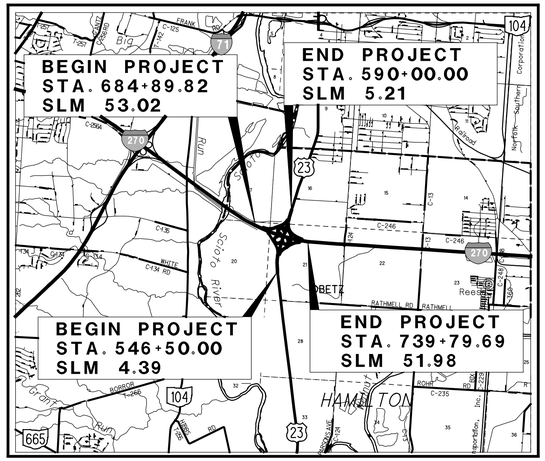

LOCATION MAP

LATITUDE: 39° 52′ 30″ LONGITUDE: 83° 00′ 14″

SCALE IN MILES

0 1 2 3 4

PORTION TO BE IMPROVED

INTERSTATE HIGHWAY

FEDERAL ROUTES

STATE ROUTES

COUNTY & TOWNSHIP ROADS

OTHER ROADS

DESIGN DESIGNATION - SEE SHEET 2

ENGINEERS SEAL:

SIGNED:

DATE:

SHEETS: 429 -482

ENGINEERS SEAL:

SIGNED:

DATE:

SHEETS: 483 -545

ENGINEERS SEAL:

SIGNED:

DATE:

SHEETS: 1 - 428

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG

CALL
1-800-362-2764
(TOLL FREE)

OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

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

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

FRA-270-51.50 PART 1

CITY OF COLUMBUS
HAMILTON TOWNSHIP
FRANKLIN COUNTY

FOR PART 2, SEE FRA-23-4.19 (PID 110380)

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PARTS 1 AND 2

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF THE REMOVAL OF RAMP N (IR 270WEST TO US 23 SOUTH) AND RAMP Q (IR 270 EAST TO US23 NORTH). WORK INCLUDES THE RECONFIGURATION OF RAMP P1 (IR 270 EAST) AND RAMP S (IR 270 WEST), THE CONSTRUCTION OF A SINGLE LEFT TURN LANE AT RAMP S AND US 23, AND THE CONSTRUCTION OF TWO SIGNALIZED INTERSECTIONS TO PROVIDE ACCESS TO US 23 NORTH AND SOUTH. WORK ALSO INCLUDES FULL DEPTH PAVEMENT AND PAVEMENT OVERLAY ON RAMPS L, M, O, P1, AND S.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	78.0 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	9.22 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	87.2 ACRES

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.

2019 SPECIFICATIONS

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

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT AS NOTED ON SHEET 20, AND THAT DETOURS WILL BE PROVIDED AS INDICATED ON THE PLANS.

APPROVED _____

DATE _____ DISTRICT DEPUTY DIRECTOR

APPROVED _____

DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

PLAN CERTIFIED AS TO COMPLETENESS AND QUALITY

SIGNATURE DATE

FIRM TITLE

FIRM # 39049C0319K

PLAN PREPARED BY:

DLZ ARCHITECTURE • ENGINEERING • PLANNING SURVEYING • CONSTRUCTION SERVICES

INNOVATIVE IDEAS
EXCEPTIONAL DESIGN
UNMATCHED CLIENT SERVICE

DLZ OHIO, INC.
6121 HUNTLEY RD.
COLUMBUS, OH 43229

ADDENDUM #1 04/21/2023

3196-E

ODOT STANDARD CONSTRUCTION DRAWINGS

BP-2.1	1/21/22	DM-4.4	1/15/16	ITS-14.10	1/21/22	MT-95.41	1/17/20	MT-105.10	1/17/20	TC-51.12	1/15/16				
BP-2.2	1/15/21	F-1.1	7/19/13	ITS-15.10	1/15/21	MT-95.45	1/17/20	MT-120.00	7/15/22	TC-52.10	10/18/13				
BP-2.3	7/18/14	F-3.1	7/19/13	ITS-15.11	1/15/21	MT-95.50	7/21/17	RM-1.1	1/15/21	TC-52.20	1/15/21				
BP-2.5	1/21/22	F-3.2	7/18/14	ITS-18.10	7/16/21	MT-95.82	7/19/13	RM-4.2	4/17/20	TC-65.10	1/17/14				
BP-3.1	1/21/22	F-3.3	7/19/13	ITS-30.11	4/16/21	MT-96.11	4/16/21	RM-4.3	1/21/22	TC-65.11	7/15/22				
BP-4.1	7/19/13	F-3.4	7/19/13	ITS-30.12	4/16/21	MT-96.26	1/18/19	RM-4.4	7/19/19	TC-71.10	7/15/22				
BP-5.1	7/15/22	HL-10.11	7/15/22	ITS-30.13	4/16/21	MT-97.12	1/20/17	TC-12.31	1/21/22	TC-72.20	7/20/18				
BP-6.1	7/19/13	HL-10.12	1/20/17	ITS-30.14	1/15/21	MT-97.11	1/20/17	TC-15.116	7/16/21	TC-73.20	1/17/20				
BP-9.1	1/18/19	HL-10.13	4/17/20	ITS-50.10	1/15/21	MT-98.10	1/17/20	TC-16.22	7/16/21	TC-81.11	7/16/21				
BP-9.2	1/15/21	HL-10.31	7/15/22	MGS-1.1	7/16/21	MT-98.11	1/17/20	TC-21.11	7/16/21	TC-83.10	1/17/20				
CB-1.1	7/16/21	HL-20.11	1/15/21	MGS-2.1	1/19/18	MT-98.21	1/17/20	TC-21.21	7/15/22	TC-83.20	7/15/22				
CB-2-2B	7/15/22	HL-20.21	1/15/21	MGS-3.2	1/18/13	MT-99.20	4/19/19	TC-22.10	4/17/20	TC-84.20	10/18/13				
CB-5A,8A	7/16/21	HL-30.11	1/15/21	MGS-4.2	7/19/13	MT-99.30	1/17/20	TC-22.20	1/17/14	TC-84.21	10/18/13				
CB-5	7/16/21	HL-30.21	4/17/20	MGS-4.3	1/18/13	MT-99.60	7/15/16	TC-41.10	7/19/13	TC-85.10	7/15/16				
CB-6	1/21/22	HL-30.22	1/15/21	MGS-5.2	7/15/16	MT-101.60	1/17/20	TC-41.20	10/18/13	TC-85.21	7/16/21				
CB-8	7/16/21	HL-40.20	7/15/22	MGS-5.3	7/15/16	MT-101.70	1/17/20	TC-41.30	10/18/13	TC-85.22	1/19/18				
DM-1.1	7/17/20	HL-60.11	7/21/17	MGS-6.1	1/19/18	MT-101.75	1/17/20	TC-41.40	10/18/13						
DM-1.2	7/16/21	HL-60.31	1/17/20	MH-3	7/16/21	MT-101.80	1/17/20	TC-41.41	7/19/19						
DM-1.3	7/18/14	HW-2.1	7/20/18	MT-95.30	7/19/19	MT-101.90	7/17/20	TC-41.50	10/18/13						
DM-4.1	7/17/20	HW-2.2	7/20/18	MT-95.31	7/19/19	MT-102.10	1/17/20	TC-42.10	10/18/13						
DM-4.2	7/20/12	ITS-10.11	7/18/15	MT-95.32	4/19/19	MT-102.20	4/19/19	TC-42.20	10/18/13						
DM-4.3	1/15/16	ITS-14.11	1/21/22	MT-95.40	1/17/20	MT-103.10	1/21/22	TC-51.11	1/15/16						

COC STANDARD CONSTRUCTION DRAWINGS

1500	9/15/15	4170	7/1/21	MIS-1	1/1/18						
1510	9/15/15	4200	8/1/15	MIS-2	1/1/18						
1520	9/15/15	4202	8/10/17	MIS-3	1/1/18						
1540	9/15/15	4205	5/1/14	MIS-4	1/1/18						
1550	9/15/15	4253	5/1/14	MIS-54	1/1/18						
4000	8/10/17	4330	8/10/17	MIS-54APP	1/1/18						
4001	8/1/15	4331	5/1/14	MIS-56	1/1/18						
4002	5/1/14	4600	7/1/20	MIS-57	1/1/18						
4020	5/1/14	4602	7/1/20	MIS-58	1/1/18						
4021	7/1/20	4603	7/1/20	MIS-202	1/1/18						
4022	7/1/20	4650	7/1/20	MIS-301	1/1/18						
4023	7/1/20			MIS-302	1/1/18						
4051	5/1/14			MIS-402	1/1/18						
4104	8/10/17			MIS-403	1/1/18						
4105	8/10/17	L-6309B	9/1/22	MIS-404	1/1/18						
4110	10/1/18	L-6310	1/26/18	MIS-501	1/1/18						
4122	10/1/18	L-6311	1/26/18	MIS-603	1/1/18						
4160	10/1/18	L-6316B	1/26/18	MIS-700	1/1/18						
4161	8/1/15	L-8508B	9/21/22	MIS-702	1/1/18						
4162	7/1/20			MIS-800	1/1/18						
4163	7/1/21										
4164	10/1/20										

SUPPLEMENTAL SPECIFICATIONS

SS800	SEE PROPOSAL
SS804	7/15/22
SS809	7/15/22
SS813	10/19/18
SS825	1/17/20
SS832	7/15/22
SS833	1/21/22
SS839	7/16/21
SS844	4/20/18
SS861	1/15/21
SS878	1/21/22
SS904	7/15/22
SS909	10/21/22
SS913	4/16/21
COC1611	2/1/13
COC1620	9/10/18

SPECIAL PROVISIONS

GEOTECHNICAL REPORT (1/18/20)

WATERWAY PERMIT 3/30/23

FEDERAL PROJECT NO. E131 (486)

PID NO. 92616

CONSTRUCTION PROJECT NO. FRA-270-51.50

RAILROAD INVOLVEMENT NONE

PLAN SPLIT INFORMATION

SPLIT #	CATEGORY	GROUP	PLAN SPLIT CODE	DESCRIPTION
1	IMS	PAVEMENT	01/IMS/04	REMOVAL OF RAMPS N & Q. RECONFIGURE RAMPS P1 & S AND SIGNALIZE INTERSECTIONS AT US 23. ADD A DECELERATION LANE ON US 23. PAVEMENT REPLACEMENT ON RAMPS L, M, O, P1, & S
2	IMS	STURCTURE	02/IMS/14	WORK ON TWO STRUCTURES (FRA-270-5264 & FRA-23-0517)
3	NHS	UTILITY	03/NHS/43	RELOCATE CITY OF COLUMBUS DEPARTMENT OF POWER POLES IN BOTH PROJECT PARTS

IMS=INTERCHANGE MODIFICATION STUDY
NHS=NATIONAL HIGHWAY SYSTEM

HORIZONTAL SCALE IN FEET
0 100 200 400

CALCULATED ACF
CHECKED CSR

SCHEMATIC PLAN

FRA-270-51.50

3
554

NOTES:

1.CENTERLINE SHIFT AT THE SOUTH END OF THIS PROJECT.

2.THIS PROJECT IS ADJACENT TO THE PID 110380 PROJECT. THERE IS A CENTERLINE SHIFT AT THE LIMITS OF THE PID 110380 AND THE PID 92616 PROJECT. AT THIS CENTERLINE SHIFT STA. 546+50.00, 0.0' RT IN THE PID 92616 PROJECT EQUALS STA 546+45.91, 3.2' RT OF THE PID 110380 PROJECT. THE STATIONING FOR THE WORK NORTH OF THIS CENTERLINE SHIFT USES THE PID 62616 PROJECT. THE STATIONING FOR THE WORK SOUTH OF THIS CENTERLINE SHIFT USES THE PID 110380 PROJECT CENTERLINE

NOTE: THERE ARE NO LANDSCAPED AREAS WITHIN THE WORK LIMITS

1 ADDENDUM #1 04/21/2023

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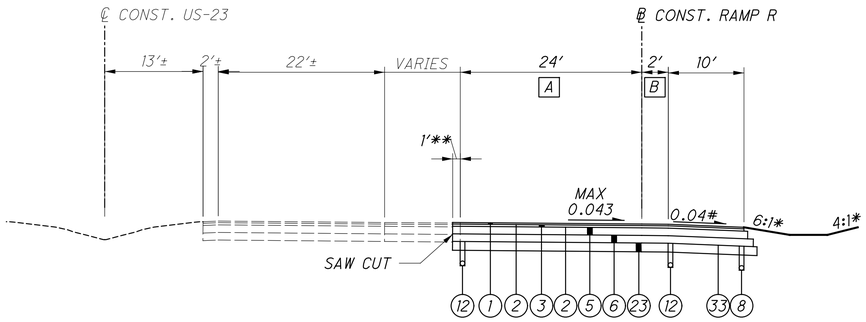
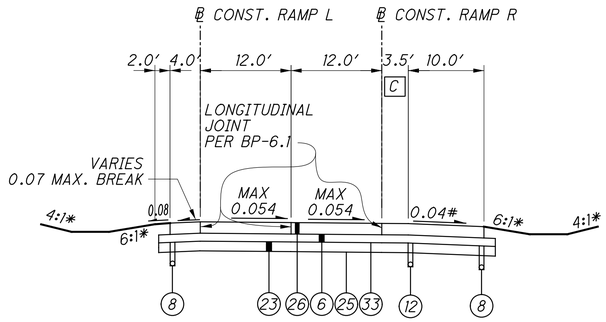


PROPOSED SUPERELEVATED SECTION RAMP R
STA 260+14.67 TO STA 266+48.50

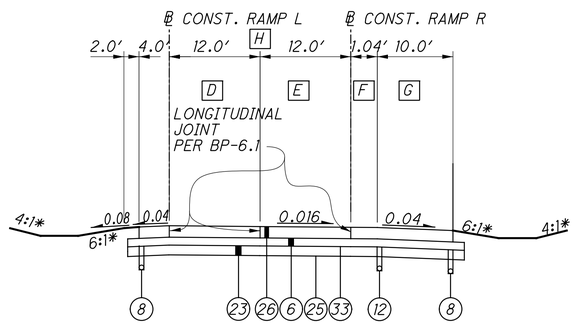
A VARIES FROM 12.0' AT STA. 260+14.67 TO 24.0' AT STA. 264+09.72
24.0' FROM STA. 264+09.72 TO STA. 266+48.50

B 0.0' FROM STA. 260+14.67 TO 265+21.48
VARIES FROM 0.0' AT STA. 265+21.48 TO 2.0' AT STA. 266+48.50



PROPOSED SUPERELEVATED SECTION RAMP R
STA 266+48.50 TO STA 272+70.68

C VARIES FROM 2.0' AT STA. 266+48.50 TO 3.5' AT STA. 267+44.39
3.5' FROM STA. 267+44.39 TO STA. 271+13.82
VARIES FROM 3.5' AT STA. 271+13.82 TO 1.0' AT STA. 272+70.68



PROPOSED NORMAL SECTION RAMP R
STA 272+70.68 TO STA 276+30.51

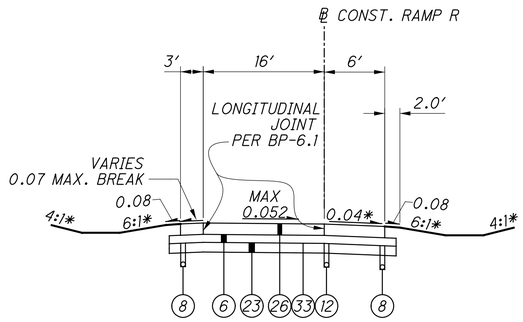
D 12.0' SEE RAMP L

E 12.0' FROM STA. 272+70.68 TO STA. 274+23.44
VARIES FROM 12.0' AT STA. 274+23.44 TO 16.0' AT STA. 275+79.94
16.0' FROM STA. 275+79.94 TO STA. 276+30.51

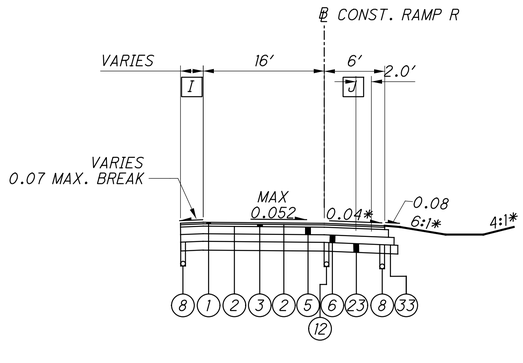
F VARIES FROM 1.0' AT STA. 272+70.68 TO 0.0' AT STA. 273+36.73

G VARIES FROM 10.0' AT STA. 275+79.94 TO 6.0' AT STA. 276+29.94.
6.0' FROM STA. 276+29.94 TO STA. 276+30.51.

H SEE PAVEMENT DETAIL



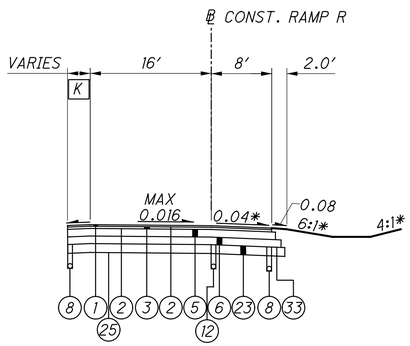
PROPOSED SUPERELEVATED SECTION RAMP R
STA 276+30.51 TO STA 285+19.83



PROPOSED SUPERELEVATED SECTION RAMP R
STA STA 285+19.83 TO STA. 287+02.09

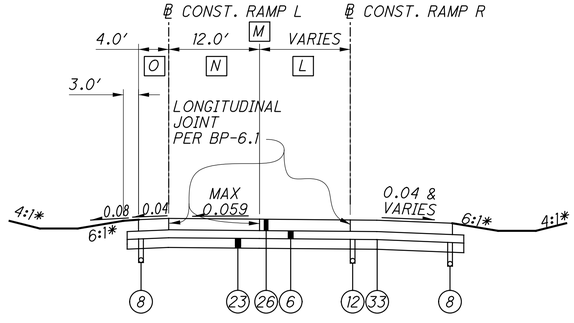
I SEE IR 270 CD LANE SECTION

J VARIES FROM 6.0' AT STA. 286+42.36 TO 8.0' AT STA. 286+92.92
8.0' FROM STA. 286+92.92 TO STA. 287+02.09



PROPOSED NORMAL SECTION RAMP R
STA. 287+02.09 TO STA. 287+90.80

K SEE IR 270 CD LANE SECTION



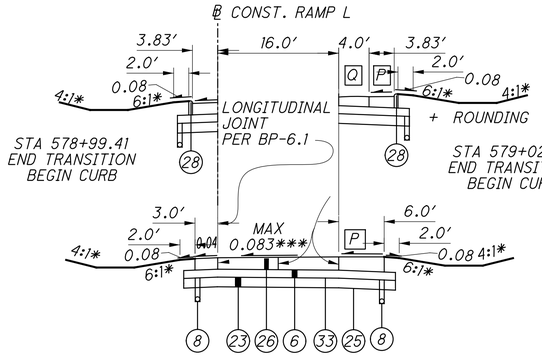
PROPOSED SUPERELEVATED SECTION RAMP L
STA 571+88.12 TO STA 578+67.54

L 12.0' SEE RAMP R

M SEE PAVEMENT DETAIL

N VARIES FROM 12.0' AT STA. 574+23.32 TO 16.0' AT STA. 575+79.41
16.0' FROM STA. 575+79.41 TO STA. 578+67.54

O VARIES FROM 4.0' AT STA. 575+86.90 TO 3.0' AT STA. 576+36.90
3.0' FROM 576+36.90 TO STA. 578+67.54

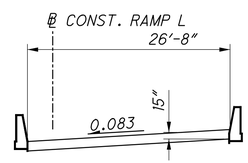


PROPOSED SUPERELEVATED SECTION RAMP L
STA 578+67.54 TO STA. 579+24.81

P VARIES FROM 0.011 FT./FT. AT STA. 578+67.54
TO 0.083 FT./FT. AT STA. 579+02.54.

Q MAINTAIN 4.0' OF ROUNDING AS NEEDED

*** 50' SLOPE TRANSITION FROM 0.059 TO 0.083
TO MATCH THE PROPOSED APPROACH SLAB SLOPE.
ALSO A 35' MINIMUM SHOULDER TAPER SHALL BE USED
FROM THE ROADWAY TO THE APPROACH SLAB.



PROPOSED SUPERELEVATED RAMP L FORWARD AND REAR APPROACH SLAB (T=15")
STA 579+24.81 TO STA. 579+49.81
STA. 583+01.24 TO STA. 583+26.24

1 # MATCH LANE CROSS SLOPE WHEN LANE CROSS SLOPE IS GREATER THAN 0.04

* OR AS NOTED IN CROSS SECTIONS

** OUTSIDE EDGE OF PAVEMENT

1 ADDENDUM #1
04/21/2023

CALCULATED ACF
CHECKED CSR

TYPICAL SECTIONS

FRA-270-51.50

11
554

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CALCULATED ACF
CHECKED CSR

GENERAL NOTES

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITES

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

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

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY. PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEM.

PIPE CONNECTIONS TO CORRUGATED METAL STRUCTURES

CONNECTIONS OF PROPOSED LONGITUDINAL DRAINAGE TO CORRUGATED METAL STRUCTURES SHALL BE MADE BY MEANS OF A SHOP FABRICATED OR FIELD WELDED STUB ON THE STRUCTURE. THE STUB SHALL MEET THE REQUIREMENTS OF 707 AND HAVE A MINIMUM LENGTH OF 2 FEET AND A MINIMUM WALL THICKNESS OF 0.064 INCHES.

THE LOCATION AND ELEVATION OF THE STUB ARE TO BE CONSIDERED APPROXIMATE AND MAY BE ADJUSTED BY THE ENGINEER TO AVOID CUTTING THROUGH JOINTS IN THE STRUCTURE.

THE FIELD WELDED JOINT, IF USED, SHALL BE THOROUGHLY CLEANED AND REGALVANIZED OR OTHERWISE SUITABLY REPAIRED. WELDING SHALL MEET THE REQUIREMENTS OF 513.21.

A MASONRY COLLAR, AS PER STANDARD DRAWING DM-1.1, WILL BE REQUIRED TO CONNECT THE LONGITUDINAL DRAINAGE TO THE STUB, WHEN PIPE OTHER THAN CORRUGATED METAL IS PROVIDED FOR THE LONGITUDINAL DRAINAGE. PAYMENT FOR CUTTING INTO THE STRUCTURE AND PROVIDING THE CONNECTION DESCRIBED, SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 611 OR 522.

FARM DRAINS

ALL FARM DRAINS, WHICH ARE ENCOUNTERED DURING CONSTRUCTION, SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS. EXISTING COLLECTORS WHICH ARE LOCATED BELOW THE ROADWAY DITCH ELEVATIONS, AND WHICH CROSS THE ROADWAY, SHALL BE REPLACED WITHIN THE CONSTRUCTION LIMITS BY ITEM 611 CONDUIT, TYPE B, ONE COMMERCIAL SIZE LARGER THAN THE EXISTING CONDUIT.

EXISTING COLLECTORS AND ISOLATED FARM DRAINS, WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF ROADWAY DITCHES, SHALL BE OUTLETTED INTO THE ROADWAY DITCH BY 611 TYPE F CONDUIT. THE OPTIMUM OUTLET ELEVATION SHALL BE ONE FOOT ABOVE THE FLOWLINE ELEVATION OF THE DITCH. LATERAL FIELD TILES WHICH CROSS THE ROADWAY SHALL BE INTERCEPTED BY 611, TYPE E CONDUIT, AND CARRIED IN A LONGITUDINAL DIRECTION TO AN ADEQUATE OUTLET OR ROADWAY CROSSING.

THE LOCATION, TYPE, SIZE AND GRADE OF REPLACEMENTS SHALL BE DETERMINED BY THE ENGINEER AND PAYMENT SHALL BE MADE ON FINAL MEASUREMENTS.

EROSION CONTROL PADS AND ANIMAL GUARDS SHALL BE PROVIDED AT THE OUTLET END OF ALL FARM DRAINS AS PER STANDARD CONSTRUCTION DRAWING DM-1.1, EXCEPT WHEN THEY OUTLET INTO A DRAINAGE STRUCTURE. PAYMENT FOR THE EROSION CONTROL PADS AND ANIMAL GUARDS AND ANY NECESSARY BENDS OR BRANCHES SHALL BE INCLUDED FOR PAYMENT IN THE PERTINENT CONDUIT ITEMS. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

611 6" CONDUIT, TYPE B	100 FT
611 6" CONDUIT, TYPE E	100 FT
611 6" CONDUIT, TYPE F	100 FT
601 ROCK CHANNEL PROTECTION TYPE C WITH FILTER	10 CU. YD

REVIEW OF DRAINAGE FACILITES

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

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

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

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEMS.

UNRECORDED STORM WATER DRAINAGE

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

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE WORK NOTED ABOVE:

611, 6" CONDUIT, TYPE B, FOR DRAINAGE CONNECTION	100 FT.
611, 6" CONDUIT, TYPE C, FOR DRAINAGE CONNECTION	100 FT.
611, 6" CONDUIT, TYPE E, FOR DRAINAGE CONNECTION	100 FT.
611, 6" CONDUIT, TYPE F, FOR DRAINAGE CONNECTION	100 FT.

MANHOLES, CATCH BASINS AND INLETS REMOVED OR ABANDONED

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 202 ITEM.

ITEM SPECIAL - PIPE CLEANOUT

THIS WORK SHALL CONSIST OF REMOVING SEDIMENT AND DEBRIS FROM THE EXISTING DRAINAGE CONDUITS SPECIFIED IN THE PLANS. ALL MATERIAL REMOVED SHALL BE DISPOSED OF AS PER 105.16 AND 105.17. ALL SEWERS SHALL BE CLEANED OUT TO THE SATISFACTION OF THE ENGINEER.

CLEANOUT OF THE PIPE SHALL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM SPECIAL - PIPE CLEANOUT. THIS PRICE SHALL INCLUDE THE COST FOR MATERIAL, EQUIPMENT, LABOR, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CLEANOUT.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE ABOVE NOTED WORK:

SPECIAL, PIPE CLEANOUT, 24" AND UNDER	2600 FT.
SPECIAL, PIPE CLEANOUT, 27" TO 48"	250 FT.
SPECIAL, PIPE CLEANOUT, OVER 48"	1500 FT.

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THE CONTRACTOR SHALL PROVIDE A VIDEO OF THE INSIDE OF THE PIPE AFTER CLEANING TO VERIFY PIPE HAS BEEN COMPLETELY CLEANED.

THE PIPES LABELED ON SHEETS 174, 175, 202, 206, 221, 224, 225, 226, 227, 229, 230, 257, 258, 269, 270, AND 302 SHALL BE CLEANED OUT PER ITEM SPECIAL - PIPE CLEANOUT.

EXISTING SUBSURFACE DRAINAGE

PROVIDE UNOBSTRUCTED OUTLETS FOR ALL EXISTING UNDERDRAINS OR AGGREGATE DRAINS ENCOUNTERED DURING CONSTRUCTION.

PROVIDE AN OUTLET PER STANDARD CONSTRUCTION DRAWING DM-1.1 FOR ALL UNDERDRAINS THAT OUTLET TO A SLOPE.

UNDERDRAINS THAT CAN BE CONNECTED TO THE NEW OR EXISTING UNDERDRAINS AT THE END OF THE PROJECT LIMITS AS WELL AS ALL NECESSARY BENDS OR BRANCHES REQUIRED FOR CONNECTION ARE INCLUDED IN THE BASIS OF PAYMENT FOR UNCLASSIFIED PIPE UNDERDRAINS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

601, TIED CONCRETE BLOCK MAT, TYPE 1	10 SQ. YD.
605, AGGREGATE DRAINS	50 FT.
611 6" CONDUIT, TYPE F	100 FT.
611, PRECAST REINFORCED CONCRETE OUTLET	10 EACH
605 6" UNCLASSIFIED PIPE UNDERDRAINS	200 FT.

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

659, SOIL ANALYSIS TEST	2 EACH
659, TOPSOIL	5574 CU. YD.
659, SEEDING AND MULCHING	50209 SQ. YD.
659, REPAIR SEEDING AND MULCHING	2511 SQ. YD.
659, INTER-SEEDING	2511 SQ. YD.
659, COMMERCIAL FERTILIZER	7.79 TON
659, LIME	10.38 ACRES
659, WATER	407 M. GAL.
659, MOWING	113 M. SQ. FT.

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

CULVERT AND STORM SEWER EXTENSIONS

THE EXISTING CULVERT OR STORM SEWER SHOULD BE REMOVED BACK TO THE FIRST JOINT AT THE OUTLET END AND THE SECOND JOINT AT THE INLET END OF THE CULVERT, MEASURED IN THE FIELD AND PROVIDE A MASONRY COLLAR PER DM-1.1 AT CONNECTION. MATCH EXISTING MATERIAL FOR CULVERT EXTENSION. THE CONTRACTOR SHALL INSPECT EACH PIPE TO ENSURE PIPE IS IN GOOD CONDITION AND SHALL PROMPTLY INFORM THE ENGINEER IF ADDITIONAL PIPE REMOVAL AND REPLACEMENT IS REQUIRED.

PERMITS, WATERWAY PERMITS

A WATERWAYS PERMIT SHALL BE OBTAINED FOR THE PROJECT PRIOR TO PROJECT CONSTRUCTION. ONCE RECEIVED, THE SPECIAL PROVISIONS FOR THE PROJECT SHALL BE ATTACHED TO THE CONSTRUCTION PLANS. ALL CONDITIONS SHALL BE ADHERED TO DURING CONSTRUCTION. ALSO, A COPY OF THE PERMIT IS TO BE KEPT AT THE WORK SITE AT ALL TIMES.

ANTI-SEGREGATION

PROVIDE ANTI-SEGREGATION EQUIPMENT FOR ALL COURSES OF UNIFORM THICKNESS IN ACCORDANCE WITH C&MS 401.12

NON-RUBBER TIRE VEHICLES

NO NON-RUBBER TIRE VEHICLE SHALL BE MOVED ON STATE OR COUNTY ROADS. EXCEPTIONS MAY BE GRANTED BY AN AUTHORIZED STATE OR COUNTY OFFICIAL WHERE SHORT DISTANCES AND SPECIAL CIRCUMSTANCES ARE INVOLVED. GRANTING OF EXCEPTIONS MUST BE IN WRITING AND ANY RESULTING DAMAGE MUST BE REPAIRED FOR THE SATISFACTION OF THE STATE OR COUNTY

PAVEMENT REPAIRS

THE CONTRACTOR IS RESPONSIBLE FOR ALL PAVEMENT REPAIRS THAT ARE NEEDED FROM THE START OF CONSTRUCTION THRU COMPLETION OF THE PROJECT. ANY PAVEMENT REPAIRS SHALL BE INCLUDED IN THE BID COST FOR ITEM 614 MAINTENANCE OF TRAFFIC.

PAVEMENT FOR MAINTAINING TRAFFIC

A QUANTITY OF 50 CY OF ASPHALT FOR MAINTAIN TRAFFIC HAS BEEN TO BE USED AS DIRECTED BY THE ENGINEER TO LEVEL OUT ANY SETTLEMENT IN THE TEMPORARY PAVEMENT DURING CONSTRUCTION OPERATIONS.

ITEM 202 - PAVEMENT REMOVED AS PER PLAN

ALL EXISTING PAVEMENT TO BE REMOVED CONTAINING LAYERS OF CONCRETE, INCLUDING COMPOSITE ASPHALT OVER CONCRETE PAVEMENT, SHALL BE REMOVED UNDER ITEM 202 PAVEMENT REMOVED, AS PER PLAN. EXISTING PAVEMENT NOT CONTAINING CONCRETE SHALL BE REMOVED UNDER ITEM 202 PAVEMENT REMOVED, ASPHALT. SEE THE EXISTING TYPICAL SECTIONS FOR PAVEMENT BUILDUP. PAYMENT FOR THE OPERATION DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 202 ITEMS.

DRAINAGE AND UTILITY SETTLEMENT

PIPES, DRAINAGE STRUCTURES, OR UTILITIES LOCATED IN FILL ALONG THE TOE OF EMBANKMENTS SHALL NOT BE CONSTRUCTED UNTIL AT LEAST 30 DAYS AFTER COMPLETION OF EMBANKMENT.

ITEM 203 EMBANKMENT, AS PER PLAN

AS SPECIFIED IN THE GEOTECHNICAL REPORT, DRAINAGE LAYERS SHOULD BE COMPOSED OF FINE AGGREGATE THAT MEETS THE GRADATION CRITERIA OF C&MS 703.02 OR 703.03, SHOULD BE GRADED TO DRAIN, AND SHOULD HAVE A MINIMUM OF 2 FEET COVER. SEE PLAN SHEET NO 324 FOR ADDITIONAL INFORMATION.

ITEM 203 GRANULAR MATERIAL, TYPE E, AS PER PLAN

IN THE AREA ALONG TEMPORARY RAMP L BETWEEN STA. 91+00 AND 93+00, GRANULAR MATERIAL, TYPE E, SIZES NO. 1 AND NO. 2 STONE MAY BE PLACED BY THE METHOD OF END DUMPING IF SOFT/WET FOUNDATION SOILS ARE PRESENT AT THE TIME OF CONSTRUCTION. END DUMPING METHODS MAY BE USED UP TO AN ELEVATION 12 INCHES ABOVE THE FOUNDATION SUBGRADE. ABOVE THIS ELEVATION, EMBANKMENT CONSTRUCTION METHODS WILL BE IN ACCORDANCE WITH 203.05 TO 203.07 INCLUSIVE. DURING NORMAL CLEARING AND GRUBBING WHERE END DUMPING IS PERMITTED, THE REQUIREMENTS OF 201.04 FOR SCALPING SHALL BE WAIVED.

TEST PITS CONSTRUCTED FOR TEMPORARY RAMP L SHALL BE PAID FOR AS PART OF THIS PAY ITEM

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

TEMPORARY DRAINAGE ITEMS

TEMPORARY DRAINAGE ITEMS LABELED ON THE MAINTENANCE OF TRAFFIC PLAN ARE ITEMIZED ON THE MOT PLANS. PAYMENT FOR THE TEMPORARY DRAINAGE ITEMS ARE ITEMIZED AND CARRIED TO THE GENERAL SUMMARY.

1 ADDENDUM #1 04/21/2023

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TEMPORARY RAMP L

CONTRACTOR SHALL MAINTAIN TRAFFIC ALONG RAMP L DURING THE RECONSTRUCTION OF THE BRIDGES BY CONSTRUCTING A TEMPORARY RAMP AS SHOWN ON SHEETS 36-43. DUE TO THE POTENTIAL PRESENCE OF PEAT SOILS IN THIS AREA, THE CONTRACTOR SHALL DIG TEST PITS TO DETERMINE THE PRESENCE AND DEPTH EXTENT OF THE PEAT. TEST PITS SHALL BE LOCATED AT 50' ON-CENTER ALONG THE ALIGNMENT AND EXTEND TO A MINIMUM DEPTH OF 4.0' EACH. TEST PITS SHALL BE PAID FOR AS PART OF THE PAY ITEM, ITEM 203 - GRANULAR MATERIAL, TYPE E, AS PER PLAN.

CONDITION 1: WHERE PEAT IS NOT ENCOUNTERED WITHIN 4.0' BELOW THE SUBGRADE, A 2.0' THICK GEOGRID AND STONE WORK PLATFORM SHALL BE CONSTRUCTED AT THE FOUNDATION SUBGRADE. THE FOUNDATION SUBGRADE SHALL BE SCALPED IN ACCORDANCE WITH C&MS ITEM 201 PRIOR TO CONSTRUCTION OF THE WORK PLATFORM. THE WORK PLATFORM SHALL BE CONSTRUCTED USING ITEM 203 GRANULAR MATERIAL, TYPE E, SIZES NO. 1 AND NO. 2 STONE. TWO LAYERS OF GEOGRID SHALL BE INCORPORATED IN THE WORK PLATFORM. THE STONE MAY BE END DUMPED TO A DEPTH OF 12 INCHES.

CONDITION 2: PEAT WITH DEPTHS LESS THAN 4.0. REMOVE PEAT IN ITS ENTIRETY. CONSTRUCT 2.0' THICK GEOGRID AND STONE WORK PLATFORM AT BOTTOM OF EXCAVATION. THE WORK PLATFORM SHALL BE CONSTRUCTED USING ITEM 203 GRANULAR MATERIAL, TYPE E, AS PER PLAN, SIZES NO. 1 AND NO. 2 STONE WITH TWO LAYERS OF GEOGRID ONE AT THE BASE AND ANOTHER PLACED MID-HEIGHT. THE STONE MAY BE END DUMPED TO A DEPTH OF 12 INCHES.

CONDITION 3: PEAT IN EXCESS OF 4.0' SHALL BE REMOVED TO A DEPTH OF 4.0' AND REPLACED WITH ITEM 203 GRANULAR MATERIAL, TYPE E, AS PER PLAN SIZES NO.1 AND NO. 2 STONE WITH GEOGRID AT THE BASE AND ANOTHER LAYER OF GEOGRID PLACED MID-HEIGHT WITHIN THE BACKFILL.

THE FOLLOWING CONTINGENCY QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR THE STABILIZATION OF TEMPORARY RAMP L.

ITEM 203 EXCAVATION,	504 CY
ITEM 203 GRANULAR MATERIAL, TYPE E, AS PER PLAN	504 CY
ITEM 204 GEOTEXTILE	2276 SY
ITEM 861 GEOGRID	756 SY

WATER

THE CITY OF COLUMBUS, CONSTRUCTION AND MATERIAL SPECIFICATIONS, 2018 EDITION AND ALL REVISIONS, INCLUDING ALL SUPPLEMENTS THERETO, SHALL GOVERN ALL CONSTRUCTION ITEMS THAT ARE A PART OF THIS PLAN, UNLESS OTHERWISE NOTED.

ALL WATER MAIN MATERIALS AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE CURRENT RULES AND REGULATIONS OF THE CITY OF COLUMBUS, DIVISION OF WATER. ALL CITY OF COLUMBUS, DIVISION OF WATER STANDARD DRAWINGS SHALL APPLY TO THE PROJECT, UNLESS OTHERWISE NOTED.

FOR ANY EMERGENCIES INVOLVING THE WATER DISTRIBUTION SYSTEM, PLEASE CONTACT THE DIVISION OF WATER DISTRIBUTION MAINTENANCE OFFICE AT 614-645-7788.

ALL BRASS FITTINGS ASSOCIATED WITH WATER WORK, INCLUDING REPAIRS TO THE EXISTING SYSTEM, SHALL CONFORM TO THE REVISED ALLOWABLE LEAD EXTRACTION LIMIT PER THE UPDATED NSF/ANSI 61 STANDARD. THE DIVISION OF WATER'S APPROVED MATERIALS LIST HAS BEEN UPDATED TO REFLECT THIS REQUIREMENT.

NO PERSON SHALL BEGIN CONSTRUCTION OR INSTALLATION OF A PUBLIC WATER MAIN UNTIL PLANS HAVE BEEN APPROVED BY THE STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA).

ALL WATER MAINS SHALL BE CLEANED AND FLUSHED, AND ANY WATER MAIN 12-INCH AND LARGER MUST BE PROPERLY PIGGED, IN ACCORDANCE WITH SECTION 801.15 OF THE CITY OF COLUMBUS, CONSTRUCTION AND MATERIAL SPECIFICATIONS.

IT SHALL BE UNLAWFUL FOR ANY PERSON TO PERFORM ANY WORK ON CITY OF COLUMBUS WATER MAIN SYSTEMS WITHOUT FIRST SECURING LICENSE TO ENGAGE IN SUCH WORK, AS INDICATED IN COLUMBUS CITY CODE SECTION 1103.02 AND 1103.06. THIS WORK INCLUDES ANY ATTACHMENTS, ADDITIONS TO OR ALTERATIONS IN ANY CITY SERVICE PIPE OR APPURTENANCES (INCLUDING WATER SERVICE LINES AND TAPS). THIS REQUIREMENT MAY BE MET BY UTILIZATION OF A SUBCONTRACTOR WHO HOLDS A CITY OF COLUMBUS WATER CONTRACTOR LICENSE OR A COMBINED WATER/SEWER CONTRACTOR LICENSE TO PERFORM THIS WORK. UTILIZATION OF A SUBCONTRACTOR MUST MEET THE LICENSING REQUIREMENTS OF CITY OF COLUMBUS BUILDING CODE, IN PARTICULAR SECTION 4114.119 AND 4114.529.

THE CONTRACTOR SHALL OBTAIN THE PROPER HYDRANT PERMIT(S), AND PAY ANY APPLICABLE FEES, FOR ANY APPROVED HYDRANT USAGE DEEMED NECESSARY FOR WORK UNDER THIS IMPROVEMENT. PERMITS MAY BE OBTAINED THROUGH THE DIVISION OF WATER PERMIT OFFICE (645-7330). THE CONTRACTOR SHALL ADHERE TO ALL RULES & REGULATIONS GOVERNING SAID PERMIT AND MUST HAVE THE ORIGINAL PERMIT ON SITE ANYTIME IN WHICH THE HYDRANT IS IN USE. PERMITS MAY BE OBTAINED BY ACCESSING HTTP://PORTAL.COLUMBUS.GOV/PERMITS/. COST TO BE INCLUDED IN THE VARIOUS BID ITEMS.

ALL WATER MAINS SHALL BE PRESSURE TESTED IN ACCORDANCE WITH SECTION 801.16 OF THE CITY OF COLUMBUS, CONSTRUCTION AND MATERIAL SPECIFICATIONS. THE CITY MAY NOT APPROVE ANY TEST LASTING LESS THAN TWO HOURS, REGARDLESS OF THE AMOUNT OF LEAKAGE.

ANY SECTION OF WATER MAIN THAT IS LONGER THAN 20 FEET IN LENGTH SHALL BE CHLORINATED. HAND SWABBING METHODS WILL ONLY BE PERMITTED FOR SECTIONS LESS THAN OR EQUAL TO 20 FEET IN LENGTH. USE UNSCENTED HOUSEHOLD BLEACH FOR HAND SWABBING OF PIPE AND FITTINGS. PLEASE NOTE THAT CUT-IN-TEES, SLEEVES, AND ANY OTHER REQUIRED FITTINGS OR PIPING SHALL BE TAKEN INTO ACCOUNT AND ARE INCLUDED IN THE TOTAL LENGTH OF THE SECTION (CUT TO CUT).

ONLY ONE CONNECTION TO AN EXISTING WATER MAIN IS PERMITTED BEFORE DISINFECTION OF A NEW WATER MAIN HAS BEEN COMPLETED. ALL OTHER CONNECTIONS MUST BE MADE AFTER THE MAIN HAS BEEN DISINFECTED.

ALL FIRE HYDRANTS TO BE INSTALLED IN THE CITY OF COLUMBUS SHALL BE PAINTED WITH THE COLOR "SAFETY ORANGE". THE FIRE HYDRANTS SHALL BE PROVIDED WITH TWO COATS IN A GLOSS ENAMEL OF THE "SAFETY ORANGE" COLOR FOR THE ENTIRE HYDRANT. THE TOPS OF THE FIRE HYDRANTS ARE NO LONGER REQUIRED TO BE PAINTED BLACK. AFTER INSTALLATION OF FIRE HYDRANTS, THE CONTRACTOR IS RESPONSIBLE TO APPLY TOUCH UP PAINT TO ANY DAMAGE TO THE FACTORY APPLIED HYDRANT PAINT. HYDRANTS WILL NOT BE ACCEPTED UNTIL ANY PAINT DAMAGE FROM SHIPPING OR INSTALLATION HAS BEEN REPAIRED. USE HYDRANT TOUCH UP PAINT IN ACCORDANCE WITH THE APPROVED MATERIALS LIST.

MAINTAIN EIGHTEEN (18) INCHES VERTICAL AND TEN (10) FEET HORIZONTAL SEPARATION BETWEEN ANY SANITARY OR STORM SEWER PIPING AND ALL PROPOSED WATER MAINS.

WHEN CROSSING THE EXISTING WATER MAIN, AND LOW STRENGTH MORTAR (ITEM 613) IS TO BE USED AS BACKFILL, THE CONTRACTOR SHALL PROVIDE SIZE NO. 57 CRUSHED CARBONATE STONE (CCS) 1 FOOT BELOW TO 1 FOOT ABOVE THE EXISTING WATER MAIN.

IF DURING EXCAVATION, THE POLYETHYLENE ENCASEMENT ON THE EXISTING WATER MAIN BECOMES DAMAGED, THE CONTRACTOR SHALL REPAIR THE POLYETHYLENE ENCASEMENT PER MANUFACTURER'S SPECIFICATIONS AND DOW STANDARD DRAWINGS L-1003 AND L-1004, AT THEIR OWN EXPENSE. ENSURE THAT THE ENTIRE EXPOSED AREA IS COVERED WITH NEW POLYETHYLENE ENCASEMENT AND SECURELY TAPED, PRIOR TO BACKFILLING.

CONTRACTOR SHALL ADHERE TO THE REQUIREMENTS OF THE OHIO ADMINISTRATIVE CODE CHAPTER 3745-83-02 WATER DISRUPTION OF SERVICE RULE. EXCAVATE PITS SUFFICIENTLY BELOW THE AREA TO BE CONNECTED TO IN ORDER TO MAINTAIN WATER LEVELS BELOW THE WATER MAIN. IF WATER FROM THE PIT ENTERS THE EXISTING MAIN, CONTACT DIVISION OF WATER IMMEDIATELY. ENSURE THAT SUFFICIENTLY SIZED PUMPS ARE UTILIZED TO REMOVE WATER FROM THE TRENCH AND BACKUP PUMPS ARE KEPT ON SITE FOR REDUNDANCY.

"ITEM SPECIAL SURVEY COORDINATES"SHALL INCLUDE ALL MATERIAL, EQUIPMENT, AND LABOR NECESSARY TO OBTAIN HORIZONTAL AND VERTICAL (NORTHING, EASTING, AND CENTERLINE OF PIPE ELEVATION) SURVEY COORDINATES FOR THE WATER MAIN IMPROVEMENTS. THE SURVEY COORDINATES SHALL BE OBTAINED FOR THE COMPLETED WATER MAIN CONSTRUCTION AND SHALL INCLUDE ALL VALVES, TEES, CROSSES, BENDS, HORIZONTAL DEFLECTIONS, PLUGS, REDUCERS, TAPPING SLEEVES, FIRE HYDRANTS, AIR RELEASES, CURB STOPS, TRACER WIRE BOXES, AND CASING PIPE TERMINI. ADDITIONAL SURVEY COORDINATES ARE REQUIRED ON THE WATER MAIN EVERY 200 FEET WHERE NO FITTING OR OTHER WATER MAIN STRUCTURE IS BEING INSTALLED WITHIN THAT LENGTH OF THE IMPROVEMENT.

ALL SURVEY COORDINATES SHALL BE REFERENCED TO THE APPLICABLE COUNTY ENGINEER'S MONUMENTS, AND SHALL BE BASED ON THE NORTH AMERICAN DATUM OF 1983 (NAD 83) WITH THE (NSRS2007) ADJUSTMENT, WITH FURTHER REFERENCE MADE TO THE OHIO STATE PLANE SOUTH COORDINATE SYSTEM, SOUTH ZONE, WITH ELEVATIONS BASED ON NAVD 88 DATUM. ALL COORDINATES (NORTHING, EASTING, CENTERLINE ELEVATION) SHALL BE REFERENCED TO THE NEAREST HUNDREDTH (N XXXXXX.XX, E XXXXXX.XX, C/L ELEV. XXX.XX). ALL SURVEY COORDINATES SHALL BE ACCURATE TO WITHIN 1.0 FOOT HORIZONTAL AND A TENTH OF A FOOT (0.10) OR LESS VERTICAL.

THE COORDINATES SHALL BE DOCUMENTED TO THE ENGINEER IN DIGITAL SPREADSHEET FORM AND SHALL INCLUDE THE APPLICABLE ITEM, STATION, NORTHING, EASTING, AND CENTERLINE ELEVATION. COORDINATES SHALL BE SUBMITTED TO THE ENGINEER ON A BI-WEEKLY BASIS. COORDINATES SHALL ALSO BE REQUIRED TO BE SUBMITTED TO THE DIVISION OF WATER AS PART OF THE REQUEST FOR CHLORINATION.

LUMP SUM PAYMENT IS FULL COMPENSATION FOR ALL WORK INVOLVED IN OBTAINING AND DOCUMENTING THE SURVEY COORDINATES AS DESCRIBED IN THIS SPECIFICATION.

ALL WATER MAIN VALVE BOXES, WATER TAP BOXES, TEST STATIONS, PITOMETER TAP STRUCTURES, METER PIT COVERS, AND OTHER SURFACE UTILITY STRUCTURES WITHIN THE DISTURBED AREA SHALL BE ADJUSTED TO GRADE. ANY OF THESE STRUCTURES LOCATED WITHIN PAVEMENT, DRIVEWAYS, OR OTHER TRAVELED AREAS, WHETHER EXISTING OR PROPOSED, SHALL BE EQUIPPED WITH A TRAFFIC RATED, HEAVY DUTY VALVE BOX AND/OR COVER IN ACCORDANCE WITH THE STANDARD DRAWINGS. EXISTING WATER TAP BOXES TO REMAIN THAT ARE ENCOUNTERED WITHIN THE PROJECT LIMITS SHALL BE CLEANED OUT, CENTERED OVER THE CURB STOP, AND ADJUSTED TO THE PROPOSED GRADE.

WHERE NEW CONDUIT IS PROPOSED TO CROSS AN EXISTING OR PROPOSED WATER MAIN OR WATER TAP/SERVICE LINE, A MINIMUM OF 12-INCHES OF VERTICAL CLEARANCE SHALL BE MAINTAINED BETWEEN THE CONDUIT AND THE WATER MAIN OR TAP/SERVICE LINE. A MINIMUM OF 3-FEET OF HORIZONTAL CLEARANCE (OUT TO OUT) IS REQUIRED AT LOCATIONS WHERE THE CONDUIT IS PARALLEL TO THE WATER MAIN AND AT LOCATIONS OF WATER MAIN THRUST BLOCKS.

A MINIMUM OF 3 FEET OF HORIZONTAL CLEARANCE (OUT TO OUT) SHALL BE MAINTAINED BETWEEN ALL EXISTING WATER MAINS AND FOUNDATIONS FOR POLES, PULL BOXES, PUSH BUTTON PEDESTALS, AND ANY OTHER MISCELLANEOUS ELECTRICAL STRUCTURE.

DURING CONSTRUCTION, THE CONTRACTOR SHALL USE EXTREME CAUTION NOT TO DAMAGE THE EXISTING WATER MAINS DUE TO MINIMAL COVER.

FIRE HYDRANT RELOCATIONS SHALL CONFORM TO APPLICABLE SECTIONS OF ITEM 809 OF THE CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS. WORK SHALL CONSIST OF REMOVING THE EXISTING HYDRANT, INSTALLING NEW 6" PIPE AND FITTING AS REQUIRED TO LOCATE THE FIRE HYDRANT 2 FEET FROM BACK OF PROPOSED CURB OR 8 FEET OFF EDGE OF PAVEMENT, RESETTING HYDRANT AND BLOCKING AS REQUIRED. ALL 6"PIPE SHALL BE INSTALLED AT 4"-0" MINIMUM COVER. HYDRANT EXTENSIONS SHALL BE PROVIDED PER ITEM 810, AS REQUIRED. RELOCATED FIRE HYDRANTS SHALL BE ADJUSTED TO PROPER GRADE AND FACED IN THE PROPER DIRECTION. WHEN A HYDRANT IS RELOCATED FIFTEEN (15) FEET OR MORE FROM THE "TYPICAL HYDRANT SETTING"VALVE LOCATION (SEE L-6409 & L-6637), AN ADDITIONAL VALVE SHALL BE INSTALLED, AND RESTRAINED, WITHIN TWO (2) FEET OF THE RELOCATED HYDRANT. PAYMENT IS TO BE INCLUDED UNDER ITEM 809, FIRE HYDRANT RELOCATED.

RELOCATED FIRE HYDRANTS SHALL BE PUT BACK IN SERVICE AS SOON AS POSSIBLE. THE CONTRACTOR SHALL NOTIFY THE DIVISION OF FIRE ALARM OFFICE, 221-3132, WHENEVER FIRE HYDRANTS ARE TAKEN OUT OF SERVICE AND PLACED BACK IN SERVICE. NO TWO (2) ADJACENT FIRE HYDRANTS SHALL BE TAKEN OUT OF SERVICE CONCURRENTLY.

THE CONTRACTOR SHALL COORDINATE HIS WORK SUCH THAT NO WATER CUSTOMER WILL HAVE THEIR SERVICE DISRUPTED MORE THAN TWO (2) TIMES THROUGHOUT THE DURATION OF THIS PROJECT.

IF A LEAD WATER TAP IS ENCOUNTERED AND IS NEITHER DAMAGED NOR PART OF A PLANNED RELOCATION/REPLACEMENT, THE CONTRACTOR SHALL REPORT THE PRESENCE OF THE LEAD TAP TO THE DIVISION OF WATER DISTRIBUTION MAINTENANCE GROUP AT 614-645-7788.

1 ADDENDUM #1 04/21/2023

CALCULATED ACF CHECKED CSR

GENERAL NOTES

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WATER (CONTINUED)

IF A LEAD TAP IS EITHER DAMAGED DURING CONSTRUCTION OR IS PART OF A PLANNED WATER TAP RELOCATION/REPLACEMENT, THE CONTRACTOR SHALL TAKE THE FOLLOWING STEPS:

1. IF DAMAGED, IMMEDIATELY CONTACT LEW FLEMISTER, DIVISION OF WATER, (614-645-7028), TO REQUEST THE SHUT OFF OF THE EXISTING CURB STOP. IF LEW CANNOT BE REACHED, CONTACT THE DIVISION OF WATER DISTRIBUTION ENGINEERING OFFICE AT 614-645-7677 TO REQUEST THE SHUT OFF.

2. CONTRACTOR SHALL EXPOSE THE OWNER'S SIDE OF THE WATER SERVICE TO CONFIRM THE MATERIAL. THE INSPECTOR SHALL BE PRESENT FOR THIS.

3. IF THE CUSTOMER'S PRIVATE SERVICE MATERIAL IS LEAD, STOP WORK AND NOTIFY THE DIVISION OF WATER DISTRIBUTION ENGINEERING OFFICE (614-645-7677) IMMEDIATELY. IF THE MATERIAL IS NOT LEAD, THE CONTRACTOR SHALL REPLACE THE LEAD TAP (FROM EXISTING CORPORATION STOP TO CURB STOP) AND REINSTATE SERVICE TO THE CUSTOMER. PARTIAL REPAIRS OF THE LEAD TAP ARE NOT PERMITTED.

4. REFER TO DIVISION OF WATER STANDARD DRAWINGS L-7102C AND L-9901 FOR INFORMATION ON WATER TAP RELOCATIONS, PLACING NEW CURB STOPS, AND RELOCATING CURB BOXES.

ITEM SPECIAL - FILL AND PLUG EXISTING CONDUIT

THIS ITEM CONSISTS OF THE CONSTRUCTION OF BULKHEADS IN AN EXISTING 15 INCH DIAMETER CONDUIT AND FILLING THE AREA SEALED OFF WITH ITEM 613, SAND OR OTHER MATERIAL APPROVED BY THE ENGINEER.

LOCATE THE BULKHEADS AT THE LIMITS OF THE AREA TO BE FILLED, AS INDICATED ON THE PLANS. THE BULKHEADS CONSIST OF BRICK OR CONCRETE MASONRY WITH A MINIMUM THICKNESS OF 12 INCHES.

PUMP THE FILL MATERIAL INTO PLACE OR BY OTHER MEANS APPROVED BY THE ENGINEER, SO THAT AFTER SETTLEMENT, AT LEAST 90 PERCENT OF THE CROSS- SECTIONAL AREA OF THE CONDUIT, FOR ITS ENTIRE LENGTH IS FILLED. THE LENGTH OF FILLED AND PLUGGED CONDUIT TO BE PAID FOR IS THE ACTUAL NUMBER OF FEET (MEASURED ALONG THE CENTERLINE OF EACH CONDUIT FROM OUTER FACE TO OUTER FACE OF BULKHEADS) FILLED AND PLUGGED AS DESCRIBED ABOVE.

IN LIEU OF FILLING AND PLUGGING THE EXISTING CONDUIT, THE PIPE MAY BE CRUSHED AND BACKFILLED PER 203, OR IT MAY BE REMOVED. THE LENGTH, MEASURED AS PROVIDED ABOVE, WILL BE PAID FOR AT THE CONTRACT PRICE PER FOOT FOR, ITEM SPECIAL, FILL AND PLUG EXISTING CONDUIT.

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ITEM 618 - RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE), AS PER PLAN

THE CONTRACTOR SHALL MILL 2 INCHES BY 2 FEET WIDE OF THE EXISTING ASPHALT SHOULDER IN ORDER TO REMOVE THE EXISTING RUMBLE STRIPS WITHIN THE PROJECT LIMITS IN THE AREA WHERE TRAFFIC IS SHIFTED. THE CONTRACTOR SHALL THEN COAT ALL MILLED SURFACES HORIZONTAL AND VERTICAL WITH APPROVED AC LIQUID. NEXT THE CONTRACTOR SHALL PLACE 2 INCHES OF ITEM 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-28.

ONCE THE PROJECT IS COMPLETE, THE CONTRACTOR SHALL INSTALL NEW RUMBLE STRIPS AS PER THE CONSTRUCTION AND MATERIAL SPECIFICATIONS SECTION 618.

ALL COST ASSOCIATED WITH THE REMOVAL OF THE EXISTING PAVEMENT, PLACEMENT OF THE SURFACE COURSE AND INSTALLATION OF THE RUMBLE STRIPS SHALL BE INCLUDED IN UNIT PRICE BID PER FOOT OF ITEM 618 - RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE), AS PER PLAN.

AN ESTIMATED QUANTITY OF 9190 FEET HAS BEEN CARRIED TO THE MAINTENANCE OF TRAFFIC SUBSUMMARY.

COORDINATION BETWEEN CONTRACTORS

THE CONTRACTOR SHALL COORDINATE WORK ON THIS PROJECT WITH ADJACENT CONSTRUCTION PROJECTS, INCLUDING PID 105839 SPOT PAVE WORK, WHILE THIS PROJECT IS UNDER CONSTRUCTION.

PAVEMENT CUTTING, SAWING, AND EXCAVATION OPERATIONS NOTE:

ALL PUBLIC AGENCIES AND PRIVATE CONTRACTORS PERFORMING PAVEMENT-CUTTING OPERATIONS ON CITY OF COLUMBUS STREETS AND ROADWAYS SHALL PROTECT THE ENVIRONMENT FROM DISCHARGES CREATED BY THEIR PAVEMENT CUTTING OPERATIONS. NOTE THAT COLUMBUS CITY CODE 1145 PROHIBITS NON-STORM WATER DISCHARGE INTO THE CITY OF COLUMBUS SEWER SYSTEM, CURB INLETS AND ANY PART OF ITS MS4 (MUNICIPAL SEPARATE STORM SEWER SYSTEM).

THE REQUIREMENT INCLUDES BUT IS NOT LIMITED TO WET OR DRY SAW-CUTTING, JACK HAMMERING, EXCAVATION EQUIPMENT USE, ETC. THE PUBLIC AGENCY AND/OR PRIVATE CONTRACTOR WORK CREWS SHALL RECOVER AND DISPOSE OF DETRITUS, POLLUTED WATERS, OR OTHER SUCH DISCHARGES RESULTING FROM THEIR PAVEMENT CUTTING OPERATIONS AND PROTECT ALL STORM SEWER INLETS FROM RECEIVING ANY DISCHARGES FROM THE CONSTRUCTION OPERATIONS. THE AGENCY OR CONTRACTOR RESPONSIBLE FOR EACH PAVEMENT CUTTING ACTIVITY SHALL BE SOLELY LIABLE FOR NOTICE OF VIOLATIONS (NOV/S) AND FINES ISSUED BY CITY OF COLUMBUS AND/OR STATE OF OHIO AUTHORITIES.

EQUIPMENT, MATERIALS AND METHODS SHALL BE PROVIDED BY THE RESPONSIBLE PUBLIC AGENCY AND/OR PRIVATE CONTRACTOR TO WORK CREWS PERFORMING THE PAVEMENT CUTTING ACTIVITY AND MADE AVAILABLE TO WORK CREWS FOR USE IN CLEANING UP DISCHARGES RESULTING FROM SUCH CUTTING ACTIVITIES AND PREVENTING RUNOFF. ALL WORK CREWS SHALL BE TRAINED TO EXERCISE AND EMPLOY EQUIPMENT, MATERIALS, AND ENVIRONMENTAL PROTECTIVE MEASURES TO PREVENT POLLUTED DISCHARGES FROM ENTERING THE CITY OF COLUMBUS STORM SEWER SYSTEM AND WATERS OF THE STATE OF OHIO.

THE PUBLIC AGENCY AND/OR PRIVATE CONTRACTOR IS SOLELY RESPONSIBLE FOR ENSURING THAT THE INLET PROTECTION IS ADEQUATE. THE MOST STRINGENT PROJECT PLANS, NOTES AND/OR DRAWINGS INCLUDING STORMWATER POLLUTION PREVENTION PLAN (SWP3) OR SPILL PREVENTION/REMEDIATION PLAN SHALL APPLY TO ALL PAVEMENT CUTTING, SAWING OR EXCAVATION OPERATIONS.

NOTE TO SPECIFICATION WRITERS: IF SWP3 OR SPILL PREVENTION/REMEDIATION PLANS ARE INCLUDED IN CONTRACT DOCUMENTS, THEY SHOULD BE CITED IN THE LAST PARAGRAPH ABOVE BY VOLUME, PAGE OR SHEET NUMBERS; SO DIRECTING THE READER TO SUCH PLAN.

DELINEATION OF PORTABLE AND PERMANENT BARRIER

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE BARRIER (PB) USED FOR TRAFFIC CONTROL AND ON PERMANENT CONCRETE BARRIER (INCLUDING BRIDGE PARAPETS) LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE.

BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THE SPACING SHALL BE AS PER TRAFFIC SCD MT-101.70. OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614.03 AND SCD MT-101.70. WHEN THE PB CONTAINS GLARE SCREEN, ONE SET OF THREE VERTICAL STRIPES OF SHEETING SHALL BE CONSIDERED EQUIVALENT TO AN OBJECT MARKER, ONE-WAY.

INCREASED BARRIER DELINEATION, AS SPECIFIED HEREIN, SHALL BE INSTALLED ON ALL PB AND CONCRETE PERMANENT BARRIER LOCATED WITHIN 5 FEET OF THE EDGE OF THE TRAVELED LANE.

THE INCREASED BARRIER DELINEATION SHALL CONSIST OF THE TRIPLE STACKING OF WORK ZONE BARRIER REFLECTORS.

TRIPLE-STACKED BARRIER REFLECTORS SHALL CONSIST OF ALIGNING THREE BARRIER REFLECTORS VERTICALLY, AT LOCATIONS WHERE A SINGLE BARRIER REFLECTOR WOULD BE OTHERWISE ATTACHED. THERE SHALL BE NO OPEN SPACE BETWEEN THE ADJACENT BARRIER REFLECTORS. THE TRIPLE-STACKED BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THEY SHALL BE SPACED AND ALIGNED PER TRAFFIC SCD MT-101.70.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE B	739 EACH
ITEM 614, OBJECT MARKER, 1-WAY	329 EACH

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING EACH OF THE ABOVE ITEMS

COORDINATION WITH ADJACENT PROJECTS

THE CONTRACTOR SHALL COORDINATE WORK WITH ODOT AND THE CONTRACTORS ON THE ADJACENT PROJECTS INCLUDING PID 110696. COORDINATION SHALL BE MADE TO PREVENT CONFLICTING ADVANCE WARNING SIGNS, CONFLICTING DETOUR ROUTES, OVERLAPING/CONFLICTING LANE CLOSURES, AND TO ENSURE THAT A MINIMUM DISTANCE OF 2 MILES BETWEEN ADJACENT LANE CLOSURES IS MAINTAINED. THIS IS NOT AN EXHAUSTIVE LIST OF COORDINATION ITEMS THAT MAY NEED TO BE RESOLVED BETWEEN PROJECTS. THE DEPARTMENT RESERVES THE RIGHT TO DECIDE WHICH PROJECT'S ACTIVITIES TAKE PRECEDENCE. PROJECTS THAT HAVE ACTIVITIES DELAYED DUE TO CONFLICTS WILL CONSIDER THIS AN EXCUSABLE, NON-COMPENSABLE DELAY PER 108.06.B. ON PROJECTS THAT HAVE ACTIVITIES DELAYED DUE TO CONFLICTS WHERE THE CONTRACTOR FAILED TO MEET THE NOTIFICATION REQUIREMENTS, THE DELAYS SHALL NOT BE CONSIDERED EXCUSABLE OR COMPENSABLE.
ATTENDANCE AT DEPARTMENT ORDERED TRAFFIC COORDINATION MEETINGS BETWEEN ADJACENT PROJECTS SHALL BE CONSIDERED MANDATORY FOR EACH PROJECT'S SUPERINTENDENT AND WORKSITE TRAFFIC SUPERVISOR (WTS)*, AND INCIDENTAL TO THE LUMP SUM MAINTENANCE OF TRAFFIC PAYMENT ITEM

*IF REQUIRED BY THE PROJECT

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⚠ ADDENDUM #1 04/21/2023

CALCULATED ACF
CHECKED CSR

GENERAL NOTES

FRA-270-51.50

SEQUENCE OF CONSTRUCTION

PHASE 1

CONSTRUCT THE EARTHWORK, DRAINAGE AND PAVEMENT FOR TEMPORARY RAMP (TO BE USED IN PHASE 2 BY DETOURED RAMP L TRAFFIC) FROM US 23 TO RAMP M. CONSTRUCT TEMPORARY SIGNAL AT TEMPORARY RAMP. THIS WORK MAY CONTINUE THROUGH PHASE 1A. RAMP M MAY BE DETOURED FOR UP TO TWO WEEKS TO CONSTRUCT THE TIE IN TO TEMPORARY RAMP L.

MAINTAIN TRAFFIC ON RIGHT SIDE OF RAMP P1 WHILE CONSTRUCTING THE EARTHWORK, DRAINAGE AND FULL DEPTH PAVEMENT FOR RAMP P2 AND WIDENING LEFT ON RAMP P1. CONSTRUCT THE EARTHWORK AND PAVEMENT FOR MAINTAINING TRAFFIC FOR THE CONNECTION OF RAMP P2 TO RAMP O (TO BE USED IN PHASE 2 BY DIVERTED RAMP R TRAFFIC) FROM US 23 TO RAMP O. CONSTRUCT PERMANENT SIGNAL AT RAMP P2 AND MODIFY FOR USE IN PHASE 1A. THE CONTRACTOR CAN CLOSE RAMP O FOR UP TO TWO WEEKS TO CONSTRUCT THE PROPOSED STORM SEWER BETWEEN RAMP O AND RAMP P2.

USING PERMISSIBLE LANE CLOSURES, CONSTRUCT EARTHWORK, DRAINAGE, PERMANENT PAVEMENT AND PAVEMENT FOR MAINTAINING TRAFFIC IN US 23 MEDIAN TO ACCOMMODATE LEFT TURN LANES.

ON I-270 EB, SHIFT LANES LEFT AND CONSTRUCT EARTHWORK, DRAINAGE, AND PERMANENT PAVEMENT ON RIGHT SIDE OF I-270 EB FROM STA. 534+00 TO STA. 539+00.

PHASE 1A

PLACE WORKZONE CONTROL MARKINGS ON US 23 AND ACTIVATE SIGNAL.

MAINTAIN TRAFFIC (270 EB TO 23 SB) ON THE LEFT SIDE OF RAMP P1 AND RAMP P2 TO THE MODIFIED SIGNAL. CONSTRUCT THE EARTHWORK AND PAVEMENT FOR THE RIGHT SIDE OF RAMP P1. CONSTRUCT THE EARTHWORK AND PAVEMENT FOR THE ACCELERATION LANE FOR RAMP P1 TO US 23 SOUTH USING PERMISSABLE LANE CLOSURES AND ADHERING TO THE DROP OFF REQUIREMENTS OF SCD MT-101.90.

CONSTRUCT PERMANENT SIGNAL AT INTERSECTION OF RAMP P2 AND US 23 AND MODIFY FOR USE WITH ADDITIONAL US23 NB LEFT TURNING TRAFFIC REROUTED FROM RAMP R. (TO BE USED IN PHASE 2 BY DETOURED RAMP R TRAFFIC.)

PHASE 2

PLACE WORK ZONE CONTROL MARKINGS ON US 23 AND ACTIVATE SIGNAL TO MAINTAIN TRAFFIC (I 270 WB TO US 23 SB & NB AND US 23 NB TO I 270 EB) VIA RAMP P1, RAMP P2 AND RAMP O. CLOSE RAMP L AND RAMP R ROUTING TRAFFIC TO TEMPORARY RAMPS.

CONSTRUCT THE SUBSTRUCTURE REPAIRS ON RAMP L STRUCTURE OVER IR 270 AND THE SUBSTRUCTURE RAMP L STRUCTURE OVER US 23 USING PERMITTED LANE CLOSURES.

REMOVE THE EXISTING SUPERSTRUCTURE FOR RAMP L STRUCTURE OVER IR 270 USING PERMITTED LANE CLOSURES AND SHORT DURATION CLOSURES AT NIGHT FOR REMOVING EXISTING BEAMS.

CONSTRUCT RAMP L OVER IR 270 STRUCTURE WORK (ABUTMENT REHABILITATION, BEARINGS, BEAMS, DECK AND APPROACH SLAB REPLACEMENT) USING PERMITTED LANE CLOSURES AND SHORT DURATION CLOSURES AT NIGHT FOR PLACING BEAMS.*

CONSTRUCT THE SUPERSTRUCTURE REPAIRS AND OVERLAY ON RAMP L STRUCTURE OVER US 23.

PHASE 2 (CONT.)

CONSTRUCT THE EARTHWORK, DRAINAGE AND PAVEMENT FOR RAMP L. *

CONSTRUCT FULL DEPTH PAVEMENT ON RAMP P1 FROM STA. 684+89 TO STA. 688+00 DURING NON-PEAK HOURS USING LANE CLOSURES. THIS WORK SHOULD OCCUR DURING WEEKENDS BEGINNING NO EARLIER THAN 9 PM ON FRIDAY AND COMPLETED BY 6 AM ON MONDAY. SEE SHEET 52. ⚠1

CONSTRUCT THE EARTHWORK, DRAINAGE AND PAVEMENT FOR RAMP R.

PLACE THE WORK ZONE CONTROL MARKINGS, DRUMS, AND TEMPORARY BARRIER TO MAINTAIN CD ROAD MERGE WITH I-270 AND CONSTRUCT THE EARTHWORK AND FULL DEPTH PAVEMENT ON THE CD ROAD/RAMP R ACCELERATION LANE TO THE RIGHT OF EXISTING PAVEMENT.

CONSTRUCT TEMPORARY PAVEMENT IN THE GORE AREA OF RAMP R AND THE CD ROAD.

DETOUR RAMP S AND CONSTRUCT EARTHWORK, DRAINAGE, FULL DEPTH PAVEMENT AND SIGNAL ON RAMP S.*

*THIS WORK MAY CONTINUE THROUGH PHASE 2A.

PHASE 2A

PLACE THE WORK ZONE CONTROL MARKINGS, DRUMS, AND TEMPORARY BARRIER TO MAINTAIN CD ROAD MERGE WITH I-270 VIA TEMPORARY PAVEMENT AND THE NEW PAVEMENT ON THE FAR RIGHT. CONSTRUCT THE EARTHWORK, DRAINAGE AND FULL DEPTH PAVEMENT ON THE CD ROAD/RAMP R ACCELERATION LANE BETWEEN I-270 EB AND THE NEW PAVEMENT WIDENING.

PHASE 3

MAINTAIN TRAFFIC ON I 270 WB BY SHIFTING 2 LANES LEFT AND MAKING RIGHT LANE EXIT ONLY TO US 23 ON RAMP S. CONSTRUCT THE EARTHWORK, DRAINAGE AND FULL DEPTH PAVEMENT ON THE RIGHT SIDE OF I 270 WB.

REMOVE PAVEMENT FOR MAINTAINING TRAFFIC BETWEEN RAMP P1 AND RAMP O AND PLACE REMAINING PAVEMENT ON RAMP P2 AT STA 867+00 TO 870+00.

MAINTAIN TRAFFIC USING BARRELS AND/OR FLAGGERS TO PLACE FINAL OVERLAY AND PAVEMENT MARKINGS, INCLUDING OVERLAY ON RAMP M AND RAMP O.

REMOVE TEMPORARY RAMP L, RAMP N, AND RAMP Q.

EARTHWORK FOR MAINTAINING TRAFFIC

WHEN UNDERCUTS ARE NECESSARY FOR PAVEMENT FOR MAINTAINING TRAFFIC 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 BORINGS ALONG THE TEMPORARY ROAD ARE NOT NORMALLY REQUIRED.

ITEM 614, MAINTAINING TRAFFIC (LANES OPEN DURING HOLIDAYS AND SPECIAL EVENTS)

NO WORK SHALL BE PERFORMED AND THE SAME NUMBER OF LANES AS WERE AVAILABLE AT THE START OF THE PROJECT SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR SPECIAL EVENTS:

NEW YEAR'S (OBSERVED)	LABOR DAY
TOTAL SOLAR ECLIPSE (4/8/24)	GENERAL/REGULAR ELECTION DAY (NOV)
MEMORIAL DAY	THANKSGIVING
FOURTH OF JULY (OBSERVED)	CHIRSTMAS (OBSERVED)

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

DAY OF HOLIDAY OR SPECIAL 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
MONDAY (TOTAL SOLAR ECLIPSE)	12:00N FRIDAY THROUGH 6:00 AM TUESDAY
TUESDAY	12:00N MONDAY THROUGH 6:00 AM WEDNESDAY
TUESDAY (GEN./REG. ELECTION)	5:00 AM TUESDAY THROUGH 12:00 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

SPECIAL EVENTS

DURING THE SAME PERIODS, MAINTAIN PEDESTRIAN ACCESS IF PEDESTRIAN ACCESS WAS PRESENT PRIOR TO CONSTRUCTION.

NO EXTENSIONS OF TIME SHALL BE GRANTED FOR DELAYS IN MATERIAL DELIVERIES, UNLESS SUCH DELAYS ARE INDUSTRY WIDE, OR FOR LABOR STRIKES, UNLESS SUCH STRIKES ARE AREA WIDE.

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE PER THE LANE VALUE CONTRACT (PN 127).

TRENCH FOR WIDENING

TRENCH EXCAVATION FOR BASE WIDENING SHALL BE ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES. PLACEMENT OF PROPOSED SUBBASE AND BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND EXCAVATION OPERATIONS. THE LENGTH OF WIDENING TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO APPROVAL OF THE ENGINEER.

MAINTAINING TRAFFIC (TIME LIMITATION ON A DETOUR)

RAMP R AND L SHALL BE FULLY OPEN AND MAINTAINED FOR ONE WAY TRAFFIC AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED 180 CONSECUTIVE CALENDAR DAYS, WHEN THROUGH TRAFFIC MAY BE DETOURED AS SHOWN ON SHEET 24. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF $12,000 PER DAY FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT. ⚠1

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⚠ ADDENDUM #1 04/21/2023

CALCULATED MBE CHECKED RCH

MAINTENANCE OF TRAFFIC GENERAL NOTES

FRA-270-51.50

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS AVAILABLE ON THE OFFICE OF MATERIALS MANAGEMENT WEB PAGE. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 800 FEET AND 650 FEET, RESPECTIVELY.

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. THE PCMS SHALL BE DELINEATED IN ACCORDANCE WITH C&MS 614.03.

THE PROBABLE PCMS LOCATIONS AND WORK LIMITS FOR THOSE LOCATIONS ARE SHOWN ON SHEET(S) OF THE PLAN. PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED AWAY FROM ALL TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT, AND TO REVISE SIGN MESSAGES, IF NECESSARY.

(THE CONTRACTOR SHALL IMPLEMENT A SYSTEM WHEREBY CHANGEABLE MESSAGES WILL BE IMPLEMENTED WITHIN HOURS FOLLOWING TELEPHONE NOTIFICATION FROM THE PROJECT ENGINEER TO A DESIGNATED PHONE.)

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN (CONTINUED)

(THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE DATA LINK WHICH WILL (IN ACTIVE CELLULAR PHONE AREAS) ALLOW REMOTE SIGN ACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES. ONE REMOTE DATA INPUT DEVICE (LAPTOP COMPUTER PLUS MODEM OR EQUIVALENT) SHALL BE FURNISHED FOR USE BY THE DISTRICT TRAFFIC ENGINEER, OR EQUIVALENT, AND SHALL BE INSURED AGAINST THEFT.)THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF C&MS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24-HOUR-PER-DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN ASSUMING 3 PCMS SIGN(S) FOR 24 MONTH(S) 72 SIGN MONTH

<u>NOTIFICATION OF CONSTRUCTION INITIATION</u>

AT LEAST FOURTEEN DAYS PRIOR TO STARTING INITIAL CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL ADVISE THE DISTRICT OFFICE OF COMMUNICATIONS VIA EMAIL AT D06.PIO@DOT.OHIO.GOV, THE DISTRICT WORK ZONE TRAFFIC MANAGER VIA EMAIL AT D06.MOT@DOT.OHIO.GOV AND THE CENTRAL OFFICE SPECIAL HAUL PERMITS SECTION VIA EMAIL AT HAULING.PERMITS@DOT.OHIO.GOV OF THE ANTICIPATED START DATE OF ANY CONSTRUCTION ACTIVITIES INCLUDING BUT NOT LIMITED TO THE PLACING OF WORK ZONE SIGNS. THE NOTIFICATION SHALL ALSO INCLUDE THE PROJECT NUMBER, PID, NAME AND PHONE NUMBER OF THE CONTRACTOR, A POINT OF CONTACT AND THE ANTICIPATED IMPACT ON TRAFFIC. THE CONTRACTOR WILL IMMEDIATELY INFORM THE DISTRICT OFFICE OF COMMUNICATIONS AND THE DISTRICT WORK ZONE TRAFFIC MANAGER OF ANY AND ALL DELAYS AND/OR CHANGES REGARDING THE CONSTRUCTION INITIATION DATE.

<u>INGRESS/EGRESS</u>

WORKSITE INGRESS AND EGRESS MEETING THE DESCRIPTIONS BELOW SHALL NOT OCCUR DURING PEAK HOURS. PEAK HOURS ARE CONSIDERED TO BE 5AM-9AM AND 3PM-6PM MONDAY-FRIDAY.

- ENTERING THE WORKSITE FROM RAMPS, INTERSTATE SHOULDERS OR INTERSTATE LANES

- EXITING THE WORKSITE ONTO OR ALONGSIDE RAMPS, INTERSTATE SHOULDERS OR INTERSTATE LANES

<u>PUBLIC OUTREACH AND NOTIFICATION (ROAD CLOSURE)</u>

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE DISTRICT 6 PUBLIC INFORMATION OFFICE VIA EMAIL AT D06.PIO@DOT.OHIO.GOV TO COORDINATE EFFORTS TO NOTIFY ALL LOCAL COUNTY, STATE AND FEDERAL EMERGENCY SERVICES, SCHOOL DISTRICTS AND ADJACENT RESIDENTS AND BUSINESSES OF THE UPCOMING CLOSURE. ADVANCE NOTIFICATION SHALL 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 CANNOT BE CLOSED UNLESS PRIOR NOTIFICATION HAS BEEN ACCOMPLISHED. THE SAME PARTIES SHALL BE NOTIFIED WHEN THE CLOSURE HAS CONCLUDED AND THE ROAD IS BACK OPEN TO TRAFFIC. ALL NOTIFICATIONS SHALL BE MADE UTILIZING THE TEMPLATE PROVIDED BY THE DISTRICT 6 PUBLIC INFORMATION OFFICE.

<u>PERMITTED LANE CLOSURES</u>

THE EXISTING NUMBER OF LANES IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES EXCEPT DURING PERIODS OF WORK AT WHICH TIME LANES MAY BE CLOSED IN ACCORDANCE WITH THE UNAUTHORIZED LANE USE TABLE FOR EACH LOCATION UNLESS OTHERWISE SHOWN IN THE PLANS.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

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.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITME 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

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.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

ITEM 614, REPLACEMENT SIGN

FLATSHEET SIGNS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT SIGNS SHALL BE NEW. OTHER MATERIALS MAY BE IN USED, BUT GOOD, CONDITION SUBJECT TO APPROVAL BY THE ENGINEER.

PAYMENT FOR THE NEW SIGNS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM 614, REPLACEMENT SIGN, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF DAMAGED SIGNS, HARDWARE AND SUPPORTS, AND PROVIDING THE NECESSARY REPLACEMENT HARDWARE, SUPPORTS, ETC.

AN ESTIMATED QUANTITY OF 10 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

ITEM 614, REPLACEMENT DRUM

DRUMS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT DRUMS SHALL BE NEW.

PAYMENT FOR THE NEW DRUMS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM 614, REPLACEMENT DRUM, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF THE DAMAGED DRUM, AND PROVIDING AND MAINTAINING THE REPLACEMENT DRUM IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS FOR THE ORIGINAL DRUM.

AN ESTIMATED QUANTITY OF 100 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

DETOUR SIGNING

THIS ITEM SHALL BE IN ACCORDANCE WITH CM&S 614.06 B. CONTRACTOR DETOUR SIGNING PAYMENT IN FULL FOR ALL DETOURS AND DIVERSIONS WITHIN THESE PLANS OR AS NECESSARY FOR MAINTAINING TRAFFIC THROUGHOUT THE CONSTRUCTION PERIOD. THE FOLLOWING PAY ITEM SHALL BE PAYMENT IN FULL FOR THE ABOVE DESCRIBED WORK AND INCLUDE ALL MATERIALS, SUPPORTS, HARDWARE AND INCIDENTALS NECESSARY FOR THIS WORK.

ITEM 614 DETOUR SIGNING LUMP SUM

1 ADDENDUM #1 04/21/2023

2 ADDENDUM #2 05/05/2023

CALCULATED MBE CHECKED RCH

MAINTENANCE OF TRAFFIC GENERAL NOTES

FRA-270-51.50

WEEKLY MAINTENANCE OF TRAFFIC MEETING

AFTER THE INITIAL PRE-MAINTENANCE OF TRAFFIC MEETING, THE CONTRACTOR SHALL MEET WITH THE PROJECT ENGINEER ON A WEEKLY BASIS TO GO OVER A DETAILED MAINTENANCE OF TRAFFIC REPORT OF AT LEAST 7 CALENDAR DAYS. THIS MEETING SHOULD BE HELD ON THE SAME DAY AND TIME OF EACH WEEK.

THE CONTRACTOR WILL PROVIDE TO THE PROJECT ENGINEER A WRITTEN DETAIL OF THE INFORMATION REQUIRED BY THE NOTIFICATION OF TRAFFIC RESTRICTIONS NOTE PRIOR TO THE MEETING.

IN ADDITION TO THE DETAILED MAINTENANCE OF TRAFFIC REPORT THE CONTRACTOR SHALL GIVE A GENERAL LOOK AHEAD OF AN ADDITIONAL 2 WEEKS OF UPCOMING WORK ACTIVITES. THIS WILL INCLUDE ANY NOTIFICATION REQUIREMENTS FOR RESTRICTIONS THAT HAVE A DURATION GREATER THAN 12 HOURS.

PRE-MAINTENANCE OF TRAFFIC MEETING

A PRE-MAINTENANCE OF TRAFFIC MEETING SHALL BE HELD (MINIMUM 14 WORK DAYS) PRIOR TO WORK BEGINNING OR ANY CHANGE OF PHASING. THIS MEETING SHALL INCLUDE THE DISTRICT WORK ZONE TRAFFIC MANAGER (D06.MOT@DOT.OHIO.GOV) AS WELL AS THE CONTRACTOR AND ANY OF HIS SUB-CONTRACTORS INVOLVED WITH TEMPORARY TRAFFIC CONTROL. FOR COLUMBUS SECTIONS OF ROADWAY, ALSO INCLUDE THE TEMPORARY CONTROL COORDINATOR (614-645-6269 OR 614-645-5845) FROM THE CITY OF COLUMBUS TRANSPORTATION DIVISION.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616, WATER M. GAL.

ITEM 614, WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN

WORK ZONE RAISED PAVEMENT MARKERS, AS PER PLAN, AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614 OR C&MS 621 AS SPECIFIED HEREIN.

RAISED PAVEMENT MARKERS IN USE DURING THE SNOW-PLOWING SEASON SHALL CONFORM TO 621. RAISED PAVEMENT MARKERS IN USE DURING THE NON-SNOW-PLOW SEASON SHALL CONFORM TO EITHER 614 OR TO 621.

THE SNOW-PLOWING SEASON SHALL RUN FROM THROUGH .

IF PROJECT DELAYS, NOT THE FAULT OF ODOT, CAUSE THE WORK TO EXTEND INTO THE SNOW-PLOWING SEASON, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING WORK ZONE RAISED PAVEMENT MARKERS (WZRPMS) CONFORMING TO C&MS 614, WITH RAISED PAVEMENT MARKERS CONFORMING TO 621, AS DETERMINED BY THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

THIS ITEM SHALL INCLUDE PURCHASE, INSTALLATION AND REMOVAL OF ITEM 614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN, INCLUDING FILLING OF ANY DEPRESSIONS CREATED IN THE PAVEMENT AS PER C&MS 621.08.

RESURFACING OF THE TRANSITION AREAS SHALL BE PERFORMED AT THE TIME THAT THE SURFACE COURSE IS BEING APPLIED TO THE ENTIRE PROJECT. PRIOR TO APPLICATION OF THE SURFACE COURSE ON THE PROJECT, THE EXISTING PAVEMENT WITHIN THE TRANSITION AREA SHALL BE REMOVED TO A DEPTH NECESSARY TO REACH THE LEVEL OF THE INTERMEDIATE COURSE OF THE PAVEMENT, AS DETERMINED BY THE ENGINEER.

THE FOLLOWING BID ITEMS SHOULD BE INCLUDED IN THE PLANS:

ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE SY

ITEM 614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN EACH

PAYMENT FOR RESURFACING WITHIN THE TRANSITION AREA SHALL BE PAID FOR UNDER THE APPROPRIATE BID ITEMS FOR THE WORK REQUIRED, AS PROVIDED FOR IN THE PLANS.

ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (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 APPROVED PRODUCTS 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.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

TRANSVERSE DRAINAGE CROSSINGS OF IR 270 AND US 23

BEFORE ANY ROADWAY CONSTRUCTION BEGINS THE CONTRACTOR SHALL CONSTRUCT THE TRANSVERSE DRAINAGE CROSSINGS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN ADEQUATE DRAINAGE THROUGHOUT ALL PHASES OF CONSTRUCTION. THIS MAY REQUIRE CONSTRUCTION OF TEMPORARY CONDUITS AND/OR TEMPORARY DITCHING. TRAFFIC CONTROL DURING THIS OPERATION SHALL BE AS PER STANDARD DRAWING MT-97.10. ANY LANE RESTRICTIONS CAUSED BY THE TRANSVERSE DRAINAGE CROSSING WORK SHALL BE LIMITED TO BETWEEN THE HOURS OF 9:30 AM TO 3:30 PM TO MINIMIZE THE IMPACT ON TRAFFIC.

ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE ABOVE WORK SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 UNLESS OTHERWISE NOTED IN THE PLANS.

PAVEMENT RESTORATION FOR PIPE INSTALLATIONS

THE FOLLOWING QUANTITY HAS BEEN PROVIDED FOR PAVEMENT RESTORATION FOLLOWING REMOVAL AND INSTALLATION OF PIPES UNDER ITEMS 203 AND 603.

ITEM 301 ASPHALT CONCRETE BASE, PG64-22

THE ABOVE QUANTITY IS BASED ON A 301 THICKNESS OF 9 INCHES AND A PAVEMENT RESTORATION WIDTH THAT INCLUDES THE TRENCH WIDTH PLUS TWO FEET ON EACH SIDE OF THE TRENCH. THE TRENCH WIDTH IS ASSUMED TO EQUAL THE SPAN TIMES 1.25 PLUS ONE FOOT.

PROVIDE ANY MATERIALS USED OUTSIDE THE LIMITED STATED ABOVE AT NO ADDITIONAL COST.

TRAFFIC INCIDENT MANAGEMENT (TIM) DURING MOT

OHIO TIM IS OHIO'S TRAFFIC INCIDENT MANAGEMENT PROGRAM WHICH IS COMMITTED TO MAINTAINING THE SAFE AND EFFECTIVE FLOW OF TRAFFIC DURING EMERGENCIES AS TO PREVENT FURTHER DAMAGE, INJURY OR UNDUE DELAY OF THE MOTORING PUBLIC. IN ADDITION TO COMPLYING WITH THE PROVISION OF OMUTCD CHAPTER 6I, CONTROL OF TRAFFIC THROUGH TRAFFIC INCIDENT MANAGEMENT AREAS, THE CONTRACTOR SHALL ACTIVELY PARTICIPATE IN TIM PLANNING AND IMPLEMENTATION AS OUTLINED BELOW.

1. SUPERINTENDENT SHALL IDENTIFY THE INDIVIDUAL PERSONS ON THE PROJECT WHO WILL, OR MAY NEED TO, PERFORM THE DUTIES HEREIN. AT A MINIMUM, INCLUDE THE SUPERINTENDENT, FOREMEN AND SUPERVISORS (OR EQUIVALENT) AS WELL AS THE WORKSITE TRAFFIC SUPERVISOR (WTS; IF APPLICABLE TO THE PROJECT). THESE INDIVIDUALLY IDENTIFIED PERSONS SHALL COLLECTIVELY BE KNOWN AS CONTRACTOR TRAFFIC INCIDENT MANAGEMENT (TIM) CONTACTS. NOTIFY THE PROJECT ENGINEER OF THE CONTRACTOR TIM CONTACTS (ALONG WITH CONTACT INFORMATION FOR EACH) AT OR BEFORE THE PRECONSTRUCTION MEETING.

2. SUPERINTENDENT SHALL NOTIFY THE ENGINEER IMMEDIATELY IF ANY CONTRACTOR TIM CONTACT IS ADDED, REMOVED OR THE CONTACT INFORMATION CHANGES OVER THE COURSE OF THE PROJECT.

3. PRIOR THE FIRST DAY OF WORK IN THE FIELD, EACH CONTRACTOR TIM CONTACT ON THE PROJECT SHALL HAVE ATTENDED AND SUCCESSFULLY COMPLETED OHIO TIM TRAINING PROVIDED BY THE DEPARTMENT OR DESIGNEE. TRAINING INFORMATION CAN BE FOUND ONLINE.

4. SUPERINTENDENT, AT A MINIMUM, SHALL ATTEND AND ACTIVELY PARTICIPATE IN A DEPARTMENT SCHEDULED TIM MEETING BEFORE CONSTRUCTION WORK BEGINS AND BEFORE EACH PHASE CHANGE. THESE MEETINGS WILL RESULT IN A DEPARTMENT ISSUED PROJECT SPECIFIC TRAFFIC INCIDENT MANAGEMENT PLAN (TIMP). AT THE TIM MEETINGS THE ATTENDING CONTRACTOR TIM CONTACTS SHALL:

A. COLLABORATE WITH ODOT AND SAFETY FORCES;

B. SHARE PROJECT SPECIFIC DETAILS THAT IMPACT TIM RESPONDERS; AND

C. RECOMMEND WAYS TO INCORPORATE NECESSARY EMERGENCY ACCESS AND OTHER TIM ELEMENTS FOR TIM RESPONDERS GIVEN PROJECT SPECIFIC WORK BEING COMPLETED AND PROJECT SPECIFIC PHASING.

5. CONTRACTOR TIM CONTACTS SHALL IMPLEMENT COMPONENTS OF THE RESULTING TIMP (SUCH AS APPROVED EMERGENCY INGRESS/EGRESS POINTS, ETC), AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.

6. CONTRACTOR TIM CONTACTS SHALL PERFORM, AT A MINIMUM, THE FOLLOWING FUNCTIONS WHEN AN INCIDENT/CRASH OCCURS:

A. IF OBSERVED OR PRESENT WHEN OCCURS, CALL 911 AND THEN NOTIFY THE TRAFFIC MANAGEMENT CENTER (TMC) TO PROVIDE THE FOLLOWING:

I. LOCATION, INCLUDING MILEPOST NUMBER AND DIRECTION OF TRAVEL
II. NUMBER AND TYPE OF VEHICLES INVOLVED, IF KNOWN
III. ESTIMATED EXTENT OF DAMAGE OR INJURY, IF KNOWN
IV. ESTIMATED NUMBER OF PATIENTS INVOLVED, IF KNOWN
V. ANY POTENTIAL HAZARDOUS CONDITIONS, IF KNOWN
VI.THE PLACARD NUMBER ON ANY HAZARDOUS MATERIALS PLACARD FROM A SAFE DISTANCE, IF APPLICABLE AND VISIBLE

B. FOLLOWING AN INCIDENT/CRASH:

I. INITIATE TRAFFIC MANAGEMENT/PROVIDE TEMPORARY TRAFFIC CONTROL AS INDICATED IN THE TIMP, AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.
II. RECOMMEND ROADWAY REPAIR NEEDS.
III. PROVIDE REPAIR RESOURCES AND INITIATE REPAIRS, AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.
IV. ATTEND AND PARTICIPATE IN AN AFTER ACTION REVIEW (AAR).

ALL COSTS, UNLESS OTHERWISE SPECIFIED, RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE FOR ITEM 614, MAINTAINING TRAFFIC. FAILURE TO PERFORM THE REQUIREMENTS OF THIS PLAN NOTE WILL RESULT IN A DAILY FINE OF 2% OF ITEM 614, MAINTAINING TRAFFIC AND MAY RESULT IN ONE OR MORE CONTRACTOR TIM CONTACTS BEING REMOVED FROM THE LIST OF OHIO TIM TRAINED INDIVIDUALS (AT THE SOLE DISCRETION OF THE OHIO TIM EXECUTIVE COMMITTEE). IN THE EVENT AN INDIVIDUAL IS REMOVED FROM THE OHIO TIM TRAINED LIST, THE INDIVIDUAL WILL BE REMOVED FROM CONTRACTOR TIM CONTACT RESPONSIBILITIES ON ALL PROJECTS.

DELINEATION OF TEMPORARY AND PERMANENT GUARDRAIL

BARRIER REFLECTORS SHALL BE INSTALLED ON ALL TEMPORARY GUARDRAIL USED FOR TRAFFIC CONTROL; AND, ON ALL PERMANENT GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. BARRIER REFLECTORS SHALL CONFORM TO C&MS 626 AND THE SPACING SHALL BE APPROXIMATELY 50 FEET.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE (2, 3, 4, OR 5) (ONE-WAY OR BI-DIRECTIONAL) 1 EACH

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING THE ABOVE ITEM(S).

⚠1 ADDENDUM #1 04/21/2023

CALCULATED MBE CHECKED RCH

MAINTENANCE OF TRAFFIC GENERAL NOTES

FRA-270-51.50

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RAMP CLOSURE RESTRICTIONS					
INTERSTATE ROUTE 270 IN FRANKLIN COUNTY					
SECONDARY ROUTE: US ROUTE 23			SLM ALONG 270: 52.64	(SOUTH SIDE)	
RAMP	MOVEMENT	NO CLOSURES ALLOWED		DETOUR ROUTES	
		MON TO FRI	SAT TO SUN	PRIMARY ROUTE	SECONDARY ROUTE
L	US 23 NB TO I-270 WB	5AM-10PM	8AM-8PM	RAMP R (23N TO 270 E) TO ALUM CREEK DRIVE N TO 270 W	23 N TO U-TURN* TO RAMP M (23 S TO 270 W)
M	US 23 SB TO I-270 WB	5AM-7PM	NO RESTRICTION	RAMP O (23S TO 270 E) TO ALUM CREEK DRIVE N TO 270 W	NONE
N	I-270 WB TO US 23 SB	6AM-7PM	NO RESTRICTION	270 W TO 71 S TO STRINGTOWN RD E TO 71 N TO 270 E TO RAMP P (270 E TO 23 S)	270 W TO 62 S TO 270 E TO RAMP P (270 E TO 23 S)
O	US 23 SB TO I-270 EB	3PM-6PM	NO RESTRICTION	270 W TO 71 S TO STRINGTOWN RD E TO 71 N TO 270 E	270 W TO 62 S TO 270 E
P	I-270 EB TO US 23 SB	5AM-10PM	8AM-8PM	270 E TO ALUM CREEK DR E TO 270 W TO RAMP N (270 W TO 23 S)	NONE
Q	I-270 EB TO US 23 NB	6AM-7PM	NO RESTRICTION	270 E TO ALUM CREEK DR E TO 270 W TO RAMP S (270 W TO 23 N)	NONE
R	US 23 NB TO I-270 EB	6AM-6PM	NO RESTRICTION	RAMP L (23 N TO 270 W) TO 62 S TO 270 E	23 N TO U-TURN* TO RAMP O (23 S TO 270 E)
S	I-270 WB TO US 23 NB	6AM-6PM	NO RESTRICTION	RAMP N (270 W TO 23 S) TO RAMP O (23 S TO 270 E) TO RAMP Q (270 E TO 23 N)	270 W TO 62 S TO 270 E TO RAMP Q (270 E TO 23 N)

LANE VALUE CONTRACT TABLE						
SECTION (SLM)	EXISTING NUMBER OF LANES PER DIRECTION	LANE CLOSURES ARE NOT PERMITTED				DISINCENTIVE AMOUNTS PER MINUTE PER LANE
		LANE REDUCTION	MON TO FRI	SAT	SUN	
FRA-23						
PICKAWAY COUNTY LINE (0.00) TO RATHMELL ROAD (4.18) NORTHBOUND	2	2 TO 1	5AM-10AM	NO RESTRICTION	NO RESTRICTION	$175
PICKAWAY COUNTY LINE (0.00) TO RATHMELL ROAD (4.18) SOUTHBOUND	2	2 TO 1	3PM-7PM	NO RESTRICTION	NO RESTRICTION	$175
RATHMELL ROAD (4.18) TO GREENLAWN AVENUE (9.60)	2	2 TO 1	6AM-9AM & 3PM-7PM	NO RESTRICTION	NO RESTRICTION	$185
SHORT TERM SHOULDER CLOSURES ARE NOT PERMITTED 6AM-9AM AND 3PM-6PM MONDAY-FRIDAY						

LANE VALUE CONTRACT TABLE						
SECTION (SLM)	EXISTING NUMBER OF LANES PER DIRECTION	LANE CLOSURES ARE NOT PERMITTED				DISINCENTIVE AMOUNTS PER MINUTE PER LANE
		LANE REDUCTION	MON TO FRI	SAT	SUN	
FRA-270						
I-71 SOUTHBOUND (0.00) TO 1/2 MILE WEST OF I-71 (0.60)	2	2 TO 1	5AM-9PM	6AM-7PM	6AM-7PM	$ 310.00
1/2 MILE WEST OF I-71 (0.60) TO US 40 - BROAD STREET (7.04)	3	3 TO 2	5AM-9PM & 3PM-6PM	NO RESTRICTION	NO RESTRICTION	$ 205.00
		3 TO 1	5AM-9PM	6AM-7PM	6AM-7PM	$ 205.00
WILLIAMS ROAD (47.42) TO US 23 INTERCHANGE (52.30)	3	3 TO 2	5AM-9PM & 3PM-7PM	NO RESTRICTION	NO RESTRICTION	$ 205.00
		3 TO 1	5AM-8PM	6AM-7PM	6AM-7PM	$ 205.00
THRU US 23 INTERCHANGE EASTBOUND (52.30) TO (53.20)	3	3 TO 2	5AM-9PM & 3PM-7PM	NO RESTRICTION	NO RESTRICTION	$ 205.00
		3 TO 1	5AM-8PM	6AM-7PM	6AM-7PM	$ 205.00
THRU US 23 INTERCHANGE WESTBOUND (52.30) TO (53.20)	2	2 TO 1	5AM-8PM	6AM-7PM	6AM-7PM	$ 310.00
US 23 INTERCHANGE (53.20) TO I-71 INTERCHANGE (54.44) MAINLINE EASTBOUND	3	3 TO 2	5AM-9PM & 3PM-7PM	NO RESTRICTION	NO RESTRICTION	$ 255.00
		3 TO 1	5AM-8PM	6AM-7PM	6AM-7PM	$ 255.00
US 23 INTERCHANGE (53.20) TO I-71 INTERCHANGE (54.44) AUXILLARY LANE EASTBOUND	1	MON TO FRI: 5A-9A & 3P-7P, SAT & SUN NO RESTRICTION WHEN MAINTAINING 3 LANES MAINLINE. MON TO FRI: 5A-10P, SAT & SUN 8A-8P WHEN CLOSING ADJACENT MAINLINE LANE				$ 255.00
US 23 INTERCHANGE (53.20) TO I-71 INTERCHANGE (54.44) MAINLINE WESTBOUND	2	2 TO 1	5AM-9PM & 3PM-7PM	6AM-7PM	6AM-7PM	$ 310.00
US 23 INTERCHANGE (53.20) TO I-71 INTERCHANGE (54.44) AUXILLARY LANES WESTBOUND	2	2 TO 1	5AM-9PM & 3PM-7PM	NO RESTRICTION	NO RESTRICTION	$ 310.00
		2 TO 0	MON TO FRI: 5A-10P, SAT & SUN 8A-8P WHEN CLOSING ADJACENT MAINLINE LANE			$ 310.00
THRU I-71 INTERCHANGE SOUTH SIDE (54.44) TO (0.00)	2	2 TO 1	5AM-9PM	6AM-7PM	6AM-7PM	$ 310.00
I-71 SOUTHBOUND (0.00) TO 1/2 MILE WEST OF I-71 (0.60)	2	2 TO 1	5AM-9PM	6AM-7PM	6AM-7PM	$ 310.00
SHORT TERM SHOULDER CLOSURES ARE NOT PERMITTED 5AM-9AM AND 3PM-7PM MONDAY-FRIDAY						

⚠ ADDENDUM #1 04/21/2023

CALCULATED MBE CHECKED RCH

MAINTENANCE OF TRAFFIC GENERAL NOTES

FRA-270-51.50

22B 554

SHEET NO.	PHASE	202 GUARDRAIL REMOVED (FT)	411 STABILIZED CRUSHED AGGREGATE (CY)		606 GUARDRAIL, TYPE MGS (FT)	606 ANCHOR ASSEMBLY, TYPE E (EACH)	606 ANCHOR ASSEMBLY, TYPE T (EACH) /1	611 CATCH BASIN, NO. 2-2B (EACH)	611 12" CONDUIT, TYPE B (FT)	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL) (EACH)	614 WORK ZONE RAISED PAVEMENT MARKER(YELLOW/YELLOW) (EACH)	614 WORK ZONE RAISED PAVEMENT MARKER(YELLOW) (EACH)	614 WORK ZONE RAISED PAVEMENT MARKER(WHITE) (EACH)	614 BARRIER REFLECTOR, TYPE 1, ONE WAY (EACH)	614 OBJECT MARKER, ONE WAY (EACH)	614 WORK ZONE LANE LINE, CLASS I (MILE)	614 WORK ZONE EDGE LINE, CLASS I (YELLOW) (MILE)	614 WORK ZONE EDGE LINE, CLASS I (WHITE) (MILE)	614 WORK ZONE CHANNELIZING LINE, CLASS I (FT)	614 WORK ZONE DOTTED LINE, CLASS I (FT)	614 WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I (FT)	614 WORK ZONE STOP LINE, CLASS I (FT)	614 WORK ZONE ARROW, CLASS I (EACH)	614 WORK ZONE WORD ON PAVEMENT, 96", CLASS I (EACH)	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A (SY)	622 PORTABLE BARRIER, UNANCHORED
IR 270	1	25			25	1	1			1		330	665	47	22		1.25	1.5	13300						287	1010
US 23	1							2	122																6884	
TEMP L	1																								/1 13567	
RAMP O	1											34		64	13		0.13								957	640
RAMP P1	1									1		150	150	68	47		0.6	0.6	3220							2360
US23	1A		98							3		42	5	44	15		0.16	0.25	100							730
RAMP P1	1A									1		48	11				0.18	0.25	210							
RAMP P2	1A											32					0.12	0.12								
IR 270	2									1		330	665	165	44		1.25	1.5	13300							2220
US 23	2		49							5		240	265	58	41	0.06	0.91	0.82	5304	700	189	82	12	7		2050
TEMP L	2									2		32		58	12	0.02	0.12	0.11		579						580
RAMP O	2									1		34		61	12		0.13			524						610
RAMP P2	2										24	24		28	6		0.09	0.16		57	65	30	2	1		280
IR 270	2A									1		494	665	71	51		1.87	1.96	13300	680						2550
IR 270	3									1		206	317	75	58		0.78	0.68	6348							2900
TOTALS CARRIED TO GENERAL SUMMARY		25	148		25	1	1	2	122	17	24	1996	2743	739	321	0.08	7.59	7.95	55082	2540	254	112	14	8	/1 21695	15930

/1 ADDENDUM #1 04/21/2023

CALCULATED MBE CHECKED RCH

MAINTENANCE OF TRAFFIC SUBSUMMARY

FRA-270-51.50

ADDENDUM #1
04/21/2023

DETOUR PLAN NOTES

SEE NOTES 1-4 SHEET 27

5. AT ANY POINT DURING CONSTRUCTION, ANY EXISTING, TEMPORARY OR PROPOSED SIGNING IN PLACE WHICH CONFLICTS WITH PRESENT TRAFFIC SHALL BE REMOVED FROM VIEW BY REMOVAL, OVERLAY, OR OTHER APPROVED METHOD.

6. AN "EXIT CLOSED" PLAQUE (W20-H15), 108 X 18 INCHES, SHALL BE PLACED HORIZONTALLY ACROSS ALL EXTRUSHEET GUIDE SIGNS PERTAINING TO THE CLOSED EXIT UNTIL THE EXIT IS READY TO BE RE-OPENED.

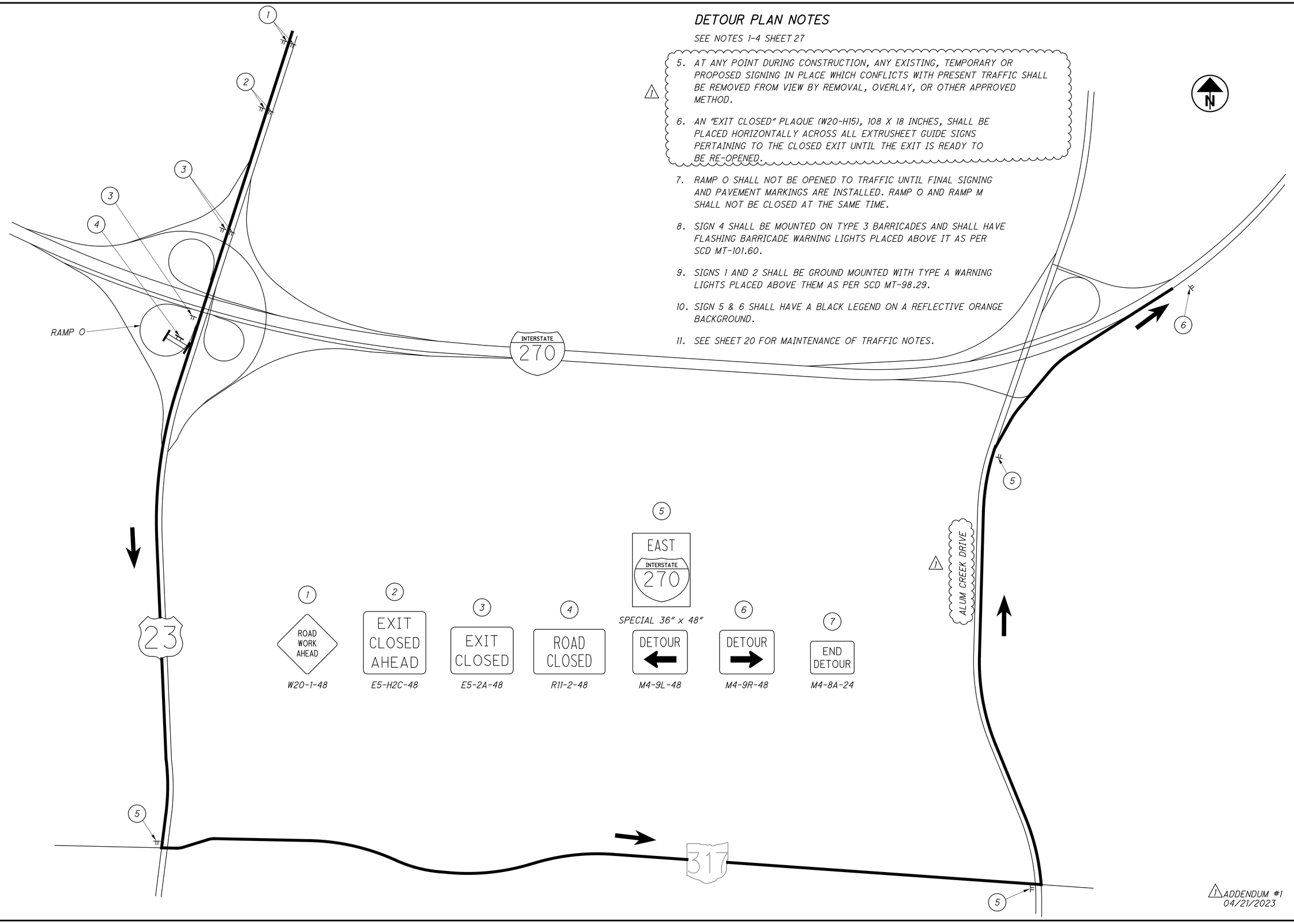
7. RAMP O SHALL NOT BE OPENED TO TRAFFIC UNTIL FINAL SIGNING AND PAVEMENT MARKINGS ARE INSTALLED. RAMP O AND RAMP M SHALL NOT BE CLOSED AT THE SAME TIME.

8. SIGN 4 SHALL BE MOUNTED ON TYPE 3 BARRICADES AND SHALL HAVE FLASHING BARRICADE WARNING LIGHTS PLACED ABOVE IT AS PER SCD MT-101.60.

9. SIGNS 1 AND 2 SHALL BE GROUND MOUNTED WITH TYPE A WARNING LIGHTS PLACED ABOVE THEM AS PER SCD MT-98.29.

10. SIGN 5 & 6 SHALL HAVE A BLACK LEGEND ON A REFLECTIVE ORANGE BACKGROUND.

11. SEE SHEET 20 FOR MAINTENANCE OF TRAFFIC NOTES.



1 ROAD WORK AHEAD — W20-1-48

2 EXIT CLOSED AHEAD — E5-H2C-48

3 EXIT CLOSED — E5-2A-48

4 ROAD CLOSED — R11-2-48

5 EAST INTERSTATE 270 — SPECIAL 36" x 48"

5 DETOUR ← — M4-9L-48

6 DETOUR → — M4-9R-48

7 END DETOUR — M4-8A-24

1 ADDENDUM #1 04/21/2023

CALCULATED MBE CHECKED RCH

MAINTENANCE OF TRAFFIC DETOUR MAP - RAMP O

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DETOUR PLAN NOTES

1. IT IS THE INTENTION TO PERFORM ALL REQUIRED WORK WITH THE LEAST INCONVENIENCE TO AND THE MAXIMUM SAFETY OF THE CONTRACTOR AND TRAVELING PUBLIC. ANY VARIANCES FROM THE MAINTENANCE OF TRAFFIC NOTES NEED TO BE APPROVED BY ODOT.

2. ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH ITEM 614 OF THE 2019 ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS, OTHER APPLICABLE PORTIONS OF THE 2019 ODOT SPECIFICATIONS, AND THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS ITEMIZED SEPARATELY IN THE PLAN.

3. BEFORE WORK BEGINS, THE CONTRACTOR SHALL PROVIDE THE ENGINEER THE NAME(S) AND TELEPHONE NUMBER(S) OF RESPONSIBLE PERSON(S) WHO CAN BE CONTACTED AT ANY TIME, 24 HOURS A DAY, BY THE ENGINEER. THESE PERSON(S) SHALL BE RESPONSIBLE FOR PLACING OR REPLACING NECESSARY TRAFFIC CONTROL DEVICES TO MAINTAIN TRAFFIC.

4. THE WORK LIMITS SHOWN ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TRAFFIC CONTROL DEVICES REQUIRED BY THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THESE LIMITS. ALL TRAFFIC CONTROL ITEMS OR DEVICES SHALL BE INSTALLED OR LOCATED WITHIN THE EXISTING RIGHT-OF-WAY.

5. AT ANY POINT DURING CONSTRUCTION, ANY EXISTING, TEMPORARY OR PROPOSED SIGNING IN PLACE WHICH CONFLICTS WITH PRESENT TRAFFIC SHALL BE REMOVED FROM VIEW BY REMOVAL, OVERLAY, OR OTHER APPROVED METHOD.

6. AN "EXIT CLOSED" PLAQUE (W20-H15), 108 X 18 INCHES, SHALL BE PLACED HORIZONTALLY ACROSS ALL EXTRUSHEET GUIDE SIGNS PERTAINING TO THE CLOSED EXIT UNTIL THE EXIT IS READY TO BE RE-OPENED.

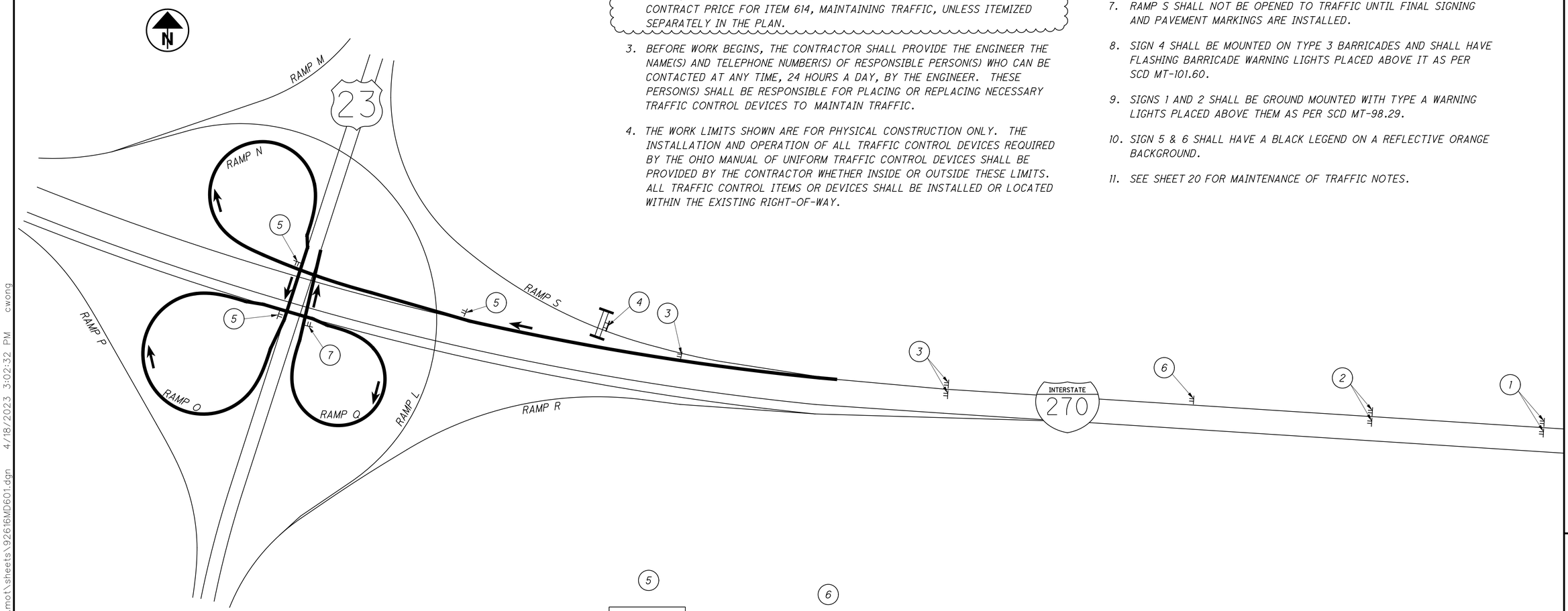
7. RAMP S SHALL NOT BE OPENED TO TRAFFIC UNTIL FINAL SIGNING AND PAVEMENT MARKINGS ARE INSTALLED.

8. SIGN 4 SHALL BE MOUNTED ON TYPE 3 BARRICADES AND SHALL HAVE FLASHING BARRICADE WARNING LIGHTS PLACED ABOVE IT AS PER SCD MT-101.60.

9. SIGNS 1 AND 2 SHALL BE GROUND MOUNTED WITH TYPE A WARNING LIGHTS PLACED ABOVE THEM AS PER SCD MT-98.29.

10. SIGN 5 & 6 SHALL HAVE A BLACK LEGEND ON A REFLECTIVE ORANGE BACKGROUND.

11. SEE SHEET 20 FOR MAINTENANCE OF TRAFFIC NOTES.



1. ROAD WORK AHEAD — W20-1-48
2. EXIT CLOSED AHEAD — E5-H2C-48
3. EXIT CLOSED — E5-2A-48
4. ROAD CLOSED — R11-2-48
5. NORTH 23 — SPECIAL 36" x 48" — M6-2-30
6. 23 NORTH / High St / USE EXIT 52B — SPECIAL 192" X 144"
7. END DETOUR — M4-8A-24

1 ADDENDUM #1 04/21/2023

CALCULATED DJR CHECKED RCH

MAINTENANCE OF TRAFFIC DETOUR MAP - RAMP S

FRA-270-51.50

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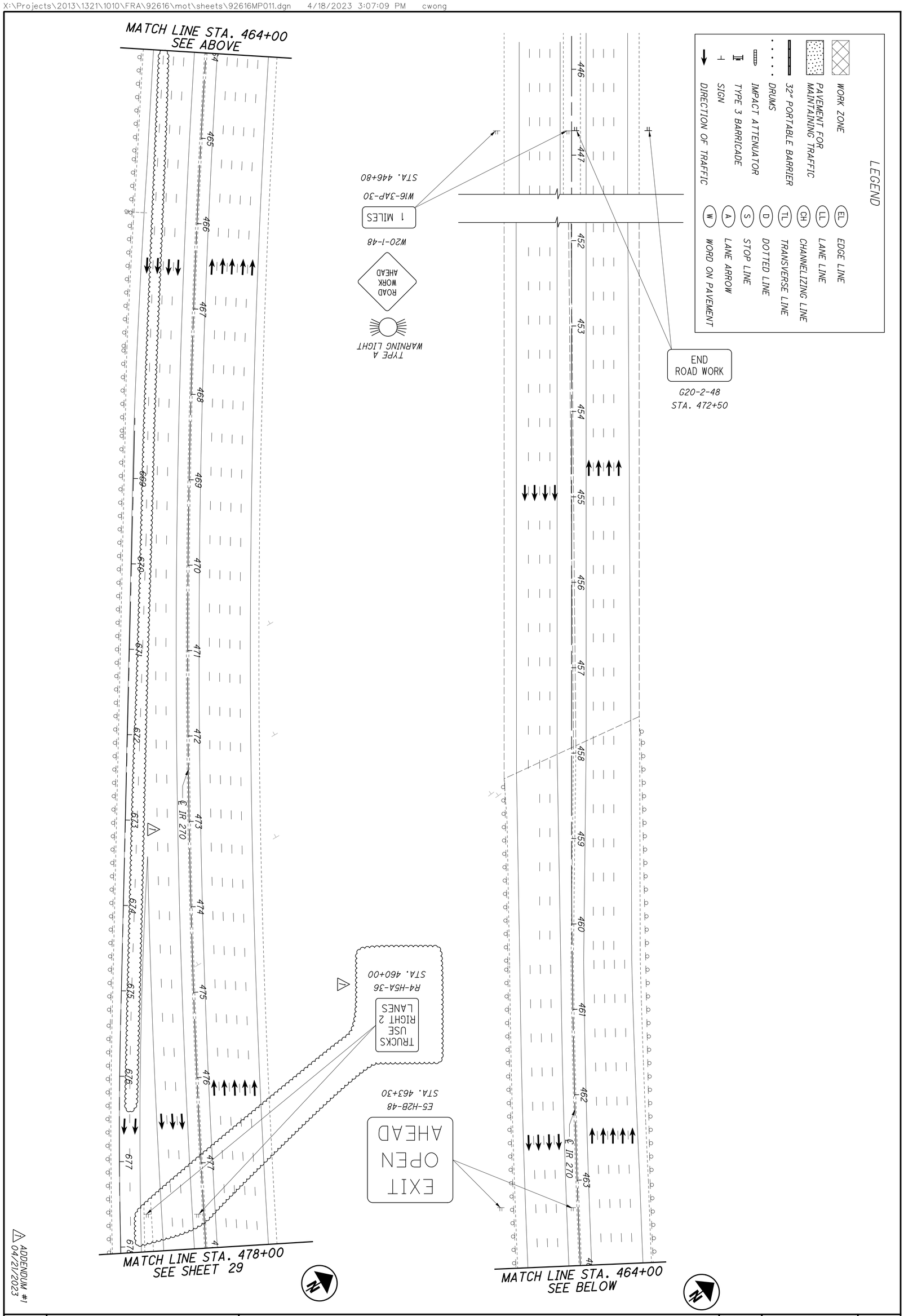


△ ADDENDUM #1 04/21/2023

28 554

FRA-270-51.50

MAINTENANCE OF TRAFFIC - PHASE 1
I-270 STA. 450+00 TO STA. 478+00

CALCULATED DJR
CHECKED RCH

0 25 50 100
HORIZONTAL SCALE IN FEET

LEGEND

- WORK ZONE
- PAVEMENT FOR MAINTAINING TRAFFIC
- 32" PORTABLE BARRIER
- DRUMS
- IMPACT ATTENUATOR
- TYPE 3 BARRICADE
- SIGN
- DIRECTION OF TRAFFIC
- (EL) EDGE LINE
- (LL) LANE LINE
- (CH) CHANNELIZING LINE
- (TL) TRANSVERSE LINE
- (D) DOTTED LINE
- (S) STOP LINE
- (A) LANE ARROW
- (W) WORD ON PAVEMENT

SECTION A-A

1 ADDENDUM #1 04/21/2023

HORIZONTAL SCALE IN FEET
0 25 50 100

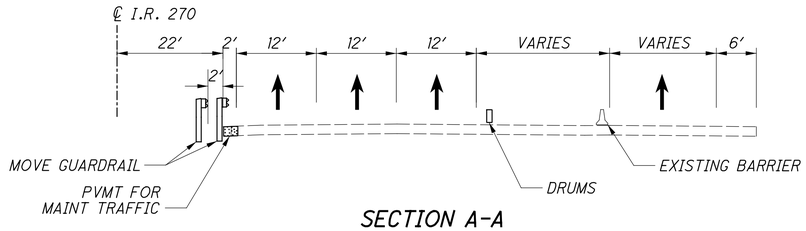
CALCULATED DJR
CHECKED RCH

MAINTENANCE OF TRAFFIC - PHASE 1
I-270 STA. 478+00 TO STA. 492+00

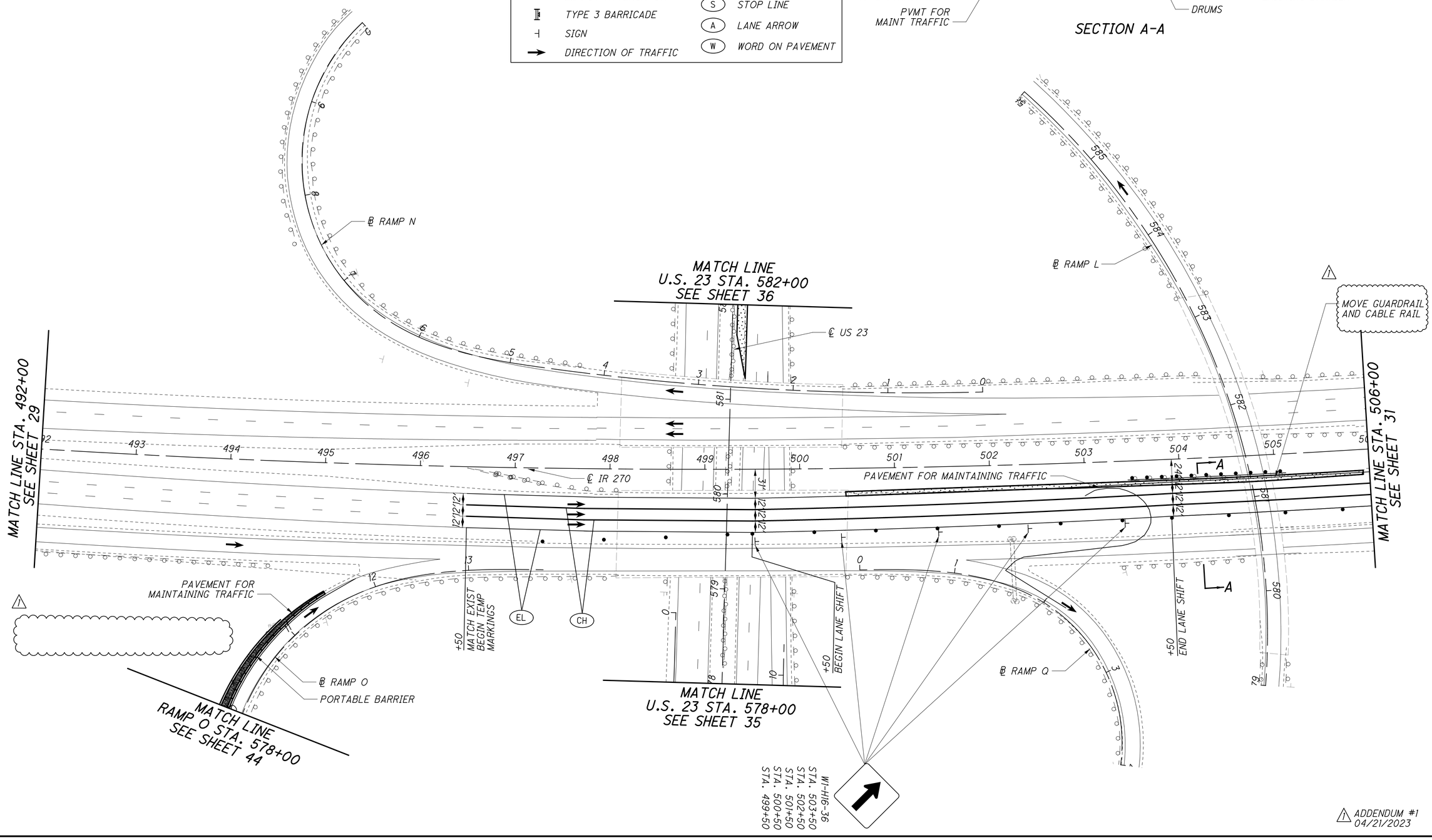
FRA-270-51.50

LEGEND

- WORK ZONE
- PAVEMENT FOR MAINTAINING TRAFFIC
- 32" PORTABLE BARRIER
- DRUMS
- IMPACT ATTENUATOR
- TYPE 3 BARRICADE
- SIGN
- DIRECTION OF TRAFFIC
- (EL) EDGE LINE
- (LL) LANE LINE
- (CH) CHANNELIZING LINE
- (TL) TRANSVERSE LINE
- (D) DOTTED LINE
- (S) STOP LINE
- (A) LANE ARROW
- (W) WORD ON PAVEMENT



SECTION A-A



⚠ ADDENDUM #1
04/21/2023

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DJR
CHECKED RCH

MAINTENANCE OF TRAFFIC - PHASE 1
I-270 STA. 492+00 TO STA. 506+00

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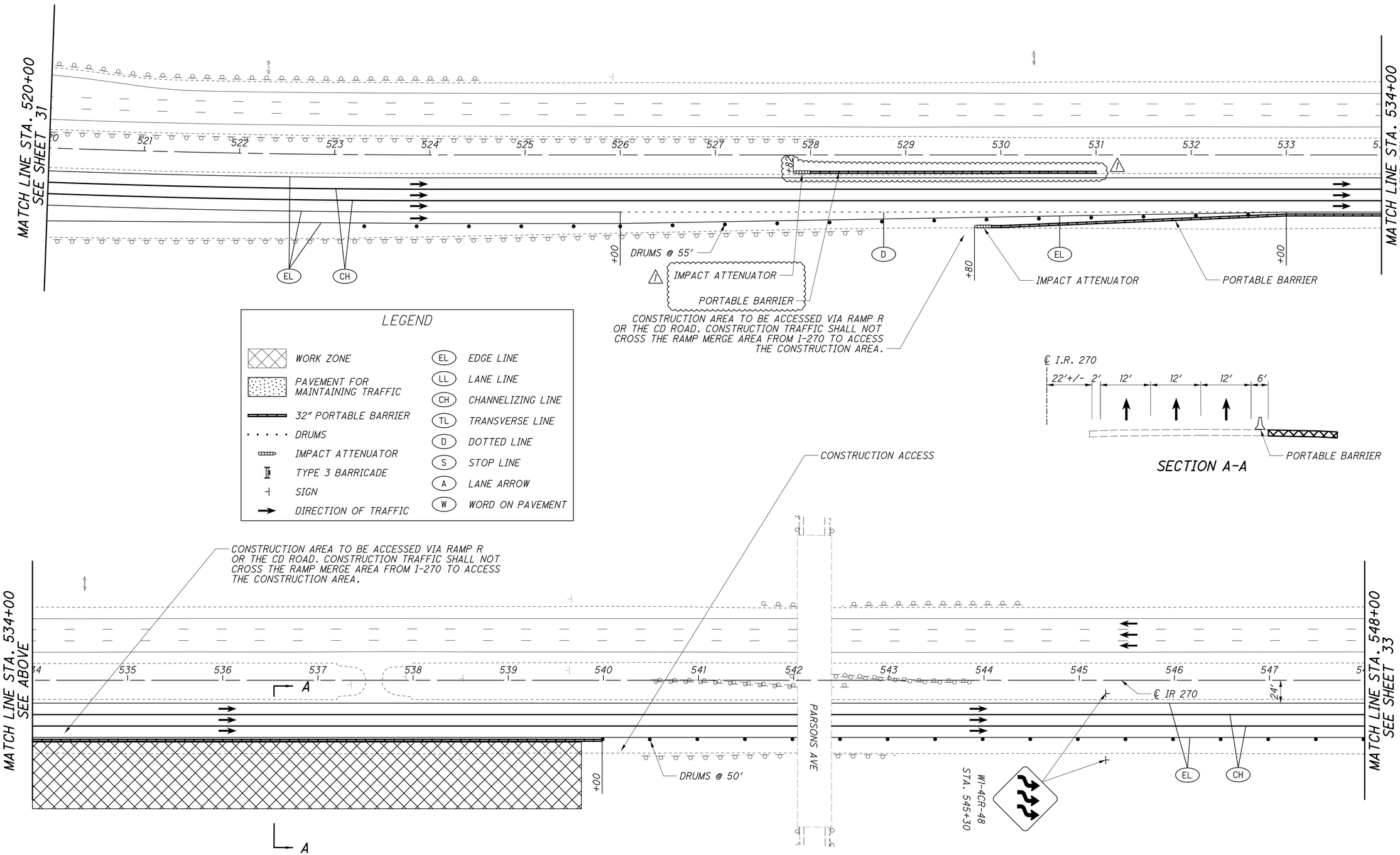

ADDENDUM #1
04/21/2023

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DJR
CHECKED RCH

MAINTENANCE OF TRAFFIC - PHASE 1
I-270 STA. 520+00 TO STA. 548+00

FRA-270-51.50

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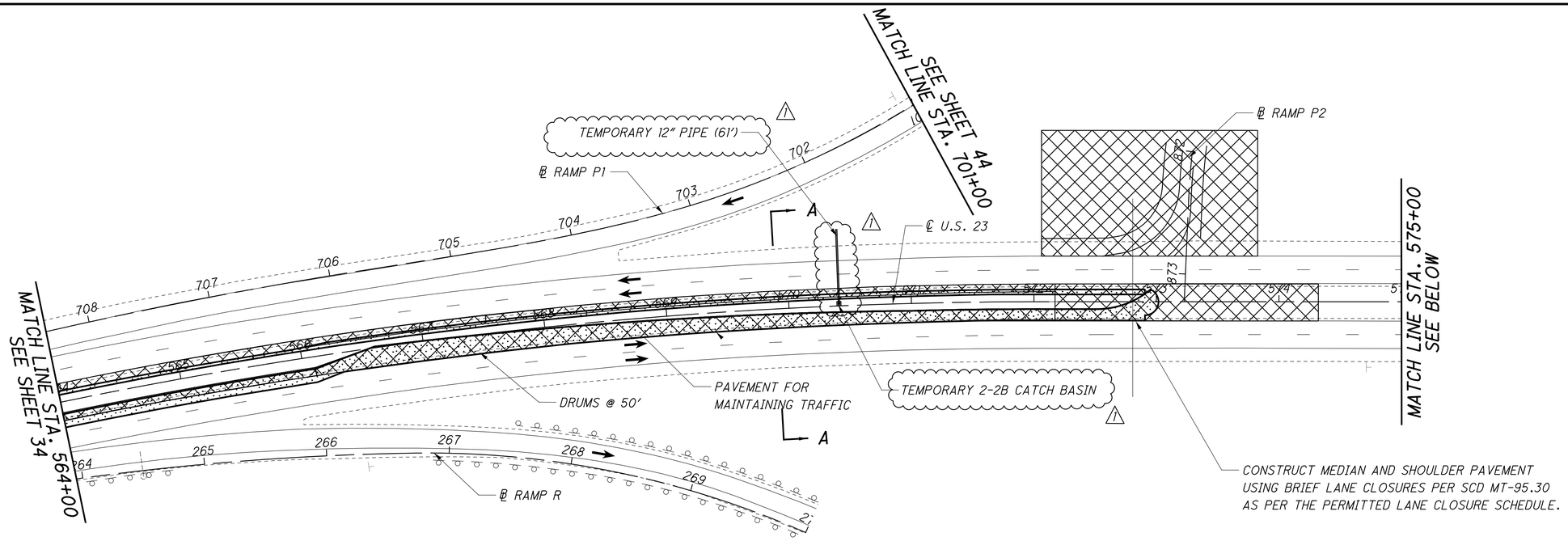
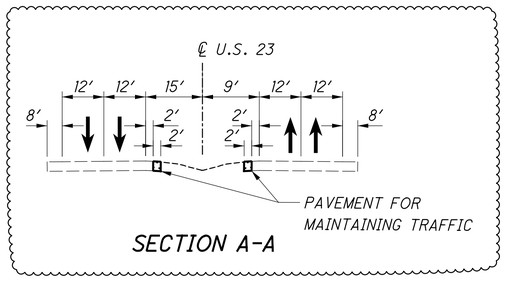
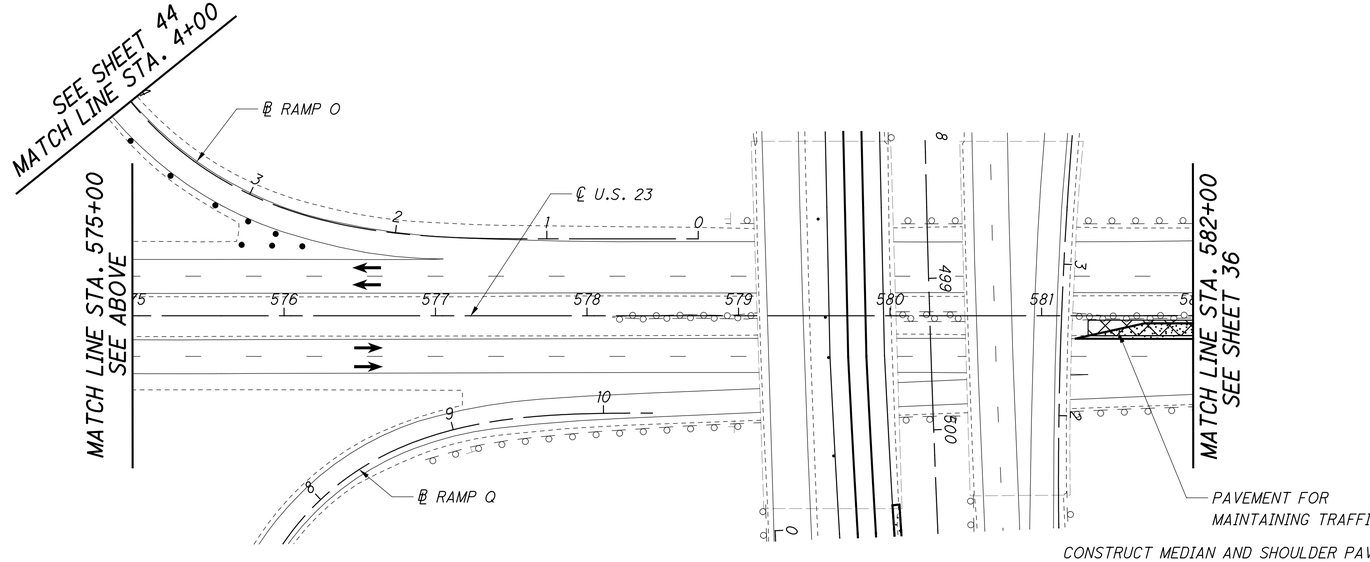




SECTION A-A

LEGEND

WORK ZONE	EDGE LINE (EL)
PAVEMENT FOR MAINTAINING TRAFFIC	LANE LINE (LL)
32" PORTABLE BARRIER	CHANNELIZING LINE (CH)
DRUMS	TRANSVERSE LINE (TL)
IMPACT ATTENUATOR	DOTTED LINE (D)
TYPE 3 BARRICADE	STOP LINE (S)
SIGN	LANE ARROW (A)
DIRECTION OF TRAFFIC	WORD ON PAVEMENT (W)



⚠1 ADDENDUM #1
04/21/2023

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DJR
CHECKED RCH

MAINTENANCE OF TRAFFIC - PHASE 1
U.S. 23 STA. 564+00 TO STA. 582+00

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MATCH LINE STA. 582+00
SEE SHEET 35

MATCH LINE STA. 596+00
SEE BELOW

℄ RAMP M

℄ RAMP N

℄ RAMP L

℄ RAMP S

℄ U.S. 23

1 TEMPORARY 12" PIPE (61')

1 TEMPORARY 2-2B CATCH BASIN

CONSTRUCT MEDIAN AND SHOULDER PAVEMENT USING BRIEF LANE CLOSURES PER SCD MT-95.30 AS PER THE PERMITTED LANE CLOSURE SCHEDULE.

LEFT SHOULDER CLOSED
W21-5AL-36
STA. 596+50

TYPE A WARNING LIGHT

ROAD WORK AHEAD
W20-1-36
STA. 601+50

MATCH LINE STA. 596+00
SEE ABOVE

END ROAD WORK
G20-2-48
STA. 596+50

LEGEND

WORK ZONE	(EL) EDGE LINE
PAVEMENT FOR MAINTAINING TRAFFIC	(LL) LANE LINE
32" PORTABLE BARRIER	(CH) CHANNELIZING LINE
DRUMS	(TL) TRANSVERSE LINE
IMPACT ATTENUATOR	(D) DOTTED LINE
TYPE 3 BARRICADE	(S) STOP LINE
SIGN	(A) LANE ARROW
DIRECTION OF TRAFFIC	(W) WORD ON PAVEMENT

1 ADDENDUM #1
04/21/2023

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DJR
CHECKED RCH

MAINTENANCE OF TRAFFIC - PHASE 1
U.S. 23 STA. 582+00 TO STA. 609+00

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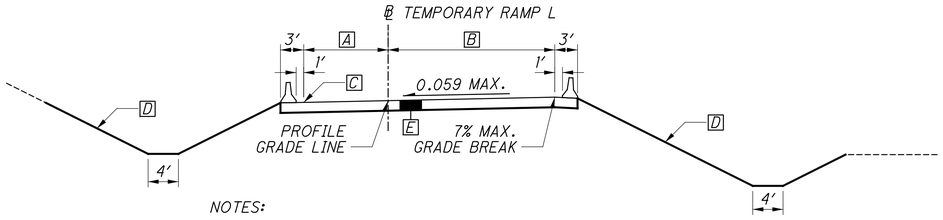


NOTES:

[A] VARIES 22.59′ - 0′ FROM STA. 89+53.58 TO STA. 90+47.11.
0′ FROM STA. 90+47.11 TO STA. 94+80.60.

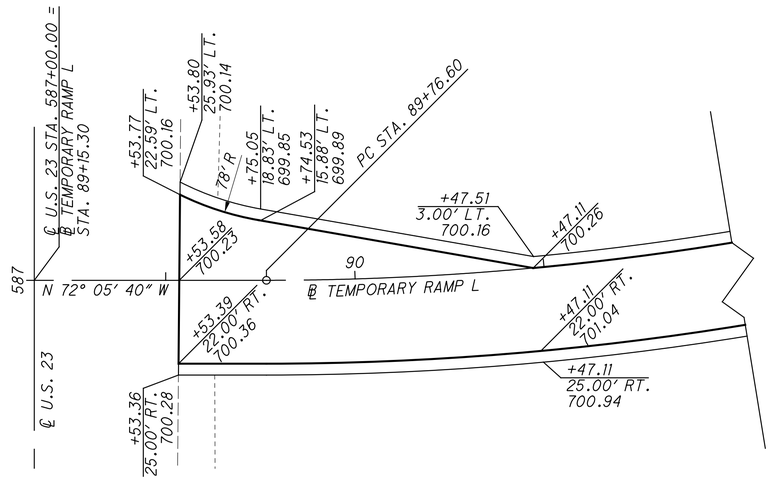
[B] 22′ FROM STA. 89+53.58 TO STA. 91+00.00.
VARIES 22′ - 13.69′ FROM STA. 91+00.00 TO STA. 94+80.60.

[C] LEFT SHOULDER CROSS SLOPE EQUALS PAVEMENT SLOPE.

[D] SEE SHEETS 39 - 42 FOR FORESLOPE AND BACKSLOPE GRADES.

[E] ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A - QUANTITIES FOR THIS ITEM ARE INCLUDED IN THE SUBSUMMARY ON SHEET 23. ⚠

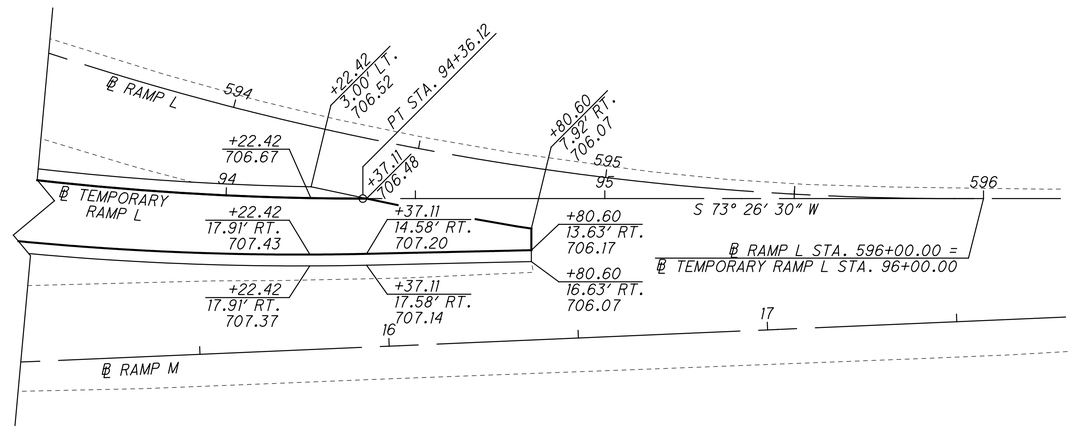
TYPICAL SECTION
TEMPORARY RAMP L
STA. 89+53.58 TO STA. 94+80.60



INTERSECTION DETAIL
TEMPORARY RAMP L AT U.S. 23

SUPERELEVATION TABLE

LEFT EDGE OF SHOULDER				LEFT EDGE OF PAVEMENT				BASELINE CONTROL		RIGHT EDGE OF PAVEMENT				RIGHT EDGE OF SHOULDER			
EDGE ELEVATION	CORRECTION FACTOR	CROSS SLOPE	WIDTH	EDGE ELEVATION	CORRECTION FACTOR	CROSS SLOPE	WIDTH	STATION	PGL ELEVATION	WIDTH	CROSS SLOPE	CORRECTION FACTOR	EDGE ELEVATION	WIDTH	CROSS SLOPE	CORRECTION FACTOR	EDGE ELEVATION
						EXIST.		89+53.58	700.23		EXIST.						
699.85	-0.04	-0.013	3.00	699.89	-0.20	-0.013	15.80	89+75.00	700.09	22.00	0.013	0.28	700.37	3.00	-0.057	-0.17	700.20
699.74	-0.06	-0.021	3.00	699.80	-0.23	-0.021	11.15	90+00.00	700.03	22.00	0.021	0.45	700.48	3.00	-0.049	-0.15	700.34
699.85	-0.09	-0.029	3.00	699.94	-0.16	-0.029	5.63	90+25.00	700.10	22.00	0.029	0.63	700.73	3.00	-0.042	-0.12	700.60
700.18	-0.11	-0.036	3.00	700.29	0.00	-0.036	0.00	90+50.00	700.29	22.00	0.036	0.80	701.09	3.00	-0.034	-0.10	700.99
700.48	-0.13	-0.044	3.00	700.61	0.00	-0.044	0.00	90+75.00	700.61	22.00	0.044	0.97	701.58	3.00	-0.026	-0.08	701.51
700.89	-0.16	-0.052	3.00	701.05	0.00	-0.052	0.00	91+00.00	701.05	22.00	0.052	1.15	702.20	3.00	-0.018	-0.05	702.15
701.36	-0.18	-0.059	3.00	701.54	0.00	-0.059	0.00	91+21.58	701.54	21.53	0.059	1.27	702.81	3.00	-0.011	-0.03	702.78
701.45	-0.18	-0.059	3.00	701.63	0.00	-0.059	0.00	91+25.00	701.63	21.45	0.059	1.27	702.90	3.00	-0.011	-0.03	702.86
702.14	-0.18	-0.059	3.00	702.32	0.00	-0.059	0.00	91+50.00	702.32	20.90	0.059	1.23	703.55	3.00	-0.011	-0.03	703.52
702.87	-0.18	-0.059	3.00	703.05	0.00	-0.059	0.00	91+75.00	703.05	20.35	0.059	1.20	704.25	3.00	-0.011	-0.03	704.22
703.59	-0.18	-0.059	3.00	703.77	0.00	-0.059	0.00	92+00.00	703.77	19.80	0.059	1.17	704.94	3.00	-0.011	-0.03	704.91
704.32	-0.18	-0.059	3.00	704.50	0.00	-0.059	0.00	92+25.00	704.50	19.25	0.059	1.14	705.64	3.00	-0.011	-0.03	705.60
705.04	-0.18	-0.059	3.00	705.22	0.00	-0.059	0.00	92+50.00	705.22	18.70	0.059	1.10	706.32	3.00	-0.011	-0.03	706.29
705.77	-0.18	-0.059	3.00	705.95	0.00	-0.059	0.00	92+75.00	705.95	18.15	0.059	1.07	707.02	3.00	-0.011	-0.03	706.99
706.39	-0.18	-0.059	3.00	706.57	0.00	-0.059	0.00	93+00.00	706.57	17.60	0.059	1.04	707.61	3.00	-0.011	-0.03	707.58
706.82	-0.18	-0.059	3.00	707.00	0.00	-0.059	0.00	93+25.00	707.00	17.05	0.059	1.01	708.01	3.00	-0.011	-0.03	707.97
707.04	-0.18	-0.059	3.00	707.22	0.00	-0.059	0.00	93+50.00	707.22	16.50	0.059	0.97	708.19	3.00	-0.011	-0.03	708.16
707.08	-0.18	-0.059	3.00	707.26	0.00	-0.059	0.00	93+60.00	707.26	16.28	0.059	0.96	708.22	3.00	-0.011	-0.03	708.19
707.08	-0.17	-0.057	3.00	707.25	0.00	-0.057	0.00	93+75.00	707.25	15.95	0.057	0.91	708.16	3.00	-0.013	-0.04	708.12
706.91	-0.16	-0.054	3.00	707.07	0.00	-0.054	0.00	94+00.00	707.07	15.40	0.054	0.83	707.90	3.00	-0.016	-0.05	707.85
706.53	-0.17	-0.057	3.00	706.70	0.00	-0.057	0.00	94+25.00	706.70	14.85	0.057	0.85	707.55	3.00	-0.013	-0.04	707.51
						EXIST.		94+50.00	706.07	14.30	0.048	0.68	706.75	3.00	-0.023	-0.07	706.68
						EXIST.		94+80.60	705.59		EXIST.						



INTERSECTION DETAIL
TEMPORARY RAMP L AT RAMP L

⚠ ADDENDUM #1
04/21/2023

TYPICAL SECTIONS AND ELEVATIONS TEMPORARY RAMP L

FRA-270-51.50

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TEMPORARY RAMP L
CURVE DATA
P.I. STA. 92+13.55
Δ = 34° 27′ 50″ (LT)
Dc = 7° 30′ 00″
R = 763.94′
T = 236.95′
L = 459.52′
E = 35.90′
C = 452.62′
C.B. = N 89° 19′ 35″ W

1 REMOVE 50 LF OF EXISTING GUARDRAIL FROM ℄ RAMP M STA. 15+50.00 TO STA. 15+96.00 AND SPLICE PROPOSED TEMPORARY GUARDRAIL INTO EXISTING GUARDRAIL

REMOVE 150 LF OF EXISTING GUARDRAIL FROM ℄ RAMP L STA. 593+00.00 TO STA. 594+47.00

END TAPER/ MEET EXISTING STA. 94+80.60

PT STA. 94+36.12

MEET EXISTING STA. 94+37.11

S 73° 26′ 30″ W

37.63′

℄ RAMP L

℄ TEMPORARY RAMP L

℄ RAMP M

℄ U.S. 23 STA. 587+00.00 = ℄ TEMP. RAMP L STA. 89+15.30

BEGIN TAPER STA. 89+74.53

END TAPER STA. 90+47.11

BEGIN TAPER STA. 91+00.00

+53.77 22.59′ LT.

78′ R

PC STA. 89+76.60

HW 2.2

90°00′

15.88′

N 72° 05′ 40″ W

+53.39 22.00′ RT.

STA. 89+53.58 MEET EXISTING

18″ RCP

DND LIGHT TOWER

CB 2-3

CONST. LIMITS

22.00′

3.00′ TYP.

18″ A

18″ B

18″ C

REMOVE 20 LF OF 18″ PIPE

MH 3

18″ RCP

2 QUANTITIES ARE FOR INFORMATION ONLY. THE FOLLOWING ITEMS ARE TO BE INCLUDED IN THE BID PRICE FOR ITEM 615 - ROADS FOR MAINTAINING TRAFFIC

ESTIMATED QUANTITIES	
PIPE REMOVED	20 FT
SEEDING AND MULCHING	2267 SY
ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	18 CY
CONCRETE MASONRY	0.86 CY
15″ CONDUIT, TYPE B	60 FT
18″ CONDUIT, TYPE A	62 FT
18″ CONDUIT, TYPE C	104 FT
CATCH BASIN, NO. 2-3	1 EACH
MANHOLE, NO. 3	1 EACH
EXCAVATION	140 CY
EMBANKMENT	4676 CY
GUARDRAIL, TYPE MGS	582 FT
ANCHOR ASSEMBLY, TYPE E	2 EACH
ANCHOR ASSEMBLY, TYPE T	1 EACH

2 ADDENDUM #1 04/21/2023

700.09 700.03 700.10 700.29 700.61 701.05 701.63 702.32 703.05 703.77 704.50 705.22 705.95 706.57 707.00 707.22 707.25 707.07 706.70

P.V.I. STA 93+50.00 ELEV = 708.12′ K = 31.31
150.00′ VC

MEET EXISTING STA. 89+53.58 ELEV. 700.23

BEGIN SEED DITCH PROTECTION STA. 91+14, 9′ LT.

BEGIN ROCK CHANNEL PROTECTION, TYPE C STA. 91+19, 53′ LT.

PROPOSED PROFILE GRADE

-0.65 %

+2.90 %

+2.90 %

-1.89 %

MEET EXISTING STA. 94+37.11 ELEV. 706.47

END SEED DITCH PROTECTION STA. 93+50, 6′ LT.

END SEED DITCH PROTECTION STA. 93+00, 30′ RT.

ELECTRIC CONDUIT

18″ CONDUIT, TYPE A

12″ WATER

ELECTRIC CONDUIT

15″ CONDUIT, TYPE B

EXISTING PROFILE GRADE

P.V.I. STA 90+55.00 ELEV = 699.57′ K = 49.27
175.00′ VC

END ROCK CHANNEL PROTECTION, TYPE C
BEGIN SEED DITCH PROTECTION
STA. 92+00, 43′ RT.

700.19 694.96 696.10 697.39 695.47 693.94 696.16 702.50 706.97 707.00 706.07

710 705 700 695 690 685

90+00 91+00 92+00 93+00 94+00

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED DJR CHECKED RCH

PLAN AND PROFILE TEMPORARY RAMP L
STA. 89+15.30 TO STA. 95+00.00

FRA-270-51.50

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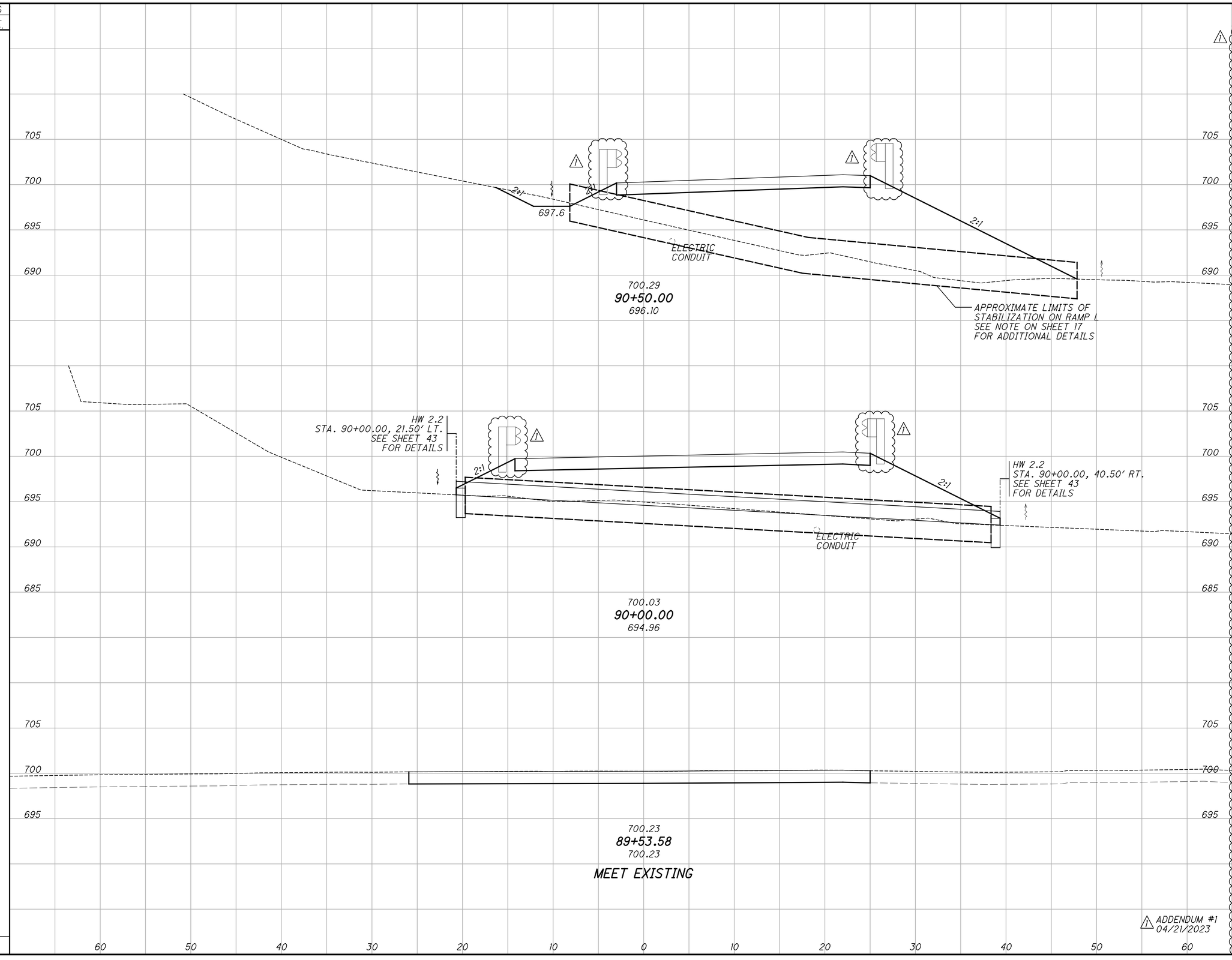
SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
6	286		
		6	490
0	243		
		6	490

CALCULATED DJR
CHECKED RCH



1 ADDENDUM #1 04/21/2023

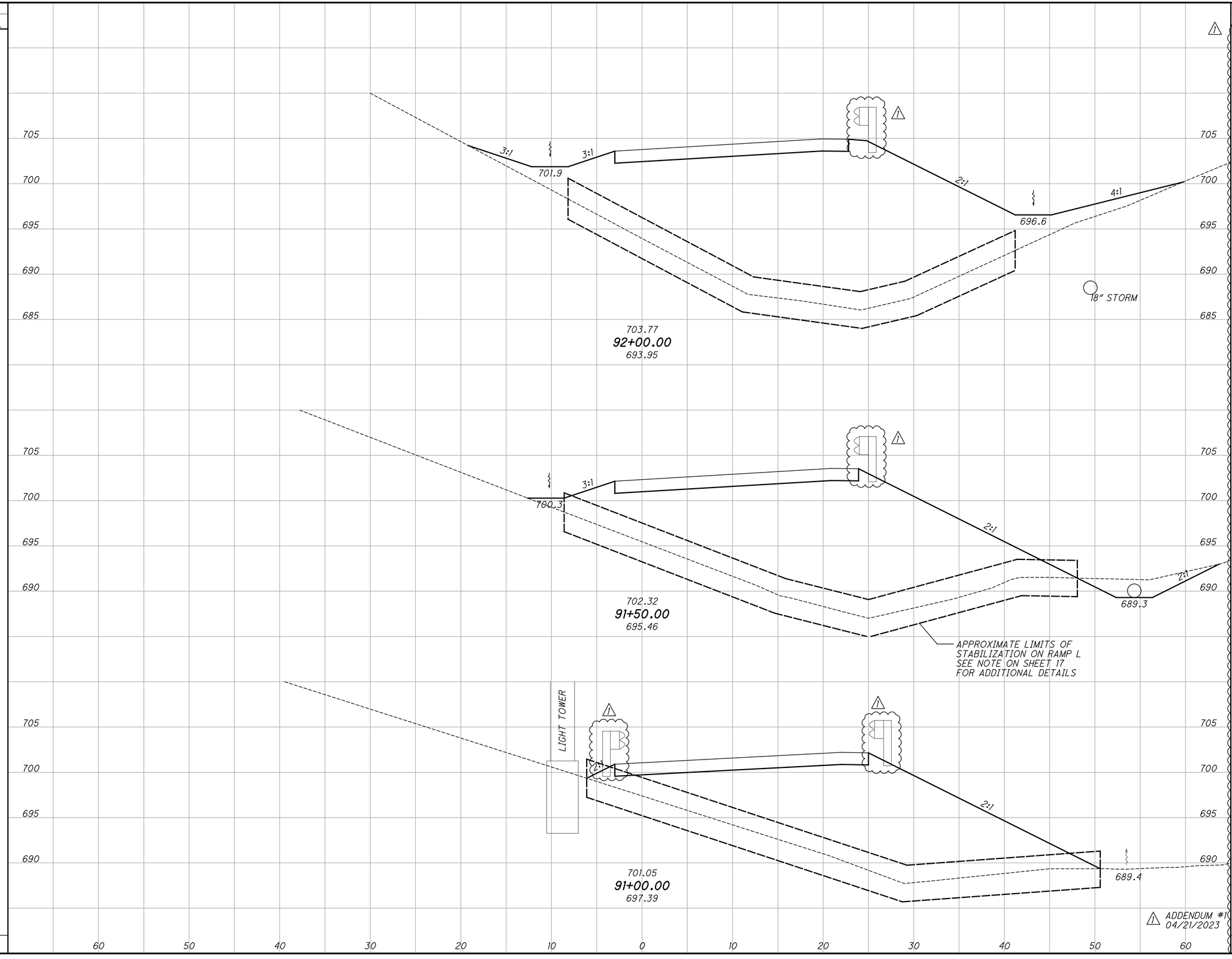
CROSS SECTIONS TEMPORARY RAMP L
STA. 89+53.58 TO STA. 90+50.00

FRA-270-51.50

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	645		
		17	1044
18	482		
		17	785
0	365		
		6	603
		40	2432

CALCULATED DJR
CHECKED RCH



CROSS SECTIONS TEMPORARY RAMP L
STA. 91+00.00 TO STA. 92+00.00

FRA-270-51.50

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
11	28		
		34	181
25	167		
		24	542
0	418		
		0	985
		58	1708

CALCULATED DJR
CHECKED RCH

710
705
700
695
690

707.22
93+50.00
706.96

706.3
2:1
3:1
2:1

704.9
2:1
3:1
2:1
703.7

706.57
93+00.00
702.50

APPROXIMATE LIMITS OF STABILIZATION ON RAMP L SEE NOTE ON SHEET 17 FOR ADDITIONAL DETAILS

703.4
3:1
3:1
2:1
4:1
700.1

MH 3
STA. 92+50.00, 40' RT.
SEE SHEET 43
FOR DETAILS

705.22
92+50.00
696.16

18" RCP

60 50 40 30 20 10 0 10 20 30 40 50 60

ADDENDUM #1
04/21/2023

CROSS SECTIONS TEMPORARY RAMP L
STA. 92+50.00 TO STA. 93+50.00

FRA-270-51.50

41
554

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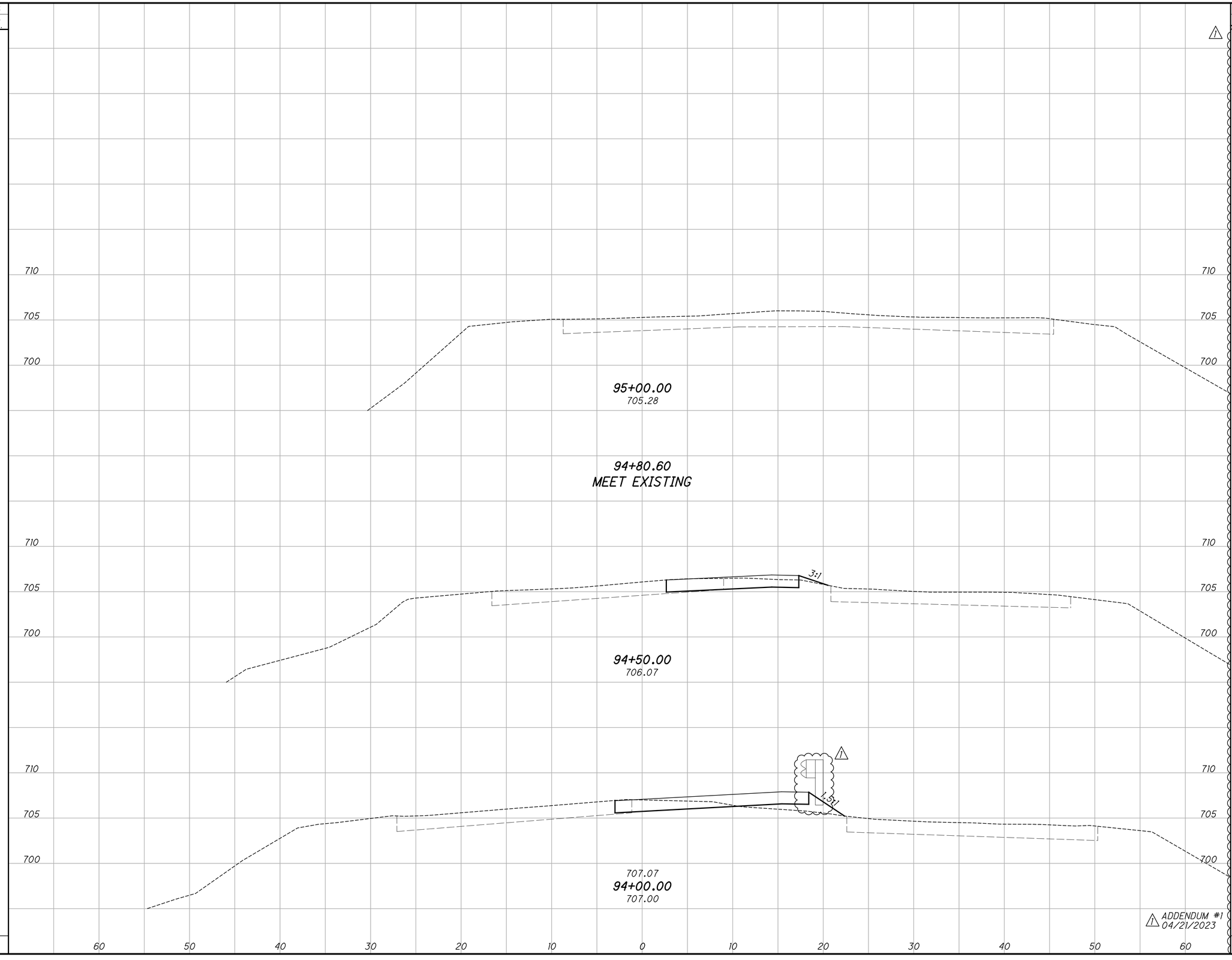
SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	4		
		13	12
13	8		
		23	34
		36	46

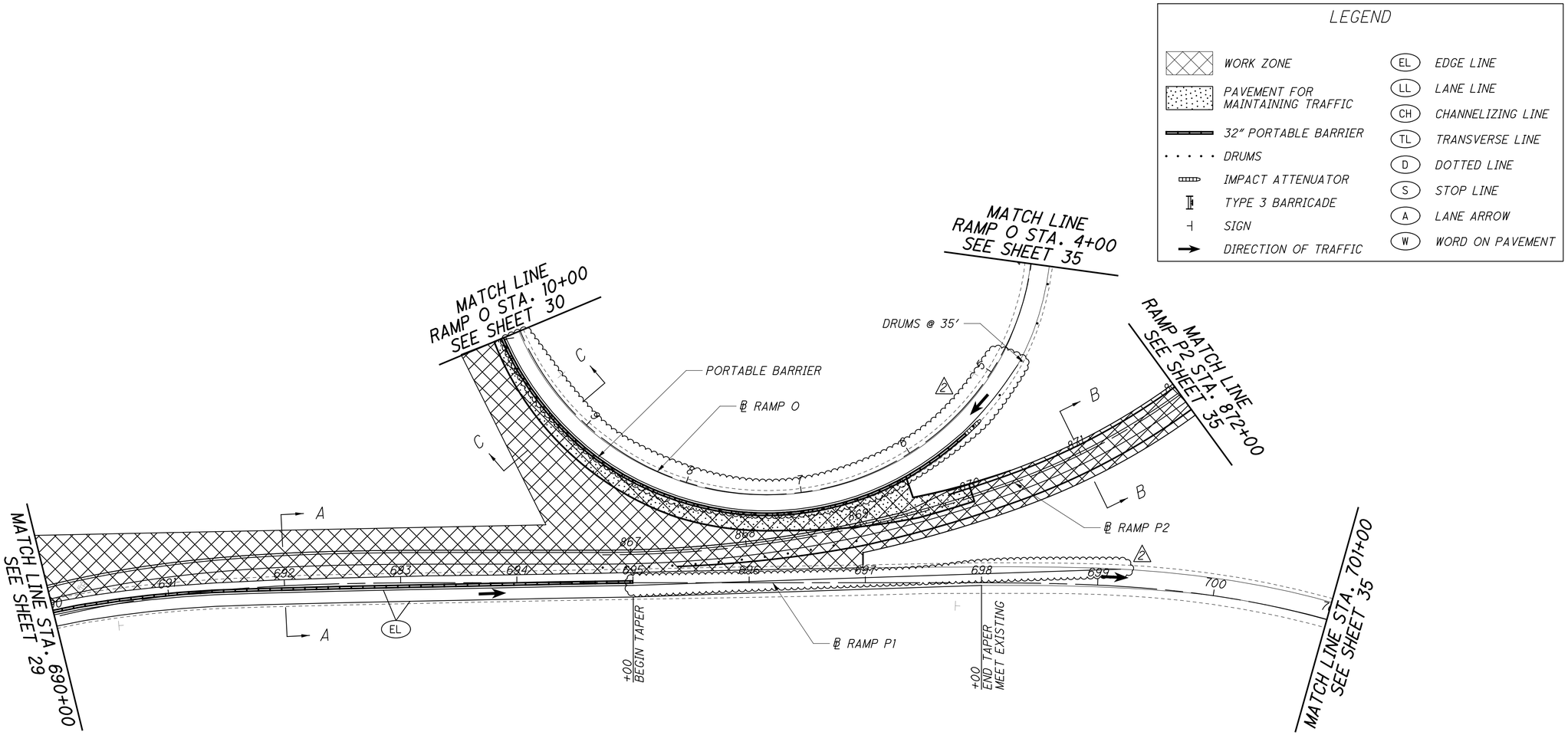
CALCULATED DJR
CHECKED RCH

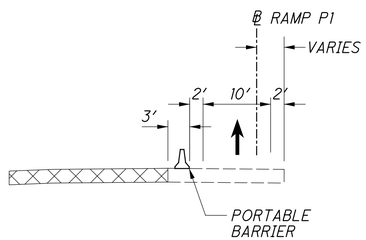


1 ADDENDUM #1 04/21/2023

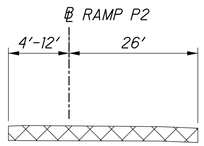
CROSS SECTIONS TEMPORARY RAMP L
STA. 94+00.00 TO STA. 95+00.00

FRA-270-51.50

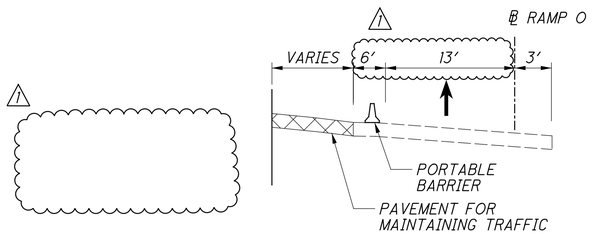




SECTION A-A



SECTION B-B



SECTION C-C

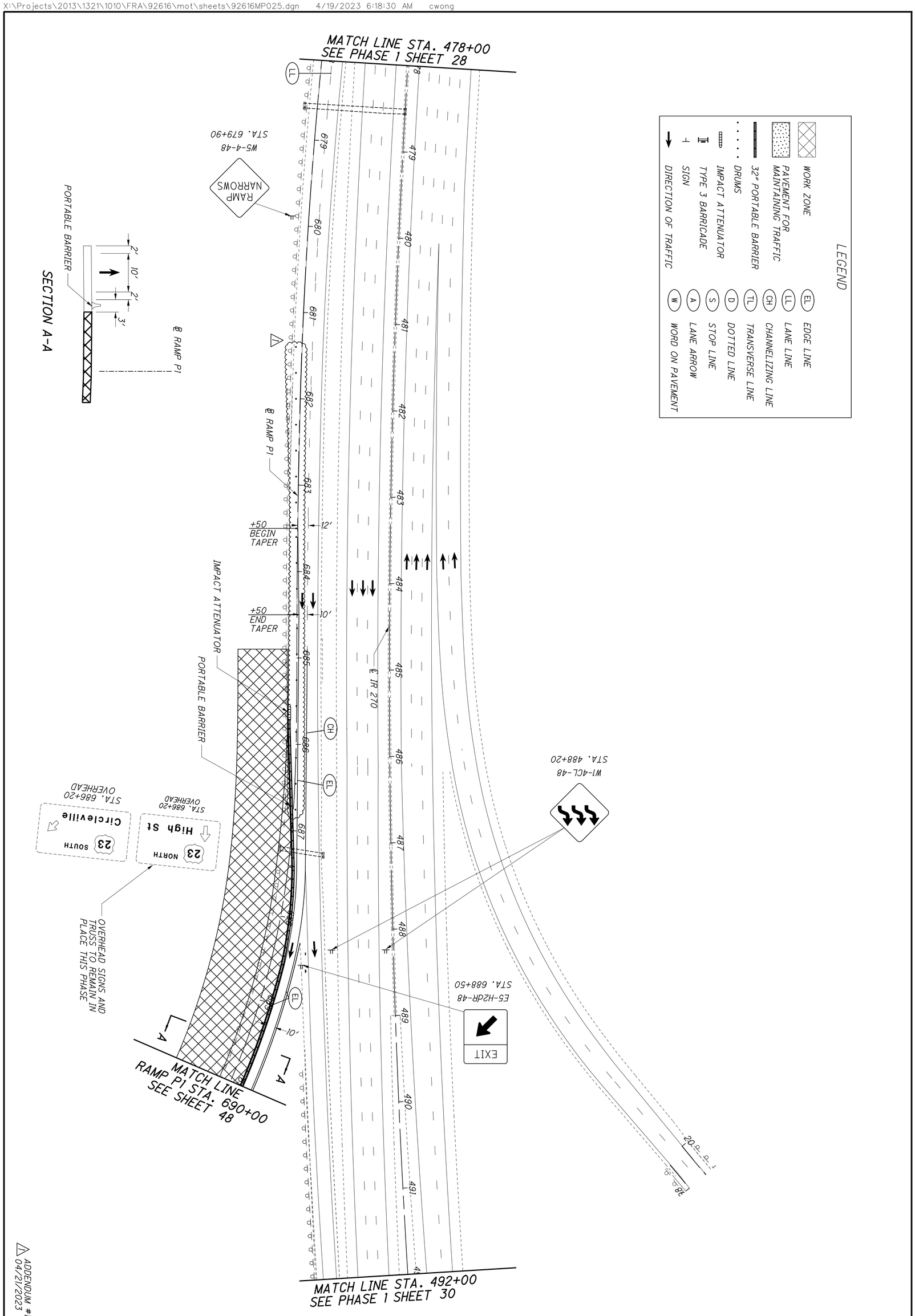
1 ADDENDUM #1 04/21/2023

MAINTENANCE OF TRAFFIC - PHASE 1 RAMP P1 STA. 690+00 TO STA. 701+00

HORIZONTAL SCALE IN FEET 0 25 50 100

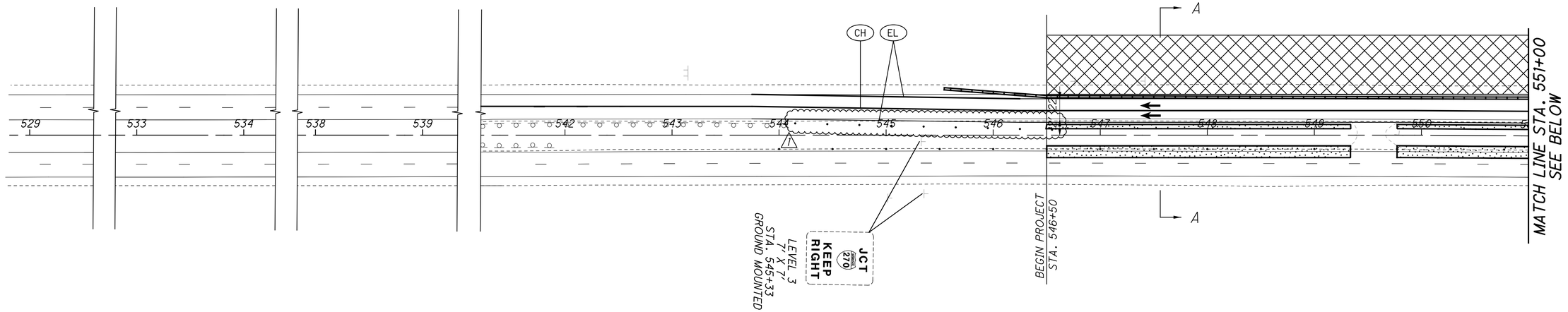
CALCULATED DJR CHECKED RCH

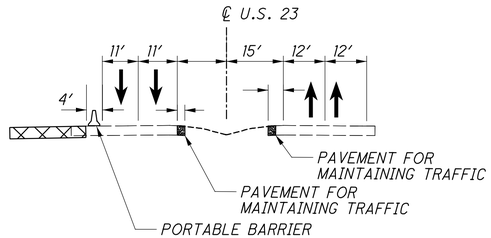
FRA-270-51.50



ADDENDUM #1
04/21/2023

45 / 554	FRA-270-51.50	MAINTENANCE OF TRAFFIC - PHASE 1A I-270 STA. 478+00 TO STA. 492+00	CALCULATED DJR CHECKED RCH 0 50 25 100 HORIZONTAL SCALE IN FEET

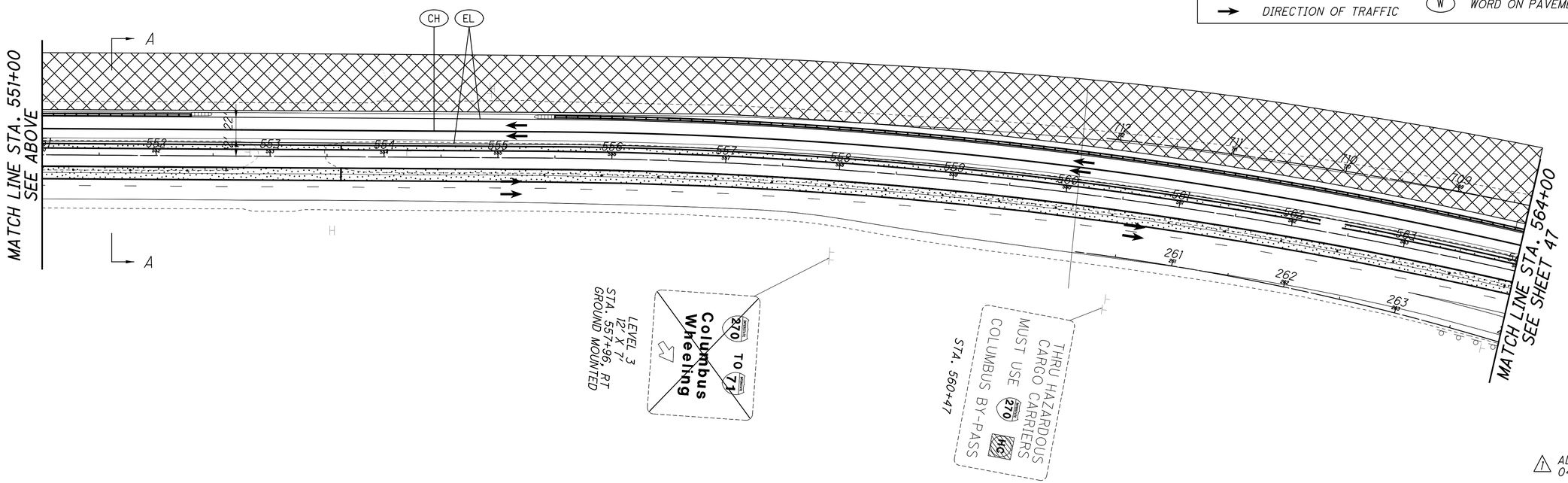




SECTION A-A

LEGEND

▨	WORK ZONE	(EL)	EDGE LINE
⛆	PAVEMENT FOR MAINTAINING TRAFFIC	(LL)	LANE LINE
═	32" PORTABLE BARRIER	(CH)	CHANNELIZING LINE
· · · · ·	DRUMS	(TL)	TRANSVERSE LINE
▭	IMPACT ATTENUATOR	(D)	DOTTED LINE
Ⅰ	TYPE 3 BARRICADE	(S)	STOP LINE
⊣	SIGN	(A)	LANE ARROW
→	DIRECTION OF TRAFFIC	(W)	WORD ON PAVEMENT



⚠ ADDENDUM #1
04/21/2023

0 25 50 100
HORIZONTAL SCALE IN FEET

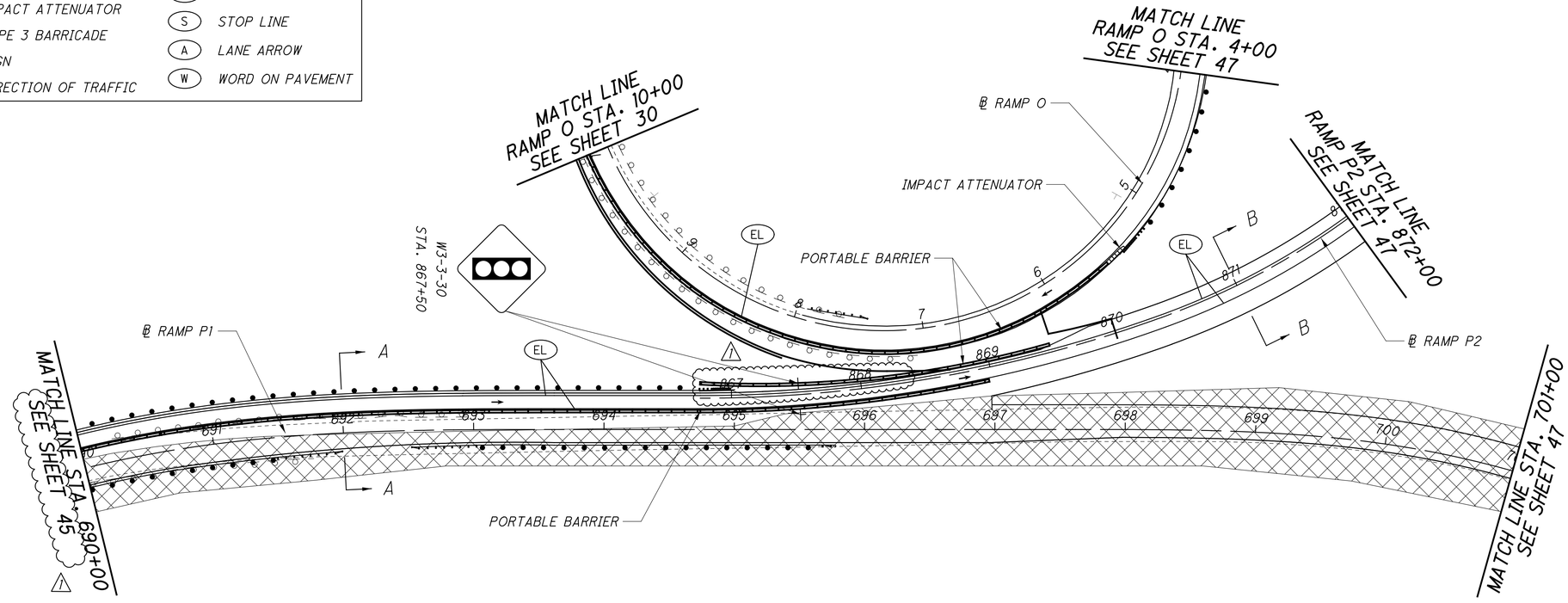
CALCULATED DJR
CHECKED RCH

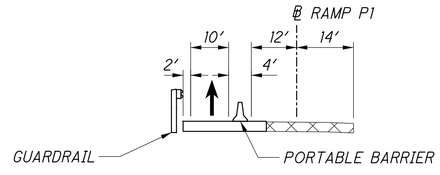
MAINTENANCE OF TRAFFIC - PHASE 1A
U.S. 23 STA. 537+00 TO STA. 564+00

FRA-270-51.50

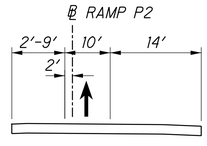
LEGEND

WORK ZONE	EL EDGE LINE
PAVEMENT FOR MAINTAINING TRAFFIC	LL LANE LINE
32" PORTABLE BARRIER	CH CHANNELIZING LINE
DRUMS	TL TRANSVERSE LINE
IMPACT ATTENUATOR	D DOTTED LINE
TYPE 3 BARRICADE	S STOP LINE
SIGN	A LANE ARROW
DIRECTION OF TRAFFIC	W WORD ON PAVEMENT





SECTION A-A



SECTION B-B

RAMP P1 STA. 690+00 TO STA. 701+00
RAMP P2 STA. 867+00 TO STA. 872+00
RAMP O STA. 4+00 TO STA. 10+00

MAINTENANCE OF TRAFFIC - PHASE 1A
RAMPS P1, P2 & O

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED MBE
CHECKED RCH

FRA-270-51.50

48
554

⚠1 ADDENDUM #1
04/21/2023

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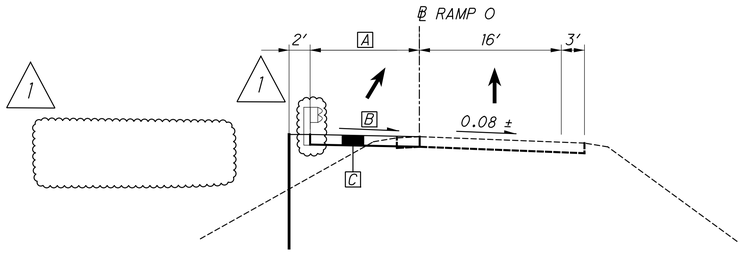
NOTES:

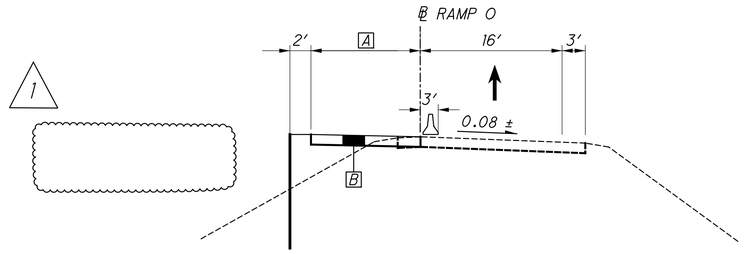
[A] 15' FROM STA. 7+00 TO STA. 8+00
VARIES 15' TO 3' FROM STA. 8+00 TO STA. 11+50

[B] VARIES: FROM .02 FT/FT AT STA. 7+00
TO .06 FT/FT AT STA. 7+50
MATCH EXISTING .08± FT/FT STA. 8+00 TO 11+50

[C] PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A

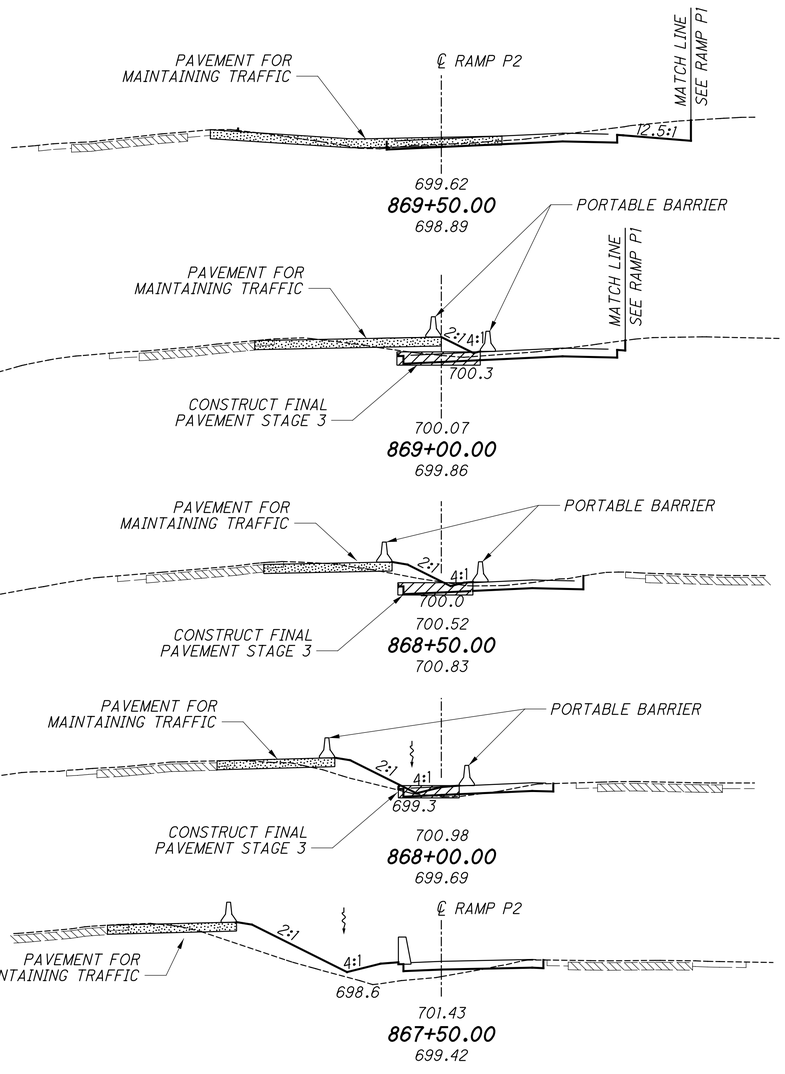


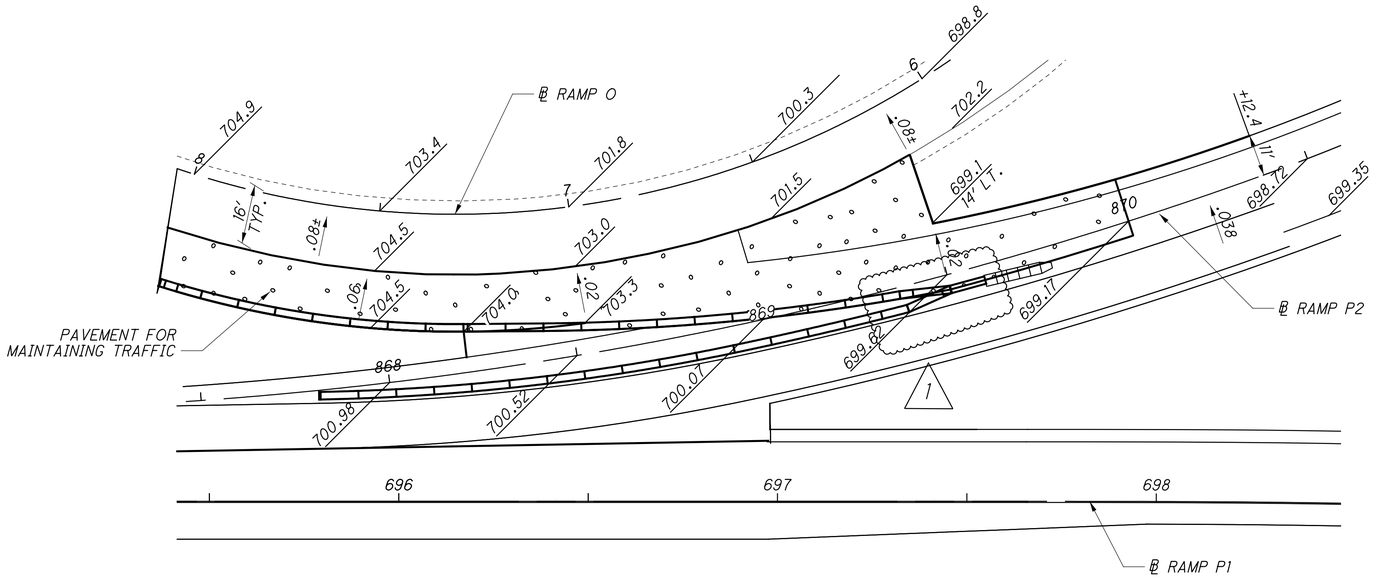
PHASE 2



PHASE 1

TYPICAL SECTION TEMPORARY WIDENING RAMP O





PAVEMENT FOR MAINTAINING TRAFFIC DETAILS
TEMPORARY CONNECTION RAMP P2 TO RAMP O

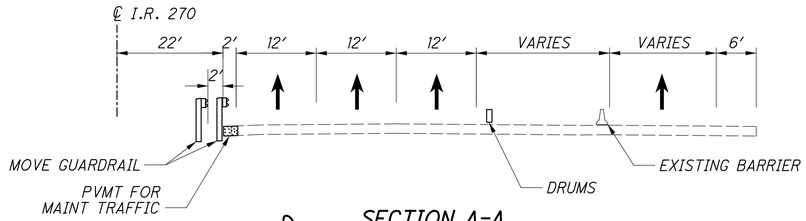
1 ADDENDUM #1
04/21/2023

RAMP O TEMPORARY CONNECTION & TYPICAL SECTION

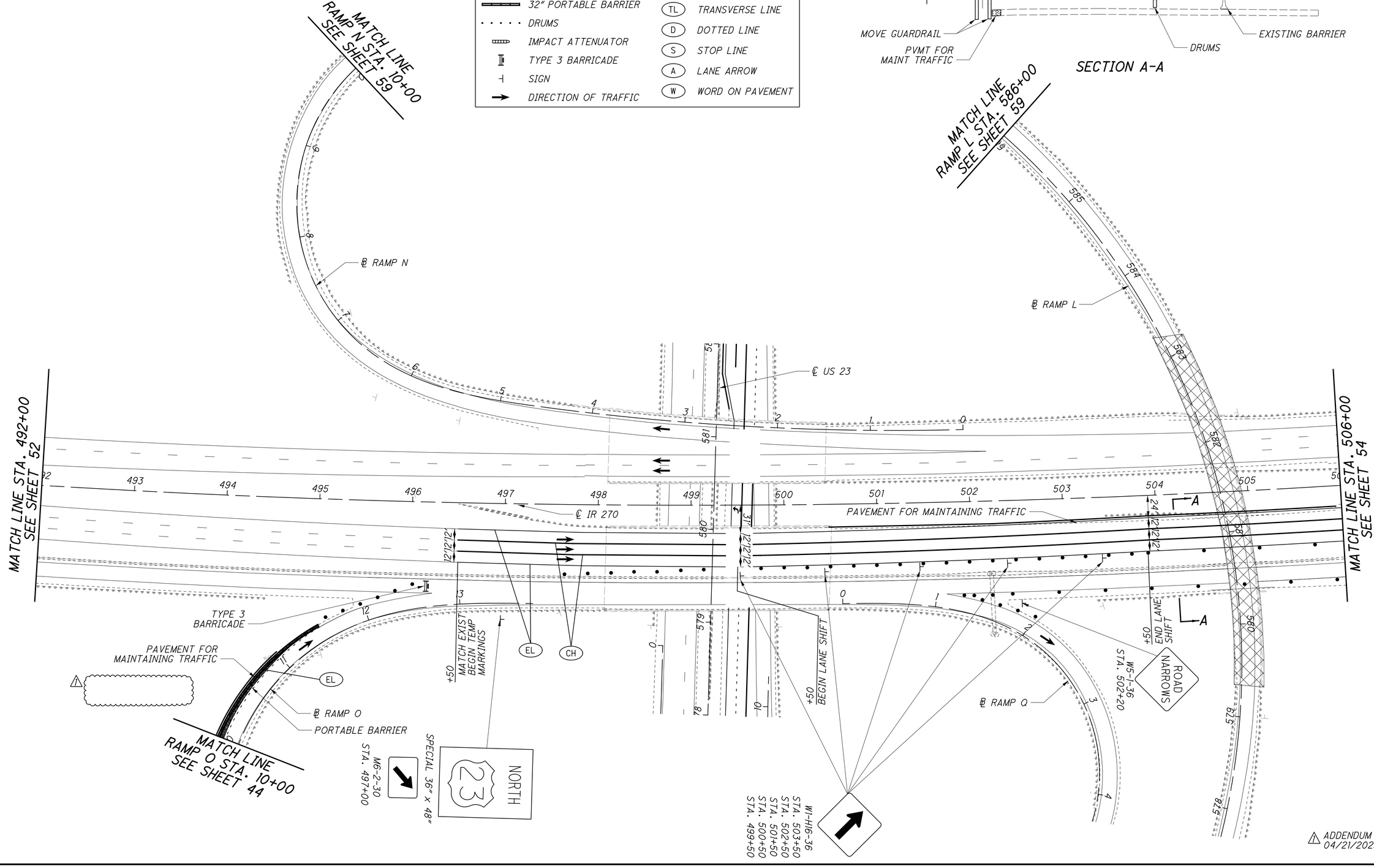
FRA-270-51.50

LEGEND

- WORK ZONE
- PAVEMENT FOR MAINTAINING TRAFFIC
- 32" PORTABLE BARRIER
- DRUMS
- IMPACT ATTENUATOR
- TYPE 3 BARRICADE
- SIGN
- DIRECTION OF TRAFFIC
- (EL) EDGE LINE
- (LL) LANE LINE
- (CH) CHANNELIZING LINE
- (TL) TRANSVERSE LINE
- (D) DOTTED LINE
- (S) STOP LINE
- (A) LANE ARROW
- (W) WORD ON PAVEMENT



SECTION A-A



⚠ ADDENDUM #1 04/21/2023

HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED DJR CHECKED RCH

MAINTENANCE OF TRAFFIC - PHASE 2
I-270 STA. 492+00 TO STA. 506+00

FRA-270-51.50

53
554

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MATCH LINE STA. 534+00
SEE ABOVE

MATCH LINE STA. 520+00
SEE SHEET 54

23 NORTH
High St
USE EXIT 52B

SPECIAL 192" X 144"
STA. 536+00

LEGEND

WORK ZONE	
PAVEMENT FOR MAINTAINING TRAFFIC	
32" PORTABLE BARRIER	
DRUMS	
IMPACT ATTENUATOR	
TYPE 3 BARRICADE	
SIGN	
DIRECTION OF TRAFFIC	
EL	EDGE LINE
LL	LANE LINE
CH	CHANNELIZING LINE
TL	TRANSVERSE LINE
D	DOTTED LINE
S	STOP LINE
A	LANE ARROW
W	WORD ON PAVEMENT

CONSTRUCTION AREA TO BE ACCESSED VIA RAMP R OR THE CD ROAD. CONSTRUCTION TRAFFIC SHALL NOT CROSS THE RAMP MERGE AREA FROM I-270 TO ACCESS THE CONSTRUCTION AREA.

PARSONS AVE

EXIT 52B
7' X 2.5'
TEMPORARY
OVERLAY

EXIT 52A
23
High St
½ MILE

STA 542+40
OVERHEAD
TO REMAIN

¾ MILE
TEMPORARY
OVERLAY

WI-4CR-48
STA. 545+30

SECTION A-A

℄ I.R. 270
22'+/-
2'
12'
12'
12'
10'
4'

PORTABLE BARRIER

EXIT
CLOSED AHEAD
E5-H2C-48
STA. 546+00

℄ I.R. 270

EXIT
CLOSED
E5-2A-48
STA. 531+00

CONSTRUCTION AREA TO BE ACCESSED VIA RAMP R OR THE CD ROAD. CONSTRUCTION TRAFFIC SHALL NOT CROSS THE RAMP MERGE AREA FROM I-270 TO ACCESS THE CONSTRUCTION AREA.

MATCH LINE STA. 548+00
SEE SHEET 56

MATCH LINE STA. 534+00
SEE BELOW

△ ADDENDUM #1
04/21/2023

55 / 554	FRA-270-51.50	MAINTENANCE OF TRAFFIC - PHASE 2 I-270 STA. 520+00 TO STA. 548+00	CALCULATED DJR CHECKED RCH	0 50 25 100 HORIZONTAL SCALE IN FEET

SECTION A-A

LEGEND

- WORK ZONE
- PAVEMENT FOR MAINTAINING TRAFFIC
- 32" PORTABLE BARRIER
- DRUMS
- IMPACT ATTENUATOR
- TYPE 3 BARRICADE
- SIGN
- DIRECTION OF TRAFFIC
- (EL) EDGE LINE
- (LL) LANE LINE
- (CH) CHANNELIZING LINE
- (TL) TRANSVERSE LINE
- (D) DOTTED LINE
- (S) STOP LINE
- (A) LANE ARROW
- (W) WORD ON PAVEMENT

NOTE 1: DRIVE NOT TO BE USED FOR CONSTRUCTION ACCESS UNLESS THE RIGHT LNE OF US 23 NORTH IS CLOSED DURING ALLOWABLE HOURS.

1 ADDENDUM #1 04/21/2023

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DJR
CHECKED RCH

MAINTENANCE OF TRAFFIC - PHASE 2
U.S. 23 STA. 529+00 TO STA. 564+00

FRA-270-51.50

57
554

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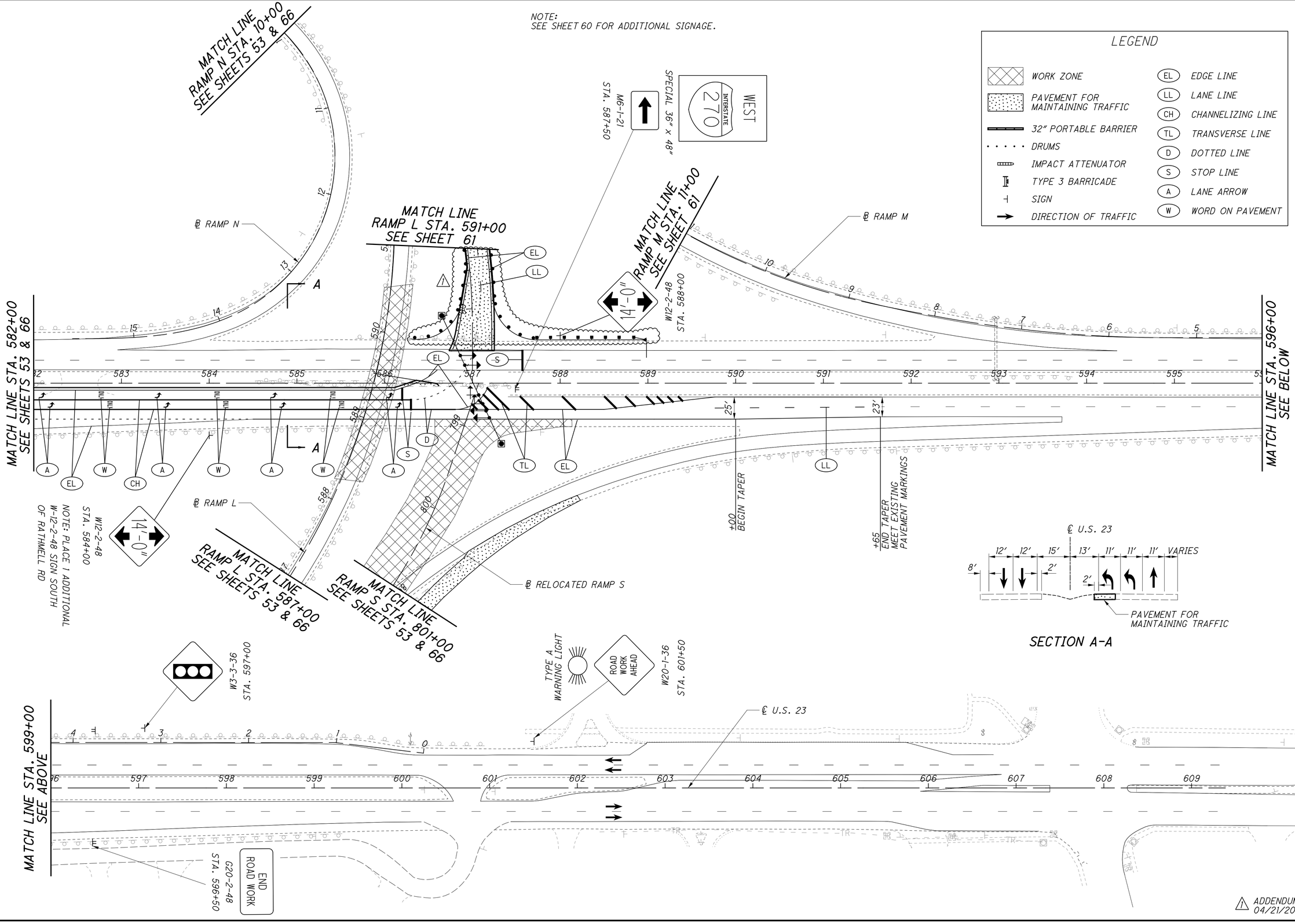
NOTE:
SEE SHEET 60 FOR ADDITIONAL SIGNAGE.



1 ADDENDUM #1 04/21/2023

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DJR
CHECKED RCH

MAINTENANCE OF TRAFFIC - PHASE 2
U.S. 23 STA. 582+00 TO STA. 609+00

FRA-270-51.50

59
554

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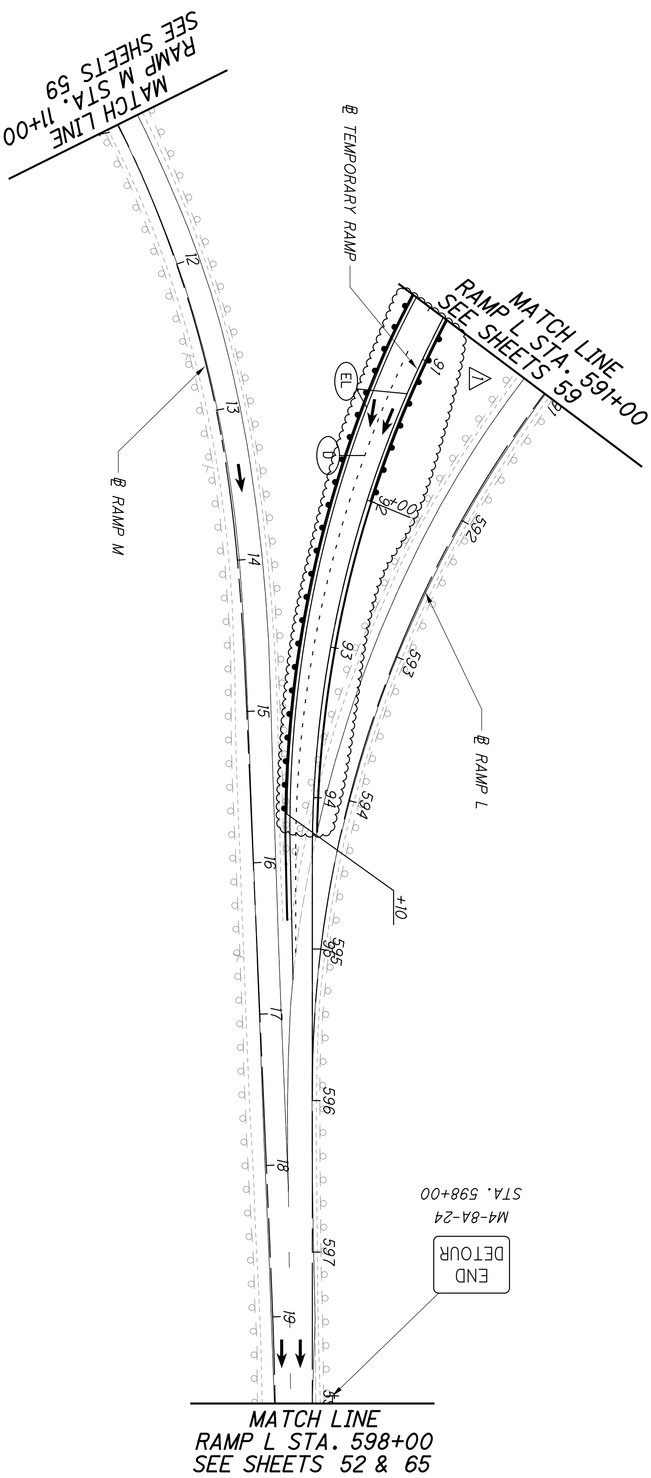
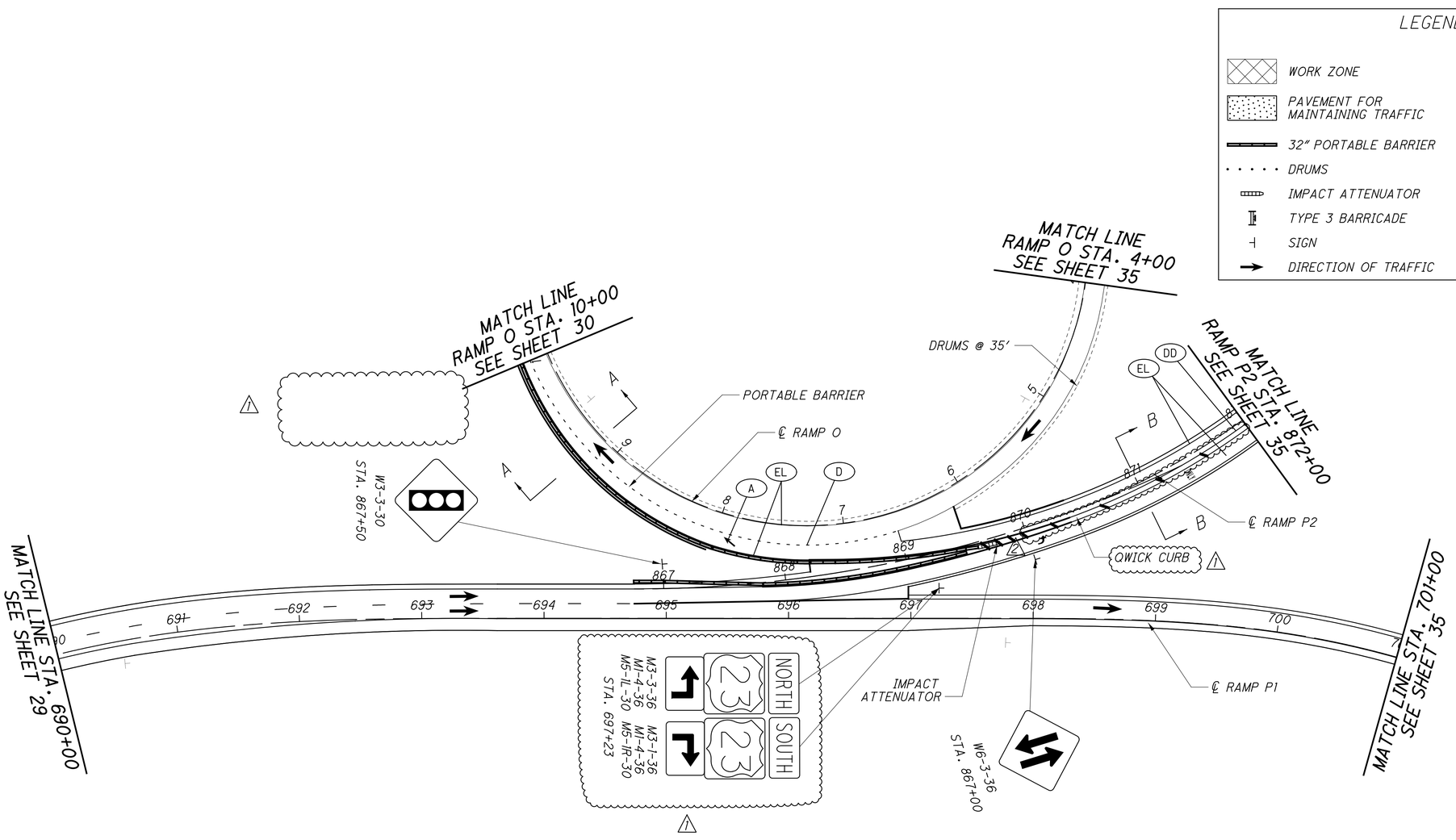


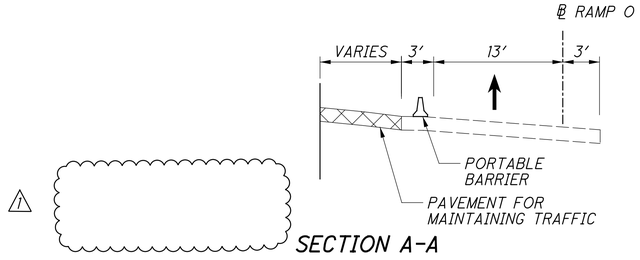
LEGEND

- WORK ZONE
- PAVEMENT FOR MAINTAINING TRAFFIC
- 32" PORTABLE BARRIER
- DRUMS
- IMPACT ATTENUATOR
- TYPE 3 BARRICADE
- SIGN
- DIRECTION OF TRAFFIC
- (EL) EDGE LINE
- (LL) LANE LINE
- (CH) CHANNELIZING LINE
- (TL) TRANSVERSE LINE
- (D) DOTTED LINE
- (S) STOP LINE
- (A) LANE ARROW
- (W) WORD ON PAVEMENT

⚠ ADDENDUM #1
04/21/2023

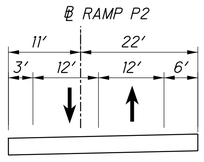
61 / 554	FRA-270-51.50	MAINTENANCE OF TRAFFIC - PHASES 2 RAMP L STA. 591+00 TO STA. 598+00	CALCULATED DJR CHECKED RCH	0 50 25 100 HORIZONTAL SCALE IN FEET	N





SECTION A-A

SEE SHEET 50 FOR ADDITIONAL DETAIL



SECTION B-B

RAMP P1 STA. 690+00 TO STA. 701+00
RAMP P2 STA. 867+00 TO STA. 872+00
RAMP O STA. 4+00 TO STA. 10+00

MAINTENANCE OF TRAFFIC - PHASE 2 RAMPS P1, P2, & O

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED DJR
CHECKED RCH

FRA-270-51.50

62
554

ADDENDUM #1
04/21/2023

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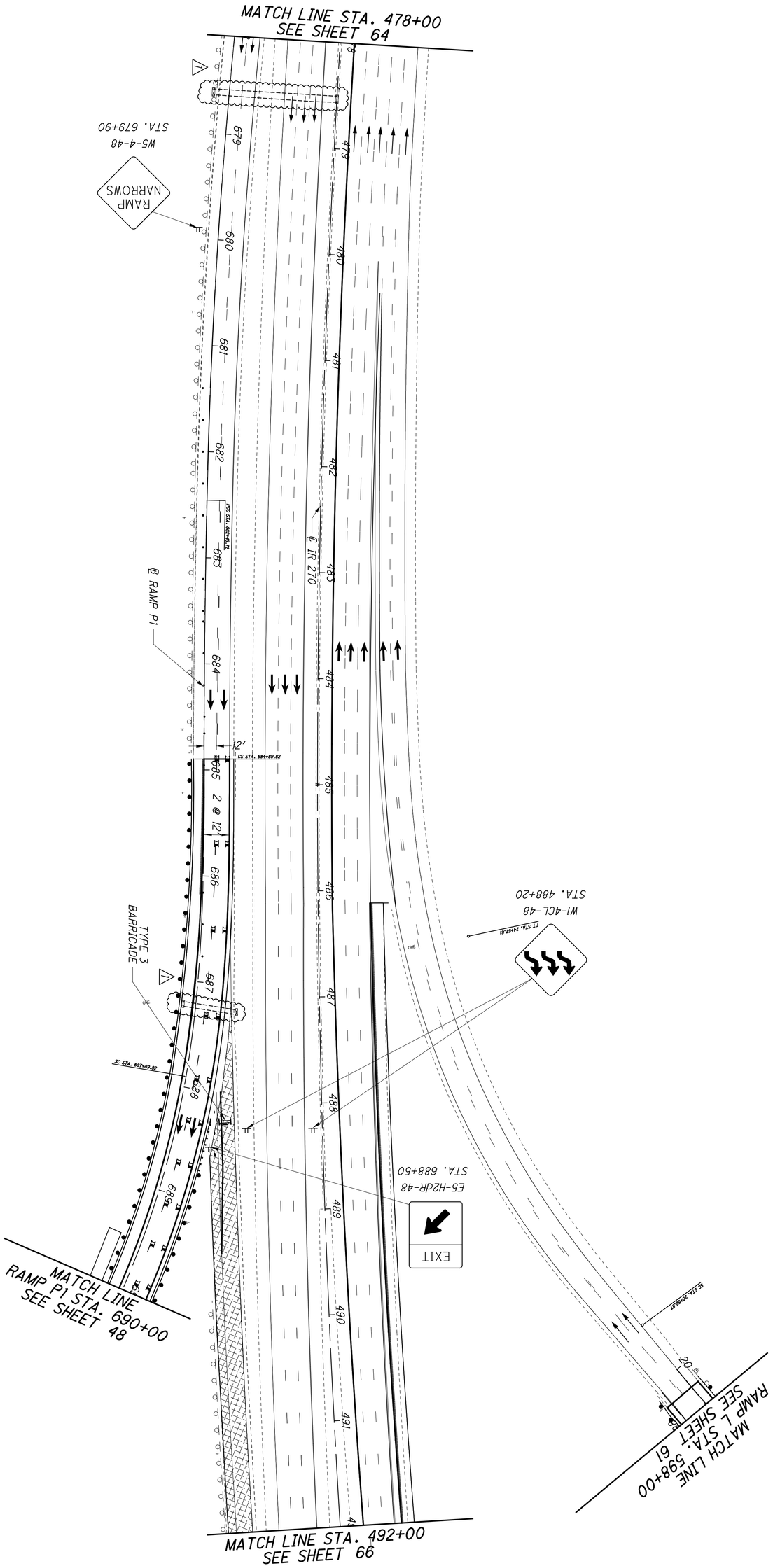

△ ADDENDUM #1
04/21/2023

65 / 554	FRA-270-51.50	MAINTENANCE OF TRAFFIC - PHASE 2A I-270 STA. 478+00 TO STA. 492+00	CALCULATED DJR CHECKED RCH	0 50 25 100 HORIZONTAL SCALE IN FEET	N

LEGEND

- WORK ZONE
- PAVEMENT FOR MAINTAINING TRAFFIC
- 32" PORTABLE BARRIER
- DRUMS
- IMPACT ATTENUATOR
- TYPE 3 BARRICADE
- SIGN
- DIRECTION OF TRAFFIC
- (EL) EDGE LINE
- (LL) LANE LINE
- (CH) CHANNELIZING LINE
- (TL) TRANSVERSE LINE
- (D) DOTTED LINE
- (S) STOP LINE
- (A) LANE ARROW
- (W) WORD ON PAVEMENT

MATCH LINE
RAMP N STA. 10+00
SEE SHEET 59

℄ RAMP N

MATCH LINE
RAMP S STA. 801+00
SEE SHEET 59

MATCH LINE
RAMP L STA. 586+00
SEE SHEET 59

MATCH LINE
RAMP S STA. 806+00
SEE SHEET 67

STA. 503+31.3
REMOVE 25' EXIST GUARDRAIL
ANCHOR ASSEMBLY, TYPE E
25' GUARDRAIL, TYPE MGS
ANCHOR ASSEMBLY, TYPE T

℄ RAMP L

MATCH LINE
U.S. 23 STA. 582+00
SEE SHEET 59

℄ US 23

MATCH LINE STA. 492+00
SEE SHEET 65

MATCH LINE STA. 506+00
SEE SHEET 67

℄ IR 270

PAVEMENT FOR MAINTAINING TRAFFIC

PAVEMENT FOR
MAINTAINING TRAFFIC

+50
MATCH EXIST
BEGIN TEMP
MARKINGS

+50
BEGIN LANE SHIFT

+50
END LANE SHIFT

℄ RAMP O

PORTABLE BARRIER

℄ RAMP Q

MATCH LINE
RAMP O STA. 10+00
SEE SHEET 62

MATCH LINE
U.S. 23 STA. 578+00
SEE SHEET 47

MATCH LINE
RAMP L STA. 579+00

MATCH LINE
RAMP Q STA. 4+00
SEE SHEET 47

W5-1-36
STA. 495+50

ROAD
NARROWS

M6-2-30
STA. 497+00

SPECIAL 36" x 48"

NORTH
23

W1-1H16-36
STA. 499+50
STA. 500+50
STA. 501+50
STA. 502+50
STA. 503+50

⚠ ADDENDUM #1
04/21/2023

HORIZONTAL
SCALE IN FEET
0 25 50 100

CALCULATED DJR
CHECKED RCH

MAINTENANCE OF TRAFFIC - PHASE 2A
I-270 STA. 492+00 TO STA. 506+00

FRA-270-51.50

66
554

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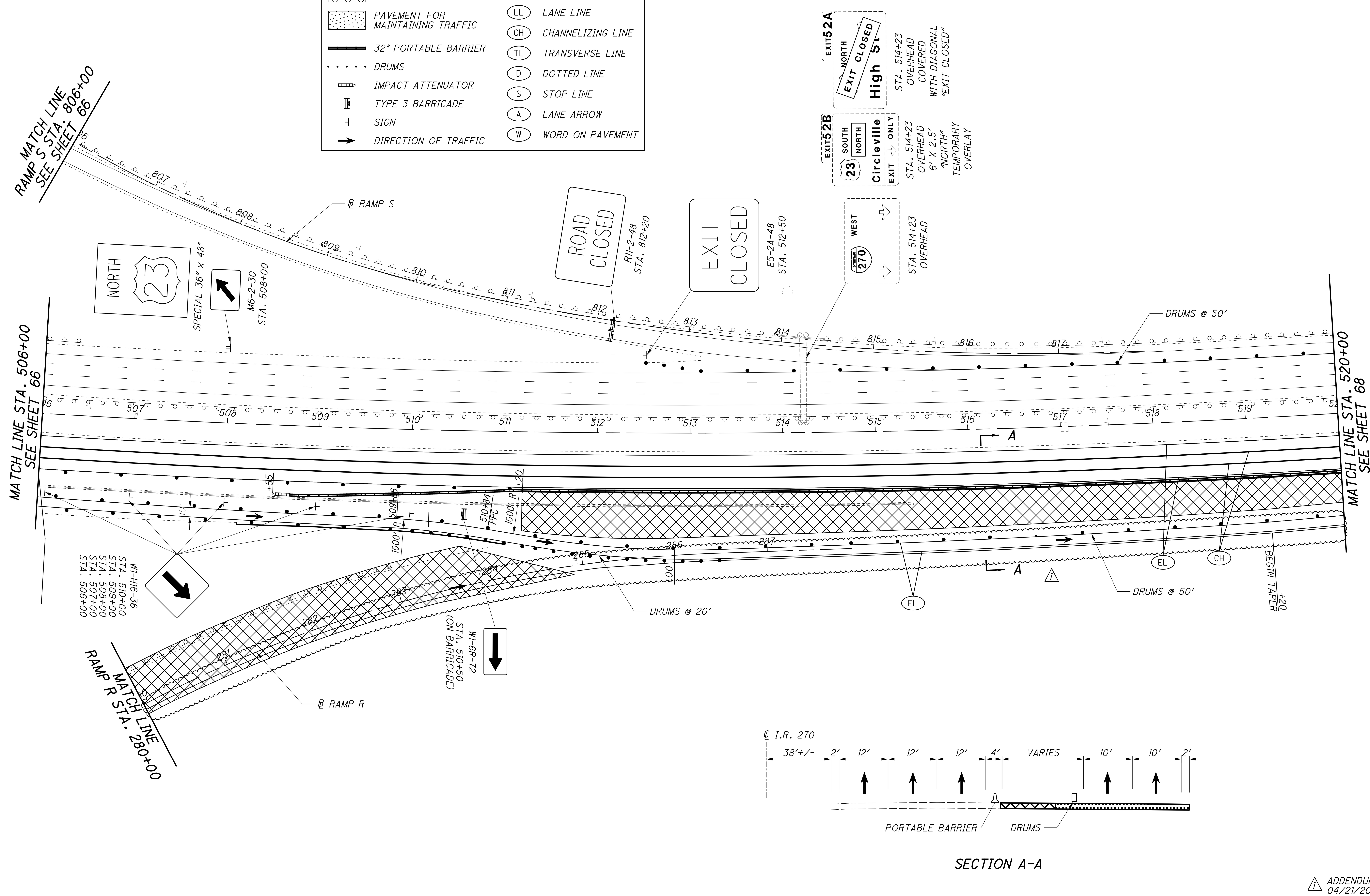
LEGEND

(hatched)	WORK ZONE	EL	EDGE LINE
(dotted)	PAVEMENT FOR MAINTAINING TRAFFIC	LL	LANE LINE
	32" PORTABLE BARRIER	CH	CHANNELIZING LINE
	DRUMS	TL	TRANSVERSE LINE
	IMPACT ATTENUATOR	D	DOTTED LINE
	TYPE 3 BARRICADE	S	STOP LINE
	SIGN	A	LANE ARROW
	DIRECTION OF TRAFFIC	W	WORD ON PAVEMENT



MATCH LINE RAMP S STA. 806+00 SEE SHEET 66
RAMP S
NORTH 23
SPECIAL 36" x 48"
M6-2-30 STA. 508+00
ROAD CLOSED
R11-2-48 STA. 812+20
EXIT CLOSED
E5-2A-48 STA. 512+50
EXIT 52A NORTH EXIT CLOSED High St
STA. 514+23 OVERHEAD COVERED WITH DIAGONAL "EXIT CLOSED"
EXIT 52B SOUTH NORTH 23 Circleville EXIT ONLY
STA. 514+23 OVERHEAD 6' X 2.5' "NORTH" TEMPORARY OVERLAY
WEST 270
STA. 514+23 OVERHEAD
DRUMS @ 50'
MATCH LINE STA. 506+00 SEE SHEET 66
MATCH LINE STA. 520+00 SEE SHEET 68
A
W1-H16-36 STA. 510+00 STA. 509+00 STA. 508+00 STA. 507+00 STA. 506+00
1000' R 509+06
510+84 PRC
1000' R +20
W1-6R-72 STA. 510+50 (ON BARRICADE)
DRUMS @ 20'
EL
EL
CH
DRUMS @ 50'
BEGIN TAPER +20
RAMP R
MATCH LINE RAMP R STA. 280+00
℄ I.R. 270
38'+/- 2' 12' 12' 12' 4' VARIES 10' 10' 2'
PORTABLE BARRIER
DRUMS
SECTION A-A

ADDENDUM #1 04/21/2023

CALCULATED DJR
CHECKED RCH

HORIZONTAL SCALE IN FEET 0 25 50 100

MAINTENANCE OF TRAFFIC - PHASE 2A
I-270 STA. 506+00 TO STA. 520+00

FRA-270-51.50

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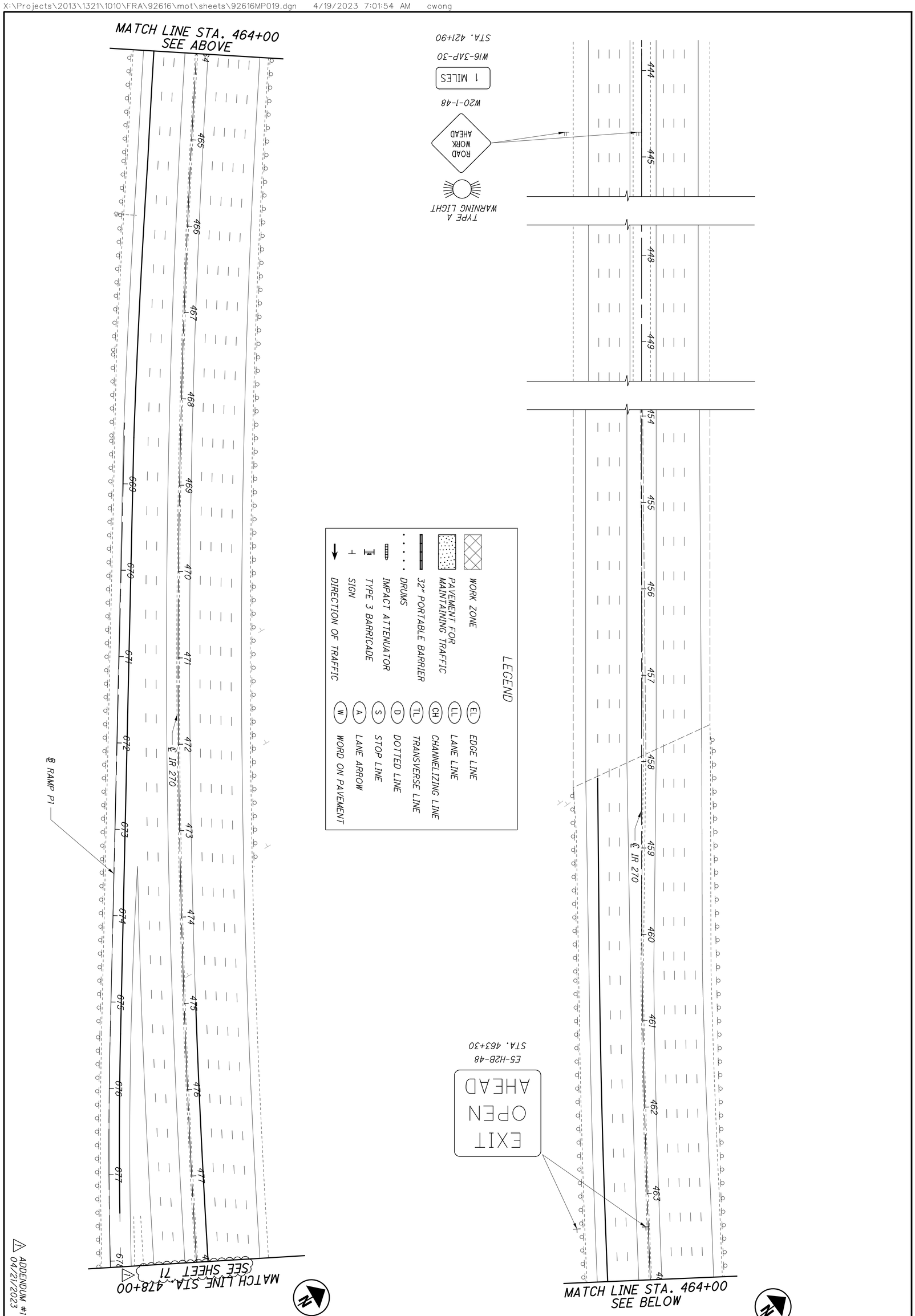
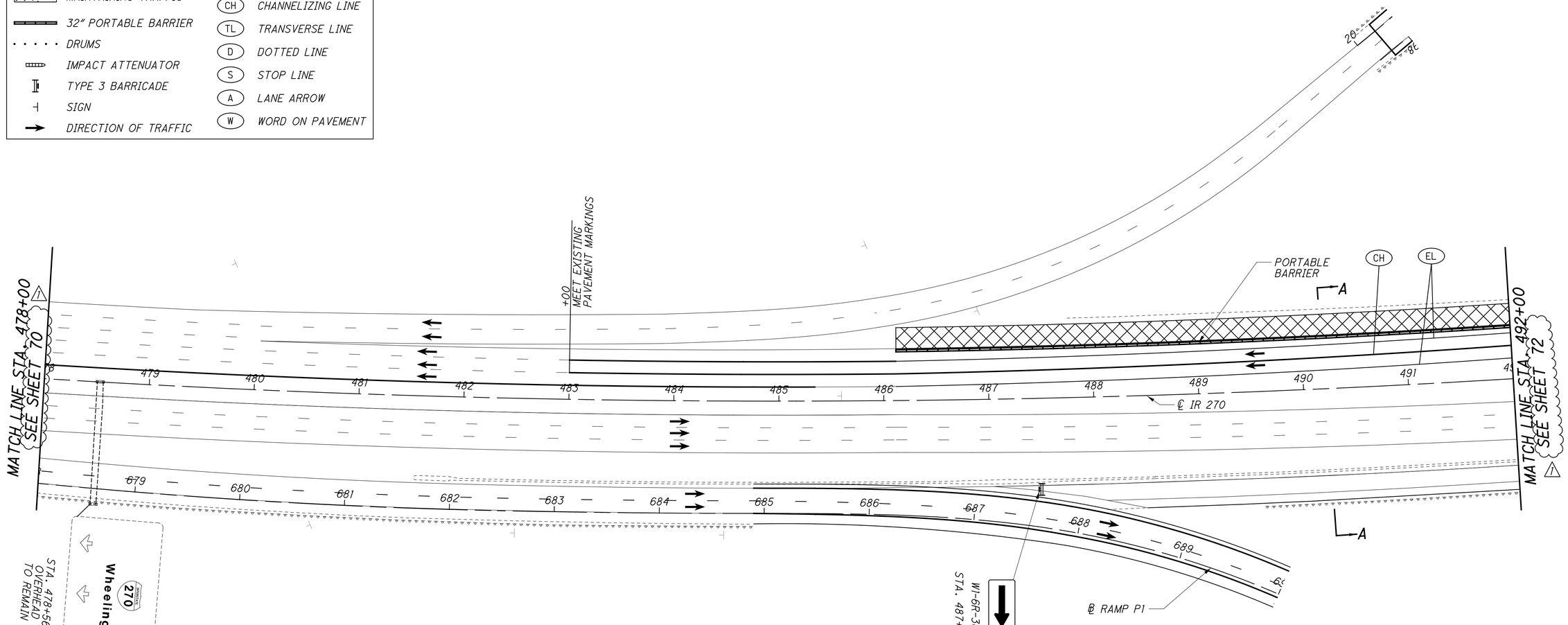


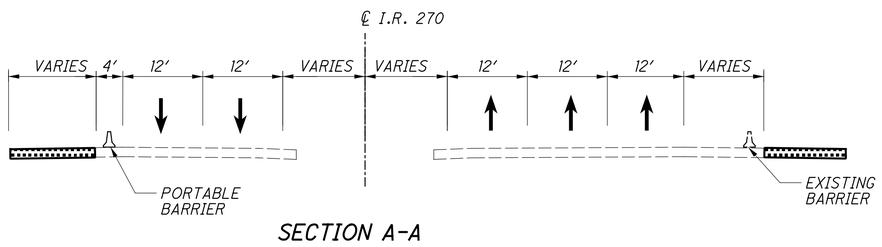
△ ADDENDUM #1 04/21/2023

70 554	FRA-270-51.50	MAINTENANCE OF TRAFFIC - PHASE 3 I-270 STA. 450+00 TO STA. 478+00	CALCULATED DJR CHECKED RCH	0 50 25 100 HORIZONTAL SCALE IN FEET

LEGEND

- WORK ZONE
- PAVEMENT FOR MAINTAINING TRAFFIC
- 32" PORTABLE BARRIER
- DRUMS
- IMPACT ATTENUATOR
- TYPE 3 BARRICADE
- SIGN
- DIRECTION OF TRAFFIC
- (EL) EDGE LINE
- (LL) LANE LINE
- (CH) CHANNELIZING LINE
- (TL) TRANSVERSE LINE
- (D) DOTTED LINE
- (S) STOP LINE
- (A) LANE ARROW
- (W) WORD ON PAVEMENT





SECTION A-A

⚠1 ADDENDUM #1 04/21/2023

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED MBE
CHECKED RCH

MAINTENANCE OF TRAFFIC - PHASE 3
I-270 STA. 478+00 TO STA. 492+00

FRA-270-51.50

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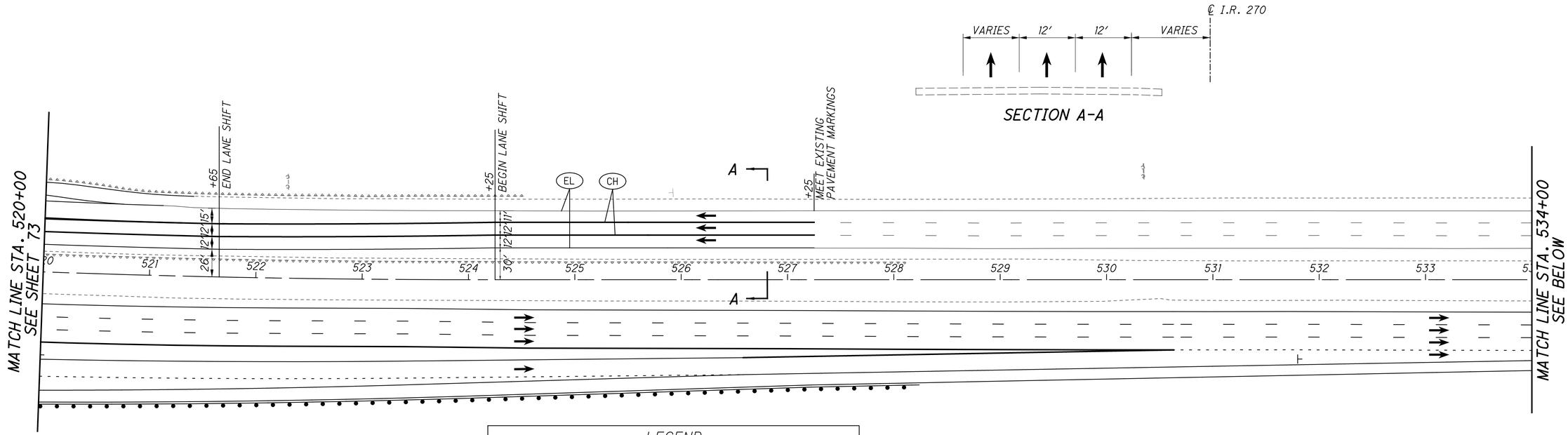
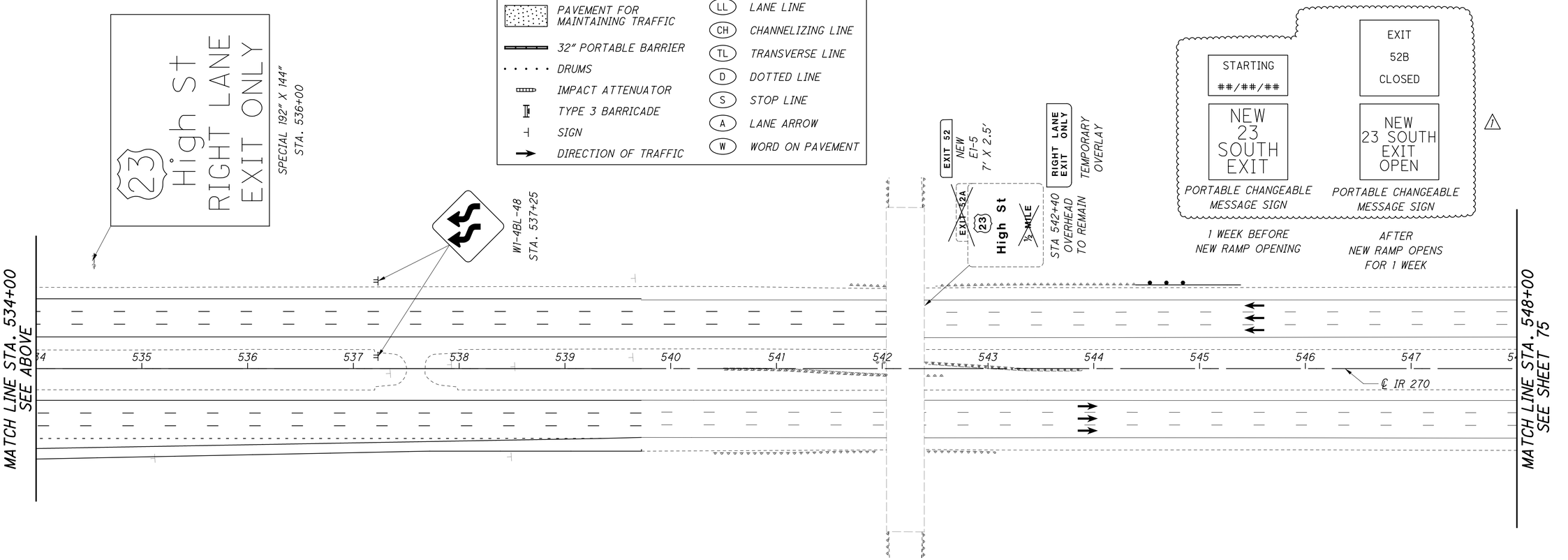


LEGEND

- WORK ZONE
- PAVEMENT FOR MAINTAINING TRAFFIC
- 32" PORTABLE BARRIER
- DRUMS
- IMPACT ATTENUATOR
- TYPE 3 BARRICADE
- SIGN
- DIRECTION OF TRAFFIC
- (EL) EDGE LINE
- (LL) LANE LINE
- (CH) CHANNELIZING LINE
- (TL) TRANSVERSE LINE
- (D) DOTTED LINE
- (S) STOP LINE
- (A) LANE ARROW
- (W) WORD ON PAVEMENT



1 ADDENDUM #1
04/21/2023

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED MBE
CHECKED RCH

MAINTENANCE OF TRAFFIC - PHASE 3
I-270 STA. 520+00 TO STA. 548+00

FRA-270-51.50

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SHEET NUM.																PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
15	16	17	23	38	85	86	87	88	89	90	91	94	324	487	OFFICE CALCS.	01/IMS/04	02/IMS/14	03/NHS/43						
																							ROADWAY	
LUMP																LUMP			201	11000	LS		CLEARING AND GRUBBING	
					5	6										11			202	20010	11	EACH	HEADWALL REMOVED	
					5,723	2,446										8,169			202	23000	8,169	SY	PAVEMENT REMOVED	
					96	97										193			202	30700	193	FT	CONCRETE BARRIER REMOVED	
					224	133	135									492			202	35100	492	FT	PIPE REMOVED, 24" AND UNDER	
					88	31										119			202	35200	119	FT	PIPE REMOVED, OVER 24"	
			25		8,501	5,186	1,395									15,107			202	38000	15,107	FT	GUARDRAIL REMOVED	
						1	2									3			202	58100	3	EACH	CATCH BASIN REMOVED	
					130											130			SPECIAL	20270000	130	FT	FILL AND PLUG EXISTING CONDUIT	18
	2,600															2,600			SPECIAL	20270110	2,600	FT	PIPE CLEANOUT, 24" AND UNDER	16
	250															250			SPECIAL	20270120	250	FT	PIPE CLEANOUT, 27" TO 48"	16
	1,500															1,500			SPECIAL	20270130	1,500	FT	PIPE CLEANOUT OVER 48"	16
						489	147									636			202	75000	636	FT	FENCE REMOVED	
							1									1			202	75610	1	EACH	VALVE BOX REMOVED	
							2									2			202	98100	2	EACH	REMOVAL MISC.:WOOD POST	
							40									40			202	98200	40	FT	REMOVAL MISC.:CABLE GATE	
		504								212			85,613			86,329			203	10000	86,329	CY	EXCAVATION	
													92,403			92,403			203	20000	92,403	CY	EMBANKMENT	
													1,986			1,986			203	20001	1,986	CY	EMBANKMENT, AS PER PLAN	18
		504														504			203	35141	504	CY	GRANULAR MATERIAL, TYPE E, AS PER PLAN	17
												8,736				8,736			204	10000	8,736	SY	SUBGRADE COMPACTION	
												3,885				3,885			204	13000	3,885	CY	EXCAVATION OF SUBGRADE	
												3,883		9		3,883	9		204	30010	3,892	CY	GRANULAR MATERIAL, TYPE B	
7												25				32			204	45000	32	HOUR	PROOF ROLLING	
		2,276										8,736		2,471		11,012	2,471		204	50000	13,483	SY	GEOTEXTILE FABRIC	
		756										8,736				9,492			204	51000	9,492	SY	GEOGRID	
																1,192	1,192		206	10500	1,192	TON	CEMENT	
												39,480				39,480			206	11000	39,480	SY	CURING COAT	
												39,480				39,480			206	15020	39,480	SY	CEMENT STABILIZED SUBGRADE, 14 INCHES DEEP	
																LUMP			206	30000	LS		MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS	
	0.2															0.2			209	60501	0.2	MILE	LINEAR GRADING, AS PER PLAN	16
			25					15,523								15,548			606	15050	15,548	FT	GUARDRAIL, TYPE MGS	
								100								100			606	15550	100	FT	GUARDRAIL, BARRIER DESIGN, TYPE MGS	
			1					13								14			606	26150	14	EACH	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	
			1					9								10			606	26550	10	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
								13								13			606	35102	13	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	
								2								2			606	60012	2	EACH	IMPACT ATTENUATOR, TYPE 1 (BIDIRECTIONAL)	
								2								2			606	60028	2	EACH	IMPACT ATTENUATOR, TYPE 2 (BIDIRECTIONAL), 55 MPH (36")	
						302	528									830			607	23000	830	FT	FENCE, TYPE CLT	
								1								1			607	98000	1	FT	FENCE, MISC.:GATE	
								1,337								1,337			622	10060	1,337	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE B	
								12								12			626	00110	12	EACH	BARRIER REFLECTOR, TYPE 2 (ONE-WAY)	
																LUMP			878	25000	LS		INSPECTION AND COMPACTION TESTING OF UNBOUND MATERIALS	
																							EROSION CONTROL	
									18	19						37			601	11000	37	SY	RIPRAP, TYPE D	
	10															10			601	21050	10	SY	TIED CONCRETE BLOCK MAT, TYPE 1	
									322							322			601	21060	322	SY	TIED CONCRETE BLOCK MAT, TYPE 2	
									78	71						149			601	32000	149	CY	ROCK CHANNEL PROTECTION, TYPE A WITH FILTER	
	10								6	6	5					27			601	32200	27	CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	
	2															2			659	00100	2	EACH	SOIL ANALYSIS TEST	
	5,574															5,574			659	00300	5,574	CY	TOPSOIL	
	50,209															50,209			659	10000	50,209	SY	SEEDING AND MULCHING	
	2,511															2,511			659	14000	2,511	SY	REPAIR SEEDING AND MULCHING	
	2,511															2,511			659	15000	2,511	SY	INTER-SEEDING	

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GENERAL SUMMARY

FRA-270-51.50

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SHEET NUM.												PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
15	16	21	22	38	85	86	87	89	90	91	324	01/IMS/04	02/IMS/14	03/NHS/43						
																			EROSION CONTROL	
	7.79											7.79			659	20000	7.79	TON	COMMERCIAL FERTILIZER	
	10.38											10.38			659	31000	10.38	ACRE	LIME	
	407											407			659	35000	407	MGAL	WATER	
	113											113			659	40000	113	MSF	MOWING	
												2,242			670	00700	2,242	SY	DITCH EROSION PROTECTION	
											47,045	47,045			670	00500	47,045	SY	SLOPE EROSION PROTECTION	
												LUMP			832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
												LUMP			832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS	
												LUMP			832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE	
												758,114			832	30000	758,114	EACH	EROSION CONTROL	
												1,850			836	10000	1,850	SY	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1	
												245			836	10020	245	SY	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 2	
																			DRAINAGE	
			1					73	12	2		87			602	20000	87	CY	CONCRETE MASONRY	
								300				300			605	05200	300	FT	4" UNCLASSIFIED PIPE UNDERDRAINS	
								11,235	7,566	13,893		32,694			605	06000	32,694	FT	4" BASE PIPE UNDERDRAINS	
	200											200			605	13300	200	FT	6" UNCLASSIFIED PIPE UNDERDRAINS	
	50											50			605	31100	50	FT	AGGREGATE DRAINS	
								90	55	134		279			611	00100	279	FT	4" CONDUIT, TYPE B	
								243	2,995	268		3,506			611	00510	3,506	FT	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	
	200							36	34	165		435			611	00900	435	FT	6" CONDUIT, TYPE B	
	100											100			611	01100	100	FT	6" CONDUIT, TYPE C	
	200								56	36		292			611	01400	292	FT	6" CONDUIT, TYPE E	
	300								18			318			611	01500	318	FT	6" CONDUIT, TYPE F	
										89		89			611	04400	89	FT	12" CONDUIT, TYPE B, 706.02	
									60			60			611	05700	60	FT	15" CONDUIT, TYPE A 706.02, 707.01 ALUMINIZED, 707.04, 707.33 CPE SMOOTH LINED	1
			1					95		170		265			611	05900	265	FT	15" CONDUIT, TYPE B	
								146				146			611	05901	146	FT	15" CONDUIT, TYPE B, AS PER PLAN, 707.13	1
										80		80			611	06400	80	FT	15" CONDUIT, TYPE D	
			1					81				81			611	06700	81	FT	15" CONDUIT, TYPE F, 707.05 TYPE C, 707.21, OR 707.33	1
									64			64			611	07200	64	FT	18" CONDUIT, TYPE A, 706.02	
								303				303			611	07400	303	FT	18" CONDUIT, TYPE B	
			1					95				95			611	13200	95	FT	30" CONDUIT, TYPE A 706.02, 707.01 ALUMINIZED, 707.04, 707.33 CPE SMOOTH LINED	
									250			250			611	22200	250	FT	54" CONDUIT, TYPE A ,707.01 (0.249), 707.02(0.064) ALUMINIZED, 707.04 (0.064 POLYMERIC), 706.02, 707.34, 707.35, 707.48, 707.65, SS938 (STEEL REINFORCED THERMOPLASTIC RIBBED PIPE)	1
								70				70			611	26000	70	FT	72" CONDUIT, TYPE A, 706.02	
									31			31			611	30000	31	FT	96" CONDUIT, TYPE A, 707.02 (0.249)	1
								1				1			611	98180	1	EACH	CATCH BASIN, NO. 3A	
										2		2			611	98370	2	EACH	CATCH BASIN, NO. 6	
								1				1			611	98410	1	EACH	CATCH BASIN, NO. 8	
			1							1		1			611	98470	1	EACH	CATCH BASIN, NO. 2-2B	
								1				1			611	98630	1	EACH	CATCH BASIN ADJUSTED TO GRADE	
										1		1			611	99094	1	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B	
			1					3				3			611	99574	3	EACH	MANHOLE, NO. 3	
								3				3			611	99654	3	EACH	MANHOLE ADJUSTED TO GRADE	
	10							15	13	13		51			611	99710	51	EACH	PRECAST REINFORCED CONCRETE OUTLET	
					2							2			611	99900	2	EACH	DRAINAGE STRUCTURE, MISC.: FLAP GATE REMOVED	
								2				2			611	99900	2	EACH	DRAINAGE STRUCTURE, MISC.: FLAP GATE, 72"	
									212			212			613	41200	212	CY	LOW STRENGTH MORTAR BACKFILL	
								1	200			200			839	29000	200	FT	TRENCH DRAIN, TYPE A, WITH STANDARD GRATE	

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CALCULATED ACF
CHECKED CSR

GENERAL SUMMARY

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SHEET NUM.												PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
16	22	85	86	87	90	94	432	433	434	435	436	01/IMS/04	02/IMS/14	03/NHS/43						
																			PAVEMENT	
		2,578	2,079	4,281								8,938			252	01500	8,938	FT	FULL DEPTH PAVEMENT SAWING	
	14,400					17,967						32,367			254	01000	32,367	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 1.25"	
						6,700						6,700			302	56000	6,700	CY	ASPHALT CONCRETE BASE, PG64-22, (449)	
						7,966						7,966			304	20000	7,966	CY	AGGREGATE BASE	
	720					4,323						5,043			407	20000	5,043	GAL	NON-TRACKING TACK COAT	
						14						14			441	50000	14	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	8
						17						17			441	50300	17	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)	
7												7			441	70801	7	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449), (UNDER GUARDRAIL), AS PER PLAN	15
						2,731						2,731			442	00100	2,731	CY	ANTI-SEGREGATION EQUIPMENT	
	500					500						500			442	10000	500	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446)	
					1	1,237						1,237			442	10000	1,237	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), 1.5"	
						211						211			442	10001	211	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), AS PER PLAN, 1.5", PG70-22M	8
						703						703			442	10001	703	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), AS PER PLAN, 1.5", PG76-22	8
						1,527						1,527			442	10080	1,527	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5 MM, TYPE A (446), 1.75"	
						1,434						1,434			452	13020	1,434	SY	9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1 WITH QC/QA	
						4,606						4,606			452	14120	4,606	SY	11" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1 WITH QC/QA	
						8,280						8,280			452	15020	8,280	SY	12" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1 WITH QC/QA	
						6,676						6,676			452	16020	6,676	SY	13" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1 WITH QC/QA	
						100						100			609	26000	100	FT	CURB, TYPE 6	
		3,240	1,952	3,998								9,190			618	40101	9,190	FT	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE), AS PER PLAN	18
		128	182									310			618	40200	310	FT	RUMBLE STRIPS, SHOULDER (CONCRETE)	
						1,935						1,935			875	10000	1,935	LB	LONGITUDINAL JOINT ADHESIVE	
																			WATER WORK	
			1 134									134			638	00600	134	FT	6" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS (COC CMS ITEM 801)	
			1									1			638	07800	1	EACH	6" GATE VALVE AND VALVE BOX (COC CMS ITEM 802)	
			2									2			638	10200	2	EACH	6" FIRE HYDRANT (COC CMS ITEM 809)	
			2	1								3			638	10700	3	EACH	FIRE HYDRANT REMOVED AND DISPOSED OF (COC CMS ITEM 809)	
			4									4			638	10800	4	EACH	VALVE BOX ADJUSTED TO GRADE (COC CMS ITEM 807)	
			1									1			638	11300	1	EACH	1" AIR RELEASE VALVE ADJUSTED TO GRADE (COC CMS ITEM 807)	
			18									18			SPECIAL	63820788	18	FT	LOWER WATER SERVICE CONNECTION, 1" 1	
												LUMP			SPECIAL		LUMP	LS	SURVEY COORDINATES	17
																			LIGHTING	
									6			6			625	00450	6	EACH	CONNECTION, FUSED PULL APART	
							30	57	30			117			625	00460	117	EACH	CONNECTION, UNFUSED PULL APART	
										3		3			625	10494	3	EACH	LIGHT POLE, LOW MAST, DESIGN ATLM50	
							1		1			2			625	11200	2	EACH	LIGHT TOWER, BB100	
							1	1	1			3			625	13200	3	EACH	LIGHT TOWER, BBBB100	
							1	1	1			3			625	13204	3	EACH	LIGHT TOWER, BBBB110	
							10	10	7			27			625	13500	27	EACH	LIGHT TOWER, MISC.: REFURBISH EXISTING LIGHT TOWER	430
										3		3			625	14200	3	EACH	LIGHT POLE FOUNDATION, 24" X 10' DEEP	
							7	5	5			17			625	15300	17	EACH	LIGHT TOWER FOUNDATION, 36" X 30' DEEP	
							867	1,953	1,338			4,158			625	23200	4,158	FT	NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE	
										450		450			625	23400	450	FT	NO. 10 AWG POLE AND BRACKET CABLE	
							6,464	6,986	6,199	625		20,274			625	24320	20,274	FT	1-1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLES	
							200	247	176			623			625	25500	623	FT	CONDUIT, 3", 725.04	
								118	110			228			625	25902	228	FT	CONDUIT, JACKED OR DRILLED, 725.04, 3"	
											291	291			625	25910	291	FT	CONDUIT CLEANED AND CABLES REMOVED, 3"	
							16	26	22			64			625	26263	64	EACH	LUMINAIRE, HIGH MAST, SOLID STATE (LED), AS PER PLAN, SYM 38000-44000 LUMEN, 480 V	429

1 ADDENDUM #1 04/21/2023

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GENERAL SUMMARY

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SHEET NUM.										PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
379	95	96	97	98	99	100	406	409	415	01/IMS/04	02/IMS/14	03/NHS/43						
																	TRAFFIC CONTROL	
					390	399	43	43		875			630	80100	875	SF	SIGN, FLAT SHEET	
					125	376				501			630	80200	501	SF	SIGN, GROUND MOUNTED EXTRUSHEET	
					890	161				1,051			630	80224	1,051	SF	SIGN, OVERHEAD EXTRUSHEET	
					2.5					2.5			630	80400	2.5	SF	SIGN, PERMANENT OVERLAY	
					6	4				10			630	84500	10	EACH	GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATION	
					6	6				12			630	84510	12	EACH	RIGID OVERHEAD SIGN SUPPORT FOUNDATION	
				62						62			630	84900	62	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
				5						5			630	85100	5	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	
				4						4			630	85400	4	EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND DISPOSAL	
				68						68			630	86002	68	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
				5						5			630	86102	5	EACH	REMOVAL OF GROUND MOUNTED STRUCTURAL BEAM SUPPORT AND DISPOSAL	
				1						1			630	86274	1	EACH	REMOVAL OF GROUND MOUNTED PIPE SUPPORT AND REERECTION	
				3						3			630	86310	3	EACH	REMOVAL OF STRUCTURE MOUNTED SIGN AND DISPOSAL	
				6						6			630	87100	6	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION	
				15						15			630	87400	15	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL	
				2						2			630	89706	2	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-12.30	
				5						5			630	89802	5	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-7.65	
				10						10			631	94250	10	EACH	REMOVAL OF LUMINAIRE	
				2						2			631	94350	2	EACH	REMOVAL OF DISCONNECT SWITCH	
				3						3			631	94450	3	EACH	REMOVAL OF BALLAST	
				5						5			631	94470	5	EACH	REMOVAL OF SIGN SERVICE	
				3						3			631	94490	3	EACH	REMOVAL, MISC.: REMOVAL OF LOOP WARNING SIGN AND FLASHERS	
1	4.21	3.69	1.56							10.46			644	00104	10.46	MILE	EDGE LINE, 6"	
2	1.56	1.77	0.54							5.87			644	00204	5.87	MILE	LANE LINE, 6"	
			0.02							0.02			644	00300	0.02	MILE	CENTER LINE	
	430	5,081	4,276							9,787			644	00404	9,787	FT	CHANNELIZING LINE, 12"	
			177							177			644	00500	177	FT	STOP LINE	
		43	201							244			644	00720	244	FT	CHEVRON MARKING	
			8							8			644	01300	8	EACH	LANE ARROW	
			4							4			644	01360	4	EACH	WRONG WAY ARROW	
	614	2,118	899							3,631			644	01510	3,631	FT	DOTTED LINE, 6"	
		900								900			644	01511	900	FT	DOTTED LINE, 6", AS PER PLAN	379
		3,327	1,268							4,595			644	30000	4,595	FT	REMOVAL OF PAVEMENT MARKING	
	3.21	3.63	0.82							7.66			644	30030	7.66	MILE	REMOVAL OF PAVEMENT MARKING	
	0.32		0.08							0.4			646	10010	0.4	MILE	EDGE LINE, 6"	
	0.08									0.08			646	10110	0.08	MILE	LANE LINE, 6"	
	0.22		0.08							0.3			646	50300	0.3	MILE	REMOVAL OF PAVEMENT MARKING	
																	TRAFFIC SIGNALS	
							100	54		154			625	25400	154	FT	CONDUIT, 2", 725.04	
							32	11		43			625	25600	43	FT	CONDUIT, 4", 725.04	
									401	401			625	25600	401	FT	CONDUIT, 4", 725.04 JACK OR DRILLED	
									161	161			625	25602	161	FT	CONDUIT, 4", 725.05 4" MULTICELL, SCHEDULE 80, 725.20	
									124	124			625	25920	124	FT	CONDUIT, MISC.:CONDUIT, 4", MULTICELL, 725.20, EPC-80, CITY OF COLUMBUS	411
									382	382			625	25920	382	FT	CONDUIT, MISC.:CONDUIT, 4" MULTICELL, SCHEDULE 80, 725.20, JACK OR DRILLED	413
									6,023	6,023			625	25920	6,023	FT	CONDUIT, MISC.:ENCASED INTERCONNECT CONDUIT BANK, TC2, SCH 40, (4)-3" & (1)-1.5", CITY OF COLUMBUS	411
							132	65		197			625	29000	197	FT	TRENCH	
									6,911	6,911			625	29001	6,911	FT	TRENCH, AS PER PLAN	411
									407	407			625	29401	407	FT	TRENCH IN PAVED AREAS, AS PER PLAN	411
							1	1		2			625	30706	2	EACH	PULL BOX, 725.08, 24"	
									2	2			625	30711	2	EACH	PULL BOX, 725.08, 32", AS PER PLAN	414
									14	14			625	31600	14	EACH	PULL BOX, MISC.:, PULL BOX, CONCRETE 32" (725.08) CITY OF COLUMBUS	411
									3	3			625	31600	3	EACH	PULL BOX, MISC.:, PULL BOX, CONCRETE 48" (725.08) CITY OF COLUMBUS	411
							6	6		12			625	32000	12	EACH	GROUND ROD	
							4	4		8			625	76000	8	EACH	ARC FLASH CALCULATIONS AND LABEL, POLES P1-P4 ON EB OFF RAMP AND WB OFF RAMP	

CALCULATED ACF
CHECKED CSR

GENERAL SUMMARY

FRA-270-51.50

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SHEET NUM.											PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
406	409	415	487	509							01/IMS/04	02/IMS/14	03/NHS/43						
																		TRAFFIC SIGNALS	
2	2										4			630	79000	4	EACH	SIGN HANGER ASSEMBLY, SPAN WIRE	
7	7										14			632	04910	14	EACH	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, ALUMINUM, WITH BACK PLATE	
2	2										4			632	05060	4	EACH	VEHICULAR SIGNAL HEAD, (LED), 4-SECTION, 12" LENS, 1-WAY, ALUMINUM, WITH BACK PLATE	
9	9										18			632	25000	18	EACH	COVERING OF VEHICULAR SIGNAL HEAD	
402	561	27									990			632	30400	990	FT	MESSENGER WIRE, 7 STRAND, 1/2" DIAMETER WITH ACCESSORIES	
402	561										963			632	30600	963	FT	TETHER WIRE, WITH ACCESSORIES	
1,279	1,389										2,668			632	40700	2,668	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	
		6,217									6,217			632	62810	6,217	FT	INTERCONNECT CABLE, MISC.:, FIBER OPTIC CABLE, 144 STRAND (COC SS1620)	412
		3									3			632	62820	3	EACH	INTERCONNECT, MISC.:FIBER OPTIC SPLICE ENCLOSURE, CLAMSHELL, 288 SPLICE (COC SS1620)	412
		240									240			632	62820	240	EACH	INTERCONNECT, MISC.:, FIBER OPTIC FUSION SPLICE (COC SS1620)	412
		3									3			632	62820	3	EACH	INTERCONNECT, MISC.:, TERMINATION PANEL, 24 FIBER, WITH 200 FT DROP CABLE	412
4	4										8			632	64000	8	EACH	STRAIN POLE FOUNDATION	
525	387										912			632	68100	912	FT	POWER CABLE, 1 CONDUCTOR, NO. 6 AWG	
		1,000									1,000			632	69300	1,000	FT	POWER CABLE, 3 CONDUCTOR, NO. 4 AWG	
1	1										2			632	70000	2	EACH	POWER SERVICE	
1	1	1									3			632	70400	3	EACH	CONDUIT RISER, 2" DIAMETER	
4	4										8			632	83000	8	EACH	STRAIN POLE, TYPE TC-81.10, DESIGN 10	
		1									1			632	89300	1	EACH	WOOD POLE	
1	1										2			633	65511	2	EACH	CABINET, TYPE TS-2, AS PER PLAN	400
1	1										2			633	67101	2	EACH	CABINET FOUNDATION, AS PER PLAN	400
1	1										2			633	67201	2	EACH	CONTROLLER WORK PAD, AS PER PLAN	400
1	1										2			633	75001	2	EACH	UNINTERRUPTIBLE POWER SUPPLY (UPS), 1000 WATT, AS PER PLAN	400
		6									6			633	99000	6	EACH	CONTROLLER ITEM, MISC.:, FIBER OPTIC ETHERNET TRANSCEIVER, SHORT RANGE	413
		3									3			633	99000	3	EACH	CONTROLLER ITEM, MISC.:, LAYER 2 ETHERNET SWITCH	413
		2									2			633	99000	2	EACH	CONTROLLER ITEM, MISC.:, TERMINAL PORT SERVER	412
1	1										2			633	99000	2	EACH	CONTROLLER ITEM, MISC.:UNMANAGED ETHERNET SWITCH	400
		3									3			804	30010	3	EACH	FAN-OUT KIT, 12 FIBER	
		3									3			804	34012	3	EACH	FIBER TERMINATION PANEL, 12 FIBER	
		2									2			804	37000	2	EACH	SPLICE ENCLOSURE, BUTT STYLE	
3	3										6			809	69001	6	EACH	ADVANCE RADAR DETECTION, AS PER PLAN	400
1	1										2			809	69101	2	EACH	STOP LINE RADAR DETECTION, AS PER PLAN	400
1	1										2			809	69122	2	EACH	ATC V6.24 CONTROLLER, AS PER PLAN	
																		STRUCTURE REPAIR (FRA-023-0517 SFN 2513447)	
												LUMP		202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	485
			166									166		202	22900	166	SY	APPROACH SLAB REMOVED	
			143									143		202	23500	143	SY	WEARING COURSE REMOVED	
			436									436		503	21100	436	CY	UNCLASSIFIED EXCAVATION	
			40,400									40,400		509	10000	40,400	LB	EPOXY COATED REINFORCING STEEL	
			110									110		509	30020	110	FT	NO. 4 DEFORMED GFRP REINFORCEMENT	
			208									208		510	10000	208	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	
			88									88		511	34447	88	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN	485
			63									63		511	34451	63	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN	485
			41									41		511	45711	41	CY	CLASS QC1 CONCRETE, ABUTMENT, AS PER PLAN	
			172									172		511	81300	172	EACH	CONCRETE, MISC.: EMBEDDED GALVANIC ANODE (EGA)	485

CALCULATED ACF
CHECKED CSR

GENERAL SUMMARY

FRA-270-51.50

SHEET NUM. 21	22	23	38	509							PART. 01/IMS/04	02/IMS/14	03/NHS/43	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
																		STRUCTURE REPAIR (FRA-270-5264, SFN 2513536)	
				8								8		516	44101	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN	
																		(LOAD PLATE 20" X 16" X 1.50", NEOPRENE 15" DIA. X 2.950")	
				4								4		516	44101	4	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN	
																		(LOAD PLATE 28" X 19" X 1.50", NEOPRENE 20" X 18" X 3.850")	
				8								8		516	44101	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN	
																		(LOAD PLATE 25" X 25" X 1.50", NEOPRENE 24" DIA. X 4.975")	
				48								48		518	21200	48	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
				960								960		SPECIAL	51900100	960	SF	COMPOSITE FIBER WRAP SYSTEM	
				98								98		519	11100	98	SF	PATCHING CONCRETE STRUCTURE	
				148								148		526	25010	148	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15")	
				58								58		526	90030	58	FT	TYPE C INSTALLATION	
																			/1
																		MAINTENANCE OF TRAFFIC	
		122									122			611	04400	122	FT	12" CONDUIT, TYPE B	
		2									2			611	98470	2	EACH	CATCH BASIN, NO. 2-2B	/1
	400										400			614	11110	400	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
		17									15	2		614	12384	17	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL)	
LUMP											LUMP			614	12420	LS		DETOUR SIGNING	
10											10			614	12500	10	EACH	REPLACEMENT SIGN	
100											100			614	12600	100	EACH	REPLACEMENT DRUM	
		4,763									4,731	32		614	12800	4,763	EACH	WORK ZONE RAISED PAVEMENT MARKER	
		739									681	58		614	13310	739	EACH	BARRIER REFLECTOR, TYPE 1, ONE-WAY	19
		321									309	12		614	13350	321	EACH	OBJECT MARKER, ONE WAY	19
/2 72											72			614	18601	72	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	21
		0.08									0.06	0.02		614	20000	0.08	MILE	WORK ZONE LANE LINE, CLASS I, 4"	
		15.54									15.31	0.23		614	22000	15.54	MILE	WORK ZONE EDGE LINE, CLASS I, 4"	
		55,082									55,082			614	23000	55,082	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 8"	
		2,540									1,961	579		614	24000	2,540	FT	WORK ZONE DOTTED LINE, CLASS I	
		254									254			614	25000	254	FT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I	
		112									112			614	26000	112	FT	WORK ZONE STOP LINE, CLASS I	
		14									14			614	30000	14	EACH	WORK ZONE ARROW, CLASS I	
		8									8			614	31640	8	EACH	WORK ZONE WORD ON PAVEMENT, 96", CLASS I	
/1		LUMP									LUMP			615	10000	LS		ROADS FOR MAINTAINING TRAFFIC	
		21,695									21,695			615	20000	21,695	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	
		15,930									15,350	580		622	41100	15,930	FT	PORTABLE BARRIER, UNANCHORED	
																		INCIDENTALS	
											LUMP			108	10000	LS		CPM PROGRESS SCHEDULE	
											LUMP			614	11000	LS		MAINTAINING TRAFFIC	
											24			619	16020	24	MNTH	FIELD OFFICE, TYPE C	
											LUMP			623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
											LUMP			624	10000	LS		MOBILIZATION	

/1 ADDENDUM #1 04/21/2023

/2 ADDENDUM #2 05/05/2023

CALCULATED ACF CHECKED CSR

GENERAL SUMMARY

FRA-270-51.50

REF NO.	SHEET NO.	STATION TO STATION					202 HEADWALL REMOVED EACH	202 PAVEMENT REMOVED SY	202 CONCRETE BARRIER REMOVED FT	202 PIPE REMOVED, 24" AND UNDER FT	202 PIPE REMOVED, OVER 24" FT	SPECIAL FILL AND PLUG EXISTING CONDUIT FT	202 GUARDRAIL REMOVED FT	252 FULL DEPTH PAVEMENT SAWING FT	611 DRAINAGE STRUCTURE, MISC.: FLAP GATE REMOVED EACH	618 RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE), AS PER PLAN FT	618 RUMBLE STRIPS, SHOULDER (CONCRETE) FT
			TO														
I-270 EASTBOUND																	
R1	102	489+59.30			494+44.96	RT							488				
P1	102	487+03.75			495+81.90	RT		2038						16			
P1	103	501+73.26			501+73.26	RT								16			
I-270 WESTBOUND																	
P1	105	486+12.07			496+00.00	LT								1001			
P2	105	486+12.07			496+00.00	LT										988	
P1	106	496+00.00			498+10.74	LT								210			
P2	106	500+45.63			506+00.00	LT								552			
P3	106	496+00.00			498+11.00	LT										209	
P4	106	500+49.05			506+00.00	LT										551	
P1	107	506+00.00			512+96.84	LT								718			
P2	107	506+00.00			512+96.84	LT										693	
P1	108	516+00.00			521+40.00	LT										537	
US-23																	
P1	174	578+43.19			584+77.90	RT		747									
R1	175	586+12.71			587+41.96	LT&RT							130				
R2	175	586+11.09			587+41.98	RT							131				
RAMP L																	
R1	202	571+88.12			576+00.00	LT							410				
R1	203	576+00.00			579+10.18	LT			48				286				
R2	203	577+37.74			579+08.33	RT							201				
R1	204	583+25.93			586+00.00	LT							271				
R2	204	583+13.10			586+00.00	RT							295				
R1	205	586+00.00			587+98.26	LT							220				
R2	205	586+00.00			588+07.52	RT							238				
R3	205	590+76.08			591+00.00	LT							49				
R4	205	590+81.17			591+00.00	RT							43				
R1	206	591+00.00			596+00.00	LT							496				
R2	206	591+00.00			594+46.57	RT							358				
R1	207	596+00.00			598+24.65	LT							225				
RAMP M																	
R1	221	10+00.00			15+97.14	LT							608				
R2	221	10+00.00			19+78.39	RT							973				
RAMP N																	
P1	223	03+81.21			06+13.41	LT&RT		2938									
R1	223	04+22.19			10+00.00	RT							558				
R2	223	07+55.20			10+00.00	LT							270				
R3	223	09+38.36			09+37.76	LT&RT	2				88						
R1	224	10+00.00			11+11.35	LT							123				
R2	224	10+00.00			11+19.77	RT							115				
R3	224	12+88.98			12+89.68	LT&RT	2			94							
R4	224	13+27.11			15+70.02	RT							236				
RAMP O																	
R1	226	07+06.18			10+00.00	LT							319				
R1	227	10+00.00			10+86.77	LT							94				
R2	227	10+00.00			498+09.95	RT							450				
RAMP P1																	
P1	228	684+89.82			684+89.82	LT&RT								39			
P2	228	684+89.82			686+17.29	RT											128
R1	228	684+89.82			688+00.00	RT			48				264				
R1	229	688+00.00			691+75.98	RT						130	371				
R2	229	690+20.45			692+95.59	LT							279				
R3	229	689+90.71			690+23.11	RT									2		
R4	229	691+40.54			691+68.26	LT	1				/1						
P1	232	703+70.79			703+70.79	LT&RT								26			
P1	233	709+50.00			712+11.92	RT							/1			262	
TOTALS CARRIED TO GENERAL SUMMARY							5	5723	96	94	88	130	8501	2578	2	3240	128

/1 ADDENDUM #1 04/21/2023

CALCULATED ACF CHECKED CSR

ROADWAY ESTIMATED QUANTITIES

FRA-270-51.50

REF NO.	SHEET NO.	STATION TO STATION					202 HEADWALL REMOVED EACH	202 PAVEMENT REMOVED SY	202 CONCRETE BARRIER REMOVED FT	202 PIPE REMOVED, 24" AND UNDER FT	202 PIPE REMOVED, OVER 24" FT	202 GUARDRAIL REMOVED FT	202 CATCH BASIN REMOVED EACH	202 FENCE REMOVED FT	202 VALVE BOX REMOVED EACH	252 FULL DEPTH PAVEMENT SAWING FT	607 FENCE, TYPE CLT FT	618 RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE), AS PER PLAN FT	618 RUMBLE STRIPS, SHOULDER (CONCRETE) FT	625 LIGHT POLE REMOVED EACH	625 PULL BOX REMOVED EACH	638 6" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, PUSH-ON JOINTS AND FITTINGS FT	638 6" GATE VALVE AND VALVE BOX EACH	638 FIRE HYDRANT REMOVED AND DISPOSED OF EACH	638 6" FIRE HYDRANT EACH	638 VALVE BOX ADJUSTED TO GRADE EACH	638 1" AIR RELEASE VALVEADJUSTED TO GRADE EACH	SPECIAL LOWER WATER SERVICE CONNECTION, 1" FT
			TO																									
		RAMP Q																										
P1	265	00+00.00			10+32.31	LT&RT		2446																				
R1	265	500+44.77			04+15.80	RT						422																
R2	265	07+99.35			08+01.24	LT&RT	2			82																		
R1	267	263+39.81			264+80.45	RT						141																
		RAMP R																										
P1	267	260+14.67			265+00.00	LT										490												
P2	267	260+14.67			265+00.00	RT												486										
P1	268	265+00.00			266+46.89	LT										160												
P2	268	265+00.00			265+52.69	RT												53										
P3	268	265+49.00			266+45.96	LT												100										
R1	268	267+53.16			270+00.00	RT						254																
R2	268	266+86.94			270+00.00	LT						311																
R1	269	270+00.00			275+00.00	RT						499																
R2	269	270+00.00			271+88.12	LT						195																
R3	269	273+11.96			273+27.87	RT	1				31																	
R1	270	277+27.38			280+00.00	LT						280																
R2	270	275+00.00			280+00.00	RT			47			458																
R3	270	279+13.15			279+22.12	RT	1																					
R1	271	280+00.00			283+01.54	LT						310																
R2	271	280+00.00			285+00.00	RT						503																
P1	272	286+18.48			287+90.80	RT												172										
R1	272	285+00.00			287+90.80	LT						292																
		RAMP S																										
R1	301	800+29.29			803+00.00	LT						288																
R2	301	802+45.09			802+70.17	RT	1																					
R1	302	803+00.00			808+00.00	LT&RT						501																
R2	302	804+85.58			804+98.77	LT	1																					
R1	303	808+00.00			813+00.00	LT						498																
P1	304	813+02.09			813+02.09	LT&RT										25												
P2	304	813+99.05			816+00.00	LT												19	182									
R1	304	813+00.00			815+80.00	LT			50			234																
		US-23 ACCELERATION LANE																										
F1	176	546+50.00			546+46.49	LT											302											
P1	176	546+50.00			551+00.00	RT										460												
P2	176	546+50.00			551+00.00	LT												339										
R1	176	546+50.00			549+21.47	LT								277														
R2	176	549+42.78			549+44.60	LT								27														
W1	176	546+68.85			546+68.85	LT																					1	
W2	176	550+68.75			550+68.75	LT																					1	
P1	177	551+00.00			556+00.00	RT										500		348										
P2	177	551+00.00			556+00.00	LT																						
R1	177	553+43.05			553+93.88	LT				51			1															
R2	177	554+58.70			556+00.00	LT								143														
R3	177	552+97.99			552+97.99	LT														1								
R4	177	553+92.60			553+92.60	LT														1	1							
R5	177	554+37.64			554+37.64	LT														1								
W1	177	554+69.46			554+69.46	LT																10	1	1	1	1		1
W2	177	552+52.85			552+52.85	LT																124		1	1	1		
W3	177	552+89.30			552+89.30	LT																						18
P1	178	556+00.00			560+35.52	LT&RT										444												
P2	178	556+00.00			560+35.11	LT												435										
R1	178	556+00.00			557+28.47	LT								42														
W1	178	558+47.01			558+47.01	LT																					1	
TOTALS CARRIED TO GENERAL SUMMARY							6	2446	97	133	31	5186	1	489		2079	302	1952	182	3	1	134	1	2	2	4	1	18

1 ADDENDUM #1 04/21/2023

CALCULATED ACF
CHECKED CSR

ROADWAY ESTIMATED QUANTITIES

FRA-270-51.50

REF NO.	SHEET NO.	STATION TO STATION					601 RIPRAP, TYPE D SY	601 TIED CONCRETE BLOCK MAT, TYPE 2 SY	601 ROCK CHANNEL PROTECTION, TYPE A WITH FILTER CY	601 ROCK CHANNEL PROTECTION, TYPE C WITH FILTER CY	602 CONCRETE MASONRY CY	605 4" UNCLASSIFIED PIPE UNDERDRAINS FT	605 4" BASE PIPE UNDERDRAINS FT	611 4" CONDUIT, TYPE B FT	611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS FT	611 6" CONDUIT, TYPE B FT	611 15" CONDUIT, TYPE B FT	611 15" CONDUIT, TYPE B, AS PER PLAN, 707.13 FT	611 15" CONDUIT, TYPE F, 707.05 TYPE C, 707.21, OR 707.33 FT	611 18" CONDUIT, TYPE B FT	611 30" CONDUIT, TYPE A FT	611 72" CONDUIT, TYPE A, 706.02 FT	611 CATCH BASIN, NO. 3A EACH	611 CATCH BASIN, NO. 8 EACH	611 CATCH BASIN ADJUSTED TO GRADE EACH	611 MANHOLE, NO. 3 EACH	611 MANHOLE ADJUSTED TO GRADE EACH	611 PRECAST REINFORCED CONCRETE OUTLET EACH	611 DRAINAGE STRUCTURE, MISC.: FLAP GATE, 72" EACH
			TO																									
I-270 WESTBOUND																												
U1	105	486+11.99			496+00.00	LT							983		53												2	
U2	105	486+11.99			496+00.00	LT							983			25												
U1	106	496+00.00			498+11.27	LT							210															
U2	106	496+00.00			498+11.27	LT							210														2	
U3	106	500+46.49			506+00.00	LT							550		30												2	
U4	106	500+46.49			506+00.00	LT							550	25													1	
U1	107	506+00.00			512+96.84	LT							691		22												1	
U2	107	506+00.00			512+96.84	LT							691	12													1	
US-23																												
D1	174	572+88.00			573+44.15	LT&RT											95							1				
D2	174	573+78.19			573+78.19	LT																				1		
RAMP L																												
U1	202	571+88.12			574+27.40	LT							239															
D1	203	578+91.37			579+00.41	LT		82																				
D2	203	578+94.78			579+03.51	RT		80																				
D1	204	583+45.00			583+45.00	LT				2	1									81				1				
D2	204	583+51.95			583+61.00	LT		80																				
D3	204	583+38.79			583+47.52	RT		80																				
RAMP P1																												
U1	228	684+89.82			687+75.75	LT							315	30														
U2	228	684+89.82			687+74.90	LT&RT							310	11														
U3	228	684+89.82			687+74.62	RT							308		12												1	
U1	229	688+00.00			693+00.00	RT							499	12														
U2	229	688+00.00			693+00.00	RT							494		22												1	
U3	229	688+00.00			693+00.00	LT							513		8												1	
D1	229	689+68.39			691+77.29	LT&RT	8		78		69.0											70					2	
D2	229	689+99.56			689+48.63	LT&RT				2	0.3								146						1			
U1	230	693+00.00			698+00.00	RT						150	350		27													
U2	230	693+00.00			698+00.00	LT&RT						150	350			11											1	
U3	230	693+00.00			694+73.94	LT							174															
U4	230	697+00.00			698+00.00	LT							100		24													
D1	230	694+36.09			694+36.09	RT																			1			
D2	230	866+76.04			866+82.28	LT					1										8					1		
D3	230	866+82.28			868+67.15	LT															287							
D4	230	869+75.62			869+83.78	LT					1										8					1		
U1	231	698+00.00			700+16.50	LT							510															
U2	231	698+00.00			700+16.50	LT&RT							500															
U3	231	698+00.00			700+16.50	RT							497															
U1	232	703+00.00			703+70.79	LT							73															
U2	232	703+00.00			703+70.79	LT&RT							71															
U3	232	703+00.00			703+70.79	RT							71															
RAMP P2																												
U1	257	866+76.04			871+00.00	LT							421		13												1	
U2	257	868+96.68			871+00.00	RT							209															
D1	257	867+48.52			867+48.52	RT																				1		
D2	257	869+10.95			869+10.95	RT																				1		
U1	258	871+00.00			872+72.48	LT							170		18												1	
U2	258	871+00.00			872+70.98	RT							193		14												1	
D1	258	872+16.23			872+29.91	LT&RT	10			2	1.1											95						
TOTALS CARRIED TO GENERAL SUMMARY							18	322	78	6	73	300	11235	90	243	36	95	146	81	303	95	70	1	1	1	3	3	15	2

1 ADDENDUM #1 04/21/2023

CALCULATED ACF
CHECKED CSR

DRAINAGE ESTIMATED QUANTITES

FRA-270-51.50

REF NO.	SHEET NO.	STATION TO STATION					203 EXCAVATION CY	601 RIPRAP, TYPE D SY	601 ROCK CHANNEL PROTECTION, TYPE A WITH FILTER CY	601 ROCK CHANNEL PROTECTION, TYPE C WITH FILTER CY	602 CONCRETE MASONRY CY	605 4" BASE PIPE UNDERDRAINS FT	611 4" CONDUIT, TYPE B FT	611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS FT	611 6" CONDUIT, TYPE B FT	611 6" CONDUIT, TYPE E FT	611 6" CONDUIT, TYPE F FT	611 15" CONDUIT, TYPE A FT	611 18" CONDUIT, TYPE A, 706.02 FT	611 54" CONDUIT, TYPE A FT	611 96" CONDUIT, TYPE A, 707.02 (0.249) FT	611 PRECAST REINFORCED CONCRETE OUTLET EACH	613 LOW STRENGTH MORTAR BACKFILL CY
			TO																				
RAMP R																							
U1	267	260+14.67			265+00.00	LT						489	24										
U2	267	260+14.67			265+00.00	LT&RT						500	9										
U3	267	260+14.67			265+00.00	RT						495		16								1	
U1	268	265+00.00			270+00.00	LT						514		20								2	
U2	268	265+00.00			270+00.00	LT&RT						499	11										
U3	268	265+00.00			270+00.00	RT						493		16								1	
U1	269	270+00.00			275+00.00	LT&RT						499	11										
U2	269	270+00.00			275+00.00	RT						496		9								1	
U3	269	270+00.00			271+88.12	LT						195											146
D1	269	273+20.11			273+18.42	LT&RT	146	12			8												
U1	270	275+00.00			280+00.00	LT&RT			71					500							31		
U2	270	275+00.00			280+00.00	RT								498									
U3	270	275+89.89			280+00.00	LT								415				18				1	
D1	270	279+16.51			279+20.62	RT	66			2	0.3								24				66
U1	271	280+00.00			285+00.00	LT&RT								500	7								
U2	271	280+00.00			284+50.00	LT								459	27	37						1	
U3	271	280+00.00			285+00.00	RT								498		19						2	
U1	272	285+00.00			287+90.80	LT&RT						291											
U2	272	285+00.00			287+90.80	RT						290											
RAMP S																							
U1	301	799+27.09			803+00.00	LT						414		10								1	
U2	301	799+27.80			803+00.00	RT						384		10								1	
D1	301	799+20.43			799+26.23	LT&RT		2		2	0.5							60					
D2	301	802+57.57			802+61.26	LT		5			2.2												
U1	302	803+00.00			808+00.00	RT						507		36						250		1	
U2	302	803+00.00			808+00.00	LT						496		8								1	
D1	302	804+88.56			804+89.92	LT				2	0.3												
U1	303	808+00.00			813+00.00	LT						505							40				
U2	303	808+00.00			813+00.00	RT						499											
TOTALS CARRIED TO GENERAL SUMMARY							212	19	71	6	12	7566	55	2995	34	56	18	60	64	250	31	13	212

CALCULATED ACF CHECKED CSR

DRAINAGE ESTIMATED QUANTITIES

FRA-270-51.50

1 ADDENDUM #1 04/21/2023

REF NO.	SHEET NO.	STATION TO STATION					601 RIPRAP, TYPE D SY	601 ROCK CHANNEL PROTECTION, TYPE C WITH FILTER CY	602 CONCRETE MASONRY CY	605 4" BASE PIPE UNDERDRAINS FT	611 4" CONDUIT, TYPE B FT	611 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS FT	611 6" CONDUIT, TYPE B FT	611 6" CONDUIT, TYPE E FT	611 12" CONDUIT, TYPE B, 706.02 FT	611 15" CONDUIT, TYPE B FT	611 15" CONDUIT, TYPE D FT	611 CATCH BASIN, NO. 2-2B EACH	611 CATCH BASIN, NO. 6 EACH	611 INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B EACH	611 PRECAST REINFORCED CONCRETE OUTLET EACH	839 TRENCH DRAIN, TYPE A, WITH STANDARD GRATE FT
			TO																			
I-270 EASTBOUND MERGE																						
U1	138	711+19.56			716+00.00	RT				481			3									
U2	138	711+19.56			716+00.00	RT				481			93								1	
U3	138	714+73.78			716+00.00	RT				127			25									
U4	138	714+73.78			716+00.00	RT				126			9									
U5	138	714+73.78			716+00.00	RT				126		9									1	
D1	138	713+02.87			713+03.16	RT		1	0.25							85				1		
D2	138	715+49.51			715+50.00	RT		1	0.25							85			1			
U1	139	716+00.00			721+00.00	RT				502	9											
U2	139	716+00.00			720+07.53	RT				409	21											
U3	139	716+00.00			721+00.00	RT				503		9									1	
U4	139	716+00.00			721+00.00	RT				501	20											
U5	139	716+00.00			720+08.53	RT				409	3.0											
D1	139	718+08.53			720+08.53	RT													1			200
U1	140	271+00.00			726+00.00	RT				501				9								
U2	140	271+00.00			726+00.00	RT				501				27								
U3	140	271+00.00			726+00.00	RT				502		10									1	
U1	141	726+00.00			731+00.00	RT				500			9									
U2	141	726+00.00			731+00.00	RT				500		10									1	
U3	141	726+00.00			730+70.11	RT				471			17									
U1	142	731+00.00			736+00.00	RT				500			9									
U2	142	731+00.00			736+00.00	RT				500		20									1	
U1	143	736+00.00			739+79.69	RT				380	9											
U2	143	736+00.00			739+79.69	RT				380		20									1	
US-23 ACCELERATION LANE																						
U1	176	546+50.00			551+00.00	LT				450		58									2	
U2	176	546+50.00			551+00.00	LT				450	18											
D1	176	549+40.06			550+04.76	LT		1									60					
U1	177	551+00.00			556+00.00	LT				500	8											
U2	177	551+00.00			556+00.00	LT				500	8											
D1	177	552+73.54			553+67.16	LT		1	0.2						89			1				
U1	178	556+00.00			560+35.52	LT				437		30									1	
U2	178	556+00.00			560+35.52	LT				436	9											
US-23 DECELERATION LANE																						
U1	189	546+50.00			551+00.00	RT				450	20											
U2	189	546+50.00			551+00.00	RT				450		70									2	
U1	190	551+00.00			556+00.00	RT				500												
U2	190	551+00.00			556+00.00	RT				500												
D1	190	555+12.00			555+33.00	RT		1	0.4								20					
U1	191	556+00.00			560+10.04	RT				410		32									1	
U2	191	556+00.00			560+10.04	RT				410	9											
TOTALS CARRIED TO GENERAL SUMMARY								5	2	13893	134	268	165	36	89	170	80	1	2	1	13	200

1 ADDENDUM #1 04/21/2023

CALCULATED ACF CHECKED CSR

DRAINAGE ESTIMATED QUANTITIES

FRA-270-51.50

STATION FROM	STATION TO	DESCRIPTION	SIDE	LENGTH, L	AVERAGE WIDTH, W	SURFACE AREA, A A=L×W	CADD GENERATED AREAS	204 SUBGRADE COMPACTION	204 PROOF ROLLING	204 EXCAVATION OF SUBGRADE (16" TYPICAL)	204 GRANULAR MATERIAL, TYPE B	204 GEOTEXTILE FABRIC	254 1.25" PAVEMENT PLANING, ASPHALT CONCRETE	206 CEMENT STABILIZED SUBGRADE 14" DEEP	206 CURING COAT	204 GEOGRID	302 8" ASPHALT CONCRETE BASE, PG 64-22, (449)	302 9" ASPHALT CONCRETE BASE, PG 64-22, (449)	302 11" ASPHALT CONCRETE BASE, PG 64-22, (449)	304 6" AGGREGATE BASE	304 8" AGGREGATE BASE	407 NON-TRACKING TACK COAT (APPLIED @ 0.05 GAL./S.Y.)	407 NON-TRACKING TACK COAT (FOR INTERMEDIATE COURSE APPLIED @ 0.08 GAL./S.Y.)	441 1.25" ASPHALT CONCRETE SURFACE COURSE, TYPE I, (448), PG64-22	441 1.75" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448), PG64-22	442 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE A, (446), PG70-22M, AS PER PLAN	442 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE A, (446), PG76-22, AS PER PLAN	442 1.75" ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5MM, TYPE A, (446)	442 ANTI-SEGREGATION EQUIPMENT	442 1.5" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A, (446)	442 1.75" ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5MM, TYPE A, (446)	452 9" NON-REINFORCED CONCRETE PAVEMENT	452 11" NON-REINFORCED CONCRETE PAVEMENT	452 12" NON-REINFORCED CONCRETE PAVEMENT	452 13" NON-REINFORCED CONCRETE PAVEMENT	609 CURB, TYPE 6	SS875 LONGITUDINAL JOINT ADHESIVE
								SQ YD	HOUR	CU YD	CU YD	SQ YD	SQ YD	SQ YD	SQ YD	SQ YD	CU YD	CU YD	CU YD	CU YD	CU YD	GAL	GAL	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD	SQ YD	SQ YD	SQ YD	SQ YD	FT	LB
486+12.00	489+00.00	I-270 WB	LT	288.00	14.50	4176.00																46.40								7.22	19.33	22.56						57.60
486+12.00	489+00.00	I-270 WB	LT	288.00	14.83	4271.04													145.00																		
486+12.00	489+00.00	I-270 WB	LT	288.00	15.50	4464.00														82.67																	
486+12.00	489+00.00	I-270 WB	LT	288.00	16.00	4608.00			0.26					512.00	512.00																						
489+00.00	497+85.66	I-270 WB	LT	885.66	20.50	18156.03																201.73								75.51	84.06	98.06						177.14
489+00.00	497+85.66	I-270 WB	LT	885.66	20.83	18450.95													626.42																		
489+00.00	497+85.66	I-270 WB	LT	885.66	21.50	19041.69														352.62																	
489+00.00	497+85.66	I-270 WB	LT	885.66	22.00	19484.52			1.08					2164.95	2164.95																						
500+80.73	512+96.84	I-270 WB	LT	1216.11	25.00	30402.75																337.81								158.58	140.75	164.21						243.23
500+80.73	512+96.84	I-270 WB	LT	1216.11	25.33	30807.71													1045.94																		
500+80.73	512+96.84	I-270 WB	LT	1216.11	26.00	31618.86														585.53																	
500+80.73	512+96.84	I-270 WB	LT	1216.11	26.50	32226.91			1.79					3580.77	3580.77																						
512+96.84	515+79.64	I-270 WB	LT	282.80	35.70	10095.96							1121.77										84.13				46.74			81.27							56.57
515+79.64	519+77.77	I-270 WB	LT	398.13	22.35	8898.21							988.69										74.15				41.20			57.91							79.63
519+77.77	521+40.00	I-270 WB	LT	162.23	15.50	2514.57							279.40										20.95				11.64			10.41							32.45
546+50.00	547+50.00	US23	RT	100.00	23.00	2300.00																25.56								14.04	10.65	12.42						20.00
546+50.00	547+50.00	US23	RT	100.00	23.33	2333.00												64.81																			
546+50.00	547+50.00	US23	RT	100.00	24.00	2400.00														44.44																	
546+50.00	547+50.00	US23	RT	100.00	24.50	2450.00			0.14					272.22	272.22																						
547+50.00	553+50.00	US23	RT	600.00	23.00	13800.00																153.33								78.24	63.89	74.54						120.00
547+50.00	553+50.00	US23	RT	600.00	23.33	13998.00												388.83																			
547+50.00	553+50.00	US23	RT	600.00	24.00	14400.00														266.67																	
547+50.00	553+50.00	US23	RT	600.00	24.50	14700.00			0.82					1633.33	1633.33																						
546+50.00	552+50.00	US23	LT	600.00	15.00	9000.00																100.00								42.13	41.67	48.61						120.00
546+50.00	552+50.00	US23	LT	600.00	15.33	9198.00												255.50																			
546+50.00	552+50.00	US23	LT	600.00	16.00	9600.00														177.78																	
546+50.00	552+50.00	US23	LT	600.00	16.50	9900.00			0.55					1100.00	1100.00																						
552+50.00	553+50.00	US23	LT	100.00	21.00	2100.00																23.33								13.04	9.72	11.34						20.00
552+50.00	553+50.00	US23	LT	100.00	21.33	2133.00												59.25																			
552+50.00	553+50.00	US23	LT	100.00	22.00	2200.00														40.74																	
552+50.00	553+50.00	US23	LT	100.00	22.50	2250.00			0.13					250.00	250.00																						
553+50.00	560+35.11	US23	LT	685.11	21.00	14387.31																159.86								89.34	66.61	77.71						137.03
553+50.00	560+35.11	US23	LT	685.11	21.33	14613.40												405.93																			
553+50.00	560+35.11	US23	LT	685.11	22.00	15072.42														279.12																	
553+50.00	560+35.11	US23	LT	685.11	22.50	15414.98			0.86					1712.78	1712.78																						
553+50.00	560+10.04	US23	RT	660.04	23.00	15180.92																168.68								99.31	70.28	82.00						132.01
553+50.00	560+10.04	US23	RT	660.04	23.33	15398.73												427.74																			
553+50.00	560+10.04	US23	RT	660.04	24.00	15840.96														293.35																	
553+50.00	560+10.04	US23	RT	660.04	24.50	16170.98			0.90					1796.78	1796.78																						
560+10.04	572+80.65	US23	LT	1270.61			4764.47																								22.06						
560+10.04	572+80.65	US23	RT	1270.61			15121.41																								70.01						
572+80.65	574+47.73	US23	LT&RT	167.08			3682.07		0.20					409.12	409.12			102.28		68.19		40.91								36.93	17.05	19.89						33.42
585+87.72	587+41.07	US23	LT&RT	153.35			3013.03		0.17					334.78	334.78			83.70		55.80		33.48								30.22	13.95	16.27						30.67
572+06.27	575+68.54	US23	LT	362.27	13.00	4709.51							523.28										39.25				21.80										72.46
575+68.54	576+87.29	US23	LT	118.75	38.85	4613.44							512.60										38.45				21.36			46.28							23.75
576+87.29	580+21.51	US23	LT	334.22	23.20	7753.90							861.54										64.62				35.90			77.78							66.85
580+21.51	582+50.00	US23	LT	228.49	21.05	4809.71							534.41										40.08				22.27			48.25							45.70
582+50.00	583+00.00	US23	LT	50.00	16.10	805.00							89.44										6.71				3.73			8.07							10.00
583+00.00	584+08.94	US23	LT	108.94	11.70	1274.60							141.62										10.62				5.90										21.79
260+14.67	264+09.72	RAMP R	LT	395.05	19.00	7505.95			0.42					833.99	833.99		185.33			139.00		125.10						34.75	40.54	75.29							
264+09.72	266+48.50	RAMP R	LT	238.78	25.00	5969.50			0.33					663.28	663.28		147.40			110.55		99.49						27.64	32.24	59.88							
260+14.67	265+21.48	RAMP R	RT	506.81	10.00	5068.10																56.31						23.46	27.37								
260+14.67	265+21.48	RAMP R	RT	506.81	10.33	5236.87														96.98																	
260+14.67	265+21.48	RAMP R	RT	506.81	11.00	5574.91											137.65					92.92															
260+14.67	265+21.48	RAMP R	RT	506.81	11.50	5828.32			0.32					647.59	647.59																						
265+21.48	266+48.50	RAMP R	RT	127.02	11.00	1397.22																15.52						6.47	7.55	1.27							
265+21.48	266+48.50	RAMP R	RT	127.02	11.33	1439.52														26.66																	
265+21.48	266+48.50	RAMP R	RT	127.02	12.00	1524.24											37.64					25.40															
265+21.48	266+48.50	RAMP R	RT	127.02	12.50	1587.75			0.09					176.42	176.42																						
266+48.50	267+44.39	RAMP R	LT&RT	95.89	40.75	3907.52																													434.17		
266+48.50	267+44.39	RAMP R	LT&RT	95.89	43.75	4195.19			0.23					466.13	466.13					77.69																	
267+44.39	271+13.82	RAMP R	LT&RT	369.43	41.50	15331.35																													1703.48		
267+44.39	271+13.82	RAMP R	LT&RT	369.43	44.50	16439.64			0.91					1826.63	1826.63					304.44																	
271+13.82	272+70.68	RAMP R	LT&RT	156.86	40.25	6313.62																													701.51		
271+13.82	272+70.68	RAMP R	LT&RT	156.86	43.25	6784.20			0.38					753.80	753.80					125.63																	
272+70.68	273+36.73	RAMP R	LT&RT	66.05	22.50	1486.12																													165.12		
272+70.68	273+36.73	RAMP R	LT&RT	66.05	25.50	1684.27			0.09					187.14	187.14					31.19																	
273+36.73	274+23.44	RAMP R	LT&RT	86.71	22.00	1907.62																													211.96		
273+36.73	274+23.44	RAMP R	LT&RT	86.71	25.00	2167.75			0.12					240.86	240.86					40.14																	
1 ADDENDUM #1 04/21/2023		TOTALS CARRIED TO SHEET 94						0	10	0	0	0	5053	19563	19563	0	509	1789	1818	3200	0	1706	379	0	0	211	93	108	1111	631	628	0	0	3217	0	0	1501

CALCULATED ACF
CHECKED CSR

PAVEMENT SUBSUMMARY

FRA-270-51.50

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STATION FROM	STATION TO	DESCRIPTION	SIDE	LENGTH, L	AVERAGE WIDTH, W	SURFACE AREA, A A=L×W	CADD GENERATED AREAS	204 SUBGRADE COMPACTION	204 PROOF ROLLING	204 EXCAVATION OF SUBGRADE (16" TYPICAL)	204 GRANULAR MATERIAL, TYPE B	204 GEOTEXTILE FABRIC	254 1.25" PAVEMENT PLANING, ASPHALT CONCRETE	206 CEMENT STABILIZED SUBGRADE 14" DEEP	206 CURING COAT	204 GEOGRID	302 8" ASPHALT CONCRETE BASE, PG 64-22, (449)	302 9" ASPHALT CONCRETE BASE, PG 64-22, (449)	302 11" ASPHALT CONCRETE BASE, PG 64-22, (449)	304 6" AGGREGATE BASE	304 8" AGGREGATE BASE	407 NON-TRACKING TACK COAT (APPLIED @ 0.05 GAL./S.Y.)	407 NON-TRACKING TACK COAT (APPLIED @ 0.08 GAL./S.Y.)	441 1.25" ASPHALT CONCRETE SURFACE COURSE, TYPE I, (448), PG64-22	441 1.75" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448), PG64-22	442 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE A, (446), PG70-22M, AS PER PLAN	442 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE A, (446), PG76-22, AS PER PLAN	442 1.75" ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5MM, TYPE A, (446)	442 ANTI-SEGREGATION EQUIPMENT	442 1.5" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A, (446)	442 1.75" ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5MM, TYPE A, (446)	452 9" NON-REINFORCED CONCRETE PAVEMENT	452 11" NON-REINFORCED CONCRETE PAVEMENT	452 12" NON-REINFORCED CONCRETE PAVEMENT	452 13" NON-REINFORCED CONCRETE PAVEMENT	609 CURB, TYPE 6	SS875 LONGITUDINAL JOINT ADHESIVE
								SQ YD	HOUR	CU YD	CU YD	SQ YD	SQ YD	SQ YD	SQ YD	SQ YD	CU YD	CU YD	CU YD	CU YD	CU YD	GAL	GAL	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD	SQ YD	SQ YD	SQ YD	SQ YD	FT	LB
694+73.94	696+97.99	RAMP P1	LT	224.05	40.20	9006.81																												1000.76		
694+73.94	696+97.99	RAMP P1	LT	224.05	41.70	9342.89		1038.10	0.52	461.38	461.38	1038.10				1038.10				173.02																
696+97.99	703+70.80	RAMP P1	LT	672.81	19.00	12783.39																												1420.38		
696+97.99	703+70.80	RAMP P1	LT	672.81	20.50	13792.61		1532.51	0.77	681.12	681.12	1532.51				1532.51				255.42																
703+70.80	712+11.92	RAMP P1	RT	841.12	31.60	26579.39							2953.27										221.49					123.05		88.01					168.23
868+98.38	869+41.00	RAMP P2	LT	42.62	4.00	170.48																									18.94					
868+98.38	869+41.00	RAMP P2	LT	42.62	5.50	234.41		26.05	0.01	11.58	11.58	26.05				26.05				4.34																
869+41.00	869+81.00	RAMP P2	LT	40.00	7.50	300.00																									33.33					
869+41.00	869+81.00	RAMP P2	LT	40.00	9.00	360.00		40.00	0.02	17.78	17.78	40.00				40.00				6.67																
869+81.00	872+70.47	RAMP P2	LT	289.47	11.00	3184.17																									353.80					
869+81.00	872+70.47	RAMP P2	LT	289.47	12.50	3618.38		402.04	0.20	178.69	178.69	402.04				402.04				67.01																
868+98.38	872+29.77	RAMP P2	RT	331.39	22.00	7290.58																									810.06					
868+98.38	872+29.77	RAMP P2	RT	331.39	23.50	7787.66		865.30	0.43	384.58	384.58	865.30				865.30				144.22																
872+29.77	872+71.00	RAMP P2	RT	41.23			1323.00																								147.00					
872+29.77	872+71.00	RAMP P2	RT	41.23			1357.00	150.78	0.08	67.01	67.01	150.78				150.78				25.13																
867+00.00	867+60.87	RAMP P2	LT	60.87	3.05	185.65																									20.63					
867+00.00	867+60.87	RAMP P2	LT	60.87	4.55	276.96		30.77	0.02	13.68	13.68	30.77				30.77				5.13																
867+60.87	869+81.00	RAMP P2	LT	220.13	2.00	440.26																									48.92					
867+60.87	869+81.00	RAMP P2	LT	220.13	3.50	770.46	BARRIER	85.61	0.04	38.05	38.05	85.61				85.61				14.27																
869+81.00	869+88.64	RAMP P2	LT	7.64	0.50	3.82																									0.42					
869+81.00	869+88.64	RAMP P2	LT	7.64	2.00	15.28		1.70	0.00	0.75	0.75	1.70				1.70				0.28																
571+88.12	574+23.32	RAMP L	LT&RT	235.20	16.00	3763.20																											418.13			
571+88.12	574+23.32	RAMP L	LT&RT	235.20	19.00	4468.80				0.25				496.53	496.53					82.76																
574+23.32	575+79.41	RAMP L	LT&RT	156.09	18.00	2809.62																											312.18			
574+23.32	575+79.41	RAMP L	LT&RT	156.09	21.00	3277.89				0.18				364.21	364.21					60.70																
575+79.41	575+86.90	RAMP L	LT&RT	7.49	26.00	194.74																											21.64			
575+79.41	575+86.90	RAMP L	LT&RT	7.49	29.00	217.21				0.01				24.13	24.13					4.02																
575+86.90	576+36.90	RAMP L	LT&RT	50.00	25.50	1275.00																											141.67			
575+86.90	576+36.90	RAMP L	LT&RT	50.00	29.50	1475.00				0.08				163.89	163.89					27.31																
576+36.90	578+67.54	RAMP L	LT&RT	230.64	25.00	5766.00																											640.67			
576+36.90	578+67.54	RAMP L	LT&RT	230.64	28.00	6457.92				0.36				717.55	717.55					119.59																
578+67.54	578+99.41	RAMP L	LT	31.87	3.42	108.88																											12.10			
578+67.54	578+99.41	RAMP L	LT	31.87	4.92	156.80				0.01				17.42	17.42					2.90																
578+99.41	579+24.81	RAMP L	LT	25.40	3.33	84.58																											9.40			
578+99.41	579+24.81	RAMP L	LT	25.40	4.83	122.68				0.01				13.63	13.63					2.27															25.00	
578+67.54	579+02.54	RAMP L	RT	35.00	22.77	796.83																											88.54			
578+67.54	579+02.54	RAMP L	RT	35.00	24.27	849.45				0.05				94.38	94.38					15.73																
579+02.54	579+24.81	RAMP L	RT	22.27	23.33	519.56																											57.73			
579+02.54	579+24.81	RAMP L	RT	22.27	24.83	552.96				0.03				61.44	61.44					10.24															25.00	
583+26.24	583+52.95	RAMP L	LT	26.71	3.33	88.94																											9.88			
583+26.24	583+52.95	RAMP L	LT	26.71	4.83	129.01				0.01				14.33	14.33					2.39															25.00	
583+52.95	583+87.95	RAMP L	LT	35.00	3.42	119.58																											13.29			
583+52.95	583+87.95	RAMP L	LT	35.00	4.92	172.20				0.01				19.13	19.13					3.19																
583+26.24	583+39.76	RAMP L	RT	13.52	23.33	315.42																											35.05			
583+26.24	583+39.76	RAMP L	RT	13.52	24.83	335.70				0.02				37.30	37.30					6.22															25.00	
583+39.76	583+87.95	RAMP L	RT	48.19	22.00	1060.18																											117.80			
583+39.76	583+87.95	RAMP L	RT	48.19	23.50	1132.46				0.06				125.83	125.83					20.97																
583+87.95	584+40.00	RAMP L	LT&RT	52.05	25.00	1301.25																											144.58			
583+87.95	584+40.00	RAMP L	LT&RT	52.05	28.00	1457.40				0.08				161.93	161.93					26.99																
584+40.00	588+10.00	RAMP L	LT&RT	370.00	25.00	9250.00																102.78						42.82	49.96	59.38					74.00
584+40.00	588+10.00	RAMP L	LT&RT	370.00	25.67	9496.42														175.86																
584+40.00	588+10.00	RAMP L	LT&RT	370.00	26.00	9620.00											237.53					160.33														
584+40.00	588+10.00	RAMP L	LT&RT	370.00	28.00	10360.00				0.58				1151.11	1151.11																					
588+10.00	594+77.69	RAMP L	LT&RT	667.69			18632.12						2070.24										155.27					86.26		76.99					133.54
+.00	16+38.07	RAMP M	LT&RT	1638.07	27.05		39357.00						4373.00										327.98					182.21		106.37					327.62
16+38.07	19+78.51	RAMP M	LT&RT	340.44	48.00	8472.17							941.35										70.60					39.22		23.46					68.09
2+98.50	11+89.82	RAMP O	LT&RT	891.32	25.45	22684.16							2520.46										189.03					105.02		72.01					178.27
11+89.82	13+78.64	RAMP O	LT&RT	21.25	23.40	497.25							55.25										4.14					2.30		1.52					4.25
553+02.33	US-23 Decel. Commercial Drive						482.81															2.68		2.24	2.61									
549+74.80	US-23 Accel. Field Drive						1654.92														40.86														
553+17.22	US-23 Accel. Commercial Drive						1166.24															6.48		5.40	6.30									
554+32.85	US-23 Accel. Commercial Drive						1372.64															7.63		6.35	7.41									
TOTALS THIS SHEET								4173	3	1857	1855	4173	12914	3463	3463	4173	238	0	0	1257	41	280	969	14	17	0	581	50	428	0	0	1434	0	2023	2422	100	954
TOTALS SHEET - 92								0	10	0	0	0	5053	19563	19563	0	509	1789	1818	3200	0	1706	379	0	0	211	93	108	1111	631	628	0	0	3217	0	0	0
TOTALS SHEET - 93								4563	12	2028	2028	4563	0	16454	16454	4563	160	0	2186	3468	0	1450	0	0	0	0	29	34	1192	606	707	0	4606	3040	4254	0	981
1 ADDENDUM #1 04/21/2023 TOTALS CARRIED TO GENERAL SUMMARY								8736	25	3885	3883	8736	17967	39480	39480	8736	907	1789	4004	7925	41	3436	1348	14	17	211	703	192	2731	1237	1335	1434	4606	8280	6676	100	1935

CALCULATED ACF
CHECKED CSR

PAVEMENT SUBSUMMARY

FRA-270-51.50

LEGEND

- CATCH BASIN 2-2B
- INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B
- MANHOLE, NO. 1

VEGTATED FILTER STRIP								
ROUTE	STATION		SIDE	TREATED AREA (AC.)	FROM		TO	
	FROM	TO			NORTHING	EASTING	NORTHING	EASTING
IR 270	463+99	471+93	CT	2	684411.009	1824687.46	1824095.8	684798.703
IR 270	471+93	481+88	CT	3.03	683954.668	1825571.32	684402.84	1824704.11
IR 270	505+75	510+48	CT	1.45	683100.64	1828308.15	683190.68	1827872.37
IR 270	510+48	516+80	CT	1.56	683002.05	1828928.92	683100.64	1828308.15
IR 270	520+22	527+40	CT	1.59	68291l.76	1829975.07	682964.64	1829272.34
IR 270	527+39	537+41	CT	1.77	682845.29	1830970.30	682909.86	1830004.62
US 23	546+50	549+45	LT	0.42	680041.06	1826825.73	680366.65	1826779.45
US 23	549+00	548+86	RT	0.32	680109.75	1826981.89	680295.68	1826963.51
US 23	548+87	552+70	RT	0.68	680295.68	1826963.51	680656.11	1826922.28
US 23	550+00	552+80	LT	0.46	680858.68	1826720.73	681256.28	1826690.42
US 23	554+50	558+70	LT	0.38	680366.65	1826779.45	680660.66	1826742.11
US 23	553+95	560+12	RT	1.12	680754.66	1826903.30	681407.48	1826859.06
US 23	558+70	560+35	LT	0.17	681256.28	1826690.42	681423.16	1826689.23
RAMP R	260+42	265+74	RT	1.04	681407.48	1826859.06	681942.58	1826932.47

MATCH LINE STA. 559+00 US-23 - SEE BELOW

MATCH LINE STA. 559+00 US-23 - SEE ABOVE

LATITUDE: 39° 52′ 30″
LONGITUDE: 83° 00′ 14″
USGS QUADRANGLES: SOUTHWEST COLUMBUS
COMMERCIAL POINT
SOUTH EAST COLUMBUS
LOCKBOURNE

* LATITUDE AND LONGITUDE TO APPROXIMATE CENTER OF PROJECT

1 ADDENDUM #1 04/21/2023

PROJECT DATA			
TOTAL AREA (RIGHT-OF-WAY)	112.8 AC	RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE	0.61
PROJECT EARTH DISTURBED AREA	78.0 AC	RUNOFF COEFFICIENT FOR POST-CONSTRUCTION SITE	0.62
ESTIMATED CONTRACTOR EARTH DISTURBED AREA	9.22 AC	POST CONSTRUCTION BMP:	VEGETATED FILTER STRIP
NOTICE OF INTENT EARTH DISTURBED AREA	87.2 AC	IMMEDIATE RECEIVING WATERS	SCIOTO RIVER
IMPERVIOUS (PAVED) AREA FOR PRE-CONSTRUCTION SITE	18.5 AC	SUBSEQUENT RECEIVING WATERS	OHIO RIVER
IMPERVIOUS (PAVED) AREA FOR POST-CONSTRUCTION SITE	21.7 AC	TOTAL AREA WITH ODOT R/W TREATED	15.98 AC
		TREATMENT REQUIREMENTS	15.77 AC

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF THE REMOVAL OF RAMP N (IR 270WEST TO US 23 SOUTH) AND RAMP Q (IR 270EAST TO US23 NORTH). WORK INCLUDES THE RECONFIGURATION OF RAMP P1 (IR 270EAST) AND RAMP S (IR 270WEST) AND THE CONSTRUCTION OF TWO SIGNALIZED INTERSECTIONS TO PROVIDE ACCESS TO US 23 NORTH AND SOUTH. WORK ALSO INCLUDES A PAVEMENT OVERLAY ON RAMPS L, M, P, AND S

HORIZONTAL SCALE IN FEET
0 100 200 400

CALCULATED ACF
CHECKED CSR

PROJECT SITE PLAN

FRA-270-51.50

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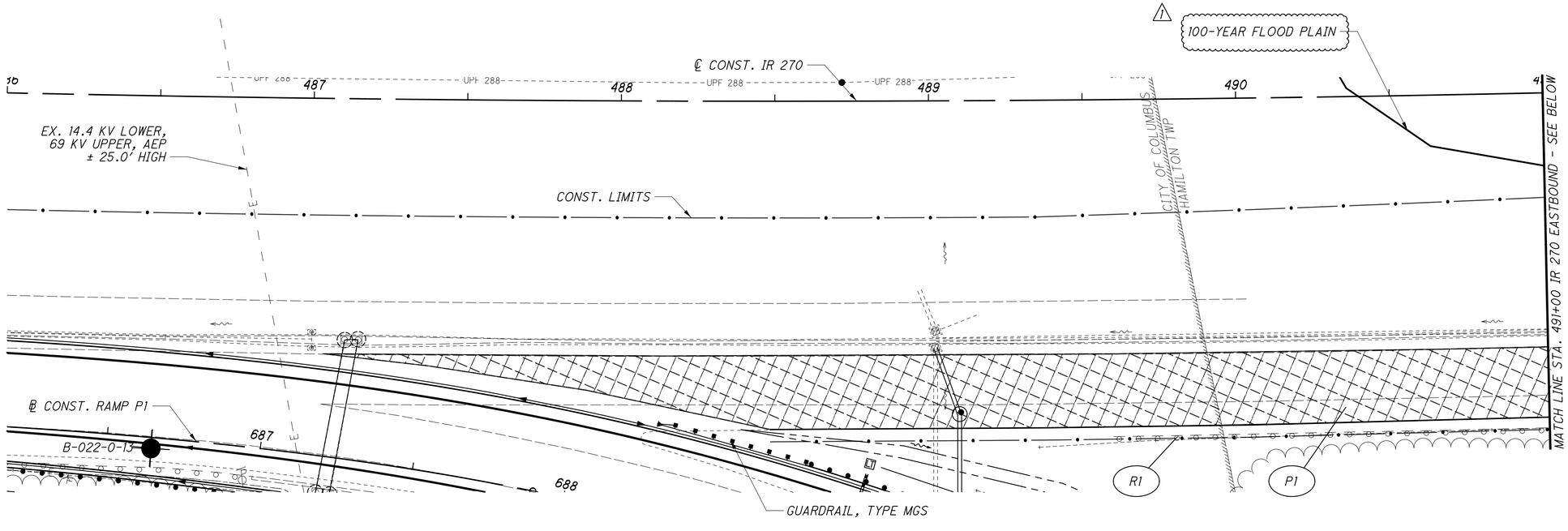
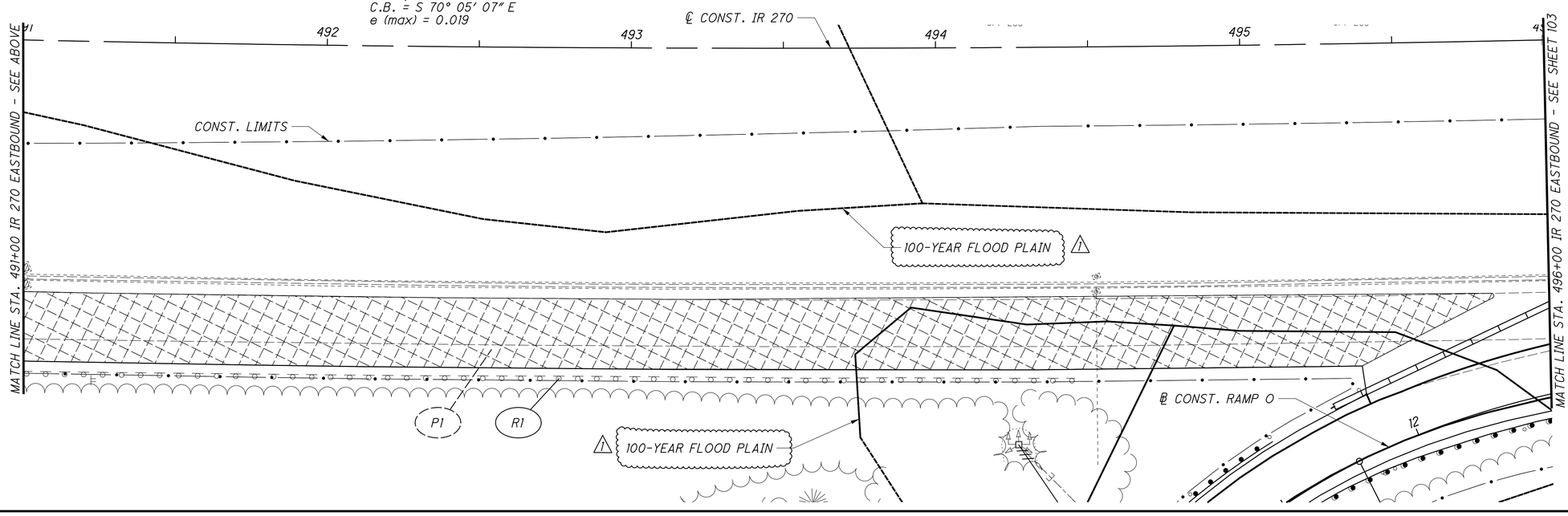


C16

℄ IR 270
P.I. STA. 492+53.27
Δ = 32° 28' 08" (LT)
Dc = 0° 30' 00"
R = 11,459.16'
T = 3,336.66'
L = 6,493.78'
E = 475.90'
C = 6,407.23'
C.B. = S 70° 05' 07" E
e (max) = 0.019

ITEM 202 - PAVEMENT REMOVED



1 ADDENDUM #1
04/21/2023

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED ACF
CHECKED CSR

PLAN - IR 270 EASTBOUND
STA. 486+00 TO STA. 496+00

FRA-270-51.50

102
554

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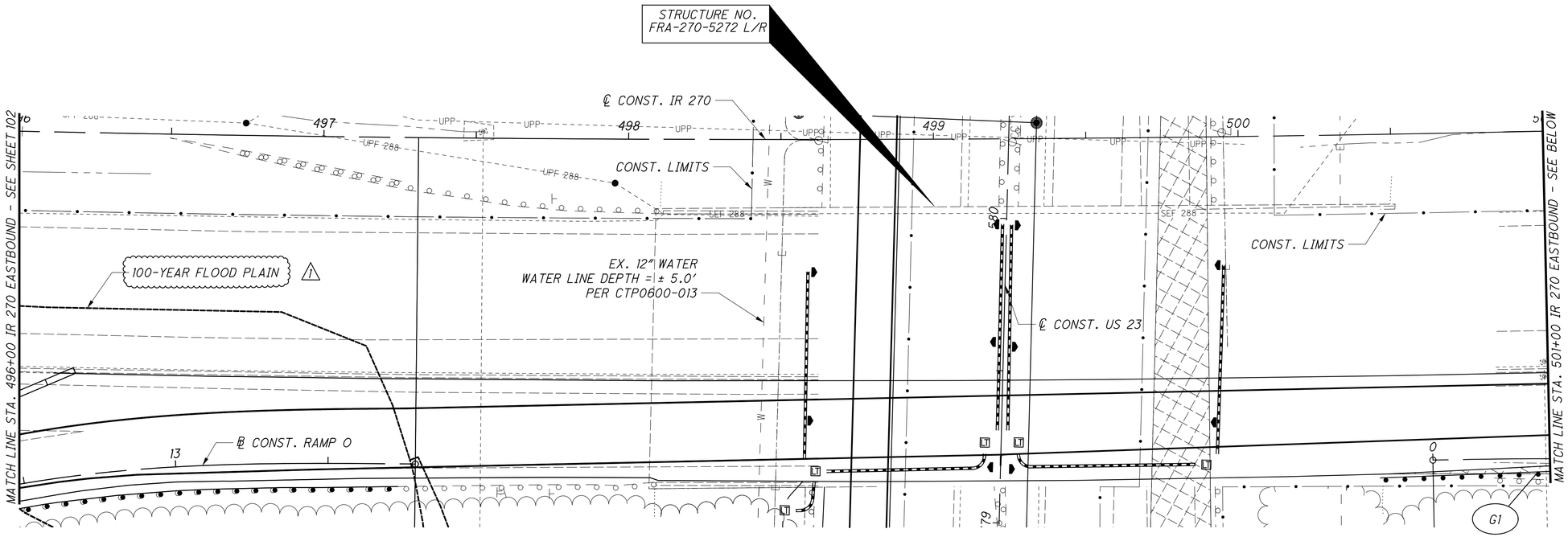

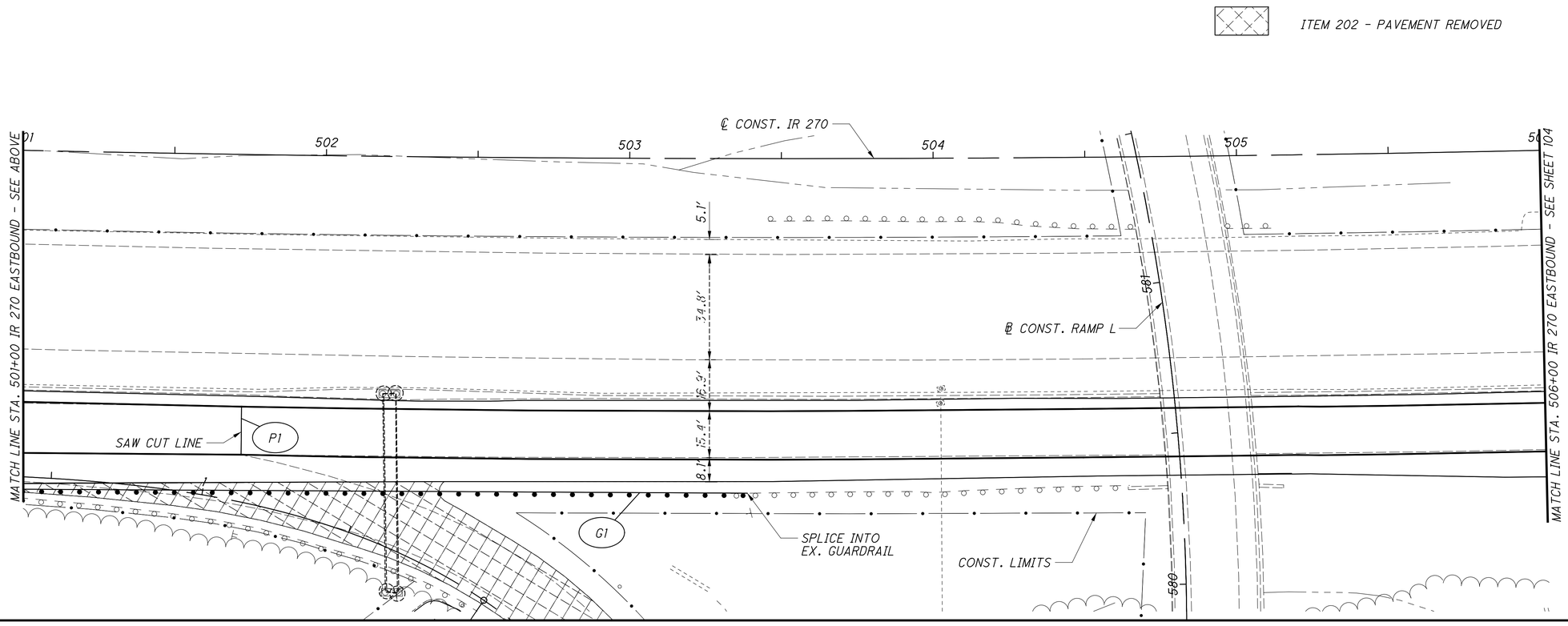

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED ACF
CHECKED CSR

PLAN - IR 270 EASTBOUND
STA. 496+00 TO STA. 506+00

FRA-270-51.50

103
554

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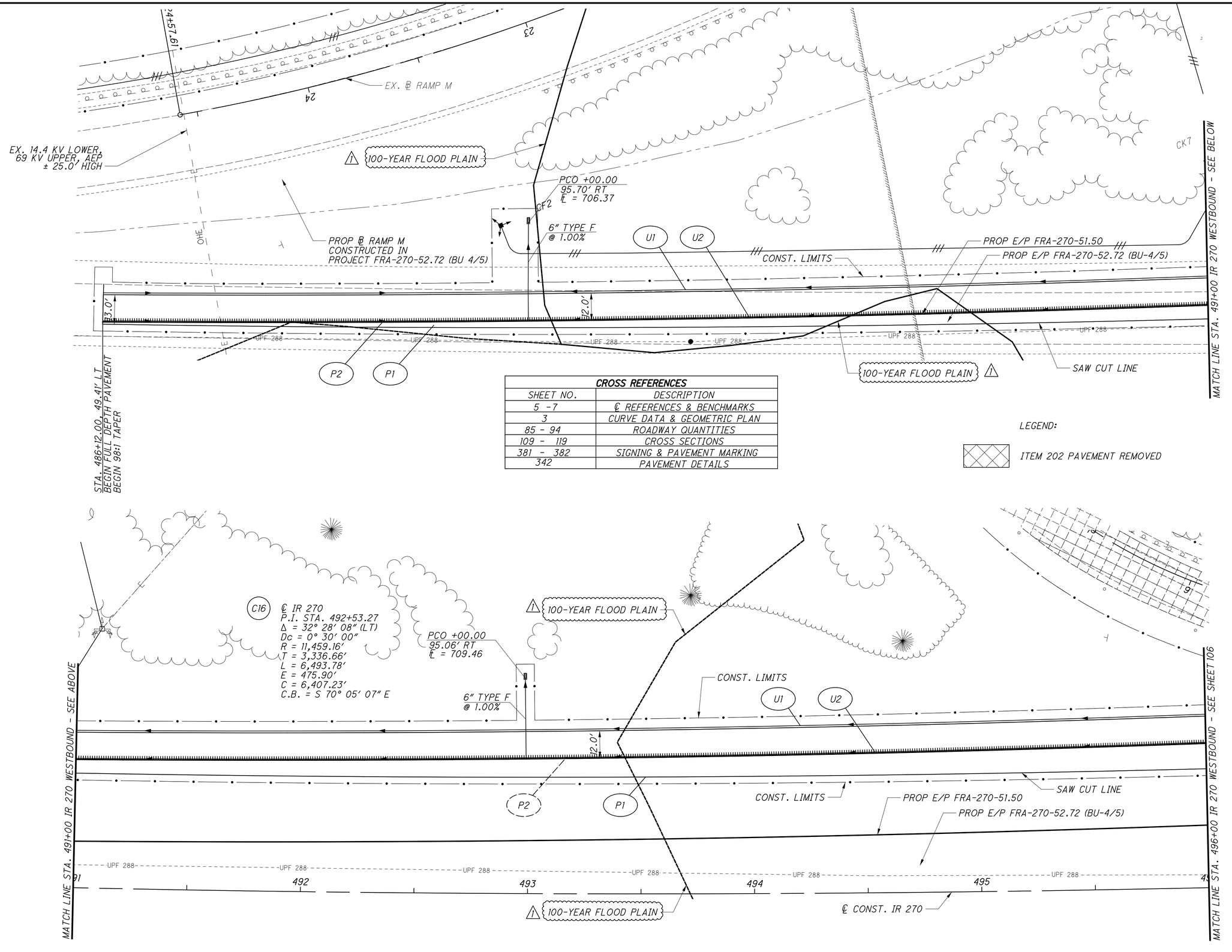


CROSS REFERENCES	
SHEET NO.	DESCRIPTION
5 -7	℄ REFERENCES & BENCHMARKS
3	CURVE DATA & GEOMETRIC PLAN
85 - 94	ROADWAY QUANTITIES
109 - 119	CROSS SECTIONS
381 - 382	SIGNING & PAVEMENT MARKING
342	PAVEMENT DETAILS

LEGEND:

ITEM 202 PAVEMENT REMOVED

ADDENDUM #1
04/21/2023

HORIZONTAL SCALE IN FEET
0 10 20 40

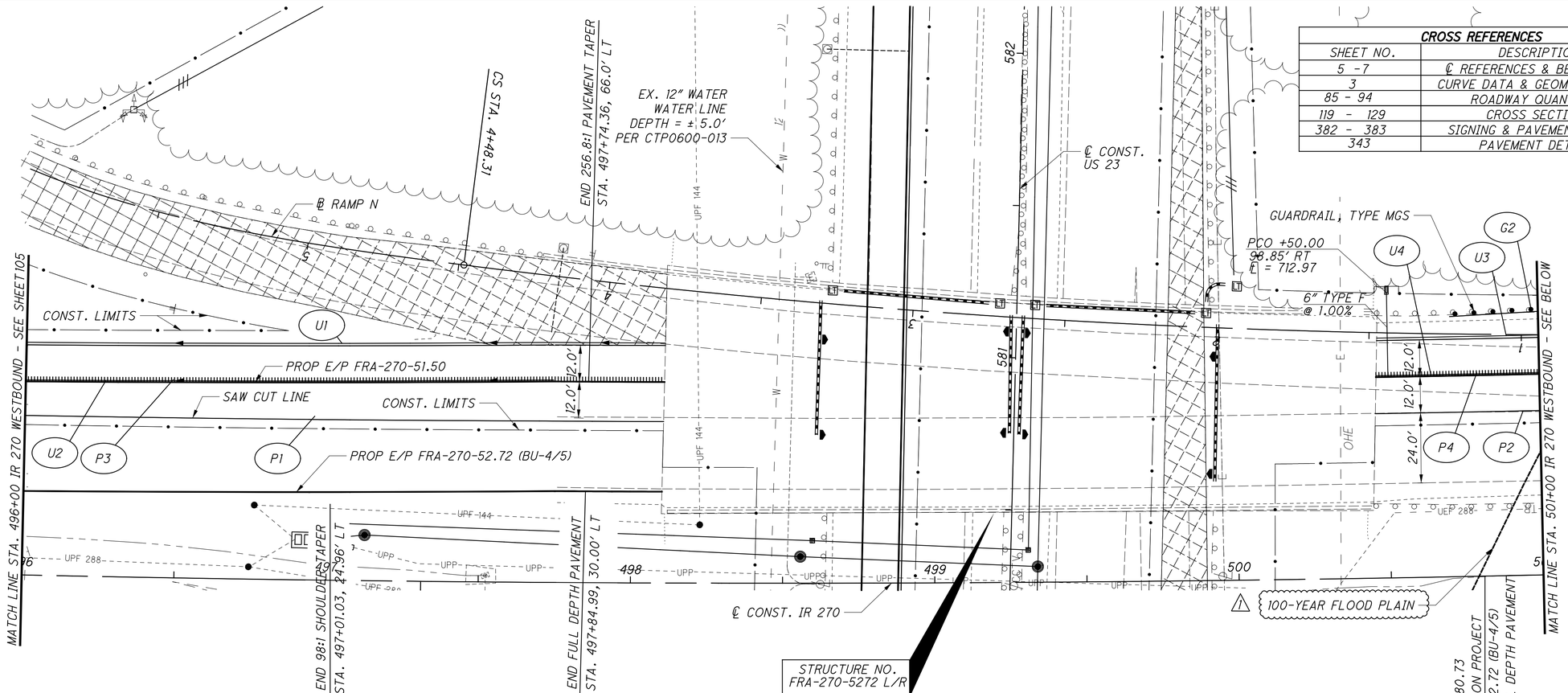
CALCULATED ACF
CHECKED CSR

PLAN - IR 270 WESTBOUND
STA. 486+00 TO STA. 496+00

FRA-270-51.50

105
554

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
5 -7	℄ REFERENCES & BENCHMARKS
3	CURVE DATA & GEOMETRIC PLAN
85 - 94	ROADWAY QUANTITIES
119 - 129	CROSS SECTIONS
382 - 383	SIGNING & PAVEMENT MARKING
343	PAVEMENT DETAILS



HORIZONTAL SCALE IN FEET

CALCULATED ACF CHECKED CSR

PLAN - IR 270 WESTBOUND STA. 496+00 TO STA. 506+00

FRA-270-51.50

106 554

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C21 IR 270EB MERGE
P.I. STA. 717+69.38
Δ = 6° 27′ 15″ (LT)
Dc = 0° 29′ 50″
R = 111,525.16′
T = 649.82′
L = 1,298.26′
E = 18.30′
C = 1,297.57′
C.B. = S 83° 05′ 33″ E
e (max) = 0.016

C22 IR 270CD MERGE
P.I. STA. 817+70.45
Δ = 6° 27′ 15″ (LT)
Dc = 0° 29′ 50″
R = 111,544.16′
T = 650.89′
L = 1,300.40′
E = 18.31′
C = 1,299.71′
C.B. = S 83° 05′ 33″ E
e (max) = 0.016

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
5 -7	℄ REFERENCES & BENCHMARKS
3	CURVE DATA & GEOMETRIC PLAN
85 -94	ROADWAY QUANTITIES
148 -152	CROSS SECTIONS
383-384	SIGNING & PAVEMENT MARKING
339	PAVEMENT DETAILS

℄ CONST. IR 270
℄ CONST. IR 270 EASTBOUND MERGE
℄ CONST. CD LANE
CONST. LIMITS
SAW CUT LINE
MATCH LINE STA. 716+00 IR 270 EASTBOUND MERGE - SEE SHEET 138
MATCH LINE STA. 721+00 IR 270 EASTBOUND MERGE - SEE SHEET 140
B1
D1
P1
P2
U1
U2
U3
U4
U5
G20
R1
B-015-0-13
B-016-0-13
6" TYPE F @ 1.00%
12.0′
6.0′
8.0′
+25.00
PT STA 820+10.00
GUARDRAIL, TYPE MGS
PCO +75.17
74.11′ RT.
℄ 715.62′
5′ CHAIN LINK FENCE
Ex. LA R/W
ITEM 670 - DITCH EROSION CONTROL PROTECTION MAT
ITEM 836 - TURF REINFORCING MAT, TYPE 1
ITEM 836 - TURF REINFORCING MAT, TYPE 2

ADDENDUM #1
04/21/2023

P.V.I. STA 718+50.00
ELEV = 720.08′
Δ = 0.01%, NO CURVE
PR. PROFILE IR 270 EASTBOUND MERGE
EX. GROUND
+0.25 %
+0.26 %
EX ELEC.
PR. LTG CONDUIT

716+00 717+00 718+00 719+00 720+00 721+00

HORIZONTAL SCALE IN FEET
CALCULATED ACF
CHECKED CSR

PLAN AND PROFILE IR 270 EASTBOUND MERGE
STA. 716+00 TO STA. 721+00

FRA-270-51.50

139
554

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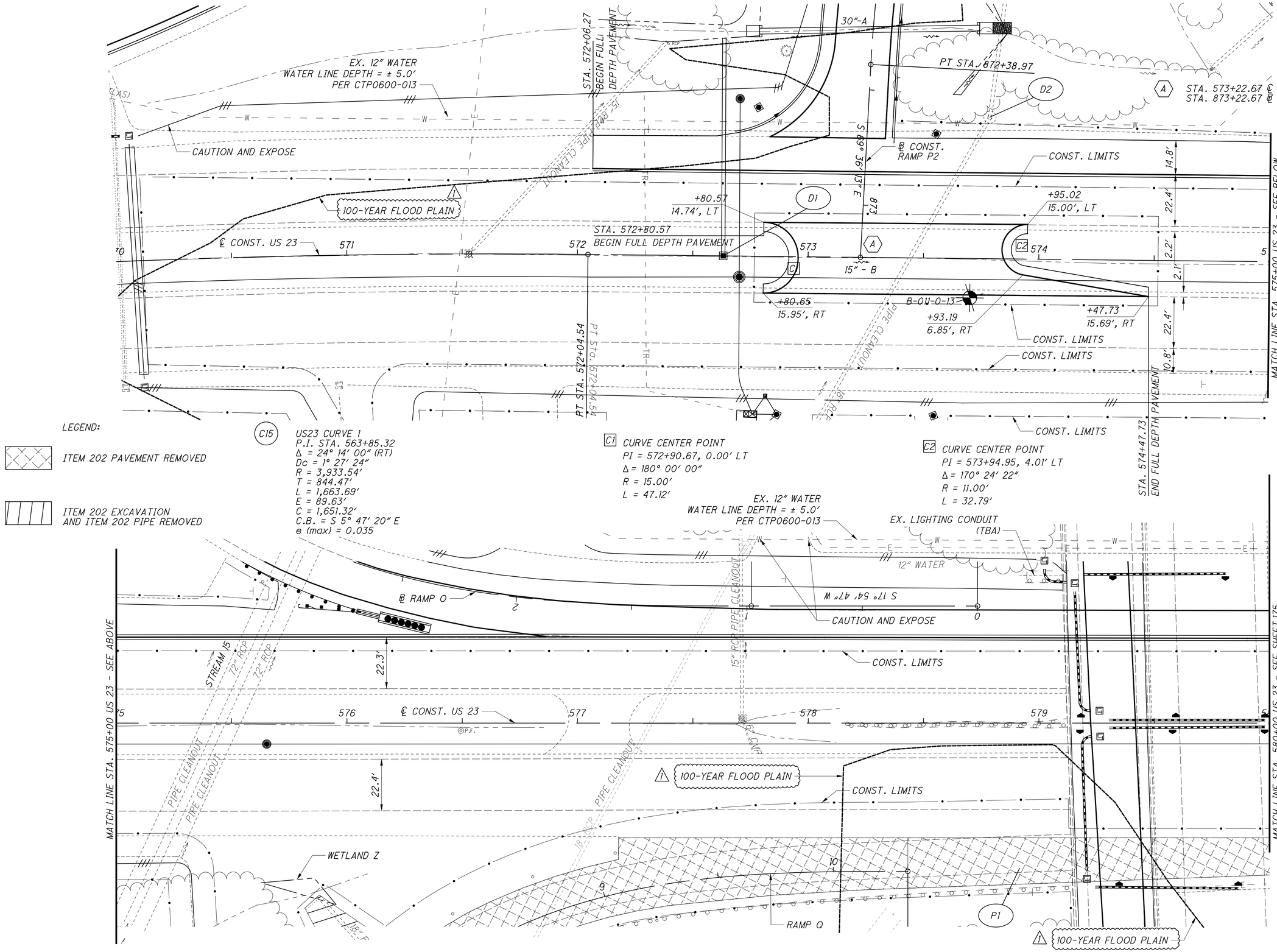

1 ADDENDUM #1
04/21/2023

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED ACF
CHECKED CSR

PLAN - US 23
STA. 570+00 TO STA. 580+00

FRA-270-51.50

174
554

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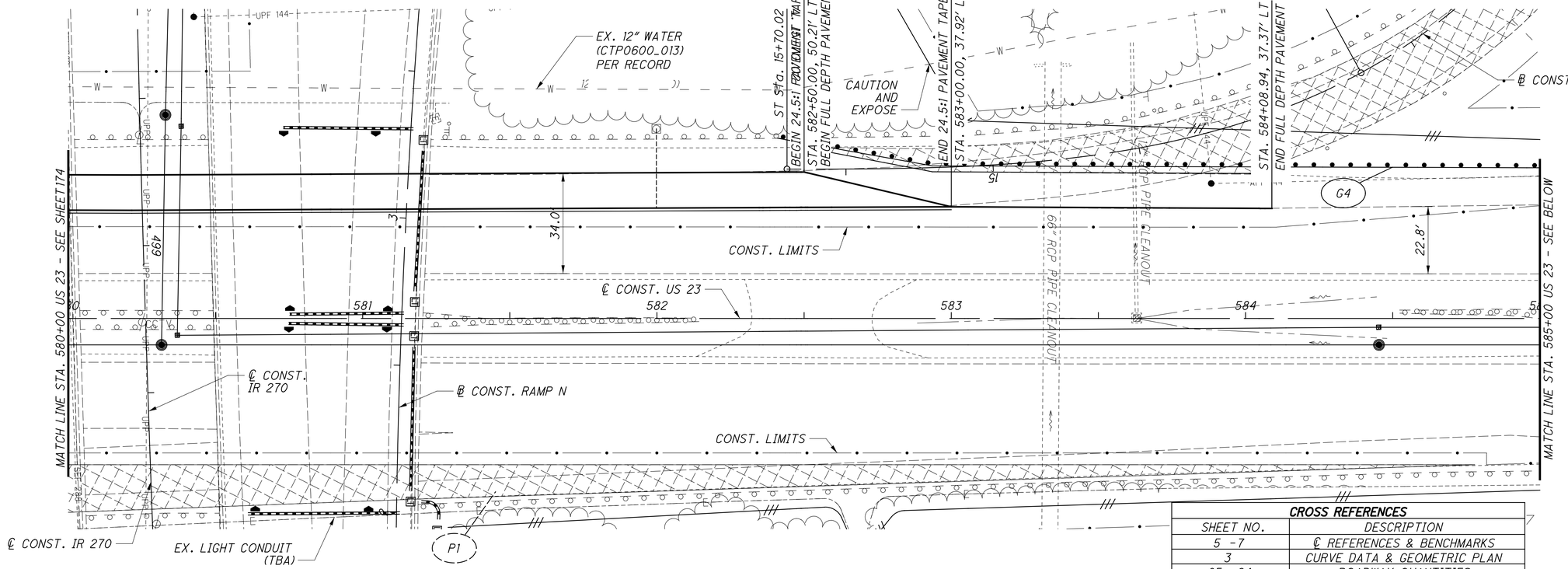


CROSS REFERENCES	
SHEET NO.	DESCRIPTION
5 -7	℄ REFERENCES & BENCHMARKS
3	CURVE DATA & GEOMETRIC PLAN
85 -94	ROADWAY QUANTITIES
273-290	CROSS SECTIONS
390	SIGNING & PAVEMENT MARKING
334	INTERSECTION DETAILS

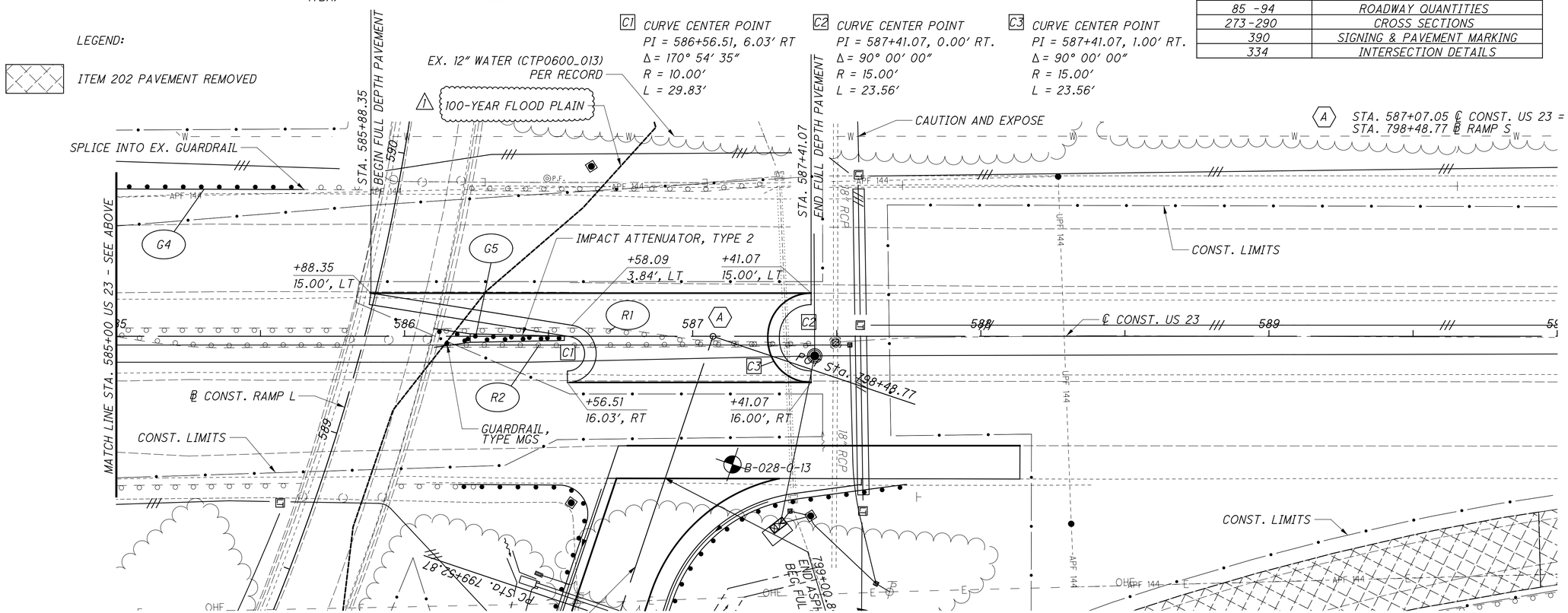
LEGEND:

ITEM 202 PAVEMENT REMOVED

C1 CURVE CENTER POINT
PI = 586+56.51, 6.03' RT
Δ = 170° 54' 35"
R = 10.00'
L = 29.83'

C2 CURVE CENTER POINT
PI = 587+41.07, 0.00' RT.
Δ = 90° 00' 00"
R = 15.00'
L = 23.56'

C3 CURVE CENTER POINT
PI = 587+41.07, 1.00' RT.
Δ = 90° 00' 00"
R = 15.00'
L = 23.56'



ADDENDUM #1
04/21/2023

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED ACF
CHECKED CSR

PLAN - US 23
STA. 580+00 TO STA. 590+00

FRA-270-51.50

175
554

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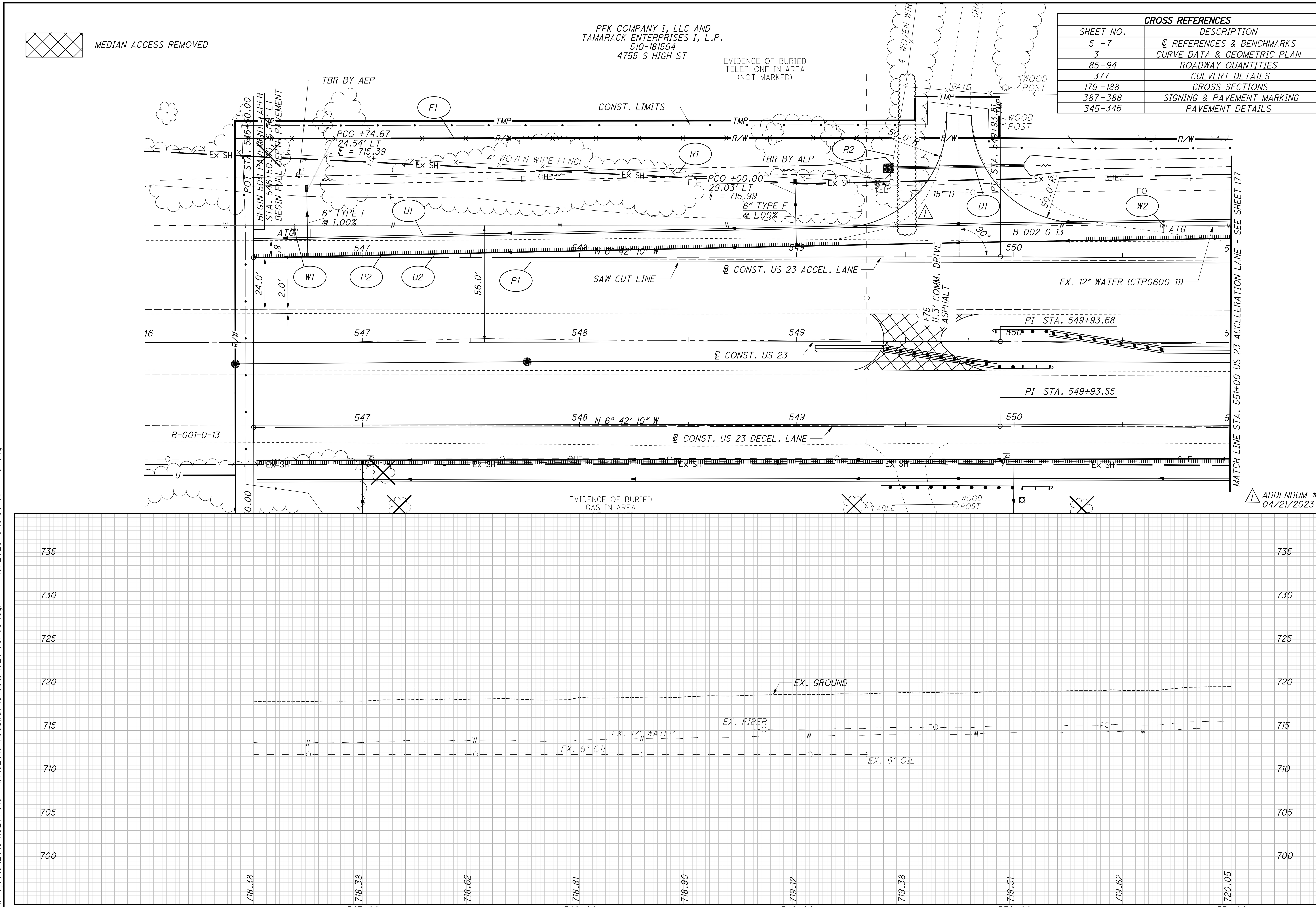
CROSS REFERENCES	
SHEET NO.	DESCRIPTION
5 -7	℄ REFERENCES & BENCHMARKS
3	CURVE DATA & GEOMETRIC PLAN
85-94	ROADWAY QUANTITIES
377	CULVERT DETAILS
179 -188	CROSS SECTIONS
387-388	SIGNING & PAVEMENT MARKING
345-346	PAVEMENT DETAILS

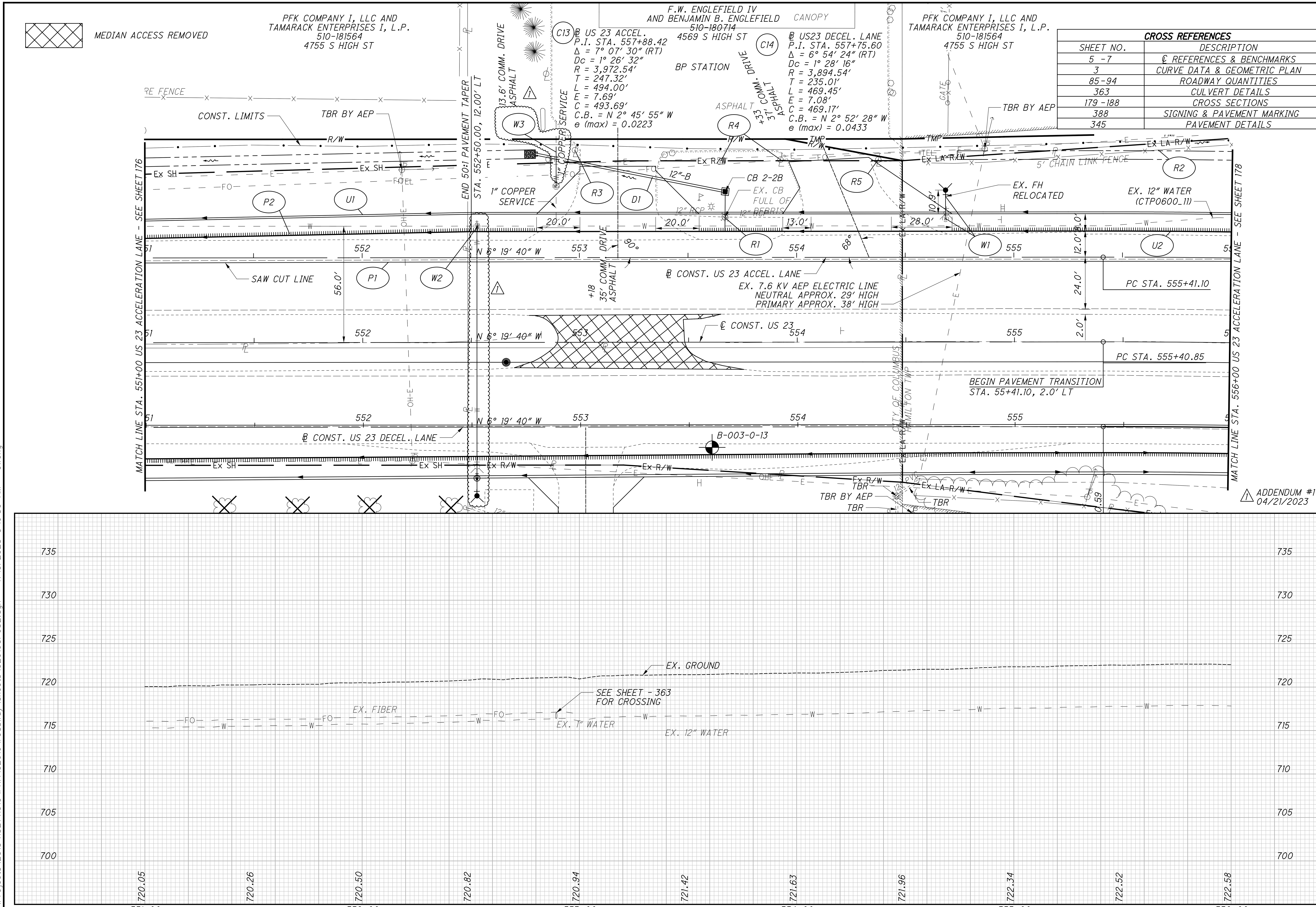


MEDIAN ACCESS REMOVED
PFK COMPANY I, LLC AND
TAMARACK ENTERPRISES I, L.P.
510-181564
4755 S HIGH ST
EVIDENCE OF BURIED
TELEPHONE IN AREA
(NOT MARKED)
TBR BY AEP
CONST. LIMITS
4' WOVEN WIRE FENCE
WOOD POST
GATE
POT STA. 546+50.00
BEGIN 50:1 PAVEMENT TAPER
BEGIN FULL DEPTH PAVEMENT
PCO +74.67
24.54' LT
℄ = 715.39
PCO +00.00
29.03' LT
℄ = 715.99
6" TYPE F
@ 1.00%
15"-D
B-002-0-13
ATG
N 6° 42' 10" W
SAW CUT LINE
℄ CONST. US 23 ACCEL. LANE
11.3' COMM. DRIVE
ASPHALT
EX. 12" WATER (CTP0600_11)
PI STA. 549+93.68
℄ CONST. US 23
PI STA. 549+93.55
B-001-0-13
℄ CONST. US 23 DECEL. LANE
MATCH LINE STA. 551+00 US 23 ACCELERATION LANE - SEE SHEET 177
EVIDENCE OF BURIED
GAS IN AREA
CABLE
ADDENDUM #1
04/21/2023
EX. GROUND
EX. FIBER
EX. 12" WATER
EX. 6" OIL
718.38
718.38
718.62
718.81
718.90
719.12
719.38
719.51
719.62
720.05
547+00
548+00
549+00
550+00
551+00
HORIZONTAL
SCALE IN FEET

CALCULATED ACF
CHECKED CSR

PLAN AND PROFILE ACCELERATION LANE US 23
STA. 546+50 TO STA. 551+00

FRA-270-51.50



MEDIAN ACCESS REMOVED
PFK COMPANY I, LLC AND
TAMARACK ENTERPRISES I, L.P.
510-181564
4755 S HIGH ST
F.W. ENGLEFIELD IV
AND BENJAMIN B. ENGLEFIELD
510-180714
4569 S HIGH ST
CANOPY
BP STATION
C13
℄ US 23 ACCEL.
P.I. STA. 557+88.42
Δ = 7° 07' 30" (RT)
Dc = 1° 26' 32"
R = 3,972.54'
T = 247.32'
L = 494.00'
E = 7.69'
C = 493.69'
C.B. = N 2° 45' 55" W
e (max) = 0.0223
C14
℄ US23 DECEL. LANE
P.I. STA. 557+75.60
Δ = 6° 54' 24" (RT)
Dc = 1° 28' 16"
R = 3,894.54'
T = 235.01'
L = 469.45'
E = 7.08'
C = 469.17'
C.B. = N 2° 52' 28" W
e (max) = 0.0433
13.6' COMM. DRIVE
ASPHALT
+33 COMM. DRIVE
31' ASPHALT
END 50:1 PAVEMENT TAPER
STA. 552+50.00, 12.00' LT
CONST. LIMITS
TBR BY AEP
1" COPPER SERVICE
CB 2-2B
EX. CB
FULL OF DEBRIS
EX. FH
RELOCATED
EX. 12" WATER
(CTP0600_11)
5' CHAIN LINK FENCE
MATCH LINE STA. 551+00 US 23 ACCELERATION LANE - SEE SHEET 176
MATCH LINE STA. 556+00 US 23 ACCELERATION LANE - SEE SHEET 178
SAW CUT LINE
+18
35' COMM. DRIVE
ASPHALT
℄ CONST. US 23 ACCEL. LANE
EX. 7.6 KV AEP ELECTRIC LINE
NEUTRAL APPROX. 29' HIGH
PRIMARY APPROX. 38' HIGH
PC STA. 555+41.10
℄ CONST. US 23
PC STA. 555+40.85
BEGIN PAVEMENT TRANSITION
STA. 55+41.10, 2.0' LT
CITY OF COLUMBUS
HAMILTON TWP
℄ CONST. US 23 DECEL. LANE
B-003-0-13
N 6° 19' 40" W
TBR BY AEP
TBR
ADDENDUM #1
04/21/2023
EX. GROUND
SEE SHEET - 363
FOR CROSSING
EX. FIBER
EX. 1" WATER
EX. 12" WATER
720.05
720.26
720.50
720.82
720.94
721.42
721.63
721.96
722.34
722.52
722.58
551+00
552+00
553+00
554+00
555+00
556+00
HORIZONTAL
SCALE IN FEET

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
5 -7	℄ REFERENCES & BENCHMARKS
3	CURVE DATA & GEOMETRIC PLAN
85-94	ROADWAY QUANTITIES
363	CULVERT DETAILS
179 -188	CROSS SECTIONS
388	SIGNING & PAVEMENT MARKING
345	PAVEMENT DETAILS

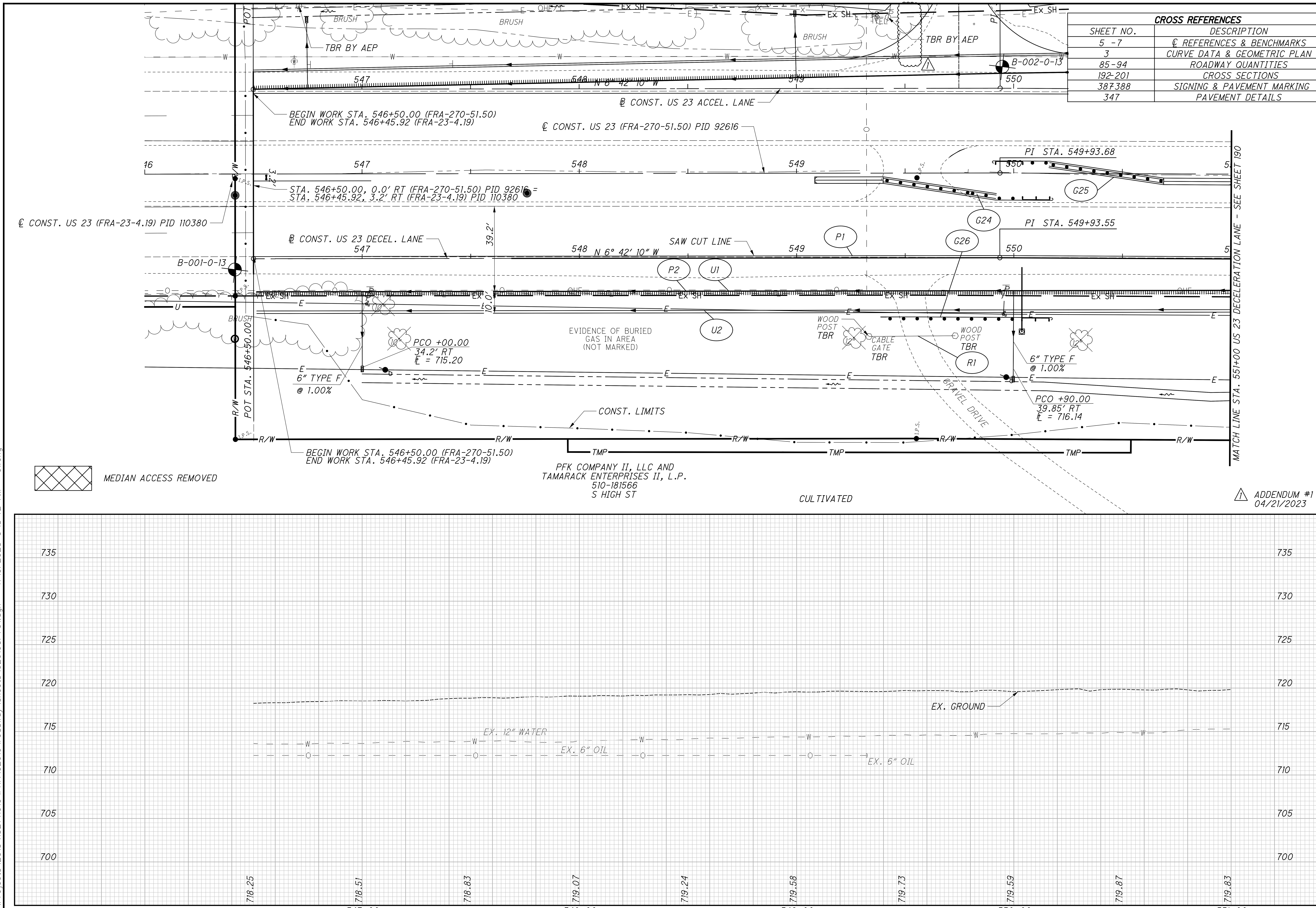
CALCULATED ACF
CHECKED CSR

PLAN AND PROFILE US 23 ACCELERATION LANE
STA. 551+00 TO STA. 556+00

FRA-270-51.50

PLAN AND PROFILE US 23 DECELERATION LANE
STA. 546+50 TO STA. 551+00

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
5 -7	℄ REFERENCES & BENCHMARKS
3	CURVE DATA & GEOMETRIC PLAN
85-94	ROADWAY QUANTITIES
192-201	CROSS SECTIONS
387-388	SIGNING & PAVEMENT MARKING
347	PAVEMENT DETAILS



TBR BY AEP
BRUSH
B-002-0-13
BEGIN WORK STA. 546+50.00 (FRA-270-51.50)
END WORK STA. 546+45.92 (FRA-23-4.19)
℄ CONST. US 23 ACCEL. LANE
℄ CONST. US 23 (FRA-270-51.50) PID 92616
PI STA. 549+93.68
STA. 546+50.00, 0.0' RT (FRA-270-51.50) PID 92616 =
STA. 546+45.92, 3.2' RT (FRA-23-4.19) PID 110380
℄ CONST. US 23 (FRA-23-4.19) PID 110380
℄ CONST. US 23 DECEL. LANE
SAW CUT LINE
PI STA. 549+93.55
N 6° 42' 10" W
B-001-0-13
EVIDENCE OF BURIED GAS IN AREA (NOT MARKED)
WOOD POST TBR
CABLE GATE TBR
PCO +00.00
34.2' RT
℄ = 715.20
6" TYPE F @ 1.00%
PCO +90.00
39.85' RT
℄ = 716.14
GRAVEL DRIVE
CONST. LIMITS
POT STA. 546+50.00
MATCH LINE STA. 551+00 US 23 DECELERATION LANE - SEE SHEET 190
MEDIAN ACCESS REMOVED
PFK COMPANY II, LLC AND
TAMARACK ENTERPRISES II, L.P.
510-181566
S HIGH ST
CULTIVATED
ADDENDUM #1
04/21/2023
EX. GROUND
EX. 12" WATER
EX. 6" OIL
718.25
718.51
718.83
719.07
719.24
719.58
719.73
719.59
719.87
719.83
547+00
548+00
549+00
550+00
551+00
HORIZONTAL SCALE IN FEET

CALCULATED ACF
CHECKED CSR

FRA-270-51.50

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MEDIAN ACCESS REMOVED

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
5 -7	℄ REFERENCES & BENCHMARKS
3	CURVE DATA & GEOMETRIC PLAN
85-94	ROADWAY QUANTITIES
192-201	CROSS SECTIONS
388	SIGNING & PAVEMENT MARKING
347	PAVEMENT DETAILS

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED ACF CHECKED CSR

PLAN AND PROFILE US 23 DECELERATION LANE
STA. 551+00 TO STA. 556+00

FRA-270-51.50

190
554

MATCH LINE STA. 551+00 US 23 DECELERATION LANE - SEE SHEET 189

MATCH LINE STA. 556+00 US 23 DECELERATION LANE - SEE SHEET 191

℄ CONST. US 23 ACCEL. LANE

℄ CONST. US 23 DECEL. LANE

℄ CONST. US 23

N 6° 19′ 40″ W

+02 25′ COMM. DRIVE ASPHALT

90°

B-003-0-13

PC STA. 555+40.85

24.0′

12.0′

36.0′

10.0′

Ex SH

Ex R/W

Ex LA-R/W

OHE

U1 U2 P1 P2 W1

EX. FH TBR PER COC SCD L-6637A

TBR (20′)

12″ PVC

12″ RCP

DND

ASPHALT

CONST. LIMITS

CUT EX. 12″ PIPE TO THE PROP. DITCH

PLUG EX. PIPE AT THE R/W LINE

TMP

D1 R1 F1

STA. 555+40.59 ℄ ELEV = 717.97′

STA. 555+12, 49.1′ RT ℄ ELEV = 717.97′

STA. 555+33, 49.0′ RT ℄ ELEV = 717.91′

HAMILTON TOWNSHIP
CITY OF COLUMBUS

C13 ℄ US 23 ACCEL.
P.I. STA. 557+88.42
Δ = 7° 07′ 30″ (RT)
Dc = 1° 26′ 32″
R = 3,972.54′
T = 247.32′
L = 494.00′
E = 7.69′
C = 493.69′
C.B. = N 2° 45′ 55″ W
e (max) = 0.0223

C14 ℄ US23 DECEL. LANE
P.I. STA. 557+75.60
Δ = 6° 54′ 24″ (RT)
Dc = 1° 28′ 16″
R = 3,894.54′
T = 235.01′
L = 469.45′
E = 7.08′
C = 469.17′
C.B. = N 2° 52′ 28″ W
e (max) = 0.0433

PFK COMPANY II, LLC AND TAMARACK ENTERPRISES II, L.P.
510-181566
S HIGH ST

PFK COMPANY II, LLC A DELAWARE LIMITED LIABILITY COMPANY AND TAMARACK ENTERPRISES II, LLP, A DELAWARE LIMITED PARTNERSHIP
510-180712
IN 200611270236041

PFK COMPANY II, LLC AND TAMARACK ENTERPRISES II, L.P.
510-181566
S HIGH ST

1 ADDENDUM #1 04/21/2023

EX. GROUND

EX. 12″ WATER

735 730 725 720 715 710 705 700

719.83 719.99 720.09 720.27 720.49 720.59 720.67 721.08 721.11 721.15 721.07

551+00 552+00 553+00 554+00 555+00 556+00

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CROSS REFERENCES	
SHEET NO.	DESCRIPTION
5 -7	℄ REFERENCES & BENCHMARKS
3	CURVE DATA & GEOMETRIC PLAN
85-94	ROADWAY QUANTITIES
372	CULVERT DETAILS
208- 219	CROSS SECTIONS
389	SIGNING & PAVEMENT MARKING
338	GORE DETAILS

C17
℄ RAMP L - 1
P.I. STA. 623+53.55
Δ = 162° 22′ 11″ (LT)
Dc = 7° 30′ 00″
R = 763.94′
T = 4,926.16′
L = 2,164.93′
E = 4,221.10′
C = 1,509.84′
C.B. = N 25° 22′ 24″ W
e = OVERLAY EXISTING

C2
℄ RAMP R - 2
P.I. Sta. 269+39.51
Δ = 38° 51′ 07″ (RT)
Dc = 7° 30′ 00″
R = 763.94′
T = 269.42′
L = 518.02′
E = 46.11′
C = 508.16′
C.B. = N 36° 23′ 08″ E
e (max) = 0.054

C3
℄ RAMP R - 3
P.I. Sta. 274+68.44
Δ = 2° 59′ 29″ (RT)
Dc = 1° 00′ 00″
R = 5,729.58′
T = 149.61′
L = 299.15′
E = 1.95′
C = 299.11′
C.B. = N 57° 18′ 26″ E
e (max) = 0.016

1 100-YEAR FLOOD PLAIN
WETLAND AA (DND)
WETLAND AB (DND)
POT Sta. 571+88.12
PT STA. 271+88.12
PC STA. 273+18.83
PIPE CLEANOUT
18" RCP
STREAM 15
96"-A
GUARDRAIL, TYPE MGS
STA. 573+19.15 PIPE CLEANOUT 96" CMP
TS Sta. 572+74.99
STA. 574+23.32 BEGIN FULL DEPTH PAVEMENT
SC Sta. 575+24.99
CONST. LIMITS
℄ CONST. RAMP L
℄ CONST. RAMP R
N 55° 48′ 41″ E
G18
U1
R1
B-008-0-13
B-008-0-14
PR. OVERHEAD SIGN
MATCH LINE STA. 576+00 RAMP L - SEE SHEET 203
16.0′
2.0′
1 100-YEAR FLOOD PLAIN
1 ADDENDUM #1 04/21/2023

P.V.I. STA 573+24.99 ELEV = 723.07′
P.V.I. STA 573+50.00 ELEV = 724.00′ NO CURVE
P.V.I. STA 573+75.00 ELEV = 724.96′ NO CURVE
P.V.I. STA 574+00.00 ELEV = 725.86′ NO CURVE
P.V.I. STA 574+50.00 ELEV = 727.55′ NO CURVE
P.V.I. STA 575+00.00 ELEV = 728.98′ NO CURVE
P.V.I. STA 575+75.00 ELEV = 731.32′ NO CURVE
+3.75 %
+3.82 %
+3.59 %
+3.39 %
+2.85 %
+3.12 %
+3.63
EX. GROUND
PR. PROFILE RAMP L
EX ELEC.
PR. LTG CONDUIT
PR. LTG CONDUIT
723.07
724.00
724.96
725.86
726.71
727.55
728.26
729.76
730.54
732.23
724.41
726.25
728.12
729.71
731.68
733.27
740
735
730
725
720
715
710
705
572+00
573+00
574+00
575+00
576+00

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED ACF
CHECKED CSR

PLAN AND PROFILE - RAMP L
STA. 571+88.12 TO STA. 576+00

FRA-270-51.50

202
554

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LEGEND:

ITEM 202 PAVEMENT REMOVED

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
5 -7	℄ REFERENCES & BENCHMARKS
3	CURVE DATA & GEOMETRIC PLAN
85-94	ROADWAY QUANTITIES
208- 219	CROSS SECTIONS
390	SIGNING & PAVEMENT MARKING
505- 545	BRIDGE PLANS

DESIGN EXCEPTION

HSSD = 264' (260' MIN)
ACTUAL DESIGN SPEED = 36 MPH

℄ CONST. RAMP Q

CONST. LIMITS

15" RCP

15" STM

CONST. LIMITS

MATCH LINE STA. 576+00 RAMP L - SEE SHEET 202

CONC. WALL

GUARDRAIL, TYPE MGS

C17
℄ RAMP L - 1
P.I. STA. 623+53.55
Δ = 162° 22' 11" (LT)
Dc = 7° 30' 00"
R = 763.94'
T = 4,926.16'
L = 2,164.93'
E = 4,221.10'
C = 1,509.84'
C.B. = N 25° 22' 24" W
e = OVERLAY EXISTING

G18

D1

BEGIN APPROACH SLAB
STA. 579+24.81

END APPROACH SLAB
STA. 579+49.81

MATCH LINE STA. 581+00 RAMP L - SEE SHEET 204

3.5'

16.0'

6.0'

30.0'

R1

℄ CONST. RAMP L

ANCHOR ASSEMBLY TYPE E

B-029-0-14

STRUCTURE NO. FRA-270-52.64

IR-270

R2

G6

GUARDRAIL, TYPE MGS

D2

℄ CONST. RAMP R

GUARDRAIL, TYPE MGS

27.7'

B-010-0-13

84

100-YEAR FLOOD PLAIN

CONC. WALL

N 58° 48' 10" E

1 ADDENDUM #1 04/21/2023

732.23 733.13 734.04 734.95 735.83 736.64 737.38 738.04 738.62 739.13 739.56 739.92 740.21 740.42 740.57 740.66 740.69 740.67 740.59 740.45 740.31

750 745 740 735 730 725 720 715

+3.63 % +0.75 % +0.75 % -0.57 %

EX. GROUND

PR. PROFILE RAMP L

BOTTOM OF BEAM

EX ELEC

PR. LTG CONDUIT

P.V.C. STA. 576+80.00
ELEV 735.13

P.V.I. STA 578+00.00 ELEV = 739.48'
240.00' VC
K = 83

P.C.V.C. STA. 579+20.00
ELEV 740.38

P.V.I. STA 579+92.50 ELEV = 740.93'
145.00' VC
K = 110

580+58.44
MIN. VERTICAL CLEARANCE
18.17'

P.V.T. STA. 580+65.00
ELEV 740.51

IR 270

733.27 734.56 735.82 736.87 737.67 738.37 738.95 739.02 738.84 738.67 738.49

576+00 577+00 578+00 579+00 580+00 581+00

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED ACF
CHECKED CSR

PLAN AND PROFILE - RAMP L
STA. 576+00 TO STA. 581+00

FRA-270-51.50

203
554

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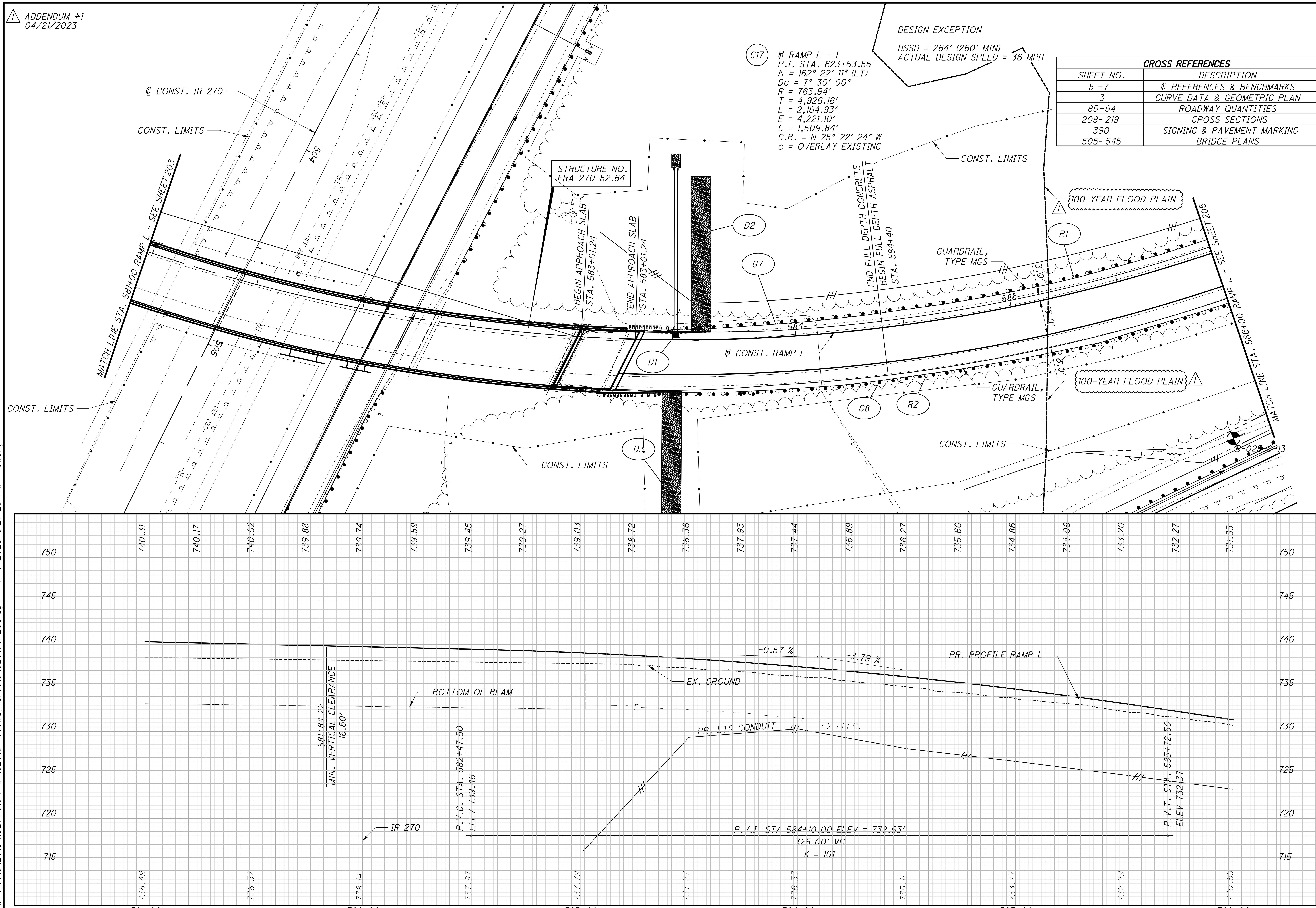
ADDENDUM #1
04/21/2023

PLAN AND PROFILE - RAMP L
STA. 581+00 TO STA. 586+00



℄ CONST. IR 270
CONST. LIMITS
MATCH LINE STA. 581+00 RAMP L - SEE SHEET 203
STRUCTURE NO.
FRA-270-52.64
BEGIN APPROACH SLAB
STA. 583+01.24
END APPROACH SLAB
STA. 583+01.24
C17
℄ RAMP L - 1
P.I. STA. 623+53.55
Δ = 162° 22' 11" (LT)
Dc = 7° 30' 00"
R = 763.94'
T = 4,926.16'
L = 2,164.93'
E = 4,221.10'
C = 1,509.84'
C.B. = N 25° 22' 24" W
e = OVERLAY EXISTING
DESIGN EXCEPTION
HSSD = 264' (260' MIN)
ACTUAL DESIGN SPEED = 36 MPH
END FULL DEPTH CONCRETE
BEGIN FULL DEPTH ASPHALT
STA. 584+40
D1
D2
D3
G7
G8
R1
R2
GUARDRAIL, TYPE MGS
100-YEAR FLOOD PLAIN
℄ CONST. RAMP L
MATCH LINE STA. 586+00 RAMP L - SEE SHEET 205
504
505
584
585
PR. PROFILE RAMP L
EX. GROUND
BOTTOM OF BEAM
-0.57 %
-3.79 %
581+84.22
MIN. VERTICAL CLEARANCE
16.60'
P.V.C. STA. 582+47.50
ELEV 739.46
P.V.I. STA 584+10.00 ELEV = 738.53'
325.00' VC
K = 101
P.V.T. STA. 585+72.50
ELEV 732.37
PR. LTG CONDUIT
EX ELEC.
IR 270
750
745
740
735
730
725
720
715
740.31
740.17
740.02
739.88
739.74
739.59
739.45
739.27
739.03
738.72
738.36
737.93
737.44
736.89
736.27
735.60
734.86
734.06
733.20
732.27
731.33
738.49
738.32
738.14
737.97
737.79
737.27
736.33
735.11
733.77
732.29
730.69
581+00
582+00
583+00
584+00
585+00
586+00

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
5 - 7	℄ REFERENCES & BENCHMARKS
3	CURVE DATA & GEOMETRIC PLAN
85-94	ROADWAY QUANTITIES
208- 219	CROSS SECTIONS
390	SIGNING & PAVEMENT MARKING
505- 545	BRIDGE PLANS

HORIZONTAL SCALE IN FEET: 0 10 20 40

CALCULATED ACF
CHECKED CSR

FRA-270-51.50

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C17

℄ RAMP L - 1
P.I. STA. 623+53.55
Δ = 162° 22′ 11″ (LT)
Dc = 7° 30′ 00″
R = 763.94′
T = 4,926.16′
L = 2,164.93′
E = 4,221.10′
C = 1,509.84′
C.B. = N 25° 22′ 24″ W
e = OVERLAY EXISTING

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
5 -7	℄ REFERENCES & BENCHMARKS
3	CURVE DATA & GEOMETRIC PLAN
85-94	ROADWAY QUANTITIES
208- 219	CROSS SECTIONS
390	SIGNING & PAVEMENT MARKING
483-504	BRIDGE PLANS

1 ADDENDUM #1 04/21/2023

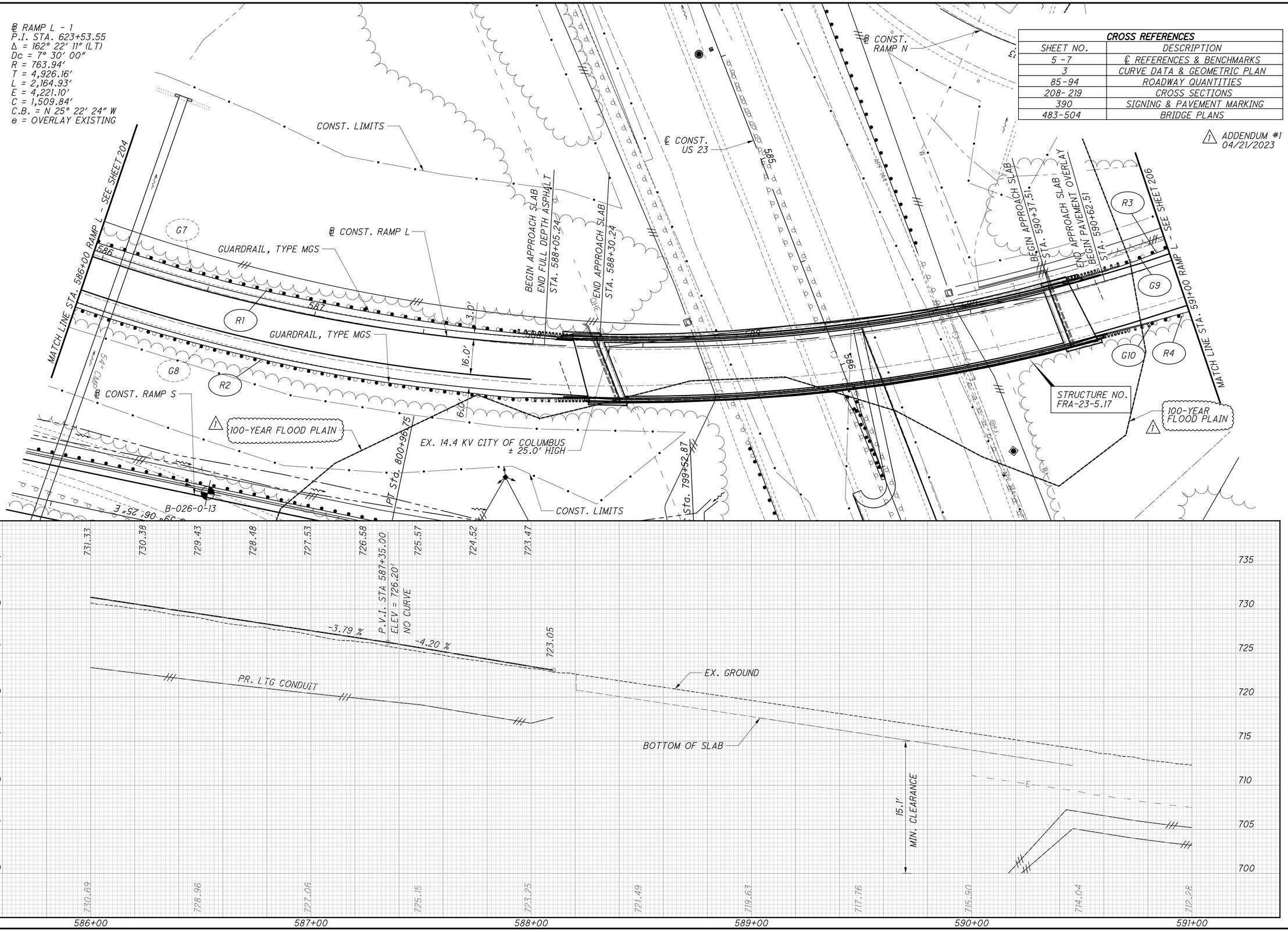
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED ACF
CHECKED CSR

PLAN AND PROFILE - RAMP L
STA. 586+00 TO STA. 591+00

FRA-270-51.50

205
554



LEGEND:

ITEM 202 PAVEMENT REMOVED

ITEM 202 EXCAVATION AND ITEM 202 PIPE REMOVED

100-YEAR FLOOD PLAIN 1

WETLAND W (DND)

℄ RAMP L - 1
P.I. STA. 623+53.55
Δ = 162° 22′ 11″ (LT)
Dc = 7° 30′ 00″
R = 763.94′
T = 4,926.16′
L = 2,164.93′
E = 4,221.10′
C = 1,509.84′
C.B. = N 25° 22′ 24″ W
e = OVERLAY EXISTING

℄ CONST. RAMP N

CONST. LIMITS

MATCH LINE STA. 591+00 RAMP L - SEE SHEET 205

GUARDRAIL, TYPE MGS

℄ CONST. RAMP L

ANCHOR ASSEMBLY, TYPE E

STA. 596+77.69 END PAVEMENT OVERLAY RAMP L

PCC Sta. 594+91.54

PT Sta. 596+69.21

WETLAND V (DND)

MATCH LINE STA. 596+00 RAMP L - SEE SHEET 207

FREE CLEANOUT 66" RCP

S 70° 58′ 38″ W 17

WETLAND U (DND)

℄ CONST. RAMP M

1 ADDENDUM #1 04/21/2023

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
3	CURVE DATA & GEOMETRIC PLAN
5 -7	℄ REFERENCES & BENCHMARKS
221	PLAN - RAMP M
85-94	ROADWAY QUANTITIES
208- 219	CROSS SECTIONS
391	SIGNING & PAVEMENT MARKING

HORIZONTAL SCALE IN FEET

CALCULATED ACF CHECKED CSR

PLAN AND PROFILE - RAMP L
STA. 591+00 TO STA. 596+00

FRA-270-51.50

206
554

EX. GROUND

PR. PROFILE RAMP L

EX. ELEC.

PR. LTG CONDUIT

PR. LTG CONDUIT

EX 66" STM

725 720 715 710 705 700 695 690

591+00 592+00 593+00 594+00 595+00 596+00

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CROSS REFERENCES	
SHEET NO.	DESCRIPTION
5 -7	℄ REFERENCES & BENCHMARKS
3	CURVE DATA & GEOMETRIC PLAN
85-94	ROADWAY QUANTITIES
208- 219	CROSS SECTIONS
391	SIGNING & PAVEMENT MARKING
221 222	PLAN - RAMP M

C17
℄ RAMP L - 1
P.I. STA. 623+53.55
Δ = 162° 22' 11" (LT)
Dc = 7° 30' 00"
R = 763.94'
T = 4,926.16'
L = 2,164.93'
E = 4,221.10'
C = 1,509.84'
C.B. = N 25° 22' 24" W
e = OVERLAY EXISTING

STA. 598+24.65
END WORK ON PROJECT FRA-270-51.50
BEGIN WORK ON PROJECT FRA-270-52.72
END PAVEMENT OVERLAY

POT Sta. 598+29.31
GUARDRAIL INSTALLED IN PROJECT FRA-270-52.72 (BU-4'S)

1 100-YEAR FLOOD PLAIN

GUARDRAIL, TYPE MGS

MATCH LINE STA. 596+00 RAMP L - SEE SHEET 206

596

S 73° 25' 30" W

598

℄ CONST. RAMP L

G9

R1

℄ CONST. RAMP M

18 19 20 21 22

CONST. LIMITS

GUARDRAIL, TYPE MGS

CONST. LIMITS

PC STA. 18+52.87

PC STA. 20+52.87

HAMILTON TOWNSHIP
CITY OF COLUMBUS

1 100-YEAR FLOOD PLAIN

WETLAND U (DND)

1 ADDENDUM #1
04/21/2023

725 720 715 710 705 700 695 690

PR. PROFILE RAMP L

EX. GROUND

EX ELEC.

PR. LTC CONDUIT

℄ E
EX ELEC.

596+00 597+00 598+00

N

0 10 20 40
HORIZONTAL
SCALE IN FEET

CALCULATED ACF
CHECKED CSR

PLAN AND PROFILE - RAMP L
STA. 596+00 TO STA. 598+34.78

FRA-270-51.50

207
554

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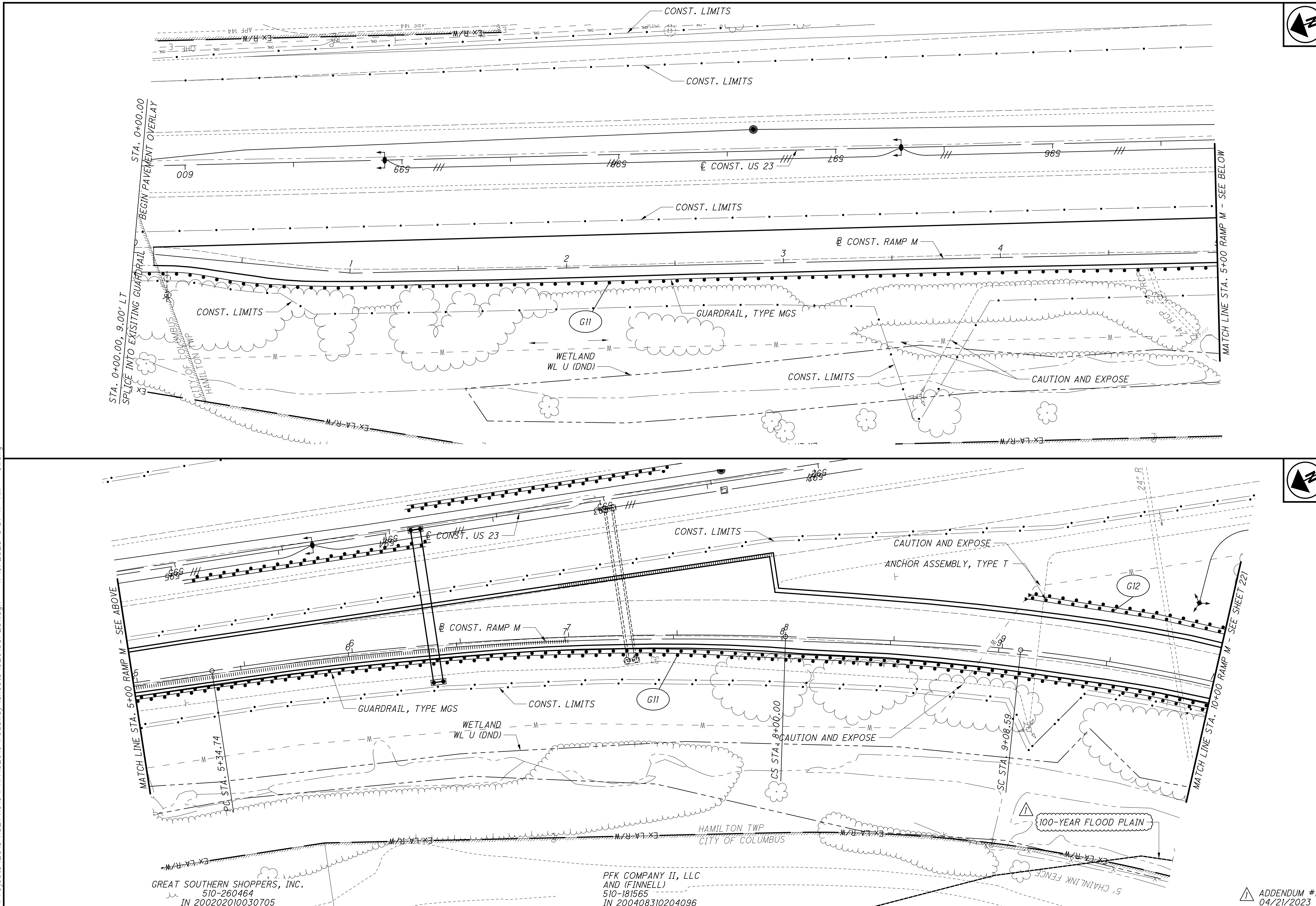

ADDENDUM #1
04/21/2023

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED ACF
CHECKED CSR

PLAN - RAMP M
STA. 0+00.00 TO STA. 10+00.00

FRA-270-51.50

220
554

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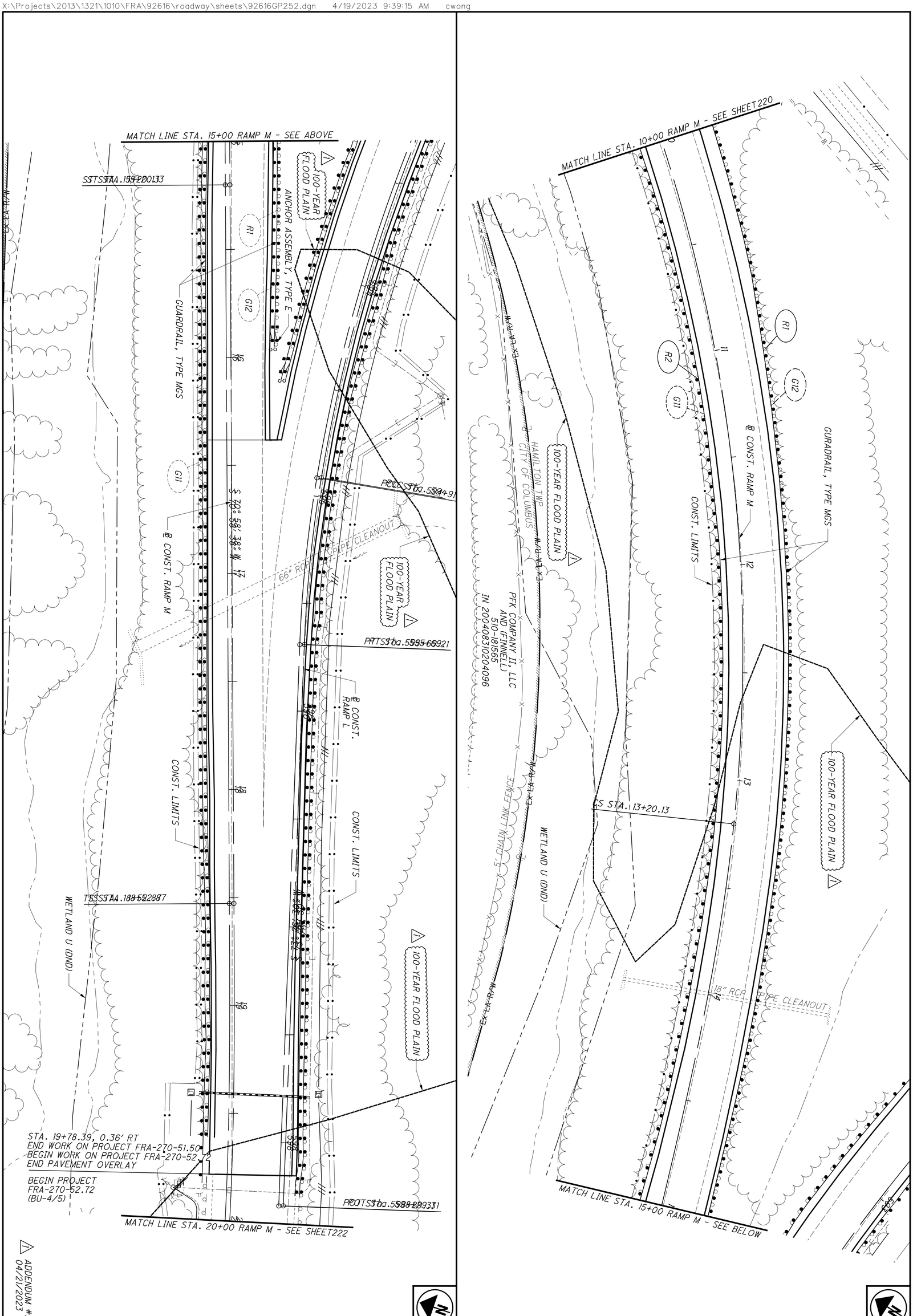
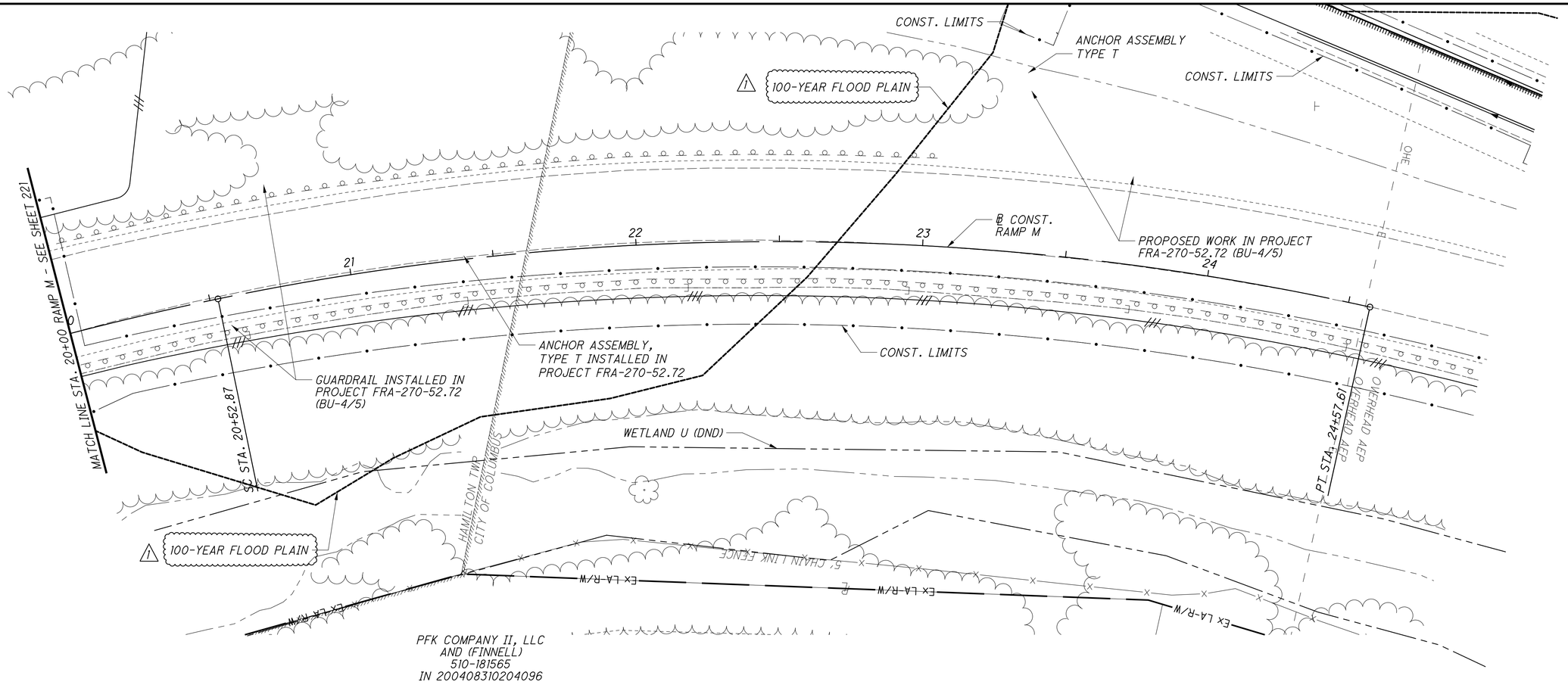


ADDENDUM #1
04/21/2023

221 / 554	FRA-270-51.50	PLAN - RAMP M STA. 10+00.00 TO STA. 20+00.00	CALCULATED ACF CHECKED CSR 0 20 10 40 HORIZONTAL SCALE IN FEET



1 ADDENDUM #1
04/21/2023

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED ACF
CHECKED CSR

PLAN - RAMP M
STA. 20+00.00 TO STA. 24+57.61

FRA-270-51.50

222
554

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℄ CONST. IR 270

CONST. LIMITS

35.0'

12.0'

PC Sta. 0+00.00

100-YEAR FLOOD PLAIN

℄ CONST. US 23

℄ CONST. RAMP N

STRUCTURE NO. FRA-270-5272 L/R

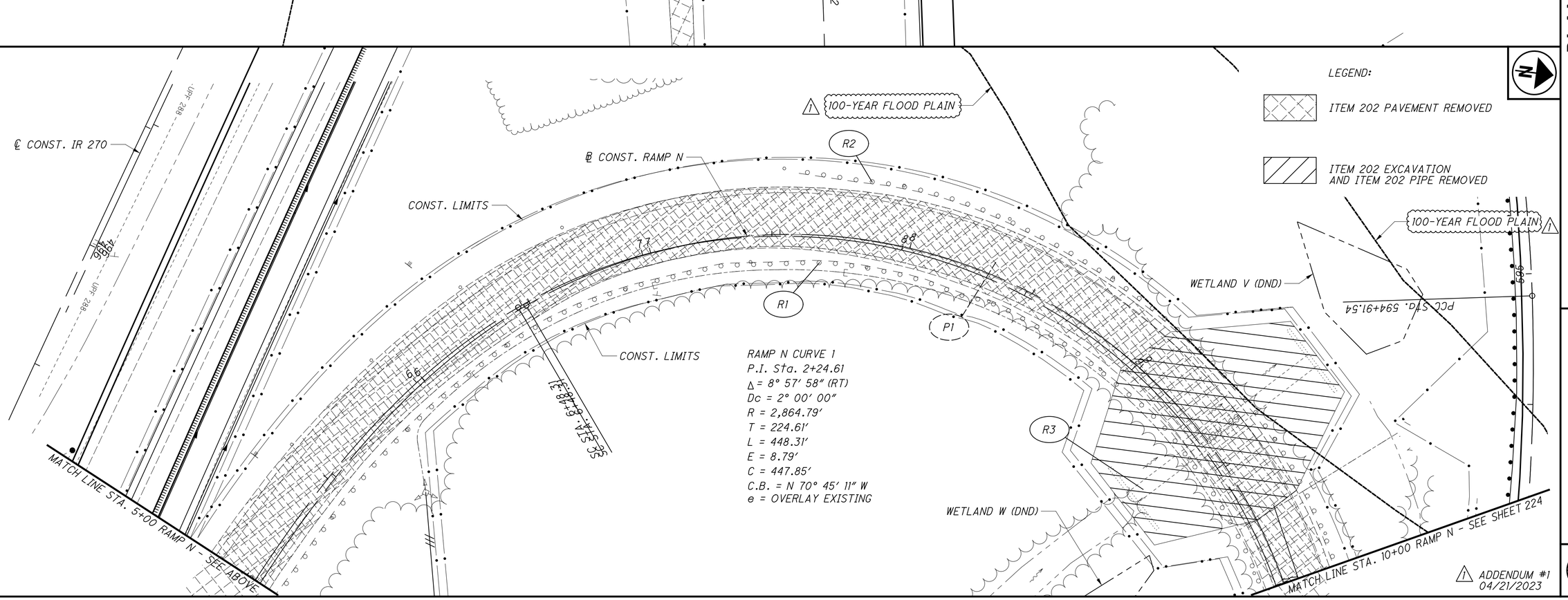
GR1

P1

CS STA. 4+48.31

MATCH LINE STA. 5+00 RAMP N - SEE BELOW

CONST. LIMITS



1 ADDENDUM #1 04/21/2023

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED ACF
CHECKED CSR

PLAN - RAMP N
STA. 0+00 TO STA. 10+00

FRA-270-51.50

223
554

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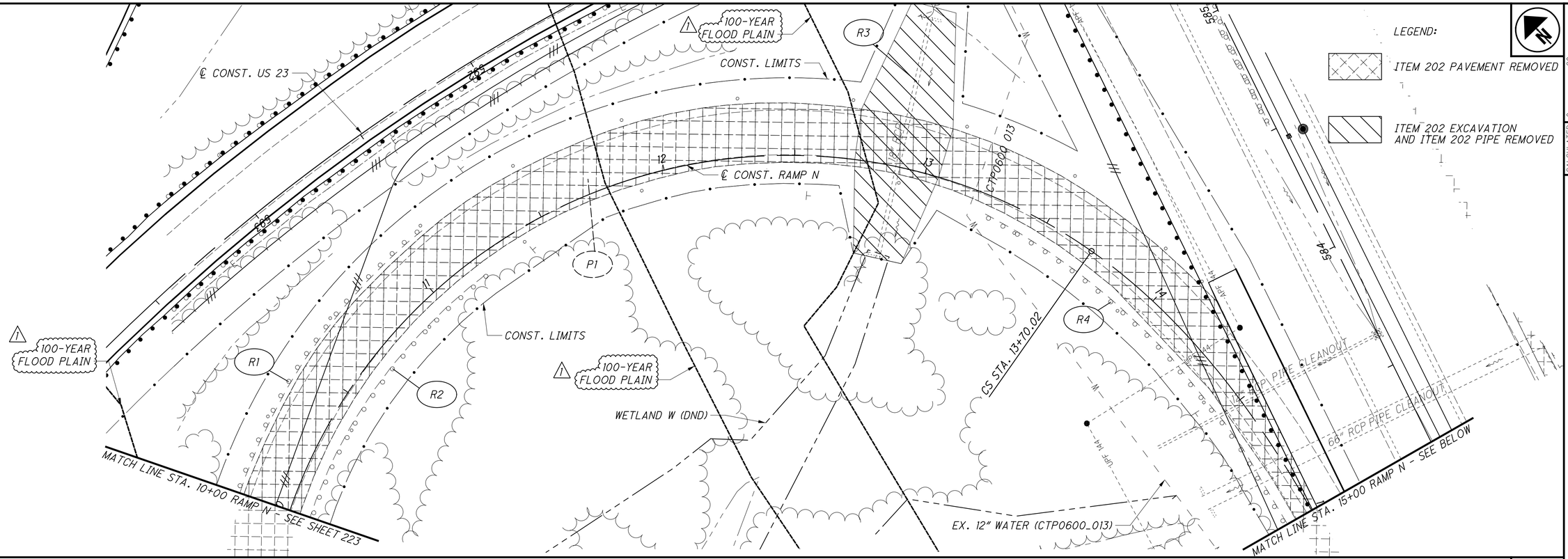

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CROSS REFERENCES	
SHEET NO.	DESCRIPTION
5 -7	℄ REFERENCES & BENCHMARKS
3	CURVE DATA & GEOMETRIC PLAN
85-94	ROADWAY QUANTITIES

℄ CONST. RAMP Q

℄ CONST. US 23

1 100-YEAR FLOOD PLAIN

CONST. LIMITS

IMPACT ATTENUATOR, TYPE 2

ANCHOR ASSEMBLY, TYPE T

GUARDRAIL, TYPE MGS

℄ CONST. RAMP O

24.0'

24.0'

576

577

578

579

72" RCP PIPE CLEANOUT

15" ACP PIPE CLEANOUT

18" RCP PIPE CLEANOUT

G13

2.8

16.4'

4.6

CAUTION AND EXPOSE

12" WATER (CTP0600_0012)

TS STA. 0+98.12

BEGIN PAVEMENT OVERLAY

SC STA. 2+98.12

S 17° 54' 47" W

STA. 0+00.00

WETLAND X (DND)

STREAM 15

S6 ℄ RAMP O - 1SB
P.I. STA. 0+67.89
Ls = 200.00'
Ts = 24° 54' 40"
LT = 134.68'
ST = 67.89'
x = 196.25'
y = 28.60'
k = 99.37'
p = 7.20'
e = OVERLAY EXISTING

C23 ℄ RAMP O - 1
P.I. STA. 9+41.40
Δ = 219° 20' 54" (RT)
Dc = 24° 54' 40"
R = 230.00'
T = 643.28'
L = 880.52'
E = 913.16'
C = 433.15'
C.B. = N 27° 30' 06" W
e = OVERLAY EXISTING

S7 ℄ RAMP O - 1SA
P.I. STA. 1+34.68
Ls = 200.00'
Ts = 24° 54' 40"
LT = 134.68'
ST = 67.89'
x = 196.25'
y = 28.60'
k = 99.37'
p = 7.20'
e = OVERLAY EXISTING

CONST. LIMITS

MATCH LINE STA. 5+00 RAMP O - SEE SHEET 226

LEGEND:

ITEM 202 PAVEMENT REMOVED

1 ADDENDUM #1
04/21/2023

693.85	693.95	694.05	694.15	694.25	694.35	694.45	694.55	694.65	694.75	694.85	694.95	695.05	695.15	695.25	695.38	695.56	695.79	696.06	696.43	696.83
693.79	693.62	694.13	694.46	694.59	694.88	694.96	695.13	695.38	695.94	696.62										

710 705 700 695 690 685 680 675

P.V.I. STA 5+00.00 ELEV = 695.85'
300.00' VC
K = 115

P.V.C. STA 3+50.00
ELEV 695.25

+0.40 %

EX. GROUND

PR. LTG CONDUIT

PR. LTG CONDUIT

PR. LTG CONDUIT

EX ELEC.

EX 12" WATER

EX 12" WATER

0 1+00 2+00 3+00 4+00 5+00

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED ACF
CHECKED CSR

PLAN AND PROFILE - RAMP O
STA. 0+00 TO STA. 5+00

FRA-270-51.50

225
554

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CROSS REFERENCES	
SHEET NO.	DESCRIPTION
5 - 7	℄ REFERENCES & BENCHMARKS
3	CURVE DATA & GEOMETRIC PLAN
85 - 94	ROADWAY QUANTITIES

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED ACF
CHECKED CSR

PLAN AND PROFILE - RAMP O
STA. 5+00 TO STA. 10+00

FRA-270-51.50

226
554

1 ADDENDUM #1 04/21/2023

(S6) ℄ RAMP O - 1SB
P.I. STA. 0+67.89
Ls = 200.00'
fs = 24° 54' 40"
LT = 134.68'
ST = 67.89'
x = 196.25'
y = 28.60'
k = 99.37'
p = 7.20'
e = OVERLAY EXISTING

(C23) ℄ RAMP O - 1
P.I. STA. 9+41.40
Δ = 219° 20' 54" (RT)
Dc = 24° 54' 40"
R = 230.00'
T = 643.28'
L = 880.52'
E = 913.16'
C = 433.15'
C.B. = N 27° 30' 06" W
e = OVERLAY EXISTING

(S7) ℄ RAMP O - 1SA
P.I. STA. 1+34.68
Ls = 200.00'
fs = 24° 54' 40"
LT = 134.68'
ST = 67.89'
x = 196.25'
y = 28.60'
k = 99.37'
p = 7.20'
e = OVERLAY EXISTING

P.V.I. STA 5+00.00 ELEV = 695.85'
300.00' VC
K = 115
P.V.T. STA 6+50.00
ELEV 700.35
PR. PROFILE RAMP O
+3.00 %
EX. GROUND
PR. LTG CONDUIT
P.V.C. STA 8+87.50
ELEV 703.47
P.V.I. STA 10+75.00 ELEV = 713.10'
375.00' VC
K = 141
SSD = 592'

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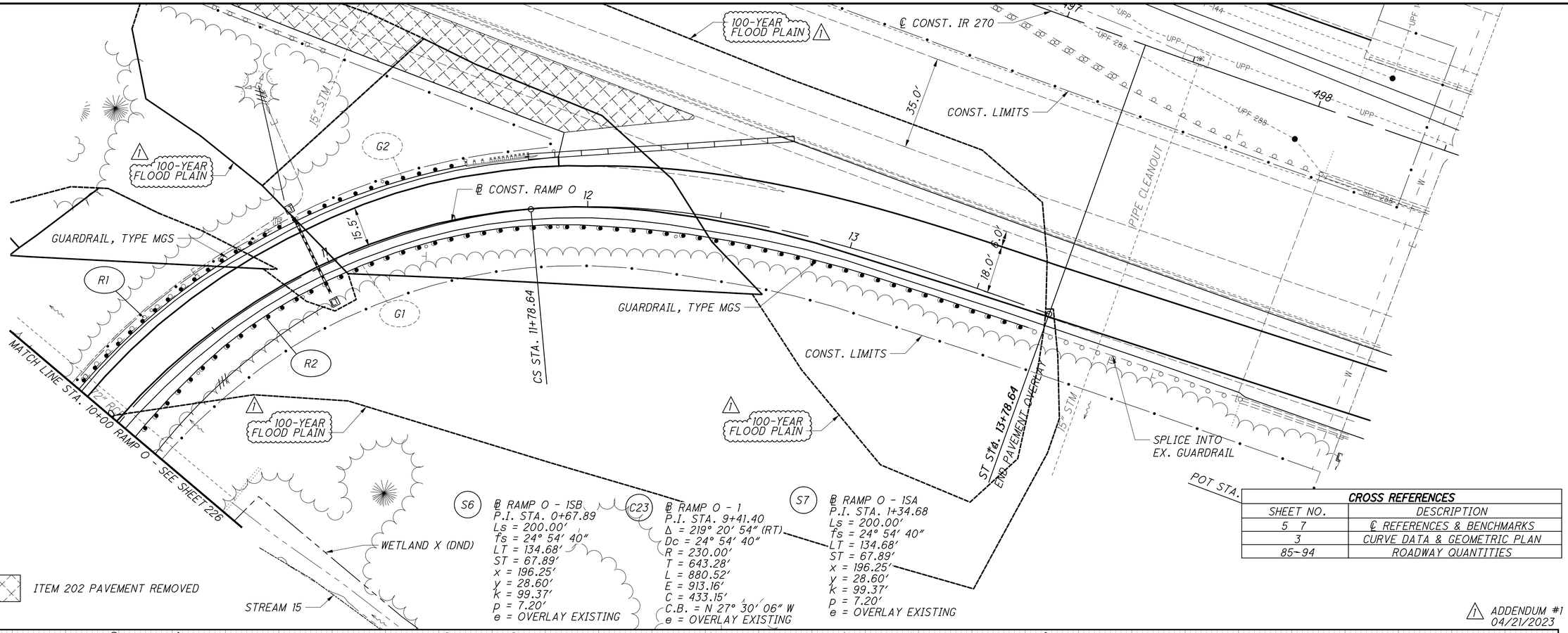

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
5 7	℄ REFERENCES & BENCHMARKS
3	CURVE DATA & GEOMETRIC PLAN
85-94	ROADWAY QUANTITIES

⚠1 ADDENDUM #1 04/21/2023

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED ACF
CHECKED CSR

PLAN AND PROFILE - RAMP O STA. 10+00 TO STA. 13+78.64

FRA-270-51.50

227
554

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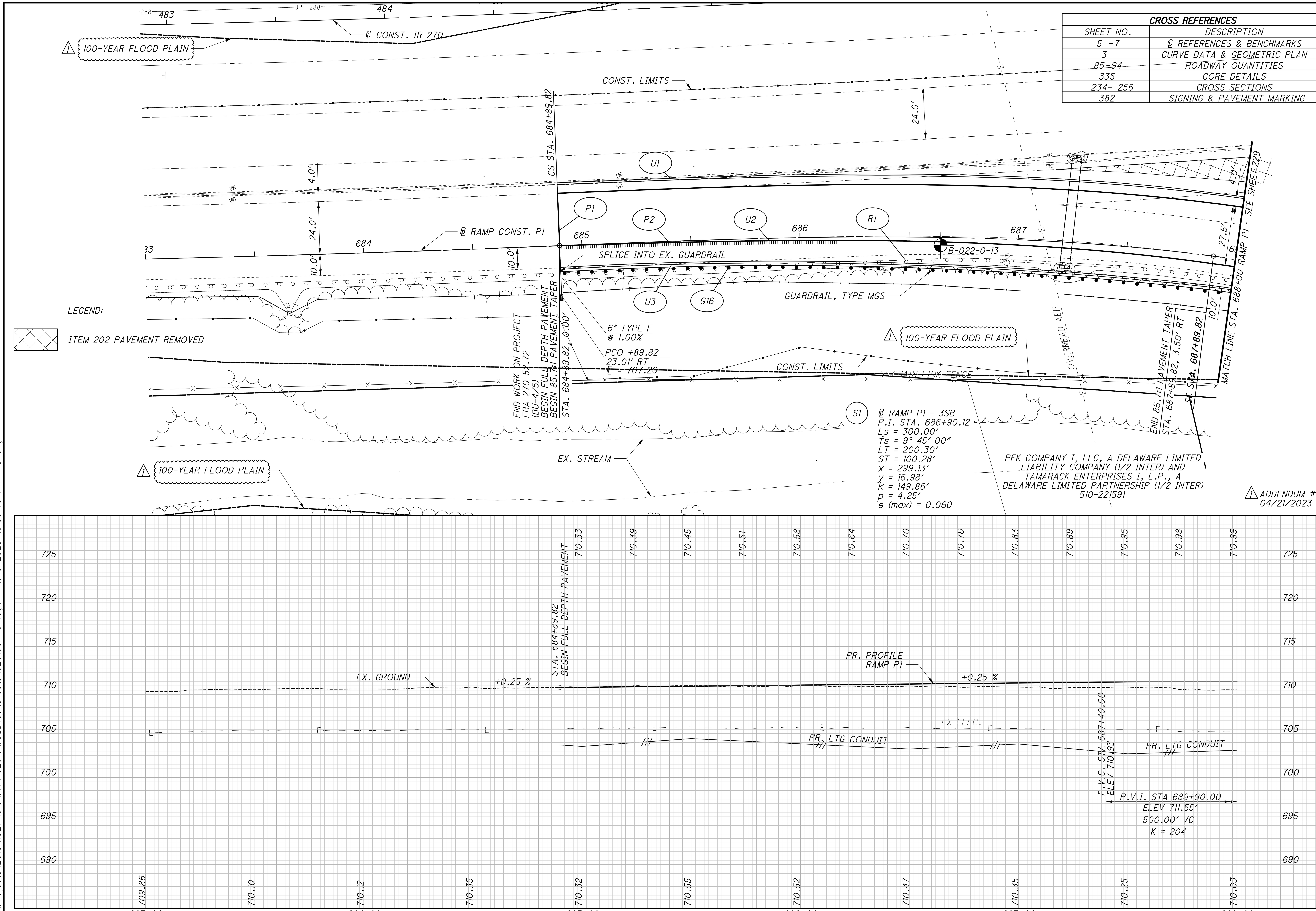
CROSS REFERENCES	
SHEET NO.	DESCRIPTION
5 -7	℄ REFERENCES & BENCHMARKS
3	CURVE DATA & GEOMETRIC PLAN
85-94	ROADWAY QUANTITIES
335	GORE DETAILS
234- 256	CROSS SECTIONS
382	SIGNING & PAVEMENT MARKING



℄ CONST. IR 270
100-YEAR FLOOD PLAIN
CONST. LIMITS
CS STA. 684+89.82
℗ RAMP CONST. P1
SPLICE INTO EX. GUARDRAIL
GUARDRAIL, TYPE MGS
B-022-0-13
LEGEND:
ITEM 202 PAVEMENT REMOVED
END WORK ON PROJECT FRA-270-52.72 (BU-4(5))
BEGIN FULL DEPTH PAVEMENT
BEGIN 85.7:1 PAVEMENT TAPER
STA. 684+89.82, 0.00'
6" TYPE F @ 1.00%
PCO +89.82 23.01' RT ℄ - 707.20
6' CHAIN LINK FENCE
EX. STREAM
OVERHEAD AEP
END 85.7:1 PAVEMENT TAPER STA. 687+89.82, 3.50' RT
SC STA. 687+89.82
MATCH LINE STA. 688+00 RAMP P1 - SEE SHEET 229
℗ RAMP P1 - 3SB
P.I. STA. 686+90.12
Ls = 300.00'
fs = 9° 45' 00"
LT = 200.30'
ST = 100.28'
x = 299.13'
y = 16.98'
k = 149.86'
p = 4.25'
e (max) = 0.060
PFK COMPANY I, LLC, A DELAWARE LIMITED LIABILITY COMPANY (1/2 INTER) AND TAMARACK ENTERPRISES I, L.P., A DELAWARE LIMITED PARTNERSHIP (1/2 INTER)
510-221591
ADDENDUM #1 04/21/2023
STA. 684+89.82 BEGIN FULL DEPTH PAVEMENT
EX. GROUND
+0.25 %
PR. PROFILE RAMP P1
EX ELEC.
PR. LTG CONDUIT
P.V.C. STA 687+40.00 ELEV 710.93
P.V.I. STA 689+90.00
ELEV 711.55'
500.00' VC
K = 204
683+00
684+00
685+00
686+00
687+00
688+00

HORIZONTAL SCALE IN FEET

CALCULATED ACF

CHECKED CSR

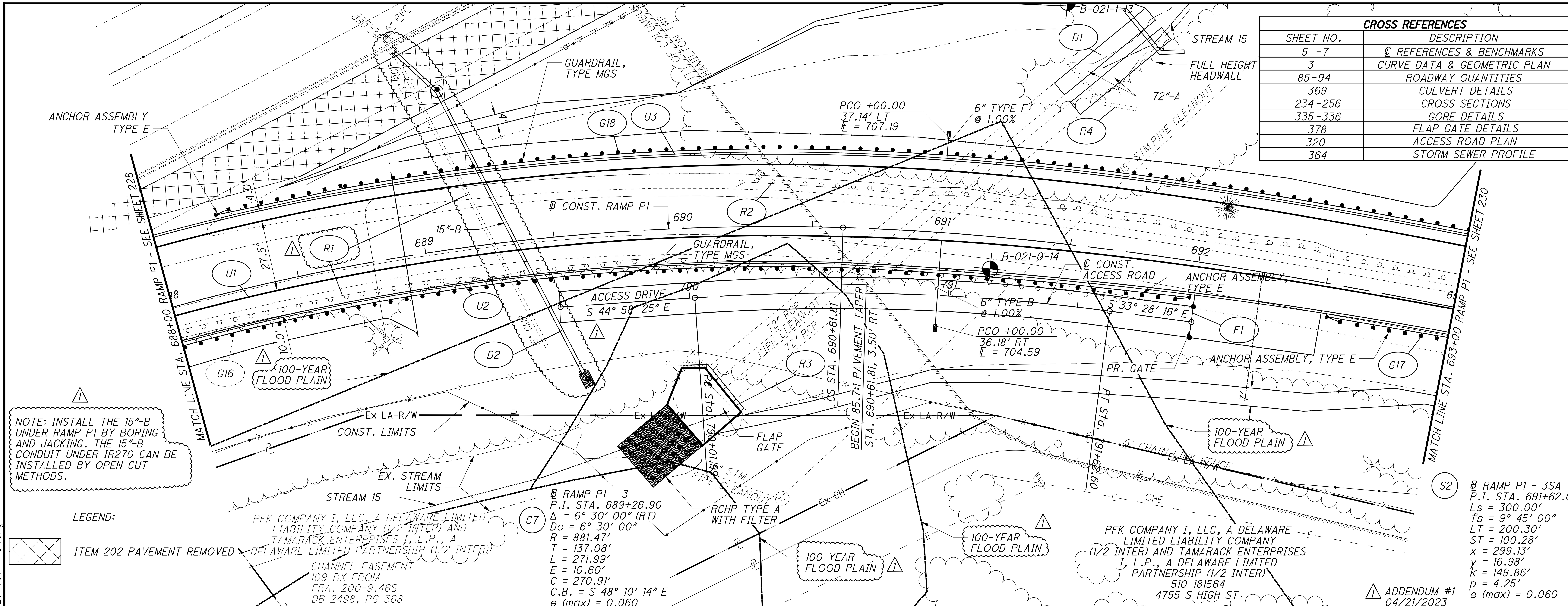
PLAN AND PROFILE - RAMP P1
STA. 683+00 TO STA. 688+00

FRA-270-51.50

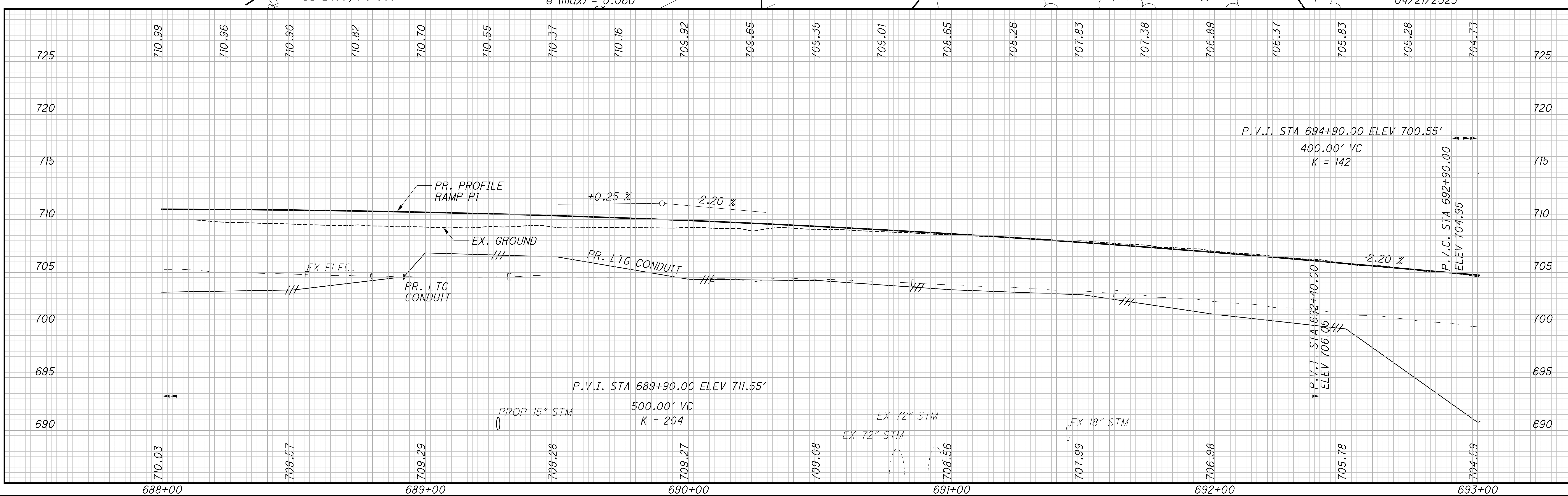
PLAN AND PROFILE - RAMP P1
STA. 688+00 TO STA. 693+00

FRA-270-51.50

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
5 -7	℄ REFERENCES & BENCHMARKS
3	CURVE DATA & GEOMETRIC PLAN
85-94	ROADWAY QUANTITIES
369	CULVERT DETAILS
234-256	CROSS SECTIONS
335-336	GORE DETAILS
378	FLAP GATE DETAILS
320	ACCESS ROAD PLAN
364	STORM SEWER PROFILE



ANCHOR ASSEMBLY TYPE E
GUARDRAIL, TYPE MGS
PCO +00.00
37.14' LT
℄ = 707.19
6" TYPE F @ 1.00%
STREAM 15
FULL HEIGHT HEADWALL
72"-A
18" STM PIPE CLEANOUT
B-021-1-13
℄ CONST. RAMP P1
15"-B
B-021-0-14
℄ CONST. ACCESS ROAD
ANCHOR ASSEMBLY, TYPE E
ACCESS DRIVE
S 44° 58' 25" E
S 33° 28' 16" E
6" TYPE B @ 1.00%
PCO +00.00
36.18' RT
℄ = 704.59
72" RCP PIPE CLEANOUT
PR. GATE
ANCHOR ASSEMBLY, TYPE E
100-YEAR FLOOD PLAIN
BEGIN 85.7:1 PAVEMENT TAPER STA. 690+61.81, 3.50' RT
CONST. LIMITS
FLAP GATE
EX. STREAM LIMITS
STREAM 15
RCHP TYPE A WITH FILTER
5' CHAIN LINK FENCE
MATCH LINE STA. 688+00 RAMP P1 - SEE SHEET 228
MATCH LINE STA. 693+00 RAMP P1 - SEE SHEET 230
NOTE: INSTALL THE 15"-B UNDER RAMP P1 BY BORING AND JACKING. THE 15"-B CONDUIT UNDER IR270 CAN BE INSTALLED BY OPEN CUT METHODS.
LEGEND:
ITEM 202 PAVEMENT REMOVED
PFK COMPANY I, LLC, A DELAWARE LIMITED LIABILITY COMPANY (1/2 INTER) AND TAMARACK ENTERPRISES I, L.P., A DELAWARE LIMITED PARTNERSHIP (1/2 INTER)
CHANNEL EASEMENT 109-BX FROM FRA. 200-9.46S DB 2498, PG 368
℄ RAMP P1 - 3
P.I. STA. 689+26.90
Δ = 6° 30' 00" (RT)
Dc = 6° 30' 00"
R = 881.47'
T = 137.08'
L = 271.99'
E = 10.60'
C = 270.91'
C.B. = S 48° 10' 14" E
e (max) = 0.060
PFK COMPANY I, LLC, A DELAWARE LIMITED LIABILITY COMPANY (1/2 INTER) AND TAMARACK ENTERPRISES I, L.P., A DELAWARE LIMITED PARTNERSHIP (1/2 INTER)
510-181564
4755 S HIGH ST
℄ RAMP P1 - 3SA
P.I. STA. 691+62.09
Ls = 300.00'
Ts = 9° 45' 00"
LT = 200.30'
ST = 100.28'
x = 299.13'
y = 16.98'
k = 149.86'
p = 4.25'
e (max) = 0.060
ADDENDUM #1 04/21/2023
HORIZONTAL SCALE IN FEET



P.V.I. STA 694+90.00 ELEV 700.55'
400.00' VC
K = 142
PR. PROFILE RAMP P1
+0.25 %
-2.20 %
EX. GROUND
PR. LTG CONDUIT
EX ELEC.
-2.20 %
P.V.C. STA 692+90.00 ELEV 704.95
P.V.T. STA 692+40.00 ELEV 706.05
P.V.I. STA 689+90.00 ELEV 711.55'
500.00' VC
K = 204
PROP 15" STM
EX 72" STM
EX 18" STM
688+00
689+00
690+00
691+00
692+00
693+00

CALCULATED ACF
CHECKED CSR

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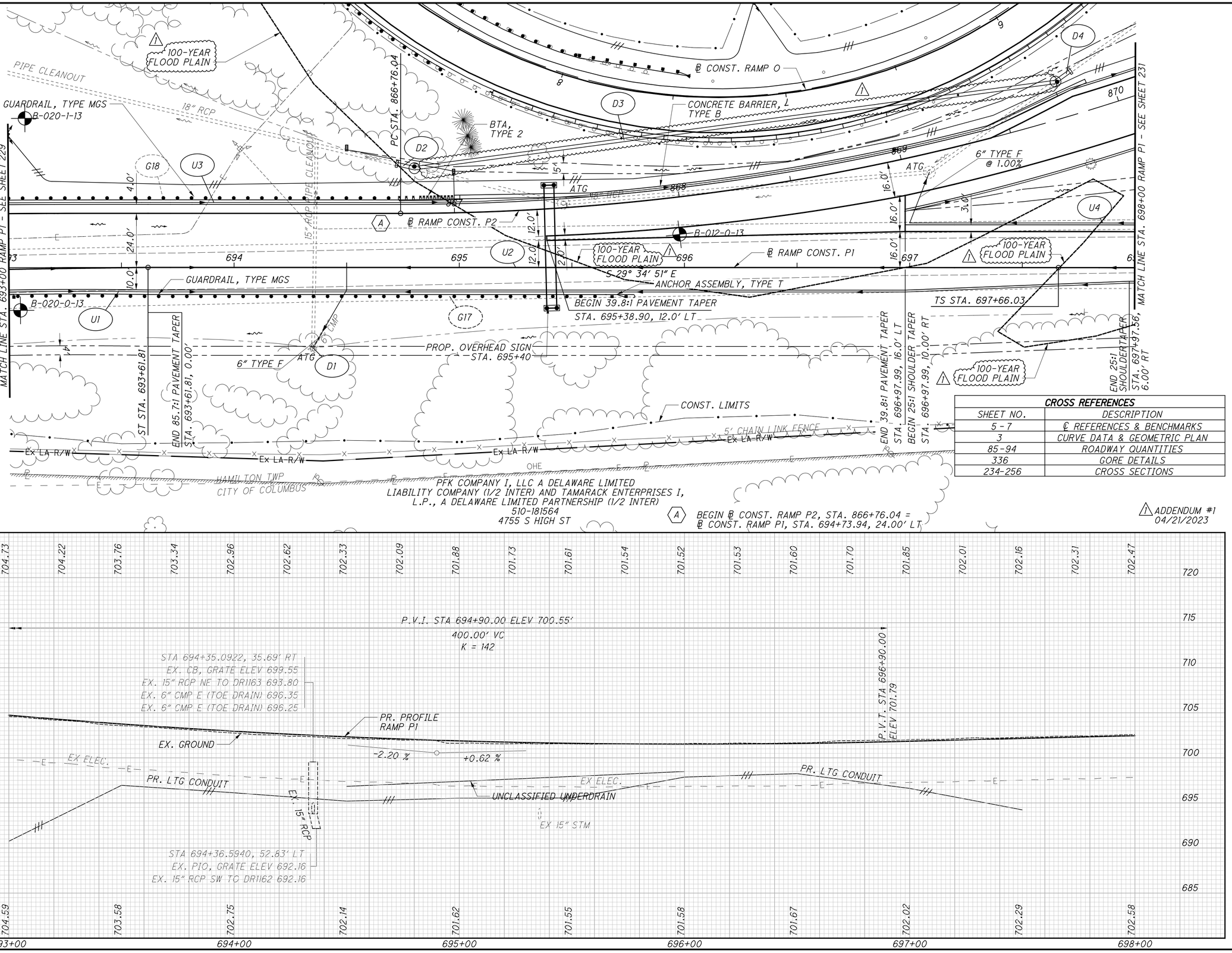

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
5 - 7	℄ REFERENCES & BENCHMARKS
3	CURVE DATA & GEOMETRIC PLAN
85 - 94	ROADWAY QUANTITIES
336	GORE DETAILS
234-256	CROSS SECTIONS

ADDENDUM #1
04/21/2023

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED ACF
CHECKED CSR

PLAN AND PROFILE - RAMP P1
STA. 693+00 TO STA. 698+00

FRA-270-51.50

230
554

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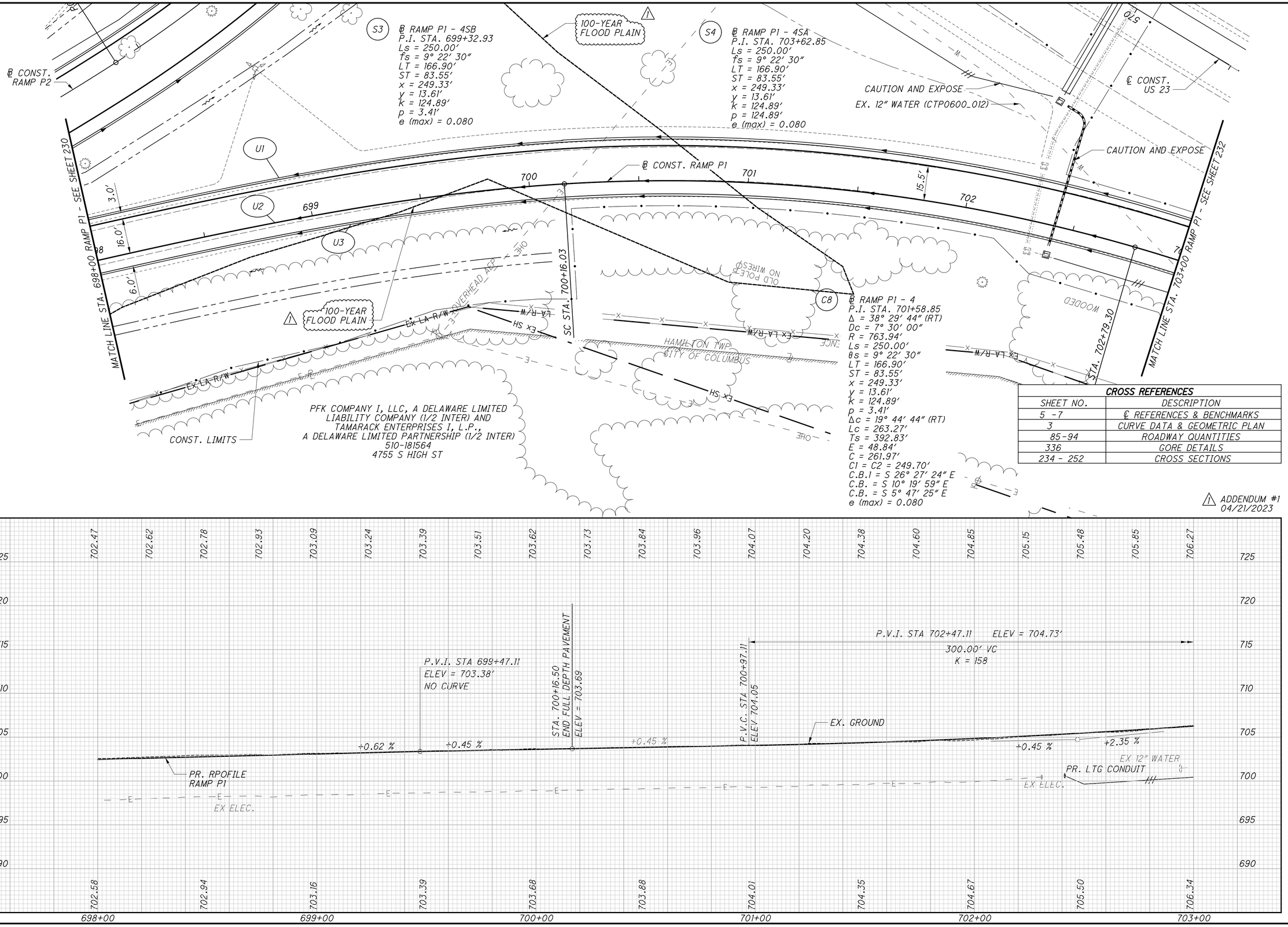

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
5 -7	℄ REFERENCES & BENCHMARKS
3	CURVE DATA & GEOMETRIC PLAN
85-94	ROADWAY QUANTITIES
336	GORE DETAILS
234 - 252	CROSS SECTIONS

⚠1 ADDENDUM #1 04/21/2023

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED ACF
CHECKED CSR

PLAN AND PROFILE - RAMP P1 STA. 698+00 TO STA. 703+00

FRA-270-51.50

231
554

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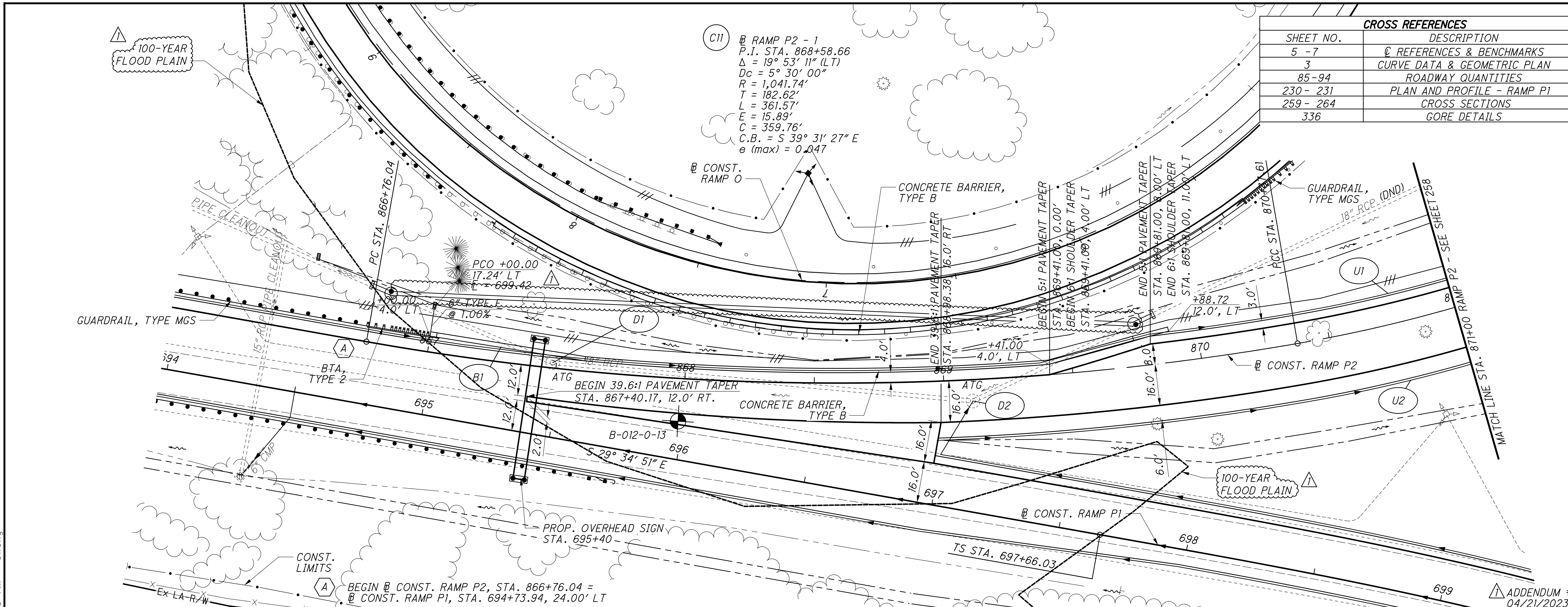
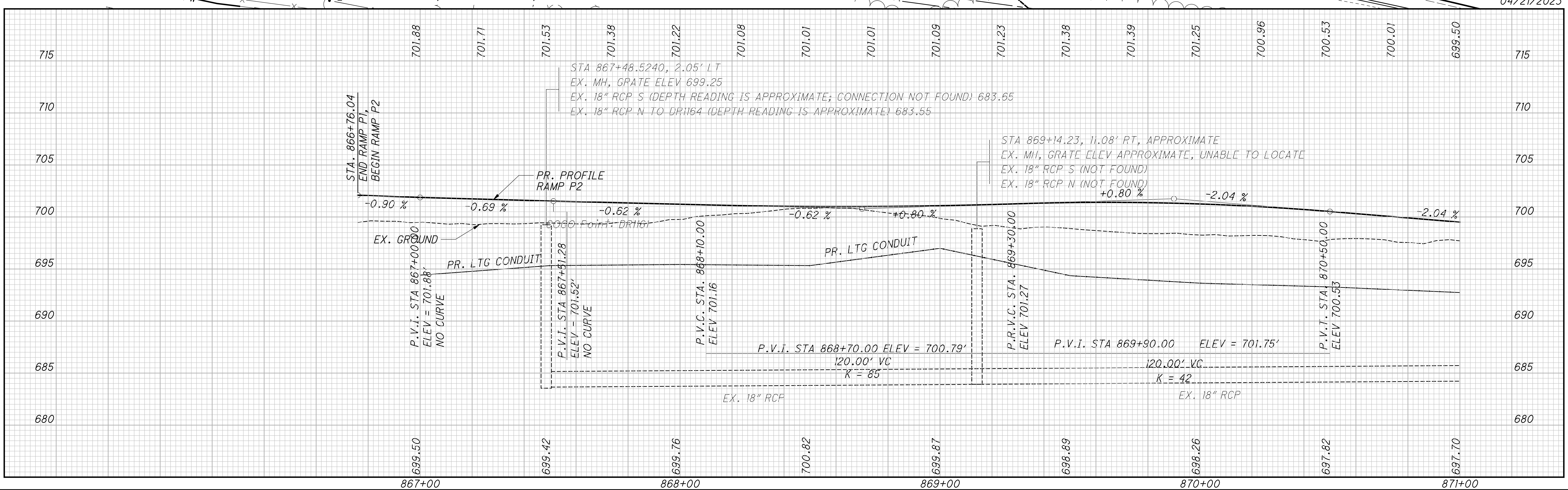


100-YEAR FLOOD PLAIN
C11
℄ RAMP P2 - 1
P.I. STA. 868+58.66
Δ = 19° 53′ 11″ (LT)
Dc = 5° 30′ 00″
R = 1,041.74′
T = 182.62′
L = 361.57′
E = 15.89′
C = 359.76′
C.B. = S 39° 31′ 27″ E
e (max) = 0.047
℄ CONST. RAMP O
CONCRETE BARRIER, TYPE B
GUARDRAIL, TYPE MGS
PIPE CLEANOUT
PC STA. 866+76.04
PCO +00.00 17.24′ LT E = 699.42
+00.00 4.0′ LT
6″ TYPE F @ 1.00%
D1
B1
A
BTA, TYPE 2
ATG
BEGIN 39.6:1 PAVEMENT TAPER STA. 867+40.17, 12.0′ RT.
CONCRETE BARRIER, TYPE B
B-012-0-13
S 29° 34′ 51″ E
D2
END 39.6:1 PAVEMENT TAPER STA. 868+98.38, 16.0′ RT
BEGIN 5:1 PAVEMENT TAPER STA. 869+41.00, 0.00′
BEGIN 6:1 SHOULDER TAPER STA. 869+41.00, 4.00′ LT
+41.00 4.0′ LT
END 5:1 PAVEMENT TAPER STA. 869+81.00, 8.00′ LT
END 6:1 SHOULDER TAPER STA. 869+81.00, 11.00′ LT
+88.72 12.0′ LT
PCC STA. 870+61
GUARDRAIL, TYPE MGS
18″ RCP (DND)
U1
U2
℄ CONST. RAMP P2
MATCH LINE STA. 871+00 RAMP P2 - SEE SHEET 258
100-YEAR FLOOD PLAIN
℄ CONST. RAMP P1
TS STA. 697+66.03
PROP. OVERHEAD SIGN STA. 695+40
CONST. LIMITS
Ex LA-R/W
BEGIN ℄ CONST. RAMP P2, STA. 866+76.04 = ℄ CONST. RAMP P1, STA. 694+73.94, 24.00′ LT
ADDENDUM #1 04/21/2023

SHEET NO.	DESCRIPTION
5 - 7	℄ REFERENCES & BENCHMARKS
3	CURVE DATA & GEOMETRIC PLAN
85 - 94	ROADWAY QUANTITIES
230 - 231	PLAN AND PROFILE - RAMP P1
259 - 264	CROSS SECTIONS
336	GORE DETAILS

CROSS REFERENCES



STA. 866+76.04 END RAMP P1, BEGIN RAMP P2
PR. PROFILE RAMP P2
EX. GROUND
PR. LTG CONDUIT
STA 867+48.5240, 2.05′ LT
EX. MH, GRATE ELEV 699.25
EX. 18″ RCP S (DEPTH READING IS APPROXIMATE; CONNECTION NOT FOUND) 683.65
EX. 18″ RCP N TO DR1164 (DEPTH READING IS APPROXIMATE) 683.55
STA 869+14.23, 11.08′ RT, APPROXIMATE
EX. MH, GRATE ELEV APPROXIMATE, UNABLE TO LOCATE
EX. 18″ RCP S (NOT FOUND)
EX. 18″ RCP N (NOT FOUND)
-0.90 %
-0.69 %
-0.62 %
+0.80 %
-2.04 %
P.V.I. STA 867+00.00 ELEV = 701.88 NO CURVE
P.V.I. STA 867+51.28 ELEV = 701.52′ NO CURVE
P.V.C. STA. 868+10.00 ELEV 701.16
P.V.I. STA 868+70.00 ELEV = 700.79′
120.00′ VC
K = 85
P.R.V.C. STA. 869+30.00 ELEV 701.27
P.V.I. STA 869+90.00 ELEV = 701.75′
120.00′ VC
K = 42
P.V.T. STA. 870+50.00 ELEV 700.53
EX. 18″ RCP
715 710 705 700 695 690 685 680
701.88 701.71 701.53 701.38 701.22 701.08 701.01 701.01 701.09 701.23 701.38 701.39 701.25 700.96 700.53 700.01 699.50
699.50 699.42 699.76 700.82 699.87 698.89 698.26 697.82 697.70
867+00 868+00 869+00 870+00 871+00

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED ACF
CHECKED CSR

PLAN AND PROFILE - RAMP P2
STA. 866+76.04 TO STA. 871+00

FRA-270-51.50

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
5 -7	℄ REFERENCES & BENCHMARKS
3	CURVE DATA & GEOMETRIC PLAN
85-94	ROADWAY QUANTITIES
370	CULVERT DETAILS
259 - 264	CROSS SECTIONS
333	INTERSECTION DETAILS
404	TRAFFIC SIGNAL PLANS

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED ACF CHECKED CSR

GUARDRAIL, TYPE MGS

PCO +50.00
29.56' LT
℄ = 694.79

PIPE CLEANOUT

6" TYPE F @ 1.00%

U1

3.0'

8.0'

℄ CONST. RAMP P2

MATCH LINE STA. 871+00 RAMP P2 - SEE SHEET257

16.0'

6.0'

U2

6" TYPE F @ 1.00%

PCO +50.00
37.21' RT
℄ = 695.67

100-YEAR FLOOD PLAIN

EX. 12" WATER (CTP0800_012)

PT STA. 872+38.97

STA 872+71.00
END FULL DEPTH PAVEMENT

872

873

S 89° 36' 13" E

B-009-0-13

B-011-0-13

30"-A

D1

15"-B

574

573

CONST. LIMITS

℄ CONST. US 23

CONST. LIMITS

CONST. LIMITS

TR

TR

WETLAND AB (DND)

A STA. 573+22.67 ℄ CONST. US 23 =
STA. 873+22.67 ℄ RAMP P2

18" RCP

PIPE CLEANOUT

100-YEAR FLOOD PLAIN

OHE

C11
℄ RAMP P2 - 1
P.I. STA. 868+53.66
Δ = 19° 53' 11" (LT)
Dc = 5° 30' 00"
R = 1,041.74'
T = 182.62'
L = 361.57'
E = 15.89'
C = 359.76'
C.B. = S 39° 31' 27" E
e (max) = 0.047

C12
℄ RAMP P2 - 2
P.I. STA. 871+39.34
Δ = 20° 08' 11" (LT)
Dc = 10° 00' 00"
R = 572.96'
T = 101.73'
L = 201.36'
E = 8.96'
C = 200.33'
C.B. = S 59° 32' 07" E
e (max) = 0.038

100-YEAR FLOOD PLAIN

CONST. LIMITS

PIPE CLEANOUT

POT STA. 871+88.12

18" RCP

ADDENDUM #1
04/21/2023

699.50 698.99 698.62 698.52 698.69 699.13 699.71 700.30

715 710 705 700 695 690 685 680

P.V.I. STA 871+75.00 ELEV = 697.97'
100.00' VC
K = 23

P.V.C. STA. 871+25.00
ELEV 698.99

P.V.T. STA. 872+25.00
ELEV 699.13

PR. PROFILE RAMP P2

-2.04 %

+2.33 %

EX. GROUND

PR. LTG CONDUIT

PR. LTG CONDUIT

30"-A
ELEV = 697.97'

STA 872+58.9573, 52.80' LT
EX. MH, GRATE ELEV 698.13
EX. 18" RCP SE TO DR1020 684.48
EX. 18" RCP W (CONNECTION NOT FOUND) 684.38

700.54

EX ELEC
EX 12" WATER

P.V.I. STA 872+65.49
ELEV = 700.54'
MATCH EXISTING PAVEMENT

697.70 697.10 696.06 697.18 700.50

871+00 872+00 873+00

PLAN AND PROFILE - RAMP P2
STA. 871+00 TO STA. 873+22.67

FRA-270-51.50

258
554

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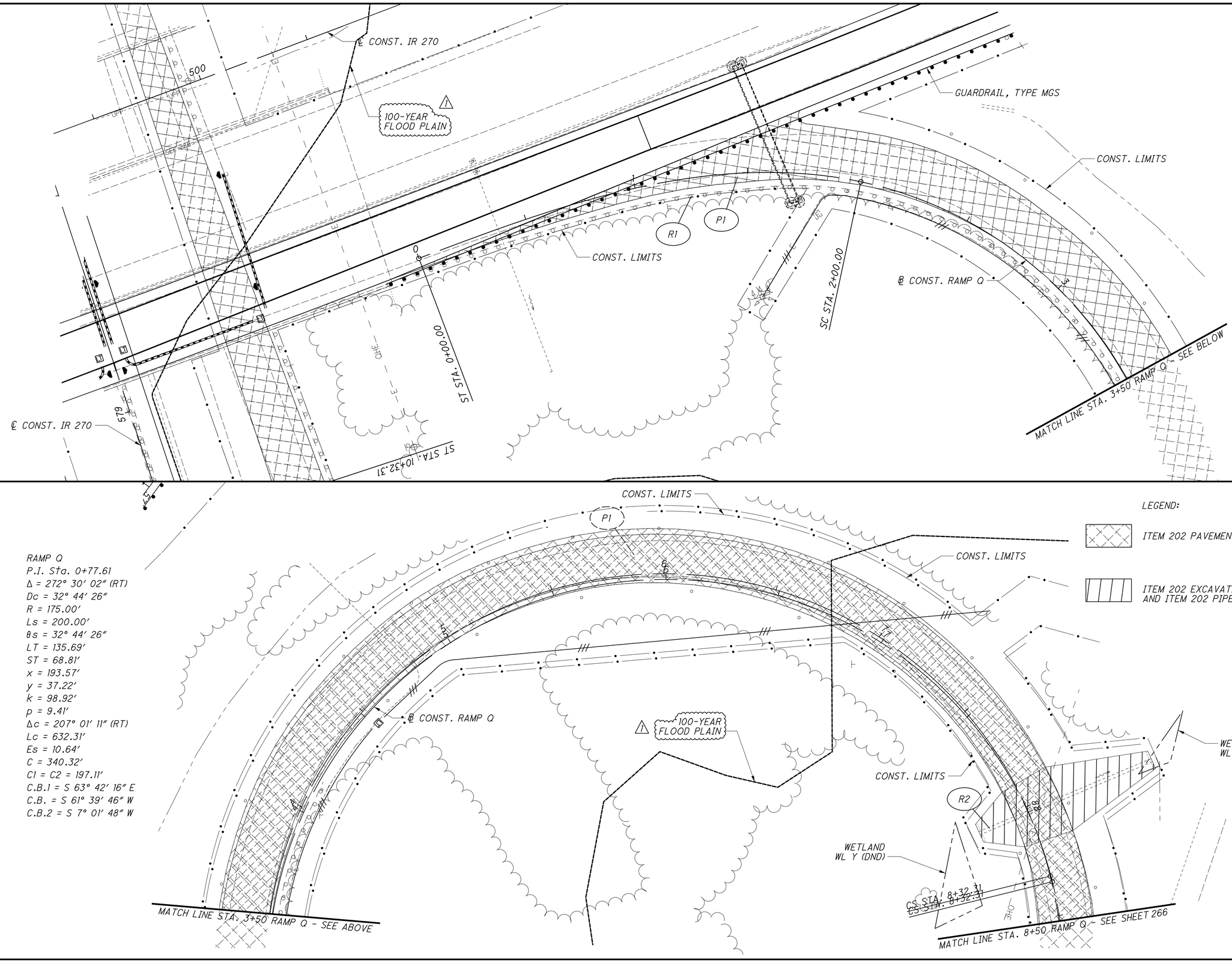

RAMP Q
P.I. Sta. 0+77.61
Δ = 272° 30′ 02″ (RT)
Dc = 32° 44′ 26″
R = 175.00′
Ls = 200.00′
θs = 32° 44′ 26″
LT = 135.69′
ST = 68.81′
x = 193.57′
y = 37.22′
k = 98.92′
p = 9.41′
Δc = 207° 01′ 11″ (RT)
Lc = 632.31′
Es = 10.64′
C = 340.32′
C1 = C2 = 197.11′
C.B.1 = S 63° 42′ 16″ E
C.B. = S 61° 39′ 46″ W
C.B.2 = S 7° 01′ 48″ W

1 ADDENDUM #1 04/21/2023

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED ACF
CHECKED CSR

PLAN - RAMP Q
STA. 0+00 TO STA. 8+50

FRA-270-51.50

265
554

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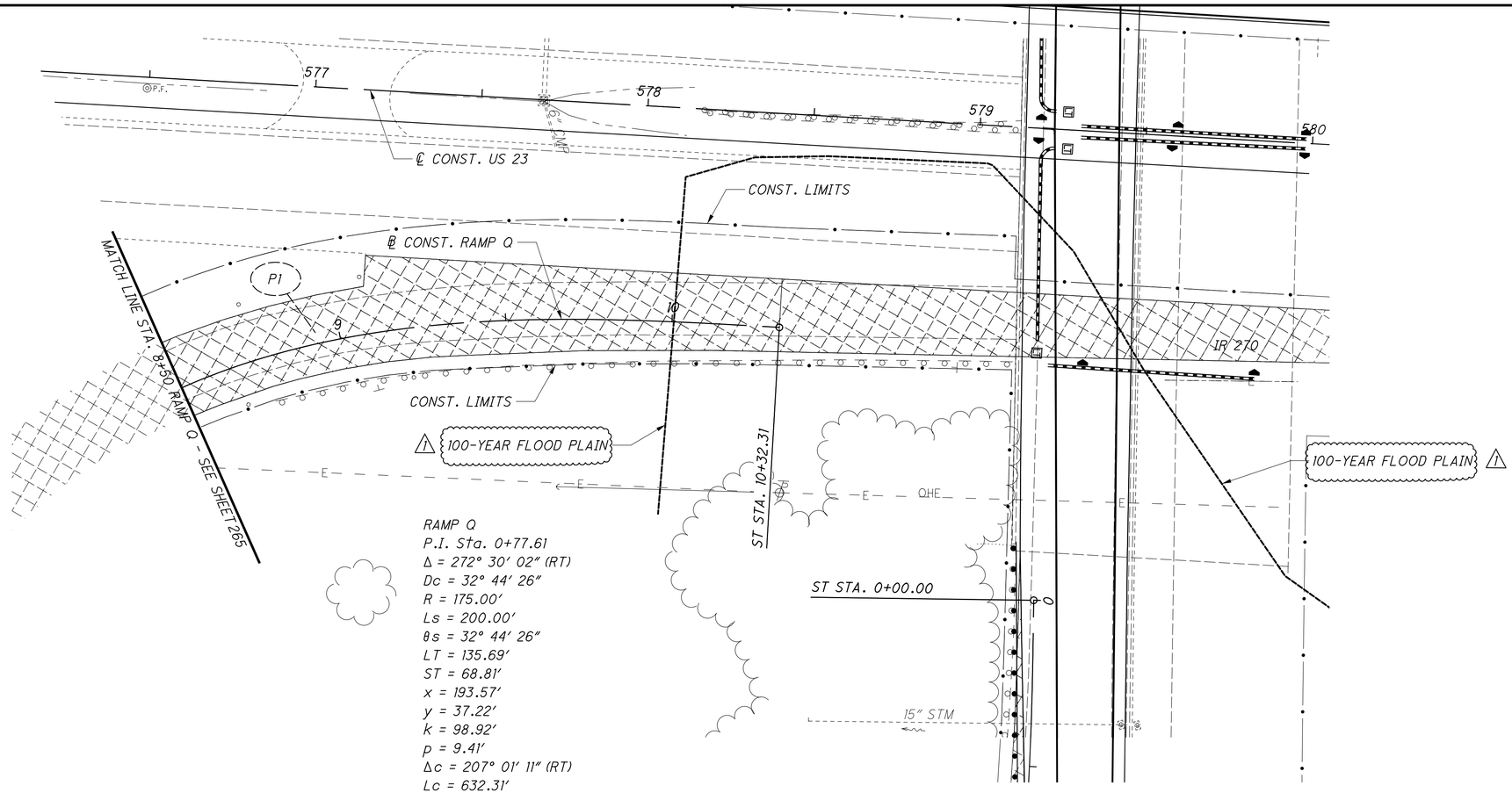


RAMP Q
P.I. Sta. 0+77.61
Δ = 272° 30′ 02″ (RT)
Dc = 32° 44′ 26″
R = 175.00′
Ls = 200.00′
θs = 32° 44′ 26″
LT = 135.69′
ST = 68.81′
x = 193.57′
y = 37.22′
k = 98.92′
p = 9.41′
Δc = 207° 01′ 11″ (RT)
Lc = 632.31′
Es = 10.64′
C = 340.32′
C1 = C2 = 197.11′
C.B.1 = S 63° 42′ 16″ E
C.B. = S 61° 39′ 46″ W
C.B.2 = S 7° 01′ 48″ W

LEGEND:

ITEM 202 PAVEMENT REMOVED

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
174	PLAN - US 23

HORIZONTAL SCALE IN FEET
0 10 20 40

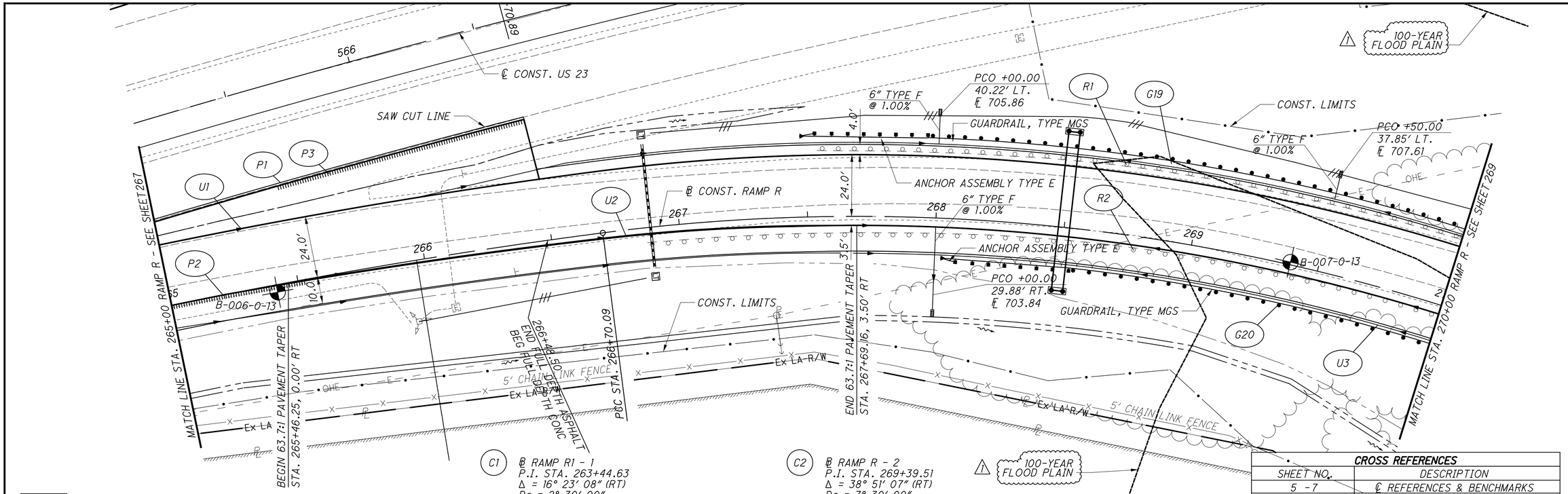
CALCULATED ACF
CHECKED CSR

PLAN - RAMP Q
STA. 8+50 TO STA. 10+32.31

FRA-270-51.50

266
554

1 ADDENDUM #1
04/21/2023



ITEM 670 - DITCH EROSION CONTROL PROTECTION MAT

ITEM 836 - TURF REINFORCING MAT, TYPE 1

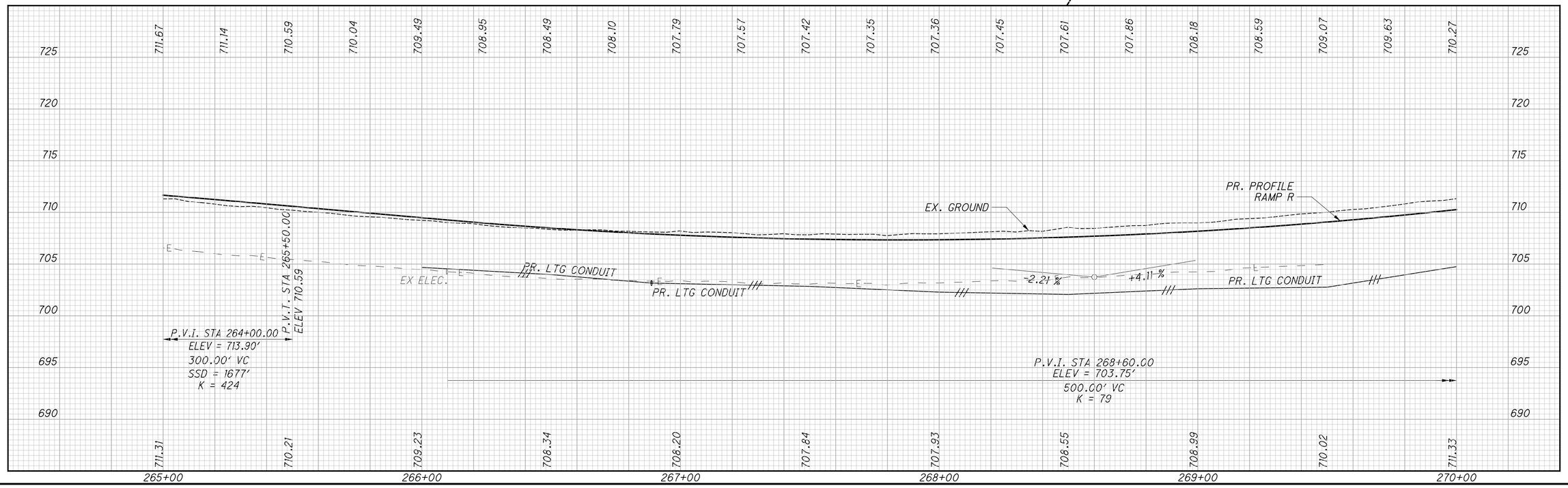
ITEM 836 - TURF REINFORCING MAT, TYPE 2

C1
℄ RAMP R1 - 1
P.I. STA. 263+44.63
Δ = 16° 23' 08" (RT)
Dc = 2° 30' 00"
R = 2,291.83'
T = 329.97'
L = 655.43'
E = 23.63'
C = 653.20'
C.B. = N 8° 46' 00" E
e (max) = 0.035

C2
℄ RAMP R - 2
P.I. STA. 269+39.51
Δ = 38° 51' 07" (RT)
Dc = 7° 30' 00"
R = 763.94'
T = 329.97
L = 269.42'
E = 46.11'
C = 508.16'
C.B. = N 36° 23' 08" E
e (max) = 0.054

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
5 -7	℄ REFERENCES & BENCHMARKS
3	CURVE DATA & GEOMETRIC PLAN
85-94	ROADWAY QUANTITIES
273-300	CROSS SECTIONS
337-338	GORE DETAILS

1 ADDENDUM #1 04/21/2023



HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED ACF CHECKED CSR

PLAN AND PROFILE - RAMP R
STA. 265+00 TO STA. 270+00

FRA-270-51.50

268
554

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
5 -7	℄ REFERENCES & BENCHMARKS
3	CURVE DATA & GEOMETRIC PLAN
85-94	ROADWAY QUANTITIES
372	CULVERT DETAILS
273-300	CROSS SECTIONS
338	GORE DETAILS

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED ACF CHECKED CSR

PLAN AND PROFILE - RAMP R
STA. 270+00 TO STA. 275+00

FRA-270-51.50

269
554

ITEM 670 - DITCH EROSION CONTROL PROTECTION MAT

ITEM 836 - TURF REINFORCING MAT, TYPE 1

ITEM 836 - TURF REINFORCING MAT, TYPE 2

⚠ ADDENDUM #1 04/21/2023

WETLAND AB (DND)
STREAM 15
CONST. LIMITS
WOODED
BRUSH & TREES
GUARDRAIL, TYPE MGS
MATCH LINE STA. 270+00 RAMP R - SEE SHEET 268
MATCH LINE STA. 275+00 RAMP R - SEE SHEET 270
POT Sta. 271+88.12 BEGIN ℄ CONST. RAMP L STA. 271+88.12, 25.02' LT ℄ CONST. RAMP R
TS Sta. 272+74.99 96" CMP
PROP. OVERHEAD SIGN STA. 274+53
℄ CONST. RAMP R
℄ CONST. RAMP L
N 55° 48' 41" E
6" TYPE F @ 1.00%
BEGIN 63.7:1 PAVEMENT TAPER STA. 271+13.83, 3.50' RT
PT STA. 271+88.12
18" RCP PIPE CLEANOUT
PCO +00.00 20.69' RT. ℄ 718.72
PIPE CLEANOUT
PC STA. 273+18.83
END 63.7:1 PAVEMENT TAPER STA. 273+36.73, 0.00'
END 67.0:1 PAVEMENT TAPER STA. 274+52.87, 14.0' LT
100-YEAR FLOOD PLAIN
B-008-0-13
B-007-1-13
Ex LA-R/W
5' CHAIN LINK FENCE
18" RCP
15" RCP
HAMILTON TWP
CITY OF COLUMBUS
RELOCATE STREAM
℄ RAMP R1 - 3
P.I. STA. 274+68.44
Δ = 2° 59' 29" (RT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 149.61'
L = 299.15'
E = 1.95'
C = 299.11'
C.B. = N 57° 18' 26" E
e (max) = 0.016

P.V.I. STA 268+60.00
ELEV = 703.75'
500.00' VC
K = 79

P.V.I. STA 274+20.00
ELEV = 726.78'
120.00' VC
K = 195

P.V.I. STA 277+50.00
ELEV = 738.32'
540.00' VC
K = 72

+4.11 %
+3.50 %

EX. GROUND
PR. PROFILE RAMP R
PR. LTG CONDUIT
EX ELEC.

STA 271+72.92, 186.15' LT
EX. MH, GRATE ELEV 690.64
EX. 18" RCP NW 684.24
EX. 18" RCP SE 684.64

STA 272+22.36, 108.19' RT
EX. MH, GRATE ELEV 691.30
EX. 18" RCP NE 685.45
EX. 18" RCP NW 685.08
EX. 15" RCP S 686.00

735 730 725 720 715 710 705 700

710.27 710.99 711.79 712.67 713.63 714.65 715.68 716.71 717.73 718.76 719.79 720.82 721.85 722.87 723.90 724.92 725.92 726.88 727.81 728.70 729.55

711.33 712.77 714.51 716.88 717.77 719.94 722.41 724.28 725.24 727.45 729.05

270+00 271+00 272+00 273+00 274+00 275+00

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CROSS REFERENCES	
SHEET NO.	DESCRIPTION
5 -7	℄ REFERENCES & BENCHMARKS
3	CURVE DATA & GEOMETRIC PLAN
85-94	ROADWAY QUANTITIES
373	CULVERT DETAILS
273-300	CROSS SECTIONS
338	GORE DETAILS
202-207	PLAN - RAMP L

℄ CONST. RAMP L
CONST. LIMITS
EX. OVERHEAD SIGN TBR
SC Sta. 575+24.99
MATCH LINE STA. 275+00 RAMP R - SEE SHEET 269
G20
G6
PCO +25.00
37.70' LT.
℄ 731.26
6" TYPE F
@ 1.00%
R1
R2
U3
U1
U2
B-010-0-13
℄ CONST. RAMP R
N 58° 48' 10" E
GUARDRAIL, TYPE MGS
PIPE CLEANOUT 18" RCP
MATCH LINE STA. 280+00 RAMP R - SEE SHEET 271
R3
100-YEAR FLOOD PLAIN
18"-A
D1
+46.00
CONST. LIMITS
5' CHAIN LINK FENCE
Ex LA R/W

C3
℄ RAMP R1 - 3
P.I. STA. 274+68.44
Δ = 2° 59' 29" (RT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 149.61'
L = 299.15'
E = 1.95'
C = 299.11'
C.B. = N 57° 18' 26" E
e (max) = 0.016

BEGIN 12.5:1 SHOULDER TAPER
STA. 275+89.89, 10.00' RT
PT STA. 276+17.98
END 12.5:1 SHOULDER TAPER
STA. 276+39.88, 6.00' RT
PC STA. 276+81.84

C4
℄ RAMP R1 - 4
P.I. STA. 281+80.94
Δ = 38° 25' 16" (RT)
Dc = 4° 00' 00"
R = 1,432.39'
T = 499.11'
L = 960.52'
E = 84.46'
C = 942.63'
C.B. = N 78° 00' 48" E
e (max) = 0.052

ITEM 670 - DITCH EROSION CONTROL PROTECTION MAT
ITEM 836 - TURF REINFORCING MAT, TYPE 1
ITEM 836 - TURF REINFORCING MAT, TYPE 2

1 ADDENDUM #1
04/21/2023

P.V.I. STA 277+50.00
ELEV = 738.32'
540.00' VC
K = 72

+3.50 %
-4.00 %
PR. PROFILE RAMP R
EX. GROUND
EX ELEC.
PR. LTG CONDUIT
PR. LTG CONDUIT

729.55 730.31 730.99 731.58 732.08 732.49 732.82 733.06 733.21 733.28 733.26 733.16 732.96 732.68 732.32 731.86 731.32 730.70 729.98 729.18 728.30
729.05 730.43 732.98 732.97 730.80 732.55 732.54 731.81 731.25 730.01 728.75

750 745 740 735 730 725 720

275+00 276+00 277+00 278+00 279+00 280+00

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED ACF
CHECKED CSR

PLAN AND PROFILE - RAMP R
STA. 275+00 TO STA. 280+00

FRA-270-51.50

270
554

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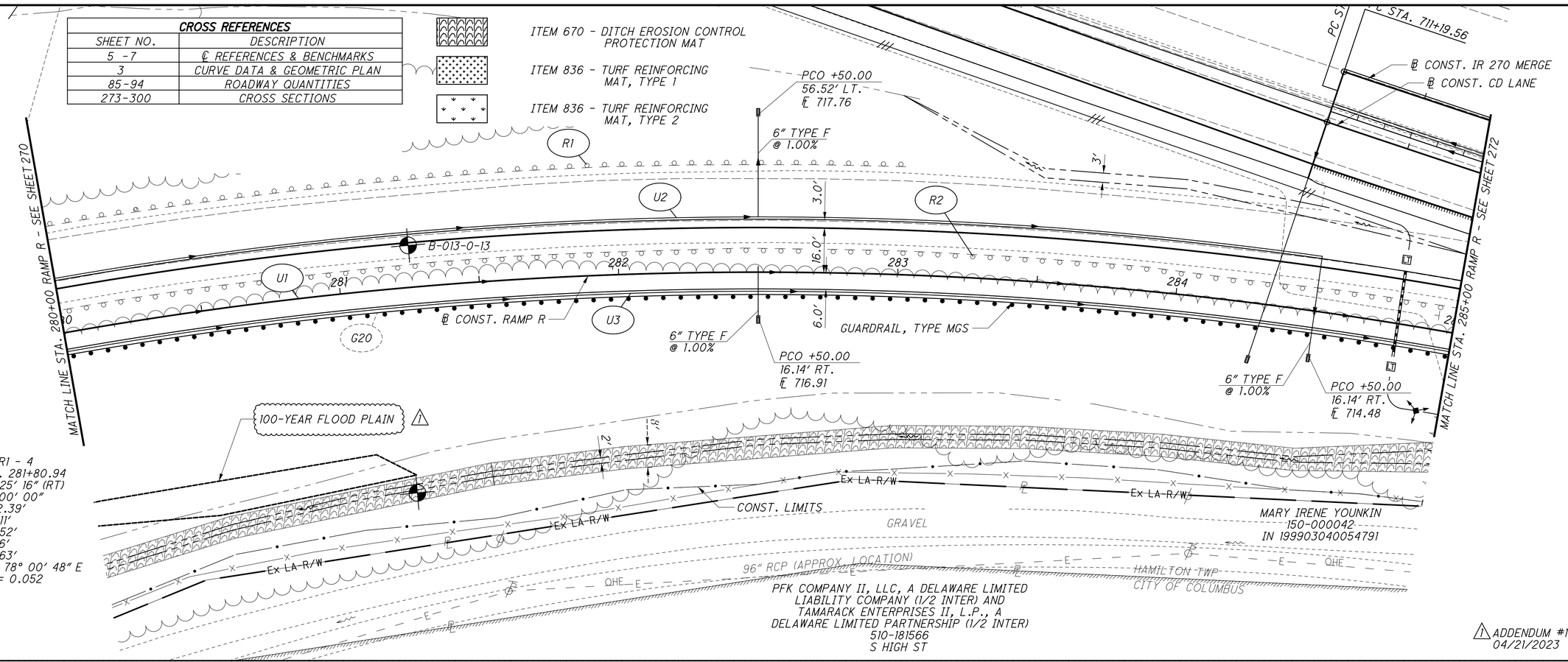
CROSS REFERENCES	
SHEET NO.	DESCRIPTION
5 -7	℄ REFERENCES & BENCHMARKS
3	CURVE DATA & GEOMETRIC PLAN
85-94	ROADWAY QUANTITIES
273-300	CROSS SECTIONS

ITEM 670 - DITCH EROSION CONTROL PROTECTION MAT

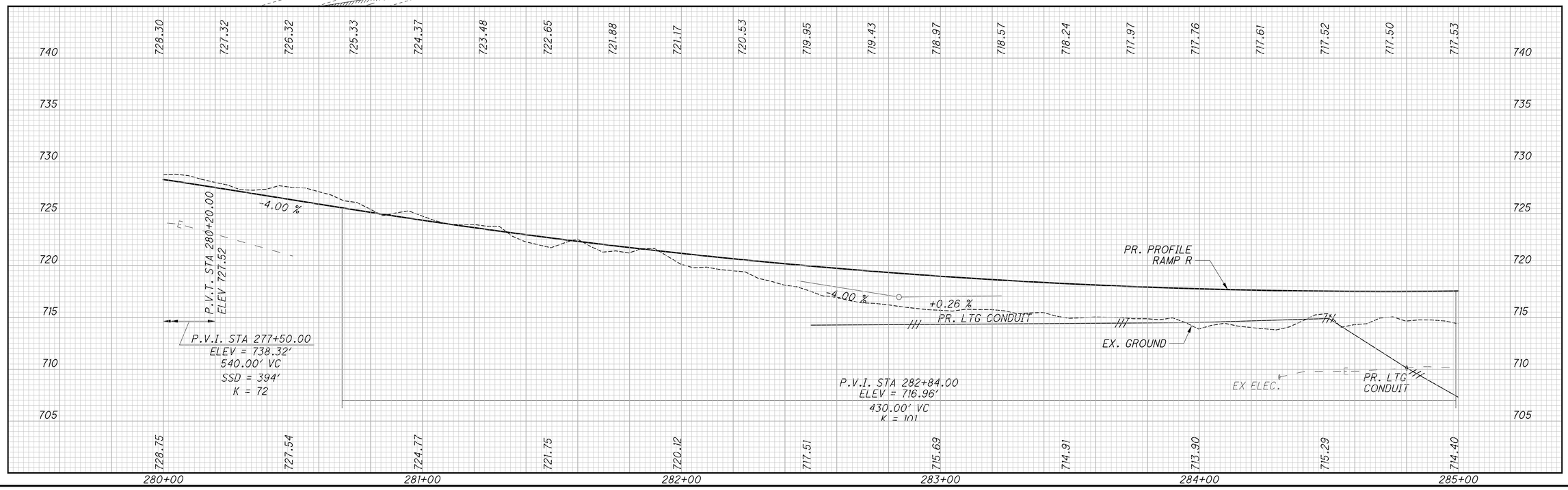
ITEM 836 - TURF REINFORCING MAT, TYPE 1

ITEM 836 - TURF REINFORCING MAT, TYPE 2



C4

℄ RAMP R1 - 4
P.I. STA. 281+80.94
Δ = 38° 25' 16" (RT)
Dc = 4° 00' 00"
R = 1,432.39'
T = 499.11'
L = 960.52'
E = 84.46'
C = 942.63'
C.B. = N 78° 00' 48" E
e (max) = 0.052



1 ADDENDUM #1
04/21/2023

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED ACF
CHECKED CSR

PLAN AND PROFILE - RAMP R
STA. 280+00 TO STA. 285+00

FRA-270-51.50

271
554

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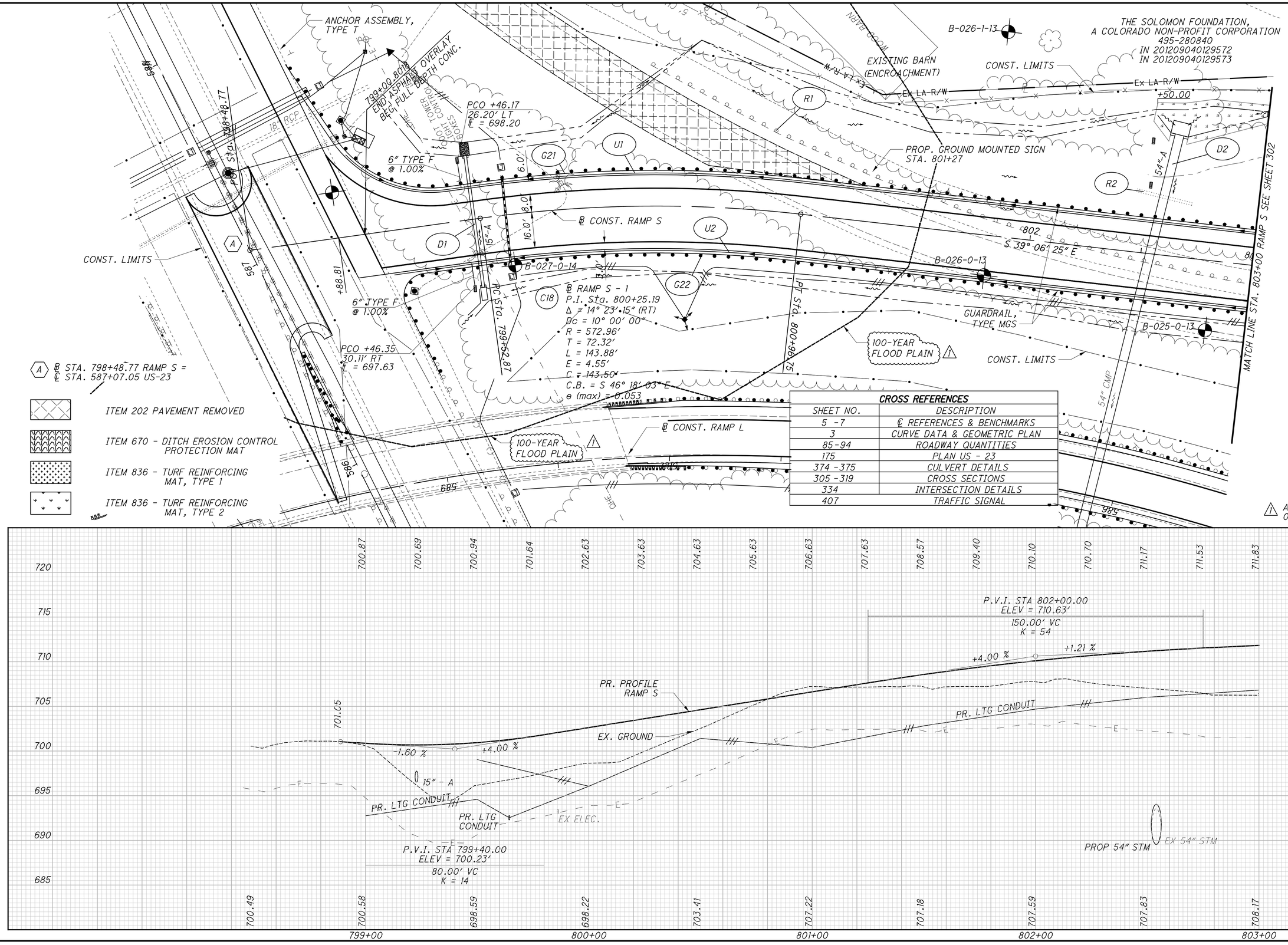

HORIZONTAL SCALE IN FEET
0 20 40
CALCULATED JGB
CHECKED CSR

PLAN AND PROFILE RAMP S
STA. 798+48.77 TO STA. 803+00.00

FRA-270-51.50

301
554

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C-19 ℄ RAMP S - 2
P.I. Sta. 806+85.23
Δ = 29° 05′ 45″ (LT)
Dc = 4° 00′ 00″
R = 1,432.39′
T = 371.72′
L = 727.40′
E = 47.45′
C = 719.61′
C.B. = S 53° 39′ 18″ E
e (max) = 0.040

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
5 -7	℄ REFERENCES & BENCHMARKS
3	CURVE DATA & GEOMETRIC PLAN
85-94	ROADWAY QUANTITIES
305-319	CROSS SECTIONS
335-336	GORE DETAILS

THE SOLOMON FOUNDATION,
A COLORADO NON-PROFIT CORPORATION
495-280840
IN 201209040129572
IN 201209040129573

100-YEAR FLOOD PLAIN

B-024-1-14

Ex LA-R/W

5′ CHAIN LINK FENCE

WETLAND
WL AL

PC Sta. 803+13.51

PCO +50.00
23.26′ LT
℄ = 710.35

D1

6″ TYPE F
@ 1.00%

18″-A

G22

GUARDRAIL, TYPE MGS

R2

U2

6.0′

BEGIN 12.5:1 PAVEMENT TAPER
STA. 805+50.06, 8.00′ LT

END 12.5:1 PAVEMENT TAPER
STA. 806+50.06, 8.00′ LT

CONST. LIMITS

+50.00

5′

11′

12″ CMP

MATCH LINE STA. 803+00 RAMP S SEE SHEET 301

MATCH LINE STA. 808+00 RAMP S SEE SHEET 303

℄ CONST. RAMP S

803 804 805 806 807 808

16.0′

24.0′

3.0′

R1

U1

GUARDRAIL,
TYPE MGS

ANCHOR ASSEMBLY
TYPE E

G23

B-024-0-14

6″ TYPE F
@ 1.00%

PCO +50.00
55.80′ RT
℄ = 711.19

PIPE CLEANOUT 18″ RCP

100-YEAR FLOOD PLAIN

CONST. LIMITS

ITEM 670 - DITCH EROSION CONTROL PROTECTION MAT

ITEM 836 - TURF REINFORCING MAT, TYPE 1

ITEM 836 - TURF REINFORCING MAT, TYPE 2

1 ADDENDUM #1
04/21/2023

730	725	720	715	710	705	700	695

711.83 712.13 712.44 712.74 713.04 713.34 713.61 713.86 714.08 714.27 714.43 714.56 714.69 714.82 714.94 715.07 715.20 715.33 715.46 715.59 715.71

P.V.I. STA 804+90.00
ELEV = 714.12′
150.00′ VC
K = 217

PR. PROFILE
RAMP S

+1.21 %

+0.51 %

PR. LTG CONDUIT

EX. GROUND

EX ELEC.

EX 18″ STM

708.17 707.96 708.66 710.42 711.98 713.70 714.40 714.78 715.27 715.56 715.88

803+00 804+00 805+00 806+00 807+00 808+00

HORIZONTAL SCALE IN FEET
0 20 40

CALCULATED JGB
CHECKED CSR

PLAN AND PROFILE RAMP S
STA. 803+00.00 TO STA. 808+00.00

FRA-270-51.50

302
554

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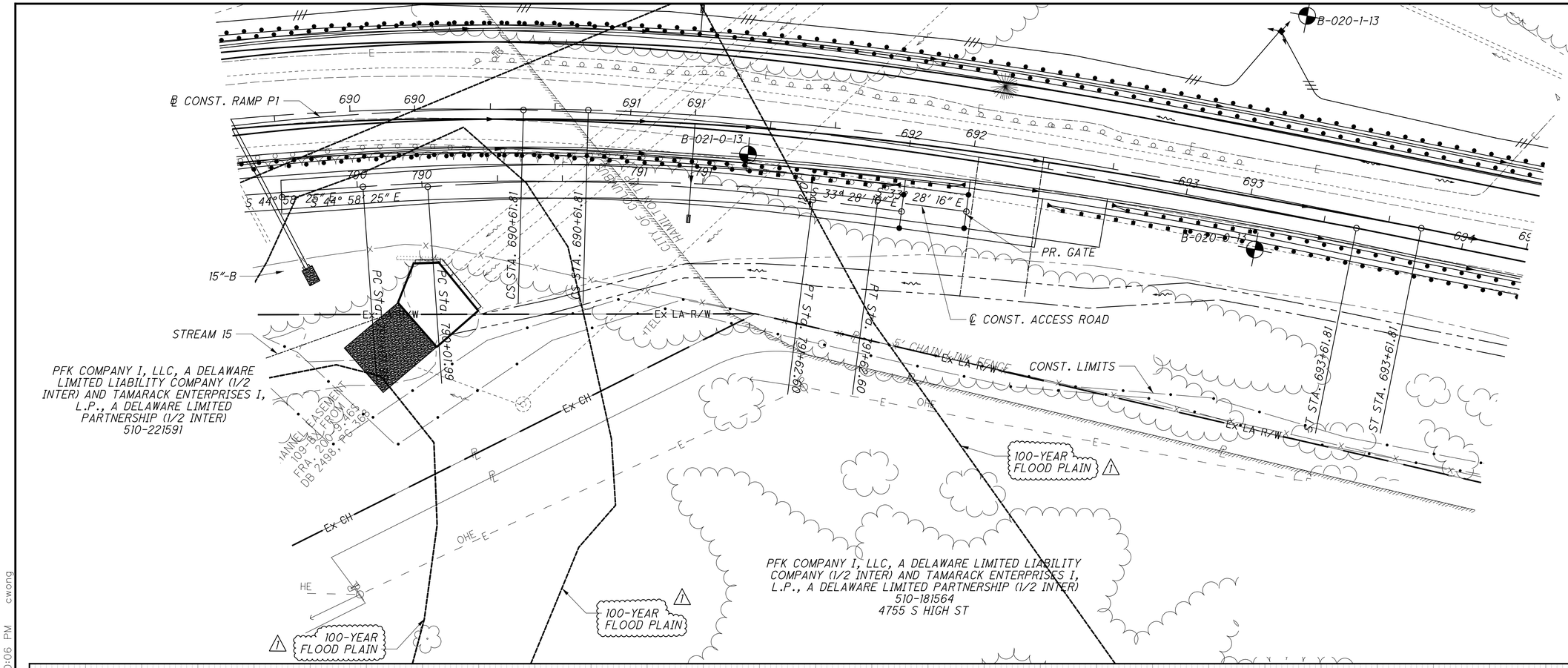

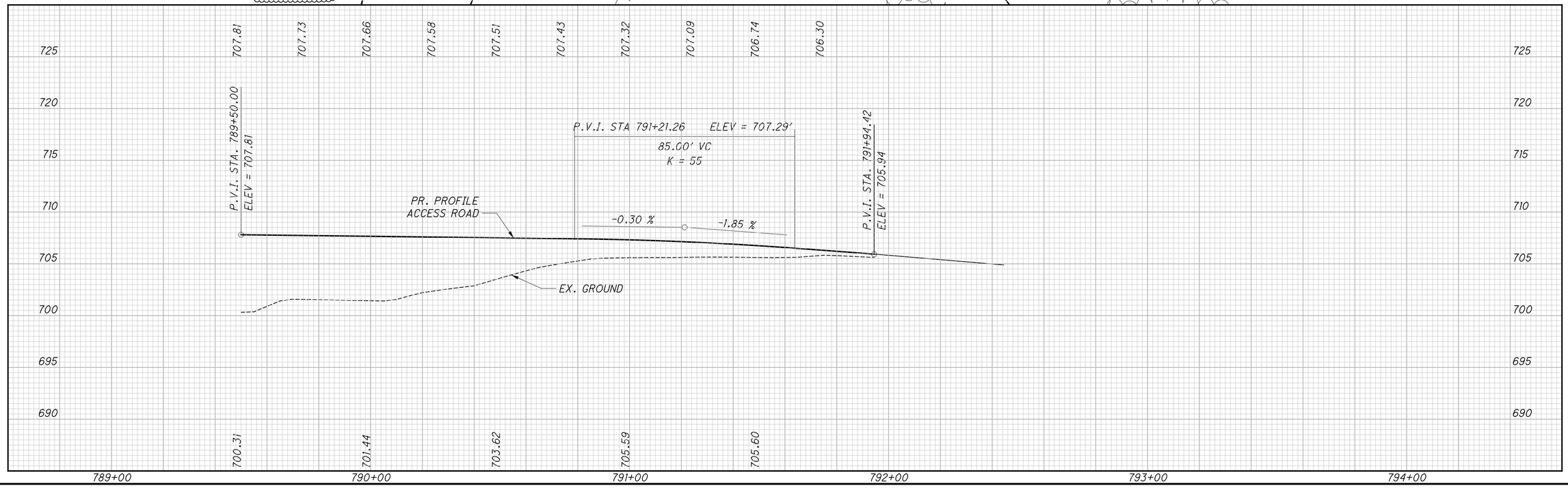

2 ADDENDUM #2 02/07/2023

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED ACF
CHECKED CSR

PLAN AND PROFILE ACCESS ROAD

FRA-270-51.50

320
554

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+63.00
94.5', RT

℄ CONST. RAMP P2

PT Sta. 872+38.97

A

STA. 573+22.67 ℄ US-23 =
STA. 873+22.67 ℄ RAMP P2

15" - B

15" RCP

S 69°36'13" E

18" STM

873

℄ CONST. US23

572

573

574

114

115

+63.00
0.0', RT

A

POT Sta. 573+22.67

PT

1 ADDENDUM #1
04/21/2023

1

STA. 572+63.00, 0.0' RT.
CATCH BASIN 8 GRATE ELEV = 698.98
15" W ELEV = 694.80

710
705
700
695
690
685
680
675

EX. GROUND

95' - 15"-B @ 2.00%

EX 18" STM

N

HORIZONTAL
SCALE IN FEET
0 5 10 20

CALCULATED ACF
CHECKED CSR

STORM SEWER PROFILE - US 23
STA. 572+63.00

2

FRA-270-51.50

362
554

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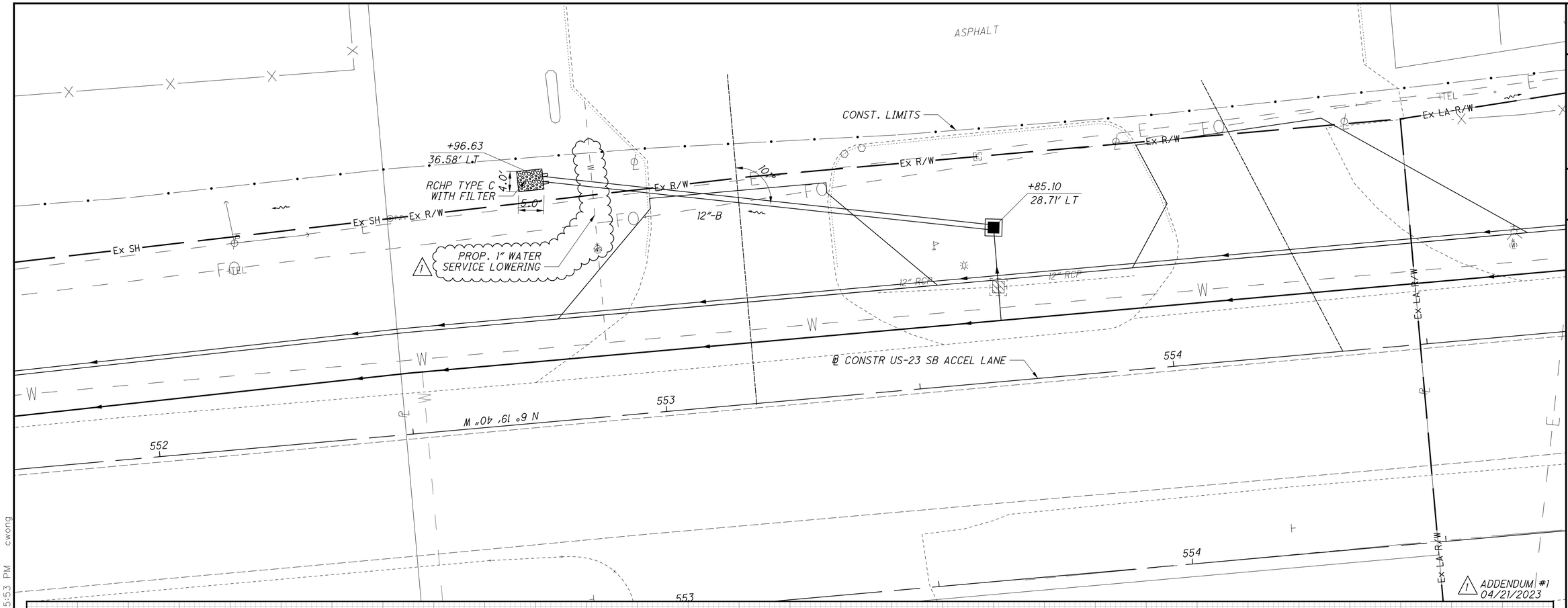

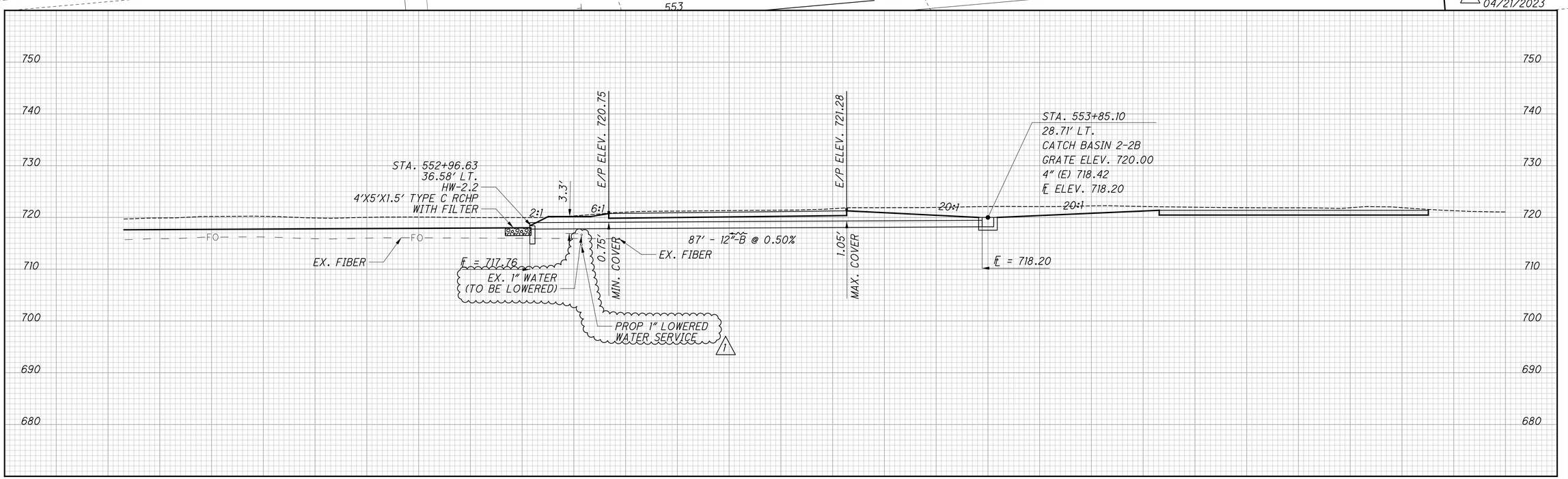

HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED JGB
CHECKED CSR

STORM SEWER PROFILE US 23 ACCEL. LANE STA. 553+85

FRA-270-51.50

363
554

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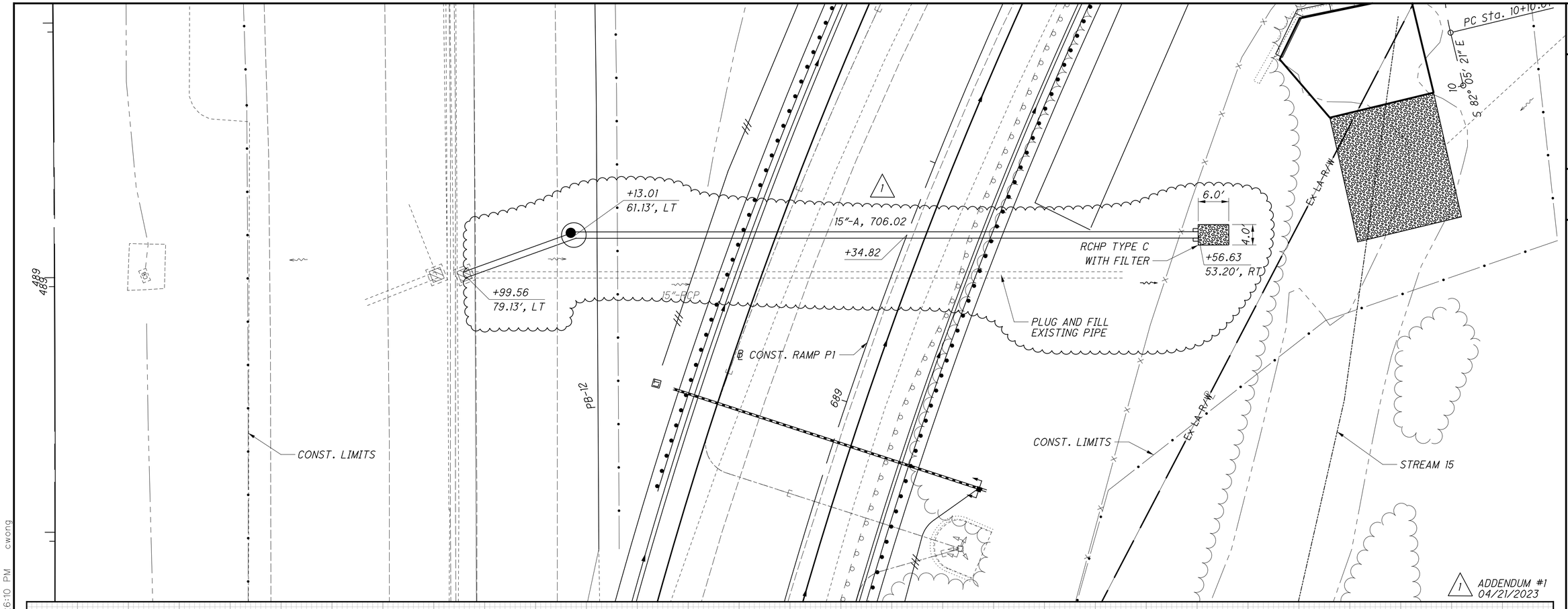

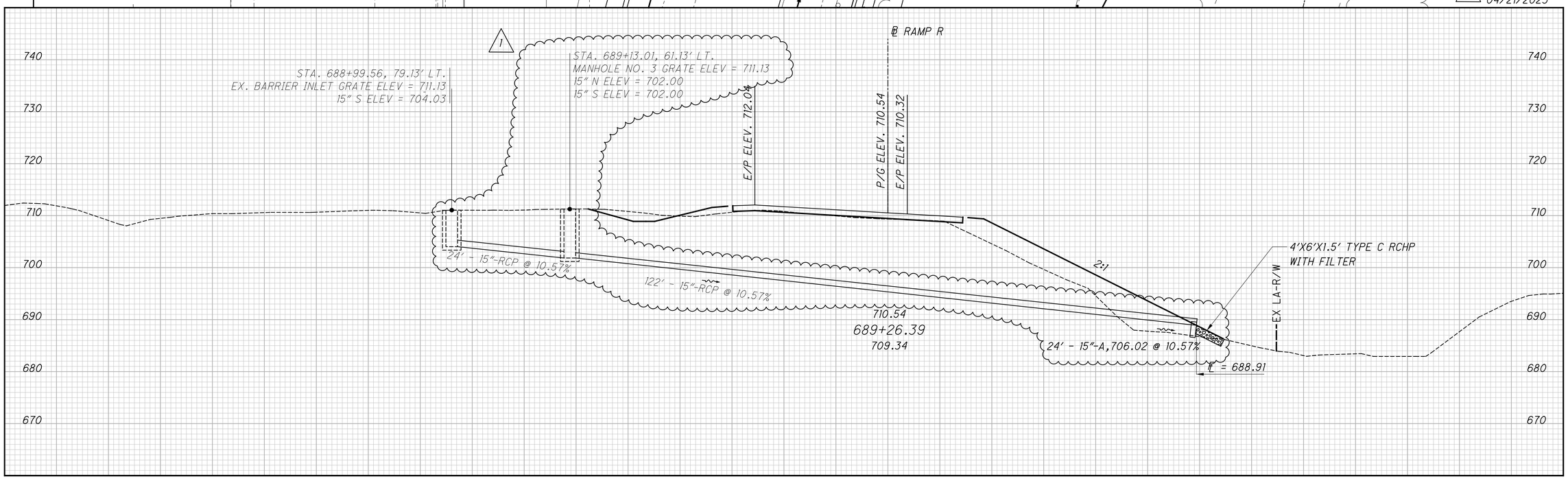

STORM SEWER PROFILE - RAMP P1
STA. 689+26

HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED ACF
CHECKED CSR

FRA-270-51.50

364
554

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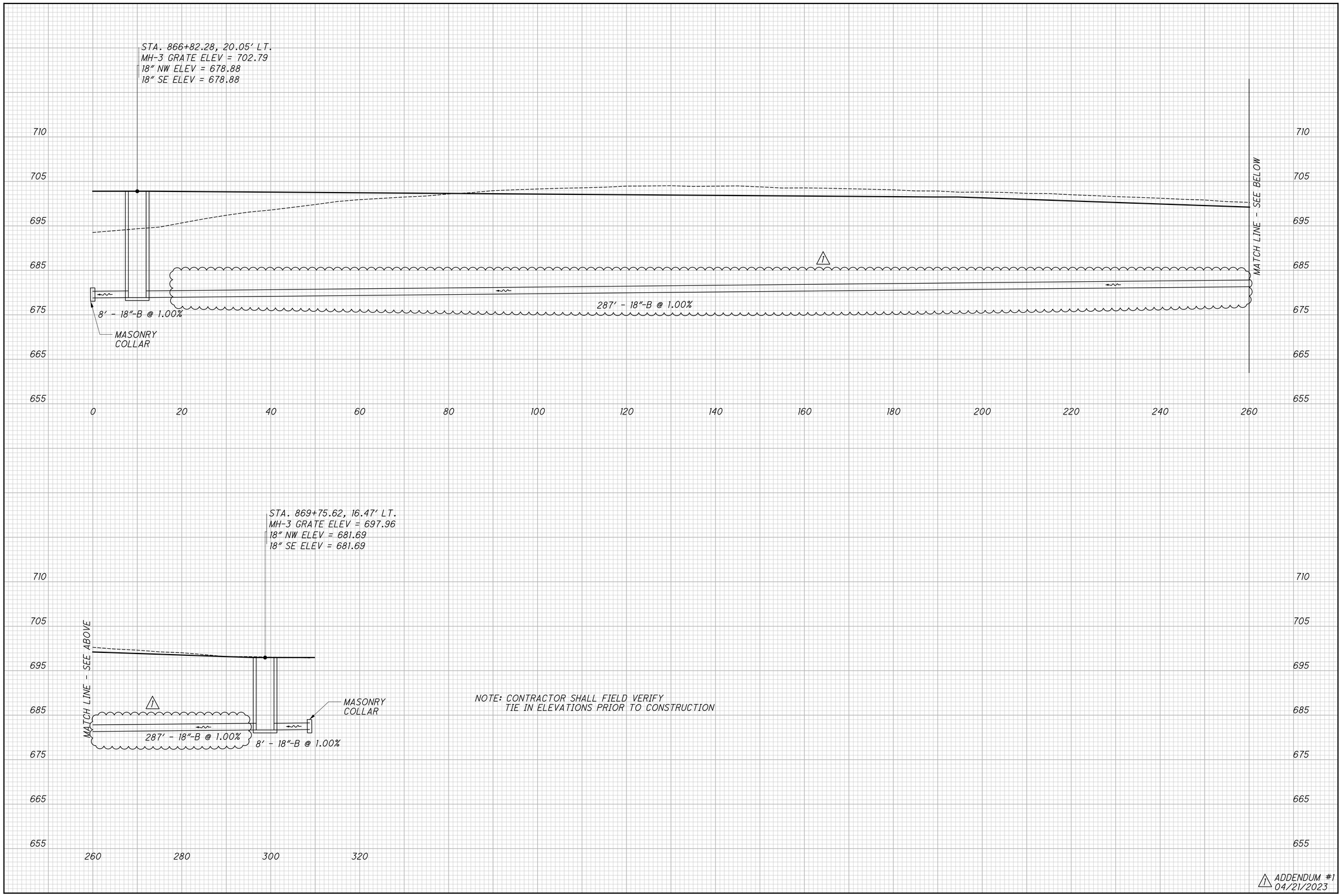


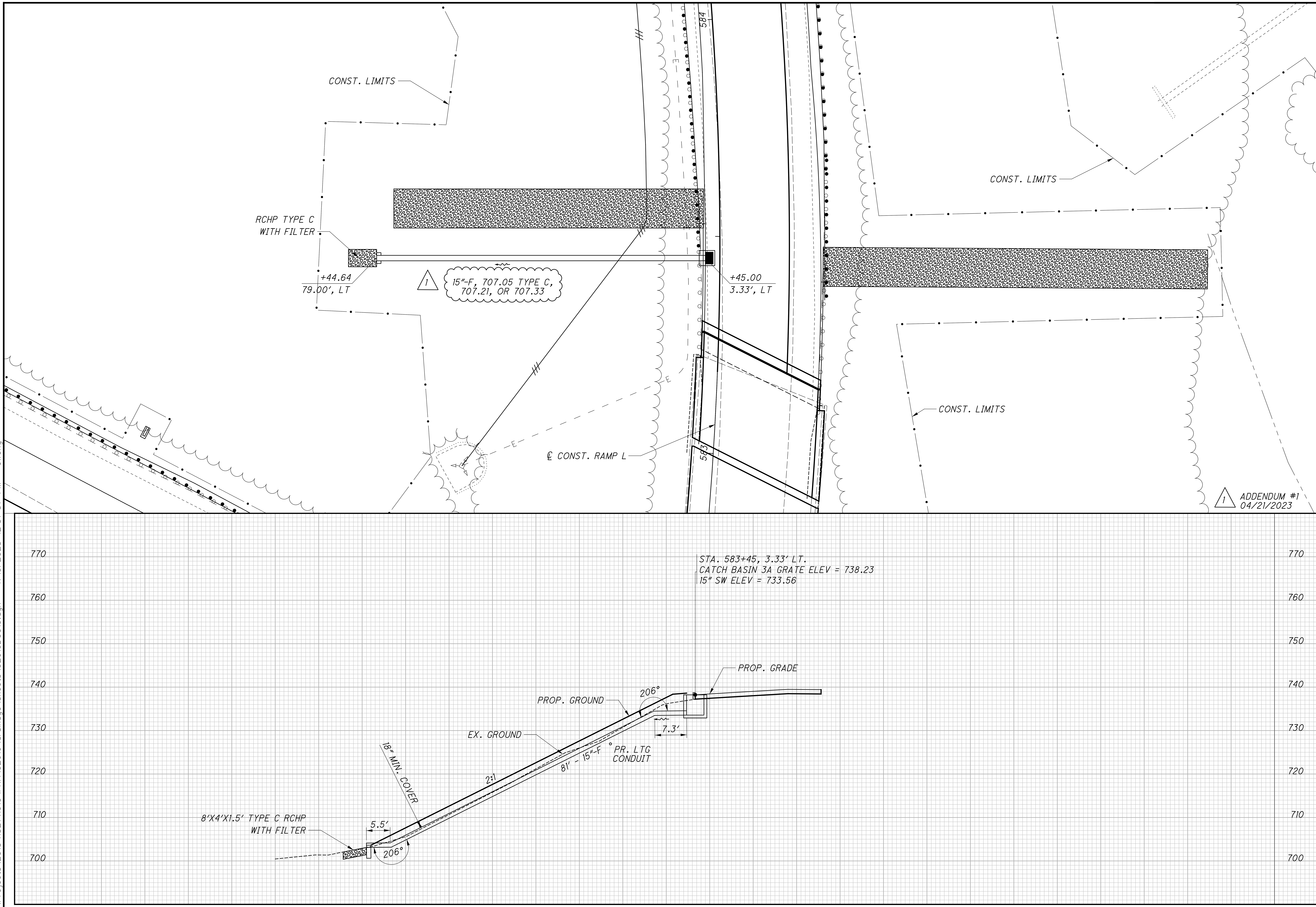
NOTE: CONTRACTOR SHALL FIELD VERIFY
TIE IN ELEVATIONS PRIOR TO CONSTRUCTION

1 ADDENDUM #1
04/21/2023

CALCULATED ACF
CHECKED CSR

STORM SEWER PROFILE

FRA-270-51.50



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HORIZONTAL SCALE IN FEET 0 5 10 20

CALCULATED ACF CHECKED CSR

STORM SEWER PROFILE - RAMP L STA. 583+45.00

FRA-270-51.50

EXISTING STRUCTURE DATA			
CFN:	1869019	DESIGN SERVICE LIFE:	75 YEARS
SIZE:	96″	STREAM pH:	7.0
TYPE:	CORRUGATED METAL	ABBRASIVENESS:	N/A
LENGTH:	126′	HEADWALL:	HALF HEIGHT
DATE CONSTRUCTED:	1963		

HYDRAULIC DATA	
DRAINAGE AREA: 4.22 SQ. MI.	
Q_{50} = 994 CFS	Q_{100} = 1140 CFS
V_{50} = 19.8 FPS	V_{100} = 22.7 FPS
Hw_{50} = 703.36	Hw_{100} = 706.89

ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
601	12	SY	RIPRAP, TYPE D
602	8	CY	CONCRETE MASONRY
611	31	FT	96″ CONDUIT, TYPE A, AS PER PLAN, 707.02 (0.249)
203	146	CY	EXCAVATION
613	146	CY	LOW STRENGTH MORTAR BACKFILL
601	71	CY	ROCK CHANNEL PROTECTION, TYPE A WITH FILTER

EXCAVATION AND REPLACEMENT WITH LOW STRENGTH MORTAR BACKFILL
WETLAND AA (DND)
WETLAND AB (DND)
30.0′
16.0′
30′X16′X4′
+18.37
101.98′ LT
CONST. LIMITS
CLEAN PIPE OF DEBRIS
STREAM 15
96″ CMP
℄ CONST. RAMP L
℄ CONST. RAMP R
EX. 96″ PIPE (31′ TBR)
96″-A,707.02 (0.249)
+20.11
91.91′ RT
PC Sta. 273+18.83
+19.75
4.0′
24.0′
0.58′
10.0′
89°
573
273
6:1
4:1
2:1
2.5:1
12.5:1
100:1
6″ WP
15″ CPP RCP
Ex LA-R/W
CONST. LIMITS
STREAM RELOCATION
41″ E

1 ADDENDUM #1 04/21/2023

101.6′
92.3′
℄ RAMP R
0.58′
4.0′
24.0′
10.0′
E/P ELEV. 699.87
P/G ELEV. 700.10
E/P ELEV. 700.57
28.5′ MAX. COVER
26.3′ MIN. COVER
PR. LTG CONDUIT
16′X30′X4′ TYPE A RCHP, WITH FILTER
CONCRETE COLLAR
HW-2.1
DM-1.1
HW_{50} = 703.36
HW_{100} = 706.89
EX LA-R/W
OHWM = 687.49′
℄ = 685.49
173′ - 96″-CMP @ 0.29%
721.87
273+21.83
723.09
31′ - 96″-A,707.02 @ 0.29% ℄ = 686.05

CULVERT DETAIL - RAMP R
STA. 273+22.00

FRA-270-51.50

372
554

HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED ACF
CHECKED CSR

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EXISTING STRUCTURE DATA			
CFN:	1869026	DESIGN SERVICE LIFE:	75 YEARS
SIZE:	54"	STREAM pH:	6.8
TYPE:	CORRUGATED METAL	ABBRASIVENESS:	N/A
LENGTH:	204'	HEADWALL:	FULL HEIGHT
DATE CONSTRUCTED:	1963		

HYDRAULIC DATA	
DRAINAGE AREA: 9.06 ACRES	
Q_{50} = 52.88 CFS	Q_{100} = 65.29 CFS
V_{50} = 7.75 FPS	V_{100} = 8.18 FPS
Hw_{50} = 693.31	Hw_{100} = 693.69

HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED ACF
CHECKED CSR

54"-A,707.01(0.249), 707.02(0.064) ALUMINIZED, 707.04(0.064 POLYMERIC), 706.02, 707.34, 707.35, 707.48, 707.65, SS938

NOTE: EX ROCK CHANNEL PROTECTION TO REMAIN IN PLACE

ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
601	5	SY	RIPRAP, TYPE D
602	2.2	CY	CONCRETE MASONRY
611	250	FT	54"-A,707.01(0.249), 707.02(0.064) ALUMINIZED, 707.04(0.064 POLYMERIC), 706.02, 707.34, 707.35, 707.48, 707.65, SS938

1 ADDENDUM #1 04/21/2023

CULVERT DETAIL - RAMP S STA. 802+54.00

FRA-270-51.50

375
554

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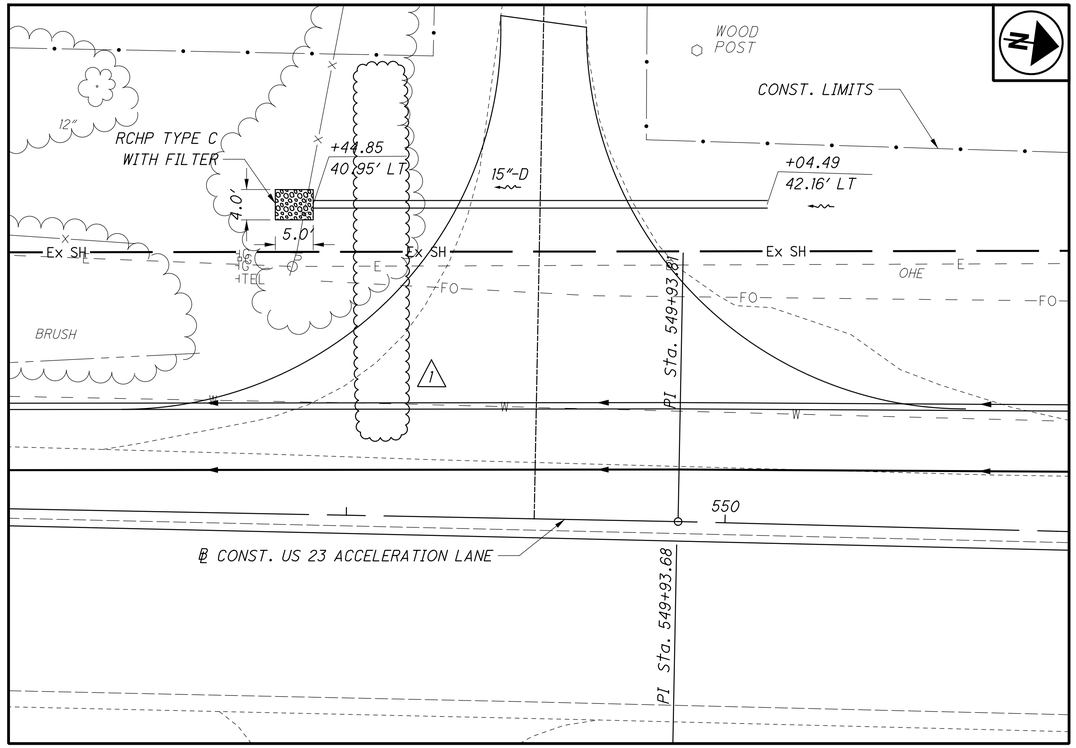

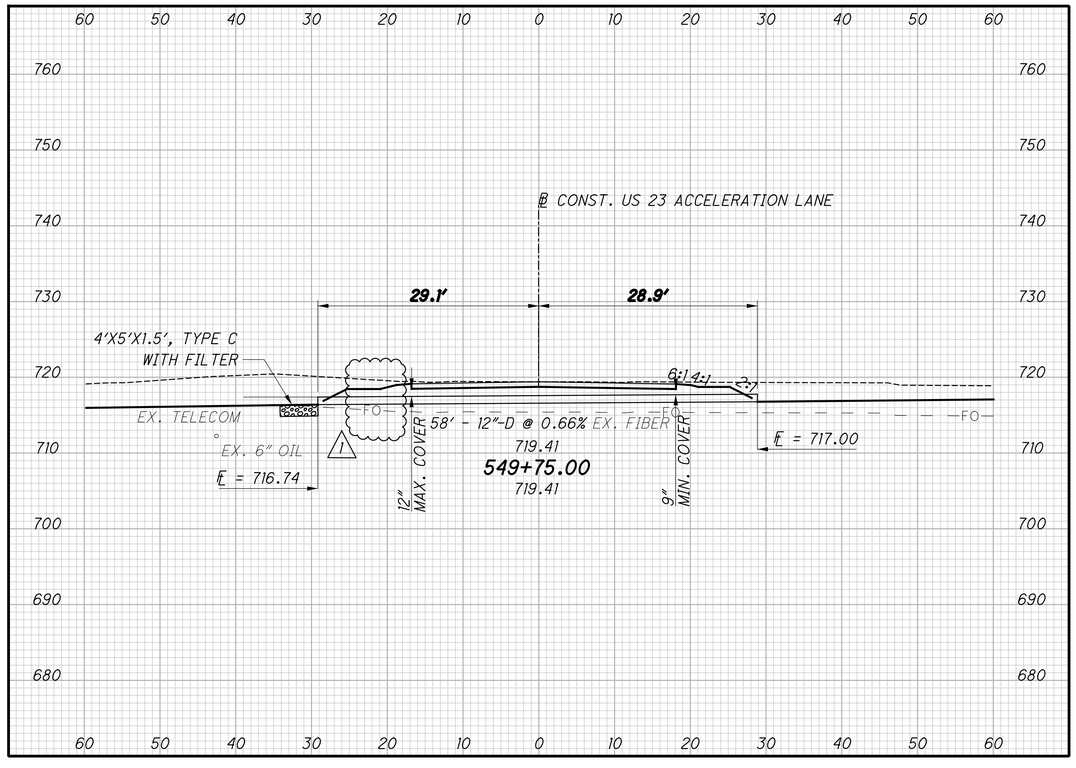

1 ADDENDUM #1 04/21/2023

HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED ACF
CHECKED CSR

CULVERT DETAILS - US 23 ACCELERATION LANE STA. 549+75

FRA-270-51.50

377
554

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1 ADDENDUM #1
04/21/2023

2

PLAN INSERT SHEET

403
554

1
1

PIS 208340

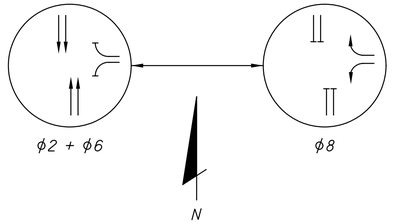
BREAKAWAY TRANSFORMER BASE CONNECTOR DESIGN

REVISION DATE: 01-16-2015
CHECKED: CHECKED
DESIGNED: XXX
REVIEWED: XXX

OFFICE OF ROADWAY ENGINEERING

FIELD WIRING HOOK-UP CHART

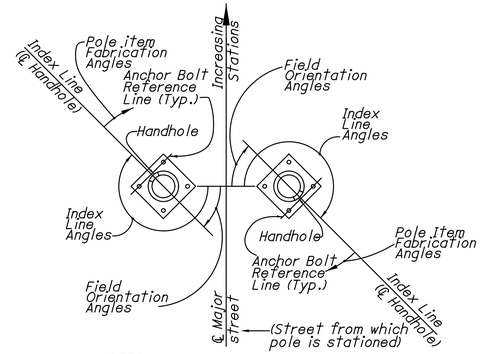
SIGNAL HEAD #	INDICATION	FIELD TERMINAL	FLASH
1-2, 4 (NB)	R	ϕ2 R	R
	Y	ϕ2 Y	
	G	ϕ2 G	
7 (WB)	R	ϕ8 R	R
	Y	ϕ8 Y	
	~~G~~	ϕ8 G	
3 & 8 (WB)	R	ϕ8 R	R
	Y	ϕ8 Y	
	G	ϕ8 G	
	~~G~~	ϕ8 G	
5-6, 9 (SB)	R	ϕ6 R	R
	Y	ϕ6 Y	
	G	ϕ6 G	



PHASING DIAGRAM

MAINTENANCE/OWNER:

ODOT WILL OWN AND MAINTAIN THIS SIGNAL.



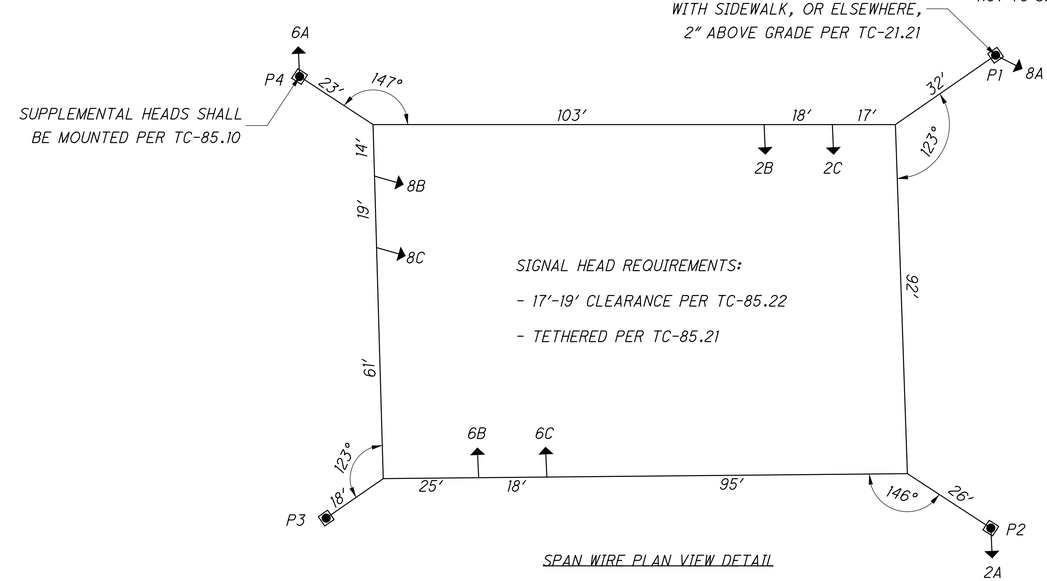
NOTES:
All angles measured clockwise.
Index line goes through the center of the handhole.

INTERSECTION TIMING								
	1	2	3	4	5	6	7	8
DIRECTION	-	NB	-	-	-	SB	-	WB
MIN GREEN	-	20	-	-	-	20	-	10
PASSAGE	-	1.0*	-	-	-	1.0*	-	3.0*
MAX 1	-	45	-	-	-	45	-	40
MAX 2	-	45	-	-	-	45	-	40
YELLOW	-	5.0	-	-	-	5.0	-	4.0
ALL RED	-	1.0	-	-	-	1.0	-	2.0
WALK	-	-	-	-	-	-	-	-
PED CLEAR	-	-	-	-	-	-	-	-
INITIALIZE	-	G	-	-	-	G	-	-
LOCKING MEMORY	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF
VEH RECALL	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF
PED RECALL	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

1

* PROGRAM PER RADAR ADVANCED DETECTOR MANUFACTURER'S RECOMMENDATIONS

TYPICAL STRAIN POLE ORIENTATION DETAIL
NOT TO SCALE

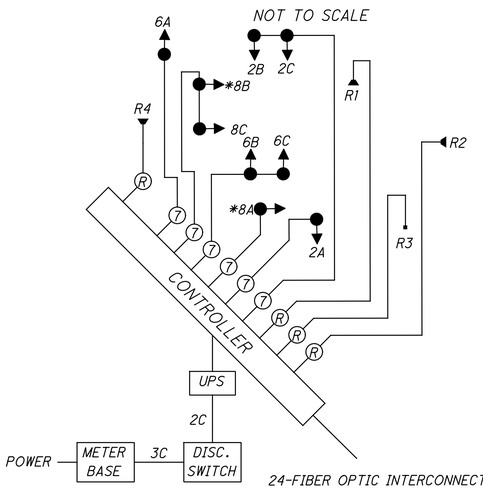


SPAN WIRE PLAN VIEW DETAIL

DETECTION CHART							
DETECTOR	DETECTOR TYPE	MOVEMENT	DETECTION ZONE	RADAR UNIT	MODE	DELAY	ASSOCIATED CONTROLLER PHASE
R1	RADAR	NB	-	ADVANCE	PRESENCE	-	ϕ2
R2	RADAR	WB	-	ADVANCE	PRESENCE	-	ϕ8
R3	RADAR	WB	DZ1	STOP BAR	PRESENCE	8	ϕ8
			DZ2	STOP BAR	PRESENCE	0	ϕ8
R4	RADAR	SB	-	ADVANCE	PRESENCE	-	ϕ6

WIRING DIAGRAM

NOT TO SCALE



WIRING DIAGRAM LEGEND

→X	3-SECTION VEHICULAR SIGNAL HEAD
→*X	4-SECTION VEHICULAR SIGNAL HEAD
—(X)—	SIGNAL CABLE, # OF CONDUCTORS
—◄	PROPOSED RADAR ADVANCED DETECTOR
—■	PROPOSED RADAR STOP BAR DETECTOR
—(R)—	PROPOSED RADAR DETECTOR CABLE

POLE SIZES & ATTACHMENT HEIGHTS								ANGLES (DEG.) FROM INDEX LINE			
POLE NO.	DESIGN NO.	POLE HEIGHT (FT.)	FOUNDATION			SPAN ATTACHMENT HEIGHT	RADAR DETECTOR ATTACHMENT HEIGHT	SUPPLEMENTAL SIGNAL HEAD	HANDHOLE	POWER SERVICE	SPARE 2" CONDUIT (CAPPED)
			STATION	OFFSET	ELEVATION						
P1	10	33'	587+41.0	62.3' RT	698.48	30'	18'	61°	180°	90°	90°
P2	10	31'	586+57.8	57.8' RT	698.82	28'	18'	54°	180°	-	270°
P3	10	32'	586+64.8	59.0' LT	698.26	29'	-	-	180°	-	90°
P4	10	32'	587+41.8	60.1' LT	698.33	29'	-	54°	180°	-	180°

1 ADDENDUM #1 04/21/2023

CALCULATED CCW CHECKED JRS

TRAFFIC SIGNAL DETAILS
US 23 AT IR-270 WESTBOUND OFF-RAMP

FRA-270-51.50

408
554

ODOT INTERCONNECT NOTES (2)

ITEM 632 - INTERCONNECT, MISC.: FIBER OPTIC SPLICE ENCLOSURE, CLAMSHELL, 288 SPLICE

FIBER OPTIC CABLE SPLICES SHALL BE PERFORMED IN SPLICE ENCLOSURES AS SHOWN ON THE PLANS. THE SPLICE ENCLOSURES SHALL BE CORROSION RESISTANT, RODENT PROOF, RE-ENTERABLE, AND MANUFACTURER CERTIFIED FOR UNDERGROUND INSTALLATION.

288 CLAMSHELL SPLICE ENCLOSURES ARE TO BE INSTALLED IN 32", 36", OR 48"PULL BOXES OR MOUNTED AERIALLY AS DIRECTED IN THE PLANS. CONTRACTOR SHALL ADVISE THE ENGINEER IN THE EVENT THAT CABLES CANNOT ENTER SPLICE ENCLOSURE PERPENDICULARLY TO CABLE PORT ENTRY PLATE, OR IF CABLE BENDS EXCEED MINIMUM INSTALLATION BEND RADIUS RATING AT THE ENCLOSURE ENTRY DUE TO EXISTING FIELD CONDITIONS SUCH AS INADEQUATE SPACE IN PULL BOX OR OTHER OBSTRUCTIONS. ADDITIONALLY, CONTRACTOR SHALL ADVISE THE ENGINEER PRIOR TO BEGINNING SPLICING IF PLANNED NUMBER OF SPLICES CANNOT BE NEATLY AND SECURELY CONTAINED IN THE TYPE OF SPLICE ENCLOSURE CALLED OUT IN THE PLANS.

FOR UNDERGROUND INSTALLATION, SPLICE ENCLOSURE AND SLACK CABLE MUST FIT WITHIN PULL BOX TO AVOID DAMAGE TO THE ENCLOSURE OR CABLE UPON CLOSING THE PULL BOX LID.

FOR AERIAL INSTALLATION, EXTENDED STRENGTH BRACKET SHALL BE INSTALLED WITH THE SPLICE ENCLOSURE TO ENSURE CABLE ENTRIES REMAIN PERPENDICULAR AND SECURELY FASTENED TO THE PORT ENTRY PLATE. AERIAL MOUNTED SLACK STORAGE RACKS ARE TO BE USED FOR ALL INSTALLATIONS WHERE CABLES ARE LOOPED OR BENT 180O. THE COST OF THE STRAIN RELIEF HARDWARE, STRENGTH BRACKETS, TIES OR OTHER INSTALLATION HARDWARE IS CONSIDERED INCIDENTAL TO THIS PAY ITEM.

THE SPLICE ENCLOSURE SHALL BE WEATHERPROOF, WATERPROOF, CORROSION RESISTANT, RODENT PROOF, RE-ENTERABLE, AND CRUSH RESISTANT. CLAMSHELL ENCLOSURES SHALL HAVE UPPER AND LOWER PIECES WITH CABLE ENTRY PLATE THAT ARE TIGHTENED DOWN AND SEALED USING SCREWS / BOLTS. DOME ENCLOSURES SHALL BE SINGLE TUBE WITH CABLE ENTRY PLATE. THE SPLICE ENCLOSURE SHALL EASILY FIT INTO PULL BOXES ALONG WITH LOOPS OF SLACK CABLE IN BOX (APPROX. 150 FT) THE SPLICE ENCLOSURE SHALL BE A COMPLETE KIT INCLUDING ALL COMPONENTS AND HARDWARE FOR INSTALLATION. THE SPLICE ENCLOSURE SHALL BE SUITABLE FOR APPLICATION IN THE TEMPERATURE RANGE OF -40 C TO +70 C. THE SPLICE ENCLOSURE SHALL PROVIDE SPACE, ALLOWING ENTRY OF FIBER OPTIC CABLE WITHOUT EXCEEDING THE MINIMUM BEND RADIUS OF THE CABLE. THE ENCLOSURE SHALL HAVE PROVISIONS FOR CABLE AND PIGTAIL STRAIN-RELIEF, AND SHALL BE EQUIPPED WITH STRAIN-RELIEF HARDWARE. THE SPLICE ENCLOSURE SHALL BE EQUIPPED WITH ELASTOMERIC SPLICE BLOCKS ENCLOSED WITHIN MANUFACTURER SPLICE TRAYS AND SHALL PERMIT SELECTIVE FIBER SPLICING (LOOPING A BACKBONE CABLE IN AND OUT WHILE ONLY CUTTING INTO THE DESIRED FIBERS ALL BUFFER TUBES NOT SHOWN AS BEING SPLICED IN THE PLANS ARE TO BE SECURELY COILED WITHIN THE SPLICE ENCLOSURE). THE SIZE OF THE CLOSURE SHALL ALLOW ALL THE FIBERS OF THE LARGEST OPTICAL FIBER TRUNK CABLE TO BE FUSION SPLICED TO A SECOND CABLE OF THE SAME SIZE, PLUS ADDITIONAL PIGTAILS. THE SPLICE ENCLOSURE SHALL ALLOW SPLICING OF ALL FIBERS UP TO THE MAXIMUM NUMBER SPECIFIED ON THE CONTRACT DRAWINGS.
FIBER OPTIC CABLE SPLICE ENCLOSURES SHALL HAVE A THREE-SECTION, 4, 6, OR 8 PORT END PLATE WITH 7/8" DIAMETER PORTS. PLUG KITS AND BRACKETS SHALL BE INCIDENTAL TO PAY ITEM. ANY PROPOSED EQUIVALENT MUST BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. FIBER OPTIC CABLE SPLICE ENCLOSURES MUST MEET THE REQUIREMENTS LISTED UNDER BELLCORE TESTING REQUIREMENT GR-771-CORE AND UL 1863.

THE WORK AS DESCRIBED WILL BE MEASURED AS ONE UNIT FOR EACH OF THE INSTALLATIONS SPECIFIED, AND SHALL INCLUDE ALL MATERIALS, EQUIPMENT AND INCIDENTALS, COMPLETE IN PLACE. TERMINATIONS, CONNECTIONS, AND OTHER MISCELLANEOUS ITEMS AND MATERIALS SHALL BE INCIDENTAL TO THIS WORK AND NO SEPARATE PAYMENT WILL BE MADE. (12/2/15)

ITEM 632 - INTERCONNECT, MISC.: TERMINATION PANEL, 24 FIBER, WITH 200 FT DROP CABLE

THE TERMINATION PANEL SHALL BE FURNISHED AND INSTALLED IN THE TRAFFIC SIGNAL CONTROLLER CABINET AT LOCATIONS SHOWN ON THE PLANS. THE TERMINATION PANEL DROP CABLE SHALL BE FIBER CONNECTIONS "GATORPATCH" MODEL FCP6684-61-0 (200 FT).

THE OPTICAL TERMINATION PANEL SHALL HOUSE AND PROTECT THE LC CONNECTORS ON EACH TERMINATION PANEL DROP CABLE AND FIBER OPTIC TERMINATION CORD. THE FACTORY TERMINATED TERMINATION PANEL SHALL UTILIZE DUPLEX LC (UPC) CONNECTORS FOR THE EQUIPMENT SIDE TO THE PRE-CONNECTORIZED 24-STRAND OR 12-STRAND FIBER OPTIC TERMINATION PANEL DROP CABLE THAT LEADS TO THE SPLICE ENCLOSURE.

A PRE-TERMINATED 24-STRAND OR 12-STRAND FIBER OPTIC DROP CABLE SHALL BE INCLUDED AND SHALL BE CONSIDERED INCIDENTAL TO THE TERMINATION PANEL. THE CONTRACTOR SHALL PROVIDE SINGLE MODE FIBER OPTIC DROP CABLES WITH COLOR CODED BUFFER TUBES. FIBER OPTIC CABLE USED FOR TERMINATION PANEL DROP CABLES SHALL BE OF THE TIGHT BUFFERED TYPE PROTECTED BY ARAMID FIBERS. SINGLE-MODE DROP CABLES SHALL BE PROVIDED WITH FACTORY PRE-CONNECTORIZED SINGLE-MODE CONNECTORS. CONNECTORS SHALL HAVE A MAXIMUM LOSS OF 0.5 DB THROUGH EACH MATED PAIR OF SINGLE-MODE FIBERS. EACH CONNECTOR SHALL BE CAPABLE OF 100 REPEATED MATINGS WITH MAXIMUM INCREASE IN SPLICE LOSS LIMITED TO 0.2 DB. THE DROP CABLE SLACK SHALL BE NEATLY COILED AND SECURED IN A MANNER THAT DOES NOT EXCEED THE MINIMUM OPERATIONAL BENDING RADIUS OF THE DROP CABLE, AS SPECIFIED BY THE MANUFACTURER. SIX (6) FEET OF FIBER OPTIC CABLE SHALL BE NEATLY COILED INSIDE THE CONTROLLER CABINET.

ALL TERMINATION CORDS OF APPROPRIATE LENGTHS TO CONNECT TO THE ETHERNET SWITCH SHALL BE INCLUDED AND SHALL BE CONSIDERED INCIDENTAL TO THE TERMINATION PANEL. THE OPTICAL TERMINATION CORDS FURNISHED SHALL CONSIST OF A SECTION OF JACKETED, SINGLE-MODE FIBER CABLE EQUIPPED WITH FACTORY ASSEMBLED OPTICAL CONNECTORS AT BOTH ENDS. EACH TERMINATION CORD SHALL HAVE UNIQUE IDENTIFICATION LABELS ON EACH END.

THE SHEATH SHALL BE FLAME RETARDANT AND CODED NFR IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE. THE OPTICAL CONNECTORS ON THE ETHERNET SWITCH END OF THESE TERMINATION CORDS SHALL BE COMPATIBLE WITH THE CONNECTORS FURNISHED ON THE OPTICAL DEVICE TRANSMIT AND RECEIVE CARDS.

THIS ITEM INCLUDES ALL MATERIALS, EQUIPMENT AND INCIDENTALS COMPLETE IN PLACE. TERMINATIONS, CONNECTIONS, AND OTHER MISCELLANEOUS ITEMS AND MATERIALS SHALL BE INCIDENTAL TO THIS WORK AND NO SEPARATE PAYMENT WILL BE MADE.

CONTACT TRAFFIC MANAGEMENT AT 614-645-7393 FOURTEEN (14) DAYS IN ADVANCE OF FINAL TESTING. PRIOR TO FINAL TESTING OF A SEGMENT OF INSTALLED FIBER OPTIC CABLE USING THE TERMINATION PANEL AND DROP CABLE ASSEMBLY, THE PATCH PANEL MUST BE INSTALLED IN ITS FINAL POSITION WITHIN THE CONTROLLER CABINET AND/OR EQUIPMENT RACK AS INDICATED IN THE PLANS, AND THE DROP CABLE PATH MUST BE INSTALLED IN ITS FINAL POSITION FROM THE CONTROLLER CABINET TO THE SPLICE ENCLOSURE. FAILURE TO TEST THE CABLE SYSTEM AND ITS COMPONENTS IN THEIR FINAL INSTALLED PLACEMENT WILL RESULT IN NULLIFICATION OF TEST RESULTS AND WILL REQUIRE THE RETESTING OF THOSE CABLE SEGMENTS.

THE WORK AS DESCRIBED WILL BE MEASURED AS ONE UNIT FOR EACH INSTALLATION SPECIFIED, AND SHALL INCLUDE ALL MATERIALS, EQUIPMENT, TESTING, AND INCIDENTALS, COMPLETE IN PLACE. TERMINATIONS, CONNECTIONS, AND OTHER MISCELLANEOUS ITEMS AND MATERIALS SHALL BE INCIDENTAL TO THIS WORK AND NO SEPARATE PAYMENT WILL BE MADE.

ITEM 633 - CONTROLLER ITEM, MISC.: TERMINAL PORT SERVER

THIS WORK IS THE FURNISHING AND INSTALLATION OF A TERMINAL PORT SERVER TO PROVIDE COMMUNICATION BETWEEN SERIAL DEVICES AND ETHERNET SWITCH. THE TERMINAL PORT SERVER SHALL BE DIGI MODEL PORTSERVER TS 2 H MEI.

PROVIDE CONNECTOR CABLE FROM TERMINAL SERVER TO SIGNAL CONTROLLER. ALL D-SUB CONNECTORS SHALL BE OF HEAVY DUTY METAL CONSTRUCTION AND MANUFACTURED BY AMP, L-COM, OR EQUIVALENT. PROVIDE CAT 5E CABLE FROM PORT SERVER TO THE ETHERNET SWITCH.

TRAFFIC MAINTENANCE SHALL BE CONTACTED AT 645-7393 ONE (1) WEEK PRIOR TO INSTALLATION TO PROGRAM THE TERMINAL PORT SERVER. THE CONTRACTOR SHALL INSTALL THE TERMINAL PORT SERVER IN THE CABINET BUT SHALL NOT MAKE ANY CONNECTIONS TO THE TERMINAL PORT SERVER.

TESTING OF THE TERMINAL PORT SERVER WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A COMPLETE, FUNCTIONAL SYSTEM INCLUDING ALL NECESSARY CABLES AND CONNECTORS IN ACCORDANCE TO THE SPECIFICATIONS AND AS SPECIFIED ON THE PLANS.

CITY OF COLUMBUS INTERCONNECT NOTES (1)

ITEM 1620 - INTERCONNECT, MISC.: FIBER OPTIC CABLE, 144 STRAND

IN ADDITION TO THE REQUIREMENTS OF SUPPLEMENTAL SPECIFICATION 1620, THE CONTRACTOR SHALL PROVIDE ALL MATERIALS REQUIRED FOR THE INSTALLATION, CONNECTORIZATION, AND SPLICING OF THE SPECIFIED COMMUNICATIONS CABLES. THE 144-STRAND CABLE SHALL BE CORNING PART NUMBER 144EU4-T4701D20. (4/22/19)

(1) ADDENDUM #1 04/21/2023

CALCULATED DKA CHECKED SGJ

TRAFFIC SIGNAL INTERCONNECT NOTES

FRA-270-51.50

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CITY OF COLUMBUS INTERCONNECT NOTES

ITEM 633 - CONTROLLER ITEM, MISC.: TERMINAL PORT SERVER (CONTINUED)

ALL CABLES SHALL MEET THE PROPOSED EQUIPMENT SPECIFICATION REQUIREMENTS AND SHALL MEET EIA/TIA TELECOMMUNICATIONS STANDARDS.

THE WORK AS DESCRIBED WILL BE MEASURED AS ONE UNIT FOR EACH OF THE INSTALLATIONS SPECIFIED, AND SHALL INCLUDE ALL MATERIALS, EQUIPMENT AND INCIDENTALS, COMPLETE IN PLACE. TERMINATIONS, CABLES, CONNECTORS, AND OTHER MISCELLANEOUS ITEMS AND MATERIALS SHALL BE INCIDENTAL TO THIS WORK AND NO SEPARATE PAYMENT WILL BE MADE. (5/24/2016)

ITEM 633 - CONTROLLER ITEM, MISC.: FIBER OPTIC ETHERNET TRANSCEIVER, SHORT RANGE

THE CONTRACTOR SHALL FURNISH AND INSTALL SINGLE MODE FIBER (SMF), SMALL FORM FACTOR PLUGGABLE (SFP) GIGABIT INTERFACE CONNECTOR (GBIC) MODULES AT LOCATIONS AS SHOWN ON THE PLANS.

THE GBIC TRANSCEIVER SHALL BE 1000BASE LX/LH SFP-LC TRANSCEIVER (CISCO PART #GLC-LX-SM-RGD).

THE CONTRACTOR SHALL INSTALL THE SFP MODULE IN THE ETHERNET SWITCH SLOT AND CONFIGURE AS NECESSARY.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A COMPLETE, FUNCTIONAL SYSTEM INCLUDING ALL NECESSARY CABLES AND CONNECTORS IN ACCORDANCE TO THE SPECIFICATIONS AND AS SPECIFIED ON THE PLANS. ALL MISCELLANEOUS PATCH AND INTERCONNECT CABLES SHALL MEET THE PROPOSED EQUIPMENT SPECIFICATION REQUIREMENTS AND SHALL MEET EIA/TIA TELECOMMUNICATIONS STANDARDS. THE WORK AS DESCRIBED WILL BE MEASURED AS ONE UNIT FOR EACH OF THE INSTALLATIONS SPECIFIED, AND SHALL INCLUDE ALL MATERIALS, EQUIPMENT AND INCIDENTALS, COMPLETE IN PLACE. PATCH CABLES, TERMINATIONS, CONNECTIONS, AND OTHER MISCELLANEOUS ITEMS AND MATERIALS SHALL BE CONSIDERED INCIDENTAL TO THIS WORK AND NO SEPARATE PAYMENT WILL BE MADE. (12/2/2015)

ITEM 633 - CONTROLLER ITEM, MISC.: LAYER 2 ETHERNET SWITCH

THE CONTRACTOR SHALL PURCHASE AND INSTALL ENVIRONMENTALLY HARDENED LAYER 2 ETHERNET SWITCHES AS SHOWN ON THE PLANS. LAYER 2 ETHERNET SWITCHES SHALL BE COMNET MODEL CNGE11FX3TX8MS THIS WORK IS THE FURNISHING AND INSTALLATION OF A LAYER 2 SWITCH WITH THREE 100/1000BASE-FX SFP PORTS AND EIGHT SWITCHED 10/100/1000BASE-TX RJ45 PORTS.

ALL EQUIPMENT SHALL BE NEW AND IN STRICT ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS AND THE SPECIFICATIONS.
TRAFFIC MAINTENANCE SHALL BE CONTACTED AT 645-7393 14 CALENDAR DAYS PRIOR TO INSTALLATION TO PROGRAM THE SWITCH. THE CONTRACTOR SHALL INSTALL THE SWITCH IN THE CABINET BUT SHALL NOT MAKE ANY CONNECTIONS TO THE SWITCH.

THE TRAFFIC MAINTENANCE MANAGER SHALL INSPECT THE CONDITION OF ALL COMPONENTS UPON INSTALLATION. NO DAMAGED COMPONENT WILL BE ACCEPTED, AND NO COMPONENT SHALL BE CONSIDERED INSTALLED UNTIL THE TRAFFIC MAINTENANCE MANAGER APPROVES OF THE SWITCH INSTALLATION. LAYER 2 ETHERNET SWITCHES SHALL SUPPORT DIRECT CONNECTIVITY TO PROPOSED AND EXISTING NETWORKS CONFIGURED IN RING AND MESH FAULT TOLERANT TOPOLOGIES ENABLING APPLICATIONS TO OPERATE RELIABLY, AND WITH LOW LATENCY.

ALL EQUIPMENT SHALL INCLUDE LICENSES, WHERE REQUIRED, FOR ANY SOFTWARE OR HARDWARE IN THE SYSTEM.

LAYER 2 ETHERNET SWITCHES SHALL SUPPORT DIRECT CONNECTIVITY TO PROPOSED AND EXISTING NETWORKS CONFIGURED IN RING AND MESH FAULT TOLERANT TOPOLOGIES ENABLING APPLICATIONS TO OPERATE RELIABLY, AND WITH LOW LATENCY.

1. INSTALL POWER ADAPTER, POWER CABLES, CATEGORY 5E OR CATEGORY 6 PATCH CORDS, AND SINGLE MODE PATCH CABLES AS REQUIRED AND DEPICTED ON COMMUNICATIONS DIAGRAMS.

2. SECURELY MOUNT THE SWITCH AND POWER SUPPLY IN THE CABINET.

3. MAKE POWER CONNECTION TO AN AVAILABLE OUTLET ON THE INSTALLED SURGE SUPPRESSOR.

4. MAKE THE COMMUNICATION CONNECTIONS.

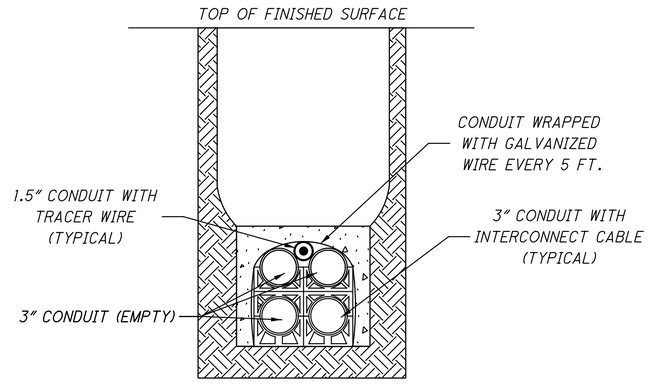
5. ESTABLISH AND VERIFY COMMUNICATIONS TO THE NETWORK PRIOR TO TRANSITIONING SIGNAL CONTROLLER TO NEW SYSTEM.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A COMPLETE, FUNCTIONAL SYSTEM INCLUDING ALL NECESSARY CABLES AND CONNECTORS IN ACCORDANCE TO THE SPECIFICATIONS AND AS SPECIFIED ON THE PLANS. ALL MISCELLANEOUS PATCH AND INTERCONNECT CABLES SHALL MEET THE PROPOSED EQUIPMENT SPECIFICATION REQUIREMENTS AND SHALL MEET EIA/TIA TELECOMMUNICATIONS STANDARDS. ADDITIONALLY, FIBER OPTIC PATCH CABLES SHALL CONFORM TO THE PLAN REQUIREMENTS FOR PATCH CABLES. (5/12/20)

ITEM 625 - CONDUIT, MISC.: 4", MULTICELL, 725.20 , EPC-80, CITY OF COLUMBUS

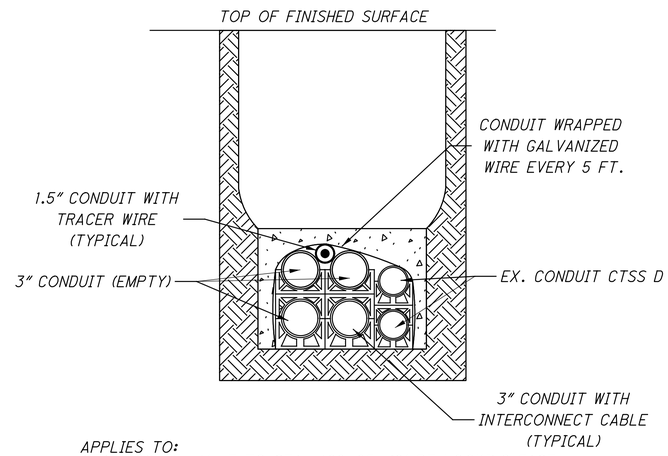
THIS ITEM SHALL FOLLOW CITY OF COLUMBUS CMS 625 AND 725.20, AND SHALL BE DIRECTIONALLY BORED AS INDICATED IN THE PLANS.

CONDUIT MISC.: ENCASED INTERCONNECT CONDUIT BANK, TC2, SCH 40, (4)-3" & (1)-1.5", CITY OF COLUMBUS
CROSS SECTION (TYPICAL)



APPLIES TO:
STA. 546+50 TO STA. 580+32 LOOKING NORTH
STA. 546+50, 11.0' RT TO STA. 546+50, 75.7' RT LOOKING EAST
STA. 580+32 TO STA. 602+64 LOOKING NORTH
STA. 602+64, 9.0' LT TO STA. 602+64, 71.0' LT LOOKING WEST
STA. 602+64 TO STA. 606+90 LOOKING NORTH

CTSS D EXISTING CONDUIT AND PROPOSED CONDUIT CROSS SECTION



APPLIES TO:
STA. 496+75, 4' LT TO STA. 498+05, 19' RT LOOKING EAST

⚠1 ADDENDUM #1
04/21/2023

CALCULATED DKA
CHECKED SGJ

TRAFFIC SIGNAL INTERCONNECT NOTES

FRA-270-51.50

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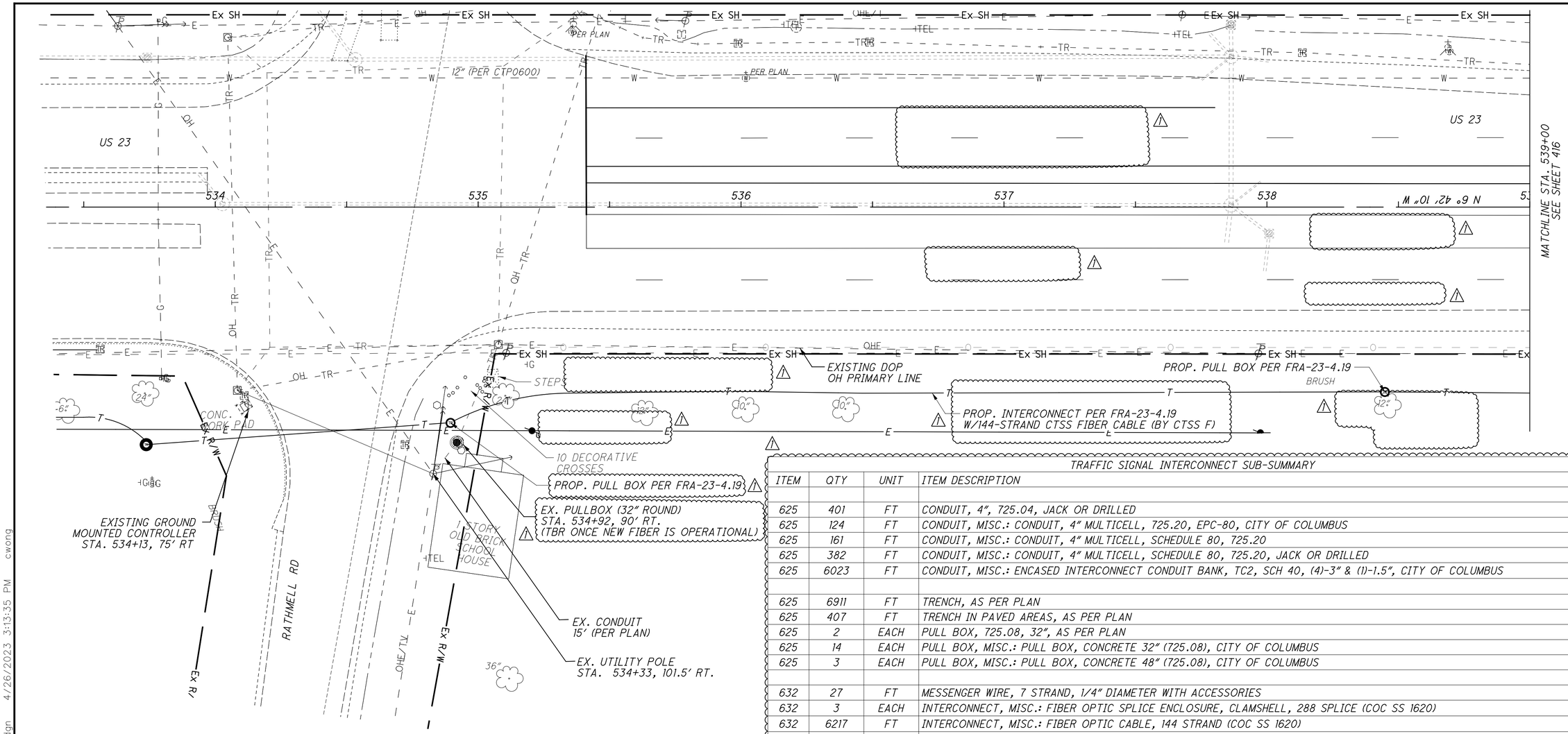

LEGEND:

- = EXISTING UTILITY POLE
- = EXISTING LIGHT POLE
- = EXISTING MANHOLE
- = EXISTING WATER VALVE
- = EXISTING GAS VALVE
- = EXISTING SIGNAL POLE FOUNDATION
- = EXISTING TRAFFIC SIGNAL PULLBOX
- = PROPOSED SIGNAL POLE FOUNDATION
- = PROPOSED TRAFFIC PULL BOX (48")
- = PROPOSED TRAFFIC PULL BOX (32")

TRAFFIC SIGNAL INTERCONNECT SUB-SUMMARY

ITEM	QTY	UNIT	ITEM DESCRIPTION
625	401	FT	CONDUIT, 4", 725.04, JACK OR DRILLED
625	124	FT	CONDUIT, MISC.: CONDUIT, 4" MULTICELL, 725.20, EPC-80, CITY OF COLUMBUS
625	161	FT	CONDUIT, MISC.: CONDUIT, 4" MULTICELL, SCHEDULE 80, 725.20
625	382	FT	CONDUIT, MISC.: CONDUIT, 4" MULTICELL, SCHEDULE 80, 725.20, JACK OR DRILLED
625	6023	FT	CONDUIT, MISC.: ENCASED INTERCONNECT CONDUIT BANK, TC2, SCH 40, (4)-3" & (1)-1.5", CITY OF COLUMBUS
625	6911	FT	TRENCH, AS PER PLAN
625	407	FT	TRENCH IN PAVED AREAS, AS PER PLAN
625	2	EACH	PULL BOX, 725.08, 32", AS PER PLAN
625	14	EACH	PULL BOX, MISC.: PULL BOX, CONCRETE 32" (725.08), CITY OF COLUMBUS
625	3	EACH	PULL BOX, MISC.: PULL BOX, CONCRETE 48" (725.08), CITY OF COLUMBUS
632	27	FT	MESSENGER WIRE, 7 STRAND, 1/4" DIAMETER WITH ACCESSORIES
632	3	EACH	INTERCONNECT, MISC.: FIBER OPTIC SPLICE ENCLOSURE, CLAMSHELL, 288 SPLICE (COC SS 1620)
632	6217	FT	INTERCONNECT, MISC.: FIBER OPTIC CABLE, 144 STRAND (COC SS 1620)
632	3	EACH	INTERCONNECT, MISC.: TERMINATION PANEL, 24 FIBER, WITH 200 FT DROP CABLE
632	240	EACH	INTERCONNECT CABLE, MISC.: FIBER OPTIC FUSION SPLICE (COC SS 1620)
632	1000	FT	POWER CABLE, 3 CONDUCTOR, NO. 4 AWG
632	1	EACH	CONDUIT RISER, 2" DIAMETER
632	1	EACH	WOOD POLE
633	3	EACH	CONTROLLER ITEM, MISC.: LAYER 2 ETHERNET SWITCH
633	6	EACH	CONTROLLER ITEM, MISC.: FIBER OPTIC ETHERNET TRANSCEIVER, SHORT RANGE
633	2	EACH	CONTROLLER ITEM, MISC.: TERMINAL PORT SERVER
804	3	EACH	FAN-OUT KIT, 12 FIBER
804	3	EACH	FIBER TERMINATION PANEL, 12 FIBER
804	2	EACH	SPLICE ENCLOSURE

⚠1 ADDENDUM #1
04/21/2023

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DKA
CHECKED SGJ

TRAFFIC SIGNAL INTERCONNECT PLAN
U.S. 23 STA. 533+50 TO STA. 539+00

FRA-270-51.50

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554

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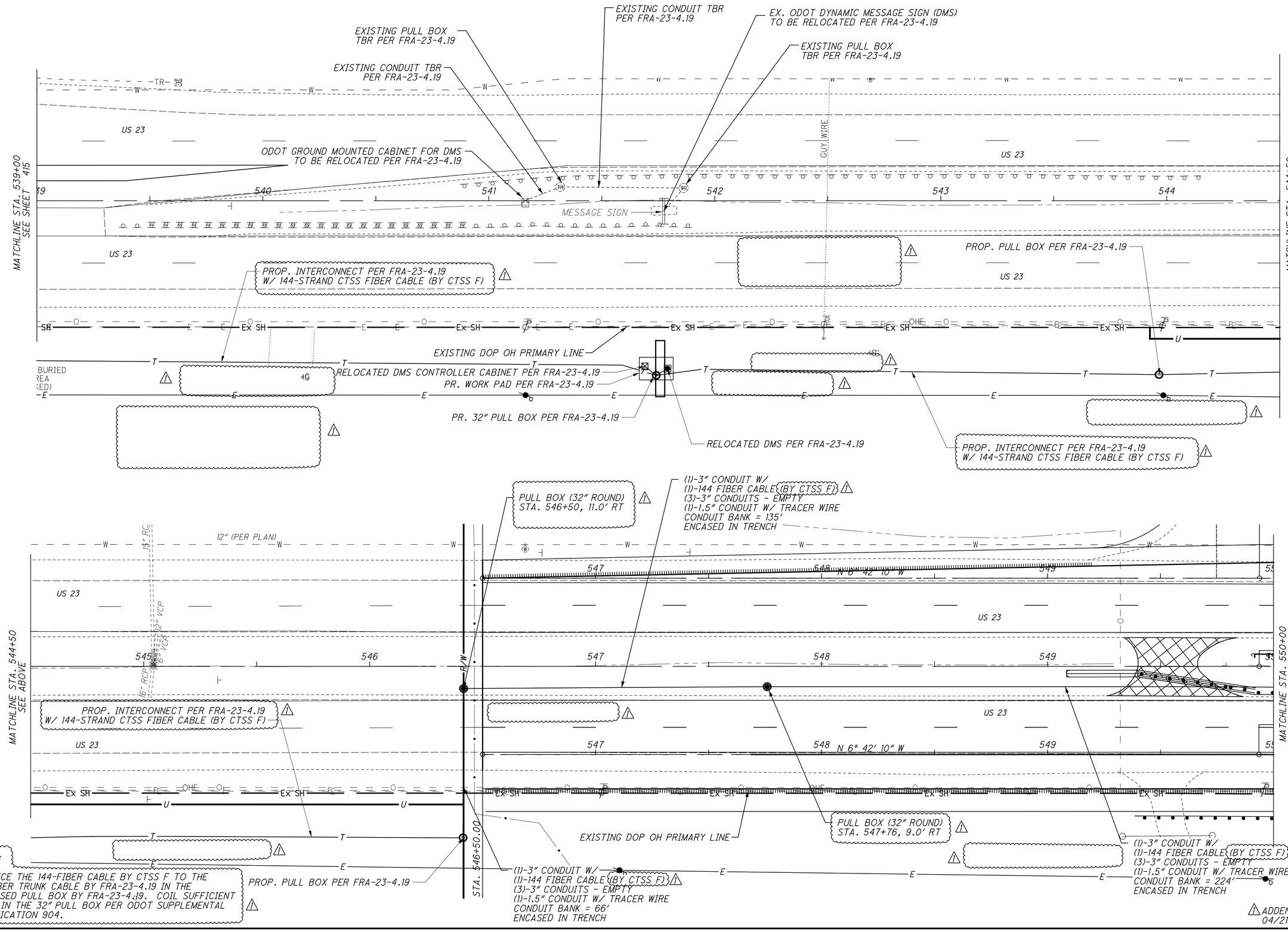

NOTES:

1. SPLICE THE 144-FIBER CABLE BY CTSS F TO THE 144-FIBER TRUNK CABLE BY FRA-23-4.19 IN THE PROPOSED PULL BOX BY FRA-23-4.19. COIL SUFFICIENT SLACK IN THE 32" PULL BOX PER ODOT SUPPLEMENTAL SPECIFICATION 904.

ADDENDUM #1
04/21/2023

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DKA
CHECKED SGJ

TRAFFIC SIGNAL INTERCONNECT PLAN
U.S. 23 STA. 539+00 TO STA. 550+00

FRA-270-51.50

416
554

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(1)-3" CONDUIT W/
(1)-144 FIBER CABLE (BY CTSS F) ⚠
(3)-3" CONDUITS - EMPTY
(1)-1.5" CONDUIT W/ TRACER WIRE
CONDUIT BANK = 266'
ENCASED IN TRENCH

PULL BOX (32" ROUND)
STA. 552+66, 9.2' RT ⚠

(1)-3" CONDUIT W/
(1)-144 FIBER CABLE (BY CTSS F) ⚠
(3)-3" CONDUITS - EMPTY
(1)-1.5" CONDUIT W/ TRACER WIRE
CONDUIT BANK = 274'
ENCASED IN TRENCH

MATCHLINE STA. 550+00
SEE SHEET 416

PI STA. 549+93.68

PI STA. 549+93.55

US 23

N 6° 19' 40" W

THE CITY OF COLUMBUS, OHIO
NO PID

EXISTING DOP OH PRIMARY LINE

MATCHLINE STA. 555+50
SEE BELOW

(1)-3" CONDUIT W/
(1)-144 FIBER CABLE (BY CTSS F) ⚠
(3)-3" CONDUITS - EMPTY
(1)-1.5" CONDUIT W/ TRACER WIRE
CONDUIT BANK = 226'
ENCASED IN TRENCH

PULL BOX (32" ROUND)
STA. 557+76, 9.3' RT ⚠

(1)-3" CONDUIT W/
(1)-144 FIBER CABLE (BY CTSS F) ⚠
(3)-3" CONDUITS - EMPTY
(1)-1.5" CONDUIT W/ TRACER WIRE
CONDUIT BANK = 324'
ENCASED IN TRENCH

MATCHLINE STA. 555+50
SEE ABOVE

PC STA. 555+41.10

PC STA. 555+40.85

PC STA. 555+40.59

PT STA. 560+35.11

PT STA. 560+10.04

PC 260+14.67

MATCHLINE STA. 561+00
SEE SHEET 418

⚠ ADDENDUM #1
04/21/2023

TRAFFIC SIGNAL INTERCONNECT PLAN
U.S. 23 STA. 550+00 TO STA. 561+00

FRA-270-51.50

417
554

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DKA
CHECKED SGJ

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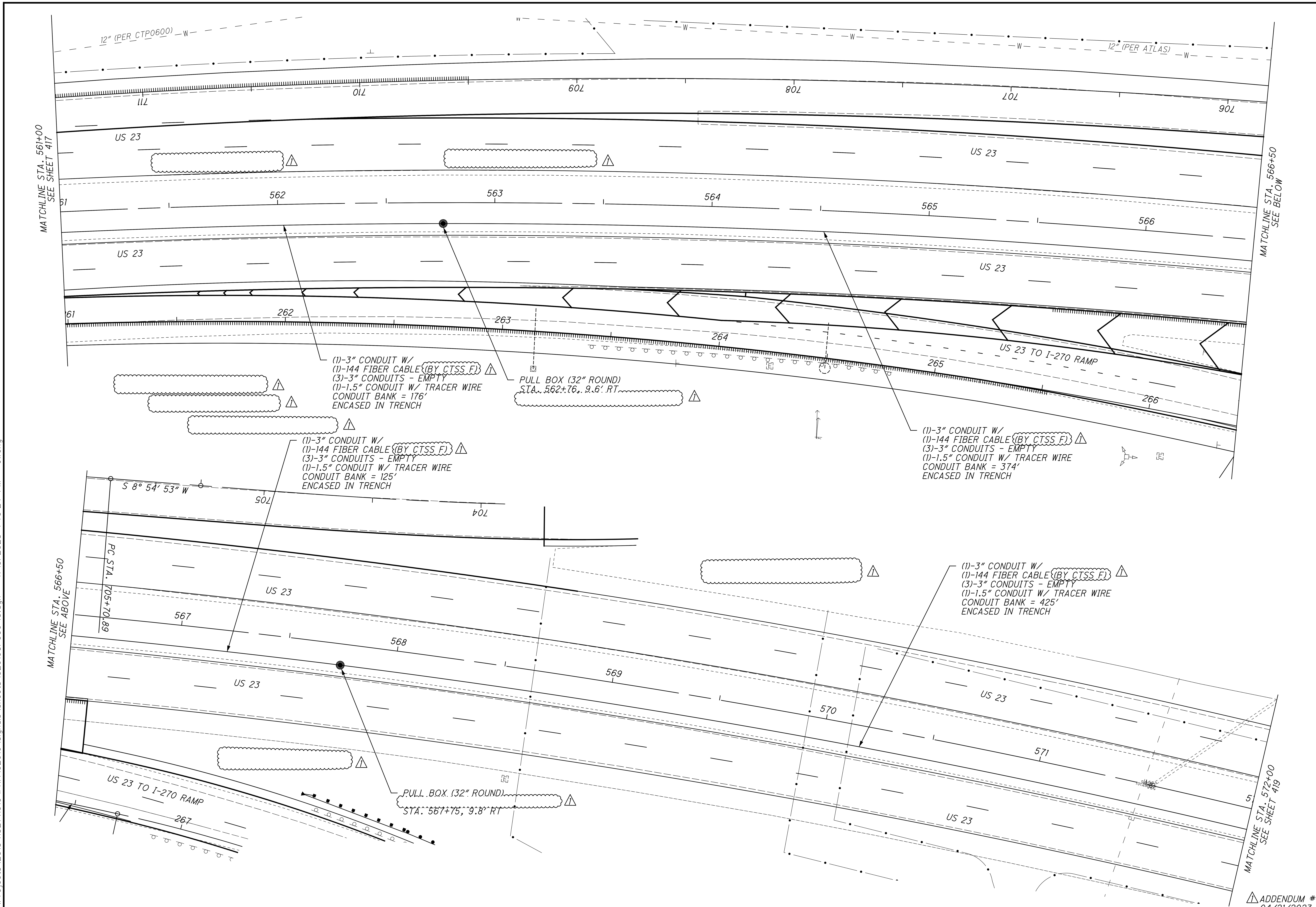

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED DKA
CHECKED SGJ

TRAFFIC SIGNAL INTERCONNECT PLAN
U.S. 23 STA. 561+00 TO STA. 572+00

FRA-270-51.50

NOTE

COIL SUFFICIENT 24-FIBER DROP CABLE IN THE PROPOSED 48" PULL BOX (STATION 572+76) AND THE PROPOSED CONTROLLER CABINET (STATION 572+76.5) PER ODOT SUPPLEMENTAL SPECIFICATION 804.

(2) - 4" CONDUITS (MULTICELL) JACK OR DRILLED, 77' (EMPTY)

(1)-3" CONDUIT W/ (1)-144 FIBER CABLE (BY CTSS F) (3)-3" CONDUITS - EMPTY (1)-1.5" CONDUIT W/ TRACER WIRE CONDUIT BANK = 76' ENCASED IN TRENCH

PULL BOX (32" ROUND) STA. 572+76, 77.0' LT

RAMP P2

30"-A

PT STA. 572+38.97

EX. 12" WATER (CTP0600-013)

(1)-3" CONDUIT W/ (1)-144 FIBER CABLE (BY CTSS F) (3)-3" CONDUITS - EMPTY (1)-1.5" CONDUIT W/ TRACER WIRE CONDUIT BANK = 185' ENCASED IN TRENCH

STA. 2+98.12

US 23

MATCHLINE STA. 572+00 SEE SHEET 418

MATCHLINE STA. 577+50 SEE SHEET 420

72" RCP

72" RCP

18" RCP

PULL BOX (48" ROUND) TYPE 1 STA. 572+76, 9.0' RT W/ SPLICE ENCLOSURE (SPLICE 144-FIBER TO 24-FIBER DROP CABLE)

(2)-4" CONDUITS (MULTICELL) W/ (1) - 24-FIBER DROP CABLE, JACK OR DRILLED, 55'

PROPOSED GROUND MOUNTED CONTROLLER STA. 572+76.5, 61.4' RT INSTALL (2)-GBIC MODULES INSTALL (1)-LAYER 2 SWITCH

CONDUIT TO PROPOSED POWER LOCATION

(1)-3" CONDUIT W/ (1)-144 FIBER CABLE (BY CTSS F) (3)-3" CONDUITS - EMPTY (1)-1.5" CONDUIT W/ TRACER WIRE CONDUIT BANK = 295' ENCASED IN TRENCH

PULL BOX (32" ROUND) STA. 575+65, 9.1' RT

ADDENDUM #1 04/21/2023

HORIZONTAL SCALE IN FEET

CALCULATED DKA CHECKED SGJ

TRAFFIC SIGNAL INTERCONNECT PLAN
U.S. 23 STA. 572+00 TO STA. 577+50

FRA-270-51.50

419
554

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NOTES

COIL SUFFICIENT 12-FIBER DROP CABLE IN THE PROPOSED PTZ CAMERA CONTROL BOX (STATION 580+17) AND THE PROPOSED 32" PULL BOX (STATION 580+17) PER ODOT SUPPLEMENTAL SPECIFICATION 804.

COIL SUFFICIENT 24-FIBER DROP CABLE IN THE PROPOSED CONTROLLER CABINET (STATION 587+29.7) AND THE PROPOSED 48" PULL BOX (STATION 587+37) PER ODOT SUPPLEMENTAL SPECIFICATION 804.

⚠ EX. TR CONDUIT (TBA) W/EX. CTSS 144-STRAND FOC (TBR)

⚠ EX. POWER FOR NODE CABINET PER CTSS D (DND)

⚠ EX. CONDUIT ATTACHED TO BRIDGE W/EX. 288-STRAND CTSS FOC (DND)

⚠ (1)-4" MULTICELL CONDUIT W/ 12-FIBER DROP CABLE, 65'

⚠ PULL BOX (32" ROUND) STA. 580+33, 69.1' LT

⚠ (1)-4" MULTICELL CONDUIT W/ 12-FIBER DROP CABLE, JACK OR DRILLED, 78'

⚠ EX. POWER FOR NODE CABINET PER CTSS D (DND)

MATCH LINE STA. 498+00 - SEE SHEET 420A

⚠ EX. PULL BOX PER CTSS E (TBR)

⚠ EX. 18" ELECTRIC PB PER CTSS D (DND)

(1)-3" CONDUIT W/ (1)-144 FIBER CABLE (3)-3" CONDUITS - EMPTY (1)-1.5" CONDUIT W/ TRACER WIRE CONDUIT BANK = 268' ENCASED IN TRENCH

⚠ EX. TR CONDUIT (TBA) W/EX. CTSS 144-STRAND FOC (TBR)

ST STA. 15+70.02

12" WATER

S 17° 54' 47" W

12" (PER CTP0600)

MATCHLINE STA. 577+50 SEE SHEET 419

US 23

(1)-3" CONDUIT W/ (1)-144 FIBER CABLE (BY CTSS F) (3)-3" CONDUITS - EMPTY (1)-1.5" CONDUIT W/ TRACER WIRE CONDUIT BANK = 125' ENCASED IN TRENCH

I-270 EB

I-270 WB

MATCHLINE STA. 583+00 SEE BELOW

578 579 580 581 582

⚠ EX. PULL BOX PER CTSS E (TBR)

⚠ PULL BOX (18") STA. 580+37, 5.8' RT

⚠ EX. TR CONDUIT (TBA) W/EX. CTSS 144-STRAND FOC (TBR)

(2) - 4" CONDUITS (MULTICELL) (EMPTY), 62'

(1)-3" CONDUIT W/ (1)-144 FIBER CABLE (3)-3" CONDUITS - EMPTY (1)-1.5" CONDUIT W/ TRACER WIRE CONDUIT BANK = 113' ENCASED IN TRENCH

WOODED

PULL BOX (32" ROUND) STA. 587+42, 54.8' LT

PULL BOX (48" ROUND) TYPE 1 STA. 587+42, 6.8' RT W/ SPLICE ENCLOSURE COIL 300' 144-FIBER TRUNK CABLE (SPLICE 144-FIBER TUNK CABLE TO 24-FIBER DROP CABLE)

⚠ EX. PULL BOX PER CTSS E (TBR)

12" (PER ATLAS)

⚠ EX. TR CONDUIT (TBA) W/EX. CTSS 144-STRAND FOC (TBR)

PULL BOX (32" ROUND) STA. 580+32, 9.0' RT. W/ SPLICE ENCLOSURE COIL 150' 144 FIBER TRUNK CABLE (SPLICE 144-FIBER TRUNK CABLE TO 12-FIBER DROP CABLE)

⚠ EX. PULL BOX PER CTSS E (TBR)

12" (PER ATLAS)

US 23

MATCHLINE STA. 583+00 SEE ABOVE

584 585 586 587 588

PULL BOX (32" ROUND) STA. 584+45, 9.0' RT COIL 150' SLACK OF 144-FIBER CABLE

⚠ (1)-3" CONDUIT W/ (1)-144 FIBER CABLE (3)-3" CONDUITS - EMPTY (1)-1.5" CONDUIT W/ TRACER WIRE CONDUIT BANK = 297' ENCASED IN TRENCH

⚠ (1)-3" CONDUIT W/ (1)-144 FIBER CABLE (3)-3" CONDUITS - EMPTY (1)-1.5" CONDUIT W/ TRACER WIRE CONDUIT BANK = 145' ENCASED IN TRENCH

US 23 TO I-270 WB RAMP

RAMP S

P.C. Sta. 799+52.87

P.T. Sta. 798+48.77

(2) - 4" CONDUITS (MULTICELL) W/ (1) - 24-FIBER DROP CABLE, JACK OR DRILLED, 59'

PULL BOX (18") (SEE SIGNAL PLANS)

SEE DETAIL A

(1) - 2" CONDUIT W/ POWER CABLE (SIGNAL)

(1) - 2" CONDUIT W/ POWER CABLE (CCTV CAMERA), 6' (CONDUIT QUANTITY IN SIGNAL PLANS)

⚠ EX. PULL BOX PER CTSS E (TBR)

EX. 144-STRAND CTSS FOC AND MESSENGER WIRE (TBR)

⚠ EX. RISER (TBR)

(1) - 4" CONDUIT (MULTICELL) W/ (1) - 24-FIBER DROP CABLE

CONDUIT TO PROP. POWER LOCATION ⚠

PROPOSED GROUND MOUNTED CONTROLLER STA. 587+29.7, 63.9' RT INSTALL (1)-LAYER 2 SWITCH INSTALL (2)-GBIC MODULES

PULL BOX (32") (SEE SIGNAL PLANS)

(1) - 3" CONDUIT W/ SIGNAL CABLES (SEE SIGNAL PLANS)

CONDUIT W/ POWER CABLE

DETAIL A
SCALE 1:10

⚠ ADDENDUM #1
04/21/2023

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DKA
CHECKED SGJ

TRAFFIC SIGNAL INTERCONNECT PLAN
U.S. 23 STA. 577+50 TO STA. 588+50

FRA-270-51.50

420
554

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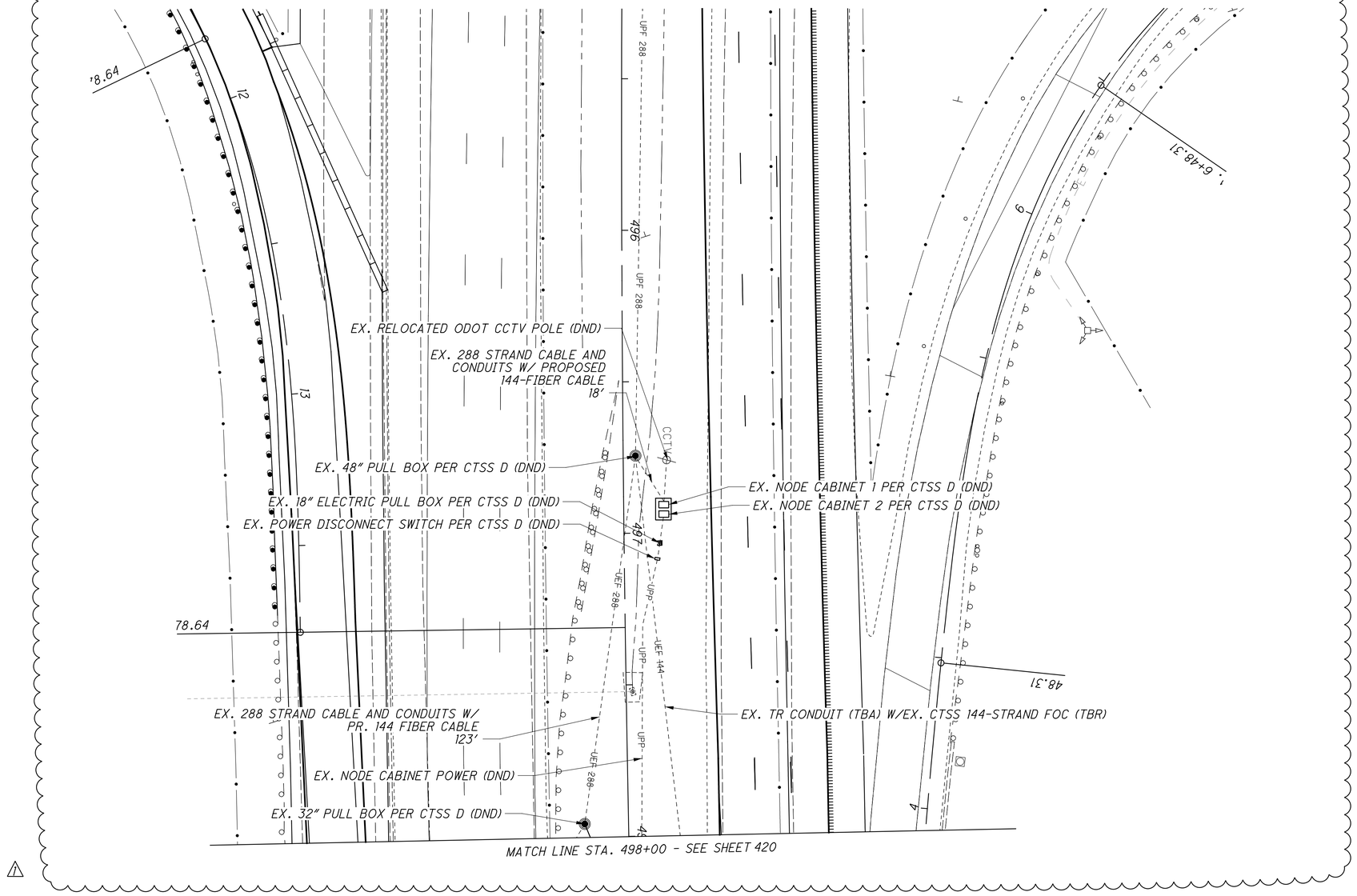

⚠ ADDENDUM #1
04/21/2023

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HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DKA
CHECKED SGJ

TRAFFIC SIGNAL INTERCONNECT PLAN
U.S. 23 STA. 577+50 TO STA. 588+50

FRA-270-51.50

420A
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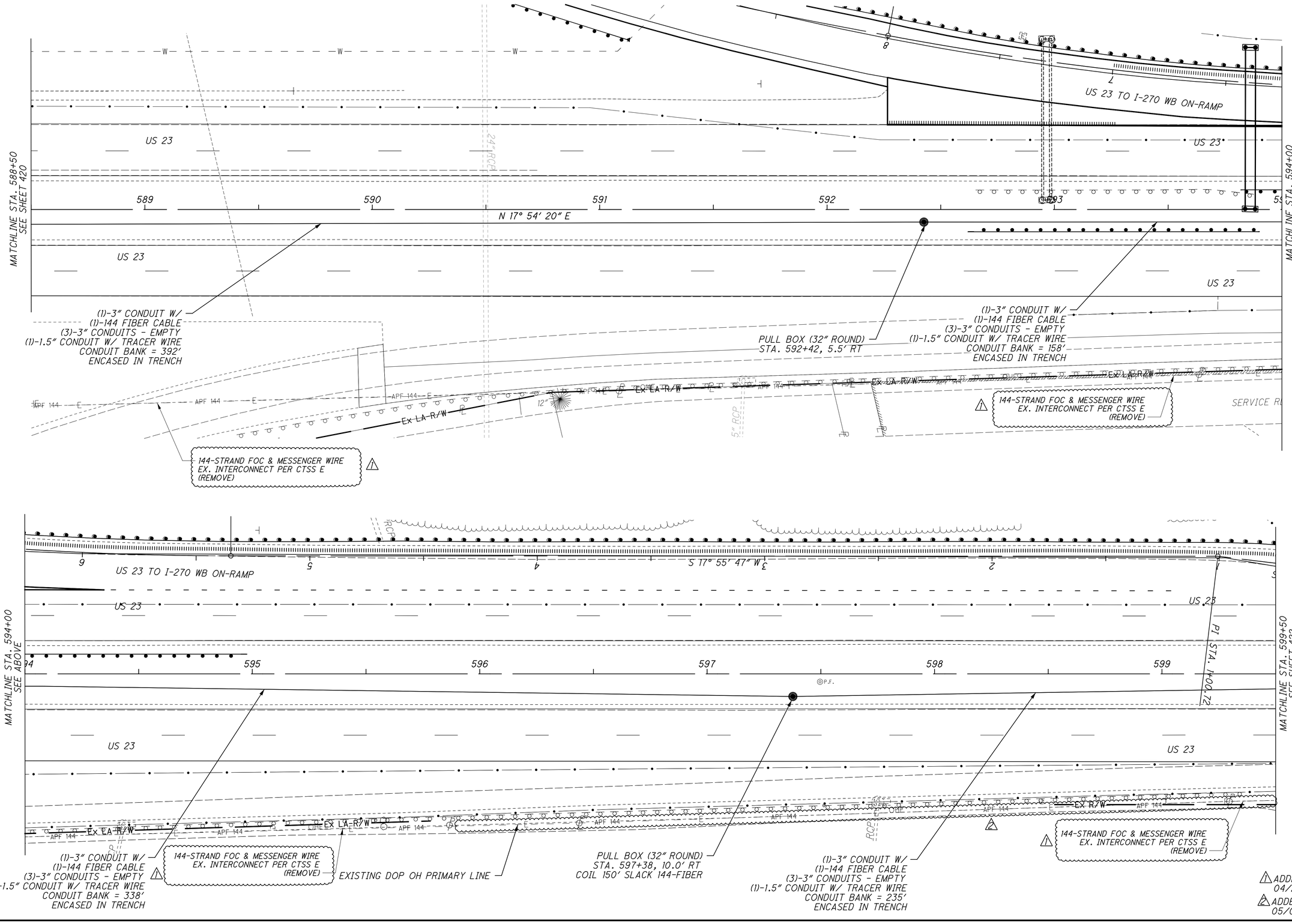

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DKA
CHECKED SGJ

TRAFFIC SIGNAL INTERCONNECT PLAN
U.S. 23 STA. 588+50 TO STA. 599+50

FRA-270-51.50

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PULL BOX (32" ROUND)
STA. 602+64, 71.0' LT
COIL 150' SLACK 144-FIBER CABLE

EX. 10" SERVICE LINE
P3250

(1)-3" CONDUIT W/
(1)-144 FIBER CABLE
(3)-3" CONDUITS - EMPTY
(1)-1.5" CONDUIT W/ TRACER WIRE
CONDUIT BANK = 236'
ENCASED IN TRENCH

(1)-3" CONDUIT W/
(1)-144 FIBER CABLE
(3)-3" CONDUITS - EMPTY,
(1)-1.5" CONDUIT W/ TRACER WIRE
ENCASED IN TRENCH, 63'

(1)-3" CONDUIT W/
(1)-144 FIBER CABLE
(3)-3" CONDUITS - EMPTY
(1)-1.5" CONDUIT W/ TRACER WIRE
CONDUIT BANK = 292'
ENCASED IN TRENCH

PULL BOX (32" ROUND)
COIL 100' 144-FIBER TRUNK CABLE
STA. 602+64, 9.0' LT

EXPOSE

24° 46' 21" W

US 23

MATCHLINE STA. 599+50
SEE SHEET 421

POT STA. 0+00.00

600 601 602 603 US 23 604

MATCHLINE STA. 605+00
SEE BELOW

EX. 12" WATER
(CTP236 009)
PER PLANS

US 23

2" (PER PLAN)

EXISTING DOP OH PRIMARY LINE

144-STRAND FOC & MESSENGER WIRE
EX. INTERCONNECT PER CTSS E
(REMOVE)

PROP. 0.25" MESSENGER WIRE
W/(1)-144-STRAND CTSS FOC

144-STRAND FOC & MESSENGER WIRE
EX. INTERCONNECT PER CTSS E
(REMOVE)

(1)-3" CONDUIT W/
(1)-144 FIBER CABLE
(3)-3" CONDUITS - EMPTY
(1)-1.5" CONDUIT W/ TRACER WIRE
CONDUIT BANK = 190'
ENCASED IN TRENCH (TYP)

PROP. WOOD POLE W/(1)-2"
MODIFIED CONDUIT RISER, 725.04
STA. 606+87, 79.2' LT

EXISTING GROUND MOUNTED CONTROLLER
STA. 607+09, 70.4' LT
INSTALL (2)-GBIC MODULES
INSTALL (1)-LAYER 2 SWITCH

(1)-2" CONDUIT W/(1)-144-STRAND
CTSS FOC AND TRACING WIRE
ENCASED IN TRENCH, 9'

EXISTING CONDUITS W/SIGNAL CABLES

EXISTING TRAFFIC PULL BOX (24" SQUARE)
STA. 607+16.8, 70.3' LT

12" RCP
CONC. WORK PAD
12" STEEL
3' PEDESTAL
12" RCP
12" (PER PLAN)
OBETZ RD
POT Sta. 609+38.46

EX. 8" WATER
(WL2002-22_002)
PER PLANS

PULL BOX (48" ROUND) TYPE 1
STA. 606+90, 70.4' LT
W/ 200' SLACK

24-STRAND FOC DROP CABLE (DND)
PROP. 144-STRAND CTSS FOC CABLE
(LASH WITH EXISTING DROP CABLE)

MATCHLINE STA. 605+00
SEE ABOVE

12" RCP 12" RCP 606 12" RCP 4" CPP 607 608 12" VCP 24" RCP 609

US 23

EXISTING TRAFFIC SIGNAL POLE
STA. 607+11.3, 66.3' LT

144-STRAND FOC
EX. INTERCONNECT PER CTSS E
(REMAIN)

15" RCP 15" RCP 4" CPP 3' PEDESTAL 12" RCP 12" RCP

144-STRAND FOC & EX.
INTERCONNECT PER CTSS E (REMOVE)
EX. MESSENGER WIRE (TO REMAIN)

EX. CTSS SPLICE
ENCLOSURE (REMAIN)

PROP. 144-STRAND CTSS
FOC (LASH WITH EXISTING
TRUNK AND DROP CABLES)

1 ADDENDUM #1
04/21/2023
2 ADDENDUM #2
05/05/2023

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DKA
CHECKED SGJ

TRAFFIC SIGNAL INTERCONNECT PLAN
U.S. 23 STA. 599+50 TO STA. 608+81

FRA-270-51.50

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LEGEND

144-FIBER OPTIC TRUNK CABLE (UNDERGROUND)

EX. 144-FIBER OPTIC TRUNK CABLE

24-FIBER OPTIC DROP CABLE (UNDERGROUND)

12-FIBER OPTIC DROP CABLE (UNDERGROUND)

PROPOSED CONTROLLER CABINET — CONT. CAB.

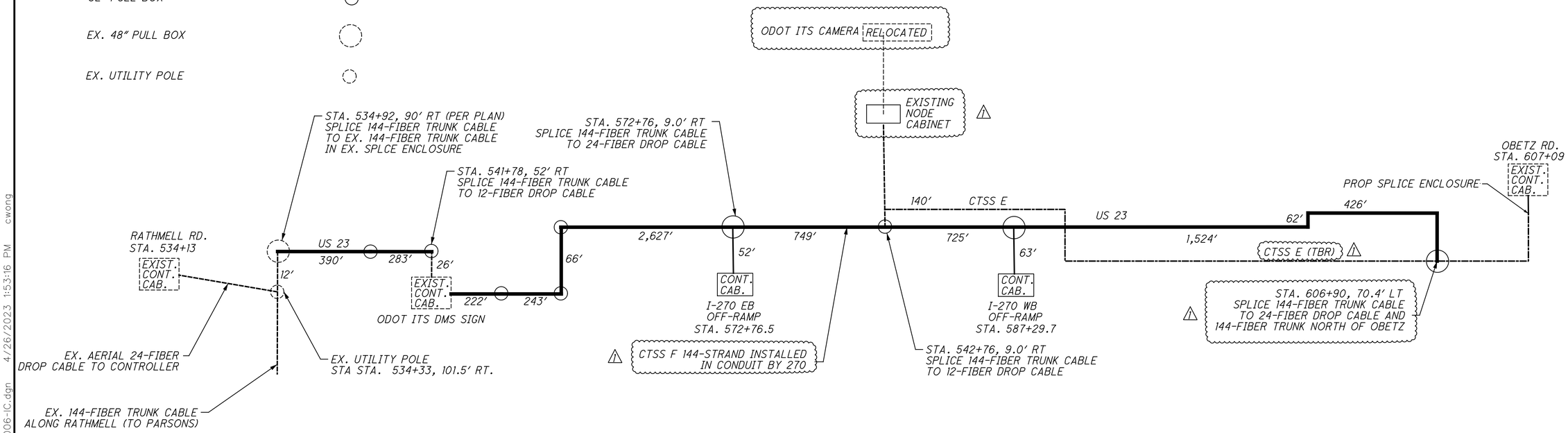
EXISTING CONTROLLER CABINET — EXIST. CONT. CAB.

48" PULL BOX

32" PULL BOX

EX. 48" PULL BOX

EX. UTILITY POLE



NOTE: FOR CROSS-SECTION OF CONDUIT BANK, SEE CITY OF COLUMBUS STANDARD DRAWING 4001 (TRAFFIC SIGNAL CONDUIT BANK STANDARDS).

1 ADDENDUM #1
04/21/2023

CALCULATED DKA
CHECKED SGJ

TRAFFIC SIGNAL INTERCONNECT PLAN SCHEMATIC - US 23

FRA-270-51.50

△ ADDENDUM #1
04/21/2023

FRA-270-51.50

TRAFFIC SIGNAL INTERCONNECT COMMUNICATIONS PLAN

△

CALCULATED DKA
CHECKED SGJ

TRAFFIC SIGNAL CABINET ASSEMBLY

PROPOSED ETHERNET SWITCH – LAYER 2

1 2 3 4 5 6 7 8

ETHERNET SWITCH PORT DESTINATION

PORT 5: INT. # 2069: HIGH ST AT OBETZ RD (SEE SHEET 427)
PORT 6: PARSONS AVE AT RATHMELL ROAD (END OF PROJECT)

PROP. PORT SERVER

RS232

PROP. TRAFFIC SIGNAL CONTROLLER

BLUE TUBE

ORANGE TUBE

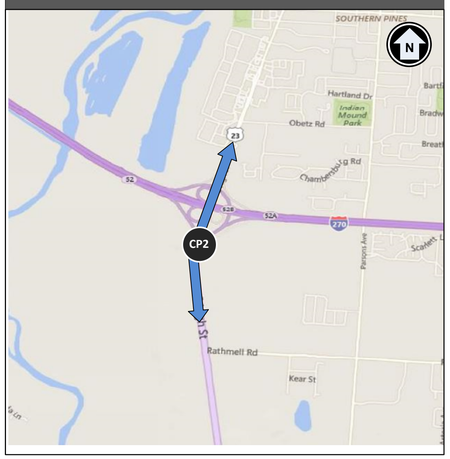
24 STRAND FOC

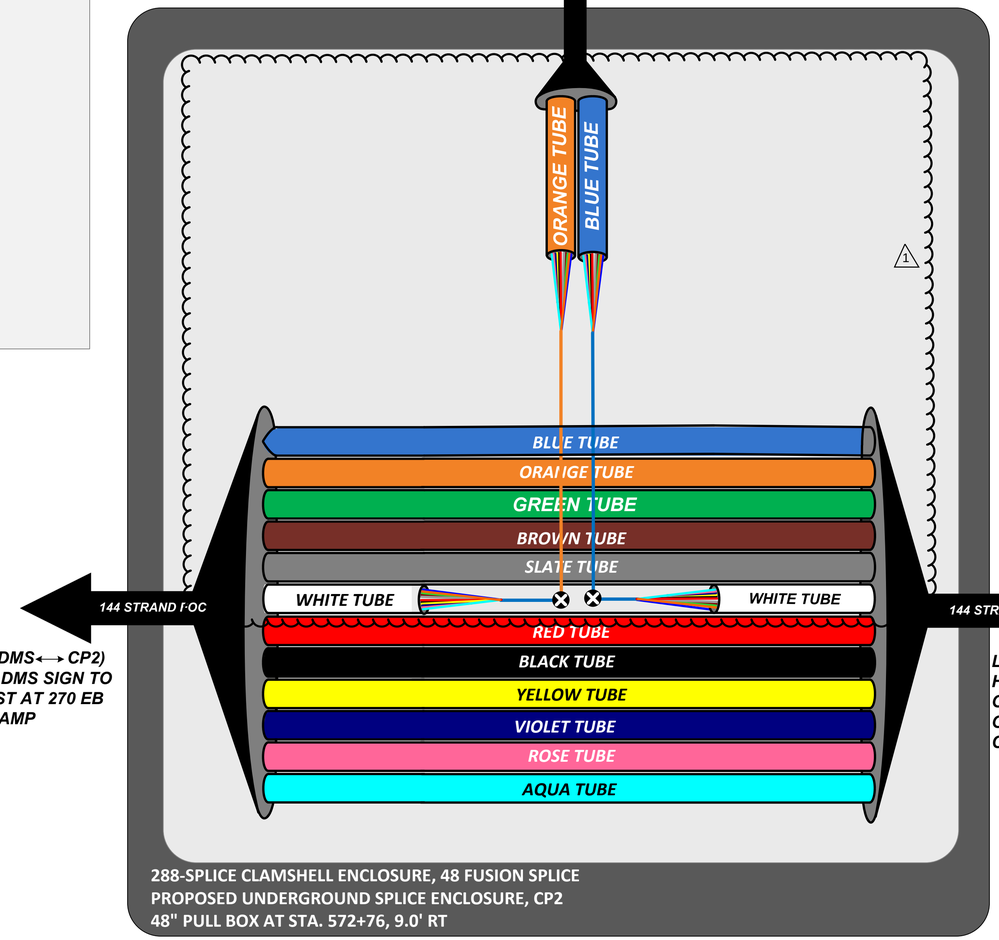
PATCH PANEL ENCLOSURE – 24 TERMINATION

LEGEND

- FIBER PATCH CABLE TX/RX STANDARD
- FIBER PATCH CABLE RX/TX CROSSOVER
- CAT 5E CABLE
- PATCH PANEL
- EXISTING/PROPOSED FIBER OR BUFFER TUBE LEFT COILED IN SPLICE ENCLOSURE
- FUSION SPLICE – SINGLE FIBER
- FIBER BUFFER TUBE Ssplice PR / EX
- LH/ZX GBIC OPTICAL TRANSCEIVER LH – LED ZX – LASER
- 8P8C CONNECTOR
- COLUMBUS - CTSS

LOCATION MAP





LINK (DMS ⟷ CP2) ODOT DMS SIGN TO HIGH ST AT 270 EB OFF RAMP

LINK (CP2 ⟷ NODE) HIGH ST AT 270 EB OFF RAMP TO ODOT NODE CABINET

288-SPLICE CLAMSHELL ENCLOSURE, 48 FUSION SPLICE
PROPOSED UNDERGROUND SPLICE ENCLOSURE, CP2
48" PULL BOX AT STA. 572+76, 9.0' RT

1 ADDENDUM #1 04/21/23

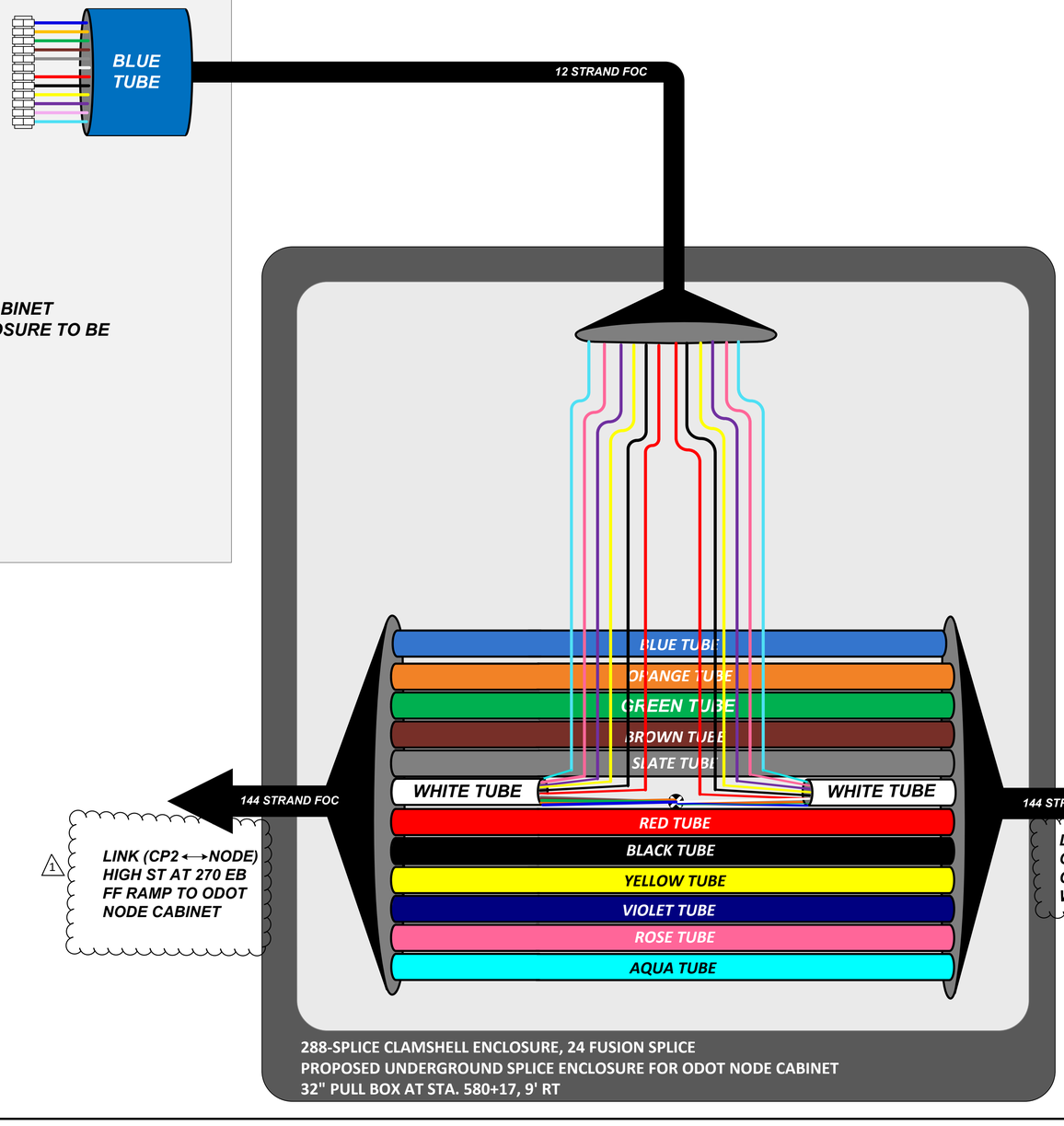
CREATED DKA | CHECKED SGJ

FIBER OPTIC SLICING DIAGRAM
RAMP P2 (I-270 EB OFF-RAMP AT US 23)

FRA-270-51.50

ITS CABINET

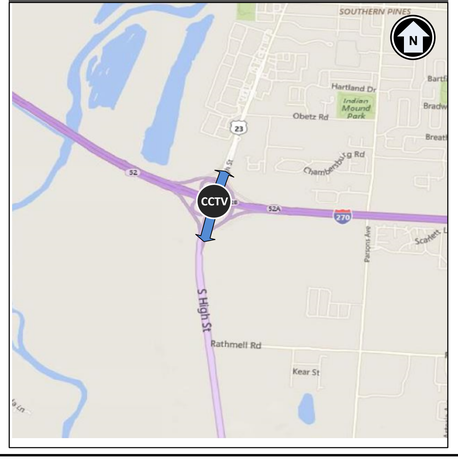
INSTALL 20 FEET OF SLACK IN CABINET CONNECTIONS TO PATCH PANEL ENCLOSURE TO BE COMPLETED BY OTHERS



LEGEND

- FIBER PATCH CABLE TX/RX STANDARD
- FIBER PATCH CABLE RX/TX CROSSOVER
- CAT 5E CABLE
- PATCH PANEL
- EXISTING/PROPOSED FIBER OR BUFFER TUBE LEFT COILED IN SPLICE ENCLOSURE
- FUSION SPLICE – SINGLE FIBER
- FIBER BUFFER TUBE SPLICE PR / EX
- LH/ZX GBIC OPTICAL TRANSCEIVER LH – LED ZX – LASER
- 8P8C CONNECTOR
- COLUMBUS - CTSS

LOCATION MAP



CREATED DKA
CHECKED SGJ

FIBER OPTIC SLICING DIAGRAM
ODOT NODE CABINET: STA. 496+92

1

FRA-270-51.50

1 ADDENDUM #1 04/21/23

TRAFFIC SIGNAL CABINET ASSEMBLY

PROPOSED ETHERNET SWITCH – LAYER 2

1 2 3 4 5 6 7 8

ETHERNET SWITCH PORT DESTINATION

PORT 5: INT. # 2182: HIGH ST AT RATHMELL RD (SEE SHEET 422)
PORT 6: INT # 2069: HIGH ST AT OBETZ RD (SEE SHEET 427)

PROP. PORT SERVER

RS232

PROP. TRAFFIC SIGNAL CONTROLLER

BLUE TUBE

ORANGE TUBE

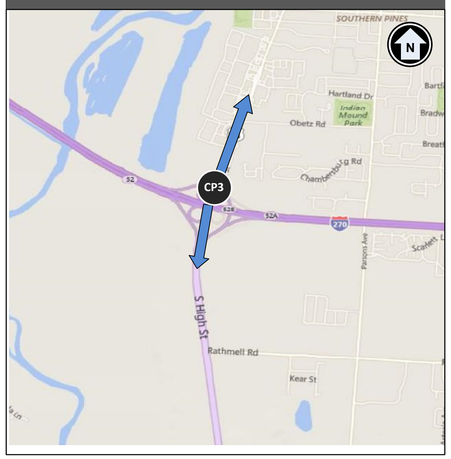
24 STRAND FOC

PATCH PANEL ENCLOSURE – 24 TERMINATION

LEGEND

- FIBER PATCH CABLE TX/RX STANDARD
- FIBER PATCH CABLE RX/TX CROSSOVER
- CAT 5E CABLE
- PATCH PANEL
- EXISTING/PROPOSED FIBER OR BUFFER TUBE LEFT COILED IN SPLICE ENCLOSURE
- FUSION SPLICE – SINGLE FIBER
- FIBER BUFFER TUBE Ssplice PR / EX
- LH/ZX GBIC OPTICAL TRANSCEIVER LH – LED ZX – LASER
- 8P8C CONNECTOR
- COLUMBUS - CTSS

LOCATION MAP



1 LINK (NODE ⟷ CP3) ODOT NODE CABINET TO HIGH ST AT 270 WB OFF RAMP

144 STRAND FOC

ORANGE TUBE

BLUE TUBE

BLUE TUBE
ORANGE TUBE
GREEN TUBE
BROWN TUBE
SLATE TUBE
WHITE TUBE ⊗ ⊗ WHITE TUBE
RED TUBE
BLACK TUBE
YELLOW TUBE
VIOLET TUBE
ROSE TUBE
AQUA TUBE

144 STRAND FOC

LINK (CP3 ⟷ CP4) HIGH ST AT 270 WB OFF RAMP TO HIGH ST AT OBETZ RD

288-SPLICE CLAMSHELL ENCLOSURE, 24 FUSION SPLICE
PROPOSED UNDERGROUND SPLICE ENCLOSURE, CP3
48" PULL BOX AT STA. 587+42, 6.8' RT

1 ADDENDUM #1 04/21/23

CREATED DKA
CHECKED SGJ

FIBER OPTIC SLICING DIAGRAM
RAMP S (I-270 WB OFF-RAMP AT US 23)

FRA-270-51.50

427
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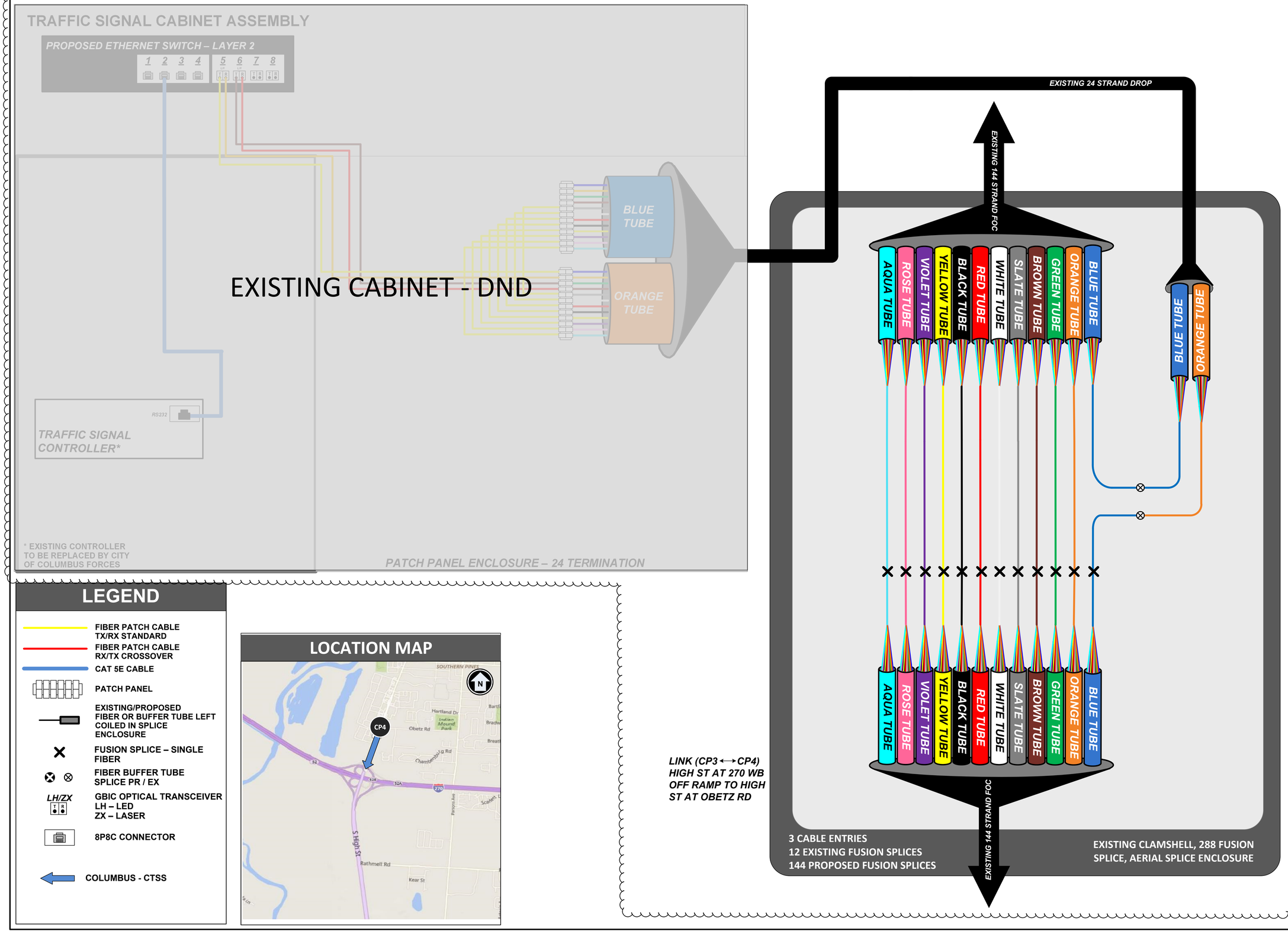

LEGEND

- FIBER PATCH CABLE TX/RX STANDARD
- FIBER PATCH CABLE RX/TX CROSSOVER
- CAT 5E CABLE
- PATCH PANEL
- EXISTING/PROPOSED FIBER OR BUFFER TUBE LEFT COILED IN SPLICE ENCLOSURE
- FUSION SPLICE – SINGLE FIBER
- FIBER BUFFER TUBE SPLICE PR / EX
- LH/ZX GBIC OPTICAL TRANSCEIVER LH – LED ZX – LASER
- 8P8C CONNECTOR
- COLUMBUS - CTSS

LOCATION MAP

LINK (CP3 ⟷ CP4)
HIGH ST AT 270 WB OFF RAMP TO HIGH ST AT OBETZ RD

1 ADDENDUM #1 04/21/23

CREATED DKA
CHECKED SGJ

FIBER OPTIC SLICING DIAGRAM
US 23 AT OBETZ ROAD

FRA-270-51.50

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554

EXISTING LEGEND: (SEE NOTE #2)

(A#) (20'± WIDTH) NB TRAVELED WAY
A1-(8.5"±) ASPHALT CONCRETE (2"± ORIGINAL + 6.5"± SHOWN PER 2013 PLANS)
A2-(1"± ORIGINAL) ROAD MIX SURFACE COURSE±
A3-(3.5"± ORIGINAL) BRICK
A4-(5.5"± ORIGINAL) PLAIN CONCRETE
A5-(12"±X4"± ORIGINAL INTEGRAL CONCRETE CURB (WITH A1 ON TOP)

(B#) (2'± WIDTH) NB INSIDE/OUTSIDE SHOULDER
B1-(8.5"±) ASPHALT CONCRETE (2"± ORIGINAL + 6.5"± SHOWN PER 2013 PLANS)
B2-(3"± ORIGINAL) BITUMINOUS BASE COURSE
B3-(1.5"± ORIGINAL) INSULATION COURSE

(C#) (24'± WIDTH) SB TRAVELED WAY
C1-(6"± SHOWN PER 2013 PLANS) ASPHALT CONCRETE
C2-(9"± PER 1954 PLANS) REINFORCED CONCRETE PAVEMENT
C3-(4"± PER 1954 PLANS) SUBBASE

(D#) (4'± ORIGINAL WIDTH) SB OUTSIDE SHOULDER
D1-(6"± SHOWN PER 2013 PLANS) ASPHALT CONCRETE
D2-(6"± PER 1954 PLANS) STABILIZED CRUSHED AGGREGATE SHOULDER

(E#) (2'± WIDTH) NB INSIDE SHOULDER
(8'± WIDTH) NB OUTSIDE SHOULDER
(2'± WIDTH) SB INSIDE SHOULDER
(5'± WIDTH) SB OUTSIDE SHOULDER
E1-(6"± PER 1986 PLANS) ASPHALT CONCRETE
E2-(6"± PER 1986 PLANS) AGGREGATE BASE

(F#) F1-(1.25"± PER 1989 PLANS) ASPHALT SURFACE COURSE
F2-(1.75"± PER 1989 PLANS) ASPHALT INTERMEDIATE COURSE
F3-(8" PER 1989 PLANS) ASPHALT CONCRETE BASE
F4-(8" PER 1989 PLANS) AGGREGATE BASE

(G) (2'± WIDTH) ALONG SHOULDERS
(2"± AVG. DEPTH) COMPACTED AGGREGATE (PER 2013 PLANS)

(H) 6" DEEP UNDERDRAINS (50" TYP) (PER 1954 PLANS)
(STA 495+00 TO STA 545+00, STA 547+00 TO STA 570+50
NOTE: AGGREGATE DRAINS BETWEEN STA 545+00 TO STA 547+00

(I) SPECIAL 8" COMBINED CURB AND GUTTER (2'± WIDTH) (PER 1989 PLANS)

(J) 4" BASE PIPE UNDERDRAINS (<18" TYP) (PER 1989 PLANS)

(K) SHOULDER RUMBLE STRIPS (16" WIDE PER 2013 PLANS)

(L) 8"± TO 14"± ASPHALT CONCRETE

(M) 6"± TO 8"± AGGREGATE BASE

(N) GUARDRAIL

(O) UPDATED DMS LOCATION ON EX. DMS SUPPORT CONSTRUCTED PER FRA-DMS REPLACEMENT FY20 PROJECT IN 2020 (PID 109467) (US-23 NB DMS)

PROPOSED LEGEND:

(1) US-23 - (1.50") ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A, (446), PG70-22M
CR-121 - (1.25") ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG70-22M

(2A) US-23 - (1.75") ITEM 442 - ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5MM, TYPE A, (446)
CR-121 - (1.75") ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446)

(2B) US-23 - (1.75") ITEM 442 - ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5MM, TYPE A, (448), PG 64-28, AS PER PLAN

(3) US-23 - (9") ITEM 301 - ASPHALT CONCRETE BASE, PG64-22, (449)
(PLACED IN TWO LIFTS)
CR-121 - (9") ITEM 301 - ASPHALT CONCRETE BASE, PG64-22, (449)
(PLACED IN TWO LIFTS)

(4) (VAR., 6" MIN) ITEM 304 - AGGREGATE BASE
(SEE NOTE #4)

(5) ITEM 407 - NON-TRACKING TACK COAT
(PLACED IN BETWEEN LIFT OF ASPHALT)
(APPLIED AT 0.055 GAL/SY AVG FOR NEW PAVEMENT
(APPLIED AT 0.085 GAL/SY AVG FOR PLANED ASPHALT SURFACE)

(6) CHEMICALLY STABILIZED SUBGRADE: (SEE NOTE #4)
ITEM 204 - PROOF ROLLING
(APPLIED AT 1 HR/2000 SY FOR RECONSTRUCTION)
(APPLIED AT 1 HR/3000 SY FOR NEW CONSTRUCTION)
ITEM 206 - CEMENT
(APPLIED AT 5% PER 115 LB/CF SOIL)
ITEM 206 - CEMENT STABILIZED SUBGRADE, 12-INCHES DEEP
ITEM 206 - CURING COAT
ITEM 206 - MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS
(SPECIFIED ON PROJECTS > 40,000 SY, SEE SUPPLEMENT 1120

(7) ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (1" MIN, 3.25" MAX)

(8) ITEM 202 - PAVEMENT REMOVED (SEE NOTE #3)

(9) ITEM 605 - 4" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC (VAR. 18" TO 30" DEPTH)

(10) ITEM 605 - 4" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC (18" DEPTH)

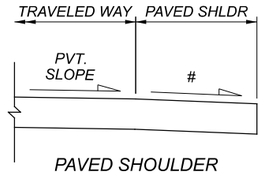
(11) ITEM 606 - GUARDRAIL, TYPE MGS

(12) ITEM 606 - GUARDRAIL, BARRIER DESIGN, TYPE MGS

(13) ITEM 609 - CURB, TYPE 4-C

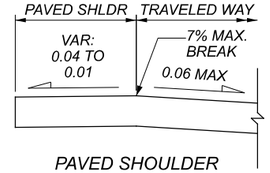
(14) ITEM 618 - RUMBLE STRIPS, TRANSVERSE (ASPHALT CONCRETE)
ITEM 618 - RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)

(15) ITEM 659 - SEEDING AND MULCHING, CLASS 2

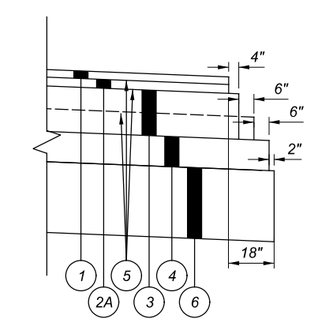


PAVED SHOULDER (ANY WIDTH) CROSS SLOPE DETAILS FOR LOW SIDE OF SUPERELEVATED SECTION

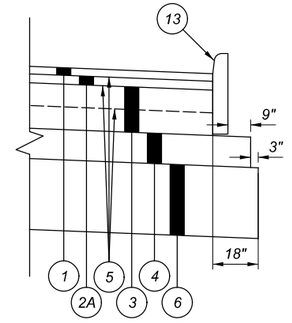
= 0.040 OR SUPERELEVATION RATE, WHICHEVER IS GREATER



PAVED SHOULDER (4' TO 10' WIDTH) CROSS SLOPE DETAILS FOR HIGH SIDE OF SUPERELEVATED SECTION



PAVED SHOULDER EDGE COURSE DETAIL FOR US-23 & CR-121



PAVED SHOULDER EDGE COURSE DETAIL WITH CURB, TYPE 4-C FOR CR-121

TYPICAL SECTIONS (1 OF 7)

TYPICAL SECTION NOTES:

1. SEE CROSS SECTIONS FOR DETAILED GRADING AND SIDESLOPE CONDITIONS, INCLUDING DITCH SECTIONS.

2. THE EXISTING PAVEMENT BUILDUP (COMPOSITION AND DEPTHS) ARE BASED ON EXISTING PLAN INFORMATION AND AVERAGE RESULTS OF BORING LOCATIONS PER REPORT OF ROADWAY EXPLORATION DATED 11-18-2020 BY STANTEC.

3. ALL SAWCUTS AND THE REMOVAL LIMITS AND THE REMOVAL OF ALL EXISTING PAVEMENT LAYERS, INCLUDING ASPHALT, CONCRETE, BRICK, FROM THE SURFACE TO THE BOTTOM OF PAVEMENT COURSES AT LOCATIONS SHOWN IN THE PLANS SHALL BE PAID UNDER ITEM 202 - PAVEMENT REMOVED. THE REMOVAL OF ANY UNBOUND AGGREGATE OR NATURAL SOIL MATERIAL IS NOT INCLUDED AND SHALL BE PAID UNDER ITEM 203 - EXCAVATION.

4. FOR FULL DEPTH ASPHALT PAVEMENT WIDENING, THE EXISTING PAVEMENT EDGES SHALL BE SAW CUT PER ODOT C&MS 202.05 AT LOCATIONS SHOWN IN THE ROADWAY PLANS OR AT SOUND PAVEMENT, AS DIRECTED BY THE ENGINEER. THE EXISTING PAVEMENT AND FULL DEPTH ASPHALT WIDENING SECTION SHOULD MEET AT THE SAME SUBGRADE ELEVATION. THE BASE UNDER THE WIDENING SECTION SHOULD BE THICKENED TO MATCH THE ADJACENT SUBGRADE OF EXISTING MAINLINE PAVEMENT AND PROPOSED DRIVEWAY PAVEMENT.

5. THE CONSTRUCTION LIMITS SHOWN IN ROADWAY PLANS ARE DEFINED BY 2' OFFSET FROM EDGE OF PROPOSED GRADING DUE TO ROUNDING.

CROSS REFERENCES:

SEE SHEET P.4 FOR TYPICAL SECTION NOTES
SEE SHEET P.4 FOR PAVED SHOULDER DETAILS
SEE SHEET P.4 FOR GEOTECHNICAL BORING INFO
SEE SHEET P.5-7 FOR US-23 TYPICAL SECTIONS
SEE SHEET P.8 FOR CR-121 TYPICAL SECTIONS
SEE SHEET P.9 FOR ROADSIDE GRADING DETAILS
SEE SHEET P.10 FOR END CONDITIONS
SEE SHEET P.95 FOR INTERSECTION DETAILS - US-23 & CR-121
SEE SHEET P.96 FOR DRIVE DETAILS
SEE SHEET P.97-106 FOR DRAINAGE DETAILS

GEOTECHNICAL BORING INFORMATION

BORING ID	STATION	OFFSET	ROADWAY	LOCATION	EXISTING PAVEMENT COMPOSITION
B-001-0-20	525+42.77	19.88' RT	US-23	NB INSIDE THRU LANE	13" ASPHALT, 3.5" BRICK
B-002-0-20	525+96.25	34.29' LT	US-23	SB OUTSIDE THRU LANE	6" ASPHALT, 8" CONCRETE
B-003-0-20	528+46.43	43.86' RT	US-23	NB OUTSIDE SHOULDER	9.5" ASPHALT
B-004-0-20	528+82.42	14.83' LT	US-23	SB INSIDE SHOULDER	3.25" ASPHALT
B-005-0-20	531+06.81	44.27' RT	US-23	NB OUTSIDE SHOULDER	7" ASPHALT
B-006-0-20	531+56.69	43.16' LT	US-23	SB OUTSIDE SHOULDER	6.75" ASPHALT
B-007-0-20	532+71.37	1.99' LT	US-23	NB LT. TURN LANE	13" ASPHALT
B-008-0-20	533+46.90	46.05' RT	US-23	NB RT. TURN LANE	12" ASPHALT
B-008-1-20	107+84.65	21.21' LT	CR-121	WB LANE	9.75" ASPHALT
B-008-2-20	0+95.94	22.28' RT	QUARRY DR.	WB LANE	15.5" ASPHALT
B-009-0-20	536+11.09	6.63' RT	US-23	SB LT. TURN LANE	13" ASPHALT
B-010-0-20	536+02.26	37.02' RT	US-23	NB OUTSIDE THRU LANE	12.25" ASPHALT, 4.5" CONCRETE
B-011-0-20	537+16.32	45.57' LT	US-23	SB RT. TURN LANE	13" ASPHALT
B-012-0-20	539+00.04	46.81' RT	US-23	NB OUTSIDE SHOULDER	6" ASPHALT
B-013-0-20	540+12.56	19.35' LT	US-23	SB INSIDE LANE	5.25" ASPHALT, 9.5" CONCRETE
B-014-0-20	542+05.06	19.97' RT	US-23	NB INSIDE LANE	13" ASPHALT, 3.5" BRICK
B-015-0-20	543+06.58	15.79' LT	US-23	SB INSIDE LANE	6" ASPHALT, 9" CONCRETE
B-016-0-20	545+13.97	43.34' RT	US-23	NB OUTSIDE SHOULDER	7" ASPHALT
B-017-0-20	546+23.77	41.51' LT	US-23	NB OUTSIDE SHOULDER	7" ASPHALT
B-018-0-20	550+89.29	43.86' RT	US-23	NB OUTSIDE SHOULDER	7" ASPHALT
B-019-0-20	554+09.68	18.74' RT	US-23	NB INSIDE LANE	18" ASPHALT
B-020-0-20	556+15.66	43.83' RT	US-23	NB OUTSIDE SHOULDER	N/A - SOIL

DESIGN AGENCY
IBI

DESIGNER WLC
REVIEWER KMK 12-01-22
PROJECT ID 92616
SHEET P.4 TOTAL 170

FRA-23-4.19 PART 2 (PID 92616)

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 2023-04-07 TIME: 3:45:18 PM USER: william.croxton
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SHEET NUM.										PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
OFFICE CALCS	P.14	P.16	P.17	P.19	P.20	P.44	P.97	P.98	P.108	04/NHS/04	05/NHS/05						
																DRAINAGE	
							0.97			0.97		602	20000	0.97	CY	CONCRETE MASONRY	
								3,246		3,246		605	05110	3,246	FT	4" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
	100									100		605	05200	100	FT	4" UNCLASSIFIED PIPE UNDERDRAINS	
								7,572		7,572		605	06020	7,572	FT	4" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
	100									100		605	13300	100	FT	6" UNCLASSIFIED PIPE UNDERDRAINS	
	50							288		338		611	00410	338	FT	4" CONDUIT, TYPE F FOR UNDERDRAIN OUTLET	
	50									50		611	00510	50	FT	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	
							11			11		611	01100	11	FT	6" CONDUIT, TYPE C	
							11			11		611	04600	11	FT	12" CONDUIT, TYPE C	
							788			788		611	05900	788	FT	15" CONDUIT, TYPE B	
							347			347		611	06100	347	FT	15" CONDUIT, TYPE C	
							286			286		611	07600	286	FT	18" CONDUIT, TYPE C	
							216			216		611	09100	216	FT	21" CONDUIT, TYPE C	
							225			225		611	10400	225	FT	24" CONDUIT, TYPE B	
							369			369		611	10600	369	FT	24" CONDUIT, TYPE C	
							70			70		611	13400	70	FT	30" CONDUIT, TYPE B	
							557			557		611	13600	557	FT	30" CONDUIT, TYPE C	
							96			96		611	96600	96	FT	CONDUIT, BORED OR JACKED, 21" O.D., TYPE B, 748.06	P.14
							85			85		611	96600	85	FT	CONDUIT, BORED OR JACKED, 36" O.D., TYPE B, 748.06	P.14
							6			6		611	98300	6	EACH	CATCH BASIN, NO. 5	
							2			2		611	98341	2	EACH	CATCH BASIN, NO. 5A	
							12			12		611	98370	12	EACH	CATCH BASIN, NO. 6	
							2			2		611	98410	2	EACH	CATCH BASIN, NO. 8	
							4			4		611	98434	4	EACH	CATCH BASIN, NO. 8A	
							1			1		611	98470	1	EACH	CATCH BASIN, NO. 2-2B	
							1			1		611	99574	1	EACH	MANHOLE, NO. 3	
	3							8		11		611	99710	11	EACH	PRECAST REINFORCED CONCRETE OUTLET	
																PAVEMENT	
					7,334					7,334		254	01000	7,334	SY	PAVEMENT PLANING, ASPHALT CONCRETE (1.25" MIN)	
14,917				6,248						5,693	15,472	254	01000	21,165	SY	PAVEMENT PLANING, ASPHALT CONCRETE (1" MIN, 3.25" MAX)	
4,062		125								4,187		301	56000	4,187	CY	ASPHALT CONCRETE BASE, PG64-22, (449)	
2,804		75								2,879		304	20000	2,879	CY	AGGREGATE BASE	
4,262		221		532	624					3,815	1,824	407	20000	5,639	GAL	NON-TRACKING TACK COAT	
			185							185		411	10000	185	CY	STABILIZED CRUSHED AGGREGATE	
241										241		441	10100	241	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG70-22M	
337										337		441	10200	337	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446)	
993				261	255					863	646	442	10000	1,509	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), PG 70-22M	
1,158				304						709	753	442	10080	1,462	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5 MM, TYPE A (446)	
290										177	113	442	20171	290	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5 MM, TYPE A (448), PG 64-28, AS PER PLAN	P.16
						131				131		609	24510	131	FT	CURB, TYPE 4-C	
						14				14		618	39000	14	EACH	RUMBLE STRIPS, TRANSVERSE (ASPHALT CONCRETE)	
						6,546				6,546		618	40100	6,546	FT	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)	
																WATER WORK	
									3	3		638	98000	3	EACH	WATER WORK, MISC.: CMSC 802 - 6" VALVE	P.107
									7	7		638	98000	7	EACH	WATER WORK, MISC.: CMSC 807 - VALVE BOX ADJUSTED TO GRADE	P.107
									3	3		638	98000	3	EACH	WATER WORK, MISC.: CMSC 809 - FIRE HYDRANT, RELOCATED	P.107
									1	1		638	98000	1	EACH	WATER WORK, MISC.: CMSC 810 - 18" HYDRANT EXTENSION	P.107
									LS	LS		638	98100	LS		WATER WORK, MISC.: CMSC SPECIAL - WATER AS-BUILT COORDINATE TABLE	P.107
									16	16		638	98600	16	FT	WATER WORK, MISC.: CMSC 801 - 6" WATER PIPE & FITTINGS	P.107
									225	225		638	98600	225	FT	WATER WORK, MISC.: CMSC 808 - RELOCATE 12" WATER MAIN	P.107

GENERAL SUMMARY (2 OF 5)

FRA-23-4.19 PART 2 (PID 92616)

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 2023-04-17 TIME: 2:24:14 PM USER: william.croxton
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DESIGN AGENCY
IBI

DESIGNER
WLC

REVIEWER
KMK 12-01-22

PROJECT ID
92616

SHEET P.39 TOTAL 170

SHEET NUM.										PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
P.44	P.109	P.111	P.133	P.138	P.141					04/NHS/04	05/NHS/05						
																LIGHTING	
					4					4		625	98000	4	EACH	LIGHTING, MISC.: CMSC 1001 - 13 INCH X 24 INCH PULL BOX (MIS-54)	P.141
					3					3		625	98000	3	EACH	LIGHTING, MISC.: CMSC 1001 - 17 INCH X 30 INCH X 24 INCH (MIS-54-APP)	P.141
					1					1		625	98000	1	EACH	LIGHTING, MISC.: CMSC 1001 - STREETLIGHT CIRCUIT RISER (MIS-56)	P.141
					1					1		625	98000	1	EACH	LIGHTING, MISC.: CMSC 1001 - METER, SELF CONTAINED WITH METER SOCKET, 100 AMP (MIS-57)	P.141
					6					6		625	98000	6	EACH	LIGHTING, MISC.: CMSC 1001 - 8' STREET LIGHT FOUNDATION (MIS-202)	P.141
					2					2		625	98000	2	EACH	LIGHTING, MISC.: CMSC 1001 - POLE, ALUMINUM, 10' BRACKET, T-BASE, 40' MOUNTING HEIGHT (MIS-301)	P.141
					4					4		625	98000	4	EACH	LIGHTING, MISC.: CMSC 1001 - POLE, ALUMINUM, 15' BRACKET, T-BASE, 40' MOUNTING HEIGHT (MIS-302)	P.141
					6					6		625	98000	6	EACH	LIGHTING, MISC.: CMSC 1001 - 3-WIRE POLE TO BE WIRED (MIS-501)	P.141
					1					1		625	98000	1	EACH	LIGHTING, MISC.: CMSC 1001 -3-WIRE, 480V PAD MOUNT CONTROLLER (MIS-603)	P.141
					6					6		625	98000	6	EACH	LIGHTING, MISC.: CMSC 1001 - COBRA HEAD LED LUMINAIRE (MIS-800)	P.141
					1					1		625	98000	1	EACH	LIGHTING, MISC.: CMSC 1001 - POWER SERVICE, AS PER PLAN	P.141
					190					190		625	98100	190	FT	LIGHTING, MISC.: CMSC 1001 - 2-WIRE #6 DUPLEX OVERHEAD CIRCUIT (MIS-402)	P.141
					10					10		625	98100	10	FT	LIGHTING, MISC.: CMSC 1001 - 2-WIRE UNDERGROUND CIRCUIT (MIS-403)	P.141
					725					725		625	98100	725	FT	LIGHTING, MISC.: CMSC 1001 - 3-WIRE UNDERGROUND CIRCUIT (MIS-404)	P.141
					275					275		625	98100	275	FT	LIGHTING, MISC.: CMSC 1001 - 2-INCH CONDUIT, CONCRETE ENCASED (MIS-700)	P.141
					410					410		625	98100	410	FT	LIGHTING, MISC.: CMSC 1001 - 3-INCH RIGID STEEL WITH 2-INCH CONDUIT INSERT (MIS-702)	P.141
																TRAFFIC SURVEILLANCE	
				2,200						2,200		625	23000	2,200	FT	NO. 4 AWG 600 VOLT DISTRIBUTION CABLE	
				345						345		625	25408	345	FT	CONDUIT, 2", 725.051	
			78							78		625	25803	78	FT	CONDUIT, CONCRETE ENCASED, 3", 725.051, AS PER PLAN	P.123
			1,904							1,904		625	25920	1,904	FT	CONDUIT, MISC.:ENCASED INTERCONNECT CONDUIT BANK, TC2, SCH 40, (4)-3" & (1)-1.5"	P.126
			103							103		625	25920	103	FT	CONDUIT, MISC.:ENCASED INTERCONNECT CONDUIT BANK, TC2, SCH 80, (4)-3" & (1)-1.5"	P.126
				120						120		625	25906	120	FT	CONDUIT, 2", JACKED OR DRILLED, 725.051	
			2,085							2,085		625	29001	2,085	FT	TRENCH, AS PER PLAN	P.123
				357						357		625	29011	357	FT	TRENCH, 30" DEEP, AS PER PLAN	P.137
				4						4		625	30700	4	EACH	PULL BOX, 725.08, 18"	
				1						1		625	30710	1	EACH	PULL BOX, 725.08, 32"	
			6							6		625	31600	6	EACH	PULL BOX, MISC.:PULLBOX, 32"	P.123
				2						2		625	32000	2	EACH	GROUND ROD	
				4						4		625	32001	4	EACH	GROUND ROD, AS PER PLAN	P.137
				1						1		625	34001	1	EACH	POWER SERVICE, AS PER PLAN	P.137
				477						477		625	36010	477	FT	UNDERGROUND WARNING/MARKING TAPE	
				1						1		630	70044	1	EACH	OVERHEAD SIGN SUPPORT, DMS PEDESTAL	
				1						1		630	70060	1	EACH	CATWALK, DMS PEDESTAL	
				1						1		630	70082	1	EACH	OVERHEAD SIGN SUPPORT FOUNDATION, DMS PEDESTAL	
			301							301		632	62810	301	FT	INTERCONNECT CABLE, MISC.: CMSC 1620 - FIBER OPTIC CABLE, 24 STRAND	P.126
			1							1		632	62820	1	EACH	INTERCONNECT, MISC.: CMSC 1620 - TERMINATION PANEL, 24 FIBER	P.126
			12							12		632	62820	12	EACH	INTERCONNECT, MISC.: FIBER OPTIC FUSION SPLICE	P.126
			1							1		632	70401	1	EACH	CONDUIT RISER, 2" DIAMETER, AS PER PLAN	P.126
				1						1		633	67101	1	EACH	CABINET FOUNDATION, AS PER PLAN	P.137
				1						1		633	67201	1	EACH	CONTROLLER WORK PAD, AS PER PLAN	P.137
			1							1		633	99000	1	EACH	CONTROLLER ITEM, MISC.: LAYER 2 ETHERNET SWITCH	P.126
			1							1		633	99000	1	EACH	CONTROLLER ITEM, MISC.:FIBER OPTIC ETHERNET TRANSCEIVER, SHORT RANGE	P.126
				463						463		804	15040	463	FT	FIBER OPTIC CABLE, 144 FIBER	
				26						26		809	24500	26	FT	CONDUIT, 4", MULTICELL, HDPE WITH 4 – 1" INNERDUCTS	
				146						146		809	64550	146	FT	ETHERNET CABLE, OUTDOOR-RATED	
				1						1		809	65990	1	EACH	ITS DEVICE, MISC.: REMOVE AND RELOCATE DMS CABINET	P.137
				1						1		809	65990	1	EACH	ITS DEVICE, MISC.: REMOVE AND RELOCATE DMS SIGN	P.137
				1						1		809	65990	1	EACH	ITS DEVICE, MISC.: REMOVAL OF DMS INSTALLATION	P.137
																TRAFFIC CONTROL	
		283								201	82	621	00100	283	EACH	RPM	
	3									3		625	32000	3	EACH	GROUND ROD	
25										25		626	00110	25	EACH	BARRIER REFLECTOR, TYPE 2 (ONE-WAY)	
3										3		626	00110	3	EACH	BARRIER REFLECTOR, TYPE 2 (BIDIRECTIONAL)	

FRA-23-4.19 PART 2 (PID 92616)
MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 2023-04-07 TIME: 3:39:45 PM USER: william.croxton
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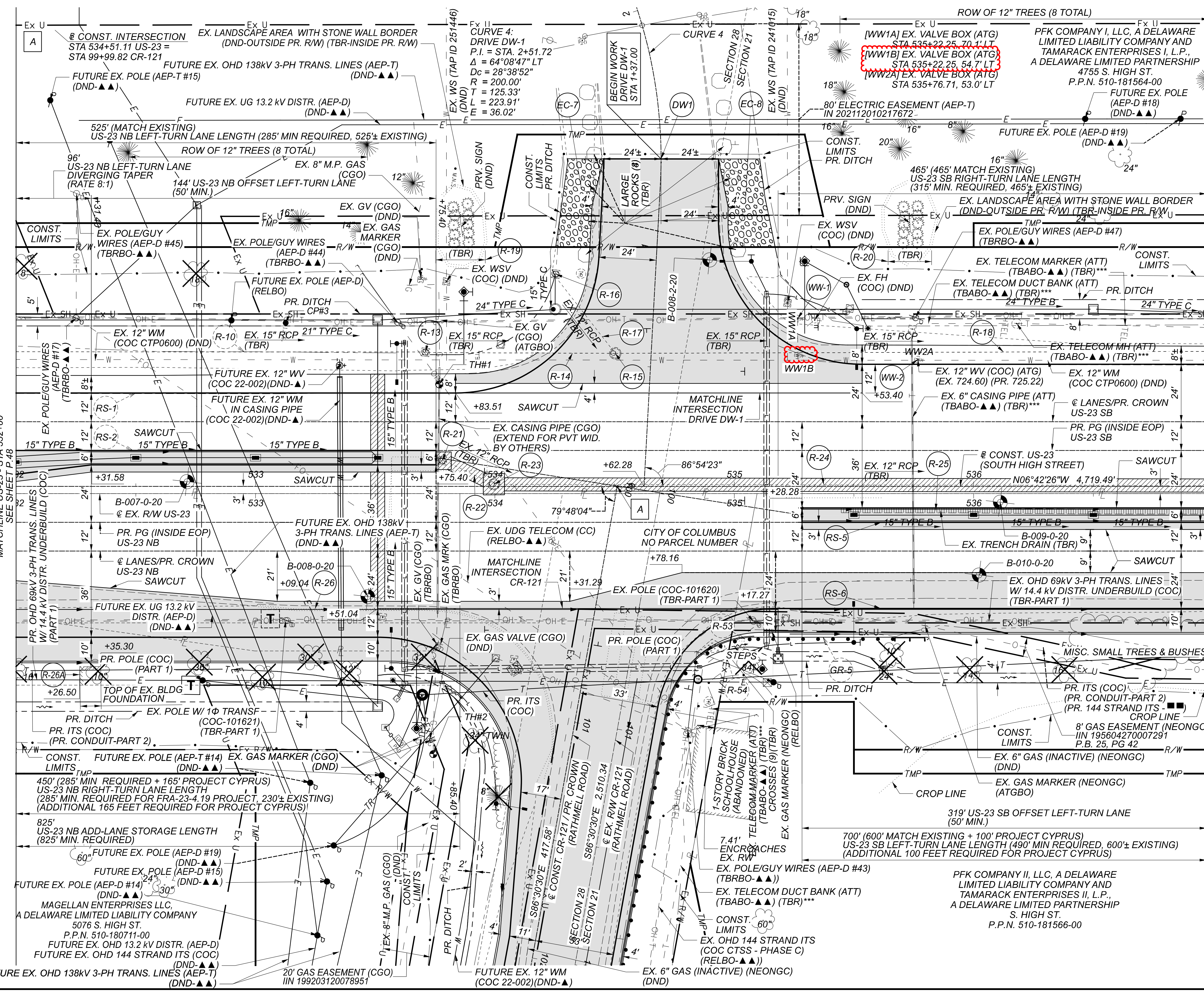
DESIGN AGENCY
IBI

DESIGNER
WLC

REVIEWER
KMK 12-01-22

PROJECT ID
92616



NOTES:
1. SEE SHEET P. 58 FOR CGO TEST HOLE INFORMATION FOR TH#1 AND TH#2
2. SEE SHEET P.11 FOR CONTRACTOR'S USE OF PARCEL 2T.

SEE SHEET P. 11 FOR CGO, NEONGC, COC DPU GENERAL NOTE

*** SEE SHEET P. 13 FOR ATT PAY ITEM NOTE (ITEM 202 - REMOVAL, MISC.: ABANDONED TELECOM FACILITIES)

HORIZONTAL SCALE IN FEET
0 10 20 40

PLAN - US-23 (SOUTH HIGH STREET)
STA 532+00 TO STA 537+00

CROSS REFERENCES:
SEE SHEET P.3 FOR PROJECT CONTROL, SEE SHEET P.47 FOR PLAN LEGENDS
SEE SHEET P.43-P.45 FOR SUBSUMMARIES
SEE SHEET P.53 FOR PROFILE - US-23 SB - STA 532+00 TO STA 542+00
SEE SHEET P.56 FOR PROFILE - US-23 NB - STA 532+00 TO STA 542+00
SEE SHEET P.95 FOR INTERSECTION DETAILS - US-23 & CR-121 / SEE SHEET P.96 FOR DRIVE DETAILS
SEE SHEET P.97-P.106 FOR DRAINAGE DETAILS
SEE SHEET P.108 FOR WATER WORK
SEE SHEET P.109-P.132 FOR TRAFFIC CONTROL, SEE SHEET P.133-140 FOR TRAFFIC SURVEILLANCE
SEE SHEET P.141-P.144 FOR LIGHTING

DESIGN AGENCY
IBI

DESIGNER WLC
REVIEWER KMK 12-01-22
PROJECT ID 92616
SHEET P.49 TOTAL 170

FRA-23-4.19 PART 2 (PID 92616)

MODEL: II0380_GP3 PAPERSIZE: 17x11 (in.) DATE: 2023-04-14 TIME: 1:57:33 PM USER: william.croxton
\\IOJ20JI2\5\IbIshare\22592_SafetyDesign\7.0_Production\7.3_Design\04_Civil\Worksets\II0380_FRA-23\400-Engineering\Roadway\Sheets\II0380_GP003.dgn

FUTURE EX. POLE (AEP-T #17)
(DND-▲▲)

FUTURE EX. OHD 138kV 3-PH TRANS. LINES
W/ 13.2 kV DISTR. UNDERBUILD (AEP T/D)
(DND-▲▲))

FUTURE EX. POLE (AEP-T #23)
(DND-▲▲)

* ELECTRIC EASEMENT (AEP-T)
IN 202112010217672

SEE SHEET P. 11 FOR
CGO, NEONGC, COC
DPU GENERAL NOTE

*** SEE SHEET P. 13
FOR ATT PAY ITEM
NOTE (ITEM 202 -
REMOVAL, MISC.:
ABANDONED TELECOM
FACILITIES)

285'
US-23 SB LEFT-TURN LANE DECELERATION LENGTH
50'
US-23 SB LEFT-TURN LANE DIVERGING TAPER
(RATE=4.2:1)

FUTURE EX. OHD ELEC (AEP)
(POWER SERVICE FOR EX. DMS)
(TBRBO)

FUTURE EX. UDG ELEC (AEP)
(POWER SERVICE FOR PR. DMS)
(DND-▲▲)

FUTURE EX. PEDESTRAL (AEP)
(POWER SERVICE FOR PR. DMS)
(DND-▲▲)

EX. POLE/GUY WIRES (AEP-D #51)
(TBRBO-▲▲)

PFK COMPANY I, LLC, A DELAWARE
LIMITED LIABILITY COMPANY AND
TAMARACK ENTERPRISES I, L.P.,
A DELAWARE LIMITED PARTNERSHIP
4755 S. HIGH ST.
P.P.N. 510-181564-00

E131(486) | E131(486)
END PROJECT END PART 2 STA. 546+47.41 BACK | BEGIN PROJECT BEGIN PART 1 STA. 546+50 AHEAD

SEE PART 1 PLANS FOR
PROJECT/WORK LIMITS

EX. DMS SERVICE POLE (ODOT)
(TBR-POWER SERVICE FOR EX. DMS)

EX. UDG ELEC (ODOT)
(TBR-POWER SERVICE FOR EX. DMS)

PR. UDG ELEC FOR PR. DMS (ODOT)

CONST. LIMITS

PR. 12" WM (COC) (225')
SEE SHEET P. 108 FOR
WATER WORK PLAN & PROFILE

WOOD POSTS (2)
(TBR)

EX. TELECOM MARKER (ATT)
(TBABO-▲▲) (TBR)***

EX. TELECOM DUCT BANK (ATT)
(TBABO-▲▲) (TBR)***

EX. POLE/GUY WIRES (AEP-D #52)
(TBRBO-▲▲)

(E) DEAD

EX. POLE/GUY WIRES (AEP-D #50)
(TBRBO-▲▲)

MISC. SMALL TREES & BUSHES

EX. WIRE FENCE (TBR)

PR. DITCH

EX. 6" TILE (TBR)

CONST. LIMITS

MISC. SMALL TREES & BUSHES

EX. DITCH

PARCEL 10-WD
TO BE ACQUIRED
UNDER PART 1

EX. 12" RCP
(TBR)

EX. 12" WM
(COC CTP0600) (DND)

EX. TELECOM MARKER (ATT)
(TBABO-▲▲) (TBR)***

EX. 12" WM
(COC CTP0600) (TBR-220')

EX. UDG ELEC FOR EX. DMS (ODOT)
(TBR)

EX. 12" RCP (TBR)

EX. 12" RCP (TBR)

EX. 12" RCP (TBR)

21" O.D. TYPE B

3' MIN CUT TO OUT SEPARATION

30" TYPE C

30" TYPE C

℄ CONST. US-23
(SOUTH HIGH STREET)

℄ EX. R/W US-23

℄ LANES/PR. CROWN
US-23 SB

PR. PG (INSIDE EOP)
US-23 SB

STATION EQUATION:
STA 546+47.41 BACK
PART 2 =
STA 546+50.00 AHEAD
PART 1

℄ LANES/EX. CROWN
US-23 SB LANES

EX. PG (INSIDE EOP)
US-23 SB LANES

N06°42'26"W 4,719.49'

N06°42'26"W 4,719.48'

PR. DITCH

SAWCUT

EX. OHD ELEC (AEP)
(TBRBO-▲▲)

B-014-0-20

B-015-0-20

B-016-0-20

B-017-0-20

PR. UDG ELEC FOR PR. DMS (ODOT)

EX. OHD 69kV 3-PH TRANS. LINES
W/ 14.4 kV DISTR. UNDERBUILD (COC)
(TBR-PART 1)

EX. POLE (COC-101617)
(TBR-PART 1)

PR. PG (INSIDE EOP)
US-23 NB

℄ LANES/PR. CROWN
US-23 NB

SAW CUT

EX. POLE (COC-101615)
(TBR-PART 1)

EX. SERVICE POLE (AEP)
(TBRBO-▲▲)

MISC. SMALL TREES & BUSHES

PR. ITS (COC)

PR. DITCH

CONST. LIMITS

PR. ITS (COC)
(PR. CONDUIT-PART 2)
(PR. 144 STRAND ITS - ■■)

PR. UDG ELEC FOR PR. DMS (ODOT)

PR. POLE (COC)
(PART 1)

CROP LINE

CROP LINE

CROP LINE

CROP LINE

CP#5

PARCEL 11-WD
TO BE ACQUIRED
UNDER PART 1

PR. POLE (COC)
(PART 1)

EX. GAS MARKER (NEONGC)
(ATGBO)

EX. GAS VALVE (NEONGC)
(ATGBO)

PR. OHD 69kV 3-PH TRANS. LINES
W/ 14.4 kV DISTR. UNDERBUILD (COC)
(PART 1)

8' GAS EASEMENT (NEONGC)
IIN 195604270007291
P.B. 25, PG 42

EX. 6" GAS (INACTIVE) (NEONGC)
(DND)

975' GR

AA, TYPE T

PFK COMPANY II, LLC, A DELAWARE
LIMITED LIABILITY COMPANY AND
TAMARACK ENTERPRISES II, L.P.,
A DELAWARE LIMITED PARTNERSHIP
S. HIGH ST.
P.P.N. 510-181566-00

* EXISTING STORM LOCATIONS
ARE ASSUMED AND BASED
ON 1954 PLANS

MATCHLINE US-23 - STA 542+00
SEE SHEET P. 50

CROSS REFERENCES:
SEE SHEET P. 3 FOR PROJECT CONTROL, SEE SHEET P. 47 FOR PLAN LEGENDS
SEE SHEET P. 43-P. 45 FOR SUBSUMMARIES
SEE SHEET P. 54 FOR PROFILE - US-23 SB - STA 542+00 TO STA 552+00
SEE SHEET P. 57 FOR PROFILE - US-23 NB - STA 542+00 TO STA 552+00
SEE SHEET P. 97-P. 106 FOR DRAINAGE DETAILS
SEE SHEET P. 107-P108 FOR WATER WORK
SEE SHEET P. 109-P. 132 FOR TRAFFIC CONTROL, SEE SHEET P. 133-140 FOR TRAFFIC SURVEILLANCE

HORIZONTAL
SCALE IN FEET
0 10 20 40

PLAN - US-23 (SOUTH HIGH STREET)
STA 542+00 TO STA 546+47.41

DESIGN AGENCY
IBI

DESIGNER
WLC

REVIEWER
KMK 12-01-22

PROJECT ID
92616

SHEET P.51 | TOTAL 170

FRA-23-4.19 PART 2 (PID 92616)

MODEL: I10380_GP5 PAPERSIZE: 17x11(in.) DATE: 2023-04-10 TIME: 10:35:57 AM USER: william.croxton
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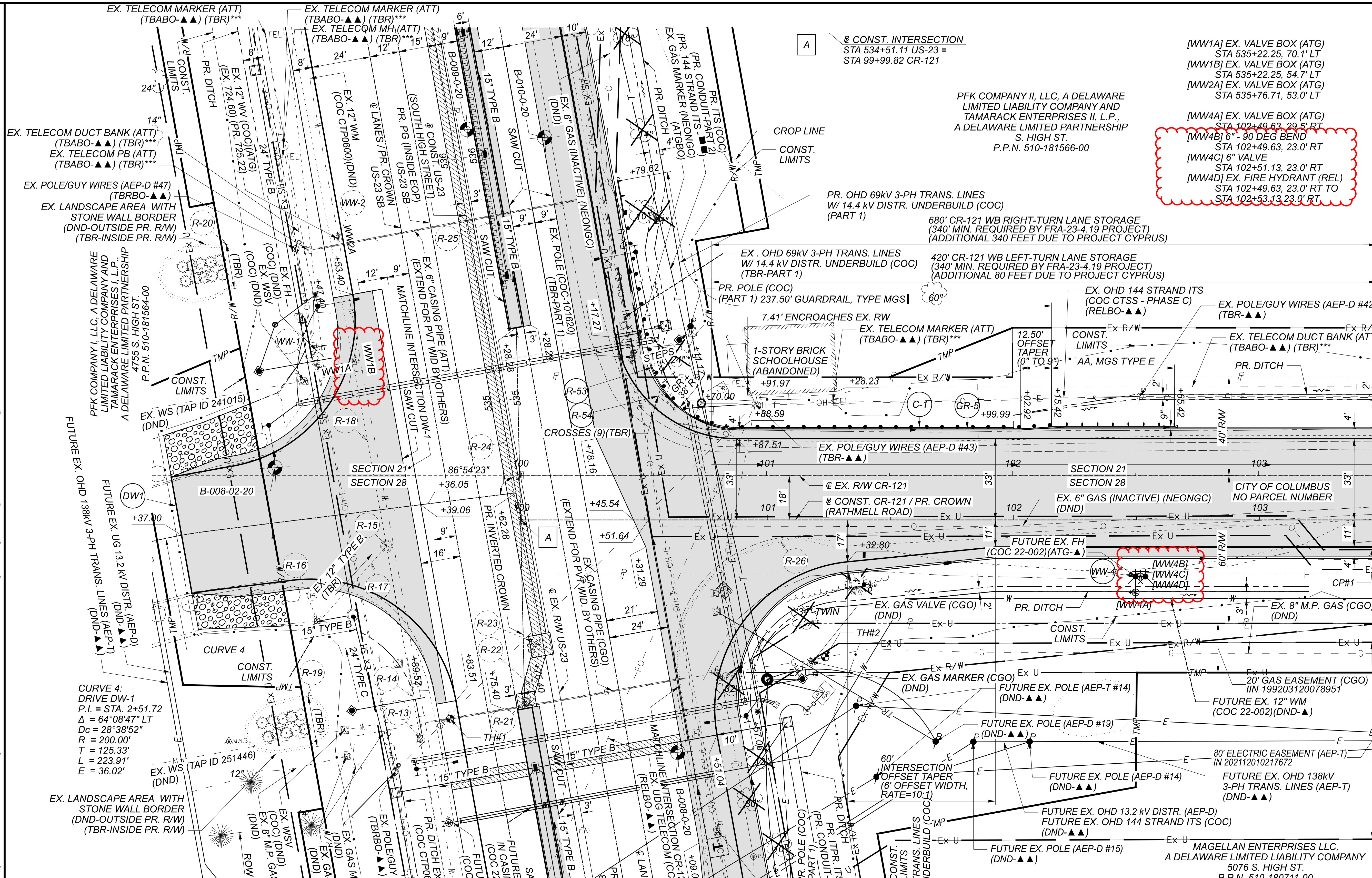
PLAN - CR-121 (RATHMELL ROAD) STA 99+99.82 TO STA 103+50



NOTES:
1. SEE SHEET P. 58 FOR CGO TEST HOLE INFORMATION FOR TH#1 AND TH#2
2. SEE SHEET P.11 FOR CONTRACTOR'S USE OF PARCEL 2T.

COLUMBIA GAS TEST HOLE INFORMATION

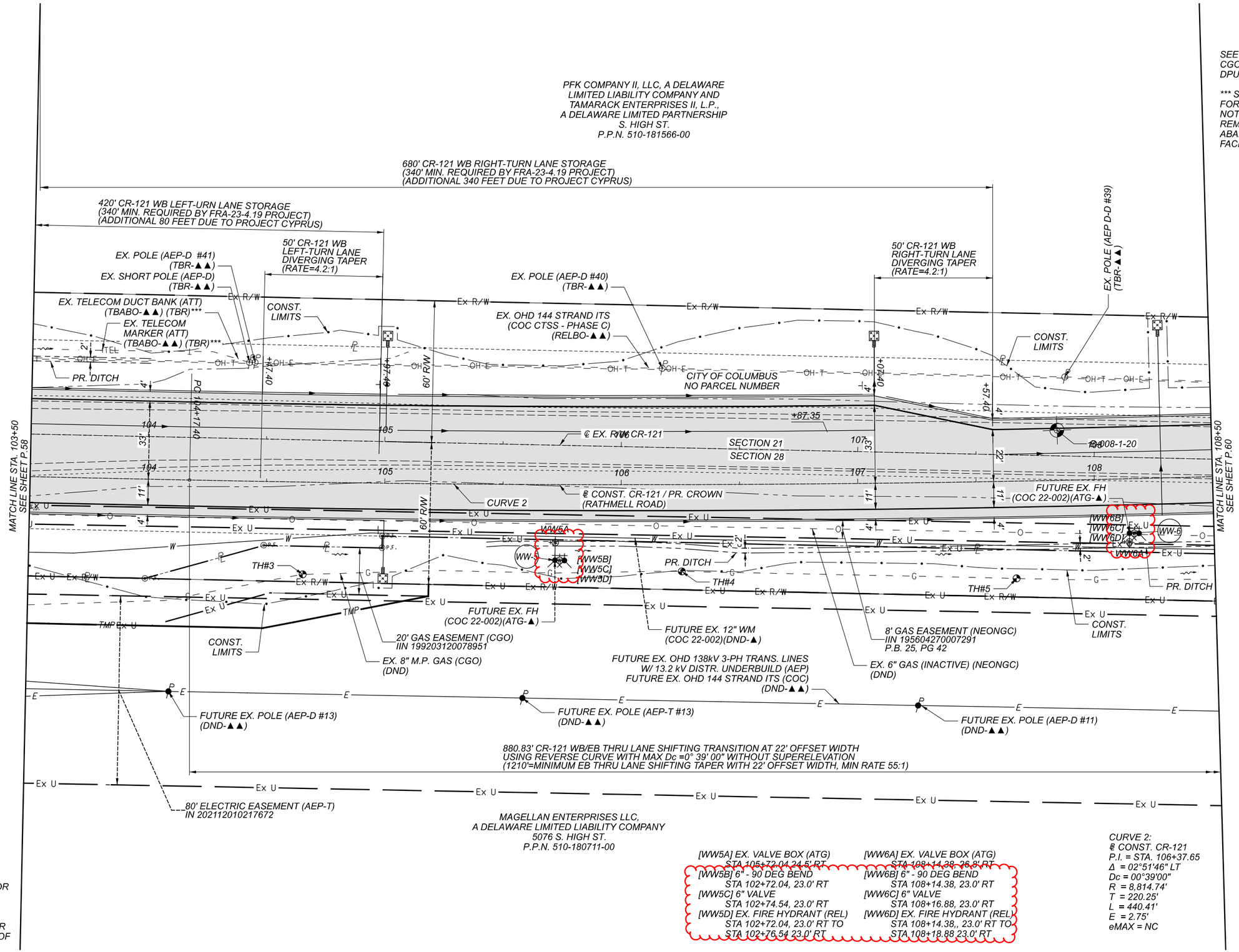
TEST HOLE ID	STATION	OFFSET	ROADWAY	GROUND ELEV.	TOP PIPE ELEV.	COVER (FT)
TH#1	533+76.76	42.61' LT.	US-23	728.20	*DNF	N/A
TH#2	101+23.50	55.80 RT.	CR-121	728.00	724.10	3.90
TH#3	104+65.89	39.00' RT	CR-121	708.70	705.40	3.30
TH#4	106+25.52	36.70' RT.	CR-121	715.00	711.20	3.80
TH#5	107+66.41	41.11' RT.	CR-121	712.30	708.70	3.60

*DNF=DID NOT FIND, DUG 97 INCHES AND DID NOT EXPOSE PIPE

ALL TEST HOLE INFORMATION PROVIDED BY COLUMBIA GAS ON 2-5-2021

CROSS REFERENCES:
SEE SHEET P.3 FOR PROJECT CONTROL, SEE SHEET P.47 FOR PLAN LEGENDS
SEE SHEET P.43-P.45 FOR SUBSUMMARIES
SEE SHEET P.62 FOR PROFILE - CR-121 - STA 99+99.82 TO STA 108+50
SEE SHEET P.95 FOR INTERSECTION DETAILS - US-23 & CR-121 / SEE SHEET P.96 FOR DRIVE DETAILS
SEE SHEET P.97-P.106 FOR DRAINAGE DETAILS
SEE SHEET P.107-P.108 FOR WATER WORK
SEE SHEET P.109-P.132 FOR TRAFFIC CONTROL, SEE SHEET P.133-140 FOR TRAFFIC SURVEILLANCE
SEE SHEET P.141-P.144 FOR LIGHTING

MODEL: II0380_GPII PAPERSIZE: 17x11 (in.) DATE: 2023-04-17 TIME: 2:24:46 PM USER: william.croxton
DESIGN AGENCY: IBI
DESIGNER: WLC
REVIEWER: KMK 12-01-22
PROJECT ID: 92616



SEE SHEET P. 11 FOR CGO, NEONGC, COC DPU GENERAL NOTE

**** SEE SHEET P. 13 FOR ATT PAY ITEM NOTE (ITEM 202 - REMOVAL, MISC.: ABANDONED TELECOM FACILITIES)*

HORIZONTAL SCALE IN FEET
0 10 20 40

PLAN - CR-121 (RATHMELL ROAD) STA 103+50 TO STA 108+50

NOTES:
1. SEE SHEET P. 58 FOR CGO TEST HOLE INFORMATION FOR TH#1 AND TH#2
2. SEE SHEET P.11 FOR CONTRACTOR'S USE OF PARCEL 2T.

[WW5A] EX. VALVE BOX (ATG)	*STA 105+72.04 24.5' RT*
[WW5B] 6" - 90 DEG BEND	*STA 102+72.04, 23.0' RT*
[WW5C] 6" VALVE	*STA 102+74.54, 23.0' RT*
[WW5D] EX. FIRE HYDRANT (REL)	*STA 102+72.04, 23.0' RT TO STA 102+76.54 23.0' RT*
[WW6A] EX. VALVE BOX (ATG)	*STA 108+14.38, 26.5' RT*
[WW6B] 6" - 90 DEG BEND	*STA 108+14.38, 23.0' RT*
[WW6C] 6" VALVE	*STA 108+16.88, 23.0' RT*
[WW6D] EX. FIRE HYDRANT (REL)	*STA 108+14.38,, 23.0' RT TO STA 108+18.88 23.0' RT*

CURVE 2:
℄ CONST. CR-121
P.I. = STA. 106+37.65
Δ = 02°51'46" LT
Dc = 00°39'00"
R = 8,814.74'
T = 220.25'
L = 440.41'
E = 2.75'
eMAX = NC

CROSS REFERENCES:
SEE SHEET P. 3 FOR PROJECT CONTROL. SEE SHEET P. 47 FOR PLAN LEGENDS
SEE SHEET P. 43-P. 45 FOR SUBSUMMARIES
SEE SHEET P. 62 FOR PROFILE - CR-121 - STA 99+99.82 TO STA 108+50
SEE SHEET P. 97-P. 106 FOR DRAINAGE DETAILS
SEE SHEET P. 107-P. 108 FOR WATER WORK.
SEE SHEET P. 109-P. 132 FOR TRAFFIC CONTROL

DESIGN AGENCY: IBI
DESIGNER: WLC
REVIEWER: KMK 12-01-22
PROJECT ID: 92616
SHEET: P.59 TOTAL: 170

FRA-23-4.19 PART 2 (PID 92616)

MODEL: li0380_GPli2 PAPERSIZE: 17x11(in.) DATE: 2023-04-17 TIME: 2:25:16 PM USER: william.croxton
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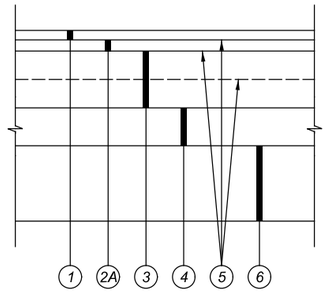


DRIVEWAY PAVEMENT BUILDUP
DW-1

(SIMILAR PAVEMENT BUILDUP TO ADJACENT US-23 MAINLINE)

PROPOSED LEGEND:

(1) (1.50") ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A, (446), PG70-22M

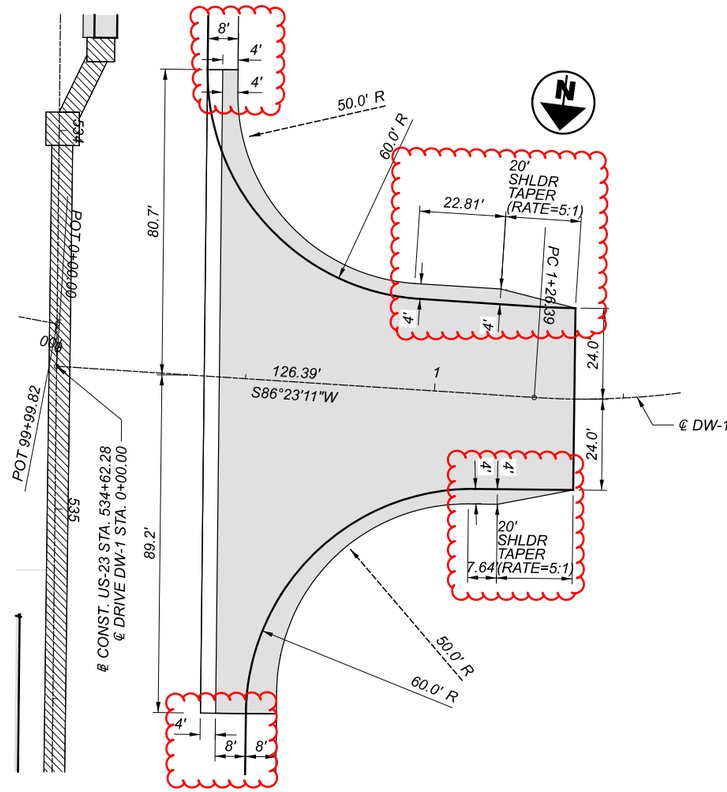
(2A) (1.75") ITEM 442 - ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5MM, TYPE A, (446)

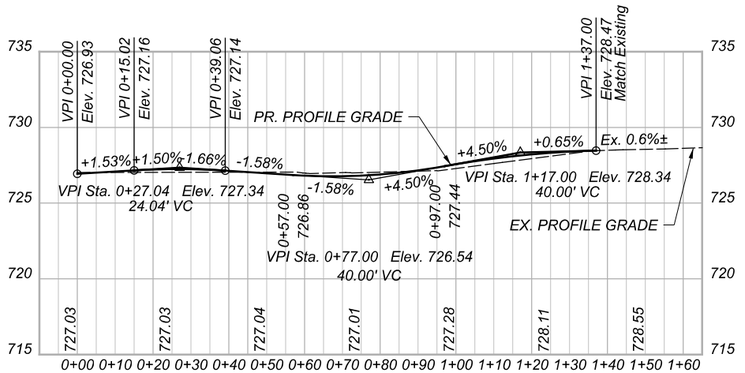
(3) (9") ITEM 301 - ASPHALT CONCRETE BASE, PG64-22, (449)
(PLACED IN TWO LIFTS)

(4) (6") ITEM 304 - AGGREGATE BASE

(5) ITEM 407 - NON-TRACKING TACK COAT
(PLACED IN BETWEEN LIFT OF ASPHALT)
(APPLIED AT 0.055 GAL/SY AVG FOR NEW PAVEMENT

(6) CHEMICALLY STABILIZED SUBGRADE:
ITEM 204 - PROOF ROLLING
(APPLIED AT 1 HR/3000 SY FOR NEW CONSTRUCTION)
ITEM 206 - CEMENT
(APPLIED AT 5% PER 115 LB/CF SOIL)
ITEM 206 - CEMENT STABILIZED SUBGRADE, 12-INCHES DEEP
ITEM 206 - CURING COAT
ITEM 206 - MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS
(SPECIFIED ON PROJECTS > 40,000 SY, SEE SUPPLEMENT 1120





DRIVEWAY PLAN AND PROFILE
DW-1
STA. 534+62.28 (LT)

PAVEMENT LEGEND:

PLANING (VAR. DEPTH) & RESURFACING (3.25") WITH
PR. ASPHALT LEVELING COURSES (VAR. DEPTH)

PR. ASPHALT PAVEMENT (FULL DEPTH)

PAVEMENT RESTORATION FOR PIPE INSTALLATIONS
AND/OR REMOVALS (SEE SHEET P.16)

CROSS REFERENCES:

SEE SHEET P.95 FOR INTERSECTION DETAILS - US-23 & CR-121 & DW-1

NOTES:

1. DUE TO SIMILAR FULL DEPTH PAVEMENT BUILDUP TO ADJACENT US-23 MAINLINE, THE DRIVEWAY PAVEMENT CALCULATIONS FOR DW-1 HAVE BEEN INCLUDED WITH GENERAL PAVEMENT CALCULATIONS. THE DRIVEWAY PAVEMENT ESTIMATED QUANTITIES HAVE BEEN CARRIED TO GENERAL SUMMARY AND LISTED UNDER OFFICE CALCS.

HORIZONTAL SCALE IN FEET
0 10 20 40

DRIVE DETAILS

FRA-23-4.19 PART 2 (PID 92616)
MODEL: Plan 1 [Sheet] PAPERSIZE: 17x11 (in.) DATE: 2023-04-10 TIME: 2:23:30 PM USER: william.croxton
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DESIGN AGENCY
IBI

DESIGNER WLC
REVIEWER KMK 12-01-22
PROJECT ID 92616
SHEET P.96 TOTAL 170

WATER WORK:

CITY OF COLUMBUS, DIVISION OF WATER GENERAL NOTES:

THE CITY OF COLUMBUS, CONSTRUCTION AND MATERIAL SPECIFICATIONS, 2018 EDITION AND ALL REVISIONS, INCLUDING ALL SUPPLEMENTS THERETO, SHALL GOVERN ALL CONSTRUCTION ITEMS THAT ARE A PART OF THIS PLAN, UNLESS OTHERWISE NOTED.

ALL WATER MAIN MATERIALS AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE CURRENT RULES AND REGULATIONS OF THE CITY OF COLUMBUS, DIVISION OF WATER. ALL CITY OF COLUMBUS, DIVISION OF WATER STANDARD DRAWINGS SHALL APPLY TO THE PROJECT, UNLESS OTHERWISE NOTED.

FOR ANY EMERGENCIES INVOLVING THE WATER DISTRIBUTION SYSTEM, PLEASE CONTACT THE DIVISION OF WATER DISTRIBUTION MAINTENANCE OFFICE AT 614-645-7788.

ALL BRASS FITTINGS ASSOCIATED WITH WATER WORK, INCLUDING REPAIRS TO THE EXISTING SYSTEM, SHALL CONFORM TO THE REVISED ALLOWABLE LEAD EXTRACTION LIMIT PER THE UPDATED NSF/ANSI 61 STANDARD. THE DIVISION OF WATER'S APPROVED MATERIALS LIST HAS BEEN UPDATED TO REFLECT THIS REQUIREMENT.

IT SHALL BE UNLAWFUL FOR ANY PERSON TO PERFORM ANY WORK ON CITY OF COLUMBUS WATER MAIN SYSTEMS WITHOUT FIRST SECURING LICENSE TO ENGAGE IN SUCH WORK, AS INDICATED IN COLUMBUS CITY CODE SECTION 1103.02 AND 1103.06. THIS WORK INCLUDES ANY ATTACHMENTS, ADDITIONS TO OR ALTERATIONS IN ANY CITY SERVICE PIPE OR APPURTENANCES (INCLUDING WATER SERVICE LINES AND TAPS). THIS REQUIREMENT MAY BE MET BY UTILIZATION OF A SUBCONTRACTOR WHO HOLDS A CITY OF COLUMBUS WATER CONTRACTOR LICENSE OR A COMBINED WATER/SEWER CONTRACTOR LICENSE TO PERFORM THIS WORK. UTILIZATION OF A SUBCONTRACTOR MUST MEET THE LICENSING REQUIREMENTS OF CITY OF COLUMBUS BUILDING CODE, IN PARTICULAR SECTION 4114.119 AND 4114.529.

THE CONTRACTOR SHALL OBTAIN THE PROPER HYDRANT PERMIT(S), AND PAY ANY APPLICABLE FEES, FOR ANY APPROVED HYDRANT USAGE DEEMED NECESSARY FOR WORK UNDER THIS IMPROVEMENT. PERMITS MAY BE OBTAINED THROUGH THE DIVISION OF WATER PERMIT OFFICE (614-645-7330). THE CONTRACTOR SHALL ADHERE TO ALL RULES & REGULATIONS GOVERNING SAID PERMIT AND MUST HAVE THE ORIGINAL PERMIT ON SITE ANYTIME IN WHICH THE HYDRANT IS IN USE. PERMITS MAY BE OBTAINED BY ACCESSING HTTP://PORTAL.COLUMBUS.GOV/PERMITS/. COST TO BE INCLUDED IN THE VARIOUS BID ITEMS.

THESE DESIGN PLANS HAVE ASSUMED DUCTILE IRON AS THE BASELINE PIPE MATERIAL FOR DESIGN. ALL FITTINGS, DEFLECTIONS, AND OTHER DESIGN ELEMENTS ARE BASED OFF OF THE DUCTILE IRON STANDARDS. PVC WILL NOT BE PERMITTED SINCE THIS IS LOCATED IN A PRIORITY 1 STREET.

ALL WATER MAINS SHALL BE CLEANED AND FLUSHED, AND ANY WATER MAIN 12-INCH AND LARGER MUST BE PROPERLY PIGGED, IN ACCORDANCE WITH SECTION 801.15 OF THE CITY OF COLUMBUS, CONSTRUCTION AND MATERIAL SPECIFICATIONS.

ALL WATER MAINS SHALL BE PRESSURE TESTED IN ACCORDANCE WITH SECTION 801.16 OF THE CITY OF COLUMBUS, CONSTRUCTION AND MATERIAL SPECIFICATIONS. THE CITY MAY NOT APPROVE ANY TEST LASTING LESS THAN TWO HOURS, REGARDLESS OF THE AMOUNT OF LEAKAGE.

ALL WATER MAINS SHALL BE DISINFECTED IN ACCORDANCE WITH SECTION 801.17 OF THE CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS. SPECIAL ATTENTION IS DIRECTED TO APPLICABLE SECTIONS OF A.W.W.A. C-651. WHEN THE WATER MAINS ARE READY FOR DISINFECTION, THE INSPECTOR SHALL SUBMIT A WRITTEN REQUEST FOR CHLORINATION OF THE MAINS THAT NEED DISINFECTED, THREE (3) SETS OF "AS- BUILT" PLANS (FULL SIZE SHEETS ONLY), THE AS- BUILT SURVEY COORDINATES, WATER SERVICE REPORTS AND A PRESSURE TEST TO THE CITY OF COLUMBUS, DIVISION OF WATER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE DISINFECTION OF ALL WATER MAINS CONSTRUCTED UNDER THIS PLAN.

CITY OF COLUMBUS, DIVISION OF WATER GENERAL NOTES: (CONT.)

THE CONTRACTOR SHALL PROVIDE CHLORINATION TAPS AND BLOWOFFS AS PER THE REQUIREMENTS OF SECTION 801.17 OF THE CITY OF COLUMBUS, CONSTRUCTION AND MATERIAL SPECIFICATIONS. IN ADDITIONS TO THE BLOWOFF LOCATIONS NOTED IN 801.17, THE CONTRACTOR SHALL ALSO INSTALL BLOWOFFS AT EVERY 1,100 LINEAR FEET OF THE WATER MAIN INSTALLED FOR SAMPLING.

ANY SECTION OF WATER MAIN THAT IS LONGER THAN 20 FEET IN LENGTH SHALL BE CHLORINATED. HAND SWABBING METHODS WILL ONLY BE PERMITTED FOR SECTIONS LESS THAN OR EQUAL TO 20 FEET IN LENGTH. USE UNSCENTED HOUSEHOLD BLEACH FOR HAND SWABBING OF PIPE AND FITTINGS. PLEASE NOTE THAT CUT- IN- TEES, SLEEVES, AND ANY OTHER REQUIRED FITTINGS OR PIPING SHALL BE TAKEN INTO ACCOUNT AND ARE INCLUDED IN THE TOTAL LENGTH OF THE SECTION (CUT TO CUT).

ONLY ONE CONNECTION TO AN EXISTING WATER MAIN IS PERMITTED BEFORE DISINFECTION OF A NEW WATER MAIN HAS BEEN COMPLETED. ALL OTHER CONNECTIONS MUST BE MADE AFTER THE MAIN HAS BEEN DISINFECTED.

ALL FIRE HYDRANTS TO BE INSTALLED IN THE CITY OF COLUMBUS SHALL BE PAINTED WITH THE COLOR "SAFETY ORANGE." THE FIRE HYDRANTS SHALL BE PROVIDED WITH TWO COATS IN A GLOSS ENAMEL OF THE "SAFETY ORANGE" COLOR FOR THE ENTIRE HYDRANT. THE TOPS OF THE FIRE HYDRANTS ARE NO LONGER RQUIRED TO BE PAINTED PLACK. AFTER INSTALLATION OF FIRE HYDRANTS, THE CONTRACTOR IS RESPONSIBLE TO APPLY TOUCH UP PAINT TO ANY DAMAGE TO THE FACTORY APPLIED HYDRANT PAINT. HYDRANTS WILL NOT BE ACCEPTED UNTIL ANY PAINT DAMAGE FROM SHIPPING OR INSTALLATION HAS BEEN REPAIRED. USE HYDRANT TOUCH UP PAINT IN ACCORDANCE WITH THE APPROVED MATERIALS LIST.

ALL FIRE HYDRANTS, WHETHER NEW OR RELOCATED, SHALL BE INSPECTED AND APPROVED BY THE DIVISION OF FIRE PRIOR TO BEING PUT INTO SERVICE. THE CONTRACTOR SHALL CONTACT THE DIVISION OF FIRE AT 614-645- 7642 EXT. 75658 TO SCHEDULE THE INSPECTION OF THE NEW OR RELOCATED FIRE HYDRANTS. THE CITY WILL PROVIDE THE CONTRACTOR "OUT OF SERVICE" RINGS THAT SHALL BE PLACED ON ALL NEW OR RELOCATED FIRE HYDRANTS TO CLEARLY IDENTIFY THEM AS INACTIVE. AFTER WRITTEN NOTIFICATION OF ACCEPTANCE HAS BEEN RECEIVED AND FINAL WATER MAIN CONNECTIONS HAVE OCCURRED, THE CONTRACTOR SHALL REMOVE THE "OUT OF SERVICE" RINGS FROM THE FIRE HYDRANTS. ALL "OUT OF SERVICE" RINGS SHALL BE RETURNED TO THE CITY. ALL COORDINATION AND WORK REQUIRED TO TEST AND ACCEPT THE FIRE HYDRANTS SHALL BE INCLUDED IN THE PRICE BID ITEM 809.

MAINTAIN EIGHTEEN (18) INCHES VERTICAL AND TEN (10) FEET HORIZONTAL SEPARATION BETWEEN ANY SANITARY OR STORM SEWER PIPING AND ALL PROPOSED WATER MAINS.

WHEN CROSSING THE EXISTING WATER MAIN, AND LOW STRENGTH MORTAR (ITEM 613) IS TO BE USED AS BACKFILL, THE CONTRACTOR SHALL PROVIDE SIZE NO. 57 CRUSHED CARBONATE STONE (CCS) 1 FOOT BELOW TO 1 FOOT ABOVE THE EXISTING WATER MAIN.

IF DURING EXCAVATION, THE POLYETHYLENE ENCASEMENT ON THE EXISTING WATER MAIN BECOMES DAMAGED, THE CONTRACTOR SHALL REPAIR THE POLYETHYLENE ENCASEMENT PER MANUFACTURER'S SPECIFICATIONS AND DOW STANDARD DRAWINGS L-1003 AND L-1004, AT THEIR OWN EXPENSE. ENSURE THAT THE ENTIRE EXPOSED AREA IS COVERED WITH NEW POLYETHYLENE ENCASEMENT AND SECURELY TAPED, PRIOR TO BACKFILLING.

CONTRACTOR SHALL ADHERE TO THE REQUIREMENTS OF THE OHIO ADMINISTRATIVE CODE CHAPTER 3745- 83- 02 WATER DISRUPTION OF SERVICE RULE. EXCAVATE PITS SUFFICIENTLY BELOW THE AREA TO BE CONNECTED TO IN ORDER TO MAINTAIN WATER LEVELS BELOW THE WATER MAIN. IF WATER FROM THE PIT ENTERS THE EXISTING MAIN, CONTACT DIVISION OF WATER IMMEDIATELY. ENSURE THAT SUFFICIENTLY SIZED PUMPS ARE UTILIZED TO REMOVE WATER FROM THE TRENCH AND BACKUP PUMPS ARE KEPT ON SITE FOR REDUNDANCY.

CITY OF COLUMBUS, DIVISION OF WATER GENERAL NOTES: (CONT.)

"SURVEY COORDINATES" SHALL INCLUDE ALL MATERIAL, EQUIPMENT, AND LABOR NECESSARY TO OBTAIN HORIZONTAL AND VERTICAL (NORTHING, EASTING, AND CENTERLINE ELEVATION) SURVEY COORDINATES FOR THE WATER MAIN IMPROVEMENTS. THE SURVEY COORDINATES SHALL BE OBTAINED FOR THE COMPLETED WATER MAIN CONSTRUCTION AND SHALL INCLUDE ALL VALVES, TEES, CROSSES, BENDS, HORIZONTAL DEFLECTIONS, PLUGS, REDUCERS, TAPPING SLEEVES, FIRE HYDRANTS, AIR RELEASES, CURB STOPS, AND CASING PIPE TERMINI. ADDITIONAL SURVEY COORDINATES ARE REQUIRED ON THE WATER MAIN EVERY 200 FEET WHERE NO FITTING OR OTHER WATER MAIN STRUCTURE IS BEING INSTALLED WITHIN THAT LENGTH OF THE IMPROVEMENT.

ALL SURVEY COORDINATES SHALL BE REFERENCED TO THE APPLICABLE COUNTY ENGINEER'S MONUMENTS, AND SHALL BE BASED ON THE NORTH AMERICAN DATUM OF 1983 (NAD 83) WITH THE 2011 ADJUSTMENT, WITH FURTHER REFERENCE MADE TO THE OHIO STATE PLANE SOUTH COORDINATE SYSTEM, SOUTH ZONE, WITH ELEVATIONS BASED ON NAVD 88 DATUM. ALL COORDINATES (NORTHING, EASTING, CENTERLINE ELEVATION) SHALL BE REFERENCED TO THE NEAREST HUNDREDTH (N XXXXXX.XX, E XXXXXX.XX, C/L ELEV. XXX.XX). ALL SURVEY COORDINATES SHALL BE ACCURATE TO WITHIN 1.0 FOOT HORIZONTAL AND A TENTH OF A FOOT (0.10) OR LESS VERTICAL.

THE COORDINATES SHALL BE DOCUMENTED TO THE ENGINEER IN DIGITAL SPREADSHEET FORM AND SHALL INCLUDE THE APPLICABLE ITEM, STATION, NORTHING, EASTING, AND CENTERLINE ELEVATION. COORDINATES SHALL BE SUBMITTED TO THE ENGINEER ON A BI- WEEKLY BASIS. COORDINATES SHALL ALSO BE REQUIRED TO BE SUBMITTED TO THE DIVISION OF WATER AS PART OF THE REQUEST FOR CHLORINATION.

LUMP SUM PAYMENT IS FULL COMPENSATION FOR ALL WORK INVOLVED IN OBTAINING AND DOCUMENTING THE SURVEY COORDINATES AS DESCRIBED IN THIS SPECIFICATION.

ALL WATER MAIN VALVE BOXES, WATER TAP BOXES, TEST STATIONS, PITOMETER TAP STRUCTURES, METER PIT COVERS, AND OTHER SURFACE UTILITY STRUCTURES WITHIN THE DISTURBED AREA SHALL BE ADJUSTED TO GRADE. ANY OF THESE STRUCTURES LOCATED WITHIN PAVEMENT, DRIVEWAYS, OR OTHER TRAVELED AREAS, WHETHER EXISTING OR PROPOSED, SHALL BE EQUIPPED WITH A TRAFFIC RATED, HEAVY DUTY VALVE BOX AND/OR COVER IN ACCORDANCE WITH THE STANDARD DRAWINGS. EXISTING WATER TAP BOXES TO REMAIN THAT ARE ENCOUNTERED WITHIN THE PROJECT LIMITS SHALL BE CLEANED OUT, CENTERED OVER THE CURB STOP, AND ADJUSTED TO THE PROPOSED GRADE.

RISER RINGS WILL NOT BE PERMITTED ON ANY NEWLY INSTALLED VALVE BOXES TO BRING VALVES TO FINAL GRADE. THE CONTRACTOR SHALL ENSURE THAT THE BOXES ARE INSTALLED AT THE CORRECT GRADE FOR FINAL PAVING OPERATIONS AND THAT THEIR PAVING CONTRACTOR INSTALLS PAVEMENT CORRECTLY AT LIDS DURING PAVING OPERATIONS. VALVE LIDS ARE NOT PERMITTED TO SET ABOVE FINAL GRADE AND SHALL BE A MAXIMUM OF ¼" BELOW FINAL GRADE.

WHERE NEW CONDUIT IS PROPOSED TO CROSS AN EXISTING OR PROPOSED WATER MAIN OR WATER TAP/SERVICE LINE, A MINIMUM OF 12- INCHES OF VERTICAL CLEARANCE SHALL BE MAINTAINED BETWEEN THE CONDUIT AND THE WATER MAIN OR TAP/SERVICE LINE. A MINIMUM OF 3- FEET OF HORIZONTAL CLEARANCE (OUT TO OUT) IS REQUIRED AT LOCATIONS WHERE THE CONDUIT IS PARALLEL TO THE WATER MAIN AND AT LOCATIONS OF WATER MAIN THRUST BLOCKS.

A MINIMUM OF 3 FEET OF HORIZONTAL CLEARANCE (OUT TO OUT) SHALL BE MAINTAINED BETWEEN ALL EXISTING WATER MAINS AND FOUNDATIONS FOR POLES, PULL BOXES, PUSH BUTTON PEDESTALS, AND ANY OTHER MISCELLANEOUS ELECTRICAL STRUCTURE.

CITY OF COLUMBUS, DIVISION OF WATER GENERAL NOTES: (CONT.)

MINIMUM OF 4 FEET OF COVER IS REQUIRED PRIOR TO PRESSURE TESTING ANY WATER MAIN. A SUFFICIENT AMOUNT OF BACKFILL SHALL BE INSTALLED TO PROVIDE THE ADEQUATE RESTRAINT IN AREAS WHERE REQUIRED.

THE PROPOSED WATER MAIN SHALL BE LOCATED A MINIMUM DISTANCE OF TWENTY (20) FEET AWAY FROM ANY EXISTING OR PROPOSED STRUCTURE, OVERHANG OR FOOTER.

FIRE HYDRANT RELOCATIONS SHALL CONFORM TO APPLICABLE SECTIONS OF ITEM 809 OF THE CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS. WORK SHALL CONSIST OF REMOVING THE EXISTING HYDRANT, INSTALLING NEW 6" PIPE AND FITTING AS REQUIRED TO LOCATE THE FIRE HYDRANT 2 FEET FROM BACK OF PROPOSED CURB OR 8 FEET OFF EDGE OF PAVEMENT, RESETTING HYDRANT AND BLOCKING AS REQUIRED. ALL 6" PIPE SHALL BE INSTALLED AT 4'- 0" MINIMUM COVER. HYDRANT EXTENSIONS SHALL BE PROVIDED PER ITEM 810, AS REQUIRED. RELOCATED FIRE HYDRANTS SHALL BE ADJUSTED TO PROPER GRADE AND FACED IN THE PROPER DIRECTION. WHEN A HYDRANT IS RELOCATED FIFTEEN (15) FEET OR MORE FROM THE "TYPICAL HYDRANT SETTING" VALVE LOCATION (SEE L-6409 & L- 6637), AN ADDITIONAL VALVE SHALL BE INSTALLED, AND RESTRAINED, WITHIN TWO (2) FEET OF THE RELOCATED HYDRANT. PAYMENT IS TO BE INCLUDED UNDER ITEM 809, FIRE HYDRANT RELOCATED.

RELOCATED FIRE HYDRANTS SHALL BE PUT BACK IN SERVICE AS SOON AS POSSIBLE. THE CONTRACTOR SHALL NOTIFY THE DIVISION OF FIRE ALARM OFFICE, 221-3132, WHENEVER FIRE HYDRANTS ARE TAKEN OUT OF SERVICE AND PLACED BACK IN SERVICE. NO TWO (2) ADJACENT FIRE HYDRANTS SHALL BE TAKEN OUT OF SERVICE CONCURRENTLY.

THE CONTRACTOR SHALL COORDINATE HIS WORK SUCH THAT NO WATER CUSTOMER WILL HAVE THEIR SERVICE DISRUPTED MORE THAN TWO (2) TIMES THROUGHOUT THE DURATION OF THIS PROJECT.

IF A LEAD WATER TAP IS ENCOUNTERED AND IS NEITHER DAMAGED NOR PART OF A PLANNED RELOCATION/REPLACEMENT, THE CONTRACTOR SHALL REPORT THE PRESENCE OF THE LEAD TAP TO THE DIVISION OF WATER DISTRIBUTION MAINTENANCE GROUP AT 614-645-7788.

IF A LEAD TAP IS EITHER DAMAGED DURING CONSTRUCTION OR IS PART OF A PLANNED WATER TAP RELOCATION/REPLACEMENT, THE CONTRACTOR SHALL TAKE THE FOLLOWING STEPS:

1. IF DAMAGED, IMMEDIATELY CONTACT LEW FLEMISTER, DIVISION OF WATER, (614-645-7028), TO REQUEST THE SHUT OFF OF THE EXISTING CURB STOP. IF LEW CANNOT BE REACHED, CONTACT THE DIVISION OF WATER DISTRIBUTION ENGINEERING OFFICE AT 614-645-7677 TO REQUEST THE SHUT OFF.
2. CONTRACTOR SHALL EXPOSE THE OWNER'S SIDE OF THE WATER SERVICE TO CONFIRM THE MATERIAL. THE INSPECTOR SHALL BE PRESENT FOR THIS.
3. IF THE CUSTOMER'S PRIVATE SERVICE MATERIAL IS LEAD, STOP WORK AND NOTIFY THE DIVISION OF WATER DISTRIBUTION ENGINEERING OFFICE (614- 645- 7677) IMMEDIATELY. IF THE MATERIAL IS NOT LEAD, THE CONTRACTOR SHALL REPLACE THE LEAD TAP (FROM EXISTING CORPORATION STOP TO CURB STOP) AND REINSTATE SERVICE TO THE CUSTOMER. PARTIAL REPAIRS OF THE LEAD TAP ARE NOT PERMITTED.
4. REFER TO DIVISION OF WATER STANDARD DRAWINGS L-7102C AND L-9901 FOR INFORMATION ON WATER TAP RELOCATIONS, PLACING NEW CURB STOPS, AND RELOCATING CURB BOXES.

THE CONTRACTOR IS REQUIRED TO SUBMIT A SEQUENCE OF CONSTRUCTION TO THE CITY AT THE PRECONSTRUCTION CONFERENCE. THIS SEQUENCE OF CONSTRUCTION SHOULD ALSO DETAIL THE CONTRACTOR'S PLANS FOR TESTING AND CHLORINATION OF THE NEW MAINS, INCLUDING THE SOURCE OF THE WATER AND LOCATION OF TEMPORARY CHLORINATION AND BLOW- OFF TAPS. THE CITY SHALL HAVE THE RIGHT TO APPROVE, REJECT OR MODIFY THE CONSTRUCTION SEQUENCE TO ENSURE THAT THE INTERRUPTIONS ARE HELD TO A MINIMUM. NOTE: THE CITY MAY TAKE UP TO 10 WORKING DAYS TO RESPOND TO THIS SUBMITTAL.

WATER WORK NOTES

DESIGN AGENCY

IBI

DESIGNER WLC/CJK

REVIEWER KMK 12-01-22

PROJECT ID 92616

SHEET P.107 TOTAL 170

FRA-23-4.19 PART 2 (PID 92616)

MODEL: Sheet PAPERSIZE: 17x11in.) DATE: 2023-04-10 TIME: 10:47:11 AM USER: william.croxton
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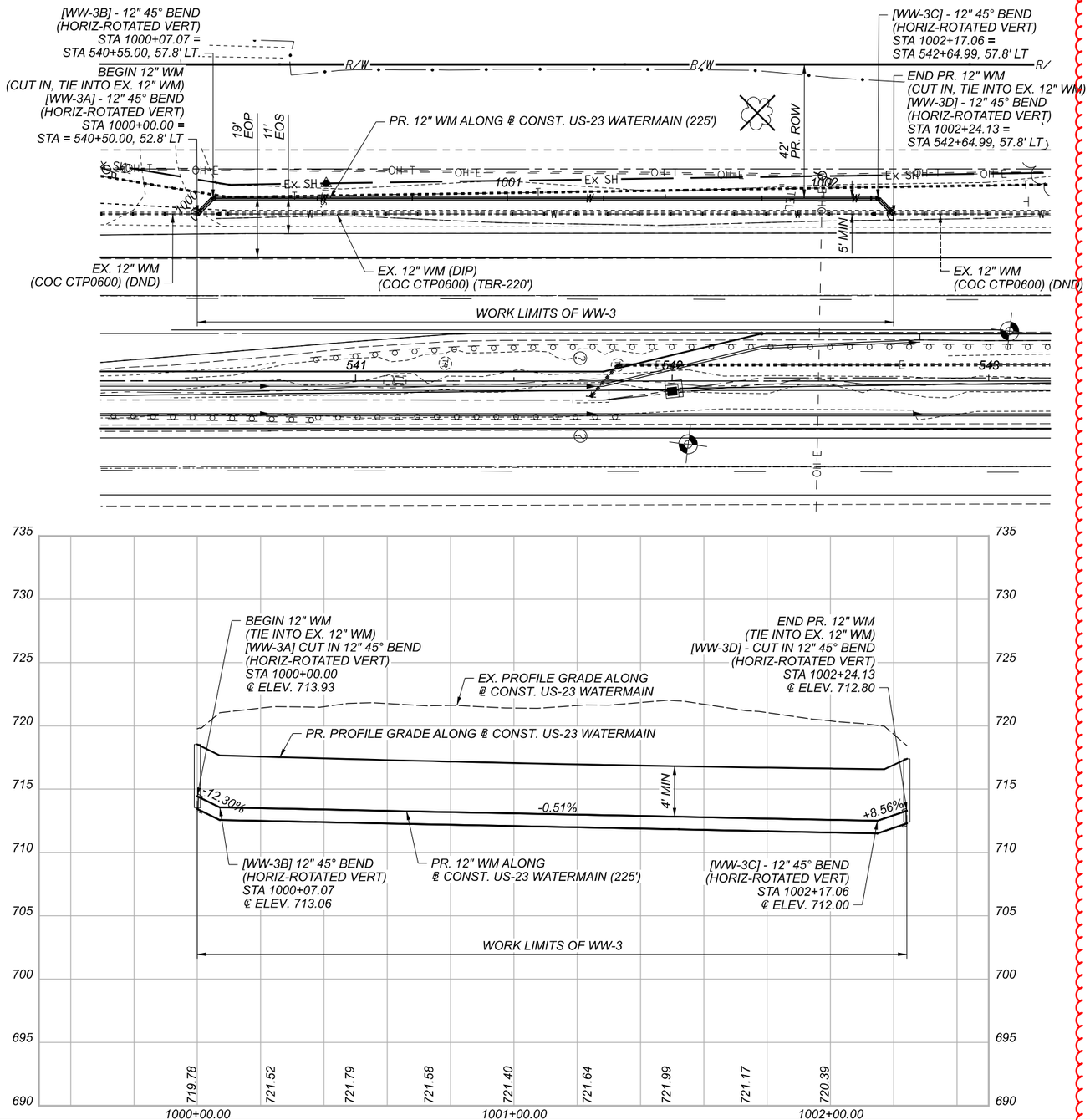

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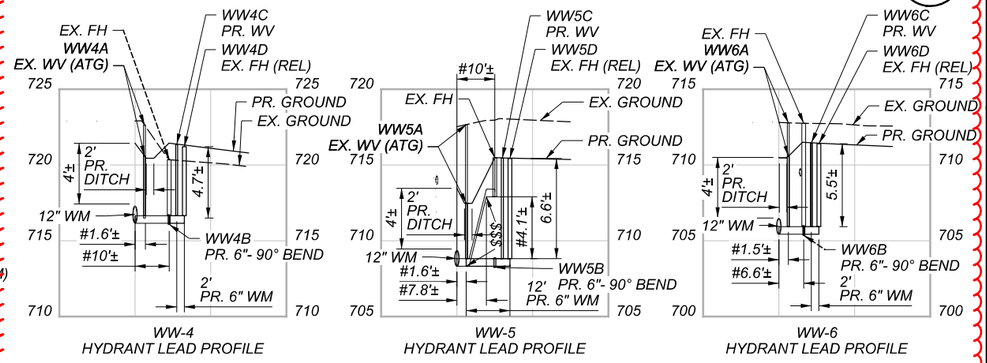
$$$=EX. 45° BEND



HORIZONTAL SCALE IN FEET
0 10 20 40

SURVEY COORDINATE DATA

REF. NO.	ITEM	STATION	OFFSET	AS-BUILT NORTHING	AS-BUILT EASTING	AS-BUILT CL ELEVATION
[WW1A]	VALVE BOX ADJUSTED TO GRADE	535+26.50	70.1' LT			
[WW1B]	VALVE BOX ADJUSTED TO GRADE	535+26.50	54.7' LT			
[WW2A]	VALVE BOX ADJUSTED TO GRADE	535+76.71	53.0' LT			
[WW-3A]	12" 45 DEG BEND (HORIZ-ROTATED VERT)	540+50.00	52.8' LT.			
[WW-3B]	12" 45 DEG BEND (HORIZ-ROTATED VERT)	540+55.00	57.8' LT.			
[WW-3C]	12" 45 DEG BEND (HORIZ-ROTATED VERT)	542+65.00	57.8' LT.			
[WW-3D]	12" 45 DEG BEND (HORIZ-ROTATED VERT)	542+70.00	52.8' LT.			
[WW-4A]	VALVE BOX ADJUSTED TO GRADE	102+49.63	29.5' RT			
[WW-4B]	6" - 90 DEG BEND	102+49.63	23.0' RT			
[WW-4C]	6" VALVE	102+51.13	23.0' RT			
[WW-4D]	FIRE HYDRANT, RELOCATED	102+53.13	23.0' RT			
[WW-5A]	VALVE BOX ADJUSTED TO GRADE	105+72.04	24.5' RT.			
[WW-5B]	6" - 90 DEG BEND	105+72.04	32.0' RT			
[WW-5C]	6" VALVE	105+74.54	32.0' RT			
[WW-5D]	FIRE HYDRANT, RELOCATED	105+76.54	32.0' RT			
[WW-6A]	VALVE BOX ADJUSTED TO GRADE	108+14.38	26.8' RT			
[WW-6B]	6" - 90 DEG BEND	108+14.38	23.0' RT			
[WW-6C]	6" VALVE	108+16.88	23.0' RT			
[WW-6D]	FIRE HYDRANT, RELOCATED	108+18.88	23.0' RT			
[WW-7A]	VALVE BOX ADJUSTED TO GRADE	112+07.34	25.4' RT.			
[WW-7B]	18" HYDRANT EXTENSION	112+02.34	25.4' RT.			

SHEET NO.	REF. NO.	STATION FROM	STATION TO	202 PIPE REMOVED FT	638 WATER WORK, MISC.: CMSC 802 - 6" VALVE EACH	638 WATER WORK, MISC.: CMSC 807 - VALVE BOX ADJUSTED TO GRADE EACH	638 WATER WORK, MISC.: CMSC 809 - FIRE HYDRANT, RELOCATED EACH	638 WATER WORK, MISC.: CMSC 810 - 18" HYDRANT EXTENSION EACH	638 WATER WORK, MISC.: CMSC SPECIAL - WATER AS-BUILT COORDINATE TABLE LS	638 WATER WORK, MISC.: CMSC 801 - 6" WATER PIPE & FITTINGS FT	638 WATER WORK, MISC.: CMSC 808 - RELOCATE 12" WATER MAIN FT
		GENERAL NOTES							LS		
P.49	WW-1	535+26.50 LT				1					
		535+26.50 LT				1					
P.49	WW-2	535+76.71 LT				1					
P.50-P.51	WW-3	540+50.00 LT	541+70.00 LT	220							225
P.58	WW-4	102+49.63 RT			1	1	1			2	
P.59	WW-5	105+72.04 RT			1	1	1			12	
P.59	WW-6	108+14.38 RT			1	1	1			2	
P.60	WW-7	112+02.34 RT				1		1			
TOTALS CARRIED TO GENERAL SUMMARY				220	3	7	3	1	LS	16	225

WATER WORKS PLAN AND PROFILE
STA 1000+00.00 TO STA 1002+24.13

DESIGN AGENCY
IBI

DESIGNER
WLC/CJK

REVIEWER
KMK 12-01-22

PROJECT ID
92616

SHEET P.108 TOTAL 170

FRA-23-4.19 PART 2 (PID 92616)

MODEL: PnP Sheet PAPERSIZE: 17x11(in.) DATE: 2023-04-17 TIME: 2:26:00 PM USER: william.croxton
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SHEET NO.	LOCATION	LENGTH	625					632				633	
			CONDUIT, CONCRETE ENCASED, 3", 725.051, AS PER PLAN	CONDUIT, MISC.: ENCASED INTERCONNECT CONDUIT BANK, TC2, SCH 40, (4)-3" & (1)-1.5"	CONDUIT, MISC.: ENCASED INTERCONNECT CONDUIT BANK, TC2, SCH 80, (4)-3" & (1)-1.5"	TRENCH, AS PER PLAN	PULL BOX, MISC.: PULL BOX, 32"	INTERCONNECT CABLE, MISC.: CMSC 1620 - FIBER OPTIC CABLE, 24 STRAND	CONDUIT RISER, 2" DIAMETER, AS PER PLAN	INTERCONNECT, MISC.: CMSC 1620 - TERMINATION PANEL, 24 FIBER	INTERCONNECT, MISC.: FIBER OPTIC FUSION SPLICE	CONTROLLER ITEM, MISC.: LAYER 2 ETHERNET SWITCH	CONTROLLER ITEM, MISC.: FIBER OPTIC ETHERNET TRANSCEIVER, SHORT RANGE
			FT	FT	FT	FT	EACH	FT	EACH	EACH	EACH	EACH	EACH
	US 23 & RATHMELL ROAD												
134	PB1						1						
134	PB1 TO PB2	459		459		459							
134	PB2						1						
134	PB2 TO PB3	292		292		292							
134	UTILITY POLE (AERIAL SPLICE) TO PULL BOX	78	78			78		128	1		12		
134	PB3 (PULLBOX QUANTIFIED WITH SIGNAL)							150					
134	PB3 TO CABINET	23		23		23		23					
134	CABINET									1		1	1
134	PB3 TO PB4	114			103	103							
134	PB4						1						
134	PB4 TO PB5	356		356		356							
134	PB5						1						
135	PB5 TO PB6	329		329		329							
	PULL BOX 6 (SEE DMS SHEETS)												
135	PB6 TO PB7	202		202		202							
135	PB7						1						
135	PB7 TO PB8	243		243		243							
135	PB8						1						
TOTALS CARRIED TO GENERAL SUMMARY			78	1904	103	2085	6	301	1	1	12	1	1

TRAFFIC SIGNAL INTERCONNECT SUBSUMMARY
US-23 (SOUTH HIGH STREET) & CR-121 (RATHMELL ROAD)

DESIGN AGENCY
IBI

DESIGNER
JMB

REVIEWER
KMK 12-01-22

PROJECT ID
92616

SHEET P.133 | TOTAL 170

FRA-23-4.19 PART 2 (PID 92616)

MODEL: Sheet PAPERSIZE: 17x11(in.) DATE: 2023-04-07 TIME: 3:51:23 PM USER: william.croxton
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