "WESTERN UNDERGROUND COMMITTEE GUIDE 3.6". THE COVER DEFLECTION SHALL NOT EXCEED 1/2" AT DESIGN LOAD. THE COVER AND BOX SHALL SHOW NO SIGNS OF DAMAGE AFTER TEN (10) CYCLES AT DESIGN LOAD.

THE BOX SHALL BE CONSTRUCTED OF FIBERGLASS REINFORCED POLYMER (FRP) WITH ISOPHTHALIT POLYESTER USING THE SPRAY-UP AND ROLL CONSTRUCTION METHOD. THE MATERIAL SHALL HAVE STABILIZERS TO RESIST ULTRAVIOLET (UV) DEGRADATION IN ACCORDANCE WITH ASTM D-790 AND ASTM D-1150I-71, SECTION 6, PROCEDURE B.

THE TOP RING OF THE BOX SHALL BE MADE OF POLYMER CONCRETE USING A POLYESTER BINDER WITH AGGREGATE FILLERS AND CHOPPED FIBERGLASS WITH MINIMUM TENSILE STRENGTH OF 1900 PSI. THE RING SHALL HAVE THE SAME UV RESISTANCE AS THE FRP MATERIAL. THE THREADED INSERTS FOR THE COVER BOLTS SHALL BE STAINLESS STEEL. THE COVER SHALL BE MADE WITH A THICK MOLDING COMPOUND (TMC) USING THE COMPRESSION MOLDING METHOD. THE TMC SHALL CONSIST OF A MINIMUM OF TEN PERCENT (10%) FIBERGLASS IN A CALCIUM CARBONATE AND POLYESTER RESIN MATRIX. THE COVER SHALL BE MARKED WITH THE WORD "TRAFFIC" IN 2 LETTERS, EMBOSSED INTO THE TMC AND SHALL HAVE A NON-SKID SURFACE AND THE SAME UV RESISTANCE AS THE FRP MATERIAL.

THE COVER SHALL BE SECURED TO THE BOX USING TWO HEX HEAD STAINLESS STEEL BOLTS AND WASHERS WHICH SHALL ATTACH TO THREADED INSERTS IN THE BODY OF THE BOX.

THE OPENINGS IN THE SIDE OF THE PULL BOX, WHICH ARE REQUIRED TO INSERT CONDUIT (INTO THE PULL BOX) SHALL BE DRILLED OR SAWN IN THE FIELD, ONCE THESE LOCATIONS HAVE BEEN DETERMINED. THE OPENINGS SHALL NOT EXCEED THE OUTSIDE DIAMETER OF THE CONDUIT BY MORE THAN FIVE PERCENT (5%). ALL OPENINGS IN THE SIDE OF THE PULL BOX SHALL BE THOROUGHLY GROUTED WITH CEMENT MORTAR AFTER PLACING THE CONDUIT. NOTE: THE EXACT LOCATIONS OF THE PULL BOXES ARE TO BE STAKED AND CHECKED BY THE ENGINEER PRIOR TO PLACEMENT TO VERIFY CLEARANCE OF UNDERGROUND FACILITIES AND ANY ABOVE GROUND OBSTRUCTIONS. IF THERE ARE ANY CONFLICTS, THESE WILL BE ADJUSTED AS DIRECTED BY THE ENGINEER. PAYMENT FOR THIS ADJUSTMENT IS INCIDENTAL TO THESE ITEMS.

PULL BOXES ARE TO PROVIDED A 4" DRAIN TO THE NEAREST STORM INLET, UNDER DRAIN, OR OTHER SUITABLE OUTLET FROM THE PULL BOX.

**ITEM 632 POWER SERVICE, AS PER PLAN**

ELECTRIC POWER SHALL BE OBTAINED FROM CLEVELAND PUBLIC POWER (CPP) AT THE LOCATION INDICATED ON THE PLANS. POWER SUPPLIED SHALL BE 120 VOLTS. ALL POWER CABLES SHALL BE RATED FOR 600 VOLTS AND CONSIST OF NO. 6 AWG COPPER. ALL CONNECTIONS OF POWER CABLE TO EQUIPMENT SHALL BE BY MEANS OF APPROVED SOLDERLESS TYPE CONNECTORS. THE SOLDERLESS CONNECTIONS ARE TO BE TAPED. POWER SERVICE SHALL ALSO INCLUDE 2" CONDUIT RISERS WHERE NECESSARY. THE CONTRACTOR SHALL MEET ON SITE WITH CPP THREE (3) DAYS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT CPP TO MAKE THE NECESSARY ARRANGEMENTS.

**ITEM 625 CONDUIT (BY SIZE), AS PER PLAN**

ALL CONDUIT INSTALLED UNDER PAVEMENT IN THIS PROJECT FOR TRAFFIC SIGNALS SHALL BE CONCRETE ENCASED. CONDUIT SHALL BE SCHEDULE 40 AND CONFORM TO OHIO DEPARTMENT OF TRANSPORTATION'S SPECIFICATION 625.12.

**ITEM 625 GROUND ROD, AS PER PLAN**

ALL GROUND RODS SHALL BE 1" DIAMETER, COPPER CLAD STEEL. ALL GROUND RODS ARE TO BE BONDED ELECTRICALLY TO THE FOUNDATION REINFORCEMENT. GROUND RODS SHALL COMPLY WITH OHIO DEPARTMENT OF TRANSPORTATION SPECIFICATION 625.09.

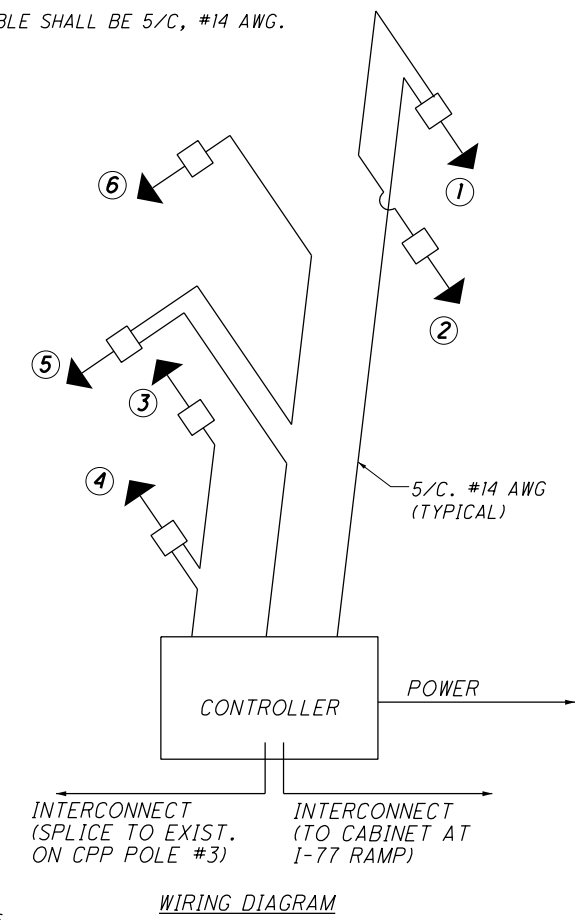
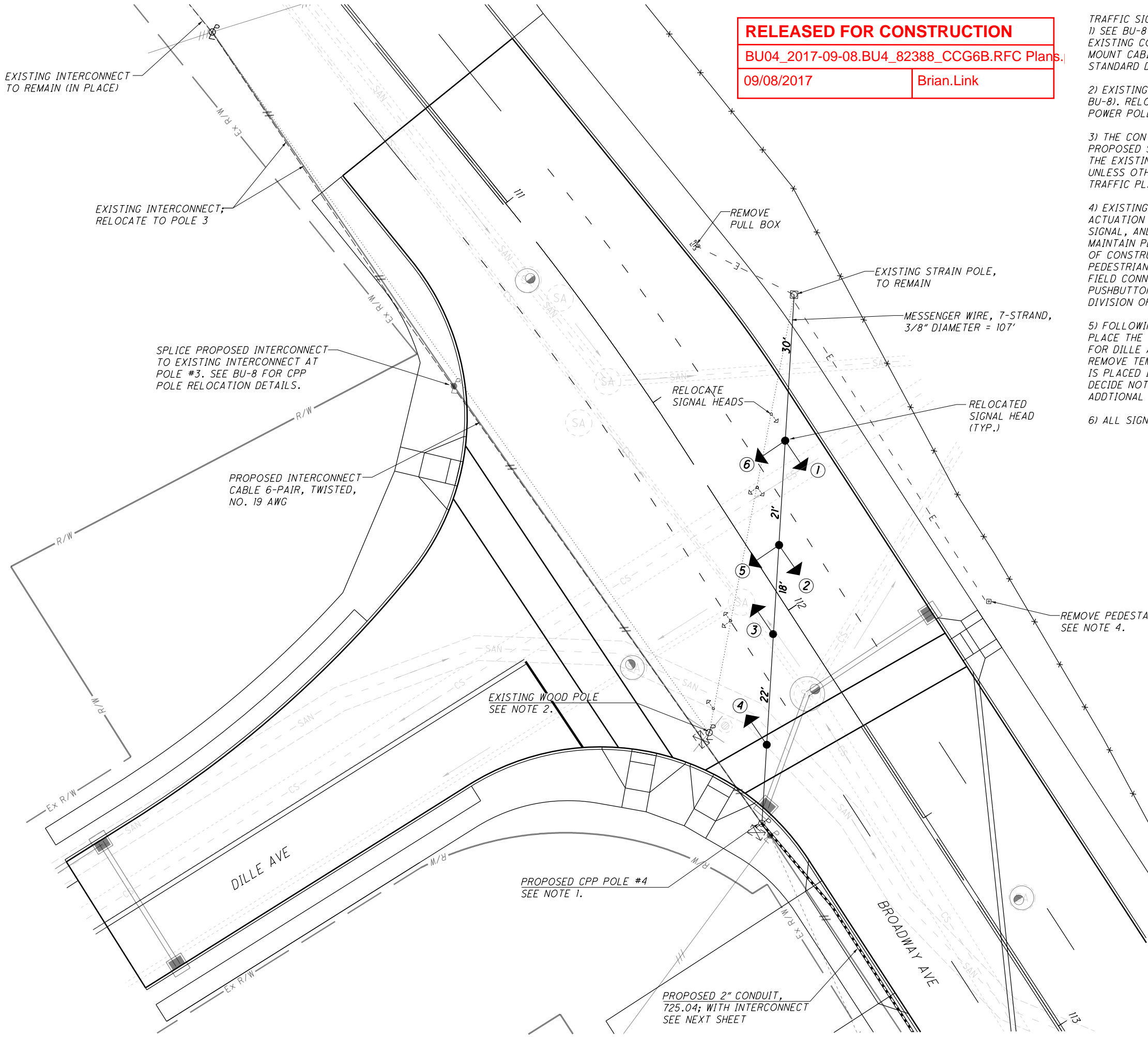
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 09/08/2017 Brian.Link

BU4 - LOCAL ROADS		
NO.	DATE	DESCRIPTION

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 BU04\_2017-09-08.BU4\_82388\_CCG6B.RFC Plans,  
 09/08/2017 Brian.Link

- TRAFFIC SIGNAL NOTES:**
- 1) SEE BU-8 FOR POWER POLE LOCATION. RELOCATE EXISTING CONTROL CENTER TO PROPOSED CPP POLE. MOUNT CABINET AND CONDUIT TO CPP POLE PER STANDARD DRAWING TC-83.10.
  - 2) EXISTING CPP POWER POLE WILL BE REMOVED (SEE BU-8). RELOCATE CONTROL CABINET TO PROPOSED CPP POWER POLE #4.
  - 3) THE CONTRACTOR SHALL MAINTAIN THE EXISTING OR PROPOSED SIGNAL DURING ALL PHASES OF CONSTRUCTION. THE EXISTING TRAFFIC SIGNAL TIMING SHALL BE UTILIZED, UNLESS OTHERWISE DIRECTED IN THE MAINTENANCE OF TRAFFIC PLANS.
  - 4) EXISTING PEDESTRIAN PUSHBUTTONS AND VEHICLE ACTUATION SHALL BE REINSTALLED ONTO THE PROPOSED SIGNAL, AND OPERATED UNTIL CONSTRUCTION IS COMPLETE. MAINTAIN PEDESTRIAN CROSSING THROUGHOUT ALL PHASES OF CONSTRUCTION. AT PROJECT COMPLETION, REMOVE PEDESTRIAN SIGNALS AND PUSHBUTTONS, LEAVING STUBBED FIELD CONNECTIONS CAPPED. PEDESTRIAN SIGNALS AND PUSHBUTTONS SHALL BE DELIVERED TO THE CITY OF CLEVELAND DIVISION OF TRAFFIC.
  - 5) FOLLOWING CONSTRUCTION, THE CONTRACTOR SHALL PLACE THE TRAFFIC SIGNAL IN FLASH MODE, FLASHING RED FOR DILLE AVE AND YELLOW FOR BROADWAY AVENUE. REMOVE TEMPORARY VEHICLE ACTUATION WHEN THE SIGNAL IS PLACED IN FLASH MODE. SHOULD THE CITY OF CLEVELAND DECIDE NOT TO MAINTAIN THIS AS A SIGNALIZED INTERSECTION, ADDITIONAL SIGNAGE WILL BE REQUIRED FOR A MID-BLOCK CROSSING.
  - 6) ALL SIGNAL CABLE SHALL BE 5/C, #14 AWG.



BU4 - LOCAL ROADS		
NO.	DATE	DESCRIPTION

**TRAFFIC SIGNAL PLAN  
 BROADWAY AVENUE AT DILLE AVE**

**CUY-77-13.80**

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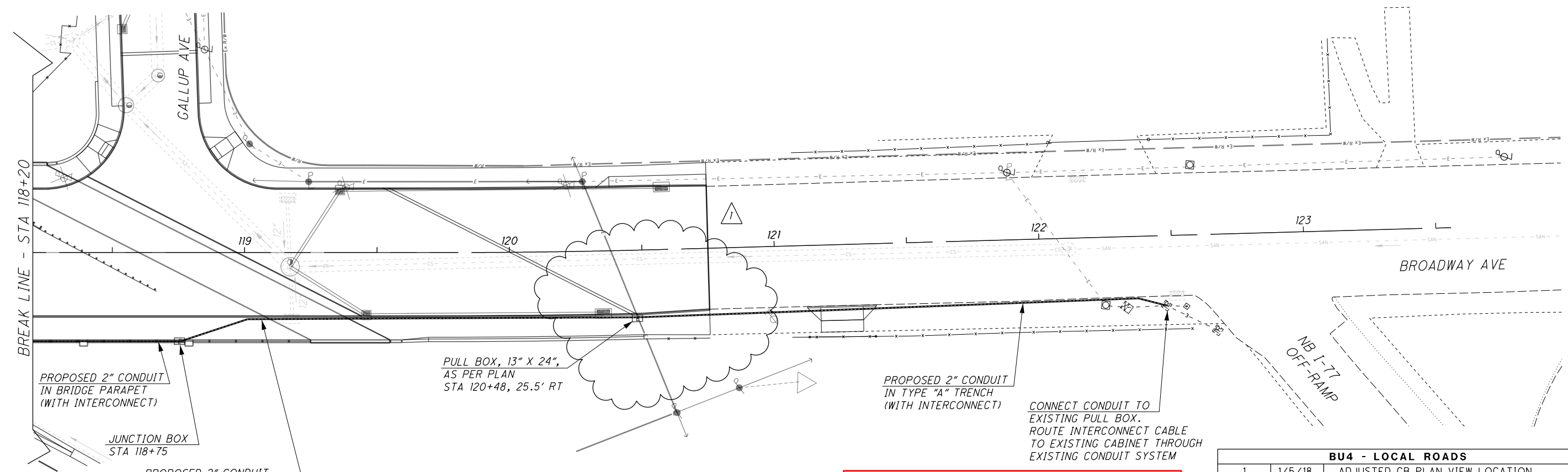
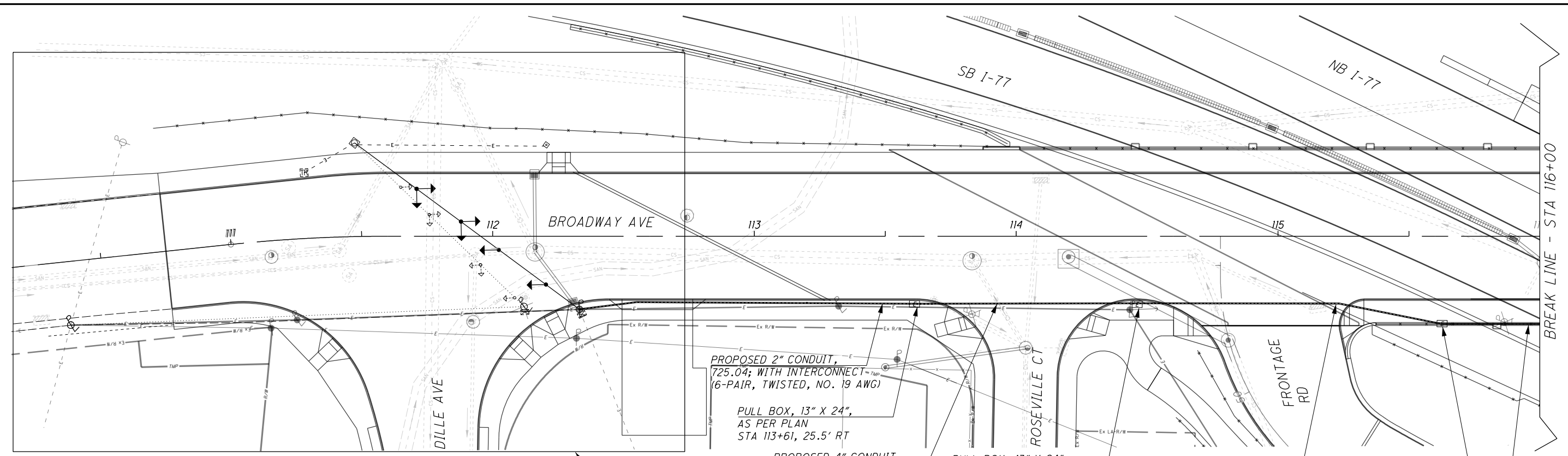


CALCULATED MJH  
CHECKED KAE

TRAFFIC SIGNAL INTERCONNECT PLAN  
DILLE AVE TO I-77 RAMP

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01/10/2018 Brian.Link

BU4 - LOCAL ROADS		
NO.	DATE	DESCRIPTION
1	1/5/18	ADJUSTED CB PLAN VIEW LOCATION

ISSUE RECORD

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