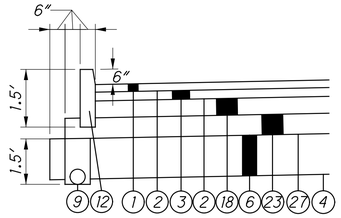
LEGEND

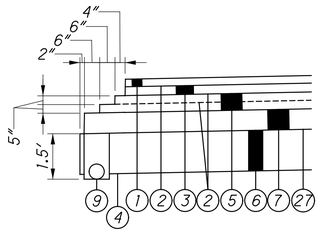
(1) ITEM 442 - 1½" ASPHALT CONCRETE (SC), 12.5MM, TYPE A (446)
(2) ITEM 407 - NON-TRACKING TACK COAT
(3) ITEM 442 - 1¾" ASPHALT CONCRETE (IC), 19MM, TYPE A (446)
(4) ITEM 206 - CURING COAT
(5) ITEM 302 - 10" ASPHALT CONCRETE BASE, PG64-22
(6) ITEM 206 - LIME STABILIZED SUBGRADE, 12" DEEP
(7) ITEM 304 - 8" AGGREGATE BASE
(8) ITEM 606 - GUARDRAIL, TYPE MGS
(9) ITEM 605 - 6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC
(10) ITEM 605 - 6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC
(11) ITEM 659 - SEEDING AND MULCHING
(12) ITEM 609 - CURB, TYPE 6
(13) ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D
(14) ITEM 609 - CURB, TYPE 4C
(15) ITEM 601 - PAVED GUTTER, TYPE 3, AS PER PLAN
(16) MECHANICALLY STABILIZED EARTH WALL (MSE)
(17) ABUTMENT WALL
(18) ITEM 302 - 6" ASPHALT CONCRETE BASE, PG64-22
(19) ITEM 452 - 11" NON REINFORCED CONCRETE PAVEMENT, CLASS QC1
(20) ITEM 608 - 5" CONCRETE SIDEWALK
(21) ITEM 609 - CURB, MISC.: CLERMONT COUNTY CURB AND GUTTER
(22) CONCRETE SLOPE PROTECTION
(23) ITEM 304 - 6" AGGREGATE BASE
(24) ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=17")
(25) ITEM 452 - 4" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1
(26) ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE C1
(27) ITEM 204 - PROOF ROLLING
(28) ITEM 605 - 4" BASE PIPE UNDERDRAINS
(29) ITEM 204 - SUBGRADE COMPACTION
(30) ITEM 441 - 1¼" AC SURFACE COURSE, TYPE 1, (448), PG64-22
(31) ITEM 441 - 1¾" AC INTERMEDIATE COURSE, TYPE 2, (448), PG64-22
(32) ITEM 452 - NON-REINFORCED CONCRETE PAVEMENT, MISC.: CONCRETE MOW STRIP
(33) ITEM SPECIAL, CABLE BARRIER (EXISTING OR PROPOSED)
(34) ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN
(35) ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (DEPTH VARIES 1.5" MAX)
(36) ITEM 304 - 23.1" AGGREGATE BASE
(37) ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (1.5" DEPTH)
(38) ITEM 601 - PAVED GUTTER, TYPE 1-2, AS PER PLAN
(39) ITEM 302 - 8¾" ASPHALT CONCRETE BASE, PG64-22

(A) 3" ASPHALT CONCRETE
(B) 9" CONCRETE
(C) AGGREGATE BASE
(D) CONCRETE BARRIER

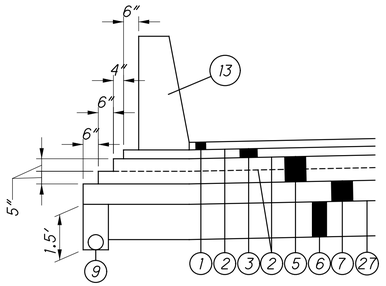
PAVEMENT EDGE DETAILS



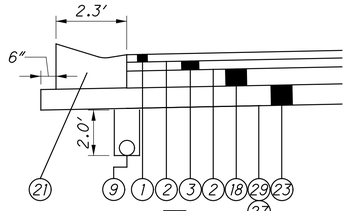
1 LOCAL PAVEMENT EDGE DETAIL WITH TYPE 6 CURB



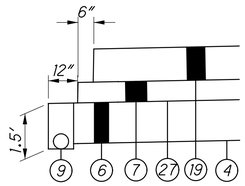
4 ASPHALT PAVEMENT EDGE STEP DETAIL



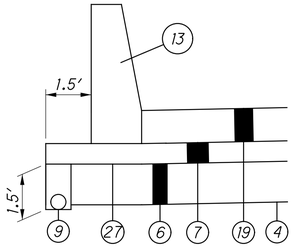
7 CONCRETE BARRIER WITH ASPHALT PAVEMENT EDGE STEP DETAIL



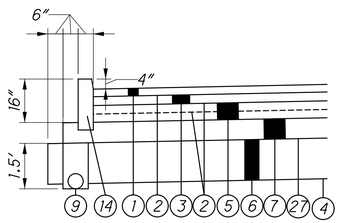
2 PAVEMENT EDGE DETAIL WITH CLERMONT COUNTY CURB AND GUTTER



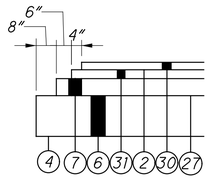
5 CONCRETE PAVEMENT EDGE STEP DETAIL



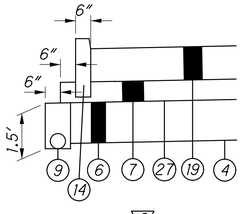
8 CONCRETE BARRIER WITH CONCRETE PAVEMENT EDGE STEP DETAIL



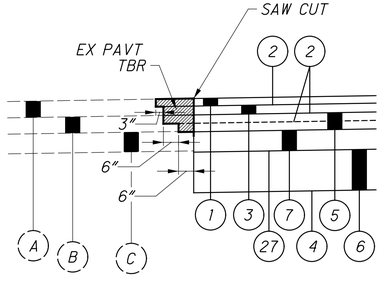
3 PAVEMENT EDGE DETAIL WITH TYPE 4C CURB



6 PAVEMENT EDGE DETAIL COMMERCIAL DRIVEWAYS NOT ABUTTING CURB



9 CONCRETE PAVEMENT WITH TYPE 4C CURB



10 PHASING & SAW CUT JOINT DETAIL

TYPICAL SECTIONS

CLE-32-3.50
(PHASE 5)

5
736

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[A] VARIES 0.0′ TO 14.0′±
STA 134+00.00 TO STA 134+50.00±
14.0′±
STA 134+50.00± TO STA 139+39.73

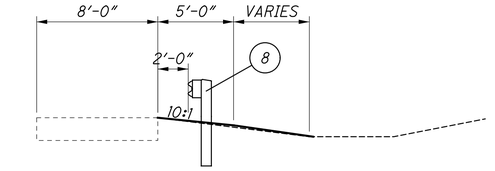
[B] VARIES 1.2′ TO 9.6′
STA 134+00.00 TO STA 135+50.00
VARIES 9.6′ TO 16.0′
STA 135+50.00 TO STA 139+39.73

[C] VARIES 10.0′ TO 4.0′
STA 134+00.00 TO STA 135+50.00
4.0′
STA 135+50.00 TO STA 139+40.00

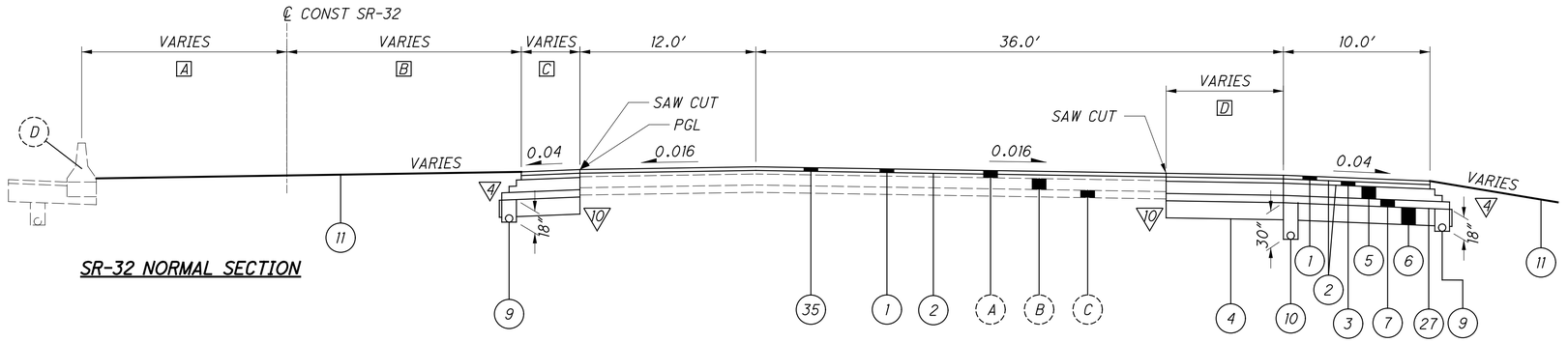
[D] VARIES 2.0′ TO 8.7′
STA 134+00.00 TO STA 136+15.63
VARIES 8.7′ TO 0.0′
STA 136+15.63 TO STA 136+54.45
0.0′
STA 136+54.45 TO STA 139+40.00

[E] WB OUTSIDE LANE FULL DEPTH REPLACEMENT SECTION APPLIES SR-32:
STA 142+03.69 TO 143+37.48
STA 143+73.43 TO 144+10.10

[F] EB OUTSIDE LANE FULL DEPTH REPLACEMENT SECTION APPLIES SR-32:
STA 143+68.34 TO 144+65.30

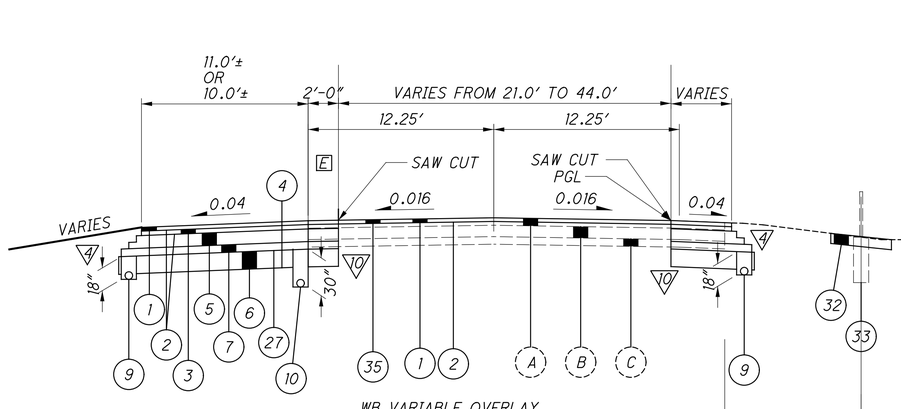


EB SR-32 OUTSIDE SHOULDER SECTION
STA 129+01.53 TO 130+64.00



SR-32 NORMAL SECTION

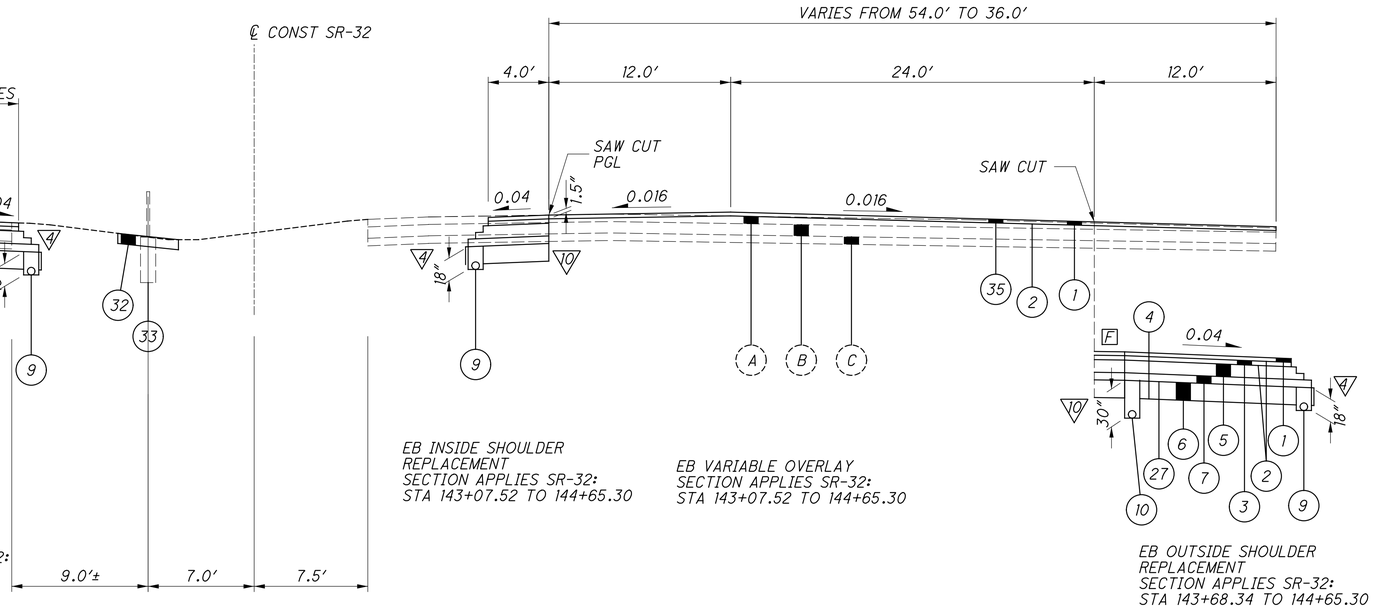
STA. 134+00.00 TO STA. 139+40.00



WB OUTSIDE SHOULDER REPLACEMENT
SECTION APPLIES SR-32:
STA 142+03.69 TO 143+37.48
STA 143+43.72 TO 144+10.10

WB VARIABLE OVERLAY
SECTION APPLIES SR-32:
STA 142+03.69 TO
144+10.10

WB INSIDE SHOULDER REPLACEMENT
SECTION APPLIES SR-32:
STA 142+38.41 TO
144+10.10



EB INSIDE SHOULDER REPLACEMENT
SECTION APPLIES SR-32:
STA 143+07.52 TO 144+65.30

EB VARIABLE OVERLAY
SECTION APPLIES SR-32:
STA 143+07.52 TO 144+65.30

EB OUTSIDE SHOULDER REPLACEMENT
SECTION APPLIES SR-32:
STA 143+68.34 TO 144+65.30

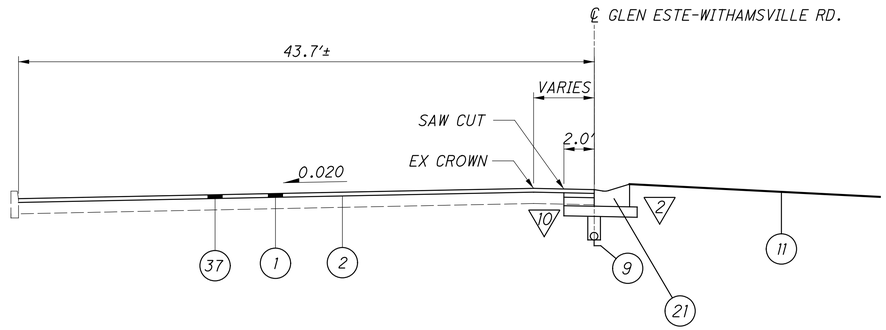
▽ FOR PAVEMENT BUILDUP AND EDGE DETAILS, SEE SHEET 5

FOR LEGEND, SEE SHEET 5

TYPICAL SECTIONS - SR-32

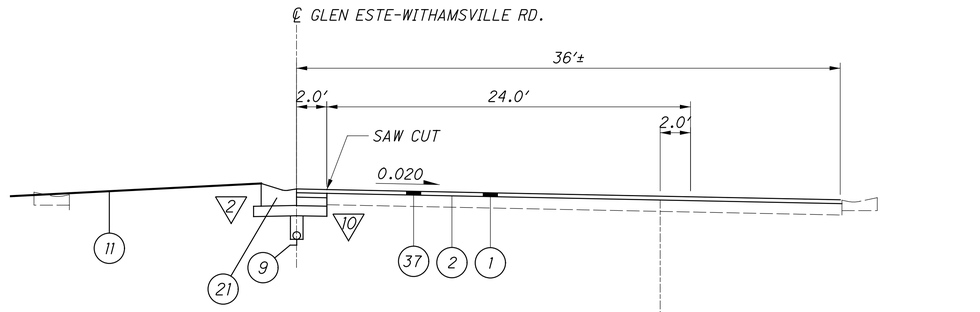
CLE-32-3.50
(PHASE 5)

*FOR ADDITIONAL INFORMATION,
SEE INTERSECTION DETAIL



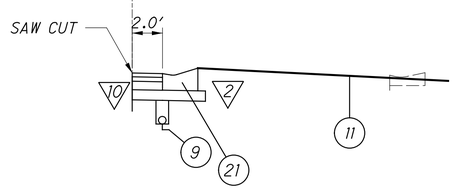
GLEN ESTE-WITHAMSVILLE RD.
NORMAL SECTION

SECTION APPLIES
GLEN ESTE-WITHAMSVILLE RD.:
STA 15+41.62 TO STA 19+38.04



GLEN ESTE-WITHAMSVILLE RD.
NORMAL SECTION

SECTION APPLIES
GLEN ESTE-WITHAMSVILLE RD.:
STA 20+58.43 TO STA 24+14.40



SECTION APPLIES
GLEN ESTE-WITHAMSVILLE RD.:
STA 21+05.66 TO STA 22+98.98

▽ FOR PAVEMENT EDGE DETAILS, SEE SHEET 5
FOR LEGEND, SEE SHEET 5

TYPICAL SECTIONS - GLEN ESTE-WITHAMSVILLE RD.

CLE-32-3.50
(PHASE 5)

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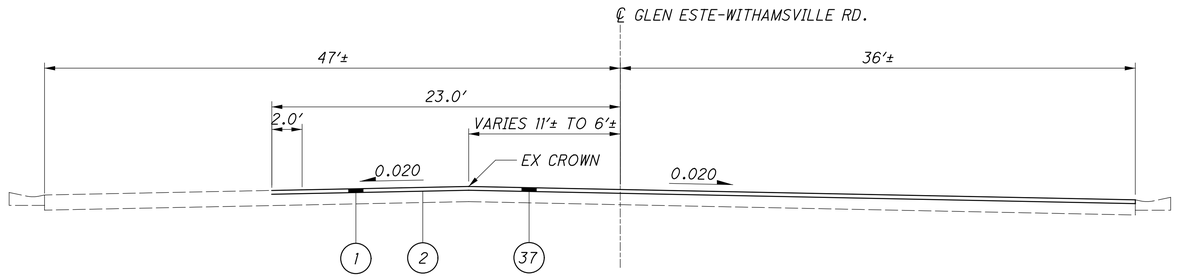
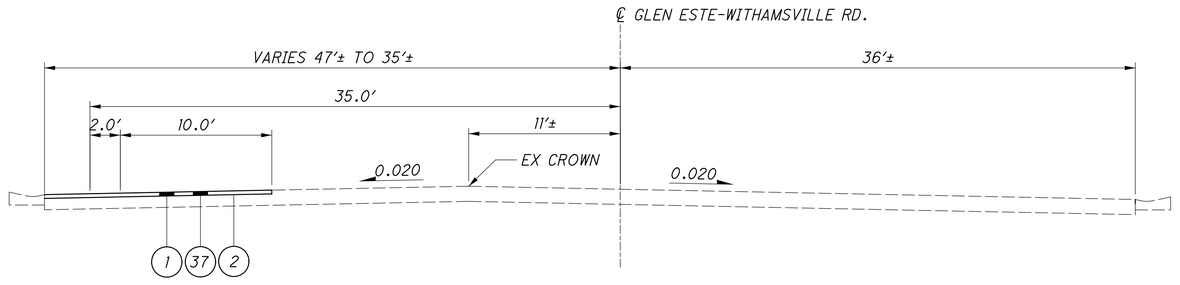
*FOR ADDITIONAL INFORMATION,
SEE INTERSECTION DETAIL



GLEN ESTE-WITHAMSVILLE RD.
NORMAL SECTION

SECTION APPLIES
GLEN ESTE-WITHAMSVILLE RD.:
STA 24+14.40 TO STA 26+15.00



GLEN ESTE-WITHAMSVILLE RD.
NORMAL SECTION

SECTION APPLIES
GLEN ESTE-WITHAMSVILLE RD.:
STA 26+15.00 TO STA 28+81.12

▽ FOR PAVEMENT EDGE DETAILS, SEE SHEET 5
FOR LEGEND, SEE SHEET 5

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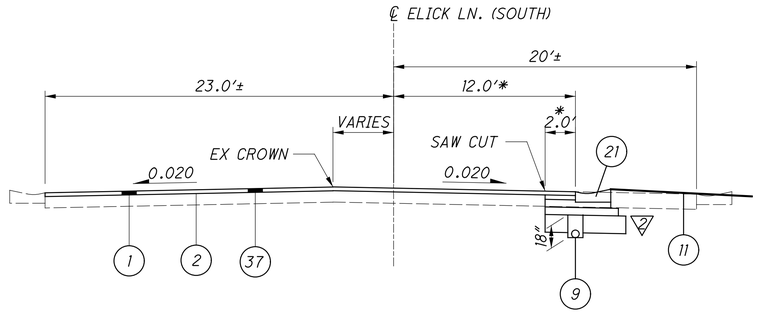
TYPICAL SECTIONS - GLEN ESTE-WITHAMSVILLE RD.

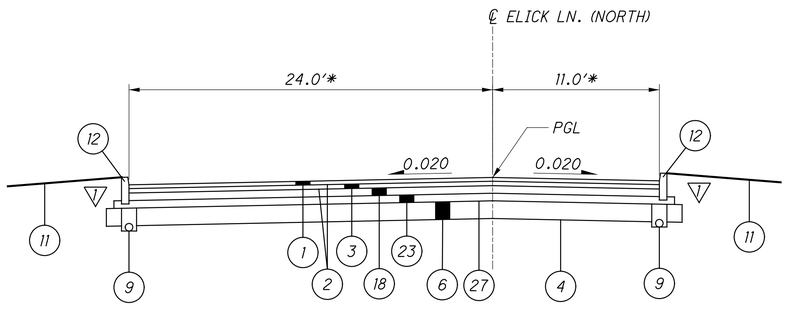
CLE-32-3.50
(PHASE 5)

*FOR ADDITIONAL INFORMATION,
SEE INTERSECTION DETAIL



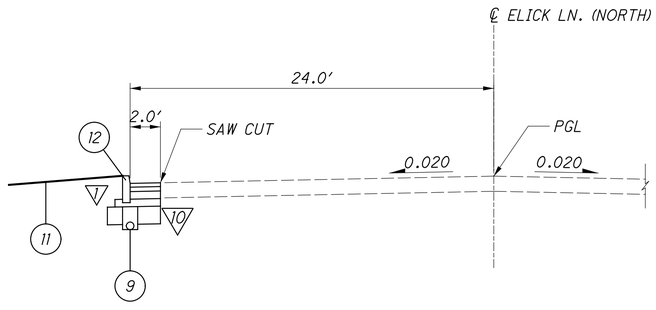
ELICK LN. (SOUTH CUL DE SAC)
NORMAL SECTION

SECTION APPLIES
ELICK LN. (SOUTH):
STA 48+38.96* TO STA 50+85.32*



ELICK LN. (NORTH CUL DE SAC)
NORMAL SECTION

SECTION APPLIES
ELICK LN. (NORTH):
STA 60+00.61 TO STA 62+00.00



ELICK LN. (NORTH CUL DE SAC)
NORMAL SECTION

SECTION APPLIES
ELICK LN. (NORTH):
STA 62+00.00 TO STA 63+55.12

▽ FOR PAVEMENT EDGE DETAILS, SEE SHEET 5
FOR LEGEND, SEE SHEET 5

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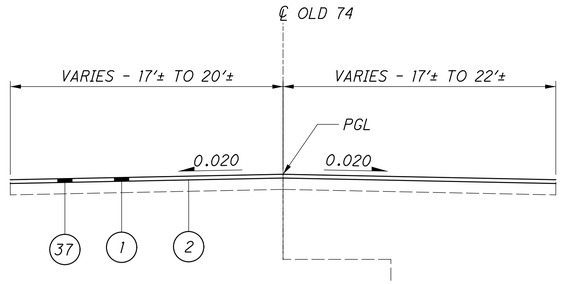
TYPICAL SECTIONS - ELICK LN.

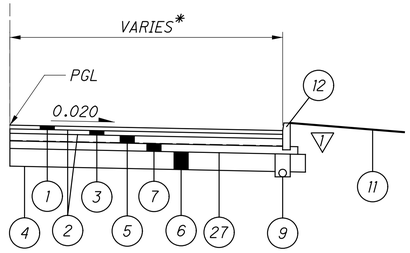
CLE-32-3.50
(PHASE 5)

*FOR ADDITIONAL INFORMATION,
SEE INTERSECTION DETAIL

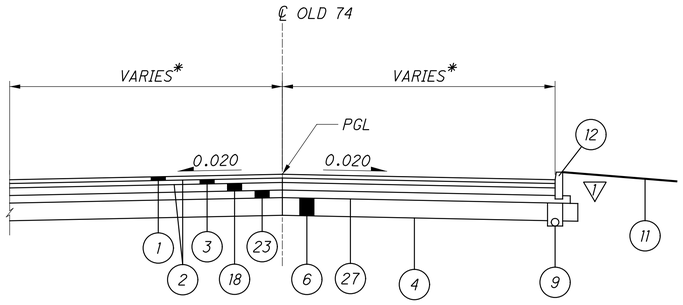


OLD 74 (NORTH) CUL DE SAC
NORMAL SECTION

SECTION APPLIES
OLD 74:
STA 199+20.00 TO STA 202+08.25

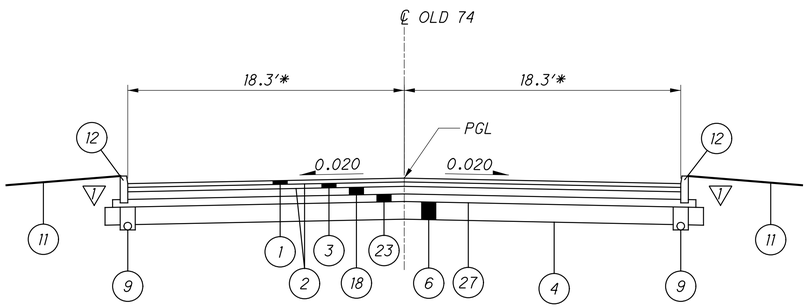


SECTION APPLIES
OLD 74:
STA 201+19.73 TO STA 202+35.47



OLD 74 (NORTH) CUL DE SAC
NORMAL SECTION

SECTION APPLIES
OLD 74: STA 202+08.25 TO STA 202+35.47



OLD 74 (SOUTH) CUL DE SAC
NORMAL SECTION

SECTION APPLIES
OLD 74: STA 204+50.17 TO STA 205+50.00

▽ FOR PAVEMENT EDGE DETAILS, SEE SHEET 5
FOR LEGEND, SEE SHEET 5

TYPICAL SECTIONS - OLD 74

CLE-32-3.50
(PHASE 5)

ITEM 614- MAINTAINING TRAFFIC

FOR THE PHASE 5 PROJECT, THE FOLLOWING NUMBER OF LANES AND WIDTH OF LANE SHALL BE MAINTAINED AT ALL TIMES, EXCEPT AS ALLOWED BY THE PERMITTED LANE CLOSURE TIMES NOTE OR AS OTHERWISE SHOWN IN THE PLANS, BY USE OF EXISTING PAVEMENT, THE COMPLETED PAVEMENT, ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, ITEM 615 ROADS FOR MAINTAINING TRAFFIC, AND TEMPORARY SURFACES USING ITEMS 301, 304, 410, 441, AND 614.

ROAD:	# OF LANES	LANE WIDTH
SR32 EASTBOUND	3 ▽, ◇	11-FOOT
SR32 WESTBOUND	2 ▽, ◇	11-FOOT
BACH-BUXTON RAMPS	1 ▽	11-FOOT (MIN)
ALL OTHER ROADS	2 ✣	10-FOOT (MIN)

NOTE:
▽= ONE DIRECTION
✣= IN EACH DIRECTION
◇= EXCEPT DURING PERMITTED LANE CLOSURE HOURS

IT IS THE INTENTION TO PERFORM THE REQUIRED WORK WITH THE LEAST INCONVENIENCE TO, AND WITH THE MAXIMUM SAFETY OF THE CONTRACTOR AND THE TRAVELING PUBLIC. ANY VARIANCE FROM THESE MAINTENANCE OF TRAFFIC NOTES MUST BE APPROVED IN ADVANCE (IN WRITING) BY THE ENGINEER, EXCEPT AS MODIFIED BELOW OF AS SHOWN IN THE MAINTENANCE OF TRAFFIC PLANS.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 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 ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

ESTIMATED QUANTITIES

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DETERMINED BY THE ENGINEER FOR THE MAINTENANCE OF TRAFFIC.

ITEM 410,	TRAFFIC COMPACTED SURFACE, TYPE A OR B	90 CY
ITEM 614,	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	30 CY
ITEM 616,	WATER	50 MGAL

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 10 M. GAL

LANE CLOSURE/REDUCTION REQUIRED

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.

LANES OPEN DURING HOLIDAYS OR SPECIAL EVENTS

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

CHRISTMAS	FOURTH OF JULY
NEW YEAR'S EVE	LABOR DAY
EASTER	THANKSGIVING
MEMORIAL DAY	

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

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

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF $165 FOR EACH MINUTE THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

SIGNS AND BARRICADES

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN SIGNS AND SIGN SUPPORTS, AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND TYPE III BARRICADES OF THE TYPE AND LOCATION AS FOLLOWS:

PHASE 4:

TYPE & QTY	LOCATION
2 - TYPE 3	INTERSECTION OF ELICK LN AND RAMP O

2 <== TOTAL OF TYPE 3 BARRICADES

ROAD CLOSED SIGN

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN STANDARD 48 X 30 INCH ROAD CLOSED SIGNS, SIGN SUPPORTS, BARRICADES AND LIGHTS, AS DETAILED IN SCD MT-101.60 AT THE FOLLOWING LOCATIONS DURING PERIODS IN WHICH THE AFFECTED ROADS ARE CLOSED TO TRAFFIC.

PHASE 1:

TYPE & QTY	LOCATION
2 - TYPE 3	INTERSECTION OF SR74 AND SR32 EB (ACROSS PAVEMENT)
2 - TYPE 3	NORTH LIMITS OF EX DRIVE ON OLD SR74
4 - TYPE 3	INTERSECTION OF RELOCATED BACH-BUXTON RD AND MARIAN DR (ACROSS PAVEMENT)
1 - TYPE 3	INTERSECTION OF RELOCATED BACH-BUXTON RD AND OLD SR74 (ACROSS PAVEMENT)
7 - TYPE 3	INTERSECTION OF RELOCATED BACH-BUXTON RD AND OLD SR74 (ACROSS PAVEMENT)
1 - TYPE 2	INTERSECTION OF EASTWOOD DR AND LONG LAKE DR

PHASE 2:

TYPE & QTY	LOCATION
2 - TYPE 2	ELICK LN AT WORK LIMITS
2 - TYPE 3	INTERSECTION OF ELICK LN AND RAMP N (ACROSS PAVEMENT)
2 - TYPE 3	INTERSECTION OF ELICK LN AND RAMP O (ACROSS PAVEMENT)
2 - TYPE 3	INTERSECTION OF OLD SR74 AND SR32 WB (ACROSS PAVEMENT)
* 2 - TYPE 3	INTERSECTION OF OLD SR74 AND SR32 EB (ACROSS PAVEMENT)
4 - TYPE 3	INTERSECTION OF ELICK LN AND MARIAN DR (ACROSS PAVEMENT)

PHASE 3:

TYPE & QTY	LOCATION
3 - TYPE 3	GLEN ESTE-WITHAMSVILLE RD STA. 17+20 RT
2 - TYPE 3	INTERSECTION OF FAYARD DR AND SR32 EB (ACROSS PAVEMENT)
* 2 - TYPE 3	INTERSECTION OF ELICK LN AND RAMP N (ACROSS PAVEMENT)
* 2 - TYPE 3	INTERSECTION OF ELICK LN AND RAMP O (ACROSS PAVEMENT)
* 2 - TYPE 3	INTERSECTION OF OLD SR74 AND SR32 WB (ACROSS PAVEMENT)
* 2 - TYPE 3	INTERSECTION OF OLD SR74 AND SR32 EB (ACROSS PAVEMENT)
2 - TYPE 2	INTERSECTION OF WYLER PARK DR AND GLEN ESTE-WITHAMSVILLE DR
2 - TYPE 3	INTERSECTION OF GLEN ESTE-WITHAMSVILLE DR AND WYLER PARK DR

PHASE 4:

TYPE & QTY	LOCATION
* 3 - TYPE 3	GLEN ESTE-WITHAMSVILLE RD STA. 17+20 RT
2 - TYPE 3	INTERSECTION OF FAYARD DR AND SR32 WB (ACROSS ROADWAY)
1 - TYPE 3	INTERSECTION OF FAYARD DR AND JAMESTOWN CROSSING (ACROSS ROADWAY)
1 - TYPE 3	INTERSECTION OF JAMESTOWN CROSSING AND BOUNDRY ST (ACROSS ROADWAY)
* 2 - TYPE 2	INTERSECTION OF WYLER PARK DR AND GLEN ESTE-WITHAMSVILLE DR SB
* 2 - TYPE 3	INTERSECTION OF GLEN ESTE-WITHAMSVILLE DR AND WYLER PARK DR
2 - TYPE 3	INTERSECTION OF WYLER PARK DR AND GLEN ESTE-WITHAMSVILLE DR NB
* 2 - TYPE 3	INTERSECTION OF FAYARD DR AND SR32 EB (ACROSS PAVEMENT)

39 <== TOTAL TYPE 3 BARRICADE & SIGN
4 <== TOTAL TYPE 2 BARRICADE & SIGN
* REMAINS FROM PREVIOUS PHASE

SHEET NUM.												PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
26	27	29	139	145	146	147	158	159				01/NHS/ OT	04/NHS/ BR						
																		ROADWAY	
LS												LS		201	11000	LS		CLEARING AND GRUBBING	
			1									1		202	20010	1	EACH	HEADWALL REMOVED	
	1,846		48,631									50,477		202	23000	50,477	SY	PAVEMENT REMOVED	
			997									997		202	30000	997	SF	WALK REMOVED	
			769									769		202	30700	769	FT	CONCRETE BARRIER REMOVED	
			2,508									2,508		202	32000	2,508	FT	CURB REMOVED	
			2,131									2,131		202	32500	2,131	FT	CURB AND GUTTER REMOVED	
			1,735									1,735		202	35100	1,735	FT	PIPE REMOVED, 24" AND UNDER	
			1,030									1,030		202	38000	1,030	FT	GUARDRAIL REMOVED	
			116									116		202	38300	116	FT	GUARDRAIL REMOVED, BARRIER DESIGN	
			230									230		202	48000	230	FT	CABLE BARRIER REMOVED	
			3									3		202	53100	3	EACH	MAILBOX REMOVED	
			3									3		202	58000	3	EACH	MANHOLE REMOVED	
			20									20		202	58100	20	EACH	CATCH BASIN REMOVED	
		7										7		202	67000	7	EACH	REGULATED UNDERGROUND STORAGE TANK REMOVED	
			6,592									6,592		202	75000	6,592	FT	FENCE REMOVED	
			4									4		202	75250	4	EACH	GATE REMOVED	
			1									1		202	98100	1	EACH	REMOVAL MISC.: BILLBOARD	29
			36									36		202	98100	36	EACH	REMOVAL MISC.: COMMERCIAL LIGHTING	29
			23									23		202	98200	23	FT	REMOVAL MISC.: STONE WALL	29
		141				13,845	12,253					26,239		203	10000	26,239	CY	EXCAVATION	
						159,478						159,478		203	20000	159,478	CY	EMBANKMENT	
						8,605						8,605		203	20001	8,605	CY	EMBANKMENT, AS PER PLAN	27
								8,651				8,651		204	10000	8,651	SY	SUBGRADE COMPACTION	
	32											32		204	45000	32	HOUR	PROOF ROLLING	
								55,265				55,265		206	10010	55,265	SY	LIME STABILIZED SUBGRADE, 12 INCHES DEEP	
								1,430				1,430		206	10300	1,430	TON	LIME	
								55,476				55,476		206	11000	55,476	SY	CURING COAT	
								LS				LS		206	30001	LS		MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS, AS PER PLAN	27
				9,277								9,277		606	15050	9,277	FT	GUARDRAIL, TYPE MGS	
				11								11		606	26150	11	EACH	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	
				8								8		606	26550	8	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
				8								8		606	35002	8	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
				5								5		606	35102	5	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	
				2,848								2,848		SPECIAL	60655000	2,848	FT	CABLE BARRIER	29
				1								1		SPECIAL	60655150	1	EACH	CABLE BARRIER, ANCHOR ASSEMBLY	29
				2								2		606	60028	2	EACH	IMPACT ATTENUATOR, TYPE 2 (BIDIRECTIONAL) (60 MPH, 34 IN)	
				7,907								7,907		607	23000	7,907	FT	FENCE, TYPE CLT	
				1								1		607	61200	1	EACH	GATE, TYPE CLT	
				7,907								7,907		607	70000	7,907	FT	FENCELINE SEEDING AND MULCHING	
				403								403		608	52000	403	SF	CURB RAMP	
					53							53		622	10120	53	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE C	
					208							208		622	10140	208	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE C1	
					3,314							3,314		622	10160	3,314	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D	
					1,403							1,403		622	10161	1,403	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN	10
					2							2		622	24840	2	EACH	CONCRETE BARRIER END SECTION, TYPE B	
					2							2		622	24860	2	EACH	CONCRETE BARRIER END SECTION, TYPE C1	
					12							12		622	25000	12	EACH	CONCRETE BARRIER END SECTION, TYPE D	
					1							1		622	25009	1	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C, AS PER PLAN	432
					19							19		622	25050	19	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D	
					1							1		622	25051	1	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, AS PER PLAN A	433
					1							1		622	25051	1	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, AS PER PLAN B	434
		1,692										1,692		SPECIAL	69065010	1,692	TON	WORK INVOLVING SOLID WASTE	29
		846										846		SPECIAL	69065016	846	TON	WORK INVOLVING PETROLEUM CONTAMINATED SOIL	29
		2,000										2,000		SPECIAL	69065020	2,000	GAL	WORK INVOLVING WATER	29
		2,000										2,000		SPECIAL	69065024	2,000	GAL	WORK INVOLVING REGULATED WATER	29
						18						18		840	23000	18	CY	SELECT GRANULAR BACKFILL	

CALCULATED MSW
CHECKED WAA

GENERAL SUMMARY

CLE-32-3.50
(PHASE 5)

SHEET NUM.												PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
27	29	145	159	165	166	573						01/NHS/ OT	04/NHS/ BR						
																		PAVEMENT	
			99,344									99,344		254	01000	99,344	SY	PAVEMENT PLANING, ASPHALT CONCRETE (1.5" DEPTH)	
			4,919									4,919		254	01000	4,919	SY	PAVEMENT PLANING, ASPHALT CONCRETE (DEPTH VARIES, 1.5" MAX)	
308			8,896									9,204		302	46000	9,204	CY	ASPHALT CONCRETE BASE, PG64-22	
			12,241									12,241		304	20000	12,241	CY	AGGREGATE BASE	
			15,303									15,303		407	20000	15,303	GAL	NON-TRACKING TACK COAT	
			32									32		441	50000	32	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	
			44									44		441	50300	44	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)	
			3,605									3,605		442	00100	3,605	CY	ANTI-SEGREGATION EQUIPMENT	
77			5,941									6,018		442	10000	6,018	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446)	
72			1,879									1,951		442	10100	1,951	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)	
			380									380		452	09010	380	SY	4" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P	
			14,343									14,343		452	14110	14,343	SY	11" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P	
	1,266											1,266		452	19200	1,266	SY	NON-REINFORCED CONCRETE PAVEMENT, MISC.: CONCRETE MOW STRIP	29
		87										87		609	12000	87	FT	COMBINATION CURB AND GUTTER, TYPE 2	
		403										403		609	24510	403	FT	CURB, TYPE 4-C	
		4,068										4,068		609	26000	4,068	FT	CURB, TYPE 6	
		1,367										1,367		609	98000	1,367	FT	CURB, MISC.: CLERMONT COUNTY C&G	470
				3								3		202	75610	3	EACH	WATER WORK VALVE BOX REMOVED	
				3.2								3.2		602	98200	3.2	CY	MASONRY, MISC.:CONCRETE ENCASEMENT (CCWRD ITEM 1170)	473
				2								2		638	08706	2	EACH	8" CUTTING-IN SLEEVE	
				3								3		638	10800	3	EACH	VALVE BOX ADJUSTED TO GRADE	
				287								287		638	98600	287	FT	WATER WORK, MISC.:8" DUCTILE IRON WATER MAIN AND DUCTILE IRON FITTINGS (CCWRD ITEM 2110)	471
					5							5		202	58700	5	EACH	SANITARY SEWER MANHOLE ABANDONED	
					797							797		611	01800	797	FT	8" CONDUIT, TYPE B, SDR-26 (CCWRD 3110)	
					5							5		611	99575	5	EACH	MANHOLE, NO. 3, AS PER PLAN	472
					4							4		611	99654	4	EACH	MANHOLE ADJUSTED TO GRADE	
						40						40		625	00450	40	EACH	LIGHTING CONNECTION, FUSED PULL APART	
						42						42		625	00480	42	EACH	CONNECTION, UNFUSED PERMANENT	
						20						20		625	10481	20	EACH	LIGHT POLE, DECORATIVE, AS PER PLAN	571
						20						20		625	14001	20	EACH	LIGHT POLE FOUNDATION, 24" X 6' DEEP, AS PER PLAN	570
						1,650						1,650		625	23200	1,650	FT	NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE	
						7,881						7,881		625	23304	7,881	FT	NO. 8 AWG 600 VOLT DISTRIBUTION CABLE	
						800						800		625	23400	800	FT	NO. 10 AWG POLE AND BRACKET CABLE	
						1,963						1,963		625	25304	1,963	FT	CONDUIT, 1-1/2", 725.051	
						347						347		625	25504	347	FT	CONDUIT, 3", 725.051	
						375						375		625	25902	375	FT	CONDUIT, JACKED OR DRILLED, 725.04, 3"	
						4						4		625	27503	4	EACH	LUMINAIRE, UNDERPASS, SOLID STATE (LED), AS PER PLAN, 240 VOLT	571
						20						20		625	27551	20	EACH	LUMINAIRE, DECORATIVE, AS PER PLAN, 150W HPS, 240 VOLT	571
						2,042						2,042		625	29000	2,042	FT	TRENCH	
						2						2		625	29920	2	EACH	STRUCTURE JUNCTION BOX	
						3						3		625	29930	3	EACH	MEDIAN JUNCTION BOX	
						6						6		625	30700	6	EACH	PULL BOX, 725.08, 18"	
						3						3		625	30706	3	EACH	PULL BOX, 725.08, 24"	
						20						20		625	32000	20	EACH	GROUND ROD	
						1						1		625	33000	1	EACH	STRUCTURE GROUNDING SYSTEM	
						1						1		625	34001	1	EACH	POWER SERVICE, AS PER PLAN	570
						2,042						2,042		625	36010	2,042	FT	UNDERGROUND WARNING/MARKING TAPE	
						LS						LS		625	37000	LS		SERVICE TO UNDERPASS LIGHTING	

CALCULATED MSW CHECKED WAA

GENERAL SUMMARY

CLE-32-3.50 (PHASE 5)

130 736

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SHEET NUM.												PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
30	31	32	33	126	35	39	36	137	138			01/NHS/OT	04/NHS/BR						
																		MAINTENANCE OF TRAFFIC	
			4,500									4,500		254	01000	4,500	SY	PAVEMENT PLANING, ASPHALT CONCRETE (FOR RPM TRANSITION AREAS)	
		290										290		301	46000	290	CY	ASPHALT CONCRETE BASE, PG64-22	
		220										220		304	20000	220	CY	AGGREGATE BASE	
		110										110		407	10000	110	GAL	TACK COAT	
90												90		410	12000	90	CY	TRAFFIC COMPACTED SURFACE, TYPE A OR B	
		60										60		441	50000	60	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	
						4						4		611	98631	4	EACH	CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN	39
	1,500											1,500		614	11110	1,500	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
									6			6		SPECIAL	61411300	6	EACH	WORK ZONE TRAFFIC SIGNAL	36
								28				28		614	12384	28	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL)	
												LS		614	12420	LS		DETOUR SIGNING	
					14							14		614	12484	14	EACH	WORK ZONE INCREASED PENALTIES SIGN	
			30									30		614	12500	30	EACH	REPLACEMENT SIGN	
		100										100		614	12600	100	EACH	REPLACEMENT DRUM	
								688				688		614	12801	688	EACH	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	33
30												30		614	13000	30	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
								1,519				1,519		614	13310	1,519	EACH	BARRIER REFLECTOR, TYPE 1, (ONE-WAY)	
								150				150		614	13314	150	EACH	BARRIER REFLECTOR, TYPE 3, (ONE-WAY)	
								1,669				1,669		614	13350	1,669	EACH	OBJECT MARKER, ONE WAY	
						5,400						5,400		614	18030	5,400	FT	MAINTAINING TRAFFIC, MISC.:PROVIDING POSITIVE DRAINAGE DURING CONSTRUCTION	39
							18					18		614	18601	18	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	36
								8.98				8.98		614	20056	8.98	MILE	WORK ZONE LANE LINE, CLASS I, 6", 807 PAINT	
								1.83				1.83		614	20100	1.83	MILE	WORK ZONE LANE LINE, CLASS I, 4", 642 PAINT	
									0.5			0.5		614	20550	0.5	MILE	WORK ZONE LANE LINE, CLASS III, 4", 642 PAINT	
									6.12			6.12		614	20560	6.12	MILE	WORK ZONE LANE LINE, CLASS III, 6", 642 PAINT	
								1				1		614	21100	1	MILE	WORK ZONE CENTER LINE, CLASS I, 642 PAINT	
									0.82			0.82		614	21550	0.82	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT	
								15.72				15.72		614	22056	15.72	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 807 PAINT	
								4.57				4.57		614	22100	4.57	MILE	WORK ZONE EDGE LINE, CLASS I, 4", 642 PAINT	
									1.46			1.46		614	22350	1.46	MILE	WORK ZONE EDGE LINE, CLASS III, 4", 642 PAINT	
									8.68			8.68		614	22360	8.68	MILE	WORK ZONE EDGE LINE, CLASS III, 6", 642 PAINT	
								29,906				29,906		614	23110	29,906	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 807 PAINT	
								12,159				12,159		614	23200	12,159	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 8", 642 PAINT	
									4,774			4,774		614	23680	4,774	FT	WORK ZONE CHANNELIZING LINE, CLASS III, 8", 642 PAINT	
									7,535			7,535		614	23690	7,535	FT	WORK ZONE CHANNELIZING LINE, CLASS III, 12", 642 PAINT	
								11,225				11,225		614	24200	11,225	FT	WORK ZONE DOTTED LINE, CLASS I, 4", 642 PAINT	
									10,365			10,365		614	24610	10,365	FT	WORK ZONE DOTTED LINE, CLASS III, 4", 642 PAINT	
								1,092				1,092		614	25200	1,092	FT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I, 642 PAINT	
									2,667			2,667		614	25620	2,667	FT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS III, 642 PAINT	
								660				660		614	26200	660	FT	WORK ZONE STOP LINE, CLASS I, 642 PAINT	
									447			447		614	26610	447	FT	WORK ZONE STOP LINE, CLASS III, 642 PAINT	
									332			332		614	27620	332	FT	WORK ZONE CROSSWALK LINE, CLASS III, 642 PAINT	
								123				123		614	30200	123	EACH	WORK ZONE ARROW, CLASS I, 642 PAINT	
									115			115		614	30650	115	EACH	WORK ZONE ARROW, CLASS III, 642 PAINT	
								30				30		614	31200	30	EACH	WORK ZONE WORD ON PAVEMENT, 72", CLASS I, 642 PAINT	
									29			29		614	31620	29	EACH	WORK ZONE WORD ON PAVEMENT, 72", CLASS III, 642 PAINT	
									547			547		614	32800	547	SF	WORK ZONE ISLAND MARKING, CLASS III, 642 PAINT	
			226									226		614	40000	226	FT	LONGITUDINAL CHANNELIZER	
		4										4		614	40051	4	EACH	BUSINESS ENTRANCE SIGN, AS PER PLAN	32
									320			320		614	98100	320	FT	WORK ZONE PAVEMENT MARKING, MISC.:CHEVRON MARKING, CLASS III, 4", 642 PAINT	36
								93				93		614	98100	93	FT	WORK ZONE PAVEMENT MARKING, MISC.:WORK ZONE GORE MARKING, CLASS I, 642 PAINT	36
									6			6		614	98200	6	EACH	WORK ZONE PAVEMENT MARKING, MISC.:LANE REDUCTION ARROW, CLASS III, 642 PAINT	36
									2			2		614	98200	2	EACH	WORK ZONE PAVEMENT MARKING, MISC.:WRONG WAY ARROW, CLASS III, 642 PAINT	36
LS												LS		615	10000	LS		ROADS FOR MAINTAINING TRAFFIC	
								1,841				1,841		615	20000	1,841	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	
60												60		616	10000	60	MGAL	WATER	

CALCULATED JLG CHECKED SCS

GENERAL SUMMARY

CLE-32-3.50 (PHASE 5)

135
736

103954mg500 General Summary 1 10/26/2021 3:11:46 PM sbell

SHEET NO.	MOT PHASE	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL) EACH	614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN (ONE WAY WHITE) EACH	614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN (TWO WAY YELLOW) EACH	614 BARRIER REFLECTIOR, TYPE 1 (ONE-WAY) EACH	614 BARRIER REFLECTIOR, TYPE 3 (ONE-WAY) EACH	614 OBJECT MARKER, (ONE-WAY) EACH	614 WORK ZONE LANE LINE, CLASS I, 4" PAINT MILE	614 WORK ZONE LANE LINE, CLASS I, 6" PAINT MILE	614 WORK ZONE CENTER LINE, CLASS I, 642 PAINT (SOLID, DOUBLE) MILE	614 WORK ZONE EDGE LINE, CLASS I, 4" PAINT MILE	614 WORK ZONE EDGE LINE, CLASS I, 6" PAINT MILE	614 WORK ZONE CHANNELIZING LINE, CLASS I, 642 PAINT FT	614 WORK ZONE CHANNELIZING LINE, CLASS I, 12" PAINT FT	614 WORK ZONE DOTTED LINE, CLASS I, 642 PAINT FT	614 WORK ZONE TRANSVERSE LINE, CLASS I, 642 PAINT FT	614 WORK ZONE STOP LINE, CLASS I, 642 PAINT FT	614 WORK ZONE ARROW, CLASS I, 642 PAINT EACH	614 WORK ZONE WORD ON PAVEMENT, 72", CLASS I, 642 PAINT EACH	614 WORK ZONE PAVEMENT MARKING, MISC.: WORK ZONE GORE MARKING, CLASS I, 642 PAINT FT	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A SY	622 PORTABLE BARRIER, UNANCHORED FT	
55 - 64	PHASE 1	10	194		447		447		6692		1709	12955	36	6383	82		110	4	1			8911	
						50	50																
	WINTER MARKINGS							6692			14664		6419		82		110	4	1				
69 - 84	PHASE 2	7	120		681		681	1815	20369	3291	3699	35998	3176	9956	3593	303	289	59	18			13592	
						50	50																
87 - 101	PHASE 3	8	206		290		290	1121	15733	1960	4062	25757	2528	10389	7468	789	151	54	10			5770	
						50	50																
104 - 114	PHASE 4	3	168		101		101		4601			8317		3178				2		93		1996	
127	PHASE 1 -																						
	SR 32 CONSTRUCTION ACCESS																				1841		
	SUBTOTALS ALL PHASES	28	688		1519	150	1669	9628	47395	5251	24134	83027	12159	29906	11225	1092	660	123	30	93	1841	30269	
	TOTALS CARRIED TO GENERAL SUMMARY	28	688		1519	150	1669	1.83	8.98	1.00	4.57	15.72	12159	29906	11225	1092	660	123	30	93	1841	30269	

NOTES: 1) THE PAVEMENT MARKINGS SHALL MATCH THE FINAL PAVEMENT MARKING LAYOUT. SEE TRAFFIC PLANS FOR DETAILS. SEE GENERAL NOTES - WORK ZONE MARKINGS AND SIGNS.

CALCULATED JLG
CHECKED SCS

MAINTENANCE OF TRAFFIC SUBSUMMARY 1/2

CLE-32-3.50
(PHASE 5)

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ESTIMATED QUANTITIES SHEET NO.	204 SUBGRADE COMPACTION	204 PROOF ROLLING	206 LIME STABALIZED SUBGRADE, 12" DEEP	206 LIME	206 CURING COAT	206 MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS, AS PER PLAN	254 PAVEMENT PLANING, ASPHALT CONCRETE (1.5" DEPTH)	254 PAVEMENT PLANING, ASPHALT CONCRETE (DEPTH VARIES 1.5" MAX)	302 6" ASPHALT CONCRETE BASE, PG64-22	302 10" ASPHALT CONCRETE BASE, PG64-22	304 6" AGGREGATE BASE	304 8" AGGREGATE BASE	407 NON-TRACKING TACK COAT (@0.06 GAL/SY)	407 NON-TRACKING TACK COAT (@0.09 GAL/SY)	441 1-1/4" AC SURFACE COURSE, TYPE 1, (448), PG64-22	441 1-3/4" AC INTERMEDIATE COURSE, TYPE 2, (448), PG64-22	442 ANTI-SEGREGATION EQUIPMENT	442 1-1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446)	442 1-3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446)	452 4" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1	452 11" NON-REINFORCED CONCRETE PAVEMENT
	SY	HR	SY	TON	SY	LS	SY	SY	CY	CY	CY	CY	GAL	GAL	CY	CY	CY	CY	CY	SY	SY
160		6.03	12,066.45	312.22	12,066.45			4,266.64	9.65	3,141.34	9.65	2,787.88	1,964.23	384.01			357.12	629.97	532.28		
161		4.76	9,524.03	246.43	9,524.03			652.75		2,505.18		2,113.78	1,555.12	58.75			326.43	383.08	422.44		
162	1,602.43	8.25	14,901.11	385.57	14,901.11							3,555.98	29.45		8.52	11.93				379.55	14,343.06
163	6,818.76	12.80	18,773.41	485.76	18,773.41		8,369.49		3,178.13		3,302.41	421.23	2,331.03	753.28	23.05	32.57		1,129.30	913.48		
164	229.62	0.11			210.83		90,974.13		3.16	58.62	3.16	46.89	39.13	8,187.83			2,921.57	3,798.76	11.21		
SUBTOTALS THIS SHEETS	8,650.81	31.96	55,265.00	1,429.98	55,475.83	LS	99,343.62	4,919.39	3,190.94	5,705.14	3,315.22	8,925.76	5,918.96	9,383.87	31.57	44.50	3,605.12	5,941.11	1,879.41	379.55	14,343.06
TOTALS CARRIED TO GENERAL NOTES		32																			
TOTALS CARRIED TO GENERAL SUMMARY	8,651		55,265	1,430	55,476	LS	99,344	4,919	8,896		12,241		15,303		32	44	3,605	5,941	1,879	380	14,343

CALCULATED MSW
CHECKED WAA

PAVEMENT SUBSUMMARY

CLE-32-3.50
(PHASE 5)

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PAV'T AREA	STATION FROM	STATION TO	SIDE	LENGTH (ALONG CURB OR EDGE LINE)	AREA (FROM CADD)	204 PROOF ROLLING	206 LIME STABALIZED SUBGRADE, 12" DEEP	206 LIME	206 CURING COAT	254 PAVEMENT PLANING, ASPHALT CONCRETE (DEPTH VARIES 1.5" MAX)	302 6" ASPHALT CONCRETE BASE, PG64-22	302 10" ASPHALT CONCRETE BASE, PG64-22	304 6" AGGREGATE BASE	304 8" AGGREGATE BASE	407 NON-TRACKING TACK COAT (@0.06 GAL/SY)	407 NON-TRACKING TACK COAT (@0.09 GAL/SY)	441 1-1/4" AC SURFACE COURSE, TYPE I, (448), PG64-22	441 1-3/4" AC INTERMEDIATE COURSE, TYPE 2, (448), PG64-22	442 ANTI-SEGREGATION EQUIPMENT	442 1-1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446)	442 1-3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446)	452 4" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1	452 11" NON-REINFORCED CONCRETE PAVEMENT
				LF	SQ FT	HR	SY	TON	SY	SY	CY	CY	CY	CY	GAL	GAL	CY	CY	CY	CY	CY	SY	SY
	SR-32 EB																						
FREEWAY RESURFACING	134+00.00	139+40.00	RT		24,686.30					2,742.92						246.87				114.29			
FULL DEPTH ASPH. LANES	134+00.00	136+54.45	RT		1,287.18	0.07	143.02	3.70	143.02			39.73		31.79	25.75				12.92	5.96	6.96		
FULL DEPTH ASPH. SHLDR	134+00.00	139+40.00	RT		5,417.91	0.30	601.99	15.58	601.99			167.22		133.78	108.36					25.09	29.27		
+ASPH. EDGE COURSE	134+00.00	139+40.00	RT	541.91		0.05	90.32	2.34	90.32			9.76		17.85									
FULL DEPTH ASPH. SHLDR	134+00.00	150+21.50	RT		6,947.84	0.39	771.99	19.98	771.99			214.44		171.56	138.96					32.17	37.53		
+ASPH. EDGE COURSE	134+00.00	150+21.50	RT	1,622.92		0.14	270.49	7.00	270.49			29.23		53.43									
FREEWAY RESURFACING	143+07.52	144+65.30	RT	157.96	6,513.43					723.71						65.14				30.16			
FULL DEPTH ASPH. LANES	143+68.15	144+65.30	RT	111.03	225.17	0.01	25.02	0.65	25.02			6.95		5.56	4.51				2.27	1.05	1.22		
FULL DEPTH ASPH. SHLDR	143+70.14	144+65.30	RT		941.65	0.05	104.63	2.71	104.63			29.07		23.26	18.84					4.36	5.09		
+ASPH. EDGE COURSE	143+70.14	144+65.30	RT	94.33		0.01	15.73	0.41	15.73			1.71		3.11									
FULL DEPTH ASPH. SHLDR	158+71.15	159+90.10	RT		1,189.57	0.07	132.18	3.42	132.18			36.72		29.38	23.80					5.51	6.43		
+CURB TYPE 4C ASPH.	158+58.68	158+76.82	RT	18.15		0.002	3.03	0.08	3.03					0.45									
+TYPE C ASPH.	158+76.82	159+89.62	RT	29.72		0.01	13.76	0.36	13.76			3.15		3.06	0.57						0.46		
FAYARD TURNAROUND	158+91.58	159+74.66	RT		520.98	0.03	57.89	1.50	57.89		9.65		9.65		10.42					2.42	2.82		
FULL DEPTH ASPH. SHLDR	170+73.24	175+08.78	RT		4,357.28	0.24	484.15	12.53	484.15			134.49		107.59	87.15					20.18	23.54		
+ASPH. EDGE COURSE	170+73.24	175+08.78	RT	435.51		0.04	72.59	1.88	72.59			7.86		14.34									
FULL DEPTH ASPH. LANES	180+01.20	188+87.92	RT		12,446.49	0.69	1,382.95	35.78	1,382.95			384.16		307.33	248.93				124.86	57.63	67.23		
FULL DEPTH ASPH. SHLDR	180+01.20	188+87.92	RT		7,187.73	0.40	798.64	20.66	798.64			221.85		177.48	143.76					33.28	38.83		
+ASPH. EDGE COURSE	180+01.20	182+87.75	RT	287.06		0.02	47.85	1.24	47.85			5.18		9.46									
+CURB TYPE 4C ASPH.	182+87.75	186+00.00	RT	311.90		0.03	51.99	1.35	51.99					7.71									
+TYPD D ASPH.	186+00.00	188+86.82	RT	287.24		0.06	111.71	2.89	111.71			24.39		24.83	8.30						3.37		
FULL ASPH. SHLDR/GORE	184+72.23	189+50.00	RT		5,923.24	0.33	658.14	17.03	658.14			182.82		146.26	118.47					27.43	32.00		
+ASPH. EDGE COURSE	188+87.92	189+50.00	RT	62.08		0.01	10.35	0.27	10.35			1.12		2.05									
FULL DEPTH ASPH. SHLDR	185+35.00	189+50.00	RT		1,660.00	0.09	184.45	4.77	184.45			51.24		40.99	33.20					7.69	8.97		
+ASPH. EDGE COURSE	185+35.00	189+50.00	RT	415.00		0.03	69.17	1.79	69.17			7.48		13.67									
FREEWAY RESURFACING	187+50.00	189+50.00	RT	200.00	7,200.00					800.00						72.00				33.34			
FULL DEPTH ASPH. SHLDR	195+99.61	197+28.82	RT		1,292.07	0.07	143.57	3.71	143.57			39.88		31.91	25.85					5.99	6.98		
+ASPH. EDGE COURSE	195+99.61	197+28.82	RT	129.21		0.01	21.54	0.56	21.54			2.34		4.26									
+TYPD D APP WALL	192+89.00	204+57.71	RT	1,168.71										62.53									
DEEP BASE MEDIAN SHLDR	196+25.00	199+65.00	℄		1,814.82	0.10	201.65	5.22	201.65			56.02		129.40	36.30					8.41	9.81		
+TYPE C1 ASPH.	196+25.00	199+65.00	℄	340.06	1,546.02	0.12	241.05	6.24	241.05			59.10		53.57	33.20					7.16	9.28		
FULL ASPH. SHLDR/GORE	204+50.00	213+14.31	RT		8,729.75	0.48	969.98	25.10	969.98			269.44		215.55	174.60					40.42	47.16		
+ASPH. EDGE COURSE	204+50.00	205+59.52	RT	110.21		0.01	18.37	0.48	18.37			1.99		3.63									
FULL DEPTH ASPH. LANES	205+59.52	236+79.47	RT		21,639.39	1.20	2,404.38	62.21	2,404.38			667.89		534.31	432.79				217.07	100.19	116.88		
FULL DEPTH ASPH. SHLDR	205+59.52	236+79.47	RT		12,892.73	0.72	1,432.53	37.07	1,432.53			397.93		318.34	257.86					59.69	69.64		
+ASPH. EDGE COURSE	205+59.52	236+79.47	RT	1,693.80		0.14	282.30	7.30	282.30			30.51		55.77									
FULL DEPTH ASPH. SHLDR	232+35.00	236+42.52	RT		1,630.07	0.09	181.12	4.69	181.12			50.32		40.25	32.61					7.55	8.81		
+ASPH. EDGE COURSE	232+35.00	236+42.52	RT	407.52		0.03	67.92	1.76	67.92			7.35		13.42									
SUBTOTAL CARRIED TO SHEET 159						6.03	12,066.45	312.22	12,066.45	4,266.64	9.65	3,141.34	9.65	2,787.88	1,964.23	384.01			357.12	629.97	532.28		

CALCULATED MSW
CHECKED WAA

PAVEMENT ESTIMATED QUANTITIES

CLE-32-3.50
(PHASE 5)

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PAV'T AREA	STATION FROM	STATION TO	SIDE	LENGTH (ALONG CURB OR EDGE LINE)	AREA (FROM CADD)	204 PROOF ROLLING	206 LIME STABALIZED SUBGRADE, 12" DEEP	206 LIME	206 CURING COAT	254 PAVEMENT PLANING, ASPHALT CONCRETE (DEPTH VARIES 1.5" MAX)	302 6" ASPHALT CONCRETE BASE, PG64-22	302 10" ASPHALT CONCRETE BASE, PG64-22	304 6" AGGREGATE BASE	304 8" AGGREGATE BASE	407 NON-TRACKING TACK COAT (@0.06 GAL/SY)	407 NON-TRACKING TACK COAT (@0.09 GAL/SY)	441 1-1/4" AC SURFACE COURSE, TYPE I, (448), PG64-22	441 1-3/4" AC INTERMEDIATE COURSE, TYPE 2, (448), PG64-22	442 ANTI-SEGREGATION EQUIPMENT	442 1-1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446)	442 1-3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446)	452 4" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1	452 11" NON-REINFORCED CONCRETE PAVEMENT
				LF	SQ FT	HR	SY	TON	SY	SY	CY	CY	CY	CY	GAL	GAL	CY	CY	CY	CY	CY	SY	SY
	SR-32 WB																						
FREEWAY RESURFACING	142+03.69	144+10.10	LT	206.18	5,874.79					652.75						58.75				27.20			
FULL DEPTH ASPH. LANES	142+03.69	143+37.48	LT		301.77	0.02	33.53	0.87	33.53			9.32		7.46	6.04				3.03	1.40	1.63		
FULL DEPTH ASPH. SHLDR	142+03.69	143+35.66	LT		1543.18	0.09	171.47	4.44	171.47			47.63		38.11	30.87					7.15	8.34		
+ASPH. EDGE COURSE	142+03.69	143+35.66	LT	129.73		0.01	21.63	0.56	21.63			2.34		4.28									
FULL DEPTH ASPH. SHLDR	142+38.41	153+50.00	LT		4445.08	0.25	493.90	12.78	493.90			137.20		109.76	88.91					20.58	24.01		
+ASPH. EDGE COURSE	142+38.41	153+50.00	LT	1,111.31		0.09	185.22	4.79	185.22			20.02		36.59									
FULL DEPTH ASPH. SHLDR	143+43.72	144+10.10	LT		507.63	0.03	56.41	1.46	56.41			15.67		12.54	10.16					2.36	2.75		
+ASPH. EDGE COURSE	142+03.69	143+35.66	LT	81.01		0.01	13.51	0.35	13.51			1.47		2.67									
FULL DEPTH ASPH. LANES	143+73.43	144+10.10	LT		71.36	0.00	7.93	0.21	7.93			2.21		1.77	1.43				0.73	0.34	0.39		
FULL DEPTH ASPH. SHLDR	158+12.78	159+32.74	LT		1,319.63	0.07	146.63	3.79	146.63			40.73		32.59	26.40					6.11	7.13		
+ASPH. EDGE COURSE	158+12.78	159+32.74	LT	119.97		0.01	20.00	0.52	20.00			2.17		3.95									
FULL DEPTH ASPH. LANES	171+90.25	188+44.21	LT		21,247.63	1.18	2,360.85	61.09	2,360.85			655.80		524.64	424.96				213.14	98.37	114.77		
FULL DEPTH ASPH. SHLDR	171+90.25	188+43.17	LT		12,521.34	0.70	1,391.27	36.00	1,391.27			386.47		309.17	250.43					57.97	67.64		
+ASPH. EDGE COURSE	158+12.78	159+32.74	LT	1,035.00		0.09	172.50	4.46	172.50			18.65		34.08									
+TYPD D ASPH.	188+48.94	188+86.82	LT	618.33		0.12	240.46	6.22	240.46			52.49		53.44	17.87						7.24		
FULL ASPH. SHLDR/GORE	180+90.41	190+00.00	LT		9,544.75	0.53	1,060.53	27.44	1,060.53			294.60		235.68	190.90					44.19	51.56		
+ASPH. EDGE COURSE	188+44.21	190+00.00	LT	155.79		0.01	25.97	0.67	25.97			2.82		5.13									
FULL DEPTH ASPH. SHLDR	188+02.27	192+03.94	LT		1,606.69	0.09	178.53	4.62	178.53			49.59		39.68	32.14					7.44	8.68		
+ASPH. EDGE COURSE	188+02.27	192+03.94	LT	401.67		0.03	66.95	1.73	66.95			7.24		13.23									
+TYPD D APP WALL	196+94.70	199+85.91	LT	291.21										15.58									
FULL DEPTH ASPH. GORE	207+94.20	210+44.28	LT		2,763.42	0.15	307.05	7.94	307.05			85.30		68.24	55.27					12.80	14.93		
FULL DEPTH ASPH. LANES	207+94.20	216+48.49	LT		10,918.35	0.61	1,213.15	31.39	1,213.15			336.99		269.59	218.37				109.53	50.55	58.98		
FULL DEPTH ASPH. SHLDR	207+96.10	216+48.49	LT		6,803.66	0.38	755.97	19.56	755.97			209.99		168.00	136.08					31.50	36.75		
+ASPH. EDGE COURSE	207+96.10	216+48.49	LT	837.08		0.07	139.52	3.61	139.52			15.08		27.56									
FULL DEPTH ASPH. SHLDR	234+71.22	236+35.30	LT		1,640.75	0.09	182.31	4.72	182.31			50.65		40.52	32.82					7.60	8.87		
+ASPH. EDGE COURSE	234+71.22	236+35.30	LT	164.13		0.01	27.36	0.71	27.36			2.97		5.41									
FULL DEPTH ASPH. SHLDR	234+95.57	239+21.68	RT		1,623.20	0.09	180.36	4.67	180.36			50.10		40.08	32.47					7.52	8.77		
+ASPH. EDGE COURSE	234+95.57	239+21.68	LT	426.10		0.04	71.02	1.84	71.02			7.68		14.03									
SUBTOTAL CARRIED TO SHEET 159						4.76	9,524.03	246.43	9,524.03	652.75		2,505.18		2,113.78	1,555.12	58.75			326.43	383.08	422.44		

CALCULATED MSW
CHECKED WAA

PAVEMENT ESTIMATED QUANTITIES

CLE-32-3.50
(PHASE 5)

PAV'T AREA	STATION FROM	STATION TO	SIDE	LENGTH (ALONG CURB OR EDGE LINE)	AREA (FROM CADD)	204 SUBGRADE COMPACTION	204 PROOF ROLLING	206 LIME STABALIZED SUBGRADE, 12" DEEP	206 LIME	206 CURING COAT	254 PAVEMENT PLANING, ASPHALT CONCRETE (1.5" DEPTH)	302 6" ASPHALT CONCRETE BASE, PG64-22	304 6" AGGREGATE BASE	304 8" AGGREGATE BASE	407 NON-TRACKING TACK COAT (@0.06 GAL/SY)	407 NON-TRACKING TACK COAT (@0.09 GAL/SY)	441 1-1/4" AC SURFACE COURSE, TYPE I, (448), PG64-22	441 1-3/4" AC INTERMEDIATE COURSE, TYPE 2, (448), PG64-22	442 ANTI-SEGREGATION EQUIPMENT	442 1-1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446)	442 1-3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446)	452 4" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1	452 11" NON-REINFORCED CONCRETE PAVEMENT
				LF	SQ FT	SY	HR	SY	TON	SY	SY	CY	CY	CY	GAL	GAL	CY	CY	CY	CY	CY	SY	SY
GLEN ESTE-WITHAMSVILLE																							
LOCAL RESURFACING	15+41.62	19+38.04	LT/RT		20,820.28						2,313.36					208.21				96.40			
LOCAL FULL DEPTH ASPH.	16+53.24	16+63.79	RT		142.21	15.80	0.01					2.64	2.64		1.90					0.66	0.77		
LOCAL FULL DEPTH ASPH.	16+72.16	19+28.72	RT		627.38	69.71	0.03					11.62	11.62		8.37					2.91	3.39		
+CLERMONT C&G	16+72.16	19+28.09	RT	311.29		871.62	0.44						2.88										
LOCAL RESURFACING	20+58.43	28+81.12	LT/RT		36,192.07						4,021.34					361.93				167.56			
LOCAL FULL DEPTH ASPH.	20+69.29	24+14.40	LT		815.85	90.65	0.05					15.11	15.11		10.88					3.78	4.41		
+CLERMONT C&G	20+69.91	24+12.43	LT	406.19		1,137.33	0.57						3.76										
LOCAL FULL DEPTH ASPH.	20+56.20	23+07.40	RT		406.22	45.14	0.02					7.53	7.53		5.42					1.89	2.20		
+CLERMONT C&G	21+05.66	23+07.40	RT	203.13		568.75	0.28						1.88										
LOCAL FULL DEPTH ASPH.	24+10.86	24+24.65	RT		76.35	8.48	0.004					1.42	1.42		1.02					0.36	0.42		
TRAFFIC ISLAND	24+12.86	24+22.65	RT		61.88	6.88	0.003						1.15										
FAYARD DR. CUL DE SAC																							
LOCAL FULL DEPTH ASPH.	10+00.00	11+29.00	LT/RT		5,319.72		0.30	591.09	15.29	591.09		98.52	98.52		70.93					24.63	28.74		
+LOCAL CURB TYPE 6	10+00.00	11+29.00	LT/RT	264.36			0.02	44.06	1.14	44.06			4.90										
ELICK LN. S. CUL DE SAC																							
LOCAL RESURFACING	48+38.96	50+85.32	LT/RT		8,339.77						926.64					83.40				38.62			
LOCAL FULL DEPTH ASPH.	47+94.74	50+85.32	RT		1,808.84		0.10	200.99	5.20	200.99		33.50	33.50		24.12					8.38	9.77		
+CLERMONT C&G	47+94.74	49+83.77	RT	291.25		815.49	0.41						2.70										
+CLERMONT C&G	50+31.33	50+80.10	LT/RT	164.87		461.62	0.23						1.53										
ASPHALT DRIVEWAY	49+36.37	50+43.37	RT		2,280.27	253.36	0.13							56.30	30.41		8.80	12.32					
ELICK LN. N. CUL DE SAC																							
LOCAL FULL DEPTH ASPH.	60+00.61	63+55.12	LT/RT		8,716.27		0.48	968.48	25.06	968.48		161.42	161.42		116.22					40.36	47.08		
+LOCAL CURB TYPE 6	60+00.61	63+55.12	LT/RT	599.54			0.05	99.92	2.59	99.92			11.11										
ASPHALT DRIVEWAY	60+86.56	61+72.64	RT		1,731.70	192.41	0.10							42.76	23.09		6.68	9.35					
+DRIVE EDGE COURSE	60+86.56	61+72.64	RT	112.79		12.53	0.006							2.79				0.30					
BACH BUXTON																							
LOCAL FULL DEPTH ASPH.	332+72.11	340+16.63	LT/RT		68,825.15		3.82	7,647.24	197.87	7,647.24		1,274.54	1,274.54		917.67					318.64	371.75		
ASPH. W/VARIABLE 302	340+16.63	340+41.63	LT/RT		2,877.08		0.16	319.68	8.27	319.68		65.49	60.01		38.37					13.32	15.54		
APPROACH SLAB TYPE B	340+41.63	340+71.63	LT/RT		3,610.36	401.15	0.20					97.51	66.86		48.14					16.72	19.51		
+LOCAL CURB TYPE 6	332+72.11	338+50.18	LT	572.36			0.05	95.39	2.47	95.39			10.60										
+LOCAL CURB TYPE 6	332+72.11	340+45.25	RT	790.11			0.07	131.69	3.41	131.69			14.64										
APPROACH SLAB TYPE C	342+24.45	342+56.50	LT/RT		3,875.97	430.66	0.22						81.24										
LOCAL FULL DEPTH ASPH.	342+56.50	348+68.26	LT/RT		66,347.25		3.69	7,371.92	190.75	7,371.92		1,228.66	1,228.66		884.63					307.17	358.36		
+LOCAL CURB TYPE 6	343+09.16	348+68.26	LT	550.78			0.05	91.80	2.38	91.80			10.20										
+TYPD D ASPH.	343+85.97	346+23.32	RT	245.17			0.05	95.35	2.47	95.35		12.11	14.38		3.55						2.87		
+LOCAL CURB TYPE 6	346+23.32	348+68.26	RT	248.93			0.02	41.49	1.07	41.49			4.61										
OLD 74 N. CUL DE SAC																							
LOCAL RESURFACING	199+20.00	202+08.25	LT/RT		9,973.30						1,108.14					99.74				46.18			
LOCAL FULL DEPTH ASPH.	201+19.73	202+35.47	LT/RT		4,128.44		0.23	458.72	11.87	458.72		76.46	76.46		55.05					19.12	22.30		
+LOCAL ASPH. EDGE COURSE	201+19.73	201+48.71	RT	24.66			0.002	4.11	0.11	4.11		0.23	0.46										
+LOCAL CURB TYPE 6	201+49.04	202+41.01	LT/RT	175.26			0.01	29.21	0.76	29.21			3.25										
OLD 74 S. CUL DE SAC																							
LOCAL FULL DEPTH ASPH.	204+49.59	205+50.00	LT/RT		4,880.44		0.27	542.28	14.03	542.28		90.38	90.38		65.08					22.60	26.37		
+LOCAL ASPH. EDGE COURSE	205+30.32	205+50.00	LT	19.70			0.002	3.29	0.09	3.29		0.19	0.37										
+LOCAL CURB TYPE 6	204+50.17	205+50.00	LT/RT	220.20			0.02	36.70	0.95	36.70			4.08										
ASPHALT DRIVEWAY	204+98.08	205+45.04	RT		1,283.48	142.61	0.07							31.69	17.12		4.95	6.93					
ACCESS DRIVE																							
ASPHALT DRIVE APRON	OLD 74 STA. 215+08.92		RT		678.82	75.42	0.04							16.76	9.06		2.62	3.67					
+DRIVE CURB TYPE 6			RT	85.65		9.52	0.005					0.80		2.12									
GRAVEL ACCESS DRIVE			RT		10,886.70	1,209.63	0.60							268.81									
SUBTOTAL CARRIED TO SHEET 159						6,818.76	12.80	18,773.41	485.76	18,773.41	8,369.49	3,178.13	3,302.41	421.23	2,331.03	753.28	23.05	32.57		1,129.30	913.48		

CALCULATED MSW
CHECKED WAA

PAVEMENT ESTIMATED QUANTITIES

CLE-32-3.50
(PHASE 5)

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PAV'T AREA	STATION FROM	STATION TO	SIDE	LENGTH (ALONG CURB OR EDGE LINE)	AREA (FROM CADD)		204 SUBGRADE COMPACTION	204 PROOF ROLLING	206 CURING COAT	254 PAVEMENT PLANING, ASPHALT CONCRETE (1.5" DEPTH)	302 6" ASPHALT CONCRETE BASE, PG64-22	302 10" ASPHALT CONCRETE BASE, PG64-22	304 6" AGGREGATE BASE	304 8" AGGREGATE BASE	407 NON-TRACKING TACK COAT (@0.06 GAL/SY)	407 NON-TRACKING TACK COAT (@0.09 GAL/SY)	441 1-1/4" AC SURFACE COURSE, TYPE 1, (448), PG64-22	441 1-3/4" AC INTERMEDIATE COURSE, TYPE 2, (448), PG64-22	442 ANTI-SEGREGATION EQUIPMENT	442 1-1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446)	442 1-3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446)	452 4" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1	452 11" NON-REINFORCED CONCRETE PAVEMENT
				LF	SQ FT		SY	HR	SY	SY	CY	CY	CY	CY	GAL	GAL	CY	CY	CY	CY	CY	SY	SY
	DRAINAGE INSTALLATIONS																						
	SR-32																						
PIPE INSTALLATION	184+00.00		RT		150.23		16.69	0.01	16.69			4.64		3.71	3.01				1.52	0.70	0.82		
PIPE INSTALLATION	184+00.00		LT		126.51		14.06	0.01	14.06			3.91		3.13	2.54				1.28	0.59	0.69		
PIPE INSTALLATION	187+99.34	188+14.03	RT		173.93		19.33	0.01	19.33			5.37		4.30	2.32				0.94		0.94		
PIPE INSTALLATION	188+00.00		LT		128.71		14.30	0.01	14.30			3.98		3.18	2.58				1.30	0.60	0.70		
PIPE INSTALLATION	192+50.00		RT		203.63		22.63	0.01	22.63			6.29		5.03	4.08				2.05	0.95	1.10		
PIPE INSTALLATION	194+52.68	194+98.81	RT		323.87		35.99	0.02	35.99			10.00		8.00	6.48				3.25	1.50	1.75		
PIPE REMOVAL	195+08.26	195+37.57	RT		205.13		22.79	0.01	22.79			6.34		5.07	4.11				2.06	0.95	1.11		
PIPE INSTALLATION	196+50.00		LT		246.13		27.35	0.01	27.35			7.60		6.08	4.93				2.47	1.14	1.33		
PIPE INSTALLATION	200+00.00		LT		151.72		16.86	0.01	16.86			4.69		3.75	3.04				1.53	0.71	0.82		
PIPE INSTALLATION	205+77.10	205+81.51	RT		187.60		20.84	0.01	20.84			5.80		4.64	3.76				1.89	0.87	1.02		
	GLEN ESTE-WITHAMSVILLE																						
LOCAL PIPE INSTALLATION	16+67.14	16+72.17	RT		18.01		2.00	0.001			0.34		0.34		0.25						0.10		
LOCAL PIPE INSTALLATION	18+73.80	18+77.88	LT		19.65		2.18	0.001			0.37		0.37		0.27						0.11		
	ELICK LN. S. CUL DE SAC																						
LOCAL PIPE INSTALLATION	50+34.94	50+55.11	RT		98.46		10.94	0.01			1.83		1.83		1.32						0.54		
	BACH BUXTON																						
LOCAL PIPE INSTALLATION	337+75.00	337+82.00	RT		32.95		3.66	0.002			0.62		0.62		0.44					0.16	0.18		
	RESURFACING FOR MOT																						
	SR-32 EB																						
RESURFACING LANES	115+00.00	134+00.00	RT		112,879.99					12,542.22						1,128.80			522.59	522.59			
RESURFACING SHLDR	115+00.00	118+02.70	RT		3,027.05					336.34						30.28				14.01			
RESURFACING SHLDR	115+00.00	134+00.00	LT		18,942.11					2,104.68						189.43				87.69			
RESURFACING SHLDR	118+05.32	134+00.00	RT		12,789.49					1,421.05						127.90				59.21			
RESURFACING LANES	139+40.00	143+07.52	RT		17,695.46					1,966.16						176.96			81.92	81.92			
RESURFACING SHLDR	139+40.00	143+31.58	RT		3,872.78					430.31						38.73				17.93			
RESURFACING LANES	144+65.30	187+50.00	RT		152,439.16					16,937.68						1,524.40			705.74	705.74			
RESURFACING SHLDR	144+65.30	158+71.15	RT		13,487.05					1,498.56						134.88				62.44			
RESURFACING SHLDR	150+21.50	185+35.00	LT		14,010.36					1,556.71						140.11				64.86			
RESURFACING SHLDR	159+90.10	170+73.24	RT		10,831.40					1,203.49						108.32				50.15			
RESURFACING SHLDR	175+08.78	180+01.20	RT		4,924.27					547.14						49.25				22.80			
RESURFACING LANES	189+50.00	239+50.00	RT		128,154.53					14,239.39						1,281.55			593.31	593.31			
RESURFACING SHLDR	189+50.00	232+35.00	LT		11,354.25					1,261.58						113.55				52.57			
RESURFACING SHLDR	236+42.52	239+50.00	LT		1,229.96					136.66						12.30				5.69			
RESURFACING SHLDR	189+50.00	195+99.61	RT		6,496.11					721.79						64.97				30.07			
RESURFACING SHLDR	197+28.82	204+50.00	RT		7,211.82					801.31						72.12				33.39			
RESURFACING SHLDR	236+79.47	239+50.00	RT		2,705.35					300.59						27.06				12.52			
	SR-32 WB																						
RESURFACING LANES	139+00.00	142+03.69	LT		7,319.44					813.27						73.20			33.89	33.89			
RESURFACING SHLDR	139+00.00	142+03.69	LT		3,099.12					344.35						31.00				14.35			
RESURFACING SHLDR	139+00.00	142+38.41	RT		1,200.15					133.35						12.01				5.56			
RESURFACING LANES	144+10.00	243+50.00	LT		208,620.95					23,180.11						2,086.21			965.84	965.84			
RESURFACING SHLDR	144+10.00	158+12.78	LT		14,372.67					1,596.96						143.73				66.54			
RESURFACING SHLDR	159+32.74	171+90.25	LT		12,937.89					1,437.54						129.38				59.90			
RESURFACING SHLDR	190+00.00	207+94.20	LT		16,855.22					1,872.80						168.56				78.03			
RESURFACING SHLDR	216+48.49	234+71.22	LT		3,828.10					425.34						38.29				17.72			
RESURFACING SHLDR	236+35.30	243+50.00	LT		6,748.94					749.88						67.49				31.25			
RESURFACING SHLDR	153+50.00	188+02.27	RT		10,874.05					1,208.23						108.75				50.34			
RESURFACING SHLDR	192+03.94	234+95.57	RT		9,313.53					1,034.84						93.14				43.12			
RESURFACING SHLDR	239+21.68	243+50.00	RT		1,546.00					171.78						15.46				7.16			
SUBTOTAL CARRIED TO SHEET 159							229.62	0.11	210.83	90,974.13	3.16	58.62	3.16	46.89	39.13	8,187.83			2,921.57	3,798.76	11.21		

CALCULATED MSW
CHECKED WAA

ESTIMATED QUANTITIES
PAVEMENT

CLE-32-3.50
(PHASE 5)

GENERAL NOTES - MSE WALL NO. 15

REFER TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

800	DATED	01-17-20
840	DATED	01-17-20
878	DATED	01-17-20

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 7TH EDITION, INCLUDING THE 2016 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

DESIGN DATA:

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (CONCRETE COPING)

MSE WALL FOUNDATION BEARING RESISTANCE:

THE FACTORED BEARING RESISTANCE FOR EACH WALL IS LISTED IN THE TABLE BELOW.

FOUNDATION BEARING RESISTANCE			
WALL NUMBER	WALL LIMITS		FACTORED BEARING RESISTANCE (KSF)
	FROM STA.	TO STA.	
15	10+00.00	15+42.00	3.8

MSE WALL NO. 15 CONSTRUCTION SEQUENCE:

MSE WALL NO. 15 SHALL BE CONSTRUCTED CONCURRENTLY WITH MSE WALL NO. 11.

MINIMUM SOIL REINFORCEMENT LENGTHS:

BASED ON THE EXTERNAL STABILITY ANALYSIS OF THE MECHANICALLY STABILIZED EARTH WALLS, THE FOLLOWING MINIMUM LENGTHS ARE AS FOLLOWS:

WALL NO. 15: THE MINIMUM SOIL REINFORCEMENT LENGTH SHALL BE 0.80H FROM WALL NO. 15 STA. 10+00.00 TO WALL NO. 15 STA. 11+50.00

WALL NO. 15: THE MINIMUM SOIL REINFORCEMENT LENGTH SHALL BE 0.70H FROM WALL NO. 15 STA. 11+50.00 TO WALL NO. 15 STA. 13+00.00

WALL NO. 15: THE MINIMUM SOIL REINFORCEMENT LENGTH SHALL BE 0.80H FROM WALL NO. 15 STA. 13+00.00 TO WALL NO. 15 STA. 15+42.00

AT NO CASE SHALL THE MINIMUM SOIL REINFORCEMENT LENGTH BE LESS THAN 8 FEET.

H = THE WALL HEIGHT AS DETERMINED ACCORDING TO SUPPLEMENTAL SPECIFICATION 840.04.

ITEM 840 - FOUNDATION PREPARATION, AS PER PLAN:

WALL NO. 15 REQUIRES 2 FEET OF UNDERCUT BENEATH THE BOTTOM OF LEVELING PAD ELEVATION FROM WALL NO. 15 STA. 10+00.00 TO WALL NO. 15 STA. 15+42.00. THE EXISTING SOILS WITHIN THIS 2 FEET OF UNDERCUT SHALL BE REPLACED WITH ITEM 203 - GRANULAR MATERIAL TYPE C AND THE UNDERCUT AND ITEM 203 MATERIAL SHALL BE PAID FOR UNDER ITEM 840 - FOUNDATION PREPARATION, AS PER PLAN.

ABBREVIATIONS

BTM.	BOTTOM	JT.	JOINT
BRG.	BEARING	LT.	LEFT
℄	CENTERLINE	MAX.	MAXIMUM
C.J.	CONSTRUCTION JOINT	MIN.	MINIMUM
CLR.	CLEAR	MISC.	MISCELLANEOUS
CMS	CONSTRUCTION AND MATERIAL SPECIFICATIONS	NO.	NUMBER
		P.E.J.F.	PREFORMED EXPANSION JOINT FILLER
CONC.	CONCRETE		
CONST.	CONSTRUCTION	PROP.	PROPOSED
C.P.P.	CORRUGATED PLASTIC PIPE	R	RADIUS
		REINF.	REINFORCEMENT
CU YD	CUBIC YARD	RT.	RIGHT
DIA.	DIAMETER	SER.	SERIES
DWG.	DRAWING	SQ FT	SQUARE FEET
EL.	ELEVATION	SQ YD	SQUARE YARD
EST.	ESTIMATED	STA.	STATION
EX.	EXISTING	STD.	STANDARD
FT.	FOOT/FEET	STR.	STRAIGHT
IN.	INCHES	TEMP.	TEMPORARY
INV.	INVERT	TYP.	TYPICAL
INC.	INCREMENT	U.N.O.	UNLESS NOTED OTHERWISE

MADE BY: GJZ DATE: 07/13/18
CHECKED BY: ZTW DATE: 07/18/18

ESTIMATED QUANTITIES - MSE WALL NO. 15

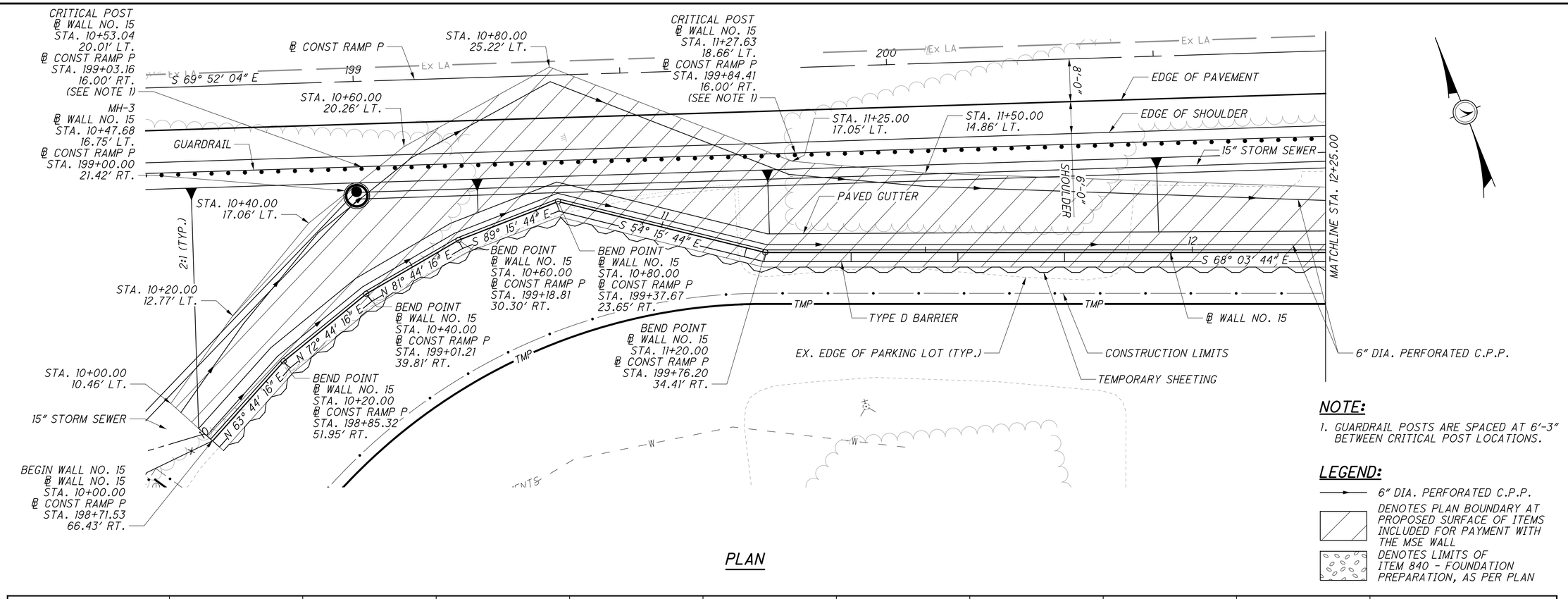
ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	WALL NO. 15	REFERENCE SHEET NUMBER
503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	LS	
512	10100	532	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	532	
516	13600	1897	SF	1" PREFORMED EXPANSION JOINT FILLER	1897	
840	20000	7789	SF	MECHANICALLY STABILIZED EARTH WALL	7789	
840	21000	2415	CY	WALL EXCAVATION	2415	
840	22001	1035	SY	FOUNDATION PREPARATION, AS PER PLAN	1035	1/5
840	23000	3883	CY	SELECT GRANULAR BACKFILL	3883	
840	23050	552	CY	NATURAL SOIL	552	
840	25010	1124	FT	6" DRAINAGE PIPE, PERFORATED	1124	
840	25020	24	FT	6" DRAINAGE PIPE, NON-PERFORATED	24	
840	26000	546	FT	CONCRETE COPING	546	
840	27000	5	DAY	ON-SITE ASSISTANCE	5	
878	25000	LS		INSPECTION AND COMPACTION TESTING OF UNBOUND MATERIALS	LS	

DESIGN AGENCY
TranSystems
400 W. NATIONWIDE BLVD, SUITE 225
COLUMBUS, OHIO 43215

DESIGNED ZTW | DRAWN GJZ | REVIEWED MSL | DATE 03/01/19
CHECKED RSB | REVISED | STRUCTURE FILE NUMBER N/A

GENERAL NOTES AND ESTIMATED QUANTITIES
MSE WALL NO. 15

CLE-32-3.50
(PHASE 5)
PID No. 103954



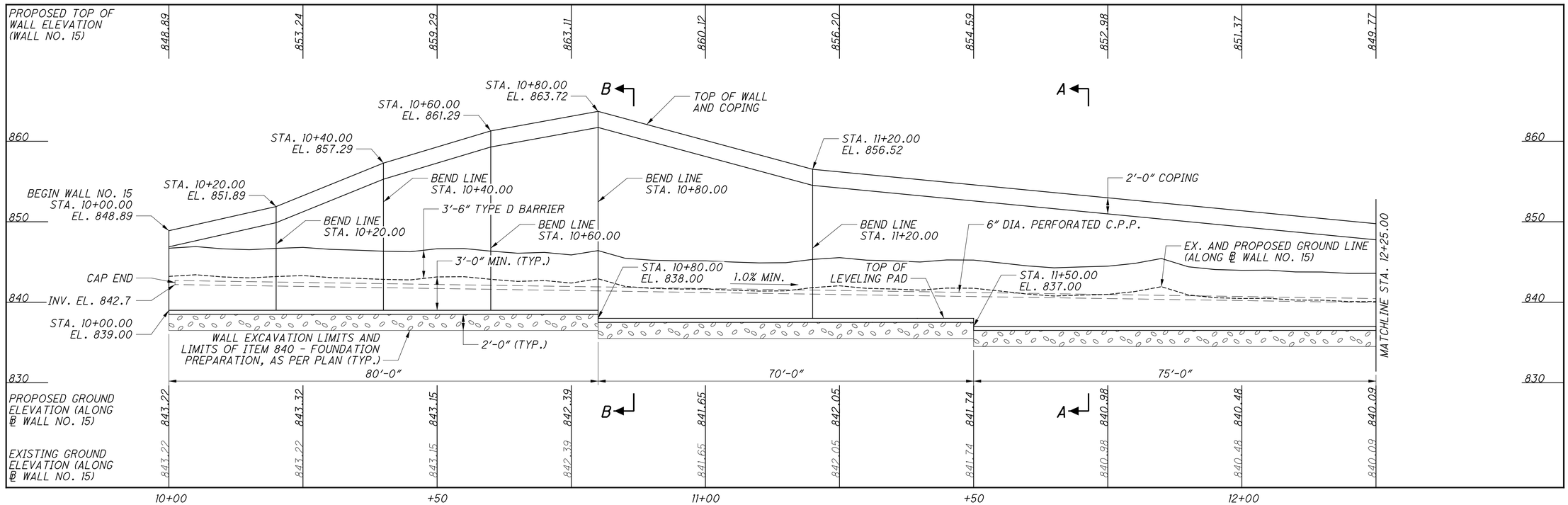
PLAN

NOTE:

1. GUARDRAIL POSTS ARE SPACED AT 6'-3" BETWEEN CRITICAL POST LOCATIONS.

LEGEND:

- 6" DIA. PERFORATED C.P.P.
- DENOTES PLAN BOUNDARY AT PROPOSED SURFACE OF ITEMS INCLUDED FOR PAYMENT WITH THE MSE WALL
- DENOTES LIMITS OF ITEM 840 - FOUNDATION PREPARATION, AS PER PLAN



PROFILE ALONG ℄ WALL NO. 15

DESIGN AGENCY
TranSystems
400 W. NATIONWIDE BLVD, SUITE 225
COLUMBUS, OHIO 43215

DESIGNED	DRAWN	REVIEWED	DATE
ZTW	ZTW	MSL	03/01/19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RSB		N/A	

MSE WALL NO. 15 PLAN AND PROFILE
MSE WALL NO. 15

CLE-32-3.50
(PHASE 5)
PID No. 103954

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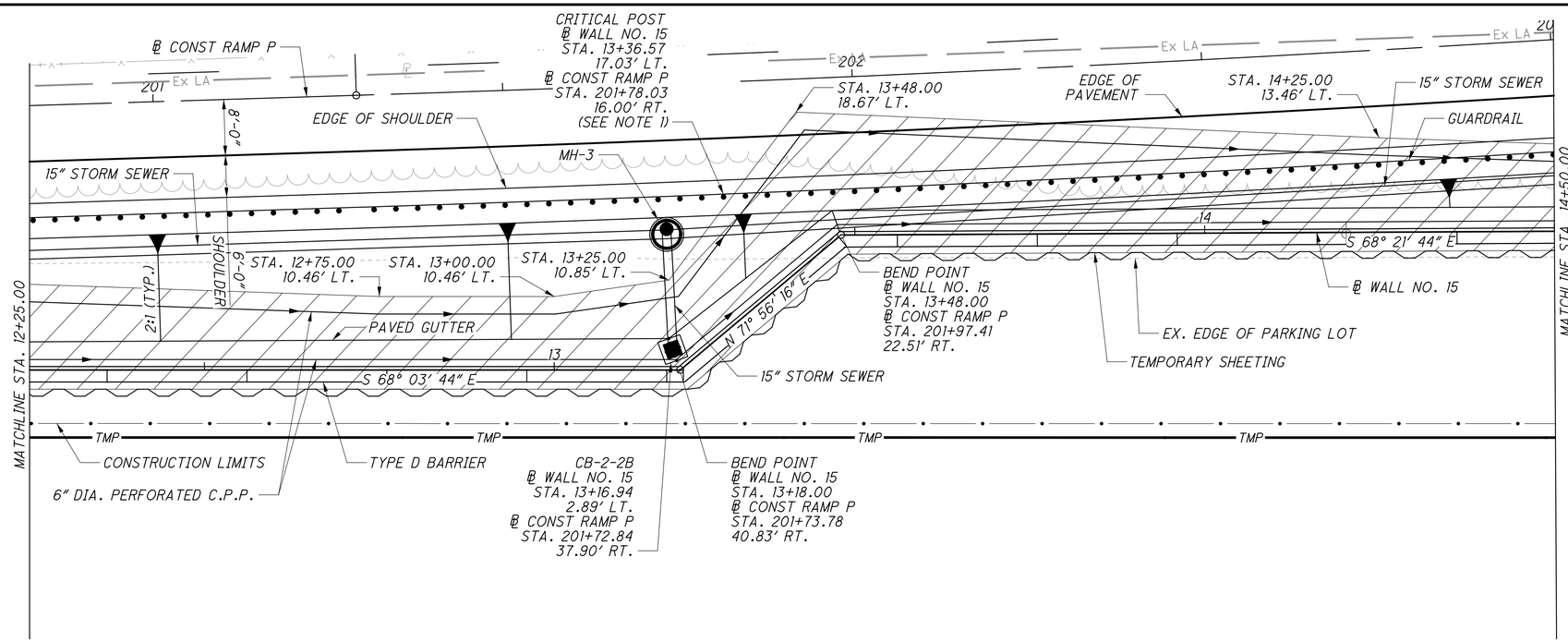


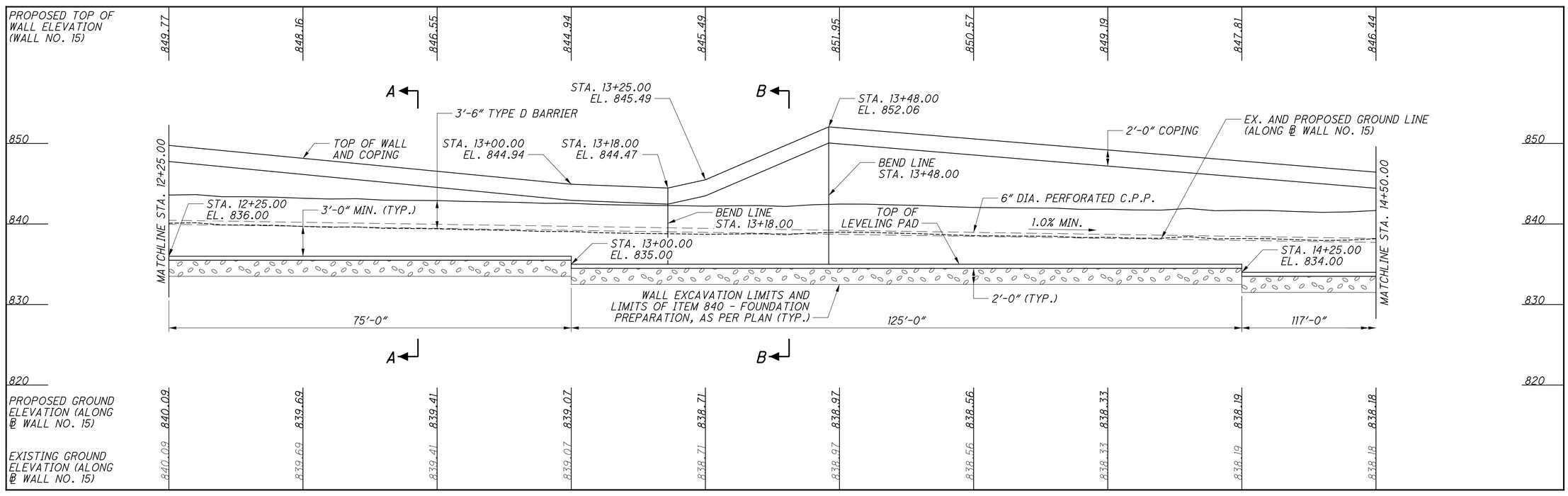
PLAN

NOTE:

1. GUARDRAIL POSTS ARE SPACED AT 6'-3" BETWEEN CRITICAL POST LOCATIONS.

LEGEND:

- 6" DIA. PERFORATED C.P.P.
- DENOTES PLAN BOUNDARY AT PROPOSED SURFACE OF ITEMS INCLUDED FOR PAYMENT WITH THE MSE WALL
- DENOTES LIMITS OF ITEM 840 - FOUNDATION PREPARATION, AS PER PLAN



PROFILE ALONG ℄ WALL NO. 15

DESIGN AGENCY
TranSystems
400 W. NATIONWIDE BLVD, SUITE 225
COLUMBUS, OHIO 43215

DESIGNED ZTW
DRAWN ZTW
REVIEWED MSL
DATE 03/01/19
CHECKED RSB
REVISED
STRUCTURE FILE NUMBER N/A

MSE WALL NO. 15 PLAN AND PROFILE
MSE WALL NO. 15

CLE-32-3.50
(PHASE 5)
PID No. 103954

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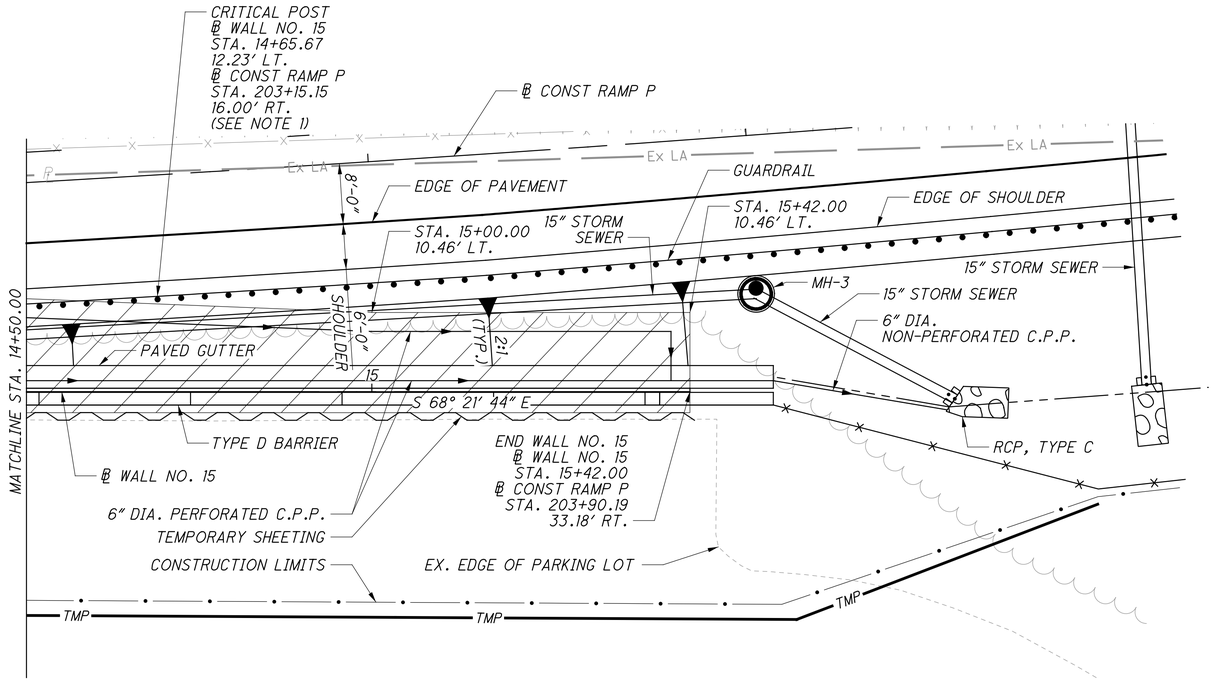
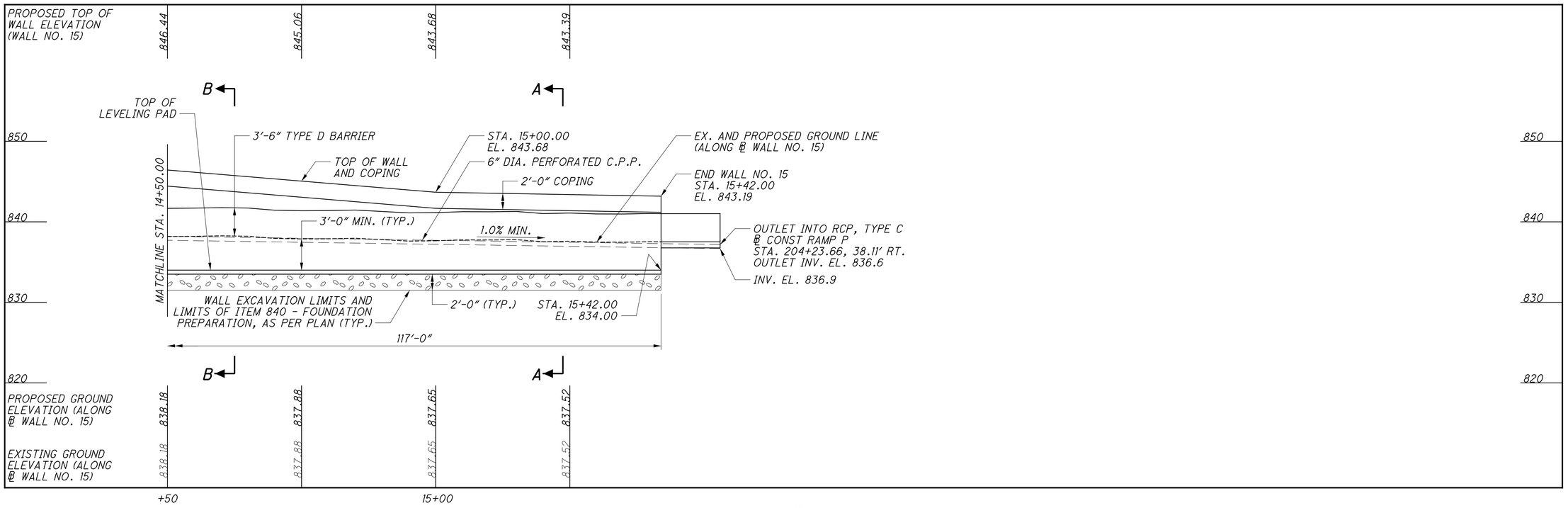


PLAN



PROFILE ALONG ℄ WALL NO. 15

NOTE:

1. GUARDRAIL POSTS ARE SPACED AT 6'-3" BETWEEN CRITICAL POST LOCATIONS.

LEGEND:

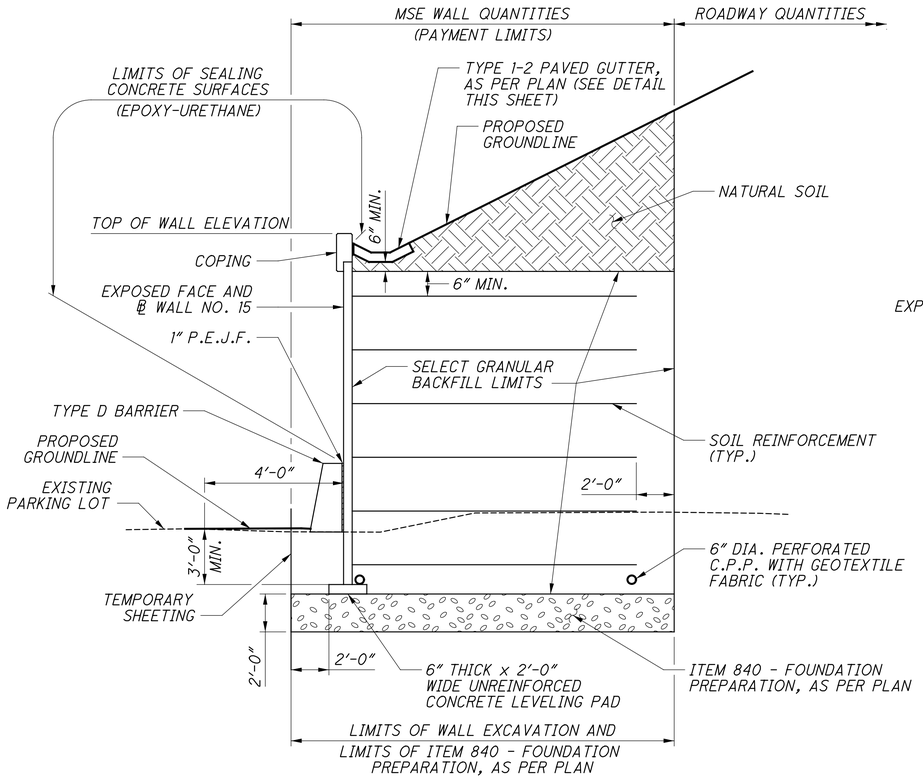
- 6" DIA. PERFORATED C.P.P. (U.N.O.)
- DENOTES PLAN BOUNDARY AT PROPOSED SURFACE OF ITEMS INCLUDED FOR PAYMENT WITH THE MSE WALL
- DENOTES LIMITS OF ITEM 840 - FOUNDATION PREPARATION, AS PER PLAN

DESIGN AGENCY
TranSystems
400 W. NATIONWIDE BLVD, SUITE 225
COLUMBUS, OHIO 43215

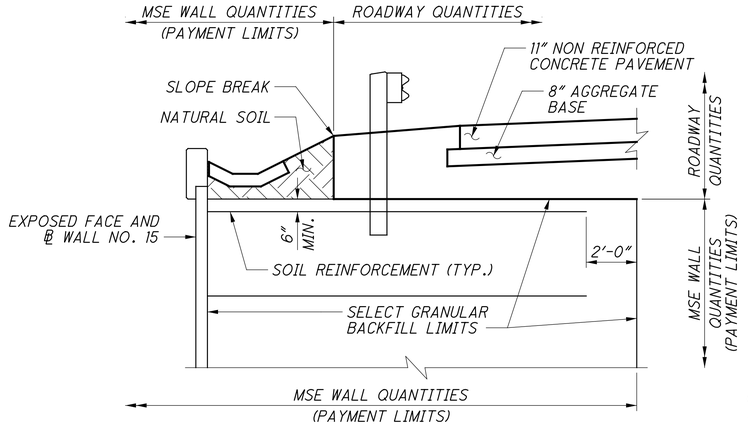
DESIGNED	DRAWN	REVIEWED	DATE
ZTW	ZTW	MSL	03/01/19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RSB		N/A	

MSE WALL NO. 15 PLAN AND PROFILE
MSE WALL NO. 15

CLE-32-3.50
(PHASE 5)
PID No. 103954

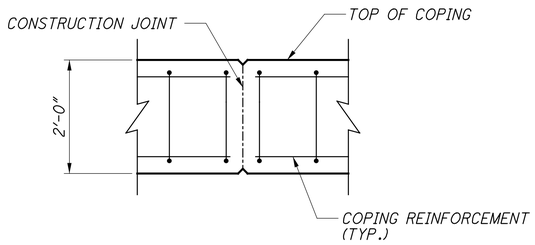


SECTION A-A

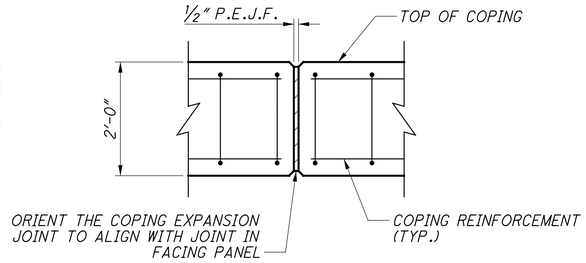


SECTION B-B

(FOR ADDITIONAL DETAILS, SEE SECTION A-A)



COPING CONTRACTION JOINT



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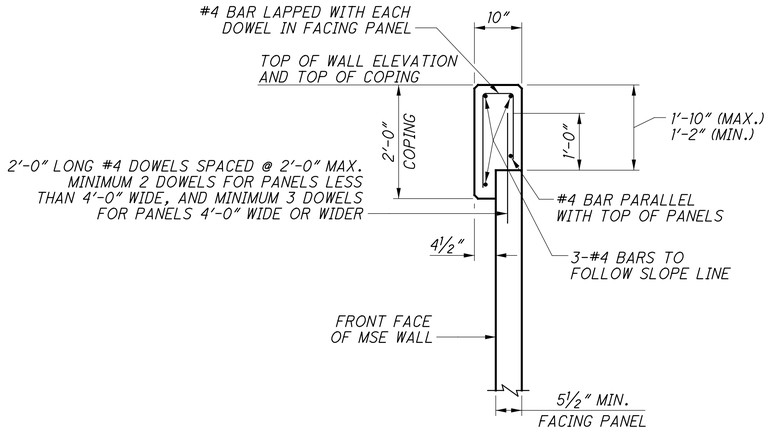
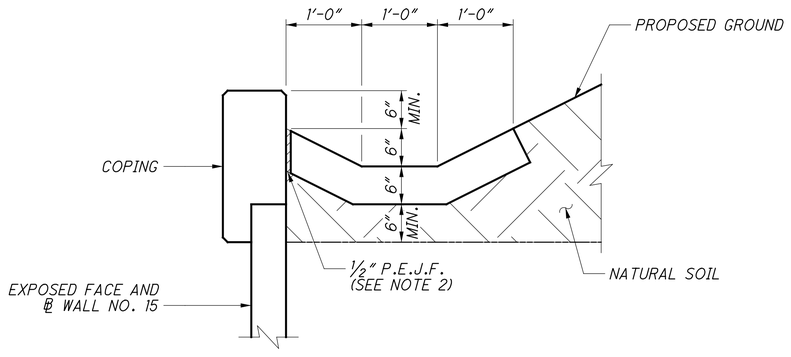


MSE WALL COPING DETAIL



PAVED GUTTER DETAIL TYPE 1-2, AS PER PLAN

(FOR ADDITIONAL DETAILS, SEE STANDARD CONSTRUCTION DRAWING DM-2.1)

NOTES:

1. ALL REINFORCING STEEL TO BE EPOXY COATED.
2. THE ½" P.E.J.F. SHALL BE INCLUDED IN ITEM 601 - PAVED GUTTER, TYPE 1-2, AS PER PLAN FOR PAYMENT. SEE ROADWAY PLANS FOR PAYMENT DETAILS.
3. WALL NO. 15 REQUIRES ITEM 840 - FOUNDATION PREPARATION, AS PER PLAN, 2'-0" THICK, FROM STA. 10+00.00 TO STA. 15+42.00. SEE ITEM 840 - FOUNDATION PREPARATION, AS PER PLAN GENERAL NOTE ON SHEET 1 / 5 FOR MORE DETAILS.

DESIGN AGENCY
TranSystems
400 W. NATIONWIDE BLVD., SUITE 225
COLUMBUS, OHIO 43215

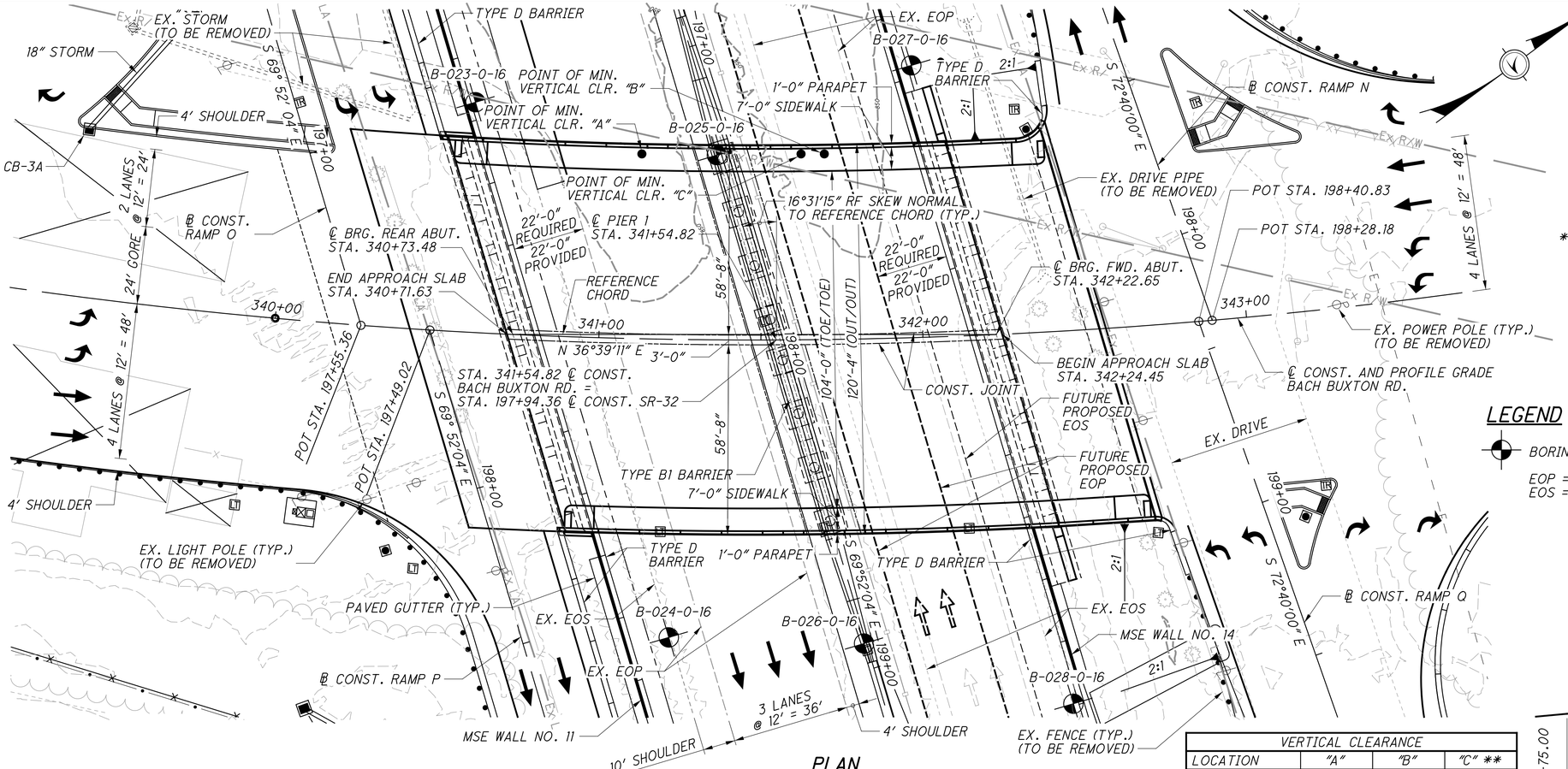
DESIGNED ZTW | DRAWN GJZ | CHECKED RSB | REVIEWED MSL | DATE 03/01/19 | REVISED | STRUCTURE FILE NUMBER N/A

MSE WALL DETAILS
MSE WALL NO. 15

CLE-32-3.50 (PHASE 5)
PID No. 103954

5 / 5

586
736



PLAN

VERTICAL CLEARANCE			
LOCATION	"A"	"B"	"C" **
REQUIRED MIN.	16'-6"	16'-6"	16'-6"
PROVIDED MIN.	16'-7¼"	16'-10⅞"	16'-6⅛"

BENCHMARK DATA

CMON-T7 = N 403525.62080, E 1472008.38900
EL. 870.52200
CMON-T8 = N 403983.32420, E 1472503.90240
EL. 857.50300

FOR ADDITIONAL BENCHMARK INFORMATION, SEE ROADWAY PLAN SHEET (2/736)

NOTES

** ESTIMATED FUTURE VERTICAL CLEARANCE CONSIDERING OVERLAY AND CROWN SHIFTING PROPOSED IN PHASE 7.

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

DESIGN TRAFFIC:

2017 ADT = 14,890	2017 ADTT = 596
2037 ADT = 26,870	2037 ADTT = 1075

DIRECTIONAL DISTRIBUTION = 0.57

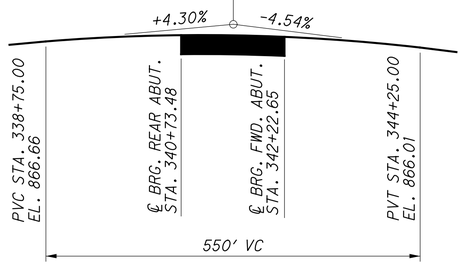
LEGEND

BORING LOCATION

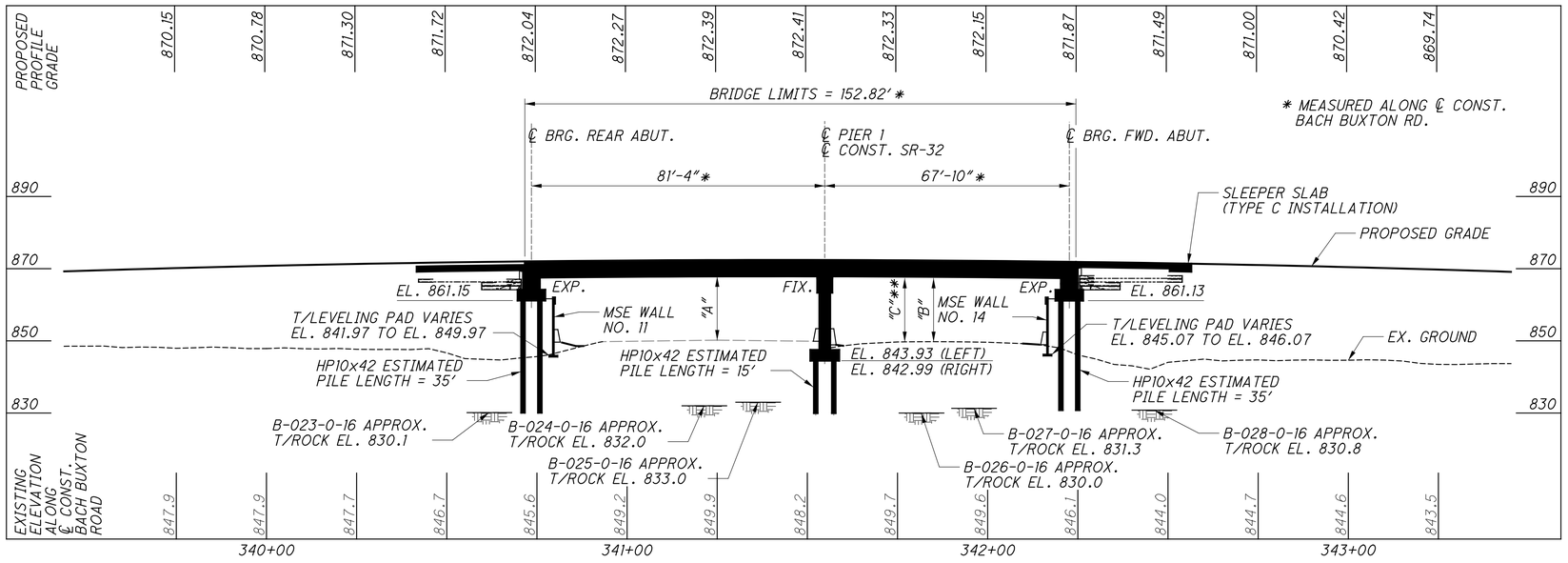
EOP = EDGE OF PAVEMENT
EOS = EDGE OF SHOULDER

HORIZONTAL CURVE DATA BACH BUXTON RD. - CURVE NO. 15

PI STA. 342+87.56
PC STA. 337+72.89
PT STA. 347+70.20
Δ = 34° 54' 20" LT
Dc = 3° 30' 00"
R = 1,637.02'
T = 514.67'
L = 997.30'
E = 79.00'
emax. = NC



VERTICAL CURVE SCHEMATIC



PROFILE ALONG ℄ CONST. AND PROFILE GRADE BACH BUXTON RD.

PROPOSED STRUCTURE

TYPE: TWO SPAN CONTINUOUS PRESTRESSED WF36-49 CONCRETE I-BEAMS WITH COMPOSITE REINFORCED CONCRETE DECK SUPPORTED ON REINFORCED CONCRETE PIER AND SEMI-INTEGRAL ABUTMENTS FOUNDED ON PILES AND MSE WALL EMBANKMENTS.

SPANS: 81'-4", 67'-10" C/C BRG. (MEASURED ALONG ℄ CONST. BACH BUXTON ROAD)

ROADWAY: 104'-0" TOE/TOE CURB WITH TWO 7'-0" SIDEWALKS

LOADING: HL-93 AND FWS 0.060 KSF
75 PSF PEDESTRIAN

WEARING SURFACE: 1" MONOLITHIC CONCRETE

SKEW: 16°31'15" RF SKEW NORMAL TO REFERENCE CHORD

APPROACH SLABS: 30'-0" LONG (AS-1-15)

ALIGNMENT: 3°30'00" CURVE LEFT

CROWN: 0.02 FT/FT

COORDINATES: LATITUDE N39°05'23.50"
LONGITUDE W84°14'41.29"

DESIGN AGENCY
TranSystems
400 W. NATIONWIDE BLVD., SUITE 225
COLUMBUS, OHIO 43215

DESIGNED	DRAWN	REVIEWED	DATE
BCS	JDG	MSL	03/01/19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		13003336	

CLERMONT COUNTY
STA. 340+71.63
STA. 342+24.45

SITE PLAN
BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

CLE-32-3.50
PID No. 103954

1 / 54
587 / 736

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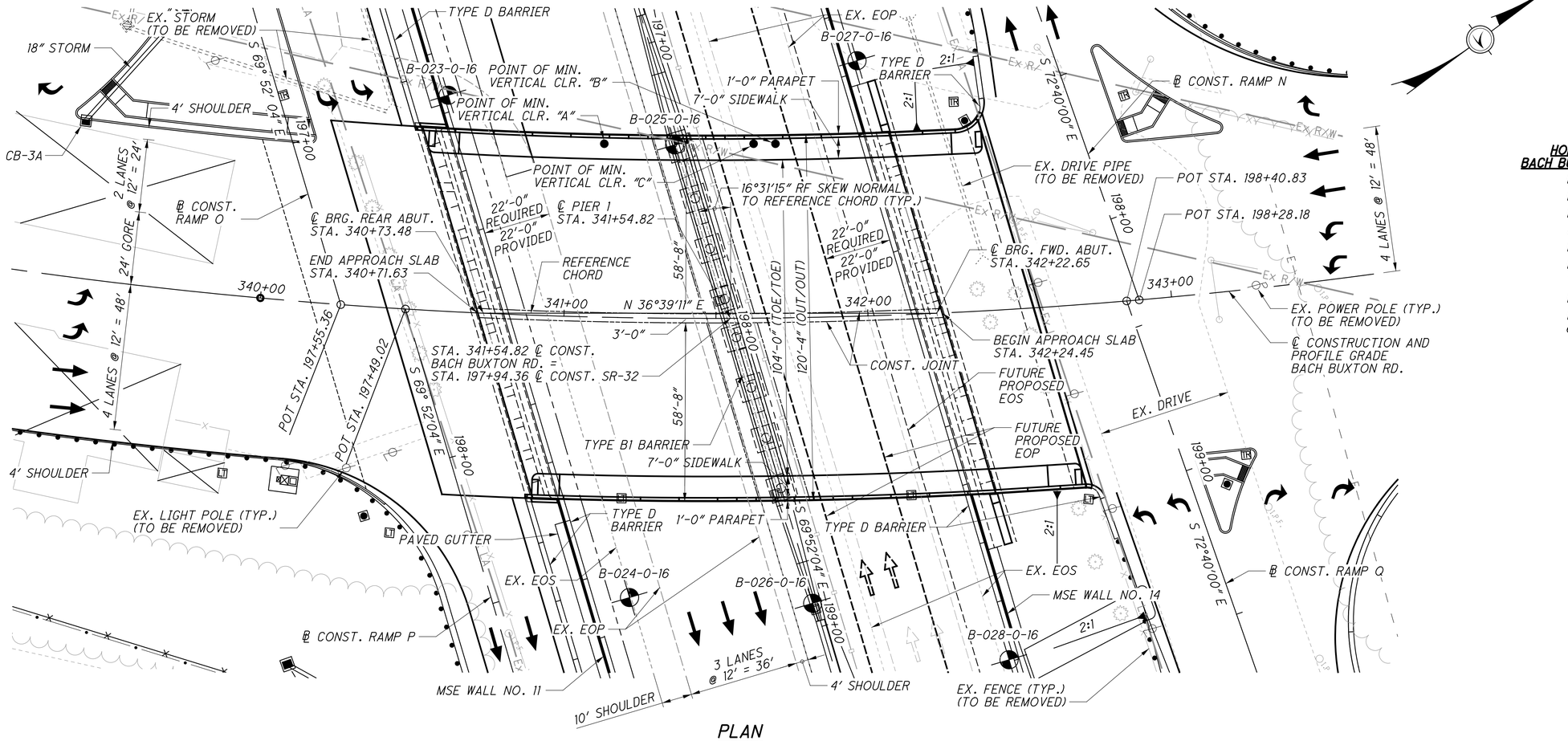
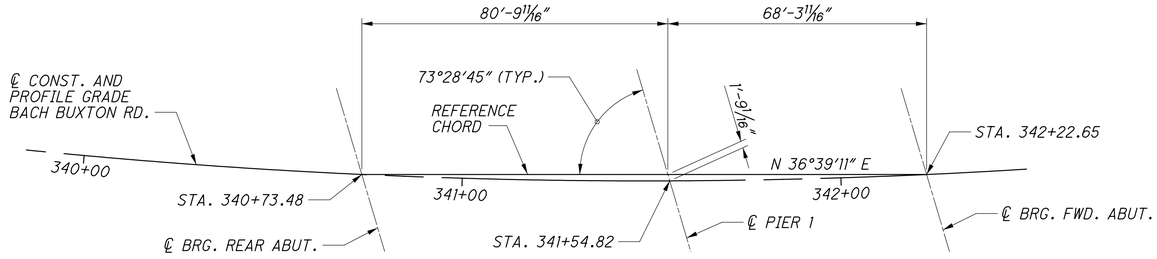


PLAN

HORIZONTAL CURVE DATA
BACH BUXTON RD. - CURVE NO. 15

PI STA. 342+87.56
PC STA. 337+72.89
PT STA. 347+70.20
Δ = 34° 54′ 20″ LT
Dc = 3° 30′ 00″
R = 1,637.02′
T = 514.67′
L = 997.30′
E = 79.00′
$e_{max.}$ = NC



GEOMETRIC LAYOUT

BENCHMARK DATA

CMON-T7 = N 403525.62080, E 1472008.38900
EL. 870.52200
CMON-T8 = N 403983.32420, E 1472503.90240
EL. 857.50300

LEGEND

BORING LOCATION

EOP = EDGE OF PAVEMENT
EOS = EDGE OF SHOULDER

NOTES

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

DESIGN AGENCY
TranSystems
400 W. NATIONWIDE BLVD., SUITE 225
COLUMBUS, OHIO 43215

DESIGNED BCS | DRAWN JDG | CHECKED PJP | REVIEWED MSL | DATE 03/01/19 | STRUCTURE FILE NUMBER 13003336 | REVISED

GENERAL PLAN AND GEOMETRIC LAYOUT

BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

CLE-32-3.50
PID No. 103954

STRUCTURE GENERAL NOTES

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-15, REVISED 07-17-15
AS-2-15, REVISED 01-18-19
BR-2-15, DATED 07-17-15
PSID-1-13, REVISED 07-20-18
SICD-1-96, REVISED 07-18-14
SICD-2-14, DATED 07-18-14
VPF-1-90, REVISED 07-20-18

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS

800 DATED 01-17-20
840 DATED 01-17-20
863 DATED 10-17-14
878 DATED 01-17-20

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 7TH EDITION, INCLUDING THE 2016 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

OPERATIONAL IMPORTANCE:

LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

DESIGN LOADING:

HL-93
FUTURE WEARING SURFACE (FWS) OF 60 LBS/SQ.FT.
PEDESTRIAN LOADING OF 75 LBS/SQ.FT.

DESIGN DATA:

CONCRETE CLASS QC3:
COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)

CONCRETE CLASS QC1 AND QC3:
COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

REINFORCING STEEL: MINIMUM YIELD STRENGTH 60 KSI

STEEL H-PILES: ASTM A572 YIELD STRENGTH 50 KSI

CONCRETE FOR PRESTRESSED BEAMS:
COMPRESSIVE STRENGTH (FINAL) = 8.0 KSI
COMPRESSIVE STRENGTH (RELEASE) = 6.0 KSI

WELDED WIRE FABRIC: YIELD STRENGTH = 70 KSI

PRESTRESSING STRAND:
AREA = 0.217 SQ.IN.
ULTIMATE STRENGTH = 270 KSI
INITIAL STRESS = 202.5 KSI (LOW RELAXATION STRANDS)

DECK PROTECTION METHOD:

EPOXY COATED REINFORCING STEEL
2½" CONCRETE COVER
SEALING OF CONCRETE SURFACES

MONOLITHIC WEARING SURFACE:

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

NON-USE OF ASBESTOS-CONTAINING MATERIALS:

THE CONTRACTOR SHALL AT NO TIME INCORPORATE ANY MATERIALS WHICH ARE COMPOSED OF OR CONTAIN ANY AMOUNTS OF ASBESTOS. THE SUBSTITUTION OF MATERIALS WHICH CONTAIN ANY AMOUNTS OF ASBESTOS WILL IN NO CIRCUMSTANCES BE ACCEPTABLE. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT OF CERTIFICATION ASSERTING THAT NO ASBESTOS CONTAINING MATERIALS WERE USED IN ANY PORTION OF THE CONSTRUCTION.

PILES TO BEDROCK:

DRIVE PILES TO REFUSAL ON BEDROCK. THE DEPARTMENT WILL CONSIDER REFUSAL TO BE OBTAINED WHEN THE PILE PENETRATION IS AN INCH OR LESS AFTER RECEIVING AT LEAST 20 BLOWS FROM THE PILE HAMMER. SELECT THE HAMMER SIZE TO ACHIEVE THE REQUIRED DEPTH TO BEDROCK AND REFUSAL.

THE TOTAL FACTORED LOAD IS 176 KIPS PER PILE FOR THE REAR AND FORWARD ABUTMENT PILES. THE TOTAL FACTORED LOAD IS 235 KIPS PER PILE FOR THE PIER PILES.

REAR ABUTMENT PILES:
HP10X42 PILES 40 FEET LONG, ORDER LENGTH

LEFT PIER PILES:
HP10X42 PILES 20 FEET LONG, ORDER LENGTH

RIGHT PIER PILES:
HP10X42 PILES 20 FEET LONG, ORDER LENGTH

FORWARD ABUTMENT PILES:
HP10X42 PILES 40 FEET LONG, ORDER LENGTH

PILE DRIVING CONSTRAINTS:

PRIOR TO DRIVING ABUTMENT PILES TO THE ULTIMATE BEARING VALUE (UBV) OR TO REFUSAL ON BEDROCK, CONSTRUCT THE MSE WALL, THE BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENT UP TO THE BOTTOM OF THE FOOTING AND A TEMPORARY SURCHARGE AND FOR A MINIMUM DISTANCE OF 200 FEET BEHIND EACH ABUTMENT. THE CONTRACTOR MAY PARTIALLY PRE-DRIVE ABUTMENT PILES BEFORE CONSTRUCTING MSE WALLS. PRE-DRIVING CONSISTS OF INSTALLING THE ABUTMENT PILES INTO THE SOIL ONLY AS FAR AS NECESSARY SO THAT THE PILE WILL REMAIN VERTICAL DURING MSE WALL CONSTRUCTION. IF PRE-DRIVING PILES, INSTALL PILE SLEEVES AROUND PILES BEFORE CONSTRUCTING THE MSE WALL. AT LEAST THREE FEET OF PILE MUST EXTEND ABOVE THE TOP OF THE PILE SLEEVE TO MEET THE REQUIREMENTS OF CMS 507.09 REGARDING SPLICES. DO NOT DRIVE ABUTMENT PILES TO THE UBV OR TO REFUSAL ON BEDROCK UNTIL AFTER THE ABOVE REQUIRED MSE WALL AND EMBANKMENT HAVE BEEN CONSTRUCTED AND A 90 CALENDAR DAY WAITING PERIOD HAS ELAPSED. THE ENGINEER MAY ADJUST THE LENGTH OF THE WAITING PERIOD BASED ON SETTLEMENT PLATFORM READINGS. AFTER THE SPECIFIED WAITING PERIOD HAS ELAPSED, DRIVE ABUTMENT PILES TO THE UBV OR TO REFUSAL ON BEDROCK. IN ORDER TO REMOVE ANY NEGATIVE SKIN FRICTION THAT HAS DEVELOPED DURING THE WAITING PERIOD, DRIVE EACH ABUTMENT PILE A DISTANCE OF AT LEAST 0.5 INCH. IF NOT PRE-DRIVING ABUTMENT PILES, INSTALL THE ABUTMENT PILES THROUGH PILE SLEEVES AFTER THE ABOVE REQUIRED MSE WALL AND EMBANKMENT HAVE BEEN CONSTRUCTED AND THE SPECIFIED WAITING PERIOD HAS ELAPSED.

PILE SPLICES:

IN LIEU OF USING THE FULL PENETRATION BUTT WELDS SPECIFIED IN CMS 507.09 TO SPLICE STEEL H-PILES, THE CONTRACTOR MAY USE A MANUFACTURED H-PILE SPLICER. FURNISH SPLICERS FROM THE FOLLOWING MANUFACTURER:

ASSOCIATED PILE AND FITTING CORPORATION
8 WOOD HOLLOW RD. PLAZA 1
PARSIPPANY, NEW JERSEY 07054

INSTALL AND WELD THE SPLICER TO THE PILE SECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN ASSEMBLY PROCEDURE SUPPLIED TO THE ENGINEER BEFORE THE WELDING IS PERFORMED.

MSE WALL FOUNDATION BEARING RESISTANCE:

THE FACTORED BEARING RESISTANCE FOR EACH WALL IS LISTED IN THE TABLE BELOW.

FOUNDATION BEARING RESISTANCE

WALL NUMBER	WALL LIMITS		FACTORED BEARING RESISTANCE (KSF)
	FROM STA.	TO STA.	
11	11+09	21+25	21.90
14	15+02	17+22	4.7

THE FACTORED BEARING RESISTANCE AT WALL 11 IS BASED ON 2 FEET OF UNDERCUT BENEATH THE PROPOSED BOTTOM OF LEVELING PAD ELEVATION. THE EXISTING SOILS WITHIN THIS 2 FEET OF UNDERCUT HAVE BEEN REPLACED WITH ITEM 203 - GRANULAR MATERIAL, TYPE C AND THE UNDERCUT AND ITEM 203 MATERIAL ARE PAID FOR UNDER ITEM 840 - FOUNDATION PREPARATION, AS PER PLAN.

PROPRIETARY RETAINING WALL DATA:

THE PROPRIETARY WALL SUPPLIER SHALL DESIGN THE INTERNAL STABILITY OF THE MECHANICALLY STABILIZED EARTH (MSE) WALLS IN ACCORDANCE WITH SS840 TO SUPPORT THE ABUTMENTS. THE DESIGN FOR INTERNAL STABILITY SHALL INCLUDE AN UNFACTORED HORIZONTAL STRIP LOAD DUE TO FRICTION (FR) FROM THE SUPERSTRUCTURE OF 1.53 KIPS/FT, APPLIED PERPENDICULAR TO THE FACE OF THE WALL AT THE BASE OF THE CONCRETE FOOTING. THIS STRIP LOAD DOES NOT INCLUDE EARTH PRESSURE LOADS FROM THE ABUTMENT BACKFILL. HOWEVER, THE PROPRIETARY WALL SUPPLIER SHALL INCLUDE EARTH PRESSURE LOADS FROM THE ABUTMENT BACKFILL IN THE DESIGN CALCULATIONS.

DECK PLACEMENT DESIGN ASSUMPTIONS:

THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.60 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103 IN.

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65 IN.

ITEM 203 - EMBANKMENT, AS PER PLAN:

PLACE AND COMPACT EMBANKMENT MATERIAL IN 6 INCH LIFTS FOR THE CONSTRUCTION OF THE APPROACH EMBANKMENT BETWEEN STATIONS 339+70 TO 340+75 AND 342+20 TO 343+25.

ITEM 511 - CLASS QC3 CONCRETE, MISC.: CLASS QC3 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING:

ITEM 511 - CLASS QC3 CONCRETE, MISC.: CLASS QC3 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS:

ITEM 511 - SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN:

THIS ITEM MODIFIES THE STANDARD 511 CONCRETE FOR STRUCTURES SPECIFICATION TO INCLUDE MACRO-SYNTHETIC AND CORROSION INHIBITORS INTO THE SUBSTRUCTURE CONCRETE. THIS ITEM SHALL CONFORM TO CMS 511 WITH THE FOLLOWING CONDITIONS AND REVISIONS:

PROVIDE MATERIALS CONFORMING TO 511.02 EXCEPT AS MODIFIED BELOW:

PORTLAND CEMENT CONCRETE: 499.03, CLASS QC3 MEETING A DESIGN STRENGTH OF 4,000 PSI WITH MACRO-SYNTHETIC FIBERS WITH MODIFICATION PER 511.02

FIBERS FOR CONCRETE: ASTM C 1116, TYPE III

CORROSION INHIBITOR: 515.15

THE CLASS QC3 CONCRETE FOR THE SUBSTRUCTURE SHALL MEET THE FOLLOWING CRITERIA: WATER/CEMENT RATIO = 0.40 MAXIMUM; MINIMUM 4 LBS/CY MACRO-SYNTHETIC FIBERS (1.0 IN. MIN. TO 2.5 IN. MAX.) MEETING ASTM C1116 TYPE III SHALL BE ADDED TO THE MIX.

MIX SHALL INCLUDE A MIGRATING CORROSION INHIBITOR AS MANUFACTURED BY AN APPROVED SUPPLIER LISTED ON ODOT'S QUALIFIED APPROVED SUPPLIERS, ITEM 515.15. THE DOSAGE RATE LISTED ON THE ODOT QUALIFIED APPROVED SUPPLIERS LIST WILL APPLY.

THE MACRO-SYNTHETIC FIBERS SHALL BE INCORPORATED INTO THE MIX IN SUCH A WAY THAT NO 'BALLING' OCCURS. UPON INSPECTION OF THE MIX AT THE TIME OF PLACEMENT, IF ANY 'BALLING' OCCURS, THE ENGINEER SHALL REJECT THE REMAINDER OF THE LOAD AT ANY TIME DURING THE POUR. IT IS IMPORTANT TO FOLLOW INDUSTRY STANDARDS AND ASTM SPECIFICATIONS ON THE PREMIXING OF THE CEMENT, AGGREGATE, AND MACRO-SYNTHETIC FIBERS PRIOR TO THE ADDITION OF WATER AND ADMIXTURES. PROVIDE MACRO-SYNTHETIC FIBERS THAT ARE MONOFILAMENT FIBERS MADE FROM VIRGIN POLYPROPYLENE, POLYETHYLENE, OR CO-POLYMERS THAT ARE INERT TO ALKALI ATTACK. ENSURE THE MACRO-SYNTHETIC FIBERS HAVE A MINIMUM TENSILE STRENGTH OF 70 KSI, A MINIMUM MODULUS OF ELASTICITY OF 800 KSI, A MINIMUM FILAMENT DIAMETER OF 0.012 INCHES, AN ASPECT RATIO BETWEEN 60 AND 100, AND ARE BETWEEN 1.0 AND 2.5 INCHES IN LENGTH. STORE THE MACRO-SYNTHETIC FIBERS ACCORDING TO THE MANUFACTURE'S RECOMMENDATION AND KEEP THE MATERIAL FREE FROM DUST, DIRT, AND MOISTURE.

USE A MINIMUM DOSAGE RATE OF MACRO-SYNTHETIC FIBERS OF 4.0 LBS/CY OF CONCRETE. DETERMINE THE FINAL PROPOSED DOSAGE RATE THROUGH MIX TESTING. ENSURE THE FIBER REINFORCED CONCRETE MEETS OR EXCEEDS A MINIMUM EQUIVALENT FLEXURAL STRENGTH RATIO OF 25% ACCORDING TO ASTM C 1609. ENSURE THE FINAL PROPOSED MIX IS WORKABLE AND ABLE TO BE PRODUCED SUCH THAT BALLING OR CLUMPING OF THE FIBERS IS NOT A PROBLEM AS DETERMINED BY THE ENGINEER. UTILIZE A LABORATORY REGULARLY INSPECTED BY THE CEMENT AND CONCRETE REFERENCE LABORATORY (CCRL) OF THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, OR OTHER APPROVED REFERENCE LABORATORY, TO PERFORM THE TESTING. BEFORE USE, SUBMIT DOCUMENTATION TO THE PROJECT ENGINEER CERTIFYING BOTH THE MACRO-SYNTHETIC FIBERS AND THE MIX MEET OR EXCEED THE REQUIRED PROPERTIES. SAMPLING WILL BE ALLOWED FOR TESTING PURPOSES. A DEMONSTRATION OF THE MIX PRODUCTION OR TRIAL MIX, MAY BE REQUIRED BY THE ENGINEER PRIOR TO PLACING ANY OF THE MIX ON THE PROJECT.

THE BATCH WEIGHTS SHALL BE CORRECTED TO COMPENSATE FOR THE MOISTURE CONTAINED IN THE AGGREGATE AT THE TIME OF USE. A CHEMICAL ADMIXTURE (705.12, TYPE A OR D) SHALL BE USED. THE ENGINEER CAN REDUCE THE BATCH LOAD SIZE AT ANY TIME AS NEEDED TO CORRECT/IMPROVE CONCRETE QUALITY.

CONCRETE SUPPLIERS SHOULD RECOGNIZE THAT THE CORROSION INHIBITOR AND ADMIXTURES MAY HAVE AN EFFECT ON STRENGTH, ENTRAINED AIR CONTENT, WORKABILITY, ETC. OF THEIR CONCRETE MIXES. THE CORROSION INHIBITOR IS SUGGESTED TO BE AN MCI PRODUCT BY CORTEC OR AN APPROVED EQUAL FROM THE QUALIFIED PRODUCTS LIST. THE CONCRETE SUPPLIER'S CHOICE OF ONE OF THESE CORROSION INHIBITORS DOES NOT ALLEVIATE MEETING DESIGN REQUIREMENTS. PLEASE BE ADVISED THAT SOME PRODUCTS ON THE LIST EFFECT THE DELIVERED MIX PROPERTIES GREATLY WHILE OTHER PRODUCTS DO NOT.

THE CONTRACTOR SHOULD BE ADVISED THAT CONCRETE RETARDING AGENTS MAY NEED TO BE ADDED TO OFFSET THE EFFECTS OF THE MIGRATING CORROSION INHIBITOR SELECTED.

ITEM 511 - CLASS QC3 CONCRETE, MISC.: CLASS QC3 CONCRETE WITH QC/QA, SUPERSTRUCTURE:

ITEM 526 - REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17"), AS PER PLAN:

THIS ITEM MODIFIES THE STANDARD 511 CONCRETE FOR STRUCTURES SPECIFICATION TO INCLUDE MACRO-SYNTHETIC AND CORROSION INHIBITORS INTO THE SUPERSTRUCTURE CONCRETE. THIS ITEM SHALL CONFORM TO CMS 511 WITH THE FOLLOWING CONDITIONS AND REVISIONS:

PROVIDE MATERIALS CONFORMING TO 511.02 EXCEPT AS MODIFIED BELOW:

PORTLAND CEMENT CONCRETE: 499.03, CLASS QC3 MEETING A DESIGN STRENGTH OF 4,500 PSI WITH MACRO-SYNTHETIC FIBERS WITH MODIFICATION PER 511.02

FIBERS FOR CONCRETE: ASTM C 1116, TYPE III

CORROSION INHIBITOR: 515.15

THE CLASS QC3 CONCRETE FOR THE SUPERSTRUCTURE SHALL MEET THE FOLLOWING CRITERIA: WATER/CEMENT RATIO = 0.40 MAXIMUM; MINIMUM 4 LBS/CY MACRO-SYNTHETIC FIBERS (1.0 IN. MIN. TO 2.5 IN. MAX.) MEETING ASTM C1116 TYPE III SHALL BE ADDED TO THE MIX.

MIX SHALL INCLUDE A MIGRATING CORROSION INHIBITOR AS MANUFACTURED BY AN APPROVED SUPPLIER LISTED ON ODOT'S QUALIFIED APPROVED SUPPLIERS, ITEM 515.15. THE DOSAGE RATE LISTED ON THE ODOT QUALIFIED APPROVED SUPPLIERS LIST WILL APPLY.

THE MACRO-SYNTHETIC FIBERS SHALL BE INCORPORATED INTO THE MIX IN SUCH A WAY THAT NO 'BALLING' OCCURS. UPON INSPECTION OF THE MIX AT THE TIME OF PLACEMENT, IF ANY 'BALLING' OCCURS, THE ENGINEER SHALL REJECT THE REMAINDER OF THE LOAD AT ANY TIME DURING THE POUR. IT IS IMPORTANT TO FOLLOW INDUSTRY STANDARDS AND ASTM SPECIFICATIONS ON THE PREMIXING OF THE CEMENT, AGGREGATE, AND MACRO-SYNTHETIC FIBERS PRIOR TO THE ADDITION OF WATER AND ADMIXTURES. PROVIDE MACRO-SYNTHETIC FIBERS THAT ARE MONOFILAMENT FIBERS MADE FROM VIRGIN POLYPROPYLENE, POLYETHYLENE, OR CO-POLYMERS THAT ARE INERT TO ALKALI ATTACK. ENSURE THE MACRO-SYNTHETIC FIBERS HAVE A MINIMUM TENSILE STRENGTH OF 70 KSI, A MINIMUM MODULUS OF ELASTICITY OF 800 KSI, A MINIMUM FILAMENT DIAMETER OF 0.012 INCHES, AN ASPECT RATIO BETWEEN 60 AND 100, AND ARE BETWEEN 1.0 AND 2.5 INCHES IN LENGTH. STORE THE MACRO-SYNTHETIC FIBERS ACCORDING TO THE MANUFACTURE'S RECOMMENDATION AND KEEP THE MATERIAL FREE FROM DUST, DIRT, AND MOISTURE.

USE A MINIMUM DOSAGE RATE OF MACRO-SYNTHETIC FIBERS OF 4.0 LBS/CY OF CONCRETE. DETERMINE THE FINAL PROPOSED DOSAGE RATE THROUGH MIX TESTING. ENSURE THE FIBER REINFORCED CONCRETE MEETS OR EXCEEDS A MINIMUM EQUIVALENT FLEXURAL STRENGTH RATIO OF 25% ACCORDING TO ASTM C 1609. ENSURE THE FINAL PROPOSED MIX IS WORKABLE AND ABLE TO BE PRODUCED SUCH THAT BALLING OR CLUMPING OF THE FIBERS IS NOT A PROBLEM AS DETERMINED BY THE ENGINEER. UTILIZE A LABORATORY REGULARLY INSPECTED BY THE CEMENT AND CONCRETE REFERENCE LABORATORY (CCRL) OF THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, OR OTHER APPROVED REFERENCE LABORATORY, TO PERFORM THE TESTING. BEFORE USE, SUBMIT DOCUMENTATION TO THE PROJECT ENGINEER CERTIFYING BOTH THE MACRO-SYNTHETIC FIBERS AND THE MIX MEET OR EXCEED THE REQUIRED PROPERTIES. SAMPLING WILL BE ALLOWED FOR TESTING PURPOSES. A DEMONSTRATION OF THE MIX PRODUCTION OR TRIAL MIX, MAY BE REQUIRED BY THE ENGINEER PRIOR TO PLACING ANY OF THE MIX ON THE PROJECT.

THE BATCH WEIGHTS SHALL BE CORRECTED TO COMPENSATE FOR THE MOISTURE CONTAINED IN THE AGGREGATE AT THE TIME OF USE. A CHEMICAL ADMIXTURE (705.12, TYPE A OR D) SHALL BE USED. THE ENGINEER CAN REDUCE THE BATCH LOAD SIZE AT ANY TIME AS NEEDED TO CORRECT/IMPROVE CONCRETE QUALITY.

CONCRETE SUPPLIERS SHOULD RECOGNIZE THAT THE CORROSION INHIBITOR AND ADMIXTURES MAY HAVE AN EFFECT ON STRENGTH, ENTRAINED AIR CONTENT, WORKABILITY, ETC. OF THEIR CONCRETE MIXES. THE CORROSION INHIBITOR IS SUGGESTED TO BE AN MCI PRODUCT BY CORTEC OR AN APPROVED EQUAL FROM THE QUALIFIED PRODUCTS LIST. THE CONCRETE SUPPLIER'S CHOICE OF ONE OF THESE CORROSION INHIBITORS DOES NOT ALLEVIATE MEETING DESIGN REQUIREMENTS. PLEASE BE ADVISED THAT SOME PRODUCTS ON THE LIST EFFECT THE DELIVERED MIX PROPERTIES GREATLY WHILE OTHER PRODUCTS DO NOT.

APPROACH SLABS, DIAPHRAGMS, AND BRIDGE RAILING CONCRETE (WHEN APPLICABLE) ARE TO USE THE SAME MIX DESIGN AS THE BRIDGE DECK. THE CONTRACTOR SHOULD BE ADVISED THAT CONCRETE RETARDING AGENTS MAY NEED TO BE ADDED TO OFFSET THE EFFECTS OF THE MIGRATING CORROSION INHIBITOR SELECTED. USE SELF-COMPACTING CONCRETE ON DECORATIVE RAILING SIMILAR TO TEXAS RAILING AND MACRO-SYNTHETIC CONCRETE PER THIS SPECIFICATION ON TRADITINONAL CONCRETE RAILING WHEN APPLICABLE.

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DESIGN AGENCY
TranSystems
401 W. NATIONWIDE BLVD., SUITE 225
COLUMBUS, OHIO 43215

DESIGNED BCS
DRAWN BCS
CHECKED PJP
REVIEWED MSL
DATE 03/01/19
REVISED
STRUCTURE FILE NUMBER 13003336

GENERAL NOTES
BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

CLE-32-3.50
PID No. 103954

GENERAL NOTES - MSE WALLS AND TEMPORARY MSE WALLS (CONT.)

ITEM 511 - CLASS QC3 CONCRETE, MISC.: CLASS QC3 CONCRETE WITH QC/QA, SUPERSTRUCTURE: (CONTINUED)

ITEM 526 - REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17"), AS PER PLAN: (CONTINUED)

THE CONTRACTOR SHALL PROVIDE TRADITIONAL BRIDGE DECK FORMS CONFORMING TO CMS 508. PERMANENT STAY-IN-PLACE (SIP) FORMS ARE NOT ALLOWED. THE PLACING OF THE DECK AND THE APPROACH SLABS IN THE SAME CONCRETE POUR IS NOT PERMITTED.

ITEM 517 - RAILING (CONCRETE PARAPET WITH TWIN STEEL TUBE RAILING AND VANDAL PROTECTION FENCE), AS PER PLAN:

CONCRETE USED IN THE RAILING SHALL MEET THE REQUIREMENTS OF ITEM 511 - CLASS QC3 CONCRETE, MISC.: CLASS QC3 CONCRETE WITH QC/QA, SUPERSTRUCTURE.

ITEM 601 - CONCRETE SLOPE PROTECTION, AS PER PLAN:

1" PEJF SHALL BE PLACED ALONGSIDE THE 6" CONCRETE SLOPE PROTECTION POSITIONED IN FRONT OF THE REAR AND FORWARD ABUTMENTS AND POSITIONED BETWEEN THE TYPE 1-2 PAVED GUTTERS AND TYPE D ROADWAY BARRIER. THE 1" PEJF SHALL BE INCLUDED FOR PAYMENT WITH ITEM 601 - CONCRETE SLOPE PROTECTION, AS PER PLAN.

ITEM SPECIAL - MISC: TEMPORARY SURCHARGE:

DESCRIPTION: THIS ITEM CONSISTS OF DESIGNING, CONSTRUCTING, AND REMOVING A TEMPORARY SURCHARGE AT THE LOCATIONS AND LIMITS SHOWN IN THE PLANS.

AS DIRECTED IN THE PILE DRIVING CONSTRAINTS NOTE, A TEMPORARY SURCHARGE IS NECESSARY AT THE ABUTMENTS FOR THIS BRIDGE TO MITIGATE EMBANKMENT SETTLEMENT. CONSTRUCT THE TEMPORARY SURCHARGE SO IT EXTENDS VERTICALLY FROM THE ELEVATION OF THE BOTTOM OF THE PROPOSED ABUTMENT FOOTING TO THE PROPOSED ROADWAY SUBGRADE ELEVATION. CONSTRUCT THE TEMPORARY SURCHARGE USING ITEM 203 EMBANKMENT WITH A DRY DENSITY OF AT LEAST 105 PCF AFTER COMPACTION. SUPPORT THE SIDES OF THE TEMPORARY SURCHARGE SO THAT THE TOP OF THE SURCHARGE MATERIAL IS NO MORE THAN 2 FEET (MEASURED HORIZONTALLY) FROM THE BACK FACE OF THE PROPOSED MSE WALLS. CONSTRUCT THE TEMPORARY SURCHARGE SO THAT IT EXTENDS AT LEAST 200 FEET BEHIND EACH ABUTMENT.

PREPARE AND PROVIDE SHOP DRAWINGS AND DESIGN CALCULATIONS FOR THE TEMPORARY SURCHARGE, INCLUDING THE METHOD USED TO SUPPORT THE SIDES OF THE TEMPORARY SURCHARGE AND ALL DETAILS OF THE SUPPORT SYSTEM. ENSURE THE TEMPORARY SURCHARGE DESIGN ACCOMMODATES THE LOCATION AND COMPOSITION OF THE PROPOSED MSE WALLS FOR THE BRIDGE STRUCTURE. HAVE TWO OHIO REGISTERED ENGINEERS SIGN, SEAL, AND DATE THE DRAWINGS AND CALCULATIONS ACCORDING TO CMS 501.05. SUBMIT THE DRAWINGS AND CALCULATIONS TO THE ENGINEER AT LEAST 30 DAYS BEFORE CONSTRUCTION OF THE TEMPORARY SURCHARGE BEGINS.

REMOVE THE TEMPORARY SURCHARGE AFTER THE CONDITIONS SPECIFIED IN THE PILE DRIVING CONSTRAINTS NOTE ARE SATISFIED AND THE ENGINEER AUTHORIZES REMOVAL.

BASIS OF PAYMENT: THE DEPARTMENT WILL PAY FOR ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO DESIGN, CONSTRUCT, AND REMOVE THE TEMPORARY SURCHARGE AT THE REAR AND FORWARD ABUTMENTS FOR THE BRIDGE AT THE CONTRACT LUMP SUM BID PRICE FOR ITEM SPECIAL - MISC: TEMPORARY SURCHARGE.

ITEM 840 - FOUNDATION PREPARATION, AS PER PLAN:

WALL 11 REQUIRES 2 FEET OF FOUNDATION PREPARATION AS OUTLINED IN SS840. TWO FEET OF EXISTING SOIL BENEATH THE PROPOSED BOTTOM OF WALL 11 LEVELING PAD ELEVATIONS WILL BE EXCAVATED/UNDERCUT AND REPLACED WITH 2 FEET OF ITEM 203 - GRANULAR MATERIAL, TYPE C. ALL OTHER REQUIREMENTS OF SS840 SHALL APPLY.

MSE WALL NO. 11 CONSTRUCTION SEQUENCE:

MSE WALL NO. 11 SHALL BE CONSTRUCTED CONCURRENTLY WITH MSE WALL NO. 15.

LEGEND

ABUT.	ABUTMENT	HMWM	HIGH MOLECULAR WEIGHT METHACRYLATE
APPR.	APPROACH	INC.	INCREMENT
B.F.	BACK FACE	JT.	JOINT
BTM.	BOTTOM	MAX.	MAXIMUM
BRG.	BEARING	MIN.	MINIMUM
℄	CENTERLINE	MISC.	MISCELLANEOUS
CIP	CAST-IN-PLACE	PEJF	PREFORMED EXPANSION JOINT FILLER
C.J.	CONSTRUCTION JOINT	PROP.	PROPOSED
CLR.	CLEAR	R	RADIUS
CMS	CONSTRUCTION AND MATERIAL SPECIFICATIONS	SER.	SERIES
CONC.	CONCRETE	SQ FT	SQUARE FEET
CONST.	CONSTRUCTION	SQ YD	SQUARE YARD
CU YD	CUBIC YARD	STA.	STATION
DIA.	DIAMETER	STD.	STANDARD
DWG.	DRAWING	STR.	STRAIGHT
EB	EASTBOUND	TEMP.	TEMPORARY
E.F.	EACH FACE	TYP.	TYPICAL
EL.	ELEVATION	U.N.O.	UNLESS NOTED OTHERWISE
EST.	ESTIMATED	WB	WESTBOUND
EX.	EXISTING		
F.F.	FRONT FACE		
FWD.	FORWARD		

ITEM SPECIAL - SETTLEMENT PLATFORM:

DESCRIPTION: THIS ITEM CONSISTS OF FURNISHING, CONSTRUCTING, AND MAINTAINING SETTLEMENT PLATFORMS AND OBTAINING SETTLEMENT READINGS AS REQUIRED BY THE PLANS OR AS DIRECTED BY THE ENGINEER. AT THE OPTION AND EXPENSE OF THE CONTRACTOR, ADDITIONAL SETTLEMENT PLATFORMS MAY BE INSTALLED AT LOCATIONS APPROVED BY THE ENGINEER. SETTLEMENT READINGS SHALL BE TAKEN WEEKLY DURING CONSTRUCTION AND DURING ANY SPECIFIED WAITING PERIOD. THE READINGS SHALL BE PLOTTED ON GRAPH PAPER PRESENTING DEFORMATION (ON THE NEGATIVE Y-AXIS) AND FILL HEIGHT (ON THE POSITIVE Y-AXIS) VERSUS TIME (ON THE X-AXIS). IN ORDER TO CREATE THE GRAPH, USE THE SETTLEMENT PLATFORM SPREADSHEET LOCATED AT: http://www.dot.state.oh.us/Divisions/Prodmgt/Geotechnical/Geotechnical_Documents/Blank_Settlement_Reading_Plots-English.xls IN THE OGE WEBSITE PUBLICATIONS AND DOCUMENTS SECTION. PREPARE A SEPARATE GRAPH IN THE SPREADSHEET FOR EACH SETTLEMENT PLATFORM. PROVIDE THE SETTLEMENT PLATFORM DESIGNATION NUMBER, STATION AND OFFSET ON EACH TAB IN THE SPREADSHEET. A COPY OF EACH CUMULATIVE PLOT SHALL BE SENT TO THE ENGINEER AND THE DISTRICT GEOTECHNICAL ENGINEER AFTER EACH SETTLEMENT READING IS RECORDED.

THE DEPARTMENT WILL CONSIDER VIBRATING WIRE SETTLEMENT MONITORING PLATFORMS IN LIEU OF THE CONVENTIONAL SETTLEMENT PLATFORMS. THE CONTRACTOR SHOULD PROVIDE DETAILS OF THE PROPOSED VIBRATING WIRE SETTLEMENT PLATFORMS AS WELL AS DESIGN DRAWINGS OF THE PROPOSED PLATFORM AND CABLING LAYOUT TO THE ENGINEER AT LEAST 30 DAYS PRIOR TO CONSTRUCTION. THE DEPARTMENT WILL REQUIRE 10 WORKING DAYS FOR REVIEW AND APPROVAL. THE DESIGN DRAWINGS SHOULD ILLUSTRATE THE PROPOSED VIBRATING WIRE SETTLEMENT PLATFORM LOCATIONS WITH ALL EXISTING AND PROPOSED SITE FEATURES TO VERIFY THE PROPOSED CABLING WILL NOT CONFLICT WITH EXISTING FACILITIES, PROPOSED FACILITIES, OR UTILITIES. NO ADDITIONAL PAYMENT WILL BE PROVIDED IF THE CONTRACTOR ELECTS TO UTILIZE VIBRATING WIRE SETTLEMENT PLATFORMS.

MATERIALS: SOUND LUMBER SUCH AS ¾" EXTERIOR GRADE PLYWOOD SHALL BE USED FOR THE BASE. THE PIPE SHALL BE 2½" STANDARD BLACK PIPE WITH THREADED FITTINGS AS SHOWN ON THE PLANS. A STEEL PLATE (36" x 36" x ⅛") MAY BE SUBSTITUTED FOR THE LUMBER FOR THE PLATFORMS, AT THE CONTRACTOR'S OPTION.

THE CONTRACTOR MAY UTILIZE VIBRATING WIRE SETTLEMENT MONITOR DEVICES IN LIEU OF THE SETTLEMENT PLATFORMS AT NO ADDITIONAL COST TO THE PROJECT. THE CONTRACTOR MUST SUBMIT THE PROPOSED VIBRATING WIRE SETTLEMENT MONITORING EQUIPMENT AND METHODS TO THE DISTRICT GEOTECHNICAL ENGINEER FOR APPROVAL PRIOR TO ORDERING MATERIALS OR FIELD INSTALLATION.

CONSTRUCTION METHODS: THE PLATFORM SHALL CONFORM TO THE DETAILS SHOWN ON THE PLANS. THE PLATFORM SHALL BE SET ON A LEVEL SURFACE. PLACE THE SETTLEMENT PLATFORMS AT THE BOTTOM OF THE GRANULAR MATERIAL, TYPE C USED IN THE ITEM 840 - FOUNDATION PREPARATION WORK. FIRMLY SECURE THE SETTLEMENT PLATFORM ON THE SS840 SUBGRADE BY DRIVING NO. 4 REINFORCING BAR STAKES WITH A 90 DEGREE BEND AT EACH CORNER OF THE SETTLEMENT PLATFORM. THE PIPE SHALL BE FIRMLY SECURED TO THE PLATFORM AND SHALL BE MAINTAINED IN A PLUMB POSITION DURING THE PLACEMENT OF THE EMBANKMENT. THE PIPE SHALL BE MARKED AT 1 FT. INTERVALS WITH PROJECT ELEVATIONS TO FACILITATE MEASUREMENT OF THE DEPTH AND ELEVATION OF FILL. THE CONTRACTOR SHALL STOP WORK IN ANY LOCATION WHERE THE SETTLEMENT PLATFORM HAS BEEN DISTURBED OR DAMAGED. PLATFORMS OR PIPES DAMAGED OR DISPLACED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR PROPER CONDITION AT THE CONTRACTOR'S EXPENSE.

1. NEW SECTIONS OF PIPE SHALL BE ADDED TO THE TOP OF THE PIPE AS THE EMBANKMENT HEIGHT RISES. IN THIS CASE, THE INCREASE IN THE LENGTH OF THE RISER PIPE SHALL BE DETERMINED AND RECORDED AS WELL AS THE DATE IN WHICH THIS OPERATION WAS PERFORMED. DOCUMENT THE DATE OF PIPE INCREASE ON THE SETTLEMENT GRAPH.
2. THE RISER PIPE SHALL HAVE GUARD STAKES OR BE MARKED WITH HIGH-VISIBILITY FLAGS OR RIBBONS IN ORDER TO PROTECT IT FROM CONSTRUCTION EQUIPMENT. SETTLEMENT PLATFORMS MAY BE PLACED BEYOND THE EDGE OF PAVEMENT BUT INSIDE THE BREAK OF THE SLOPE IN ORDER TO BE OUT OF THE WAY AS MUCH AS POSSIBLE.
3. IF THE PLATFORM OR PIPE IS DISTURBED OR DAMAGED, WORK SHALL BE STOPPED IN THAT LOCATION UNTIL THE CONTRACTOR RESTORES THE SETTLEMENT PLATFORM AND RISER PIPE TO THEIR PROPER CONDITION. DAMAGED SETTLEMENT PLATFORMS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
4. PRIOR TO PAVING, THE RISER PIPE SHALL BE CUT OFF 2 FEET BELOW THE TOP OF THE FINISHED SURFACE OF THE SUBGRADE OR THE FINISHED GROUND SURFACE, WHICHEVER IS APPLICABLE.

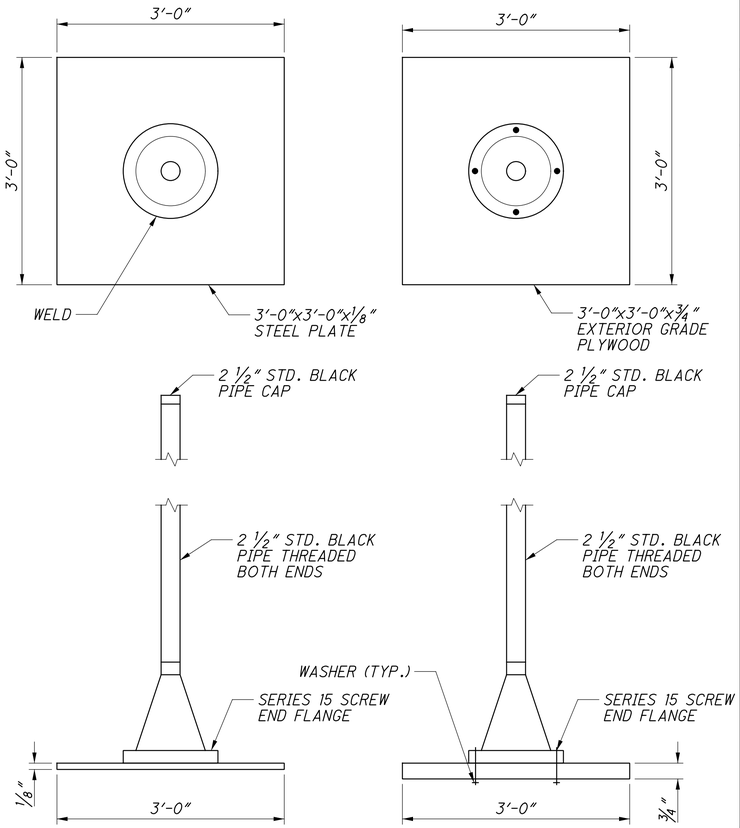
WAITING PERIOD: THE WAITING PERIOD SHALL NOT BE CONSIDERED TO BEGIN UNTIL ALL FILL LOADING HAS BEEN PLACED TO THE DESIGN SUBGRADE LEVEL FOR BRIDGE APPROACHES OR FINAL EMBANKMENT LEVEL IN AREAS BEYOND THE BRIDGE APPROACH. THE ANTICIPATED WAITING PERIOD IS 90 DAYS. INCLUDE SPECIFIC ACTIVITIES IN THE CONSTRUCTION SCHEDULE FOR THE SETTLEMENT WAITING PERIOD.

ITEM SPECIAL - SETTLEMENT PLATFORM (CONTINUED):

NO CONSTRUCTION OF STRUCTURES (INCLUDING FOOTINGS, MSE WALL COPING, OR CONCRETE BARRIER ABOVE THE MSE WALLS) OR PAVING SUPPORTED BY EMBANKMENT BEHIND THE MSE WALL SHALL BEGIN UNTIL SETTLEMENT WAITING PERIOD HAS BEEN TERMINATED BY THE ENGINEER.

METHOD OF MEASUREMENT: THE NUMBER OF SETTLEMENT PLATFORMS TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF SETTLEMENT PLATFORMS COMPLETED, MAINTAINED, AND ACCEPTED BY THE ENGINEER.

BASIS OF PAYMENT: PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE EACH FOR ITEM SPECIAL - SETTLEMENT PLATFORM WHICH IS COMPENSATION FOR CONSTRUCTING, MAINTAINING, AND MONITORING THE SETTLEMENT PLATFORMS INCLUDING FURNISHING ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK. PAYMENT SHALL NOT BE MADE FOR SETTLEMENT PLATFORMS WHICH BECOME USELESS DUE TO DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS.



SETTLEMENT PLATFORM DETAILS

ITEM 863 - REINFORCED EMBANKMENT, AS PER PLAN

THE REINFORCED EMBANKMENT IN THE GEOWALLS SHALL BE SELECT GRANULAR BACKFILL (SGB) PER ODOT SUPPLEMENTAL SPECIFICATION 840, SECTION 840.03E, PLACEMENT OF THE SGB SHALL BE PER SUPPLEMENTAL SPECIFICATION 840, SECTION 840.06I.

DESIGN AGENCY
TranSystems
400 W. NATIONWIDE BLVD, SUITE 225
COLUMBUS, OHIO 43215

DESIGNED BCS | DRAWN BCS | CHECKED PJP | REVIEWED MSL | DATE 03/01/19 | STRUCTURE FILE NUMBER 1300336 | REVISED

GENERAL NOTES - 2
BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

CLE-32-3.50
PID No. 103954

MADE BY: GJZ DATE: 3/8/2018
CHECKED BY: ZTW DATE: 3/22/2018

ESTIMATED QUANTITIES - CLE-32-0374 BRIDGE

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GENERAL	SHEET #
204	50000	1151	SY	GEOTEXTILE FABRIC	1151				
503	11100	LS		COFFERDAMS AND EXCAVATION BRACING				LS	
503	21300	LS		UNCLASSIFIED EXCAVATION				LS	
505	11100	LS		PILE DRIVING EQUIPMENT MOBILIZATION				LS	
507	00100	4000	FT	STEEL PILES HP10X42, FURNISHED	3040	960			
507	00150	3380	FT	STEEL PILES HP10X42, DRIVEN	2660	720			
509	10000	243028	LB	EPOXY COATED REINFORCING STEEL	20203	40786	182039		
511	33501	2	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN	2				3 & 11 / 54
511	46512	307	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	241	66			
511	53014	597	CY	CLASS QC3 CONCRETE, MISC.: CLASS QC3 CONCRETE WITH QC/QA, SUPERSTRUCTURE			597		3 & 4 / 54
511	53014	227	CY	CLASS QC3 CONCRETE, MISC.: CLASS QC3 CONCRETE WITH QC/QA, SUPERSTRUCTURE	184	43			3 & 4 / 54
511	53014	117	CY	CLASS QC3 CONCRETE, MISC.: CLASS QC3 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS		117			3 / 54
511	53014	115	CY	CLASS QC3 CONCRETE, MISC.: CLASS QC3 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING	115				3 / 54
512	10050	307	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)			307		
512	10100	1142	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	257	251	634		
515	15070	12	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE WF36-49 (BEAM LENGTH = 81'-11 1/4")			12		
515	15070	12	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE WF36-49 (BEAM LENGTH = 68'-6 1/4")			12		
515	20000	44	EACH	INTERMEDIATE DIAPHRAGMS			44		
516	10010	127	FT	ARMORLESS PREFORMED JOINT SEAL				127	
516	13600	4453	SF	1" PREFORMED EXPANSION JOINT FILLER	17		25	4411	
516	13900	109	SF	2" PREFORMED EXPANSION JOINT FILLER	109				
516	14020	290	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	290				
516	44101	12	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (13"x20"x2 9/16" WITH 14"x21"x2 1/4" BOTTOM LOAD PLATE)	12				25/54
516	44101	12	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (13"x18"x2 9/16" WITH 14"x19"x2" BOTTOM LOAD PLATE)	12				25/54
516	44101	24	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (11"x21"x2" WITH 12"x40"x2 3/16" TOP BEVELED LOAD PLATE)		24			26/54
517	75123	376	FT	RAILING (CONCRETE PARAPET WITH TWIN STEEL TUBE RAILING AND VANDAL PROTECTION FENCE), AS PER PLAN			306	70	4 / 54
518	12301	4	EACH	SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN			4		38/54
518	21200	36	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	36				
518	40000	293	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	293				
518	40010	1	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	1				
526	30011	804	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17"), AS PER PLAN				804	3 & 4 / 54
526	90021	105	SY	TYPE B INSTALLATION, AS PER PLAN				105	50 / 54
526	90030	127	FT	TYPE C INSTALLATION				127	
607	39930	345	FT	VANDAL PROTECTION FENCE, 12' CURVED, COATED FABRIC				345	
608	53020	40	SF	DETECTABLE WARNING				40	
SPECIAL	69098400	LS		MISC: TEMPORARY SURCHARGE				LS	4 / 54
863	00100	2534	SY	GEOGRID, TYPE P1	2534				
863	00801	539	CY	REINFORCED EMBANKMENT, AS PER PLAN	539				4 / 54

MADE BY: GJZ DATE: 2/20/2018
CHECKED BY: ZTW DATE: 2/22/2018

ESTIMATED QUANTITIES - MSE WALLS

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	WALL NO. 11	WALL NO. 14	SHEET #
203	20001	1683	CY	EMBANKMENT, AS PER PLAN	694	989	3 / 54
203	35110	303	CY	GRANULAR MATERIAL, TYPE B	150	153	
SPECIAL	20365000	8	EACH	SETTLEMENT PLATFORM	6	2	4 / 54
512	10100	1455	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	1216	239	
512	33000	7	SY	TYPE 2 WATERPROOFING	7	-	18/54
516	13200	476	SF	1/2" PREFORMED EXPANSION JOINT FILLER	445	31	
601	21001	560	SY	CONCRETE SLOPE PROTECTION, AS PER PLAN	525	35	4 / 54
840	20000	19647	SF	MECHANICALLY STABILIZED EARTH WALL	16303	3344	
840	21000	3072	CY	WALL EXCAVATION	2531	541	
840	22000	678	SY	FOUNDATION PREPARATION	-	678	
840	22001	2618	SY	FOUNDATION PREPARATION, AS PER PLAN	2618	-	4 / 54
840	23000	15947	CY	SELECT GRANULAR BACKFILL	12433	3514	
840	23050	502	CY	NATURAL SOIL	316	186	
840	25010	2511	FT	6" DRAINAGE PIPE, PERFORATED	2039	472	
840	25020	266	FT	6" DRAINAGE PIPE, NON-PERFORATED	161	105	
840	26000	1262	FT	CONCRETE COPING	1036	226	
840	27000	10	DAY	ON-SITE ASSISTANCE	5	5	
878	25000	LS		INSPECTION AND COMPACTION TESTING OF UNBOUND MATERIALS	LS	LS	

DESIGN AGENCY
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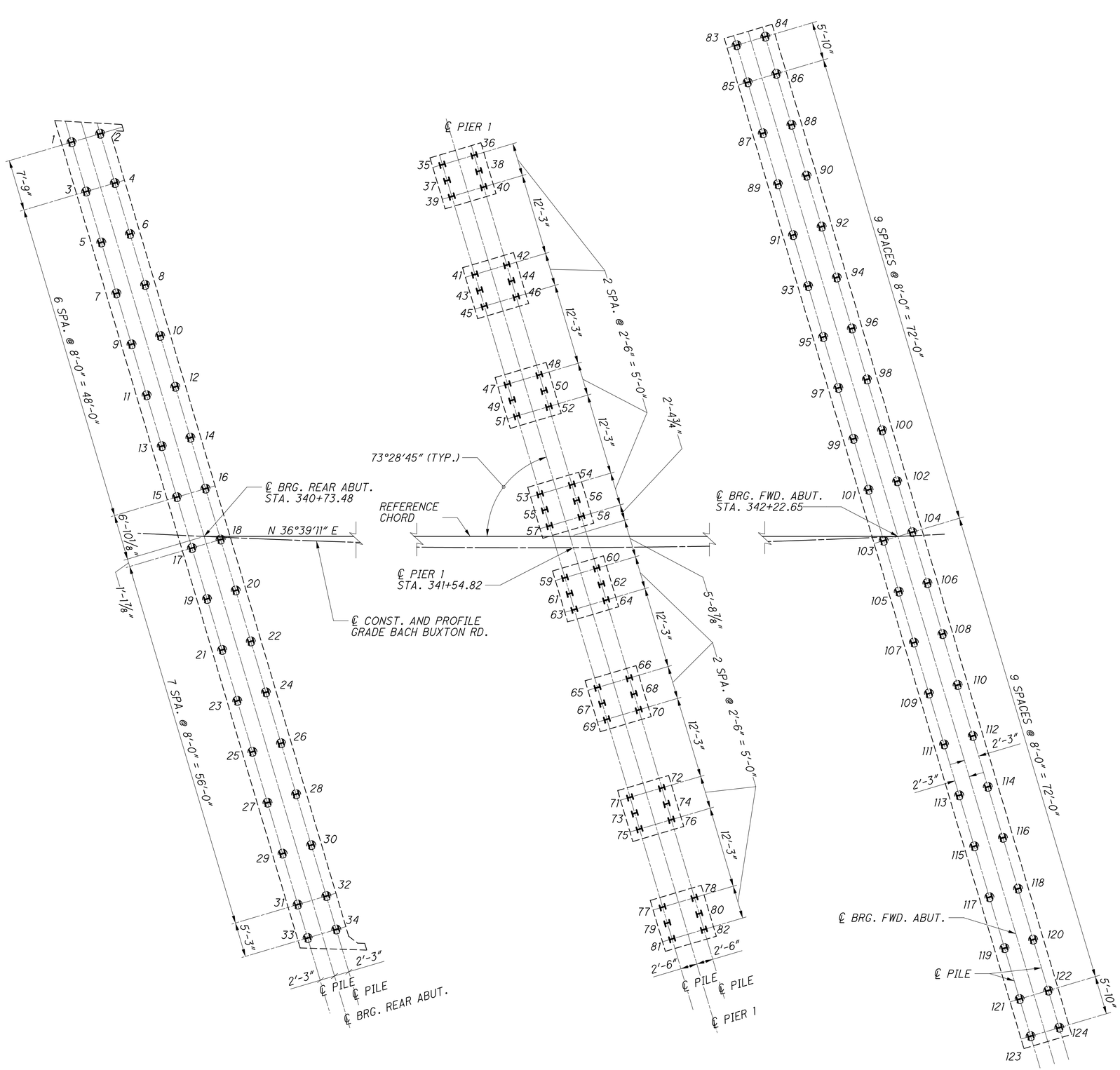
COLUMBUS, OHIO 43215

DESIGNED PJP | DRAWN PJP | REVIEWED MSL | DATE 03/01/19
CHECKED ZTW | REVISED | STRUCTURE FILE NUMBER 13003336

ESTIMATED QUANTITIES
BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

CLE-32-3.50
PID No. 103954



LEGEND:

- H — PROPOSED HP10X42 VERTICAL PILE
- H — PROPOSED HP10X42 VERTICAL PILE WITH PILE SLEEVE

NOTES:

1. FOR PILE DRIVING CONSTRAINTS, SEE THE GENERAL NOTES.

DESIGN AGENCY
TranSystems
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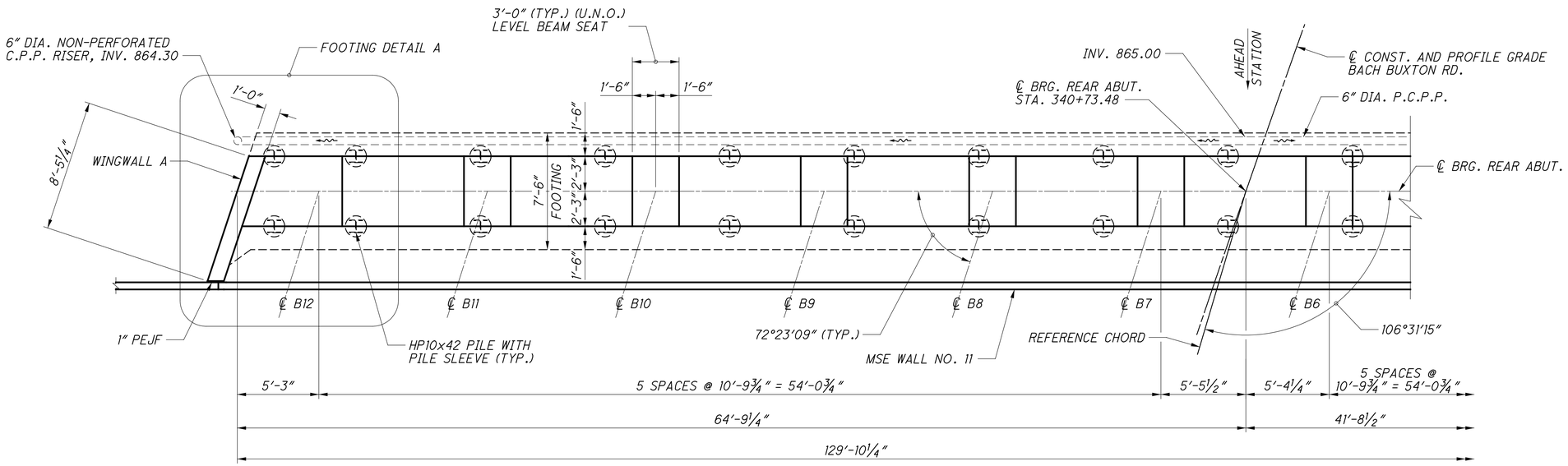
COLUMBUS, OHIO 43215

DESIGNED	DRAWN	REVIEWED	DATE
BCS	BCS	MSL	03/01/19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		1300336	

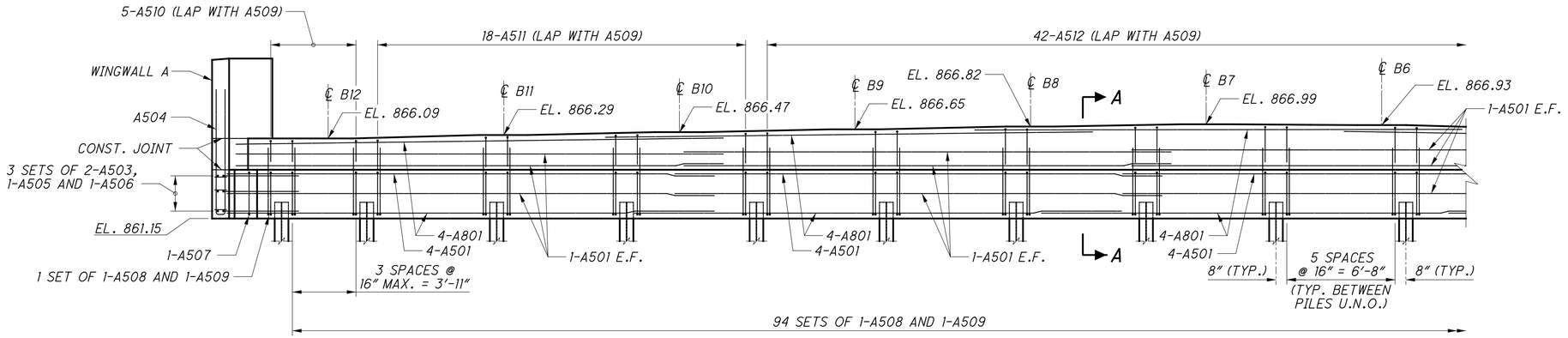
FOUNDATION PLAN

BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

CLE-32-3.50
PID No. 103954



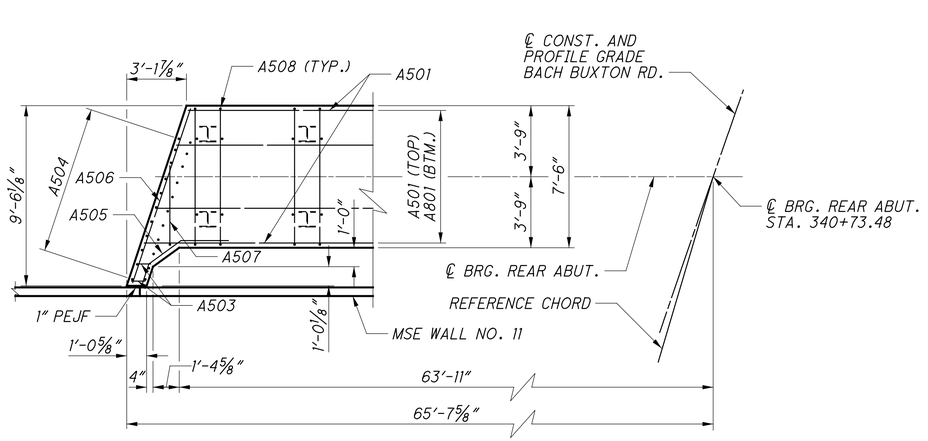
PLAN



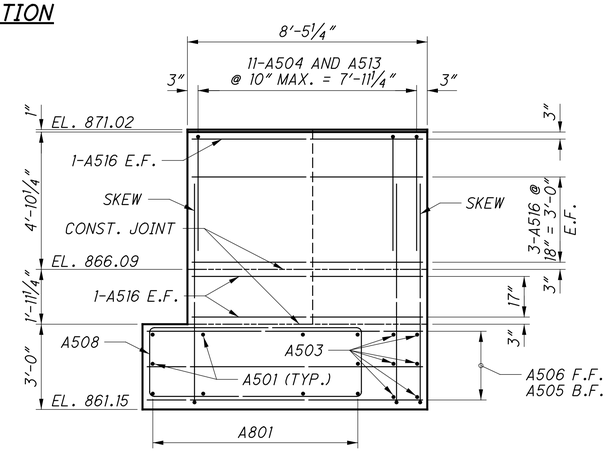
ELEVATION

MINIMUM LAP LENGTH

#5 BAR = 2'-5"
#8 BAR IN FOOTING = 4'-11"
#8 BAR IN STEM = 7'-3"



FOOTING DETAIL A



WINGWALL A

NOTES:

1. FOR SECTION A-A, SEE SHEET 8/54.
2. FOR ABUTMENT DIAPHRAGM DETAILS, SEE SHEET 31/54.
3. FOR PILE LAYOUT, SEE SHEET 6/54.
4. FOR ADDITIONAL NOTES AND DETAILS, SEE STD. DWG. SICD-1-96.

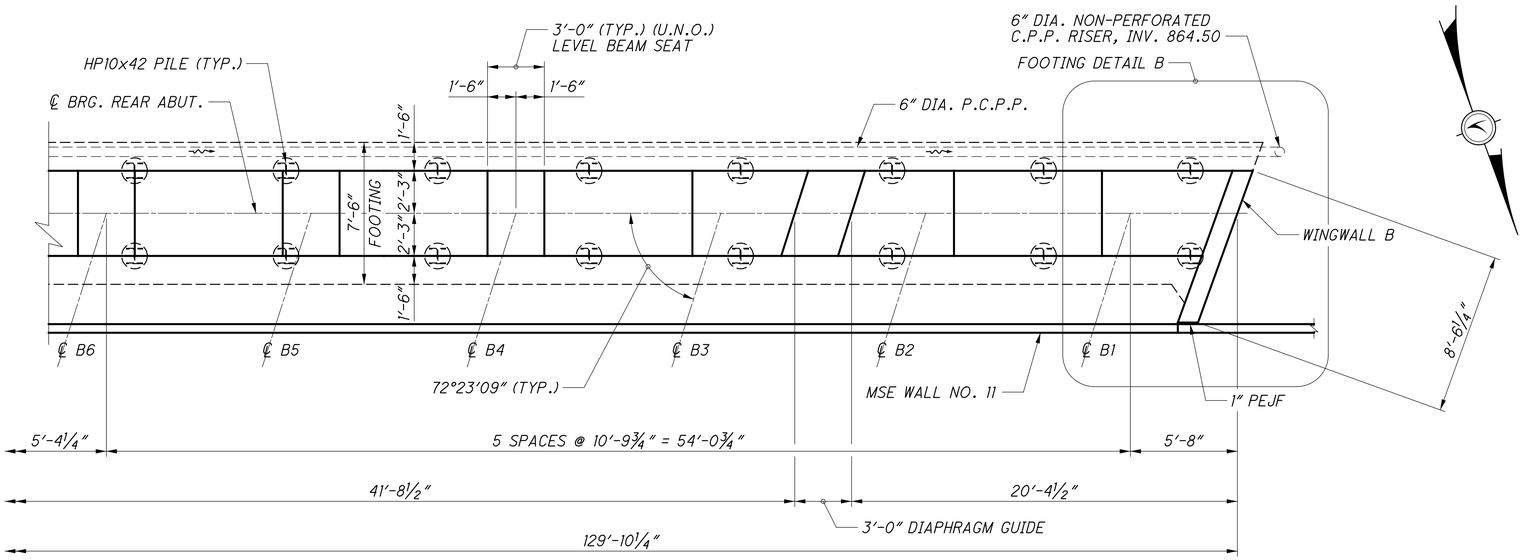
DESIGN AGENCY
TranSystems
400 W. NATIONWIDE BLVD, SUITE 225
COLUMBUS, OHIO 43215

DESIGNED	DRAWN	REVIEWED	DATE
BCS	JDG	MSL	03/01/19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		13003336	

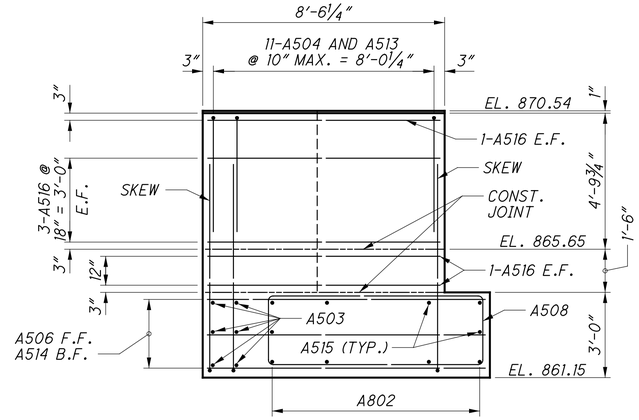
REAR ABUTMENT PLAN AND ELEVATION

BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

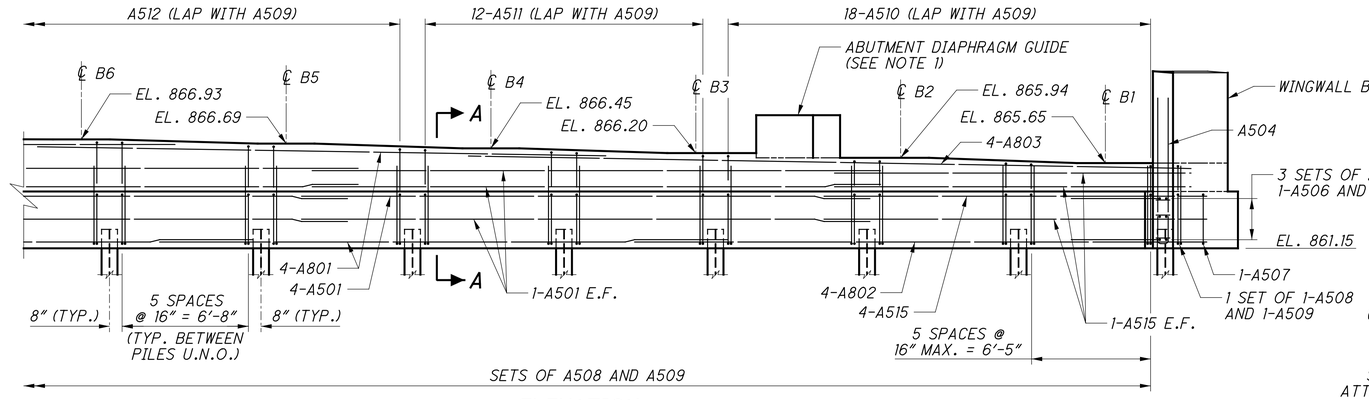
CLE-32-3.50
PID No. 103954



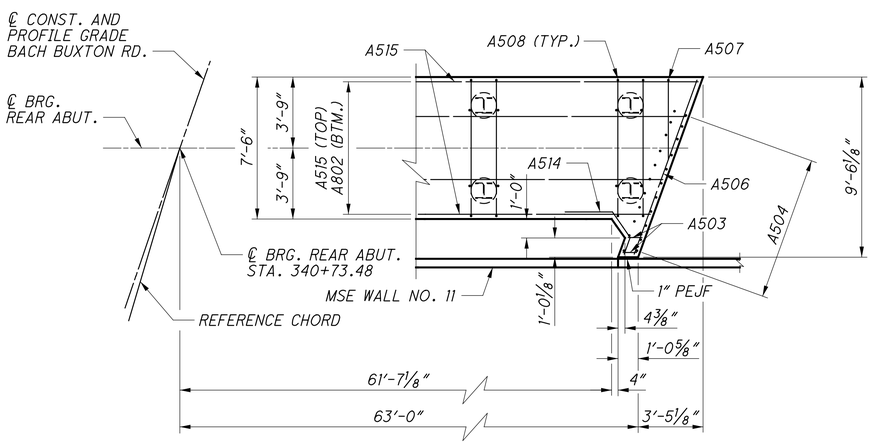
PLAN



WINGWALL B



ELEVATION



FOOTING DETAIL B

SECTION A-A

(6" AGGREGATE BASE BENEATH APPROACH SLAB AND
ITEM 203 - GRANULAR MATERIAL, TYPE B, NOT SHOWN FOR CLARITY)

MINIMUM LAP LENGTH
#5 BAR = 2'-5"
#8 BAR IN FOOTING = 4'-11"
#8 BAR IN STEM = 7'-3"

NOTES:

1. FOR ABUTMENT DIAPHRAGM GUIDE DETAILS, SEE SHEET 11/54.
2. FOR ADDITIONAL NOTES, SEE SHEET 7/54.
3. FOR GEOWALL DETAILS, SEE SHEETS 48/54 AND 49/54.

DESIGN AGENCY
TranSystems
400 W. NATIONWIDE BLVD, SUITE 225
COLUMBUS, OHIO 43215

DESIGNED BCS | DRAWN JDG | CHECKED PJP | REVIEWED MSL | DATE 03/01/19 | STRUCTURE FILE NUMBER 1300336

REAR ABUTMENT PLAN AND ELEVATION
BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

CLE-32-3.50
PID No. 103954

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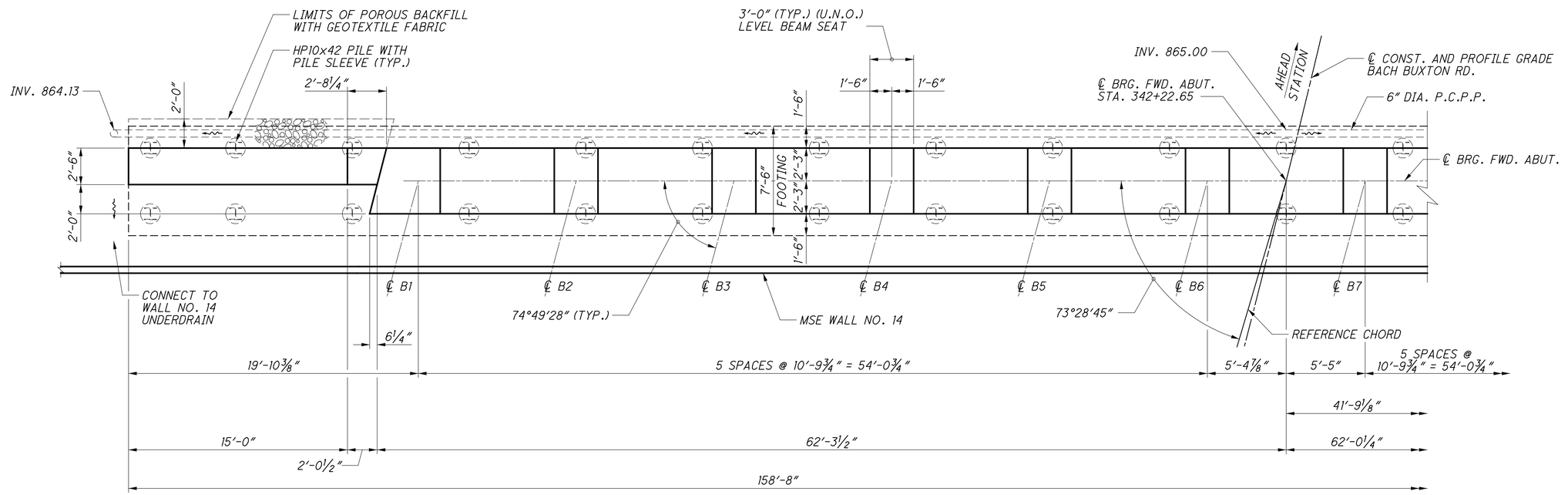

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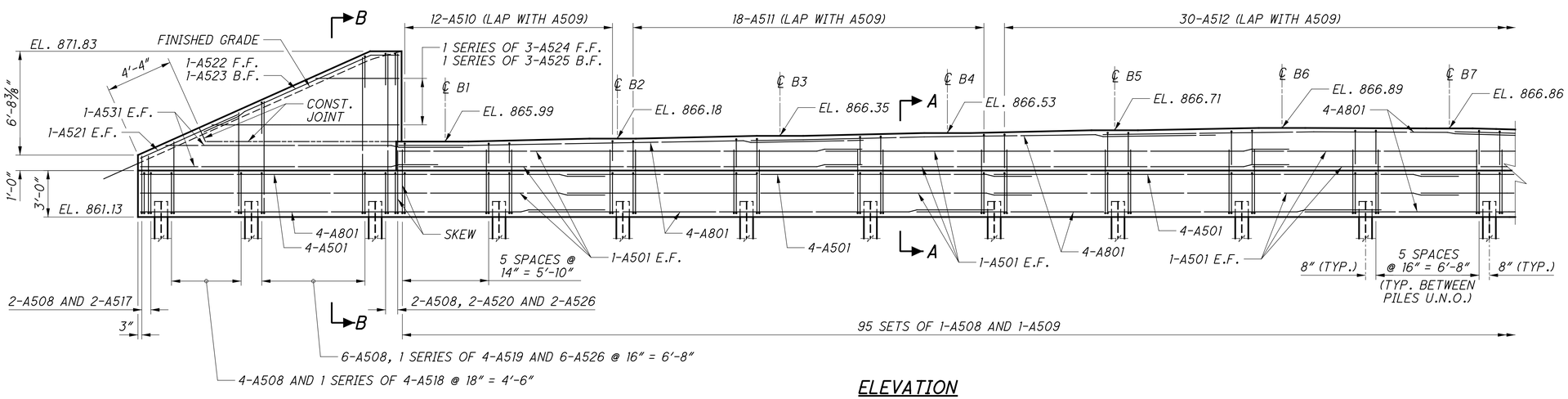

ELEVATION

MINIMUM LAP LENGTH

#5 BAR = 2'-5"
#8 BAR IN FOOTING = 4'-11"
#8 BAR IN STEM = 7'-3"

NOTES:

1. FOR SECTION A-A, SEE SHEET 10/54.
2. FOR SECTION B-B, SEE SHEET 10/54.
3. FOR ABUTMENT DIAPHRAGM DETAILS, SEE SHEET 32/54.
4. FOR PILE LAYOUT, SEE SHEET 6/54.
5. FOR ADDITIONAL NOTES AND DETAILS, SEE STD. DWG. SICD-1-96.

DESIGN AGENCY
TranSystems
400 W. NATIONWIDE BLVD, SUITE 225
COLUMBUS, OHIO 43215

DESIGNED	DRAWN	REVIEWED	DATE
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PJP		1300336	

FORWARD ABUTMENT DETAILS

BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

CLE-32-3.50
PID No. 103954

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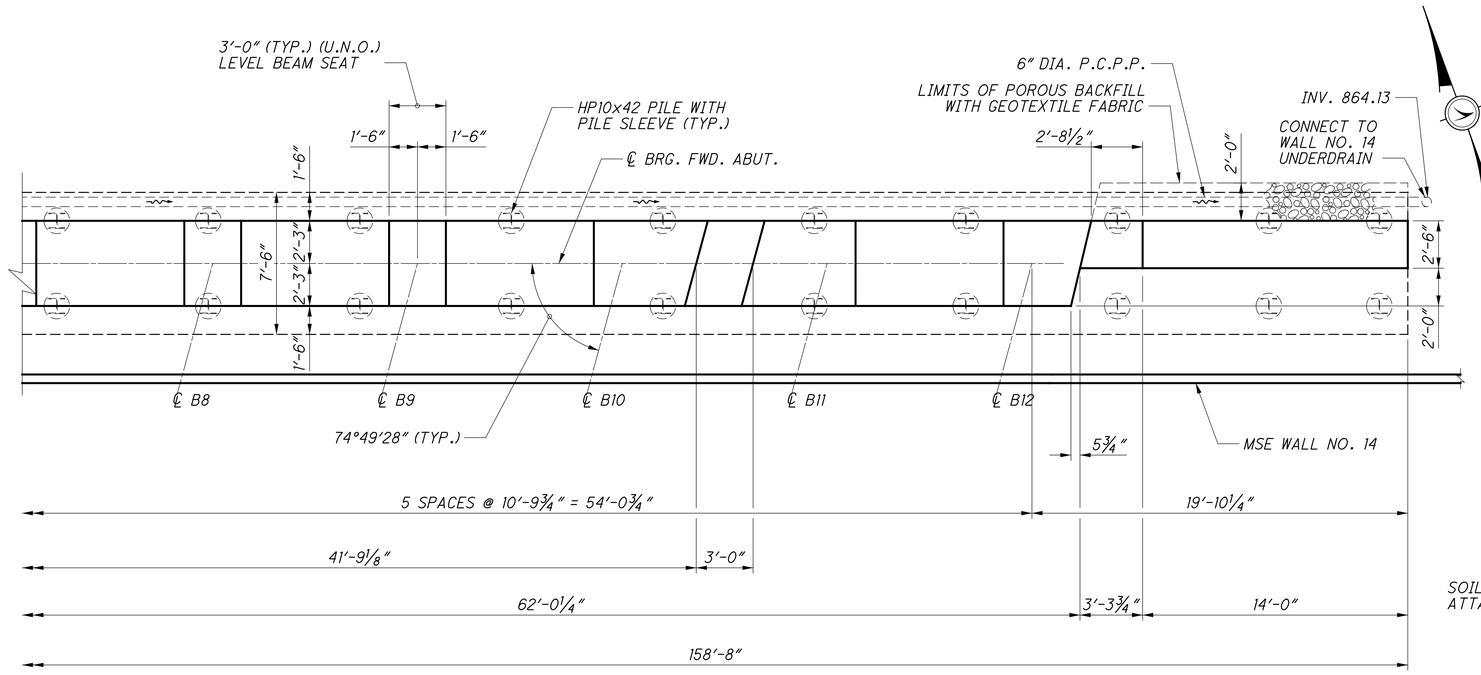
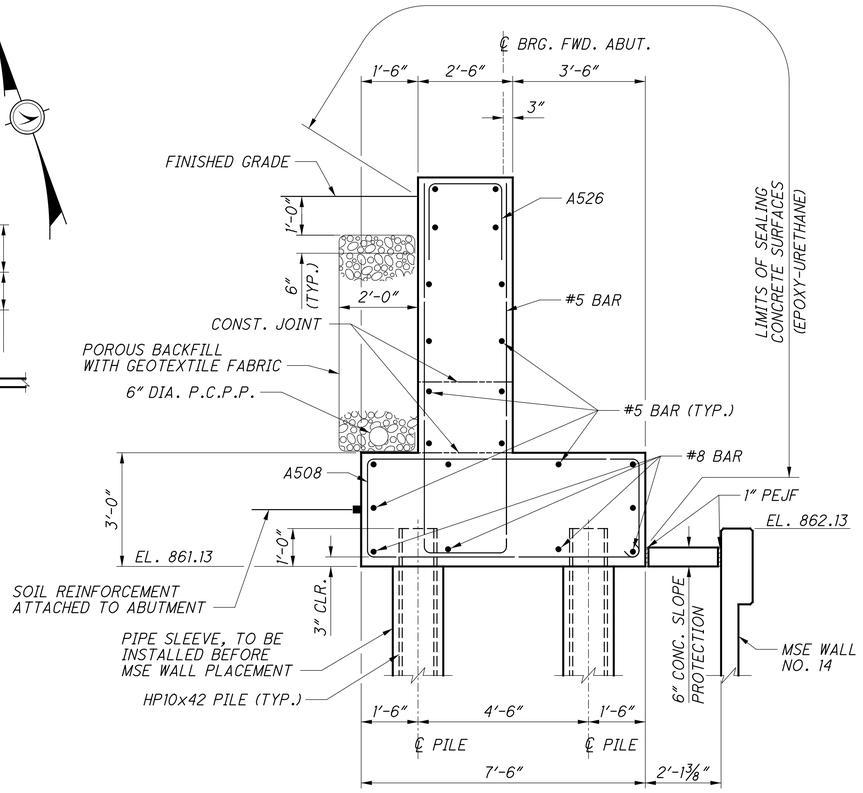
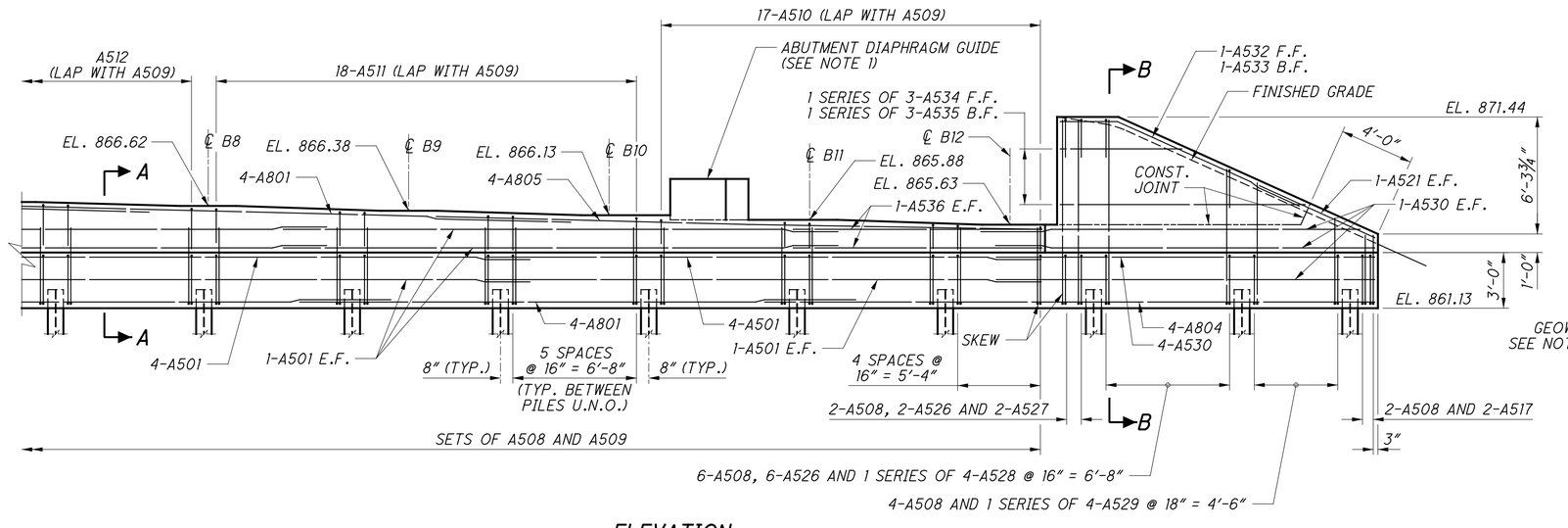
736



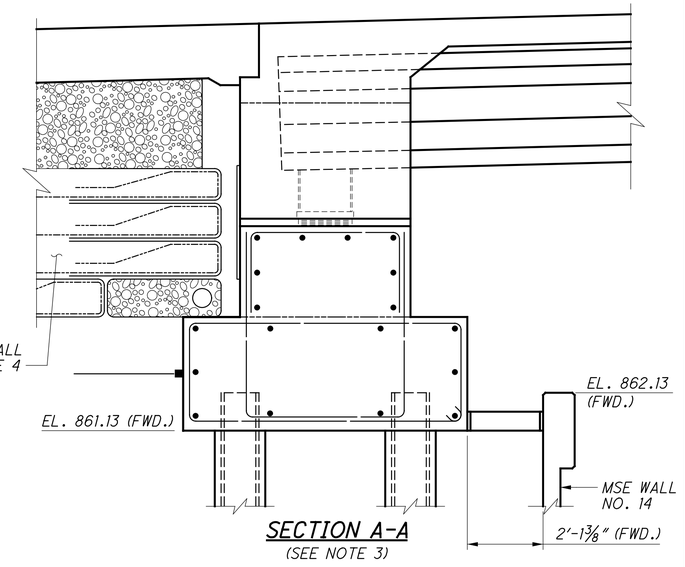
PLAN



SECTION B-B



ELEVATION



SECTION A-A
(SEE NOTE 3)

MINIMUM LAP LENGTH
#5 BAR = 2'-5"
#8 BAR IN FOOTING = 4'-11"
#8 BAR IN STEM = 7'-3"

NOTES:

1. FOR ABUTMENT DIAPHRAGM GUIDE DETAILS, SEE SHEET 11/54 .
2. FOR ADDITIONAL NOTES, SEE SHEET 7/54 .
3. FOR SECTION A-A DETAILS NOT SHOWN, SEE SECTION A-A ON SHEET 8/54 .
4. FOR GEOWALL DETAILS, SEE SHEETS 48/54 AND 49/54 .

DESIGN AGENCY
TranSystems
400 W. NATIONWIDE BLVD, SUITE 225
COLUMBUS, OHIO 43215

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FORWARD ABUTMENT DETAILS
BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

CLE-32-3.50
PID No. 103954

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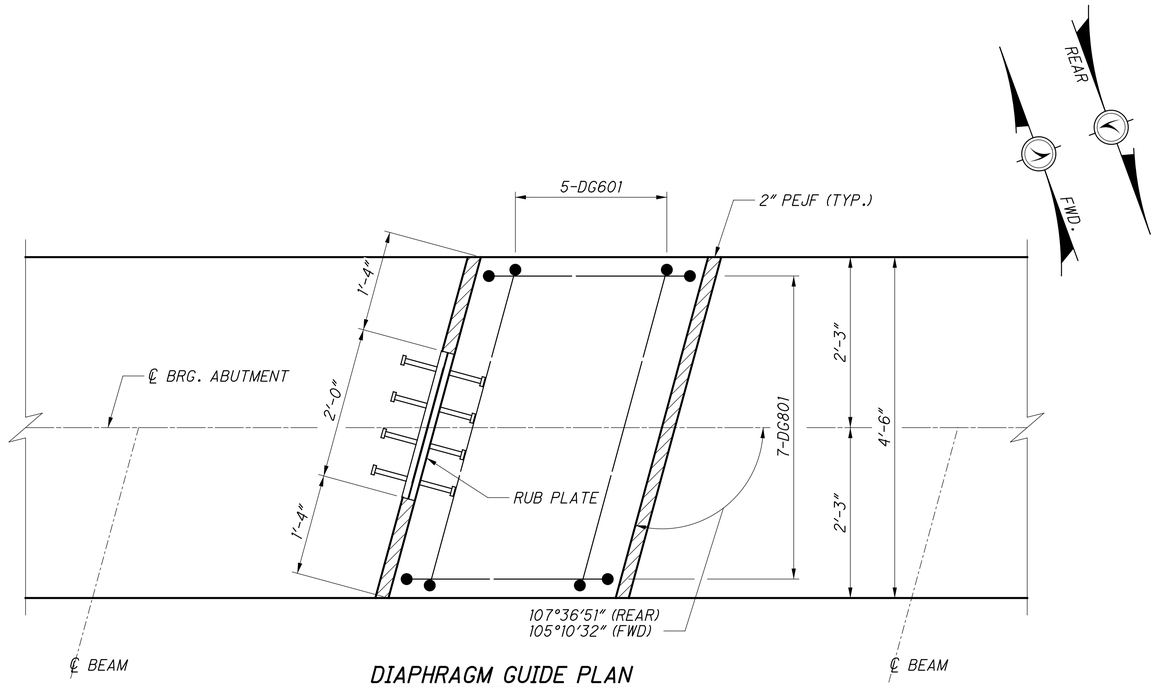
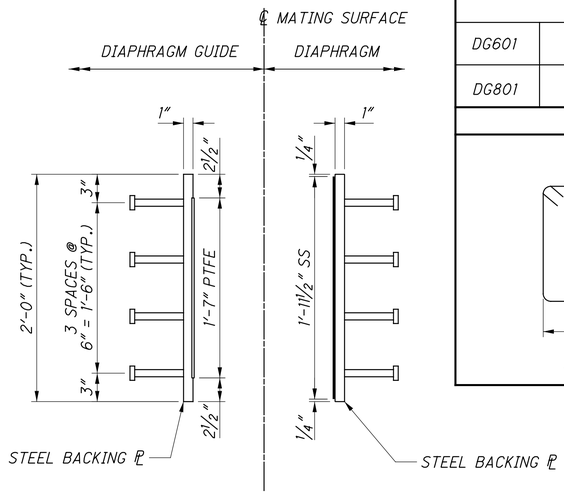


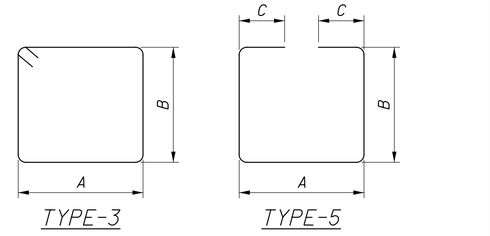
DIAPHRAGM GUIDE PLAN

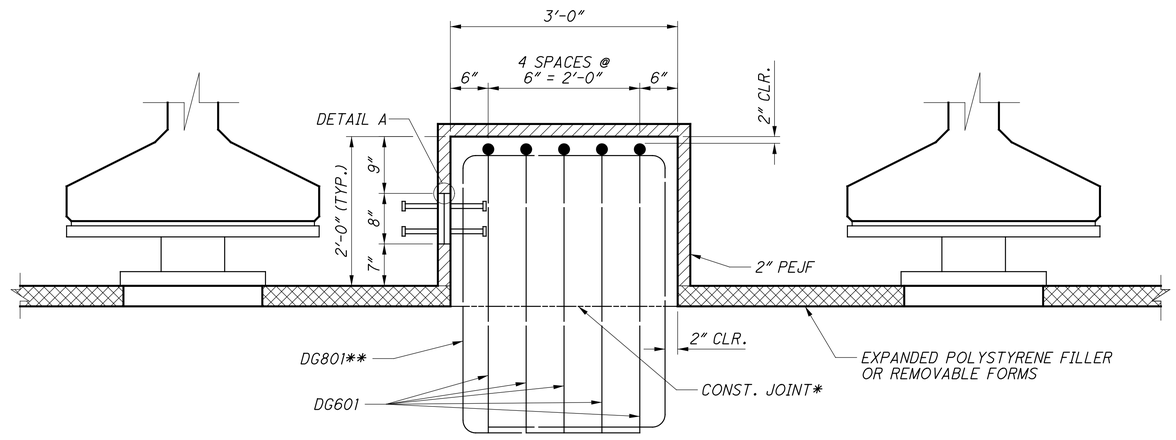


TOP VIEW

MARK	NUMBER REAR ABUTMENT TOTAL	NUMBER FORWARD ABUTMENT TOTAL	TYPE	DIMENSIONS A	B	C
DG601	5	5	3	4'-3"	3'-8½"	
DG801	7	7	5	2'-8"	3'-7"	2'-4"

BENDING DIAGRAMS

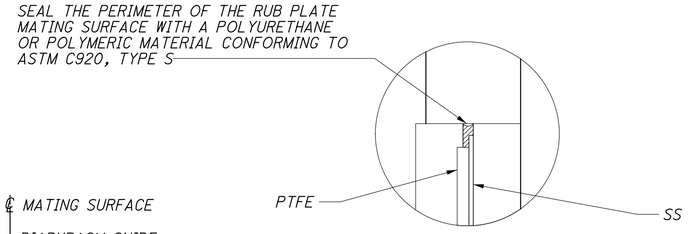




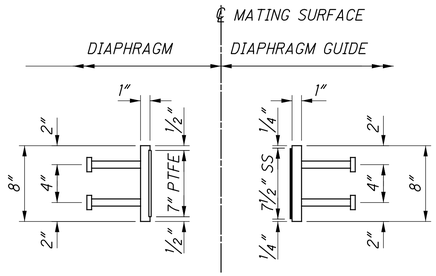
DIAPHRAGM GUIDE ELEVATION

* - FINISH THE SURFACE OF THE CONSTRUCTION JOINT WITH A SERRATED TROWEL. THE SERRATIONS SHALL BE ¼" DEEP MINIMUM.

** - PLACE TO AVOID INTERFERENCE WITH LONGITUDINAL REINFORCEMENT IN THE BEAM SEAT.



DETAIL A



END VIEW

RUB PLATE DETAILS

SS = STAINLESS STEEL
PTFE = POLYTETRAFLUORETHYLENE

NOTES:

1. FOR NOTES, SEE STD. DWG. SICD-2-14.
2. THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES OF CAULK, PEJF, CONCRETE, REINFORCEMENT AND RUB PLATES UNDER ITEM 511 - SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN.

DESIGN AGENCY
TranSystems
400 W. NATIONWIDE BLVD, SUITE 225
COLUMBUS, OHIO 43215

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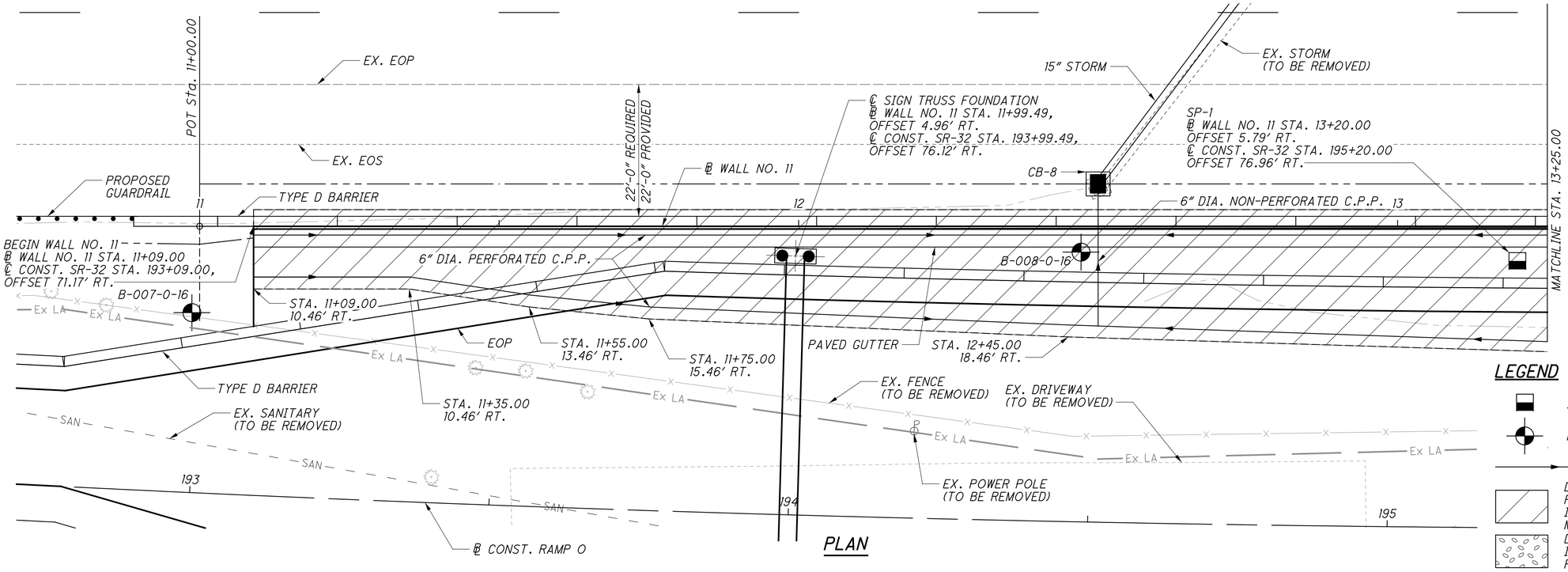
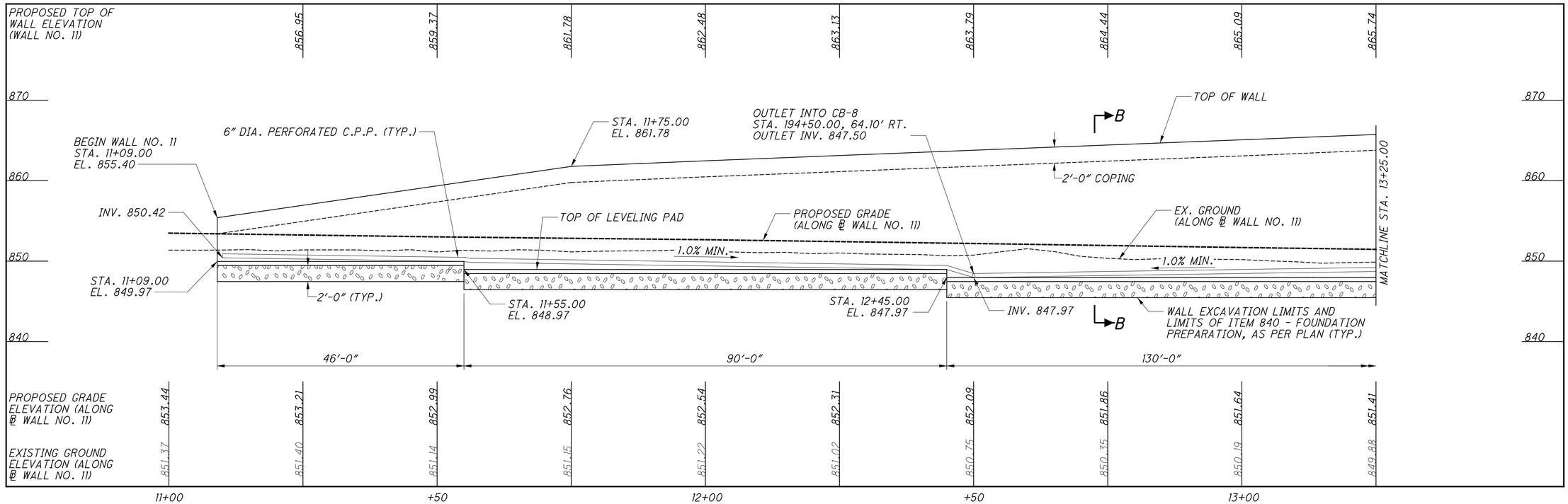
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		1300336	

ABUTMENT DIAPHRAGM GUIDE DETAILS

BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

CLE-32-3.50
PID No. 103954





PROFILE ALONG ℄ WALL NO. 11

DESIGN AGENCY
TranSystems
400 W. NATIONWIDE BLVD, SUITE 225
COLUMBUS, OHIO 43215

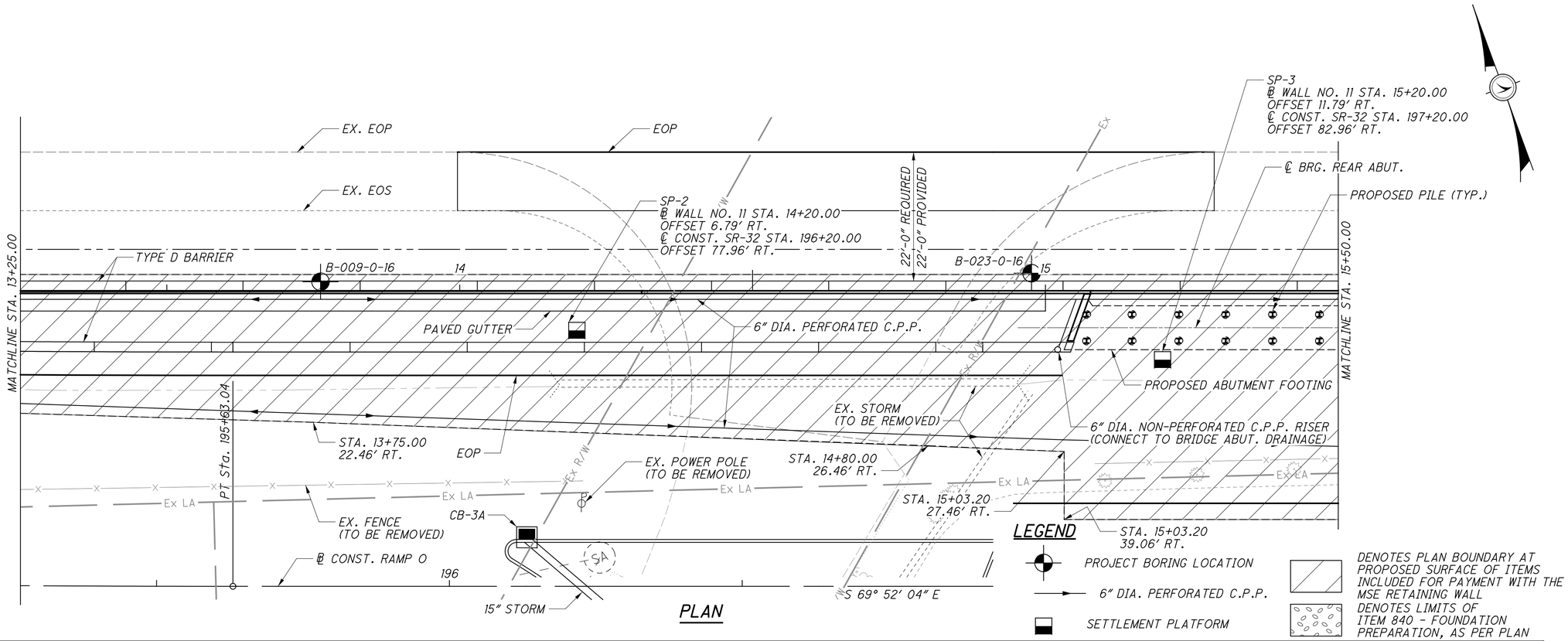
DESIGNED	DRAWN	REVIEWED	DATE
BCS	BCS	MSL	03/01/19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		13003336	

RETAINING WALL NO. 11 PLAN AND ELEVATION

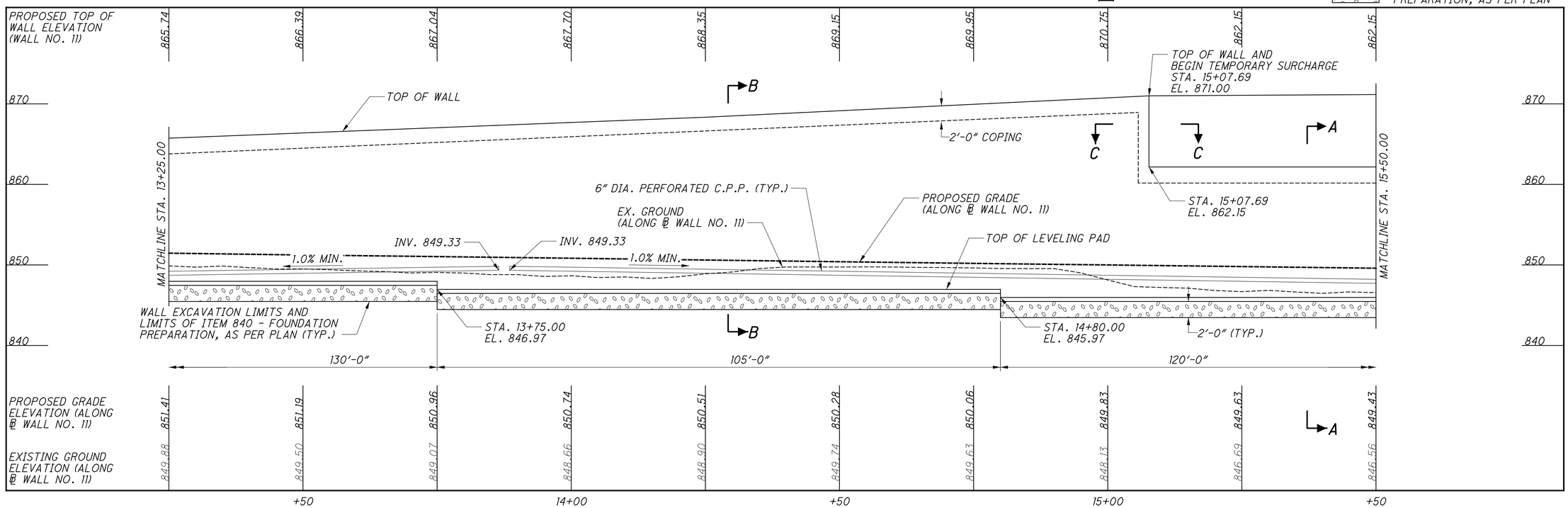
RETAINING WALL NO. 11

CLE-32-3.50

PID No. 103954



PLAN



PROFILE ALONG ℄ WALL NO. 11

DESIGN AGENCY
TranSystems
400 W. NATIONWIDE BLVD, SUITE 225
COLUMBUS, OHIO 43215

DESIGNED	DRAWN	REVIEWED	DATE
BCS	BCS	MSL	03/01/19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		1300336	

RETAINING WALL NO. 11 PLAN AND ELEVATION
RETAINING WALL NO. 11

CLE-32-3.50
PID No. 103954

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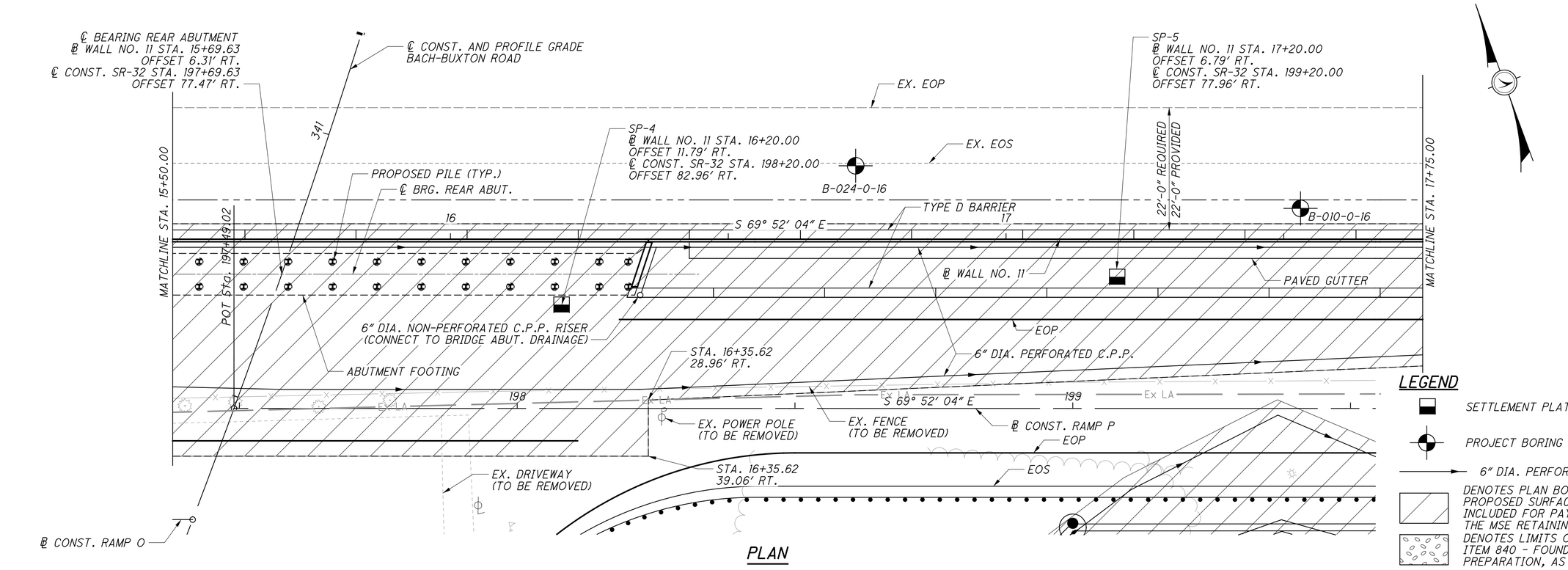
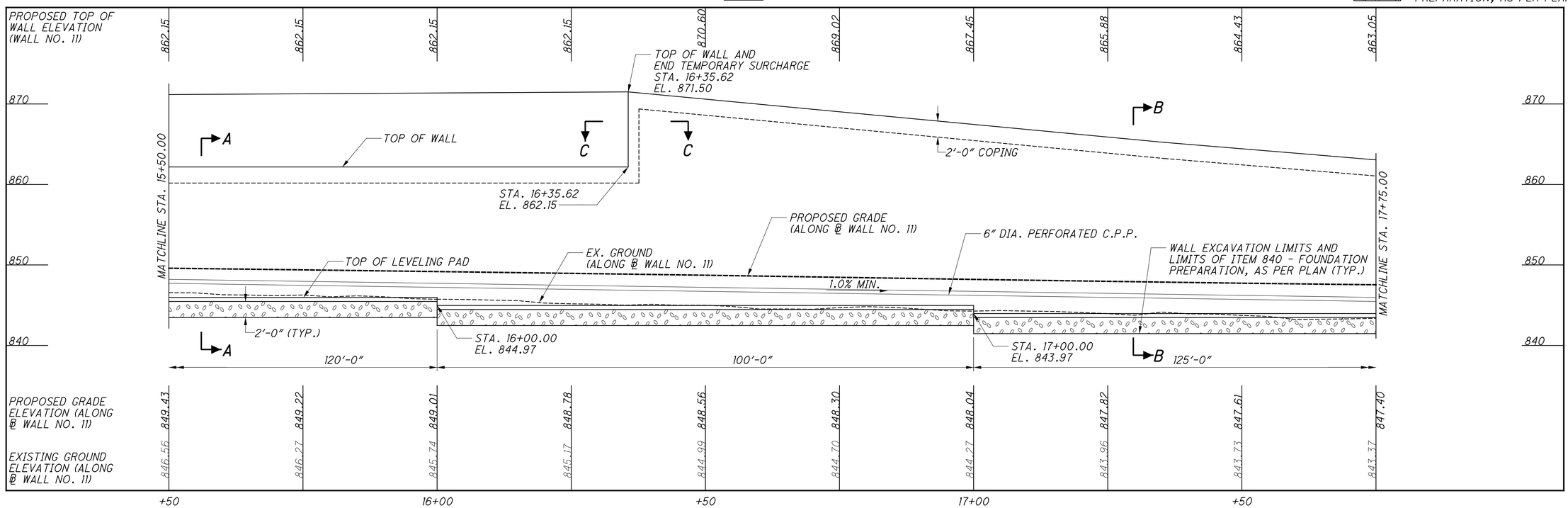


PLAN



PROFILE ALONG ℄ WALL NO. 11

DESIGN AGENCY
TranSystems
400 W. NATIONWIDE BLVD, SUITE 225
COLUMBUS, OHIO 43215

DESIGNED	DRAWN	REVIEWED	DATE
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CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		1300336	

RETAINING WALL NO. 11 PLAN AND ELEVATION

RETAINING WALL NO. 11

CLE-32-3.50
PID No. 103954

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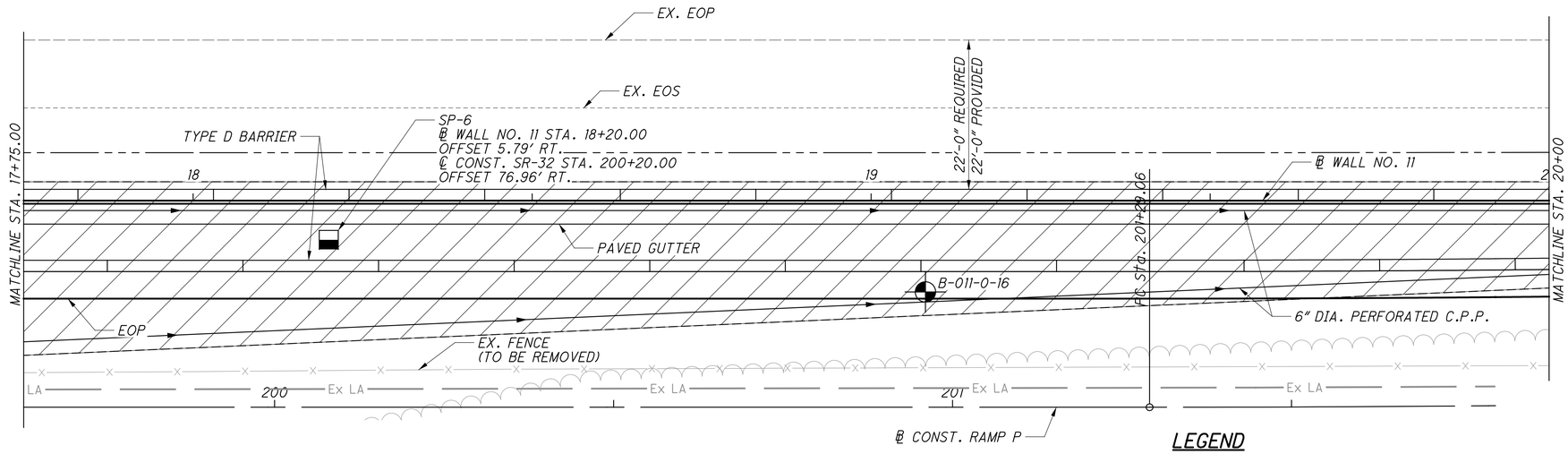
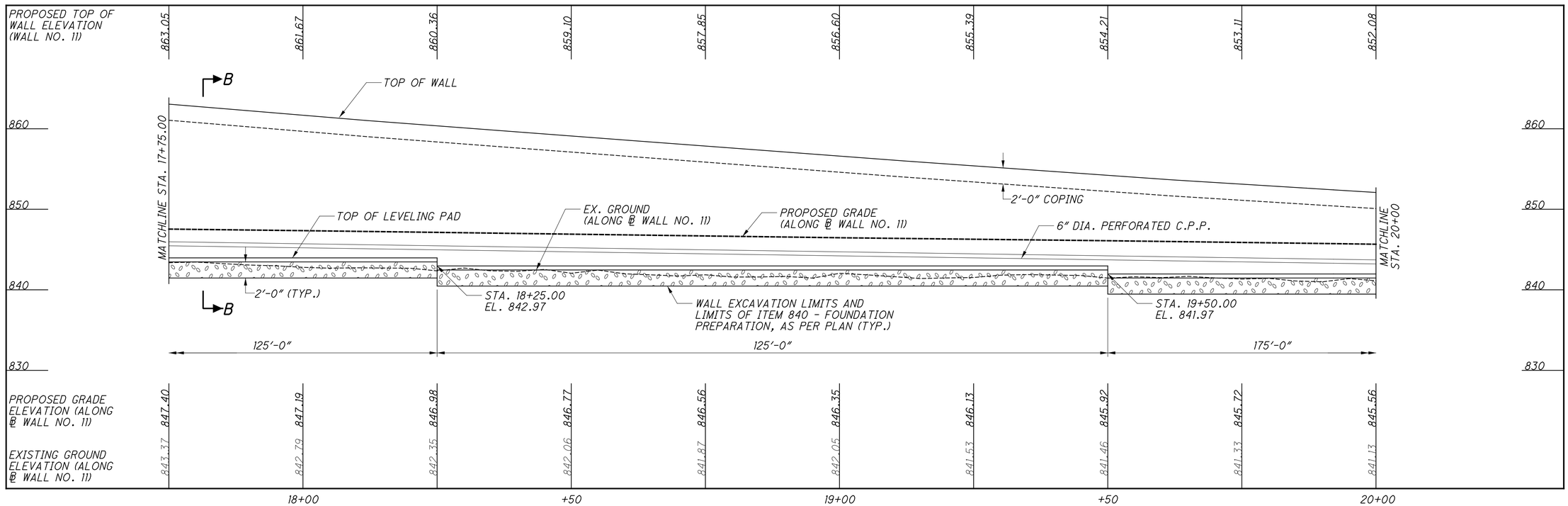


PLAN

LEGEND

- SETTLEMENT PLATFORM
- PROJECT BORING LOCATION
- 6" DIA. PERFORATED C.P.P.
- DENOTES PLAN BOUNDARY AT PROPOSED SURFACE OF ITEMS INCLUDED FOR PAYMENT WITH THE MSE RETAINING WALL
- DENOTES LIMITS OF ITEM 840 - FOUNDATION PREPARATION, AS PER PLAN



PROFILE ALONG ℄ WALL NO. 11

DESIGN AGENCY
TranSystems
401 W. NATIONWIDE BLVD, SUITE 225
COLUMBUS, OHIO 43215

DESIGNED	DRAWN	REVIEWED	DATE
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RETAINING WALL NO. 11 PLAN AND ELEVATION

RETAINING WALL NO. 11

CLE-32-3.50
PID No. 103954

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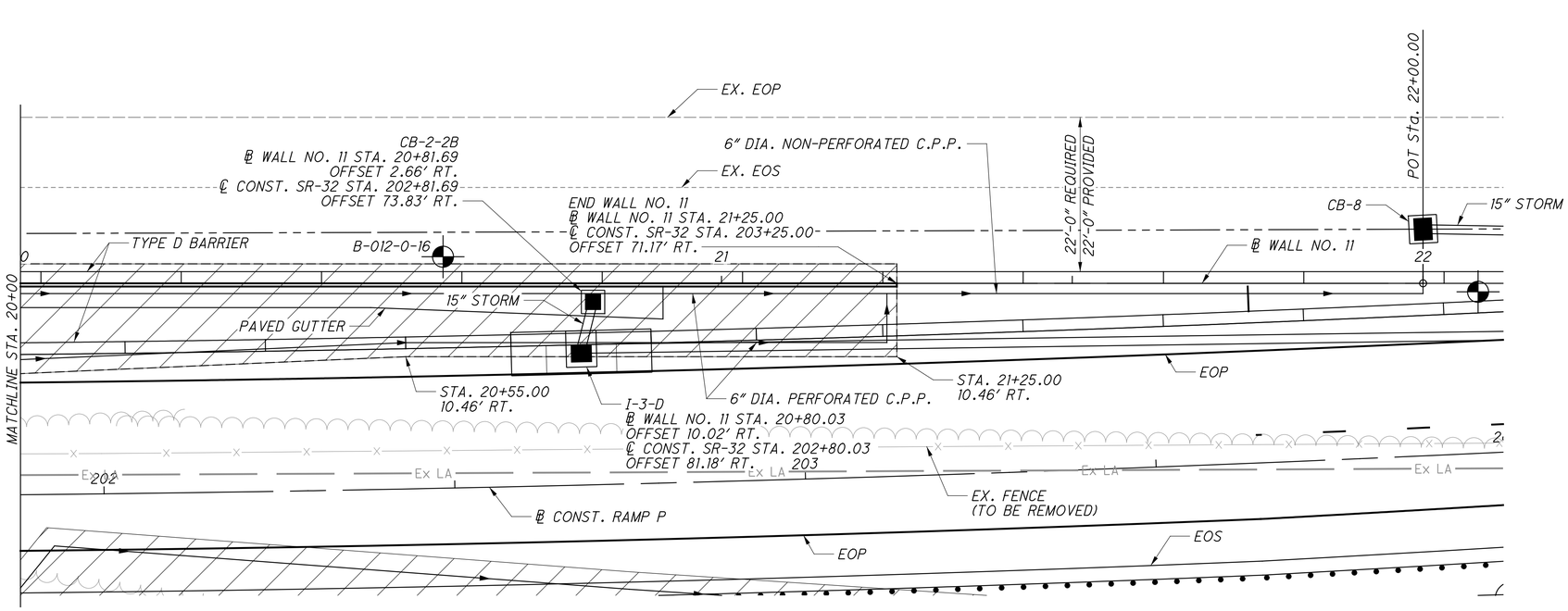
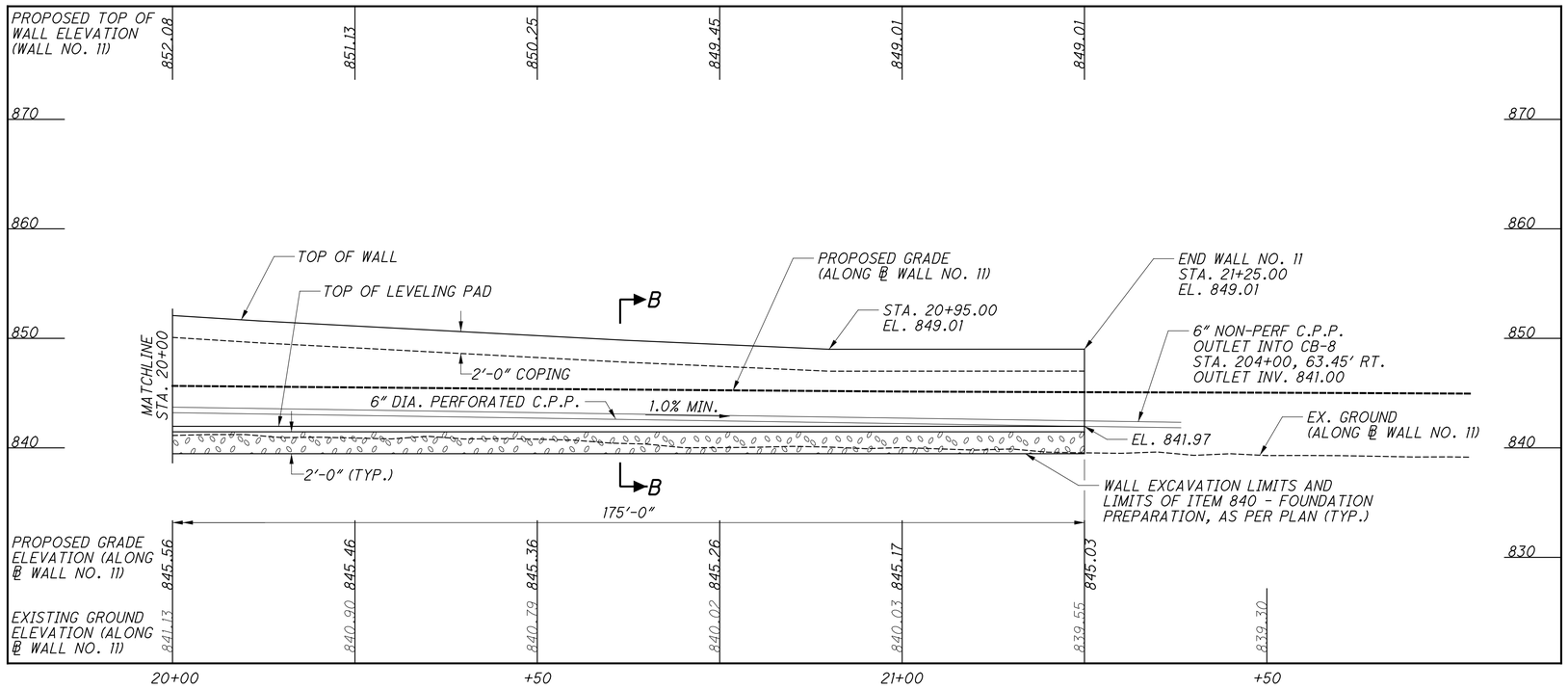


PLAN



PROFILE ALONG ℄ WALL NO. 11

LEGEND

- PROJECT BORING LOCATION
- 6" DIA. PERFORATED C.P.P. (U.N.O.)
- DENOTES PLAN BOUNDARY AT PROPOSED SURFACE OF ITEMS INCLUDED FOR PAYMENT WITH THE MSE RETAINING WALL
- DENOTES LIMITS OF ITEM 840 - FOUNDATION PREPARATION, AS PER PLAN

DESIGN AGENCY
TranSystems
400 W. NATIONWIDE BLVD, SUITE 225
COLUMBUS, OHIO 43215

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RETAINING WALL NO. 11 PLAN AND ELEVATION

RETAINING WALL NO. 11

CLE-32-3.50
PID No. 103954

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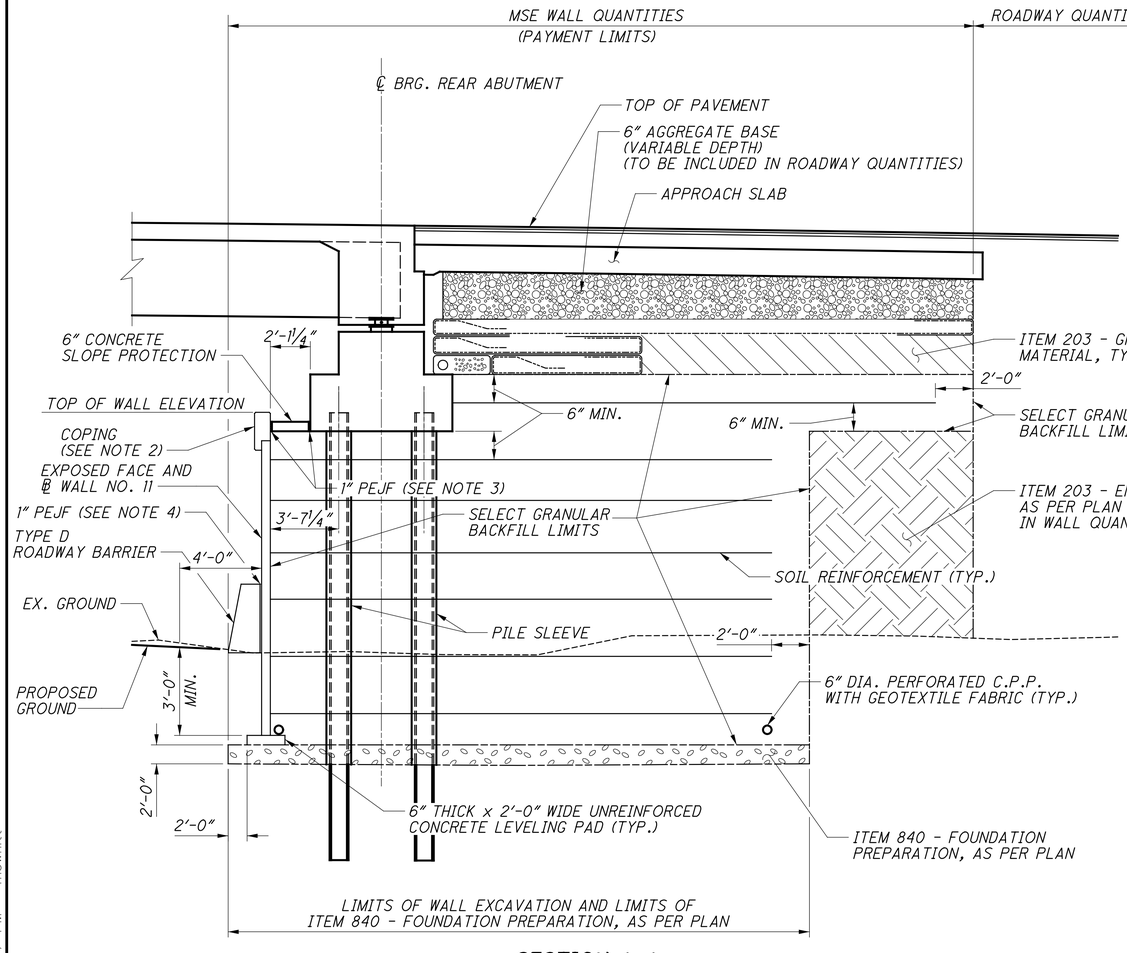
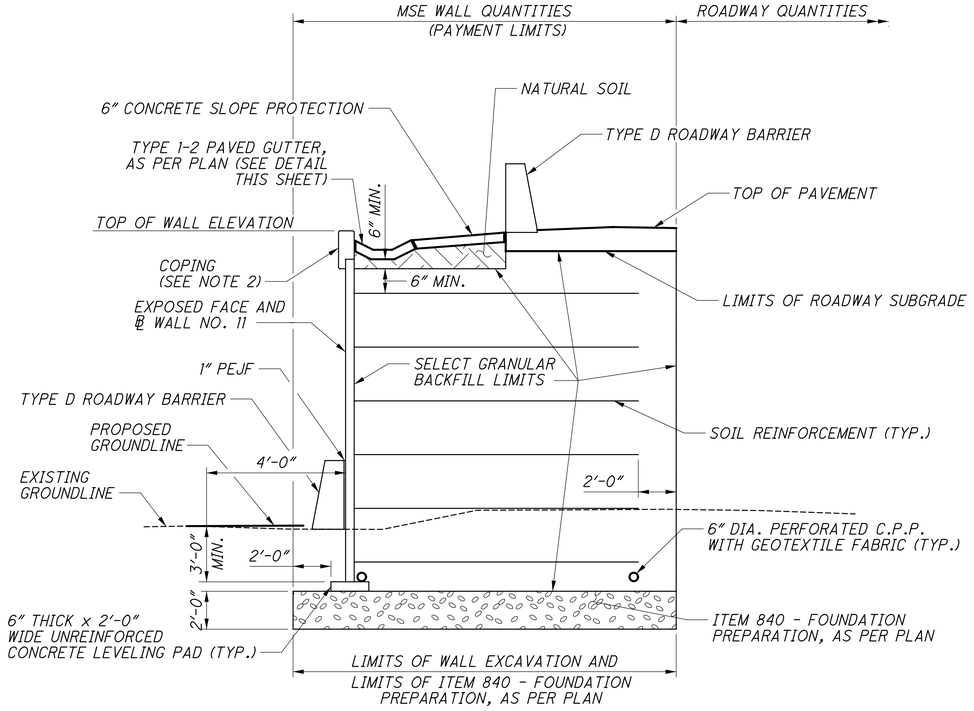
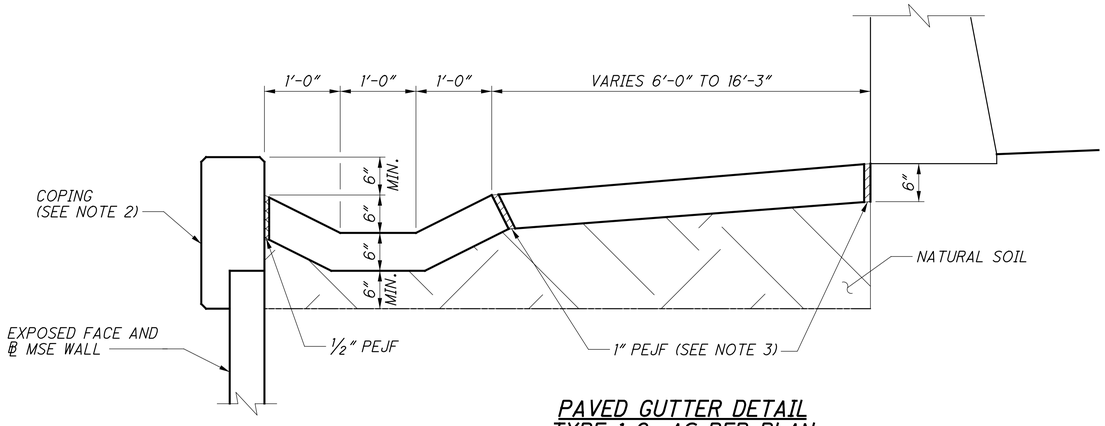


SECTION A-A



SECTION B-B



PAVED GUTTER DETAIL TYPE 1-2, AS PER PLAN

(FOR ADDITIONAL DETAILS SEE STD. CONSTR. DWG DM-2.1)

NOTES:

1. SEE PLAN AND PROFILE DRAWINGS FOR BORING LOCATIONS.
2. FOR MSE WALL AND COPING DETAIL, SEE SHEET 21/54 .
3. 1″ PEJF TO BE INCLUDED WITH ITEM 601 - CONCRETE SLOPE PROTECTION, AS PER PLAN FOR PAYMENT.
4. 1″ PEJF BEHIND TYPE D BARRIER IS INCLUDED WITH CLE-32-0374 BRIDGE QUANTITIES AND IS PAID FOR WITH ITEM 516 - 1″ PREFORMED EXPANSION JOINT FILLER.
5. FOR GEOWALL DETAILS, SEE SHEETS 48/54 AND 49/54 .

DESIGN AGENCY
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COLUMBUS, OHIO 43215

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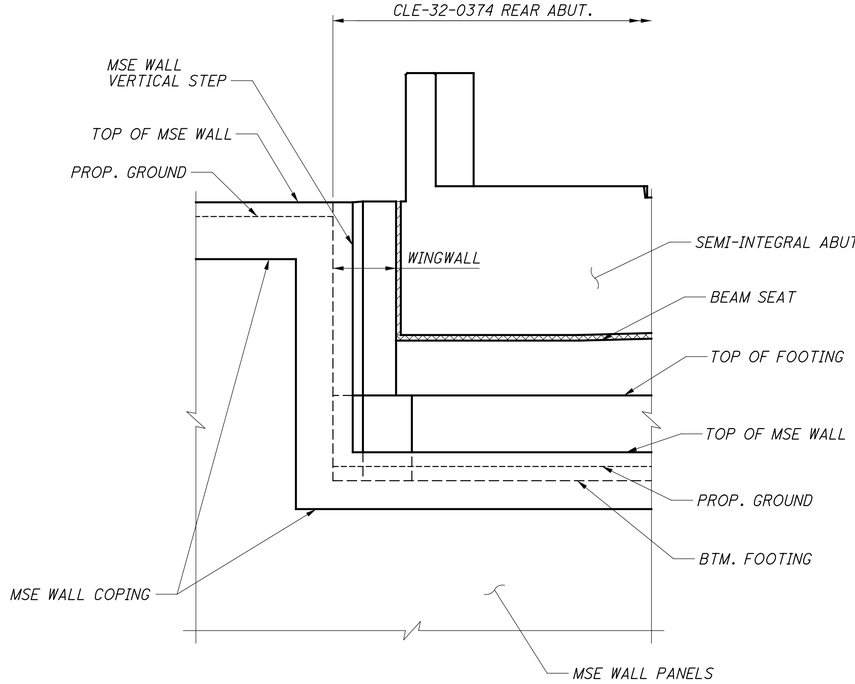
CHECKED PJP | REVISED | STRUCTURE FILE NUMBER 1300336

WALL DETAILS - WALL NO. 11

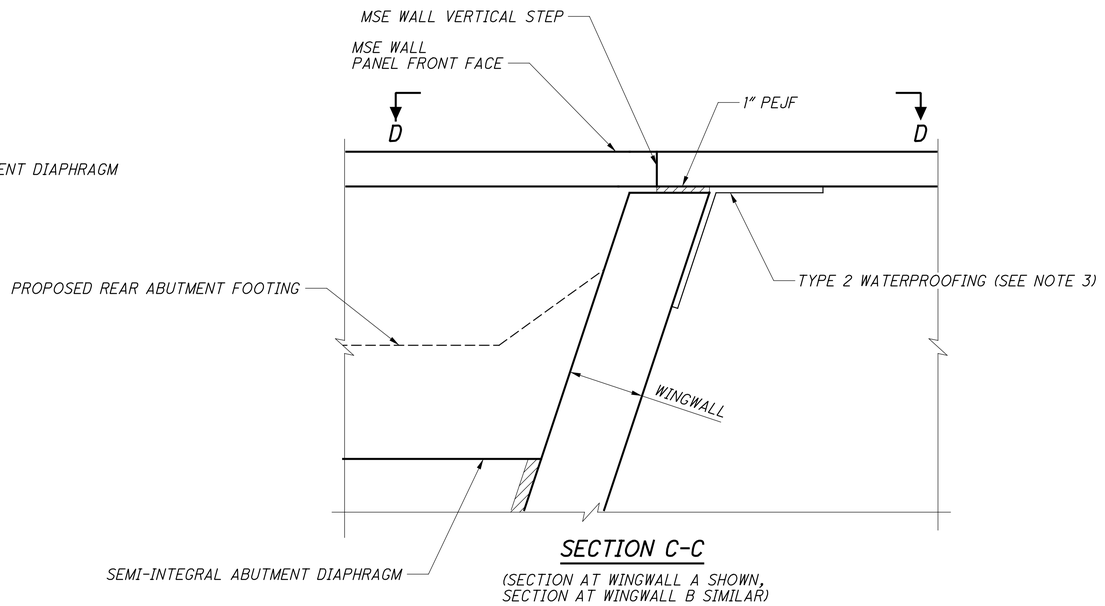
RETAINING WALL NO. 11

CLE-32-3.50
PID No. 103954



VIEW D-D

(VIEW AT WINGWALL A SHOWN, VIEW AT WINGWALL B SIMILAR)



SECTION C-C

(SECTION AT WINGWALL A SHOWN, SECTION AT WINGWALL B SIMILAR)

NOTES:

1. SEE PLAN AND PROFILE DRAWINGS FOR BORING LOCATIONS.
2. FOR MSE WALL AND COPING DETAIL, SEE SHEET 21/54 .
3. PLACE TYPE 2 WATERPROOFING 3' WIDE, CENTERED ON VERTICAL JOINT FROM BOTTOM OF ABUTMENT FOOTING TO TOP OF MSE WALL COPING.

DESIGN AGENCY
TranSystems
400 W. NATIONWIDE BLVD, SUITE 225
COLUMBUS, OHIO 43215

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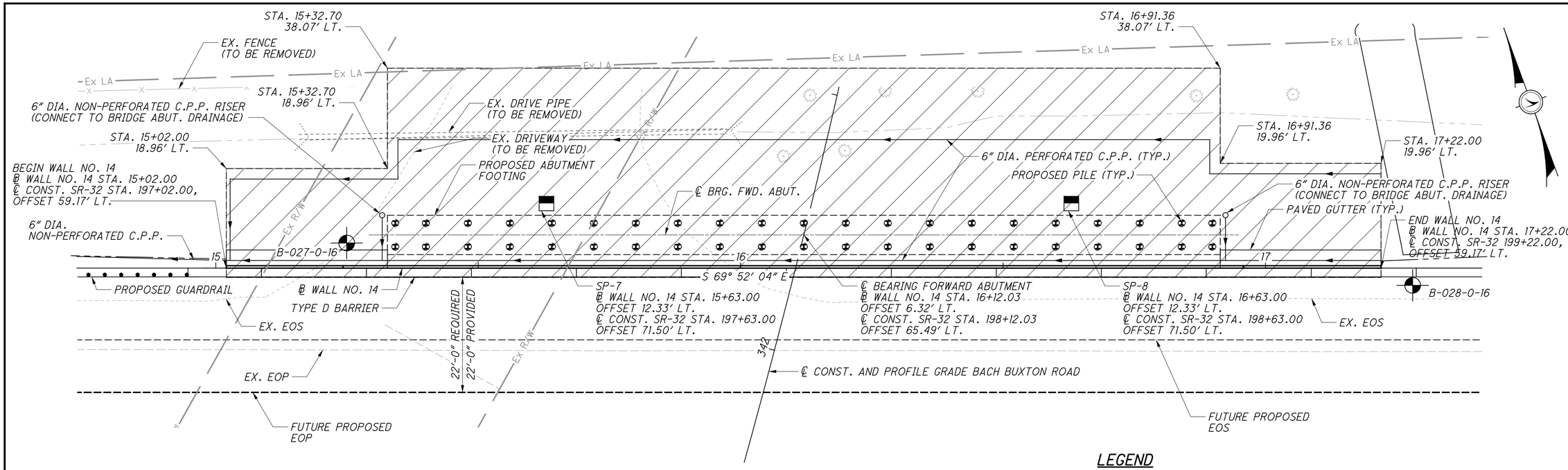
PJP		1300336	

WALL DETAILS - WALL NO. 11

RETAINING WALL NO. 11

CLE-32-3.50

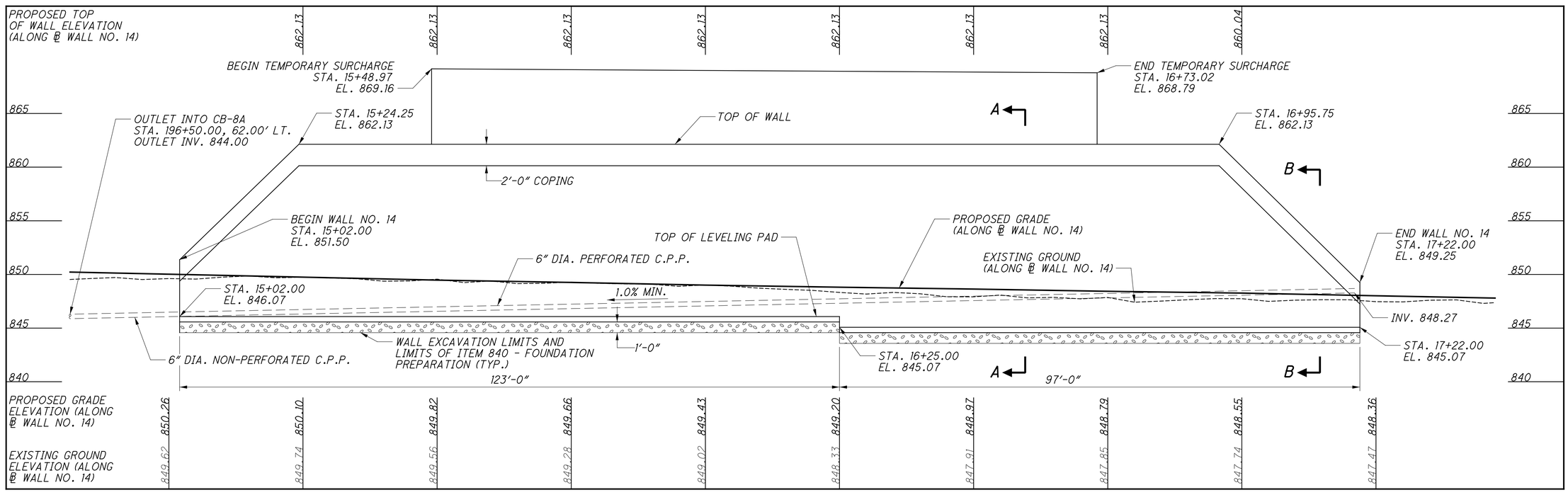
PID No. 103954



PLAN

LEGEND

- SETTLEMENT PLATFORM
- PROJECT BORING LOCATION
- 6" DIA. PERFORATED C.P.P.
- DENOTES PLAN BOUNDARY AT PROPOSED SURFACE OF ITEMS INCLUDED FOR PAYMENT WITH THE MSE RETAINING WALL
- DENOTES LIMITS OF ITEM 840 - FOUNDATION PREPARATION



WALL NO. 14 ELEVATION

DESIGN AGENCY
TranSystems
400 W. NATIONWIDE BLVD, SUITE 225
COLUMBUS, OHIO 43215

DATE 03/01/19
REVIEWED MSL
STRUCTURE FILE NUMBER 1300336
DRAWN BCS
REVISED
DESIGNED BCS
CHECKED PJP

RETAINING WALL NO. 14 PLAN AND ELEVATION
RETAINING WALL NO. 14

CLE-32-3.50
PID No. 103954

19 / 54

605
736

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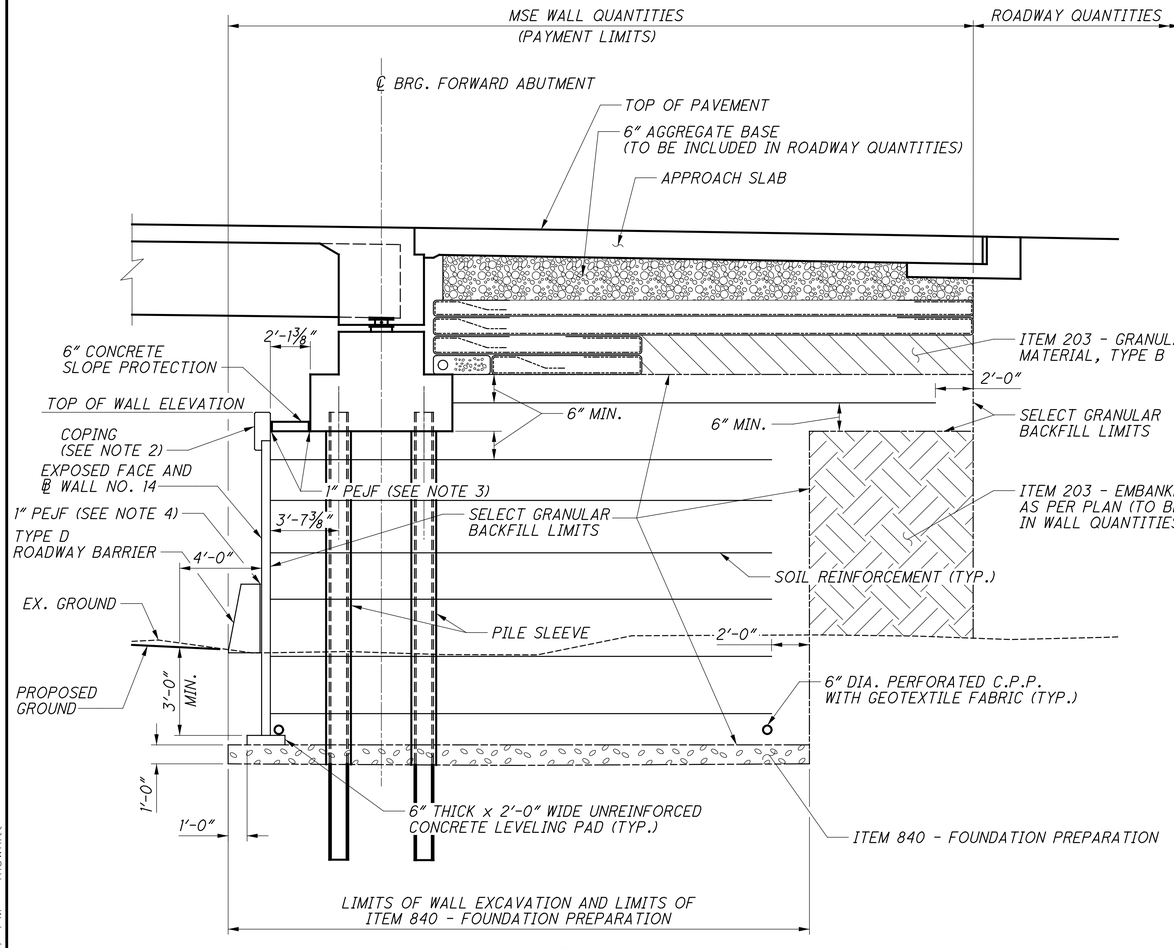
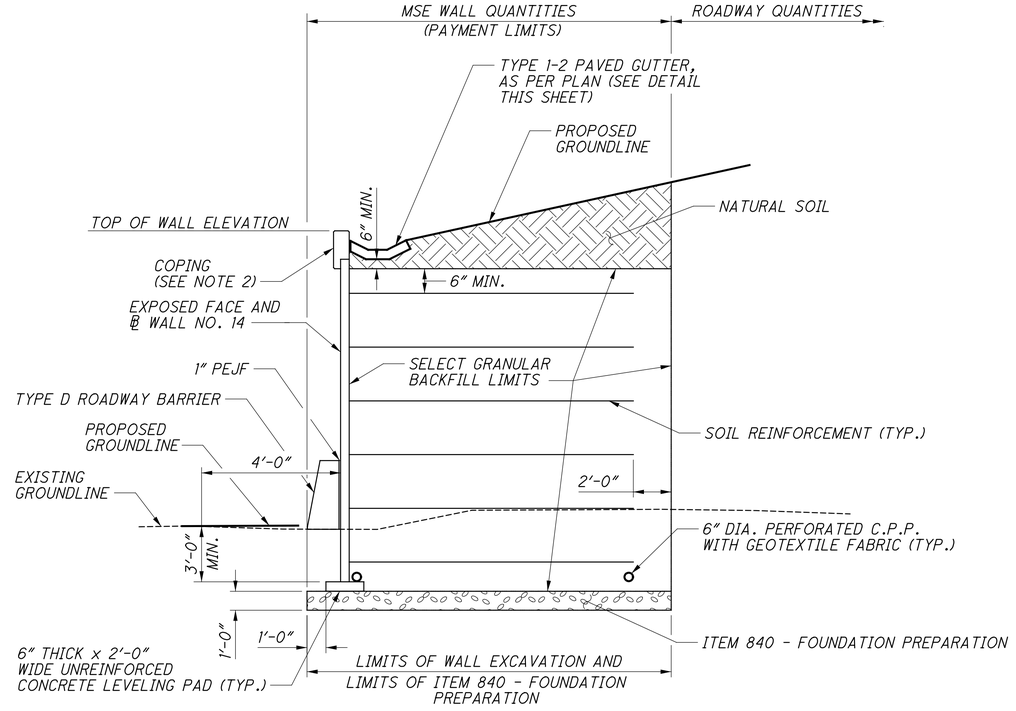
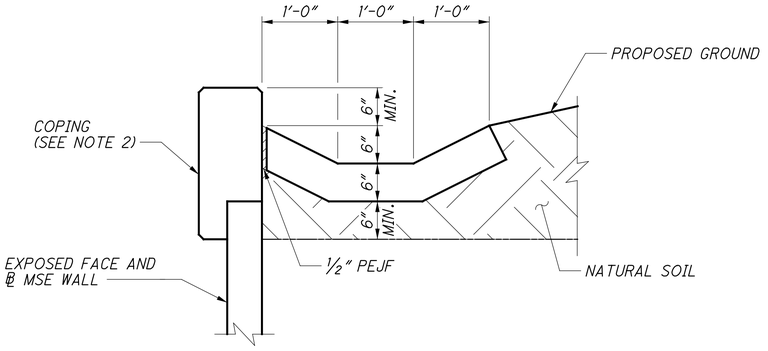


SECTION A-A



SECTION B-B



PAVED GUTTER DETAIL
TYPE 1-2, AS PER PLAN

(FOR ADDITIONAL DETAILS SEE STD. CONSTR. DWG DM-2.1)

NOTES:

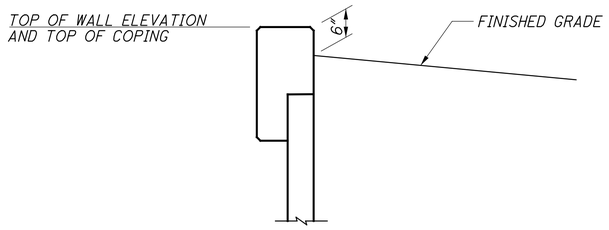
1. SEE PLAN AND PROFILE DRAWINGS FOR BORING LOCATIONS.
2. FOR MSE WALL AND COPING DETAIL, SEE SHEET 21/54 .
3. 1″ PEJF TO BE INCLUDED IN ITEM 601 - CONCRETE SLOPE PROTECTION, AS PER PLAN FOR PAYMENT.
4. 1″ PEJF BEHIND TYPE D BARRIER IS INCLUDED WITH CLE-32-0374 BRIDGE QUANTITIES AND IS PAID FOR WITH ITEM 516 - 1″ PREFORMED EXPANSION JOINT FILLER.
5. FOR GEOWALL DETAILS, SEE SHEETS 48/54 AND 49/54 .

DESIGN AGENCY
TranSystems
400 W. NATIONWIDE BLVD, SUITE 225
COLUMBUS, OHIO 43215

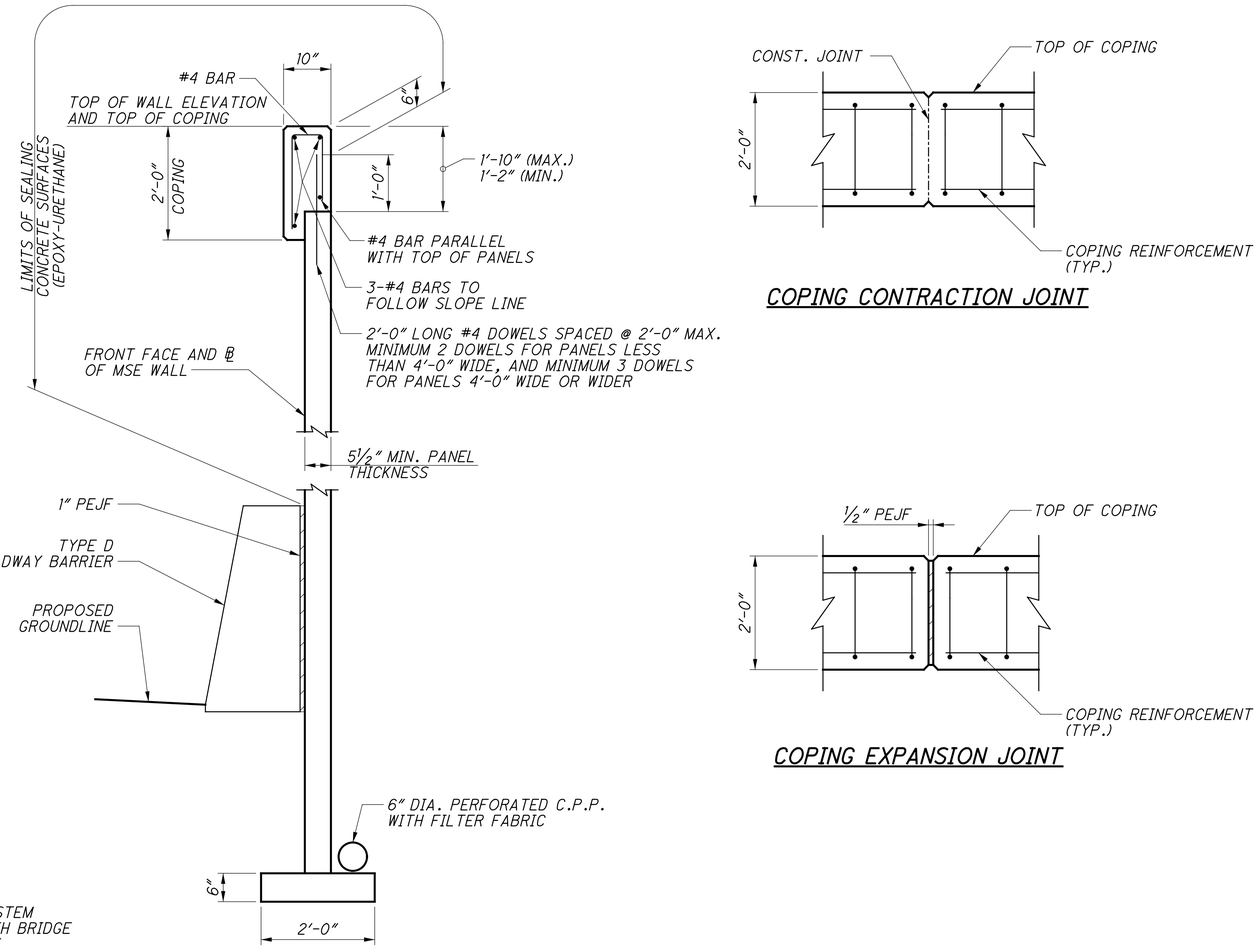
DESIGNED BCS | DRAWN BCS | REVIEWED MSL | DATE 03/01/19
CHECKED PJP | REVISED | STRUCTURE FILE NUMBER 1300336

WALL DETAILS - WALL NO. 14
RETAINING WALL NO. 14

CLE-32-3.50
PID No. 103954



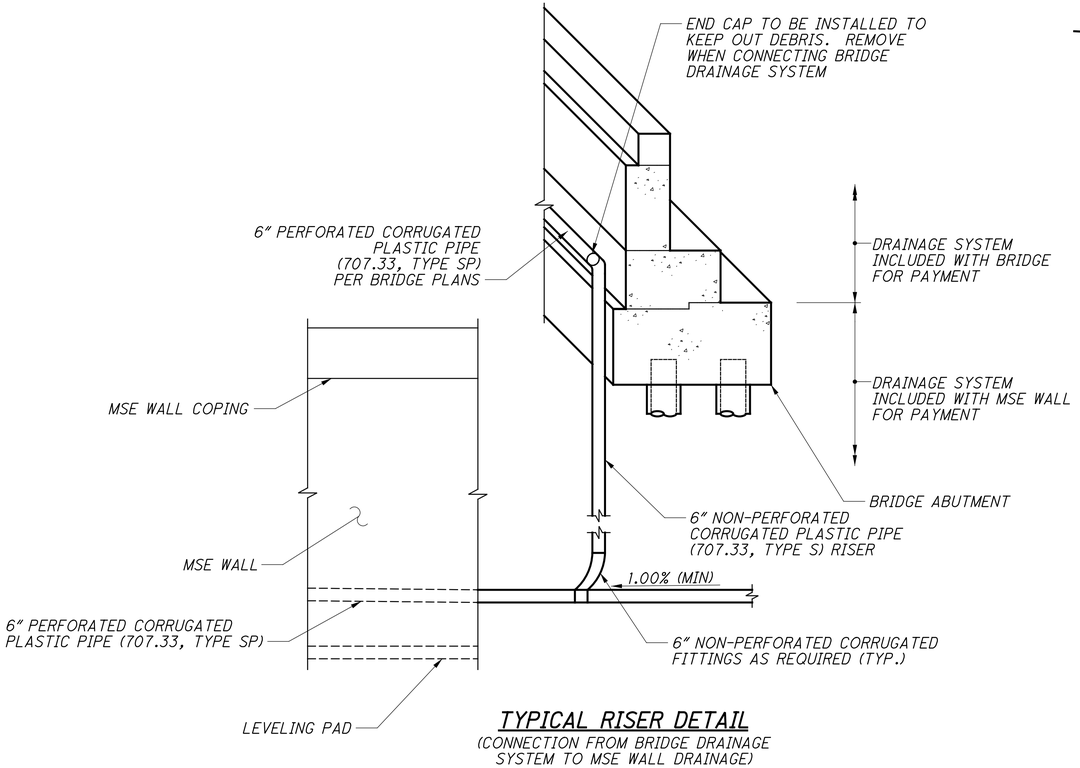
MSE WALL WITHOUT BARRIER



MSE WALL AND COPING DETAIL

COPING CONTRACTION JOINT

COPING EXPANSION JOINT



TYPICAL RISER DETAIL

(CONNECTION FROM BRIDGE DRAINAGE SYSTEM TO MSE WALL DRAINAGE)

NOTES:

1. ALL REINFORCING STEEL TO BE EPOXY COATED.

DESIGN AGENCY
TranSystems
400 W. NATIONWIDE BLVD, SUITE 225
COLUMBUS, OHIO 43215

DESIGNED	DRAWN	REVIEWED	DATE
BCS	BCS	MSL	03/01/19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		1300336	

TYPICAL MSE WALL AND COPING DETAILS
RETAINING WALLS NO. 11 AND 14

CLE-32-3.50
PID No. 103954

21 / 54

607
736

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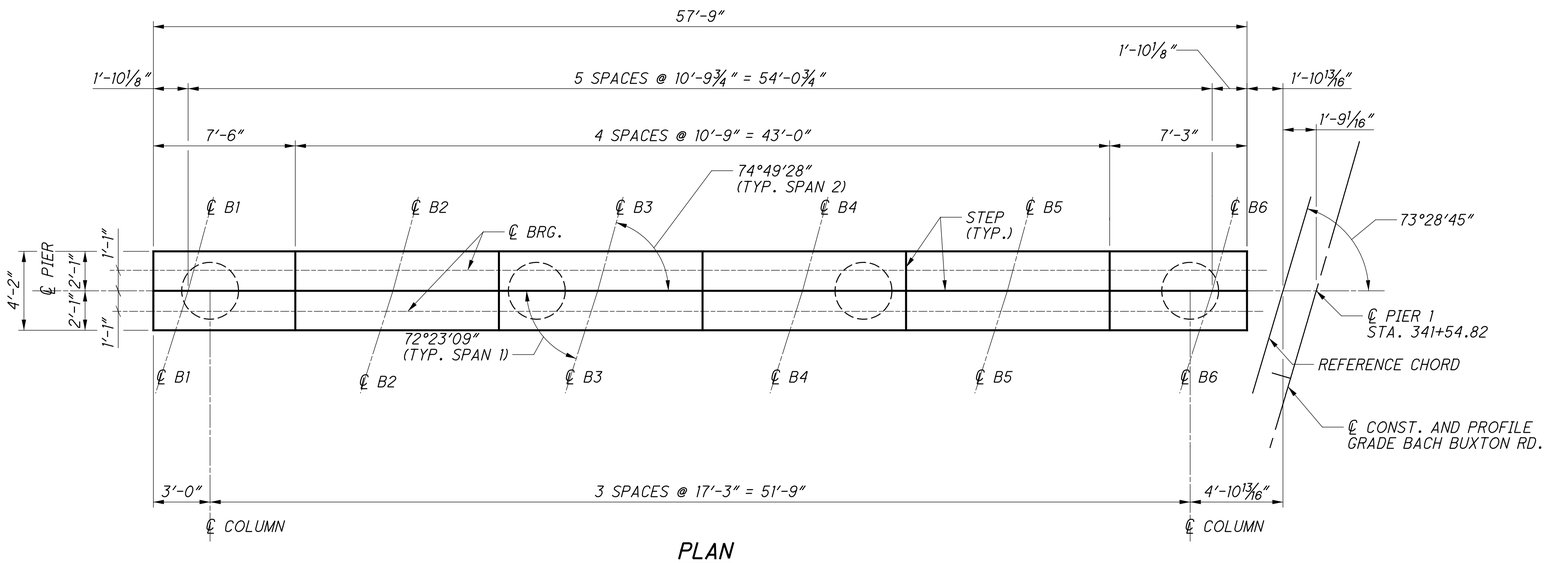
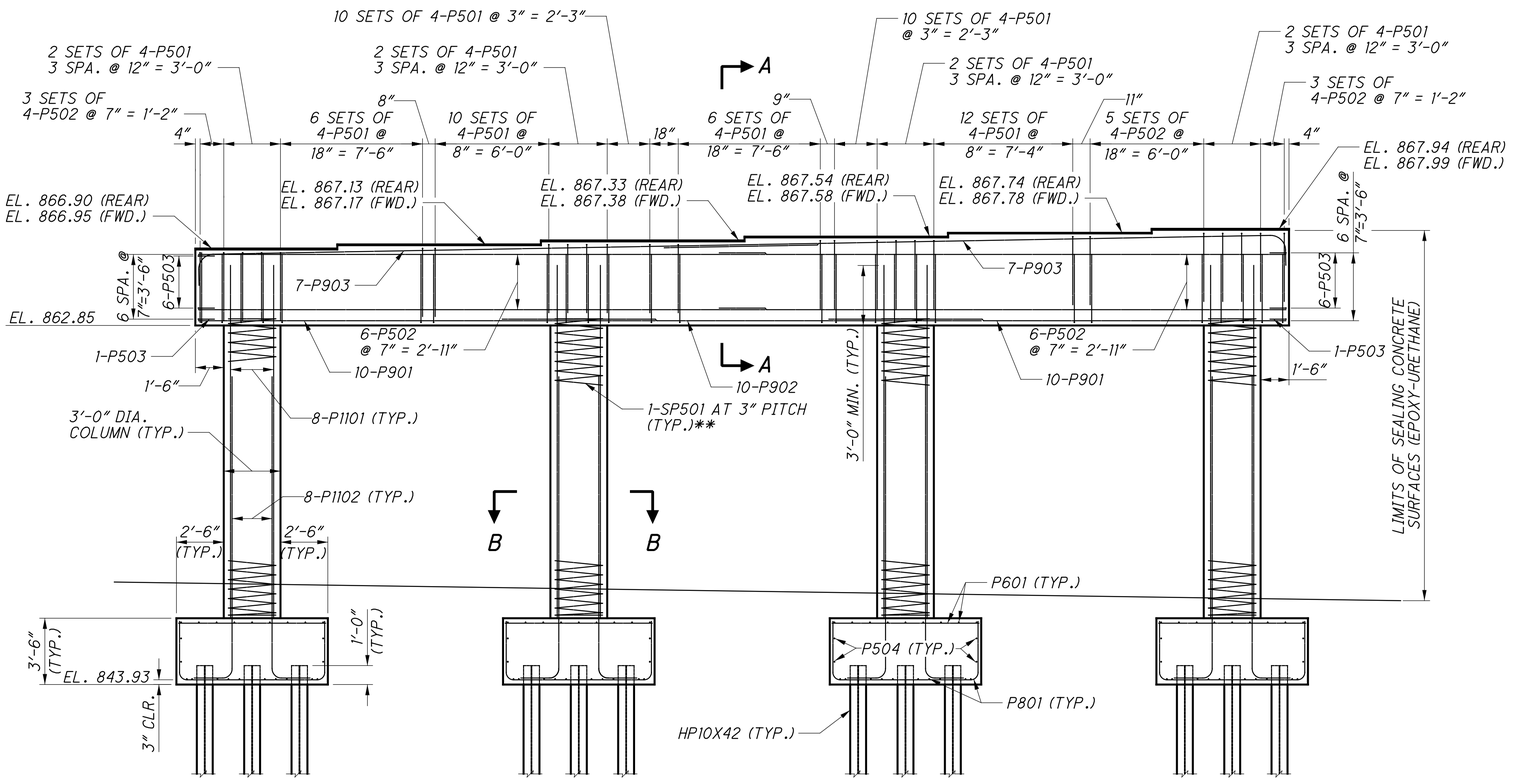


PLAN



ELEVATION

**EXTEND SPIRAL REINFORCING A MINIMUM OF 2" INTO PIER CAP

LAP LENGTH TABLE	
BAR	REQUIRED LAP LENGTH
#5	2'-5" MIN.
#9	8'-1" MIN.
#11	12'-7" MIN.

NOTES:

1. FOR SECTIONS A-A, B-B, AND FOOTING DETAILS, SEE SHEET 24/54 .
2. FOR PILE LAYOUT, SEE SHEET 6/54.
3. THIS BRIDGE WILL NEED A STRUCTURE GROUNDING SYSTEM THAT CONSISTS OF PROVIDING GROUND RODS AND GROUNDING CONDUCTOR RISER CABLES ENBEDDED IN THE PIERS TO THE STRUCTURE SUPPORT BEAMS AND PROVIDING CONNECTIONS FOR CONDUITS ENBEDDED IN THE STRUCTURE. ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO PERFORM THIS WORK SHALL BE INCLUDED WITH ITEM 625 - STRUCTURE GROUNDING SYSTEM FOR PAYMENT.

DESIGN AGENCY
TranSystems
400 W. NATIONWIDE BLVD, SUITE 225
COLUMBUS, OHIO 43215

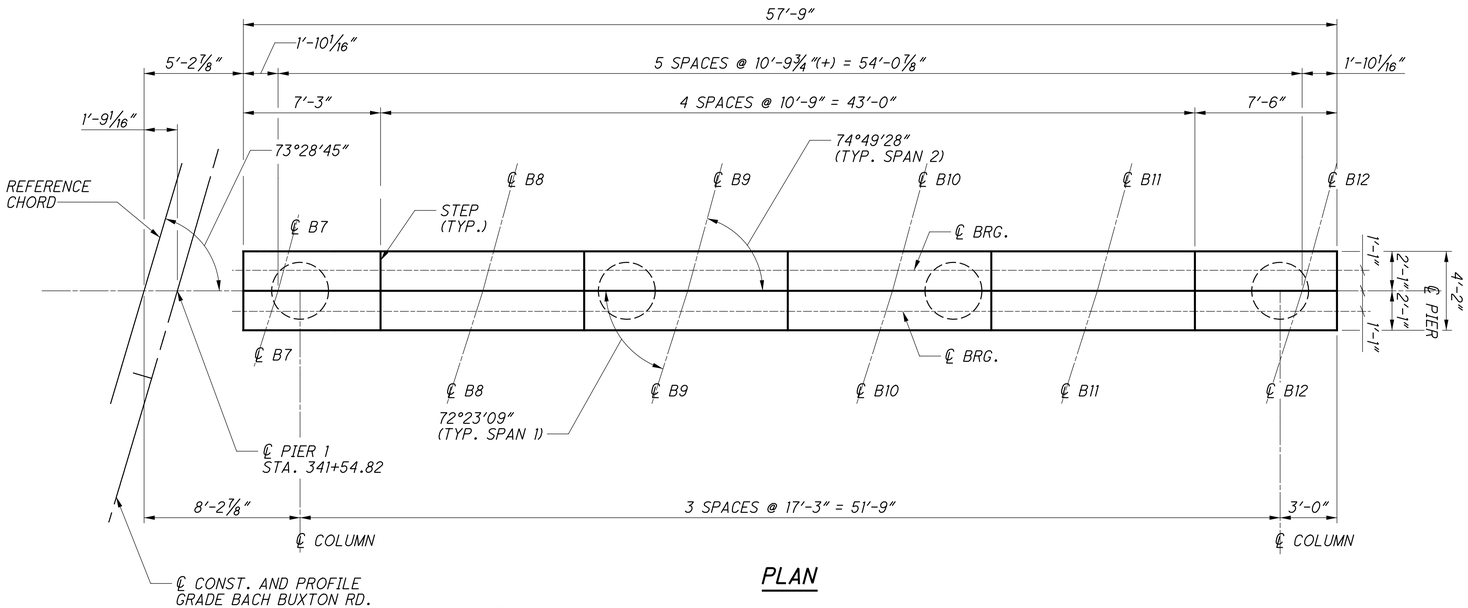
DESIGNED BCS | DRAWN BCS | CHECKED PJP | REVIEWED MSL | DATE 03/01/19 | REVISED | STRUCTURE FILE NUMBER 13003336

PIER DETAILS LEFT PIER
BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

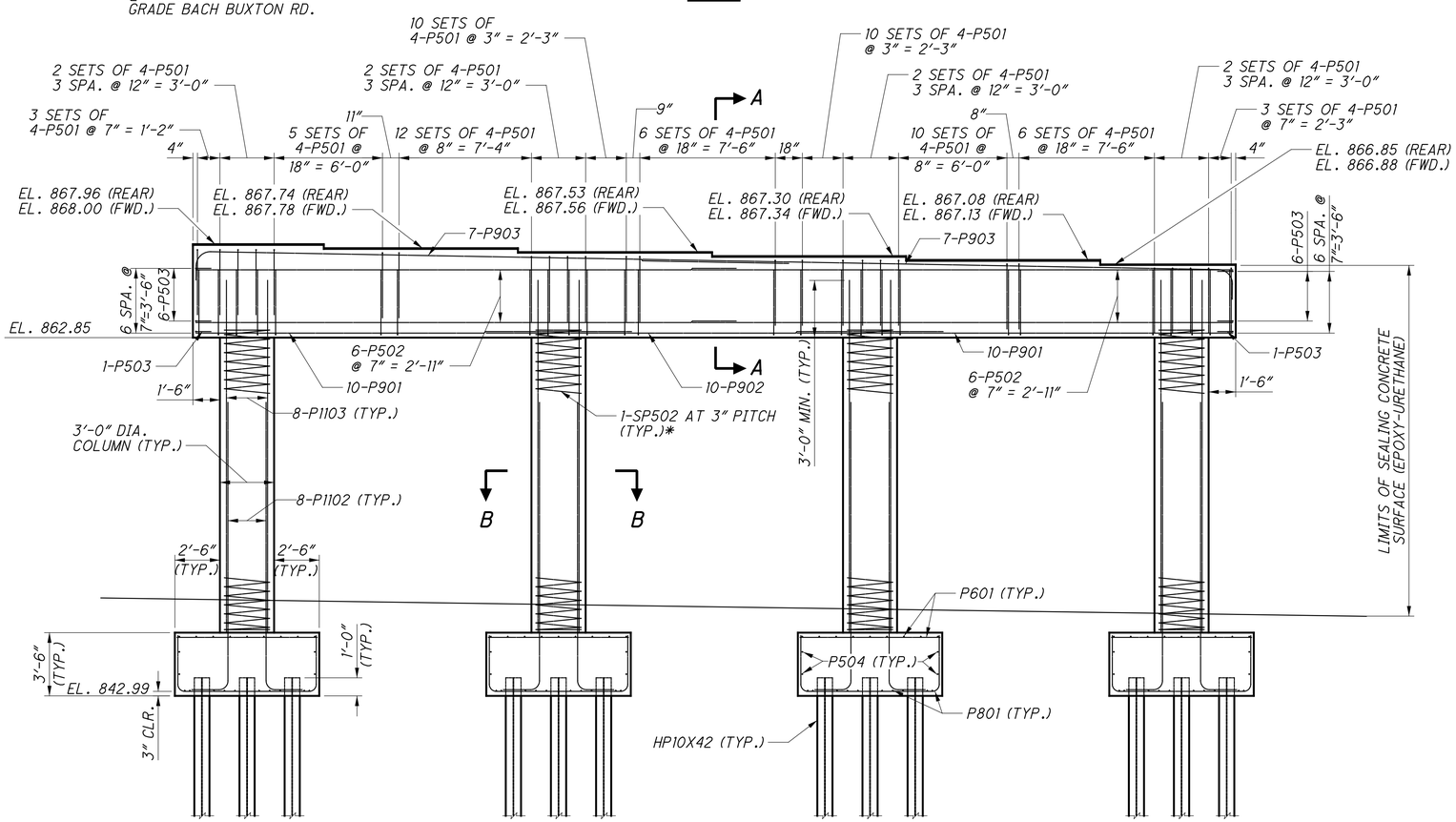
CLE-32-3.50
PID No. 103954

22 / 54

608
736



PLAN



ELEVATION

*EXTEND SPIRAL REINFORCING A MINIMUM OF 2" INTO PIER CAP

LAP LENGTH TABLE	
BAR	REQUIRED LAP LENGTH
#5	2'-5" MIN.
#9	8'-1" MIN.
#11	12'-7" MIN.

NOTES:

1. FOR SECTIONS A-A, B-B, AND FOOTING DETAILS, SEE SHEET 24/54 .
2. FOR PILE LAYOUT, SEE SHEET 6/54.
3. THIS BRIDGE WILL NEED A STRUCTURE GROUNDING SYSTEM THAT CONSISTS OF PROVIDING GROUND RODS AND GROUNDING CONDUCTOR RISER CABLES ENBEDDED IN THE PIERS TO THE STRUCTURE SUPPORT BEAMS AND PROVIDING CONNECTIONS FOR CONDUITS ENBEDDED IN THE STRUCTURE. ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO PERFORM THIS WORK SHALL BE INCLUDED WITH ITEM 625 - STRUCTURE GROUNDING SYSTEM FOR PAYMENT.

DESIGN AGENCY
TranSystems
400 W. NATIONWIDE BLVD, SUITE 225
COLUMBUS, OHIO 43215

DESIGNED BCS | DRAWN BCS | CHECKED PJP | REVIEWED MSL | DATE 03/01/19 | REVISED | STRUCTURE FILE NUMBER 1300336

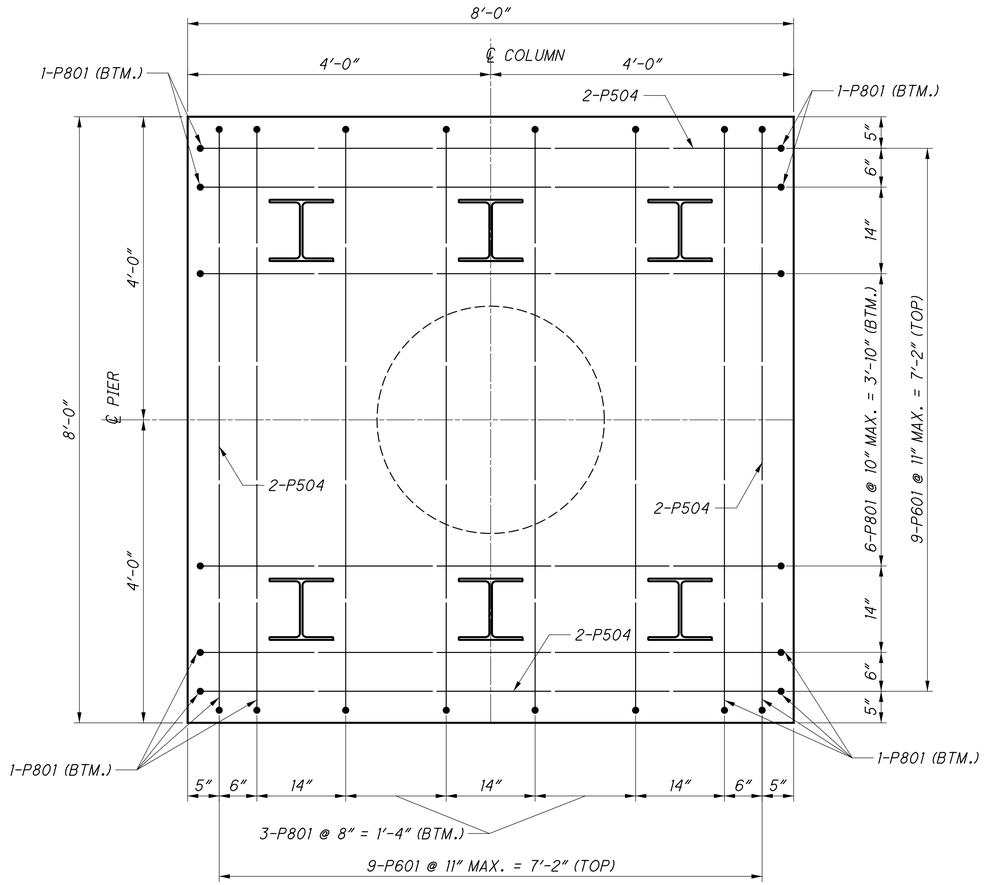
PIER DETAILS RIGHT PIER

BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

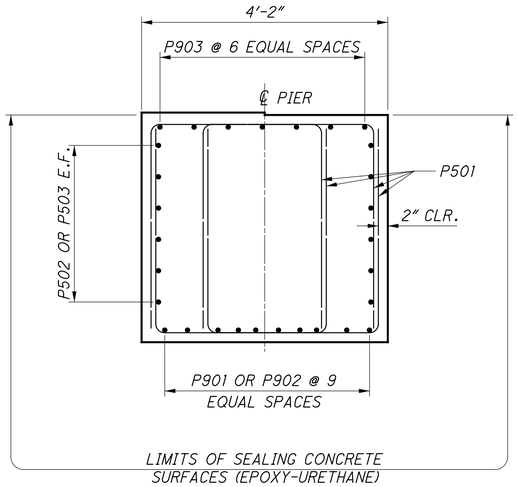
CLE-32-3.50
PID No. 103954

23 / 54

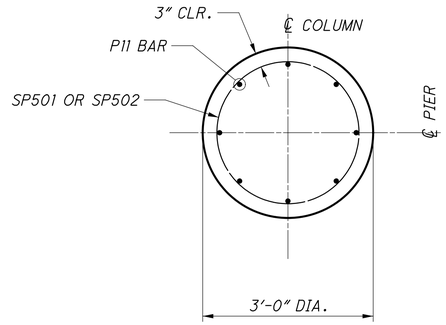
609
736



FOOTING PLAN



SECTION A-A



SECTION B-B

DESIGN AGENCY
TranSystems
400 W. NATIONWIDE BLVD, SUITE 225
COLUMBUS, OHIO 43215

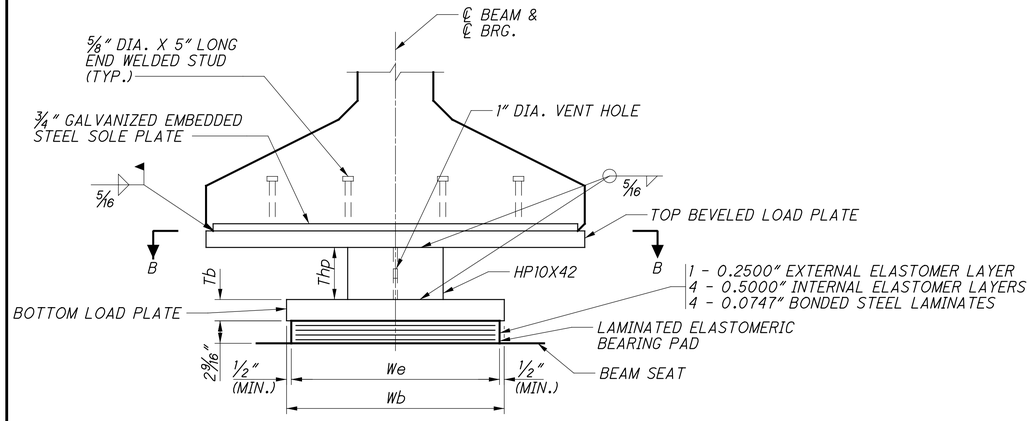
DESIGNED	DRAWN	REVIEWED	DATE
BCS	BCS	MSL	03/01/19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		1300336	

PIER FOOTINGS
BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

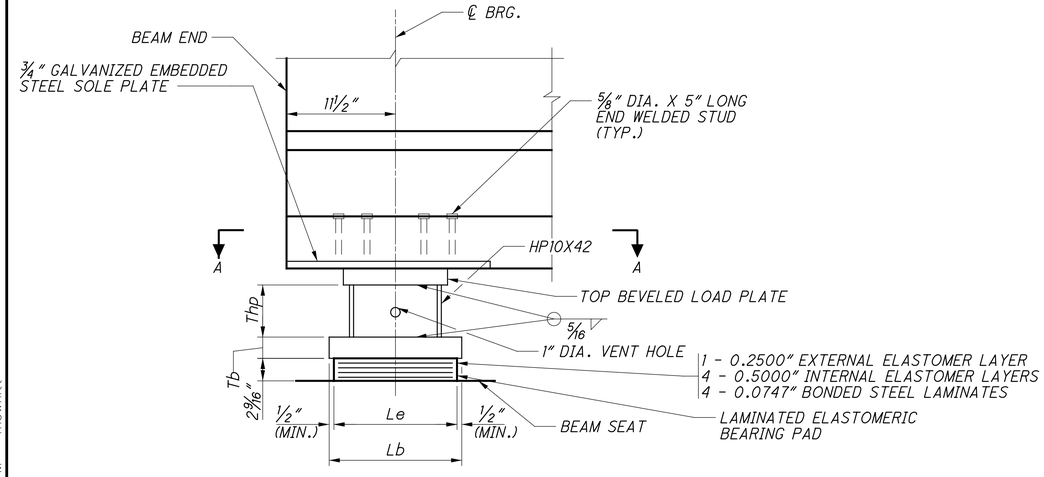
CLE-32-3.50
PID No. 103954

24/54

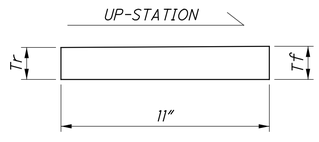
610/736



ABUTMENT BEARING ELEVATION, END VIEW - ALL BEAMS (REAR AND FORWARD ABUTMENT)



ABUTMENT BEARING ELEVATION, SIDE VIEW - ALL BEAMS (REAR AND FORWARD ABUTMENT)

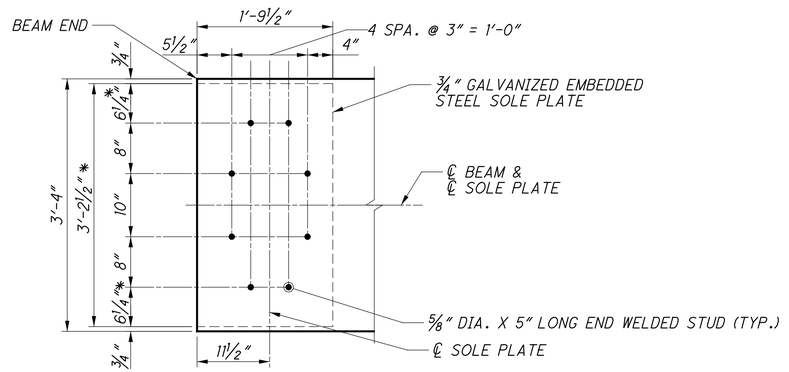


TOP BEVELED LOAD PLATE DETAIL

ELASTOMERIC BEARING DATA							
LOCATION	TYPE	NO. REQ'D	REACTION (K)		MAXIMUM	Le	We
			DL	**LL	DESIGN LOAD (K)	(in.)	(in.)
REAR ABUTMENT	EXP	12	166	72	238	13	20
FORWARD ABUTMENT	EXP	12	142	68	210	13	18

**LL DENOTES LIVE LOAD WITHOUT IMPACT

*THE PLATE WIDTH MAY BE DECREASED BY 3/8". THE 6 1/4" DIMENSION SHALL BE CHANGED ACCORDINGLY.



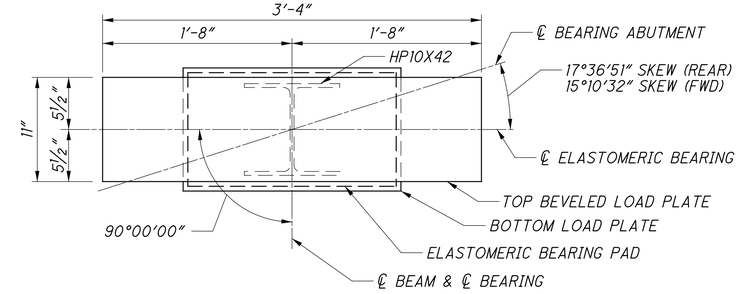
SECTION A-A

(TOP BEVELED LOAD PLATE NOT SHOWN)

TOP BEVELED LOAD PLATE DATA		
LOCATION	Tr	Tf
	(in.)	(in.)
REAR ABUTMENT	1.75	1.8125
FORWARD ABUTMENT	1.6875	1.625

BOTTOM LOAD PLATE DATA			
LOCATION	Wb	Lb	Tb
	(in.)	(in.)	(in.)
REAR ABUTMENT	21	14	2.25
FORWARD ABUTMENT	19	14	2.00

HP PEDESTAL DATA	
LOCATION	Thp
	(in.)
REAR ABUTMENT	4.9167
FORWARD ABUTMENT	5.3125



SECTION B-B

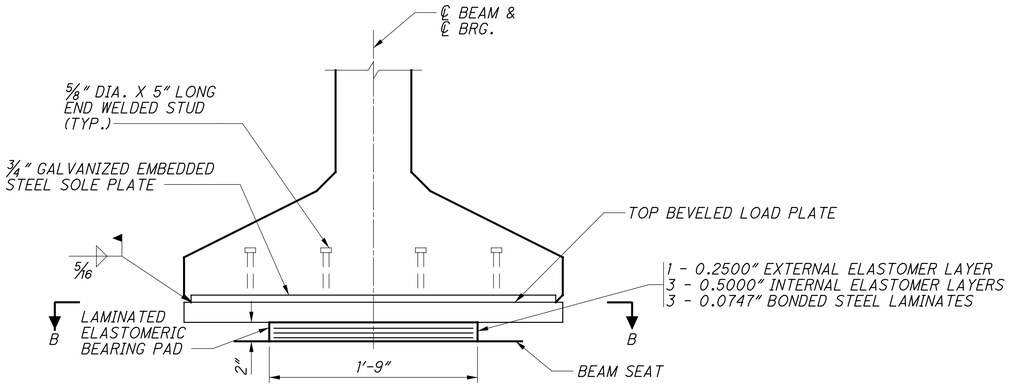
NOTES:

1. BEVELED STEEL LOAD PLATES AND HP10X42 SUPPORT POSTS SHALL BE ASTM A709 GRADE 50 STEEL AND SHALL BE GALVANIZED PER CMS 711.02. THE STEEL LOAD PLATES SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.
2. ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED IN ACCORDANCE WITH SECTION 14.7.6 (METHOD A) OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. THE LONG TERM COMPRESSION PROOF LOAD TEST (AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DIVISION II, SECTION 18.7.2.6) IS NOT REQUIRED.
3. ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE THE BEARING LOCATION ON THE BRIDGE, AND A DIRECTION ARROW THAT POINTS UP-STATION. ALL MARKS SHALL BE PERMANENT AND SHALL BE VISIBLE AFTER THE BEARING IS INSTALLED.
4. BASIS OF PAYMENT: THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS, INCLUDING LOAD PLATES, HP10X42 PEDESTALS, AND MISC. HARDWARE. PAYMENT WILL BE AT THE UNIT PRICE BID FOR ITEM 516, EACH, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN.

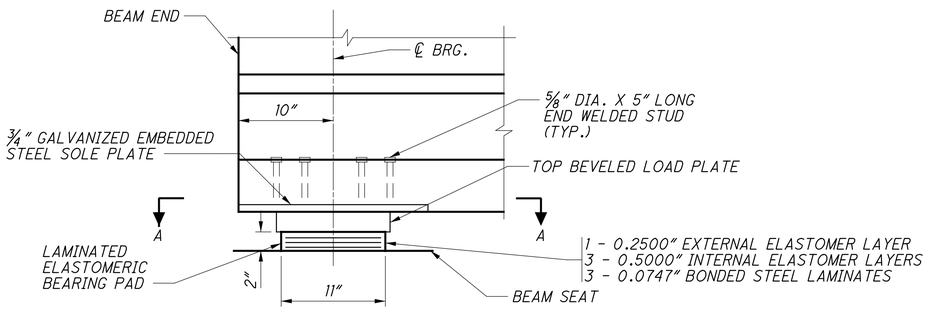
DESIGN AGENCY
TranSystems
400 W. NATIONWIDE BLVD, SUITE 225
COLUMBUS, OHIO 43215
DESIGNED BCS
DRAWN BCS
CHECKED PJP
REVIEWED MSL
DATE 03/01/19
REVISED
STRUCTURE FILE NUMBER 1300336

ABUTMENT BEARINGS
BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

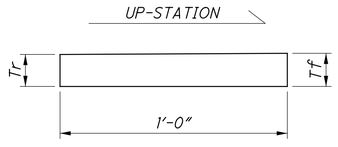
CLE-32-3.50
PID No. 103954



PIER BEARING ELEVATION, END VIEW - ALL BEAMS (SPAN 1 & 2)



PIER BEARING ELEVATION, SIDE VIEW - ALL BEAMS (SPAN 1 & 2)



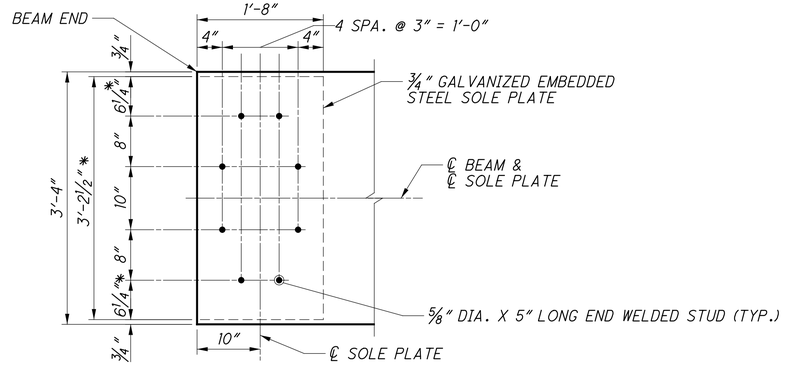
TOP BEVELED LOAD PLATE DETAIL

ELASTOMERIC BEARING DATA					
LOCATION	TYPE	NO. REQ'D	REACTION (K)		MAXIMUM
			DL	**LL	DESIGN LOAD (K)
PIER (SPAN 1)	EXP	12	134	58	192
PIER (SPAN 2)	EXP	12	134	58	192

**LL DENOTES LIVE LOAD WITHOUT IMPACT

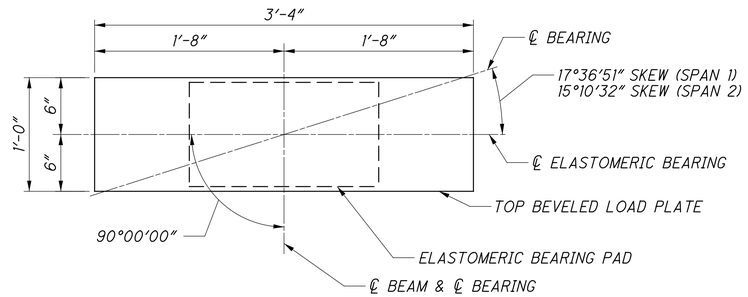
TOP BEVELED LOAD PLATE DATA		
LOCATION	Tr	Tf
	(in.)	(in.)
PIER (SPAN 1)	2.125	2.1875
PIER (SPAN 2)	2.1875	2.125

*THE PLATE WIDTH MAY BE DECREASED BY 3/8". THE 6 1/4" DIMENSION SHALL BE CHANGED ACCORDINGLY.



SECTION A-A

(TOP BEVELED LOAD PLATE NOT SHOWN)



SECTION B-B

NOTES:

1. FOR NOTES, SEE SHEET 25/54 .

DESIGN AGENCY
TranSystems
400 W. NATIONWIDE BLVD, SUITE 225
COLUMBUS, OHIO 43215

DESIGNED BCS | CHECKED PJP
DRAWN BCS | REVISED
REVIEWED MSL | DATE 03/01/19
STRUCTURE FILE NUMBER 1300336

PIER BEARINGS
BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

CLE-32-3.50
PID No. 103954

26/54
612
736

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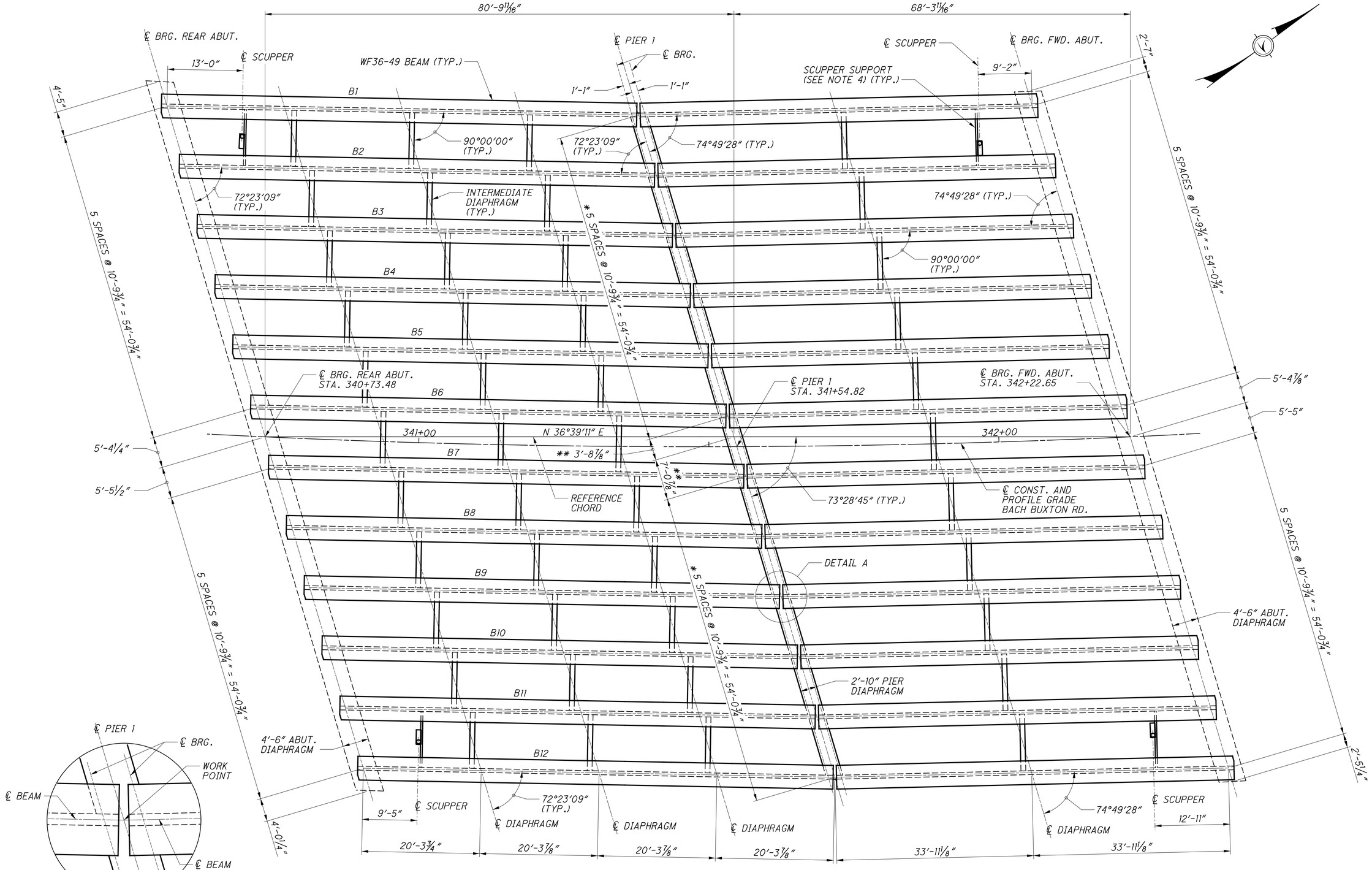

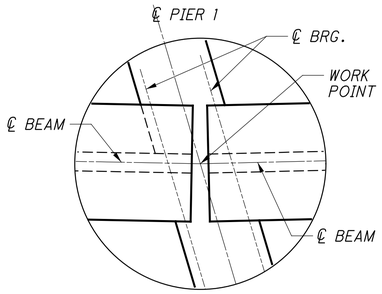

DETAIL A

FRAMING PLAN

* MEASURED ALONG ℄ PIER AT WORK POINT, SEE DETAIL A
** MEASURED BETWEEN WORK POINT AND REFERENCE CHORD

NOTES:

1. INTERMEDIATE DIAPHRAGMS SHALL BE PER STD. DWG. PSID-1-13.
2. FOR ABUTMENT DIAPHRAGM DETAILS, SEE SHEETS 31/54 AND 32/54 .
3. FOR PIER DIAPHRAGM DETAILS, SEE SHEET 34/54 .
4. FOR SCUPPER DETAILS, SEE SHEET 38/54 .

DESIGN AGENCY
TranSystems
401 W. NATIONWIDE BLVD, SUITE 225
COLUMBUS, OHIO 43215

DESIGNED	DRAWN	REVIEWED	DATE
BCS	JDG	MSL	03/01/19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		1300336	

FRAMING PLAN
BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

CLE-32-3.50
PID No. 103954

27 / 54

613
736

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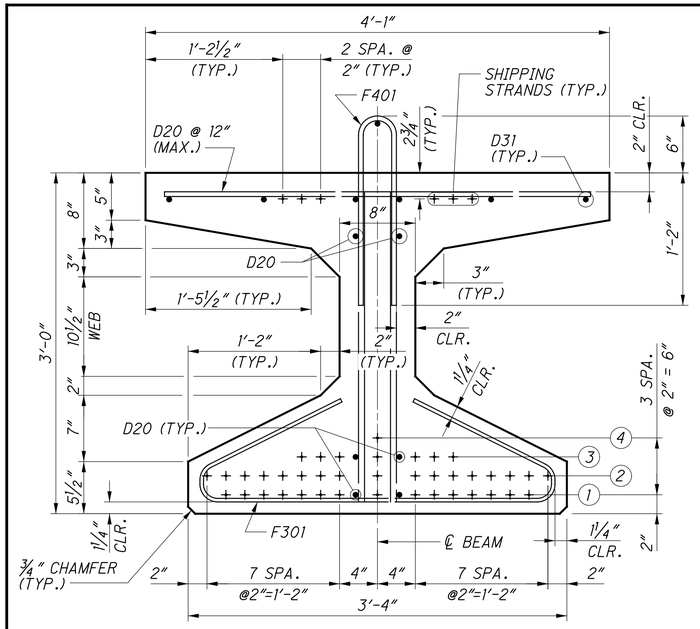
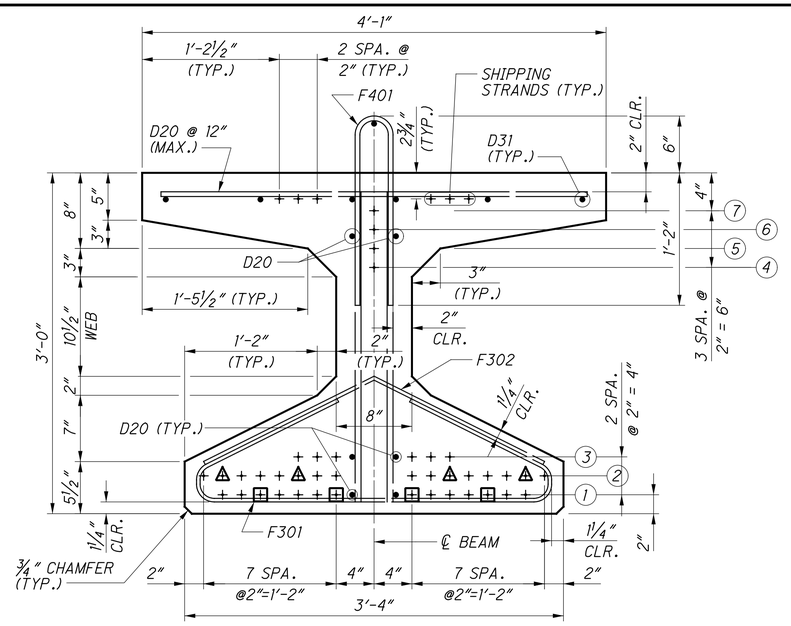
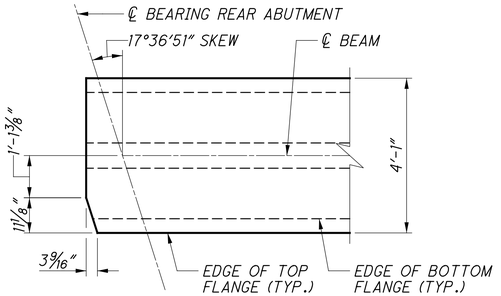


WF36-49
(AT MIDSPAN)

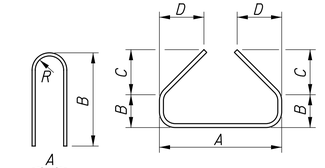


WF36-49
(AT BEAM ENDS)
(EMBEDDED STEEL PLATE NOT SHOWN)

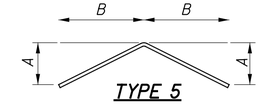


CLIPPED TOP FLANGE DETAIL
(REAR ABUTMENT SHOWN)

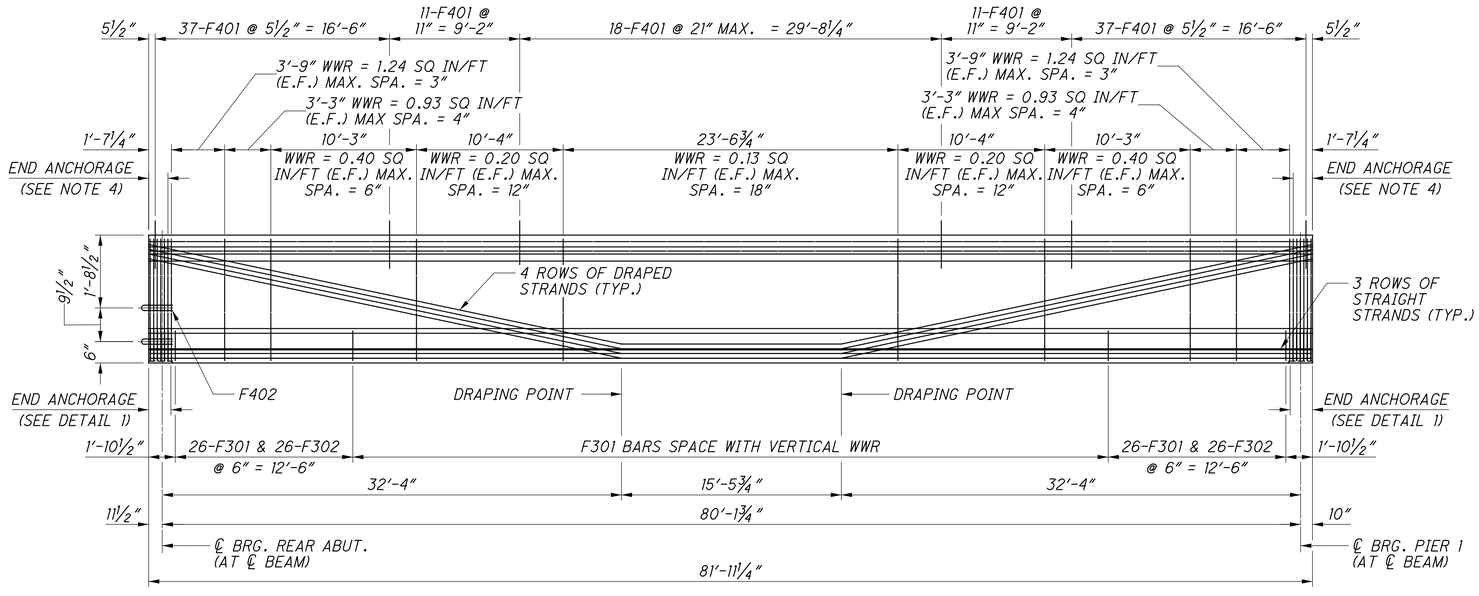
BAR BENDING DIAGRAMS



TYPE 1 TYPE 2



TYPE 5



TYPICAL WF36-49 BEAM ELEVATION - SPAN 1

BEAM DATA - SPAN 1

BEAM MARK	SECTION	NUMBER OF STRANDS PER ROW: ROW NUMBER ①	②	③	④	⑤	⑥	⑦	TOTAL STRANDS	CONCRETE STRENGTHS f'ci	f'c	F302 BARS REQ'D. (PER BEAM)	F401 BARS REQ'D. (PER BEAM)	F402 BARS REQ'D. (PER BEAM)
B1-B12	END	14	16	6	1	1	1	1	40	6 ksi	8 ksi	64	114	4
	MIDSPAN	15	17	7	1				40					

LEGEND:

- + STRAND
- (1) STRAND LINE
- ▲ STRAND DEBONDED 4'-9" AT EACH END
- ⊞ STRAND DEBONDED 9'-6" AT EACH END

REINFORCING STEEL

MARK	TYPE	A	B	C	D	R
F301	2	3'-1½"	3½"	7½"	1'-3"	
F302	5	9"	1'-6"			
F401	1	4"	1'-8"			1½"
F402	1	4½"	2'-2"			1¾"

REINFORCING STEEL NOTES:

1. THE F401 AND F402 BARS SHALL BE EPOXY COATED.
2. THE BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT INDICATES THE BAR SIZE AND THE REMAINING DIGITS, ITS SEQUENCE NUMBER. ALL REINFORCING STEEL SHALL BE BLACK UNLESS NOTED OTHERWISE.
3. ALL REINFORCING STEEL MAY BE REPLACED WITH EQUIVALENT DEFORMED WWR (WELDED WIRE REINFORCEMENT).
4. THE REQUIRED LAP LENGTHS ARE AS FOLLOWS:
   2'-0" MINIMUM LAP FOR D12.4 WELDED WIRE REINFORCEMENT.
   2'-0" MINIMUM LAP FOR D20 WELDED WIRE REINFORCEMENT.
   2'-6" MINIMUM LAP FOR D31 WELDED WIRE REINFORCEMENT.

NOTES:

1. FOR ADDITIONAL DETAILS AND NOTES, SEE STANDARD DRAWING PSID-1-13.
2. ADJUST SPACING OF STEEL REINFORCING AS REQUIRED TO CLEAR EMBEDDED STEEL PLATE END WELDED STUDS.
3. LOCATE THREADED INSERTS FOR INTERMEDIATE DIAPHRAGMS AND SCUPPER SUPPORT IN THE I-BEAM WEB TO AVOID PRESTRESSING STRANDS IN THE BEAM. THE MINIMUM CLEAR DISTANCE SHALL BE 1½ INCHES.
4. SEE DETAIL 1 SHEET 29/54.

DESIGN AGENCY
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401 W. NATIONWIDE BLVD, SUITE 225
COLUMBUS, OHIO 43215

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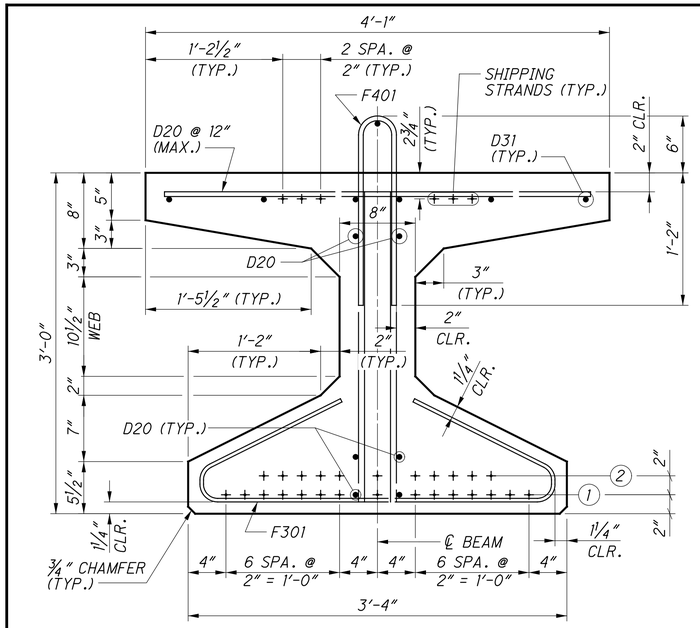
SUPERSTRUCTURE DETAILS
BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

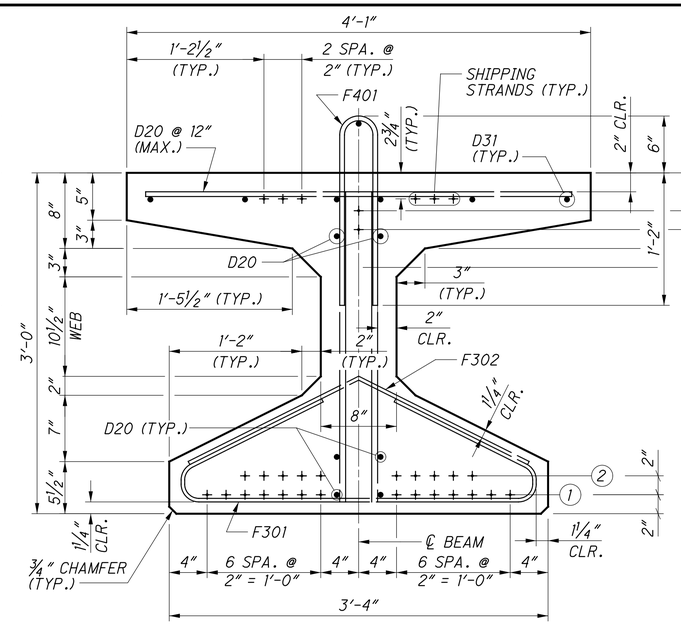
CLE-32-3.50
PID No. 103954

28/54
614/736



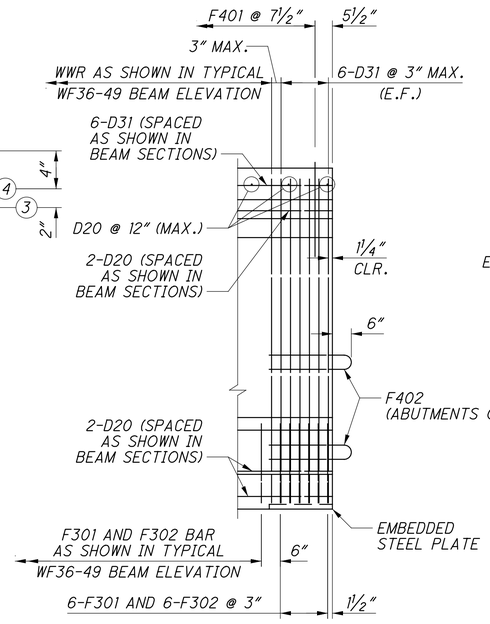
WF36-49

(AT MIDSPAN)



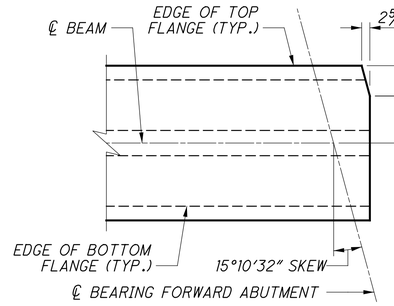
WF36-49

(AT BEAM ENDS)
(EMBEDDED STEEL PLATE NOT SHOWN)



DETAIL 1 - ANCHORAGE ZONE REINFORCING STEEL

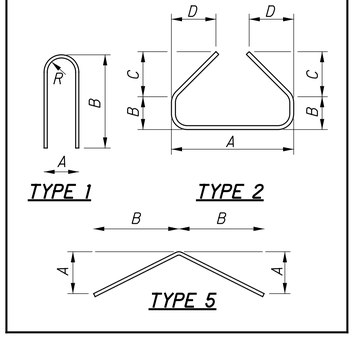
(PRESTRESSING STRANDS NOT SHOWN)

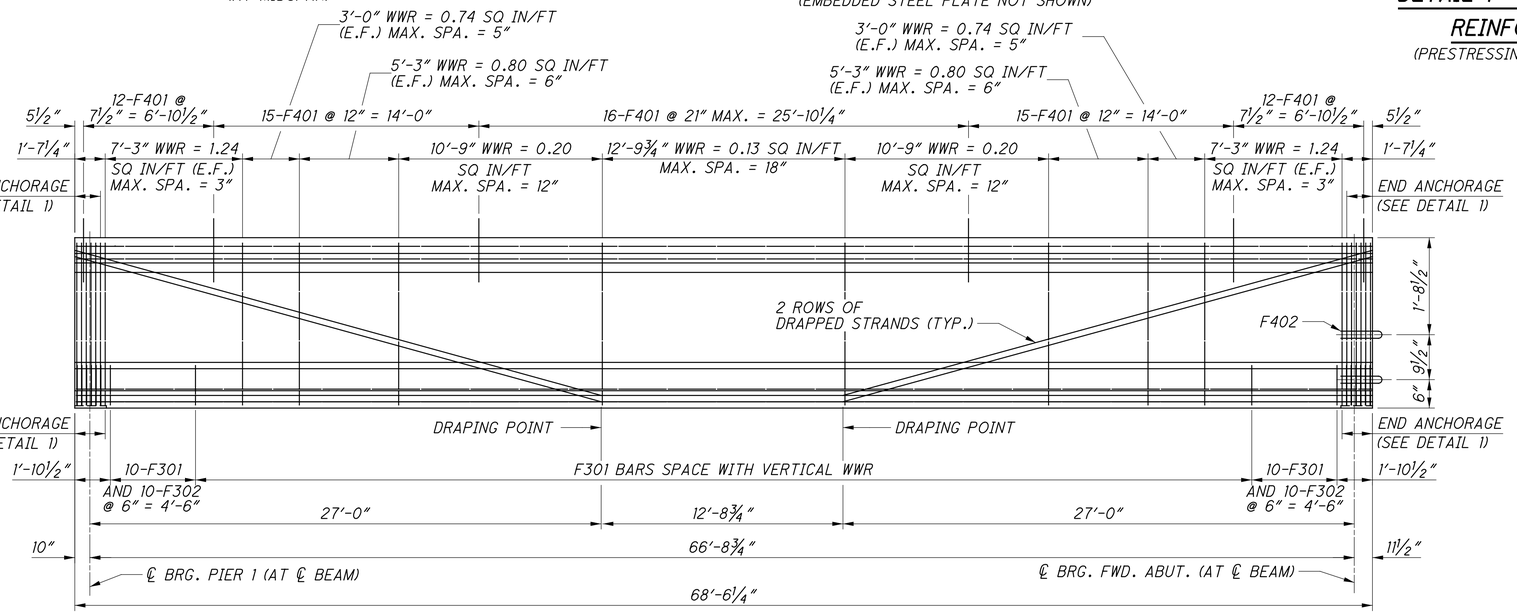


CLIPPED TOP FLANGE DETAIL

(FORWARD ABUTMENT SHOWN)

BAR BENDING DIAGRAMS





TYPICAL WF36-49 BEAM ELEVATION - SPAN 2

BEAM DATA - SPAN 2

BEAM MARK	SECTION	NUMBER OF STRANDS PER ROW ①	②	③	④	TOTAL STRANDS	CONCRETE STRENGTHS f'ci	f'c	F302 BARS REQ'D. (PER BEAM)	F401 BARS REQ'D. (PER BEAM)	F402 BARS REQ'D. (PER BEAM)
B1-B12	END	14	10	1	1	26	6 ksi	8 ksi	32	70	4
	MIDSPAN	15	11			26					

LEGEND:

\+ STRAND

(1) STRAND LINE

REINFORCING STEEL

MARK	TYPE	A	B	C	D	R
F301	2	3'-1½"	3½"	7½"	1'-3"	
F302	5	9"	1'-6"			
F401	1	4"	1'-8"			1½"
F402	1	4½"	2'-2"			1¾"

REINFORCING STEEL NOTES:

1. THE F401 AND F402 BARS SHALL BE EPOXY COATED.
2. THE BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT INDICATES THE BAR SIZE AND THE REMAINING DIGITS, ITS SEQUENCE NUMBER. ALL REINFORCING STEEL SHALL BE BLACK UNLESS NOTED OTHERWISE.
3. ALL REINFORCING STEEL MAY BE REPLACED WITH EQUIVALENT DEFORMED WWR (WELDED WIRE REINFORCEMENT).
4. THE REQUIRED LAP LENGTHS ARE AS FOLLOWS:
   2'-0" MINIMUM LAP FOR DI2.4 WELDED WIRE REINFORCEMENT.
   2'-0" MINIMUM LAP FOR D20 WELDED WIRE REINFORCEMENT.
   2'-6" MINIMUM LAP FOR D31 WELDED WIRE REINFORCEMENT.

NOTES:

1. FOR ADDITIONAL DETAILS AND NOTES, SEE STANDARD DRAWING PSID-1-13.
2. ADJUST SPACING OF STEEL REINFORCING AS REQUIRED TO CLEAR EMBEDDED STEEL PLATE END WELDED STUDS.
3. LOCATE THREADED INSERTS FOR INTERMEDIATE DIAPHRAGMS AND SCUPPER SUPPORT IN THE I-BEAM WEB TO AVOID PRESTRESSING STRANDS IN THE BEAM. THE MINIMUM CLEAR DISTANCE SHALL BE 1½ INCHES.

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		13003336	

SUPERSTRUCTURE DETAILS
BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

CLE-32-3.50
PID No. 103954

29 / 54

615
736

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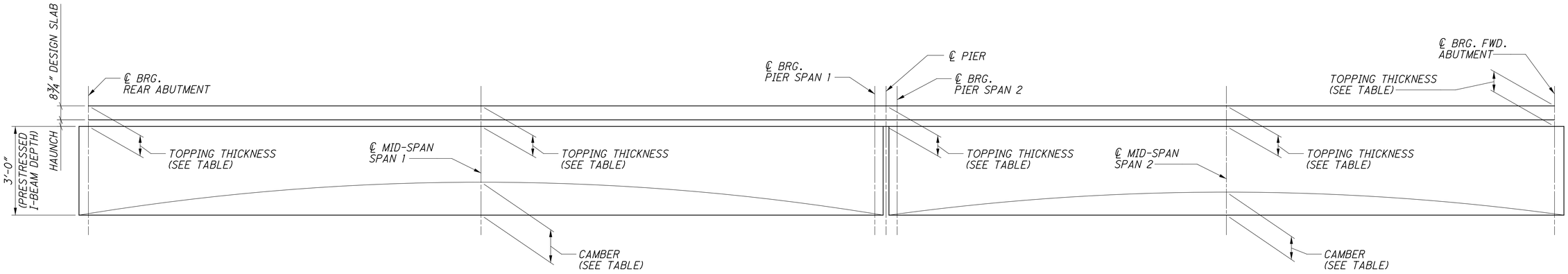

BEAM CAMBER AND DECK THICKNESS DIAGRAM

TOPPING THICKNESS			
SPAN	BEAM MARK	TOTAL TOPPING THICKNESS AT BEAM BEARINGS	TOTAL TOPPING THICKNESS AT MID-SPAN
1	1	13 3/8	12 1/2
	2	12	11 1/4
	3	12	11 1/4
	4	12	11 1/4
	5	12 1/8	11 1/4
	6	12 1/8	11 1/4
	7	11 7/8	11 1/4
	8	11 7/8	11 1/4
	9	11 7/8	11 1/4
	10	12	11 1/4
	11	12	11 1/4
	12	13 3/8	12 1/4
2	1	12 7/8	12 5/8
	2	11 1/2	11 1/4
	3	11 1/2	11 1/4
	4	11 1/2	11 1/4
	5	11 1/2	11 1/4
	6	11 1/2	11 1/4
	7	11 3/8	11 1/4
	8	11 3/8	11 1/4
	9	11 3/8	11 1/4
	10	11 3/8	11 1/4
	11	11 3/8	11 1/4
	12	12 7/8	12 1/2

CAMBER				
SPAN	BEAM MARK	ESTIMATED CAMBER AT DAY 0 (D_0)	ESTIMATED CAMBER AT DAY 30 (D_{30})	DEFLECTION DUE TO REMAINING DEAD LOAD*
1	1	2 3/8	3 7/8	-1 3/8
	2	2 3/8	3 7/8	-1 5/8
	3	2 3/8	3 7/8	-1 5/8
	4	2 3/8	3 7/8	-1 5/8
	5	2 3/8	3 7/8	-1 5/8
	6	2 3/8	3 7/8	-1 5/8
	7	2 3/8	3 7/8	-1 5/8
	8	2 3/8	3 7/8	-1 5/8
	9	2 3/8	3 7/8	-1 5/8
	10	2 3/8	3 7/8	-1 5/8
	11	2 3/8	3 7/8	-1 5/8
	12	2 3/8	3 7/8	-1 3/8
2	1	1 1/4	2	-5/8
	2	1 1/4	2	-3/4
	3	1 1/4	2	-3/4
	4	1 1/4	2	-3/4
	5	1 1/4	2	-3/4
	6	1 1/4	2	-3/4
	7	1 1/4	2	-3/4
	8	1 1/4	2	-3/4
	9	1 1/4	2	-3/4
	10	1 1/4	2	-3/4
	11	1 1/4	2	-3/4
	12	1 1/4	2	-5/8

*REMAINING DEAD LOAD INCLUDES CONCRETE DECK AND HAUNCH, DIAPHRAGMS, SIDEWALK, BARRIERS, AND UTILITIES. FUTURE WEARING SURFACE IS NOT INCLUDED.

NOTES:

1. TOPPING THICKNESS AND CAMBER GIVEN IN INCHES.
2. DECK SLAB THICKNESS FOR CONCRETE QUANTITY: THE TOPPING THICKNESSES SHOWN FROM THE TOP OF THE DECK SLAB TO THE TOP OF THE TOP FLANGE ALONG THE CENTERLINE OF THE I-BEAM ARE THEORETICAL DIMENSIONS. THE HAUNCH DEPTH IS THE TOPPING THICKNESS MINUS THE DESIGN SLAB THICKNESS. THE DEPARTMENT WILL PAY FOR SUPERSTRUCTURE CONCRETE BASED ON THE DESIGN SLAB THICKNESS AND THE AVERAGE OF THE THEORETICAL HAUNCH DEPTHS AT MID-SPAN AND AT EACH BEAM BEARING EVEN THOUGH THE DEVIATION FROM THE DIMENSION SHOWN MAY BE NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE. ONCE ALL THE BEAMS ARE SET IN THEIR FINAL POSITION, THE ACTUAL CAMBER FOR EACH MEMBER WILL BE THE TOP OF THE BEAM ELEVATION AT MID-SPAN MINUS THE AVERAGE TOP OF BEAM ELEVATION AT EACH BEARING. THE ACTUAL TOPPING THICKNESS AT MID-SPAN WILL BE THE THEORETICAL DIMENSION PLUS OR MINUS THE DIFFERENCE BETWEEN THE ACTUAL AND ANTICIPATED CAMBER.
3. FOR HAUNCH REINFORCING DETAILS, SEE SHEET 36/54 .

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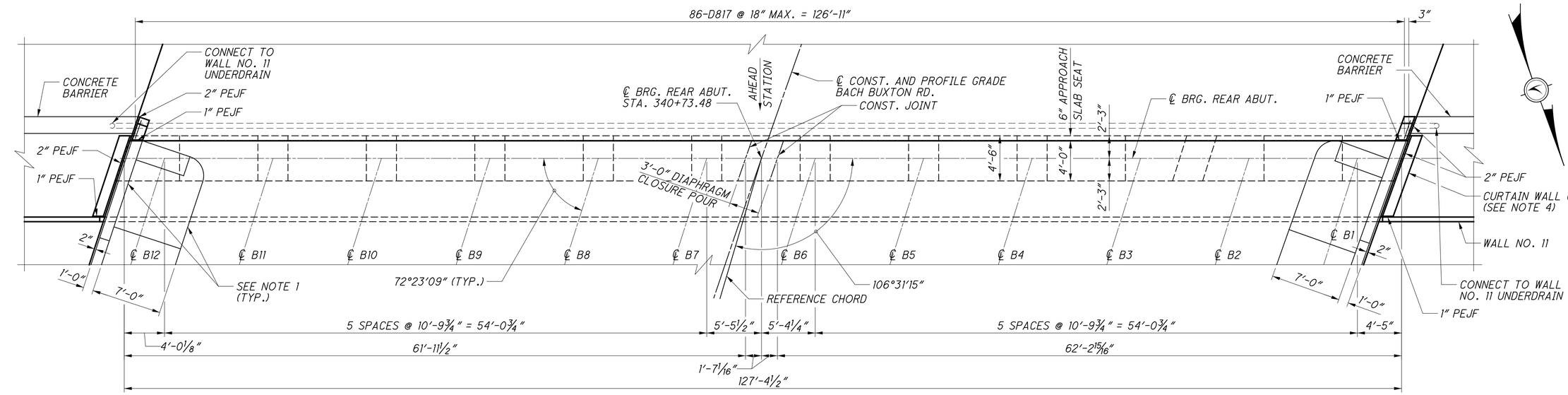
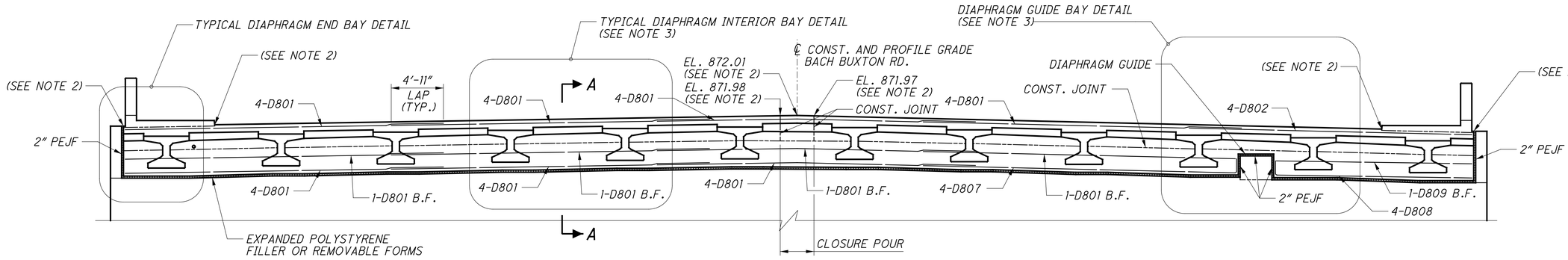
PJP		13003336	

BEAM CAMBER DETAILS
BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

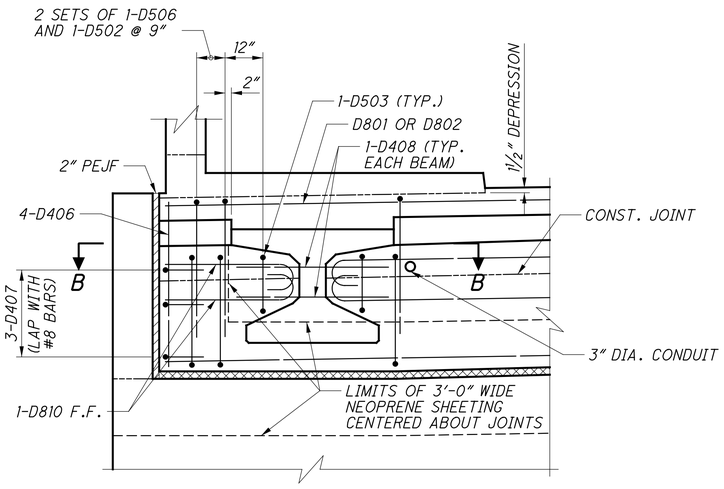
CLE-32-3.50
PID No. 103954



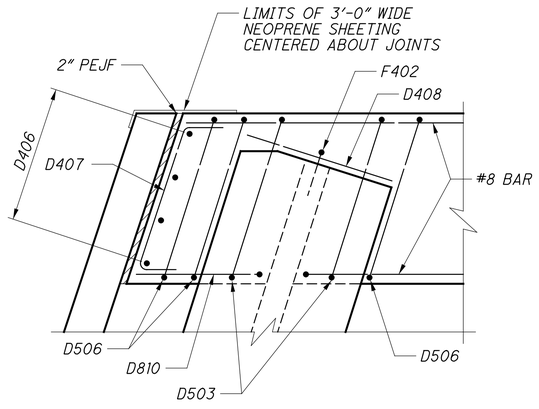
PLAN



ELEVATION



TYPICAL DIAPHRAGM END BAY DETAIL



SECTION B-B

NOTES:

1. FOR SIDEWALK AND RAILING DETAILS, SEE SHEETS 43/54 AND 45/54 .
2. FOR ELEVATIONS, SEE SIDEWALK PLANS SHEETS 43/54 AND 45/54 OR SECTION A-A.
3. FOR SECTION A-A, TYPICAL DIAPHRAGM INTERIOR BAY DETAIL AND DIAPHRAGM GUIDE BAY DETAIL, SEE SHEET 33/54 .
4. FOR ABUTMENT DETAILS, SEE SHEETS 7/54 OR 8/54 .
5. FOR BEAM DETAILS, SEE SHEETS 28/54 AND 29/54 .
6. FOR DECK POURING SEQUENCE, SEE SHEET 42/54 .
7. ABUTMENT DIAPHRAGM CONCRETE, PHASED CONSTRUCTION: PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS OF AN INDIVIDUAL PHASE AFTER THE DECK PLACEMENT IN THE ADJACENT SPAN IS COMPLETE. PROCEDURES THAT PLACE THE ABUTMENT DIAPHRAGM WITH THE DECK CONCRETE MAY BE APPROVED BY THE ENGINEER IF THE PLACEMENT SUBMITTAL CAN ASSURE THAT THE DECK CONCRETE IN THE ADJACENT SPAN WILL BE PLACED BEFORE CONCRETE IN THE DIAPHRAGM HAS REACHED ITS INITIAL SET. PLACE CLOSURE POUR CONCRETE IN THE DIAPHRAGM AND DECK CONCURRENTLY.

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COLUMBUS, OHIO 43215

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CHECKED PJP | REVISED

REAR ABUTMENT DIAPHRAGM DETAILS

BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

CLE-32-3.50
PID No. 103954

31/54

617
736

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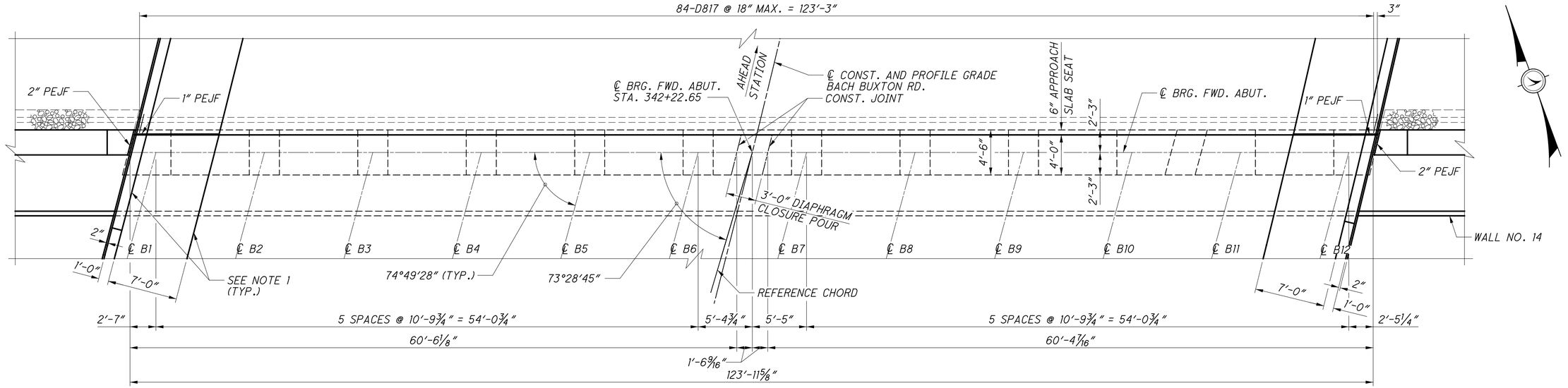

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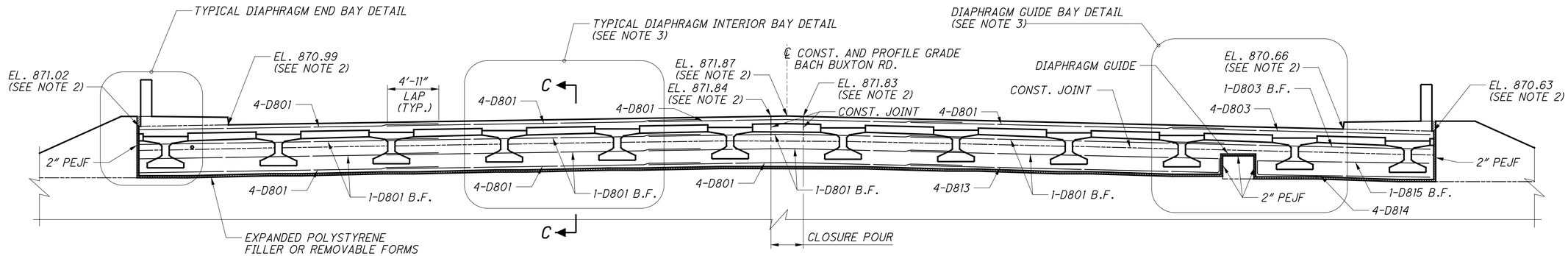
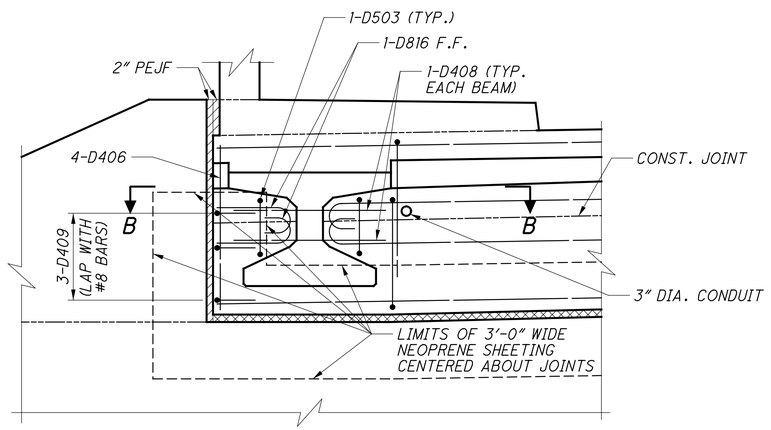
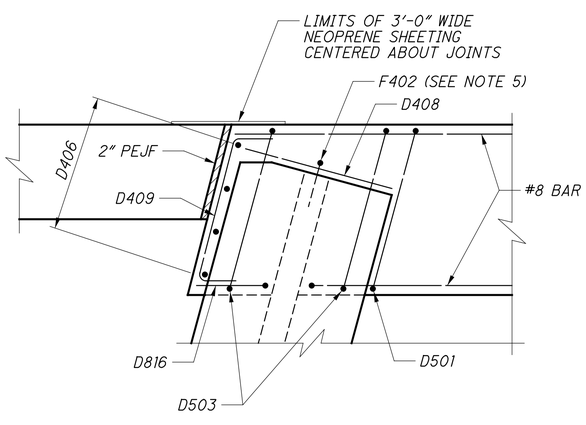


ELEVATION



TYPICAL DIAPHRAGM END BAY DETAIL



SECTION B-B

NOTES:

1. FOR SIDEWALK AND RAILING DETAILS, SEE SHEETS 43/54 AND 45/54 .
2. ELEVATIONS ARE GIVEN AT END OF APPROACH SLAB, SEE SECTION C-C.
3. FOR SECTION C-C, TYPICAL DIAPHRAGM INTERIOR BAY DETAIL AND DIAPHRAGM GUIDE BAY DETAIL, SEE SHEET 33/54 .
4. FOR ABUTMENT DETAILS, SEE SHEETS 9/54 AND 10/54 .
5. FOR BEAM DETAILS, SEE SHEETS 28/54 AND 29/54 .
6. FOR DECK POURING SEQUENCE, SEE SHEET 42/54.
7. ABUTMENT DIAPHRAGM CONCRETE, PHASED CONSTRUCTION: PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS OF AN INDIVIDUAL PHASE AFTER THE DECK PLACEMENT IN THE ADJACENT SPAN IS COMPLETE. PROCEDURES THAT PLACE THE ABUTMENT DIAPHRAGM WITH THE DECK CONCRETE MAY BE APPROVED BY THE ENGINEER IF THE PLACEMENT SUBMITTAL CAN ASSURE THAT THE DECK CONCRETE IN THE ADJACENT SPAN WILL BE PLACED BEFORE CONCRETE IN THE DIAPHRAGM HAS REACHED ITS INITIAL SET. PLACE CLOSURE POUR CONCRETE IN THE DIAPHRAGM AND DECK CONCURRENTLY.

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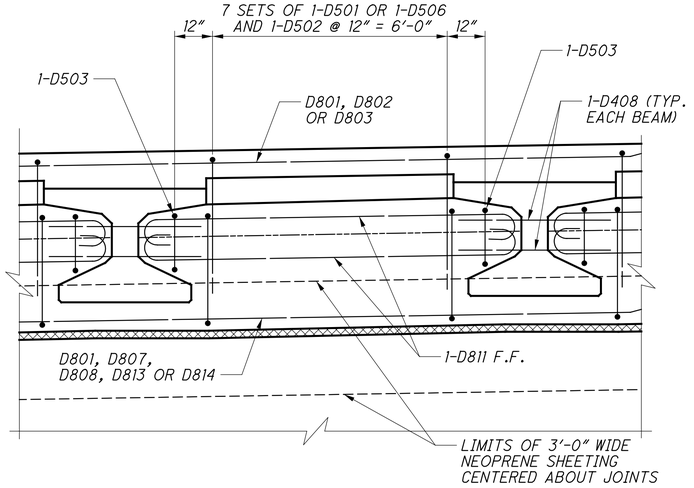
FORWARD ABUTMENT DIAPHRAGM DETAILS 2
BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

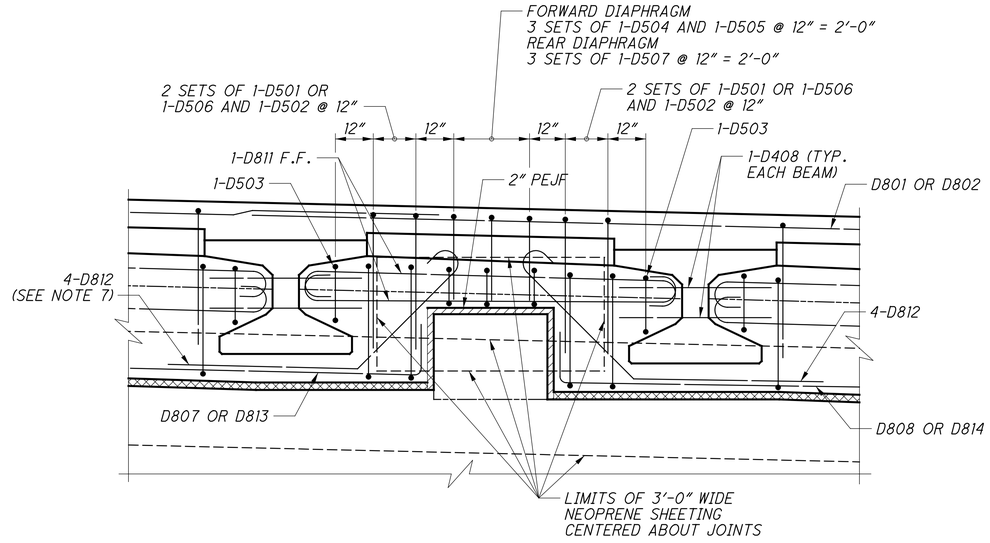
CLE-32-3.50
PID No. 103954

32 / 54

618 / 736

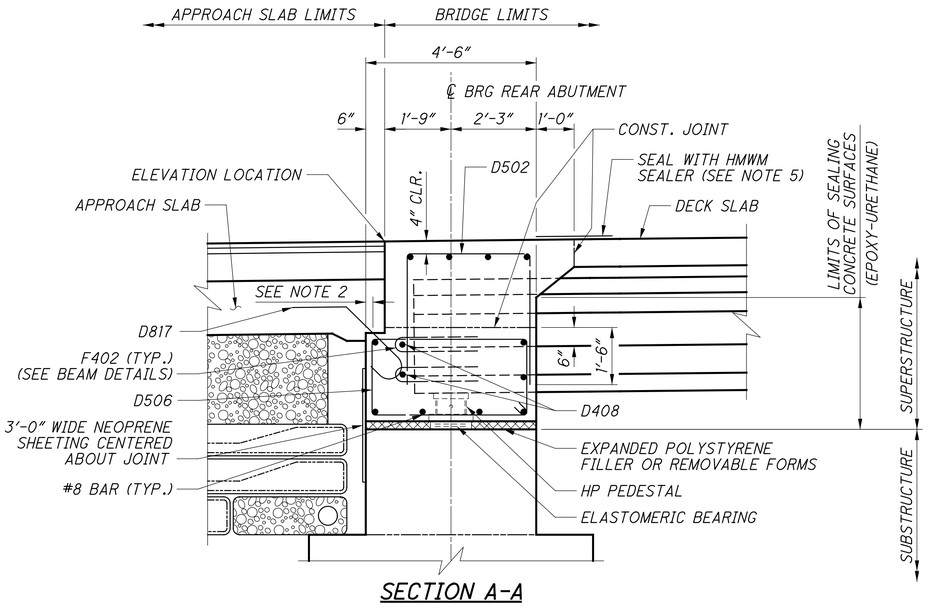


TYPICAL DIAPHRAGM INTERIOR BAY DETAIL

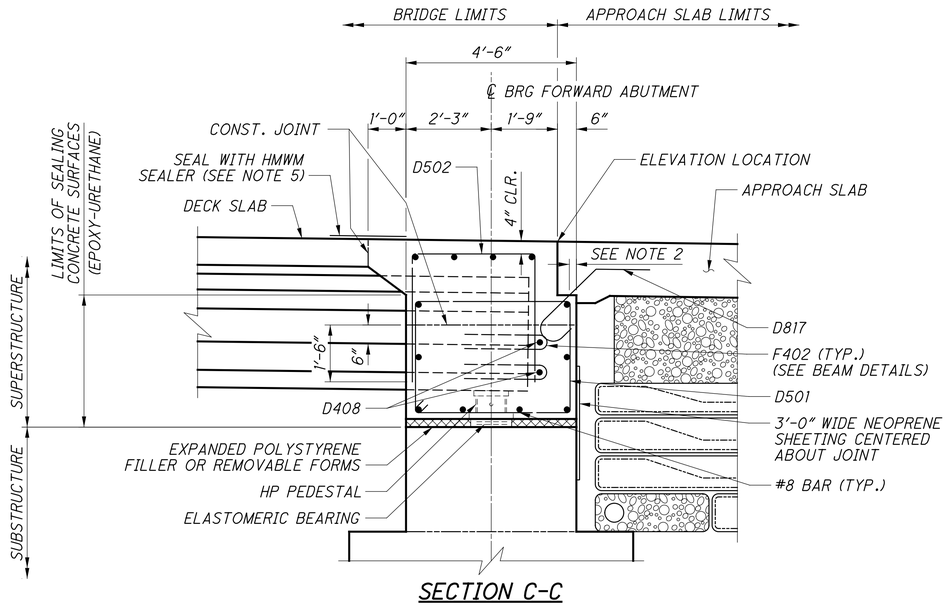


DIAPHRAGM GUIDE BAY DETAIL

(FORWARD DIAPHRAGM GUIDE SHOWN, REAR DIAPHRAGM GUIDE SIMILAR)



SECTION A-A



SECTION C-C

NOTES:

1. ALL VERTICAL REINFORCING BARS SHALL BE PLACED PARALLEL TO BEAMS.
2. 2¼" ±¼" CLEAR, FOR ADDITIONAL INFORMATION, SEE STD. DWG. AS-1-15.
3. FOR DIAPHRAGM GUIDE DETAILS, SEE SHEET 11/54.
4. FOR BEAM DETAILS, SEE SHEETS 28/54 AND 29/54.
5. 2'-0" WIDE HMWM SHALL BE CENTERED OVER CONSTRUCTION JOINT PER 511.22. ALL COST FOR SEALING OF THE CONSTRUCTION JOINT SHALL BE INCIDENTAL TO ITEM 511 - CLASS QC3 CONCRETE, MISC.: CLASS QC3 CONCRETE WITH QC/QA, SUPERSTRUCTURE.
6. FOR GEOWALL DETAILS, SEE SHEETS 48/54 AND 49/54.
7. ADJUST D812 BARS TO AVOID INTERFERENCE WITH APPROACH SLAB SEAT.

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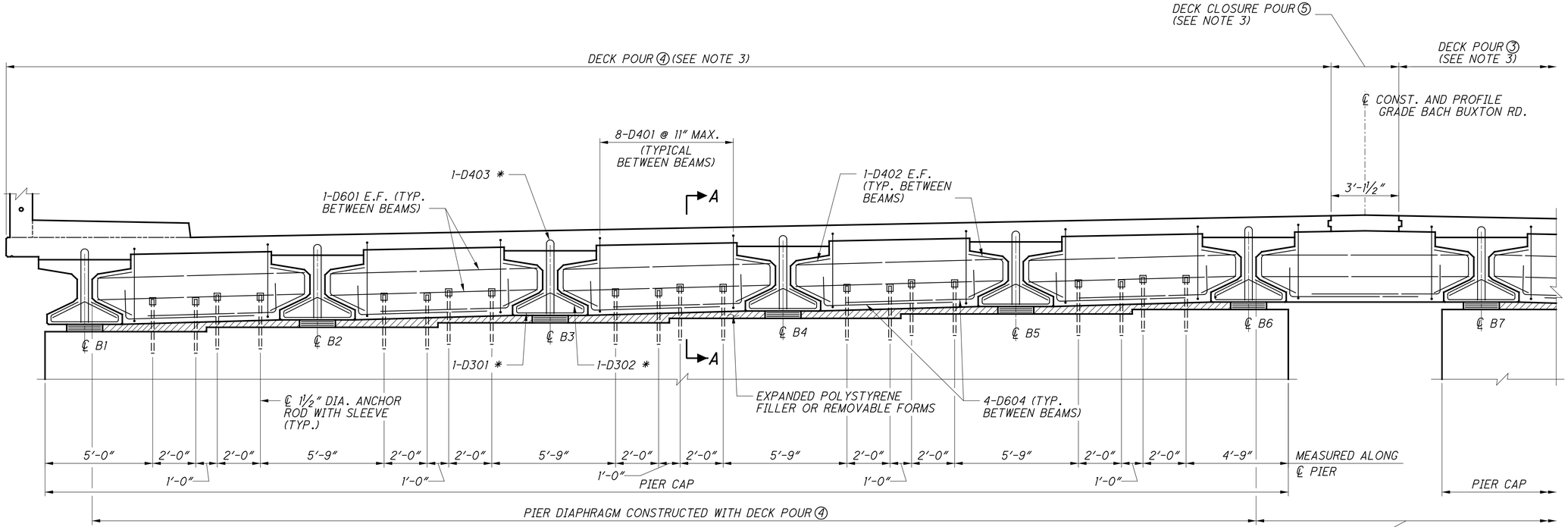
ABUTMENT DIAPHRAGM SECTIONS

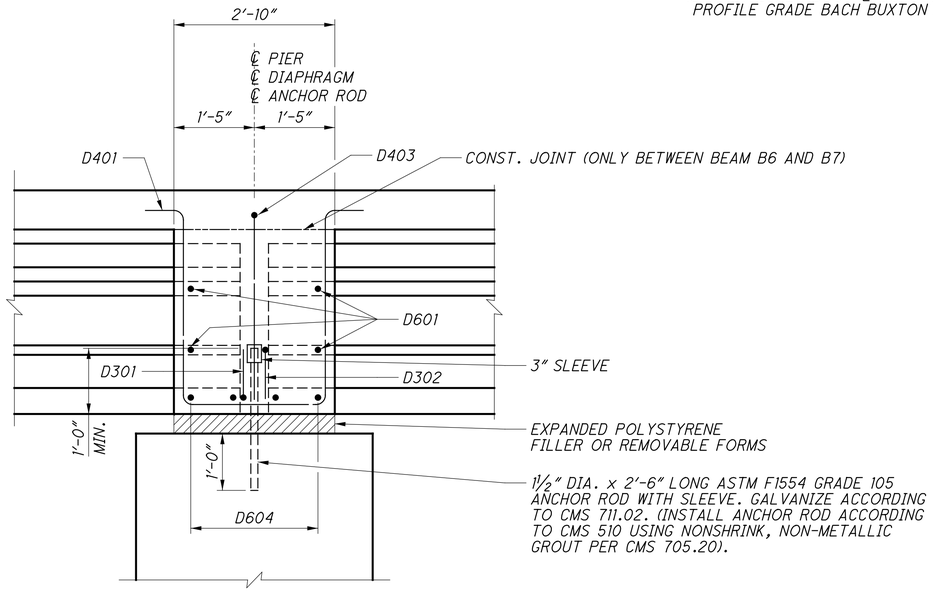
BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

CLE-32-3.50
PID No. 103954



PIER DIAPHRAGM ELEVATION

(SYMMETRICAL ABOUT ℄ CONST. AND PROFILE GRADE BACH BUXTON RD.)



SECTION A-A

* TYPICAL AT EACH BEAM, SEE SECTION A-A

NOTES:

1. ALL VERTICAL REINFORCING BARS SHALL BE PLACED PARALLEL TO BEAMS.
2. FOR ADDITIONAL DETAILS, SEE STD. DWG. PSID-1-13.
3. FOR DECK POURING SEQUENCE, SEE SHEET 42/54 .
4. ALL LABOR, MATERIALS AND EQUIPMENT, NECESSARY TO INSTALL ANCHOR RODS SHALL BE CONSIDERED INCIDENTAL TO ITEM 515 - DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE WF36-49 (BEAM LENGTH = 81′-11¼″).

DESIGN AGENCY
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401 W. NATIONWIDE BLVD, SUITE 225
COLUMBUS, OHIO 43215

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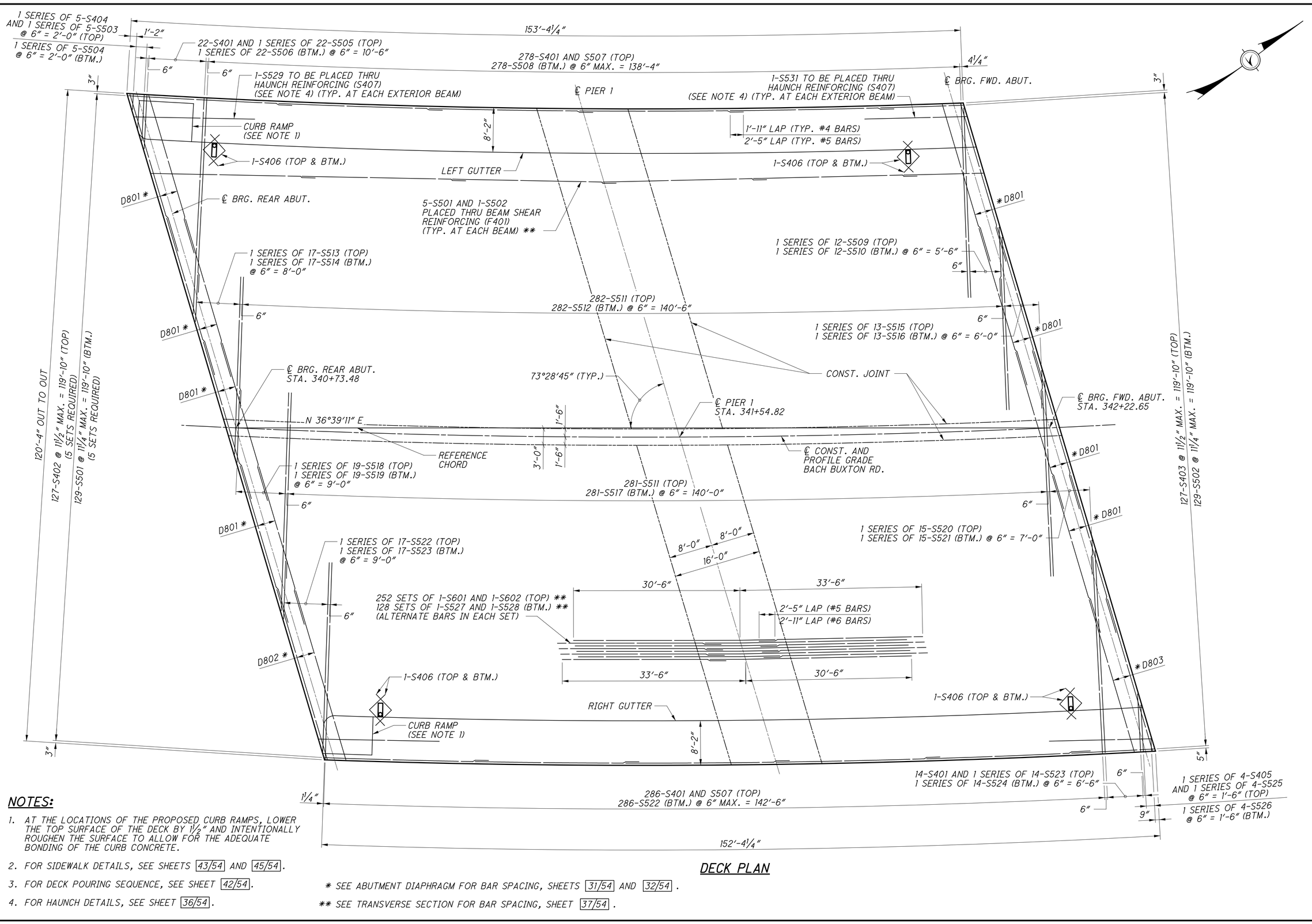
PIER DIAPHRAGM

BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

CLE-32-3.50
PID No. 103954



DECK PLAN

NOTES:

1. AT THE LOCATIONS OF THE PROPOSED CURB RAMPS, LOWER THE TOP SURFACE OF THE DECK BY 1½" AND INTENTIONALLY ROUGHEN THE SURFACE TO ALLOW FOR THE ADEQUATE BONDING OF THE CURB CONCRETE.
2. FOR SIDEWALK DETAILS, SEE SHEETS 43/54 AND 45/54.
3. FOR DECK POURING SEQUENCE, SEE SHEET 42/54.
4. FOR HAUNCH DETAILS, SEE SHEET 36/54.

* SEE ABUTMENT DIAPHRAGM FOR BAR SPACING, SHEETS 31/54 AND 32/54.

** SEE TRANSVERSE SECTION FOR BAR SPACING, SHEET 37/54.

DESIGN AGENCY
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DECK PLAN
BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

CLE-32-3.50
PID No. 103954

35 / 54

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736

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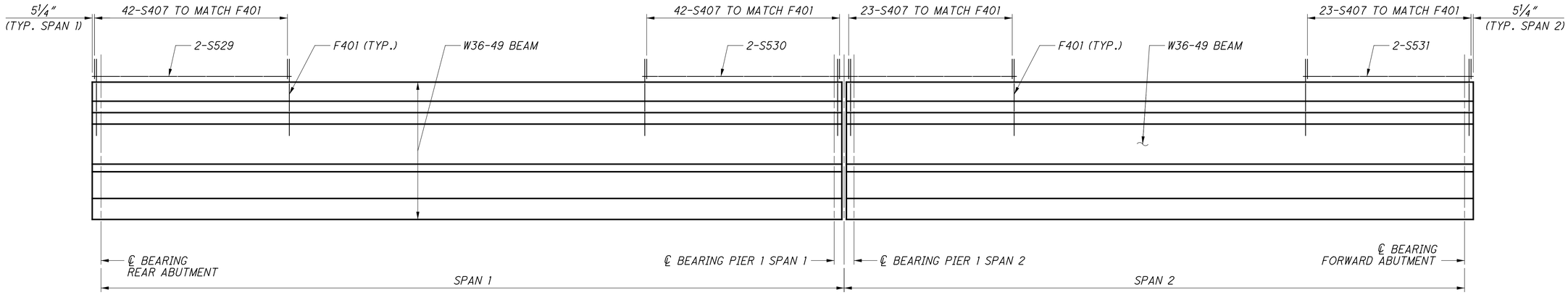
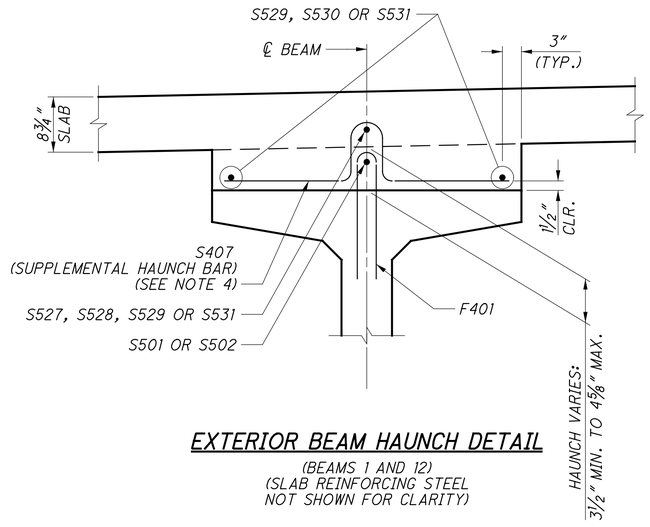


TYPICAL EXTERIOR BEAM ELEVATION - ALL SPANS

(BEAMS 1 AND 12)
(DECK SLAB NOT SHOWN)



EXTERIOR BEAM HAUNCH DETAIL

(BEAMS 1 AND 12)
(SLAB REINFORCING STEEL NOT SHOWN FOR CLARITY)

NOTES:

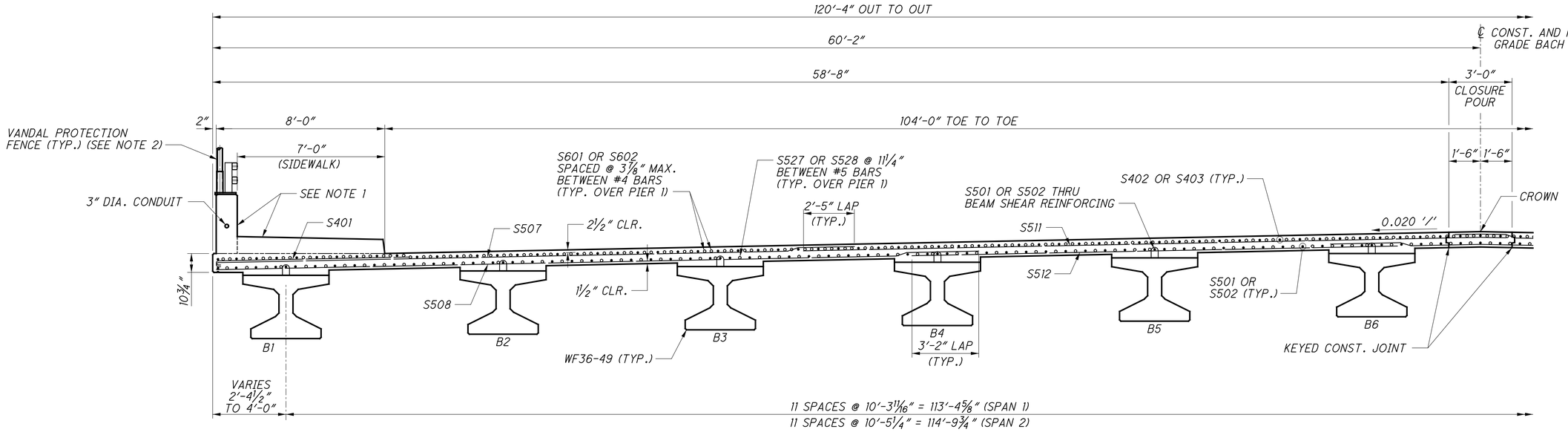
1. HAUNCHES OVER 4 INCHES IN DEPTH SHALL BE REINFORCED AS SHOWN ON THIS SHEET. SUPPLEMENTAL HAUNCH BARS SHALL BE AT THE SAME SPACING AS THE F401 BAR.
2. FOR ADDITIONAL BEAM DETAILS, SEE SHEETS 28/54, 29/54 AND 30/54.
3. FOR REINFORCING STEEL LIST, SEE SHEET 54/54.
4. SUPPLEMENTAL HAUNCH BAR MAY BE TIPPED OVER FROM VERTICAL 4:1 MAX. (V:H) TO ACCOMODATE PLACEMENT. TOP OF SUPPLEMENTAL BAR SHALL BE HOOKED OVER A LONGITUDINAL BAR IN THE BOTTOM MAT OF THE DECK SLAB. SEE SLAB PLAN, SHEET 35/54, FOR BAR LAYOUT.

DESIGN AGENCY
TranSystems
400 W. NATIONWIDE BLVD, SUITE 225
COLUMBUS, OHIO 43215

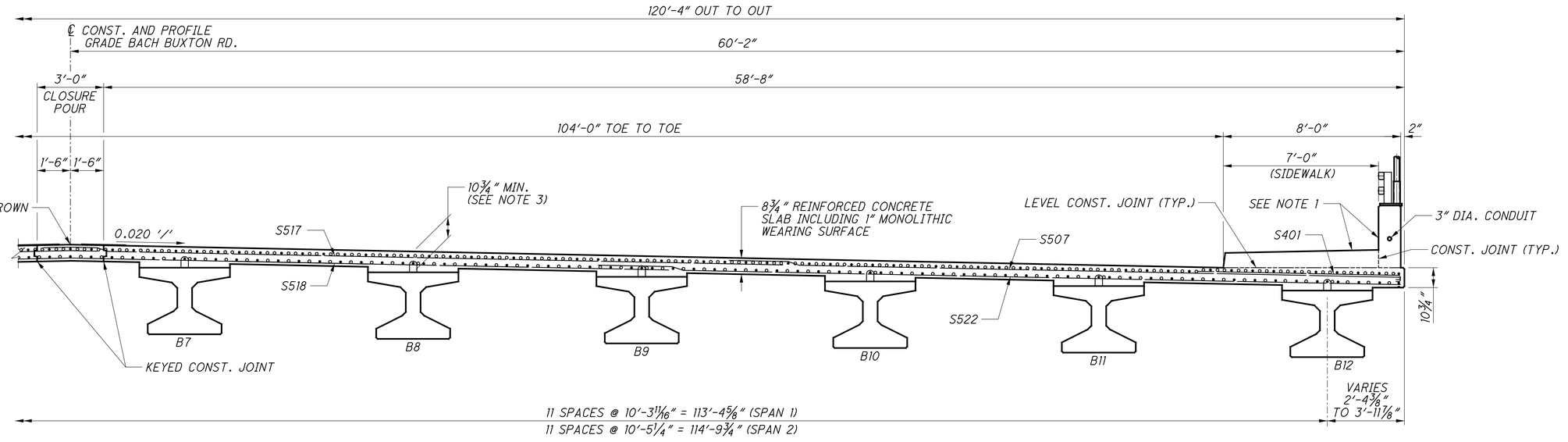
DESIGNED	DRAWN	REVIEWED	DATE
BCS	JDG	MSL	03/01/19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		13003336	

HAUNCH DETAILS
BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

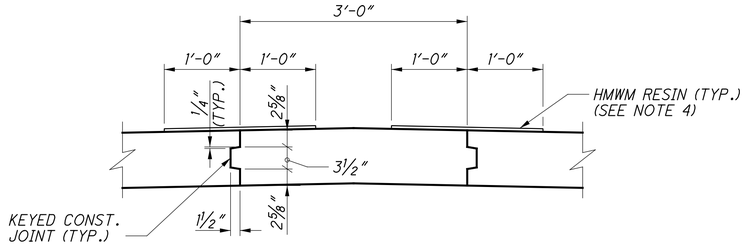
CLE-32-3.50
PID No. 103954



TRANSVERSE SECTION



TRANSVERSE SECTION



CLOSURE POUR DETAIL

NOTES:

1. FOR RAILING AND SIDEWALK DETAILS INCLUDING SEALING LIMITS, SEE SHEETS 43/54 TO 47/54 .
2. FOR VANDAL PROTECTION FENCE DETAILS AND SEALING LIMITS, SEE SHEET 47/54 .
3. THE ESTIMATED QUANTITY OF DECK CONCRETE IS MEASURED ACCORDING TO C&MS 511. IN ADDITION TO THE DESIGN SLAB THICKNESS, THE QUANTITY INCLUDES A VARIABLE HAUNCH THICKNESS THAT PROVIDES AN ALLOWANCE FOR: VERTICAL GRADE ADJUSTMENT, BEAM CAMBER AND ADDITIONAL SACRIFICIAL HAUNCH THICKNESS.
4. 2'-0" WIDE HMWM SHALL BE CENTERED OVER KEYED CONSTRUCTION JOINT PER 511.22. ALL COST FOR SEALING OF THE CONSTRUCTION JOINTS SHALL BE INCIDENTAL TO ITEM 511 - CLASS QC3 CONCRETE, MISC.: CLASS QC3 CONCRETE WITH QC/QA, SUPERSTRUCTURE.
5. THE REMOVAL OF ANY CLOSURE POUR SHALL NOT BE ALLOWED WITHOUT THE APPROVAL OF THE OFFICE OF STRUCTURAL ENGINEERING.

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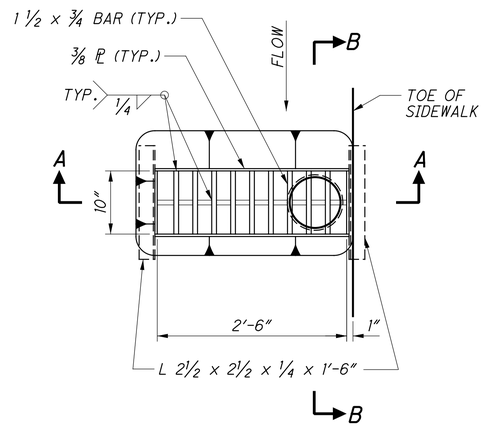
DESIGNED BCS | DRAWN JDG | CHECKED PJP | REVIEWED MSL | DATE 03/01/19 | STRUCTURE FILE NUMBER 13003336 | REVISED

TRANSVERSE SECTION
BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

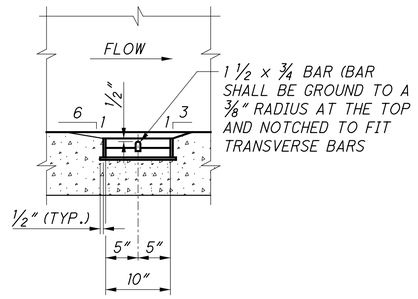
CLE-32-3.50
PID No. 103954

37/54

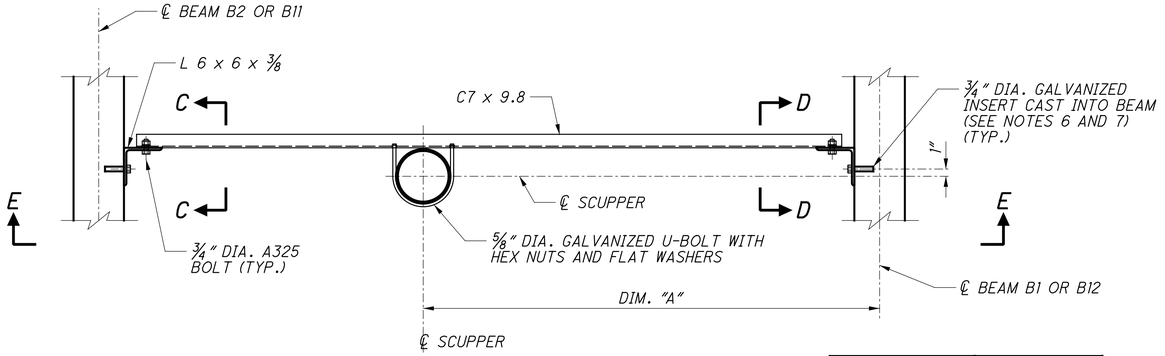
623/736



SCUPPER PLAN

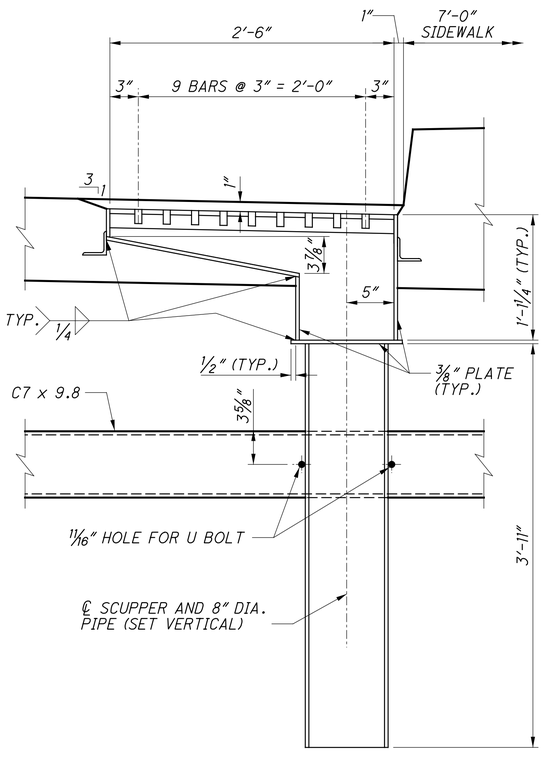


SECTION B-B

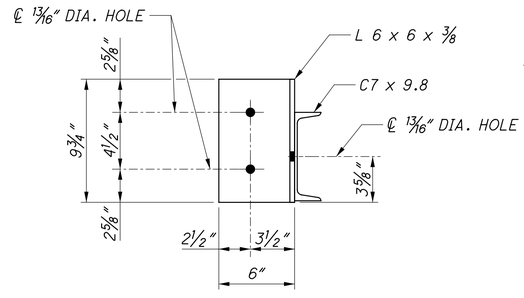


SCUPPER SUPPORT PLAN

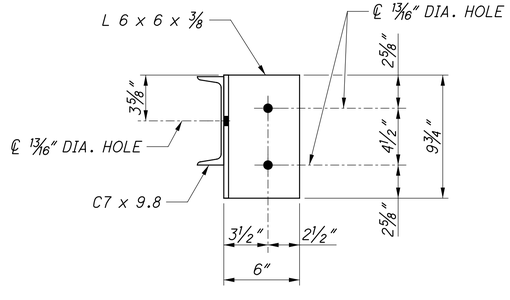
LOCATION	DIM. "A"
LEFT REAR	4′-11¾″
RIGHT REAR	4′-8⅞″
LEFT FORWARD	6′-3″
RIGHT FORWARD	5′-11½″



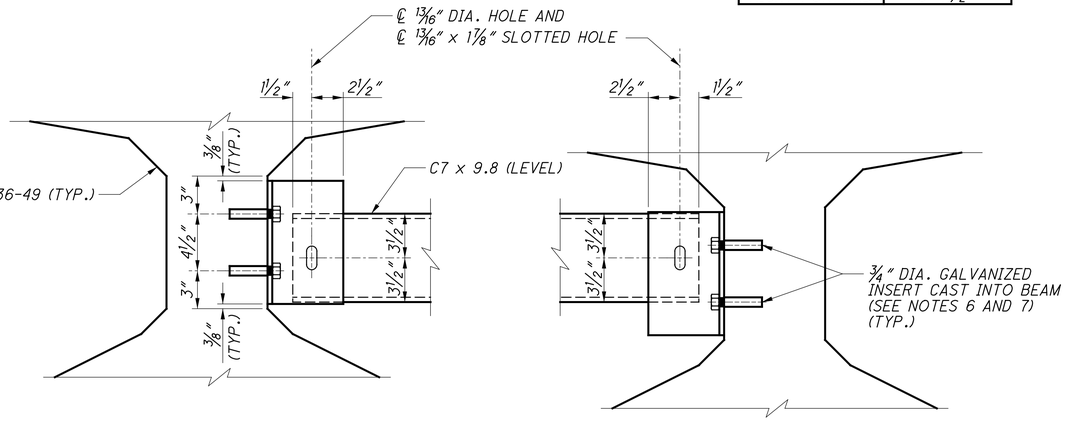
SECTION A-A



SECTION C-C



SECTION D-D



SECTION E-E

NOTES:

1. SCUPPERS, 8″ DIAMETER VERTICAL PIPES AND SPECIALS, AND SUPPORT SYSTEMS SHALL BE LOW OR MILD CARBON STEEL CONFORMING TO ITEM 513, AVAILABLE COMMERCIALLY, AND SHALL BE GALVANIZED ACCORDING TO CMS ITEM 711.02.
2. THE SCUPPERS AND SCUPPER SUPPORTS SHALL BE INCLUDED WITH ITEM 518, SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN, FOR PAYMENT.
3. STRUCTURAL STEEL FOR PIPE SUPPORTS, INCLUDING ANGLES, CHANNELS AND CONNECTION PLATES SHALL BE ASTM A709 GRADE 50 AND GALVANIZED ACCORDING TO 711.02.
4. ALL BOLTS SHALL BE GALVANIZED ACCORDING TO CMS 711.02.
5. FOR PLACEMENT OF ADDITIONAL REINFORCING AT SCUPPERS, SEE SHEETS 35/54 .
6. THREADED INSERTS IN PRESTRESSED BEAM WEBS ARE INCLUDED WITH ITEM 515 - DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE WF36-49.
7. BOLTS SHALL BE CAPABLE OF DEVELOPING A PULLOUT RESISTANCE OF NOT LESS THAN 12,000 LBS. FOR CONNECTING TO PRESTRESSED BEAMS, BOLTS SHALL BE ¾″ DIA. GALVANIZED WITH THREADED GALVANIZED INSERT CAST INTO THE BEAMS.
8. SUBMIT SHOP DRAWINGS ACCORDING TO CMS 501.04 FOR APPROVAL. PREPARATION OF SHOP DRAWINGS SHALL BE INCIDENTAL TO ITEM 518 - SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN, FOR PAYMENT.

DESIGN AGENCY
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400 W. NATIONWIDE BLVD, SUITE 225
COLUMBUS, OHIO 43215

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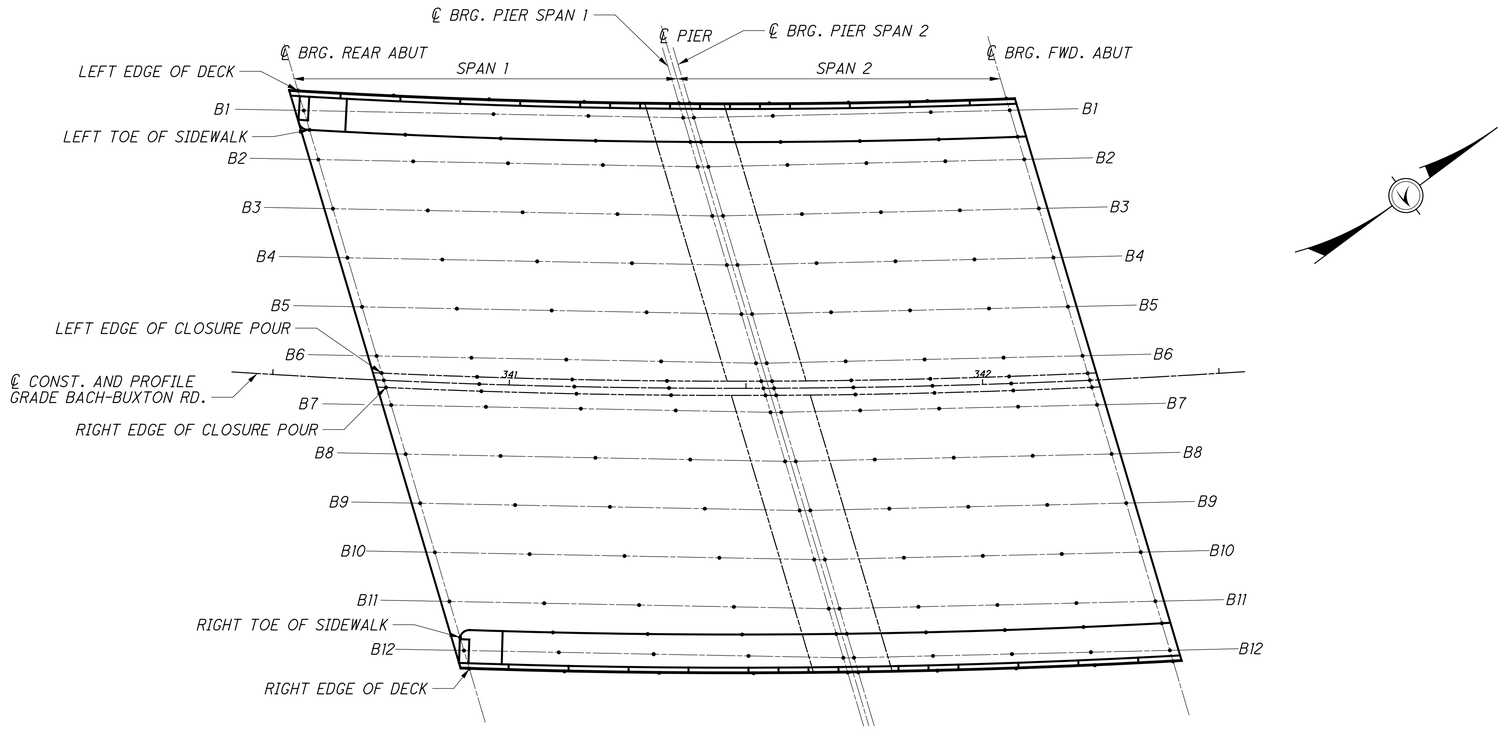
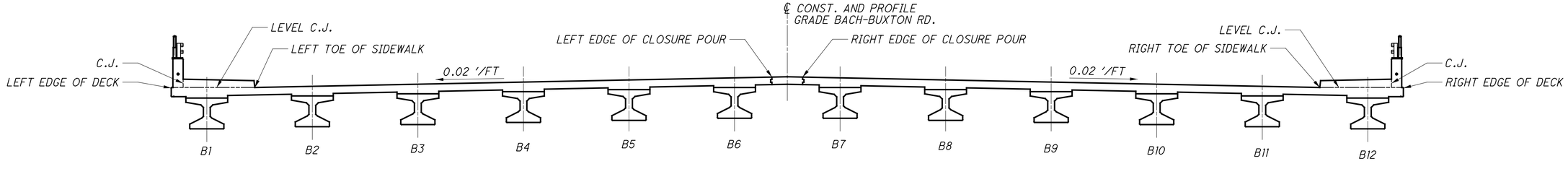
SCUPPER DETAILS

BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

CLE-32-3.50
PID No. 103954



DECK ELEVATIONS LAYOUT



TRANSVERSE SECTION

(LOOKING UPSTATION)

NOTES:

1. FOR NOTES, SEE SHEET 40/54 .

DESIGN AGENCY
TranSystems
400 W. NATIONWIDE BLVD, SUITE 225
COLUMBUS, OHIO 43215

DESIGNED	DRAWN	REVIEWED	DATE
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CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		13003336	

FINAL DECK SURFACE ELEVATIONS
BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

CLE-32-3.50
PID No. 103954

39/54

625
736

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FINAL DECK SURFACE ELEVATIONS

		℄ BRG. REAR ABUT	0.25	0.5	0.75	℄ BRG. PIER SPAN 1	℄ BRG. PIER SPAN 2	0.25	0.5	0.75	℄ BRG. FWD. ABUT
LEFT EDGE OF DECK	STATION	340+51.77	340+72.80	340+93.74	341+14.60	341+35.36	341+37.72	341+55.16	341+72.54	341+89.88	342+07.16
	OFFSET	60.17 LT.	60.17 LT.	60.17 LT.	60.17 LT.	60.17 LT.	60.17 LT.	60.17 LT.	60.17 LT.	60.17 LT.	60.17 LT.
	ELEVATION	870.71	870.98	871.18	871.31	871.37	871.37	871.36	871.30	871.19	871.04
BEAM 1	STATION	340+53.32	340+74.06	340+94.81	341+15.57	341+36.33	341+38.67	341+55.96	341+73.25	341+90.54	342+07.83
	OFFSET	56.03 LT.	56.67 LT.	57.07 LT.	57.22 LT.	57.1 LT.	57.12 LT.	57.52 LT.	57.75 LT.	57.79 LT.	57.66 LT.
	ELEVATION	870.73	870.99	871.19	871.31	871.37	871.37	871.36	871.30	871.19	871.03
LEFT TOE OF SIDEWALK	STATION	340+54.82	340+75.73	340+96.55	341+17.29	341+37.94	341+40.27	341+57.62	341+74.91	341+92.15	342+09.34
	OFFSET	52 LT.	52 LT.	52 LT.	52 LT.	52 LT.	52 LT.	52 LT.	52 LT.	52 LT.	52 LT.
	ELEVATION	870.75	871.01	871.20	871.32	871.37	871.37	871.35	871.29	871.18	871.01
BEAM 2	STATION	340+57.09	340+77.70	340+98.32	341+18.95	341+39.57	341+41.90	341+59.07	341+76.25	341+93.43	342+10.61
	OFFSET	45.85 LT.	46.45 LT.	46.81 LT.	46.91 LT.	46.76 LT.	46.77 LT.	47.14 LT.	47.33 LT.	47.35 LT.	47.19 LT.
	ELEVATION	870.91	871.14	871.32	871.43	871.48	871.48	871.45	871.37	871.26	871.10
BEAM 3	STATION	340+60.82	340+81.30	341+01.79	341+22.28	341+42.77	341+45.08	341+62.15	341+79.21	341+96.28	342+13.34
	OFFSET	35.66 LT.	36.22 LT.	36.53 LT.	36.59 LT.	36.4 LT.	36.41 LT.	36.75 LT.	36.91 LT.	36.9 LT.	36.71 LT.
	ELEVATION	871.16	871.38	871.55	871.65	871.68	871.68	871.65	871.57	871.44	871.28
BEAM 4	STATION	340+64.50	340+84.85	341+05.21	341+25.57	341+45.93	341+48.23	341+65.18	341+82.14	341+99.09	342+16.05
	OFFSET	25.47 LT.	25.98 LT.	26.25 LT.	26.27 LT.	26.04 LT.	26.05 LT.	26.35 LT.	26.48 LT.	26.44 LT.	26.22 LT.
	ELEVATION	871.41	871.62	871.77	871.86	871.89	871.89	871.84	871.76	871.63	871.45
BEAM 5	STATION	340+68.13	340+88.36	341+08.59	341+28.82	341+49.05	341+51.33	341+68.18	341+85.02	342+01.87	342+18.71
	OFFSET	15.27 LT.	15.74 LT.	15.97 LT.	15.94 LT.	15.67 LT.	15.67 LT.	15.95 LT.	16.05 LT.	15.98 LT.	15.73 LT.
	ELEVATION	871.66	871.86	872.00	872.08	872.09	872.09	872.04	871.95	871.81	871.63
BEAM 6	STATION	340+71.72	340+91.82	341+11.92	341+32.03	341+52.13	341+54.40	341+71.13	341+87.87	342+04.61	342+21.35
	OFFSET	5.06 LT.	5.49 LT.	5.67 LT.	5.61 LT.	5.3 LT.	5.3 LT.	5.54 LT.	5.61 LT.	5.51 LT.	5.24 LT.
	ELEVATION	871.91	872.09	872.22	872.29	872.30	872.29	872.24	872.14	871.99	871.81
LEFT EDGE OF CLOSURE POUR	STATION	340+72.96	340+93.15	341+13.26	341+33.29	341+53.25	341+55.51	341+72.27	341+88.99	342+05.65	342+22.28
	OFFSET	1.5 LT.	1.5 LT.	1.5 LT.	1.5 LT.	1.5 LT.	1.5 LT.	1.5 LT.	1.5 LT.	1.5 LT.	1.5 LT.
	ELEVATION	871.99	872.18	872.31	872.37	872.37	872.37	872.31	872.21	872.06	871.87
℄ CONST. AND PROFILE GRADE BACH-BUXTON RD.	STATION	340+73.48	340+93.65	341+13.74	341+33.75	341+53.69	341+55.95	341+72.69	341+89.39	342+06.04	342+22.65
	OFFSET	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	ELEVATION	872.03	872.22	872.34	872.41	872.40	872.40	872.34	872.24	872.09	871.90
RIGHT EDGE OF CLOSURE POUR	STATION	340+74.00	340+94.15	341+14.22	341+34.21	341+54.13	341+56.38	341+73.11	341+89.79	342+06.43	342+23.02
	OFFSET	1.5 RT.	1.5 RT.	1.5 RT.	1.5 RT.	1.5 RT.	1.5 RT.	1.5 RT.	1.5 RT.	1.5 RT.	1.5 RT.
	ELEVATION	872.00	872.19	872.32	872.38	872.37	872.37	872.31	872.20	872.06	871.86
BEAM 7	STATION	340+75.27	340+95.24	341+15.22	341+35.20	341+55.17	341+57.42	341+74.05	341+90.69	342+07.32	342+23.95
	OFFSET	5.16 RT.	4.77 RT.	4.63 RT.	4.73 RT.	5.08 RT.	5.09 RT.	4.87 RT.	4.83 RT.	4.96 RT.	5.26 RT.
	ELEVATION	871.94	872.14	872.26	872.31	872.30	872.29	872.24	872.13	871.98	871.78
BEAM 8	STATION	340+78.78	340+98.62	341+18.47	341+38.33	341+58.17	341+60.41	341+76.94	341+93.47	342+09.99	342+26.52
	OFFSET	15.41 RT.	15.04 RT.	14.94 RT.	15.08 RT.	15.46 RT.	15.47 RT.	15.29 RT.	15.28 RT.	15.43 RT.	15.76 RT.
	ELEVATION	871.78	871.96	872.07	872.11	872.08	872.08	872.01	871.90	871.74	871.53
BEAM 9	STATION	340+82.22	341+01.95	341+21.68	341+41.41	341+61.14	341+63.36	341+79.78	341+96.21	342+12.63	342+29.05
	OFFSET	25.62 RT.	25.31 RT.	25.25 RT.	25.43 RT.	25.85 RT.	25.87 RT.	25.72 RT.	25.73 RT.	25.91 RT.	26.26 RT.
	ELEVATION	871.61	871.77	871.87	871.90	871.87	871.86	871.79	871.67	871.50	871.29
BEAM 10	STATION	340+85.64	341+05.25	341+24.86	341+44.47	341+64.07	341+66.27	341+82.60	341+98.92	342+15.24	342+31.55
	OFFSET	35.86 RT.	35.59 RT.	35.57 RT.	35.79 RT.	36.25 RT.	36.27 RT.	36.14 RT.	36.19 RT.	36.4 RT.	36.77 RT.
	ELEVATION	871.43	871.59	871.67	871.70	871.65	871.64	871.56	871.43	871.26	871.04
BEAM 11	STATION	340+89.01	341+08.50	341+27.99	341+47.48	341+66.96	341+69.15	341+85.37	342+01.59	342+17.81	342+34.02
	OFFSET	46.1 RT.	45.88 RT.	45.9 RT.	46.15 RT.	46.65 RT.	46.67 RT.	46.58 RT.	46.65 RT.	46.88 RT.	47.29 RT.
	ELEVATION	871.26	871.40	871.48	871.49	871.43	871.42	871.33	871.20	871.02	870.80
RIGHT TOE OF SIDEWALK	STATION	340+91.46	341+10.42	341+29.82	341+49.16	341+68.43	341+70.61	341+86.80	342+02.95	342+19.06	342+35.12
	OFFSET	53.6 RT.	52 RT.	52 RT.	52 RT.	52 RT.	52 RT.	52 RT.	52 RT.	52 RT.	52 RT.
	ELEVATION	871.13	871.29	871.36	871.37	871.32	871.31	871.22	871.08	870.90	870.69
BEAM 12	STATION	340+92.35	341+11.72	341+31.09	341+50.45	341+69.81	341+72.00	341+88.12	342+04.24	342+20.35	342+36.46
	OFFSET	56.36 RT.	56.18 RT.	56.23 RT.	56.52 RT.	57.05 RT.	57.08 RT.	57.01 RT.	57.11 RT.	57.37 RT.	57.8 RT.
	ELEVATION	871.17	871.29	871.36	871.37	871.31	871.30	871.21	871.07	870.89	870.66
RIGHT EDGE OF DECK	STATION	340+93.57	341+12.95	341+32.26	341+51.49	341+70.66	341+72.83	341+88.94	342+05.00	342+21.02	342+37.01
	OFFSET	60.17 RT.	60.17 RT.	60.17 RT.	60.17 RT.	60.17 RT.	60.17 RT.	60.17 RT.	60.17 RT.	60.17 RT.	60.17 RT.
	ELEVATION	871.18	871.30	871.36	871.37	871.31	871.30	871.20	871.06	870.88	870.66

NOTES:

1. FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.
2. ALL STATIONS AND OFFSETS SHOWN ARE FROM ℄ CONSTRUCTION BACH-BUXTON.
3. DECK SLAB THICKNESS FOR CONCRETE QUANTITY: THE ESTIMATED QUANTITY OF DECK CONCRETE IS MEASURED ACCORDING TO C&MS 511. IN ADDITION TO THE DESIGN SLAB THICKNESS, THE QUANTITY INCLUDES A VARIABLE HAUNCH THICKNESS THAT PROVIDES AN ALLOWANCE FOR: BEAM CAMBER AND ADDITIONAL SACRIFICIAL HAUNCH THICKNESS.

DESIGN AGENCY
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401 W. NATIONWIDE BLVD, SUITE 225
COLUMBUS, OHIO 43215

DESIGNED BCS | DRAWN BCS | CHECKED PJP | REVIEWED MSL | DATE 03/01/19 | REVISED | STRUCTURE FILE NUMBER 13003336

FINAL DECK SURFACE ELEVATIONS
BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

CLE-32-3.50
PID No. 103954

TOP OF HAUNCH ELEVATIONS

	℄ BRG. REAR ABUT	0.25	0.5	0.75	℄ BRG. PIER SPAN 1	℄ BRG. PIER SPAN 2	0.25	0.5	0.75	℄ BRG. FWD. ABUT
BEAM 1	870.00	870.34	870.57	870.66	870.64	870.64	870.66	870.61	870.49	870.30
BEAM 2	870.18	870.50	870.72	870.79	870.75	870.75	870.76	870.71	870.57	870.37
BEAM 3	870.43	870.74	870.94	871.00	870.95	870.95	870.96	870.90	870.76	870.55
BEAM 4	870.68	870.98	871.17	871.22	871.16	871.16	871.16	871.09	870.94	870.73
BEAM 5	870.93	871.22	871.40	871.44	871.37	871.36	871.35	871.28	871.12	870.90
BEAM 6	871.18	871.45	871.62	871.65	871.57	871.57	871.55	871.47	871.31	871.08
BEAM 7	871.21	871.50	871.66	871.67	871.57	871.56	871.55	871.46	871.29	871.05
BEAM 8	871.05	871.31	871.46	871.47	871.35	871.35	871.32	871.23	871.05	870.80
BEAM 9	870.88	871.13	871.27	871.26	871.14	871.13	871.10	871.00	870.81	870.56
BEAM 10	870.70	870.95	871.07	871.05	870.92	870.91	870.87	870.77	870.57	870.31
BEAM 11	870.53	870.76	870.87	870.85	870.70	870.69	870.65	870.53	870.33	870.07
BEAM 12	870.44	870.64	870.74	870.71	870.58	870.57	870.51	870.39	870.19	869.94

NOTES:

1. FOR TOP OF HAUNCH LOCATIONS, SEE DECK ELEVATIONS LAYOUT AND TRANSVERSE SECTION ON SHEET 39/54.
2. TOP OF HAUNCH ELEVATIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF THE DECK ABOVE THE BEAM HAUNCH PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.

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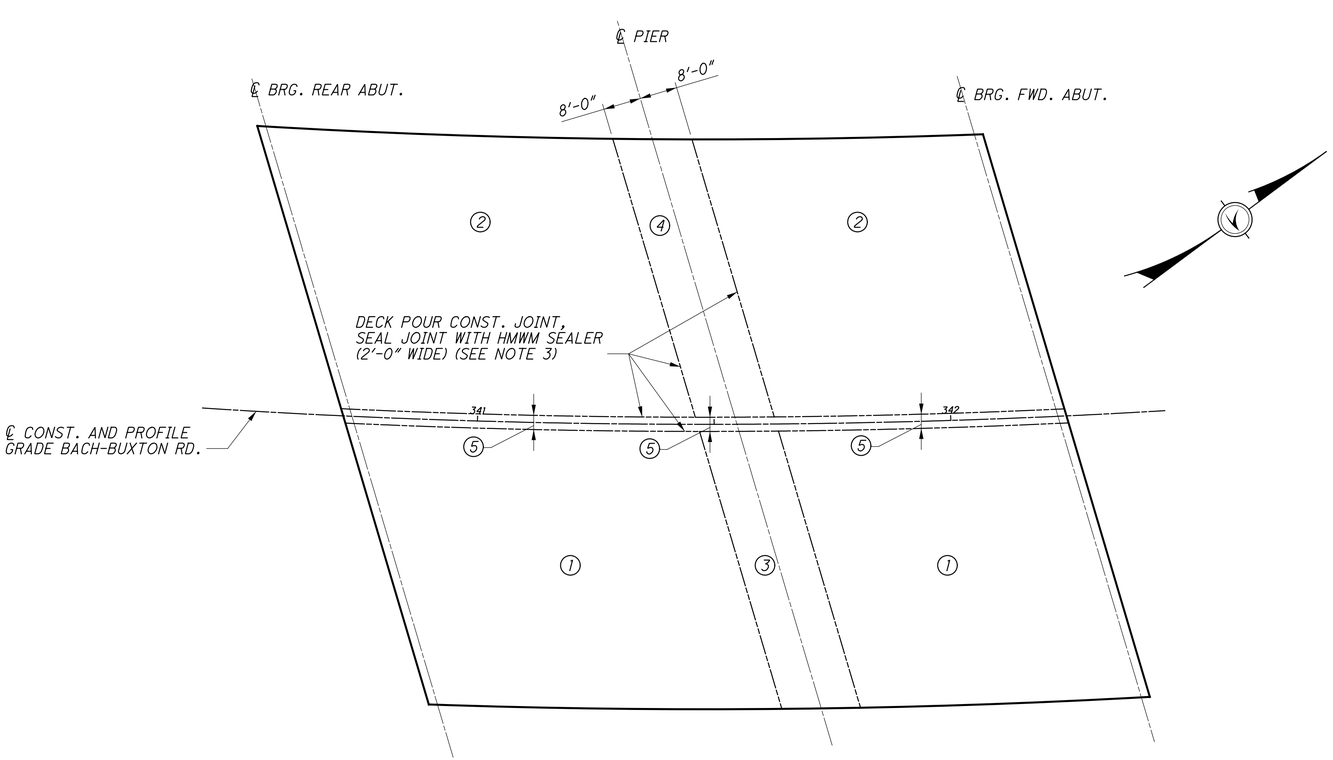
BCS	BCS	MSL	03/01/19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		1300336	

TOP OF HAUNCH ELEVATIONS
BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

CLE-32-3.50
PID No. 103954

SCREED ELEVATIONS

	℄ BRG. REAR ABUT	0.25	0.5	0.75	℄ BRG. PIER SPAN 1	℄ BRG. PIER SPAN 2	0.25	0.5	0.75	℄ BRG. FWD. ABUT
LEFT EDGE OF DECK	870.71	871.06	871.29	871.38	871.37	871.37	871.39	871.35	871.23	871.04
LEFT TOE OF SIDEWALK	870.75	871.09	871.32	871.40	871.37	871.37	871.39	871.34	871.21	871.01
LEFT EDGE OF CLOSURE POUR	871.99	872.27	872.44	872.46	872.37	872.37	872.35	872.27	872.11	871.87
℄ CONST. AND PROFILE GRADE BACH-BUXTON RD.	872.03	872.31	872.47	872.49	872.40	872.40	872.38	872.30	872.13	871.90
RIGHT EDGE OF CLOSURE POUR	872.00	872.28	872.44	872.46	872.37	872.37	872.35	872.26	872.10	871.86
RIGHT TOE OF SIDEWALK	871.13	871.37	871.47	871.45	871.32	871.31	871.25	871.13	870.94	870.69
RIGHT EDGE OF DECK	871.18	871.37	871.47	871.44	871.31	871.30	871.23	871.11	870.91	870.66



DECK POURING SEQUENCE

NOTES:

1. SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
2. FOR SCREED LOCATIONS, SEE DECK ELEVATIONS LAYOUT AND TRANSVERSE SECTION ON SHEET 39/54.
3. NO CONCRETE SHALL BE PLACED BETWEEN THE CONSTRUCTION JOINTS AT THE PIER PRIOR TO THE PLACEMENT OF CONCRETE IN EACH ADJACENT SPAN. UPON COMPLETION OF THE CONCRETE PLACEMENT IN THE ADJACENT SPANS, THE DIAPHRAGM AND DECK CONCRETE BETWEEN THE CONSTRUCTION JOINTS AT THE PIERS CAN BE PLACED. THE CONSTRUCTION JOINTS SHALL BE SEALED WITH A HIGH MOLECULAR WEIGHT METHACRYLATE RESIN 2'-0" WIDE AND CENTERED OVER THE JOINT. PAYMENT IS INCLUDED WITH ITEM 511 - CLASS QC3 CONCRETE, MISC.: CLASS QC3 CONCRETE WITH QC/QA, SUPERSTRUCTURE.
4. CONTINUOUS DECK POUR PROCEDURES, WHICH PROCEED FROM END TO END OF THE BRIDGE AND PLACE THE PIER DIAPHRAGM CONCRETE CONCURRENTLY WITH THE DECK CONCRETE, MAY BE APPROVED BY THE ENGINEER IF THE PLACEMENT SUBMITTAL CAN ASSURE THE DECK CONCRETE IN ADJACENT SPANS WILL BE PLACED BEFORE THE PIER DIAPHRAGM CONCRETE HAS REACHED ITS INITIAL SET.

DESIGN AGENCY
TranSystems
400 W. NATIONWIDE BLVD, SUITE 225
COLUMBUS, OHIO 43215

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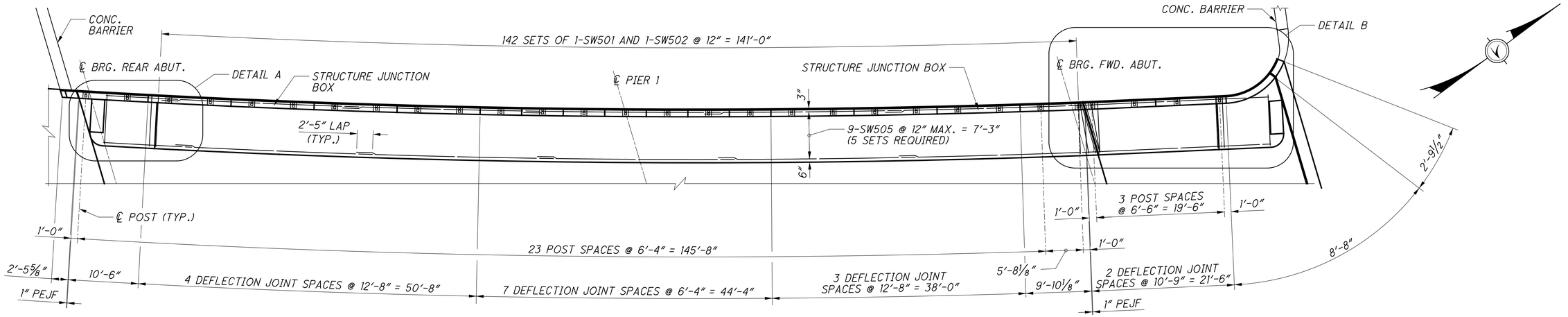
DESIGNED BCS CHECKED PJP

SCREED ELEVATIONS AND DECK POURING SEQUENCE
BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

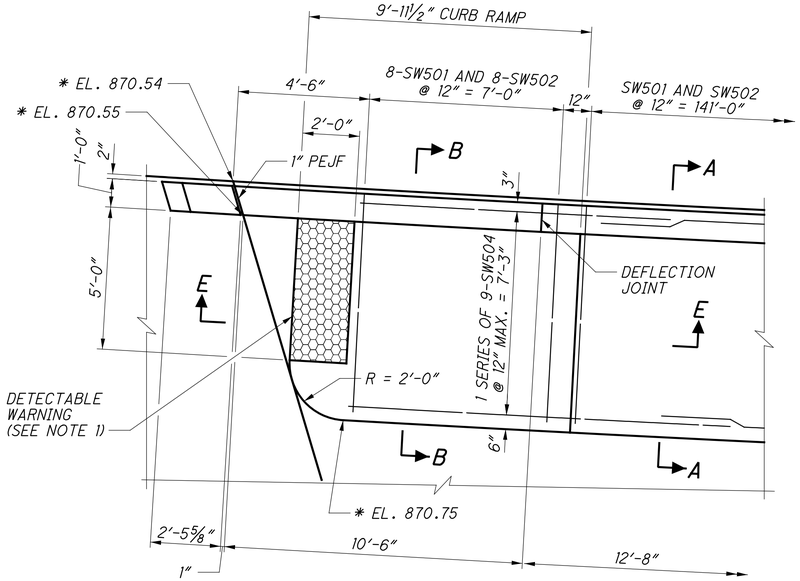
CLE-32-3.50
PID No. 103954

42/54

628/736

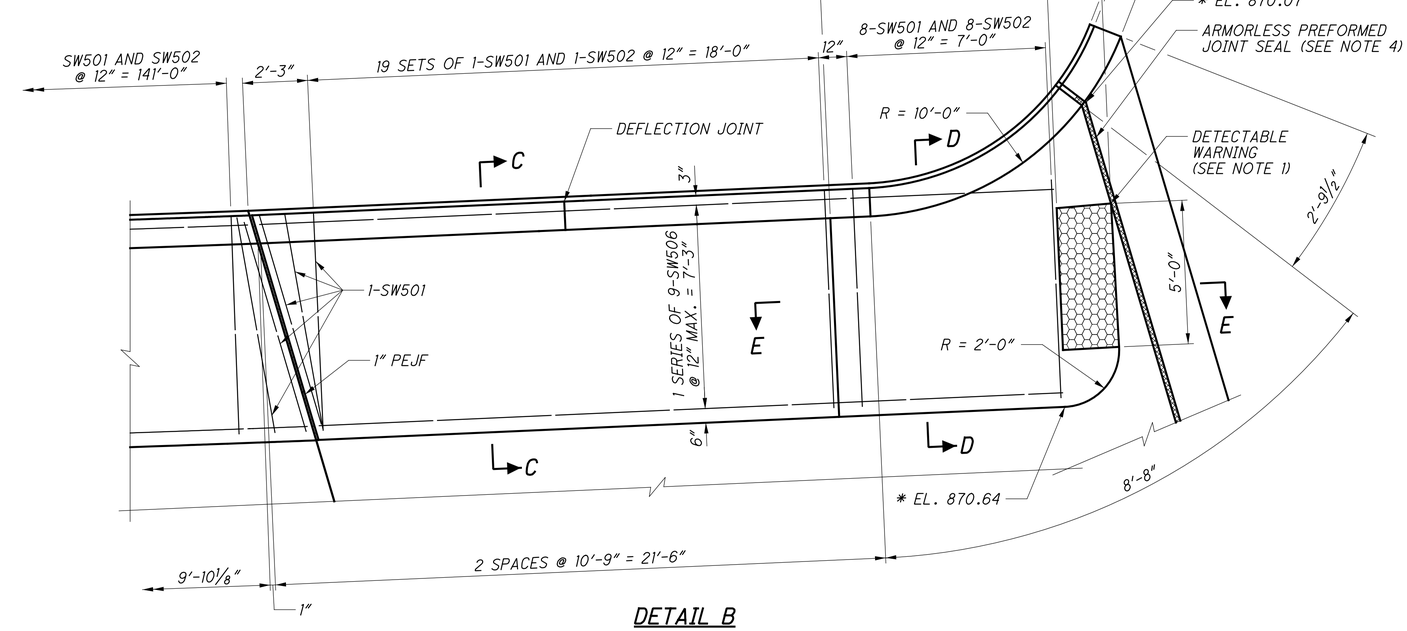


LEFT RAILING AND SIDEWALK PLAN



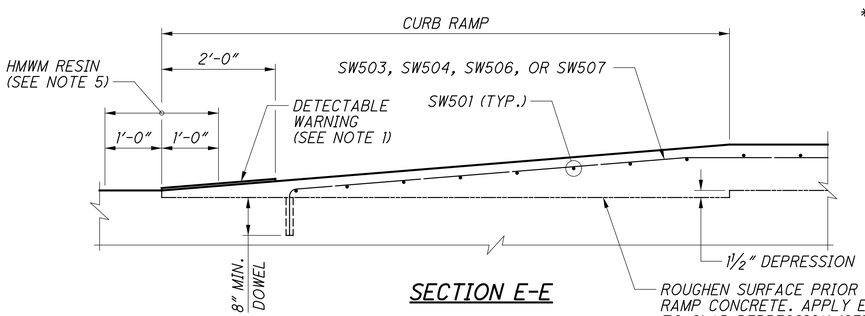
DETAIL A

(MODIFIED BP-3 BASE PLATES NOT SHOWN FOR CLARITY)



DETAIL B

(MODIFIED BP-3 BASE PLATES NOT SHOWN FOR CLARITY)



SECTION E-E

ROUGHEN SURFACE PRIOR TO PLACEMENT OF CURB RAMP CONCRETE. APPLY EPOXY BONDING COMPOUND TO SLAB DEPRESSION (SEE NOTE 6).

* DENOTES ELEVATION GIVEN AT TOP OF DECK OR APPROACH SLAB

NOTES:

1. PAID FOR AS ITEM 608 - DETECTABLE WARNING.
2. ALL HORIZONTAL RAILING DIMENSIONS ARE GIVEN ALONG F.F. OF RAIL.
3. FOR SECTION A-A, B-B, C-C AND D-D, SEE SHEET 47/54 .
4. PAID FOR AS ITEM 516 - ARMORLESS PREFORMED JOINT SEAL. SEE STD. DWG. AS-2-15, APPROACH SLAB INSTALLATION (TYPE C).
5. 2'-0" WIDE HMWM SHALL BE CENTERED OVER CONSTRUCTION JOINT PER 511.22. ALL COST FOR SEALING OF THE CONSTRUCTION JOINTS SHALL BE INCIDENTAL TO ITEM 511 - CLASS QC3 CONCRETE, MISC.: CLASS QC3 CONCRETE WITH QC/QA, SUPERSTRUCTURE.
6. EPOXY BONDING COMPOUND SHALL COMPLY WITH:
   - AASHTO M235, TYPE II
   - ASTM C881, TYPE I, II GRADE 2, CLASS B AND C

   APPLY EPOXY BONDING COMPOUND IN ACCORDANCE WITH MANUFACTURES WRITTEN INSTRUCTIONS. ALL COSTS FOR EPOXY BONDING COMPOUND SHALL BE INCIDENTAL TO ITEM 511 - CLASS QC3 CONCRETE, MISC.: CLASS QC3 CONCRETE WITH QC/QA, SUPERSTRUCTURE.

DESIGN AGENCY
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CHECKED	REVISED	STRUCTURE FILE NUMBER	
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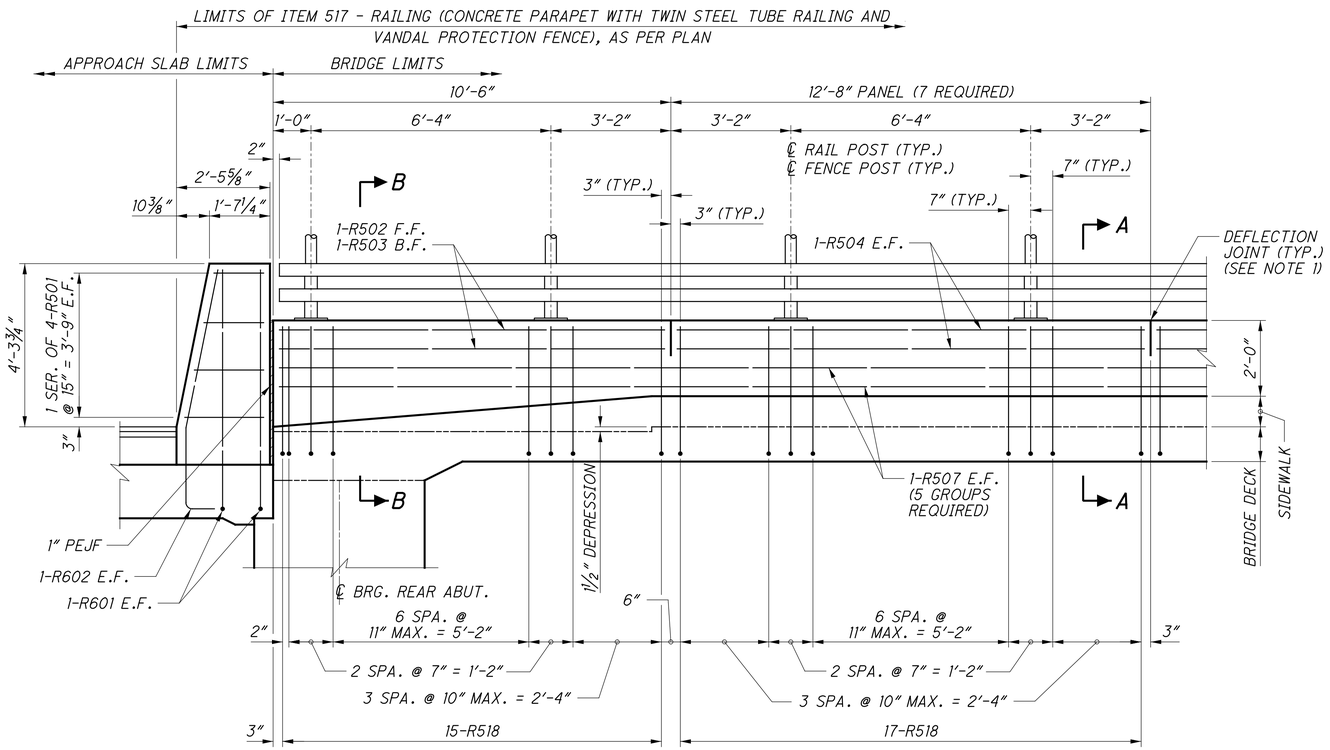
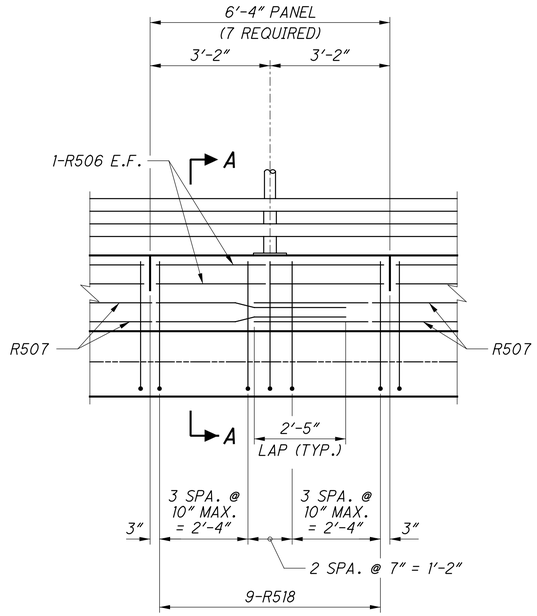
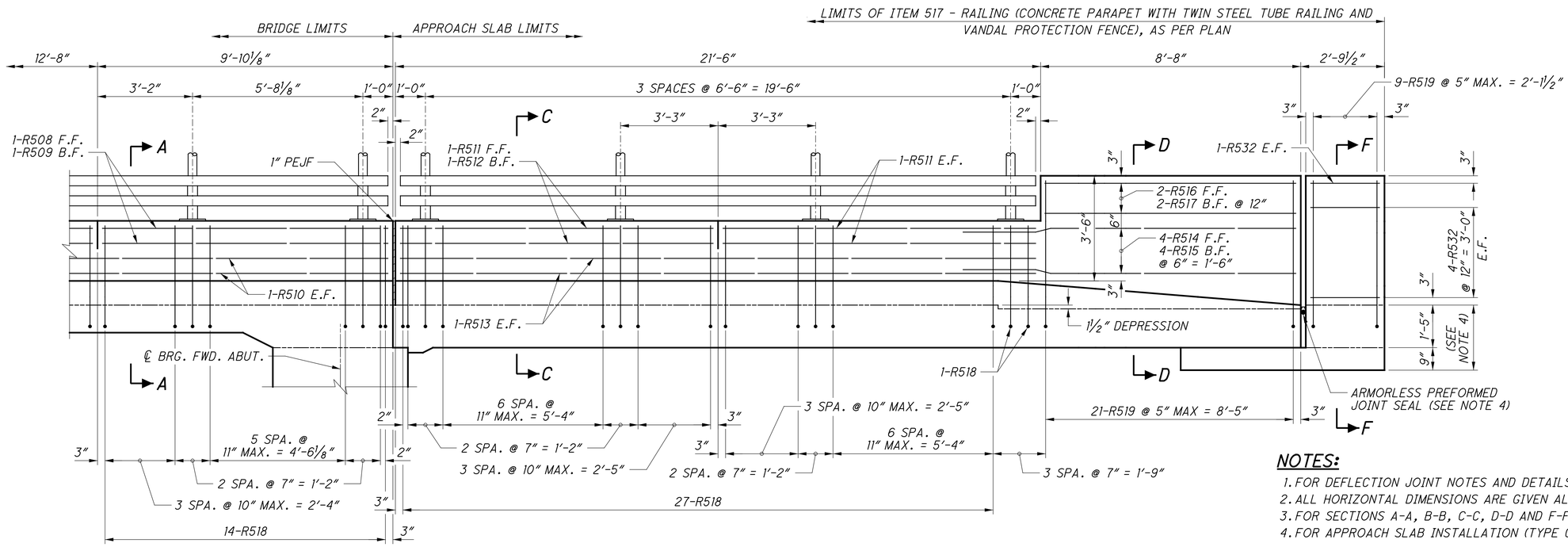
LEFT RAILING AND SIDEWALK PLAN
BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

CLE-32-3.50
PID No. 103954



LEFT RAILING AND SIDEWALK PARTIAL ELEVATION





LEFT RAILING AND SIDEWALK PARTIAL ELEVATION

NOTES:

1. FOR DEFLECTION JOINT NOTES AND DETAILS, SEE STD. DWG. BR-2-15.
2. ALL HORIZONTAL DIMENSIONS ARE GIVEN ALONG F.F. OF RAIL.
3. FOR SECTIONS A-A, B-B, C-C, D-D AND F-F, SEE SHEET 47/54 .
4. FOR APPROACH SLAB INSTALLATION (TYPE C) DETAILS, SEE STD. DWG. AS-2-15.

DESIGN AGENCY
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400 W. NATIONWIDE BLVD, SUITE 225
COLUMBUS, OHIO 43215

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DATE 03/01/19
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STRUCTURE FILE NUMBER 1300336

LEFT RAILING ELEVATION
BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

CLE-32-3.50
PID No. 103954

44/54

630
736

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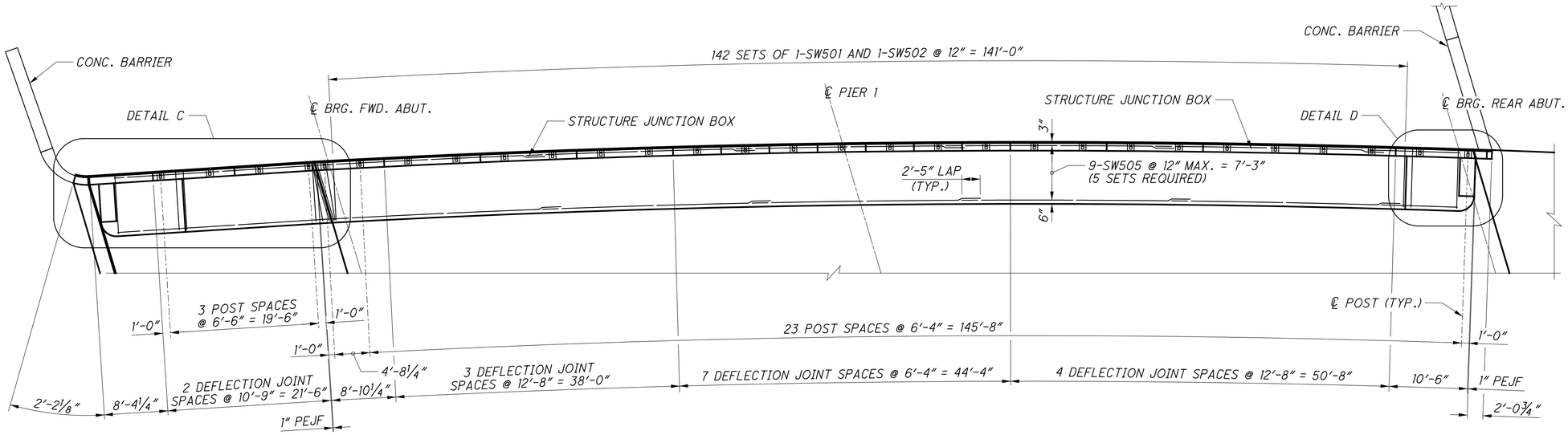
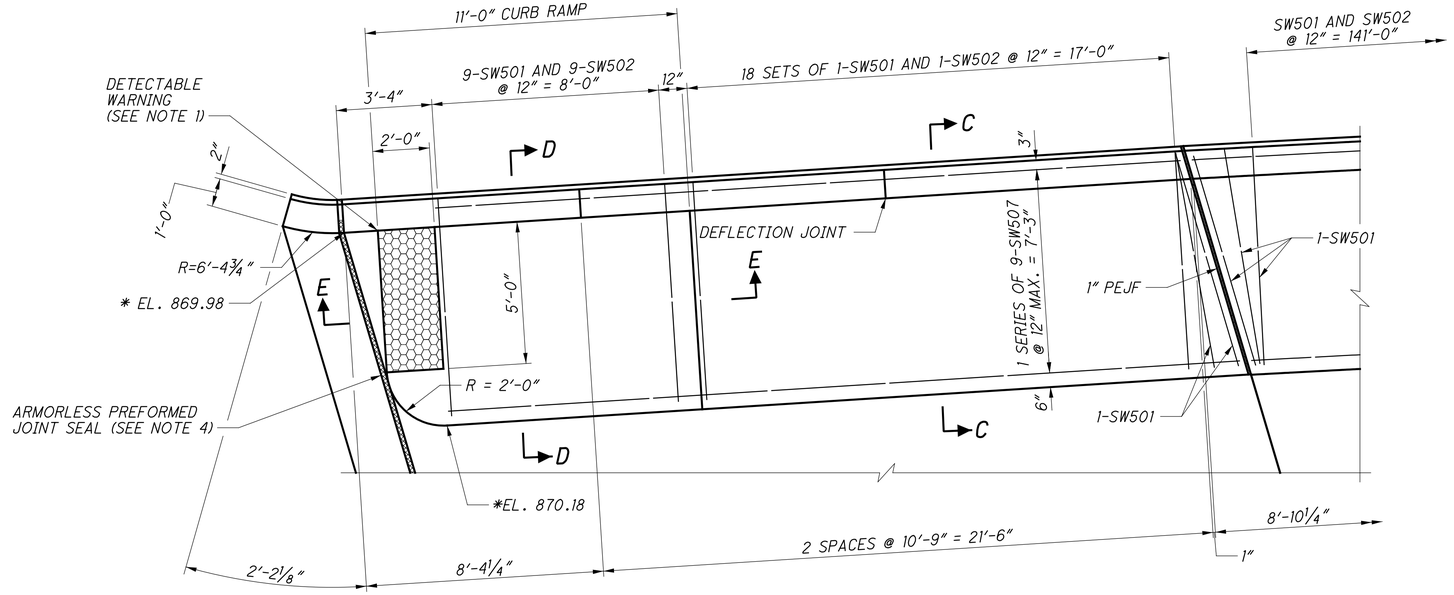
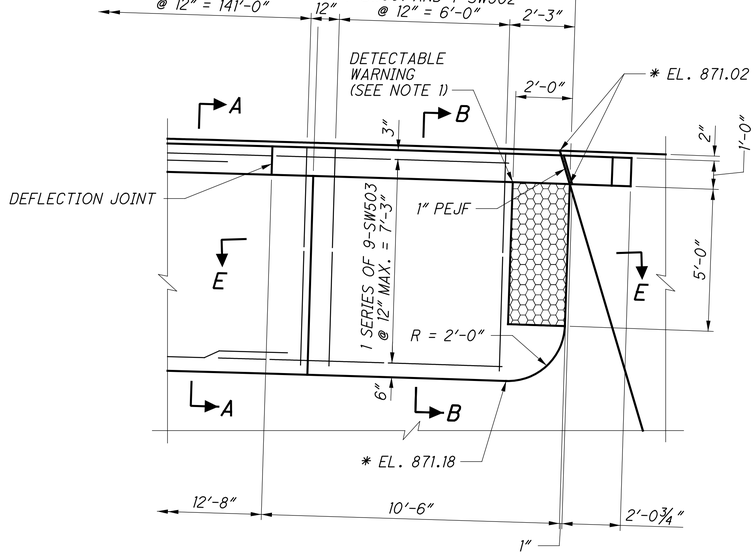


RIGHT RAILING AND SIDEWALK PLAN



DETAIL C

(MODIFIED BP-3 BASE PLATES NOT SHOWN FOR CLARITY)



DETAIL D

(MODIFIED BP-3 BASE PLATES NOT SHOWN FOR CLARITY)

* DENOTES ELEVATION GIVEN AT TOP OF DECK OR APPROACH SLAB

NOTES:

1. PAID FOR AS ITEM 608 - DETECTABLE WARNING.
2. ALL HORIZONTAL RAILING DIMENSIONS ARE GIVEN ALONG F.F. OF RAIL.
3. FOR SECTION A-A, B-B, C-C AND D-D, SEE SHEET 47/54 .
4. FOR SECTION E-E, SEE SHEET 43/54 .

DESIGN AGENCY
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400 W. NATIONWIDE BLVD, SUITE 225
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PJP		1300336	

RIGHT RAILING AND SIDEWALK PLAN
BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

CLE-32-3.50
PID No. 103954

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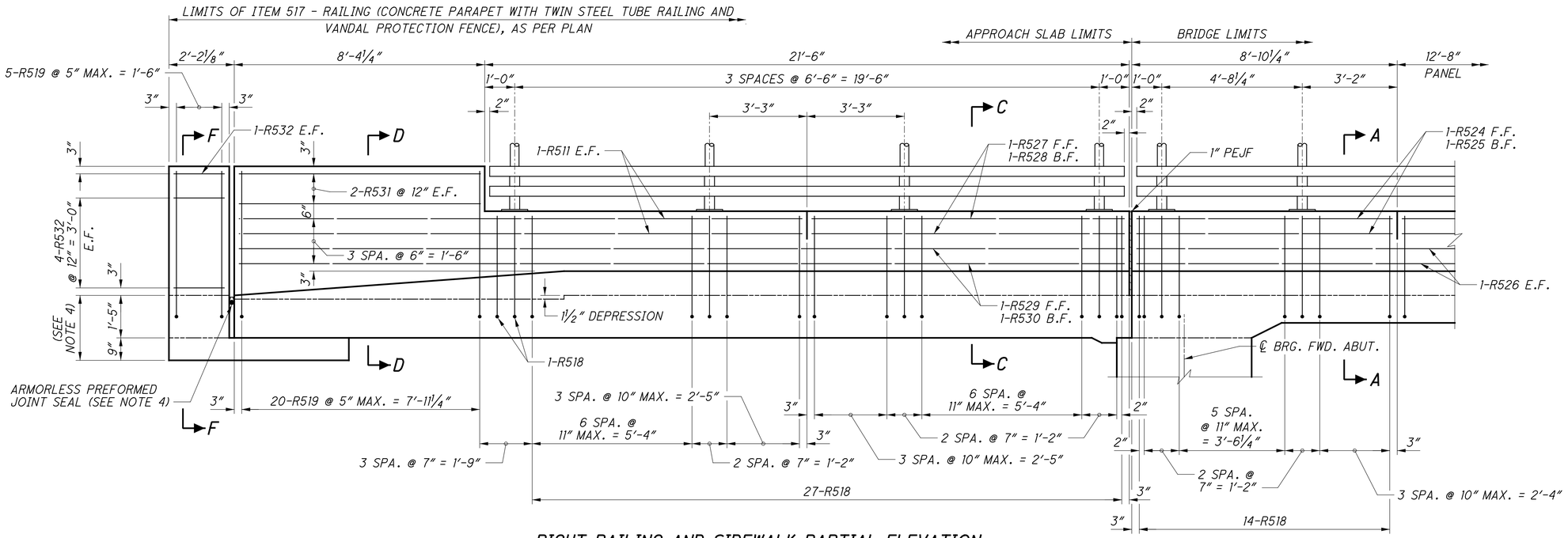
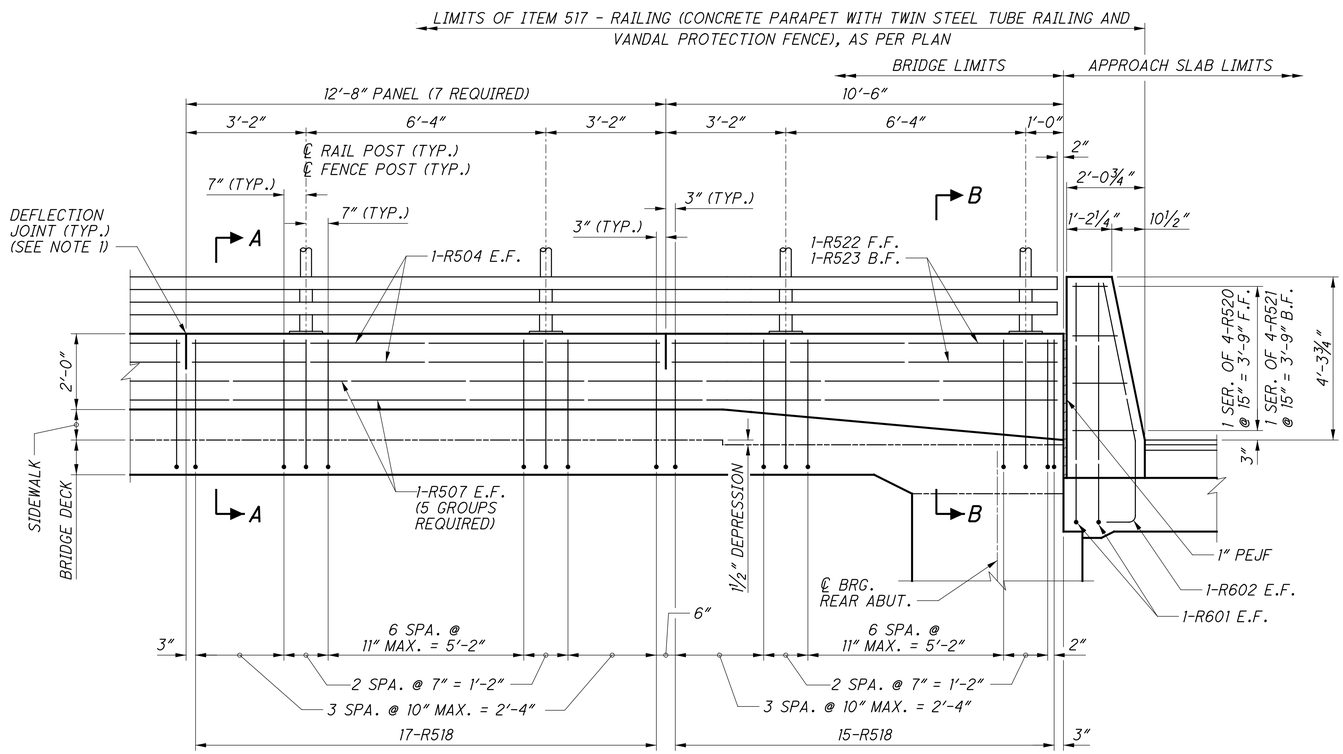
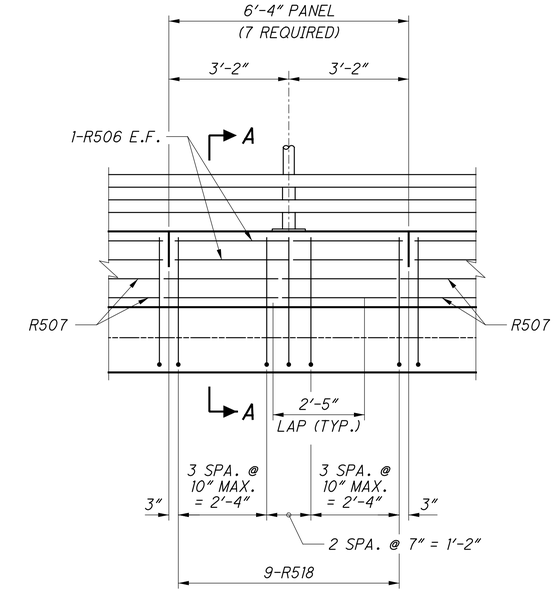


RIGHT RAILING AND SIDEWALK PARTIAL ELEVATION



RIGHT RAILING AND SIDEWALK PARTIAL ELEVATION



NOTES:

1. FOR DEFLECTION JOINT NOTES AND DETAILS, SEE STD. DWG. BR-2-15.
2. ALL HORIZONTAL DIMENSIONS ARE GIVEN ALONG F.F. OF RAIL.
3. FOR SECTIONS A-A, B-B, C-C, D-D AND F-F, SEE SHEET 47/54 .
4. FOR APPROACH SLAB INSTALLATION (TYPE C) DETAILS, SEE STD. DWG. AS-2-15.

DESIGN AGENCY
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400 W. NATIONWIDE BLVD, SUITE 225
COLUMBUS, OHIO 43215

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RIGHT RAILING ELEVATION
BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

CLE-32-3.50
PID No. 103954

46 / 54

632
736

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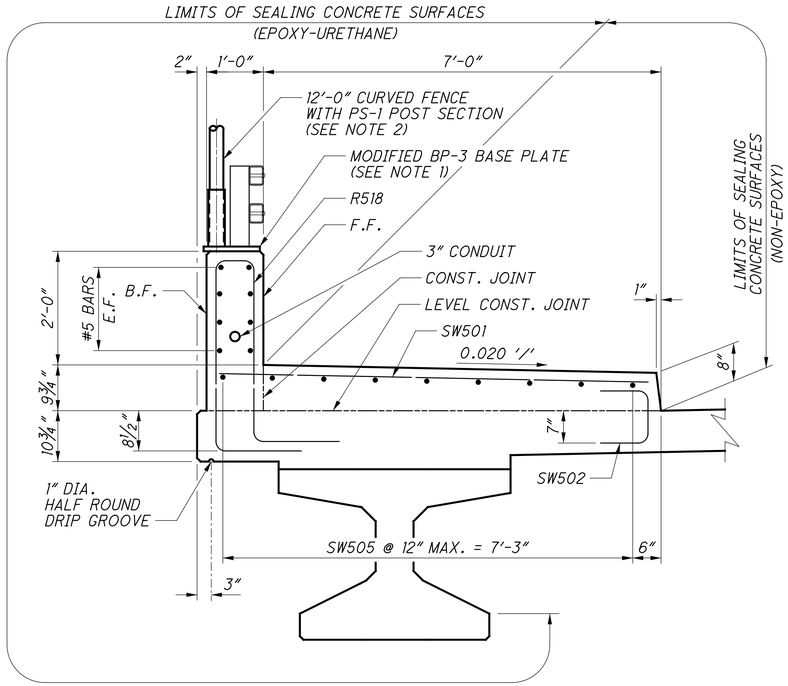
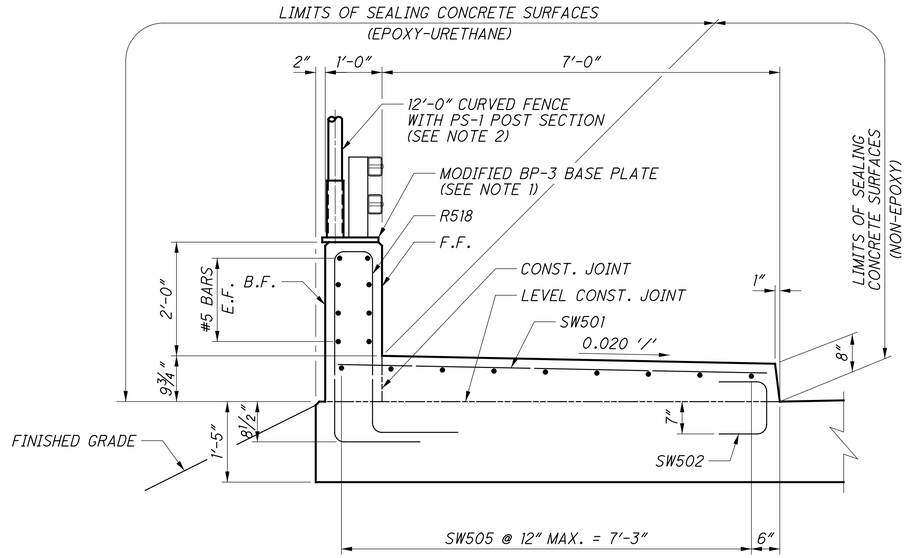
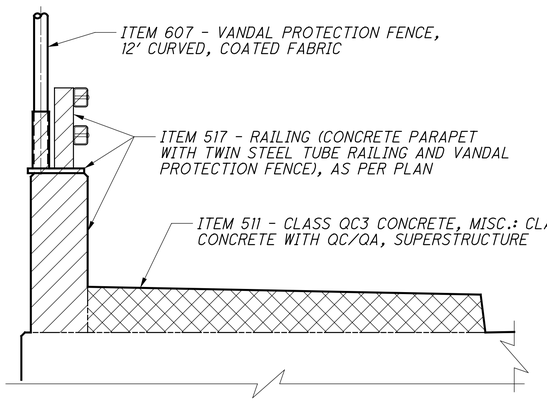


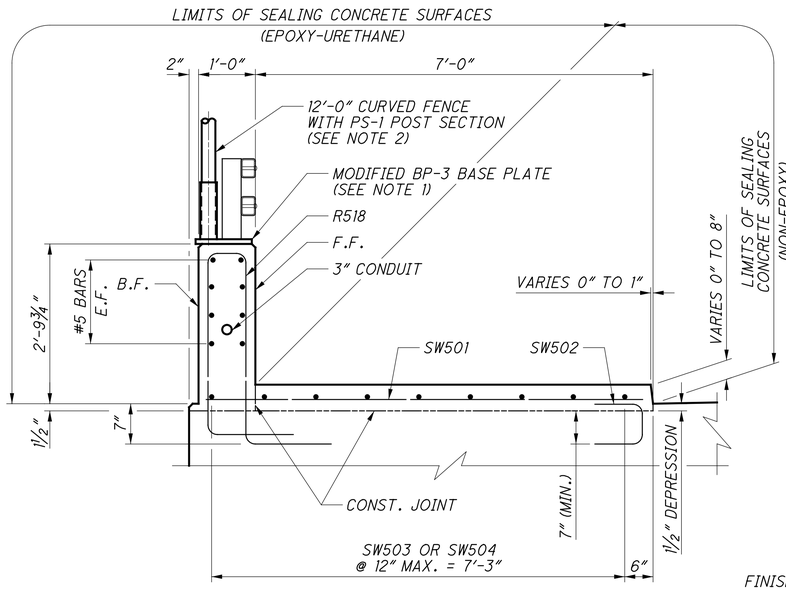
SECTION A-A



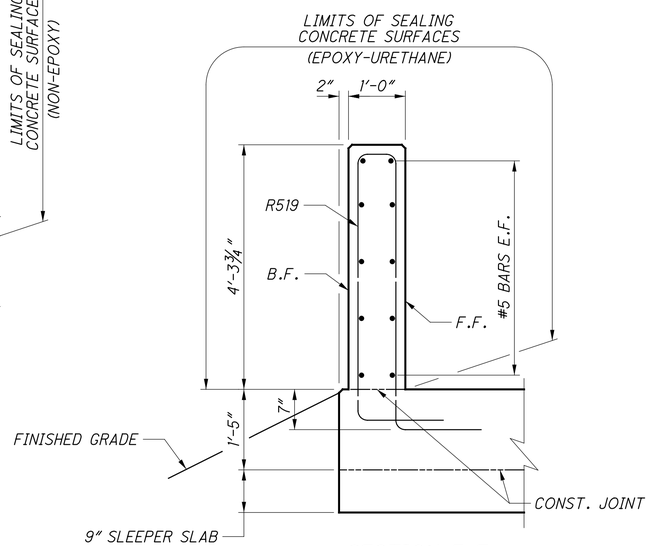
SECTION C-C



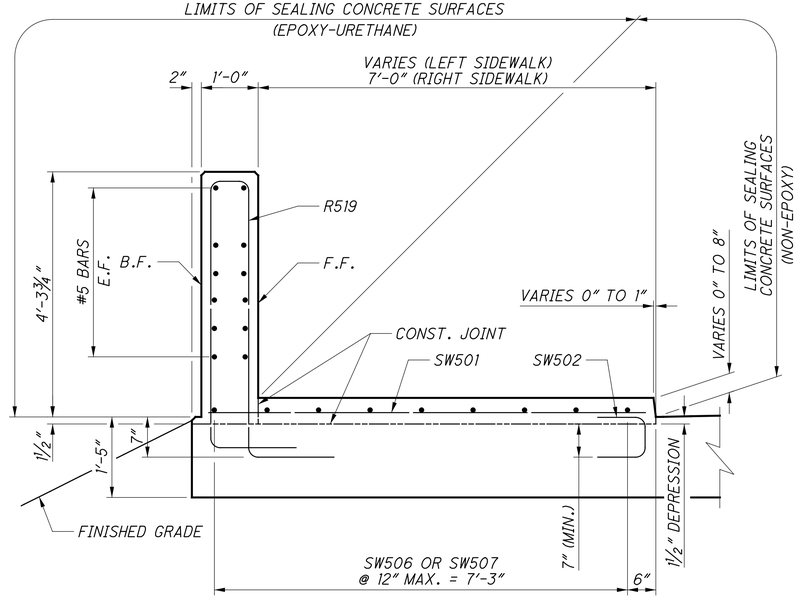
QUANTITY SCHEMATIC



SECTION B-B



SECTION F-F



SECTION D-D

NOTES:

1. FOR BASE PLATE AND ADDITIONAL RAILING DETAILS, SEE STD. DWG. BR-2-15.
2. FOR VANDAL PROTECTION FENCE DETAILS, SEE STD. DWG. VPF-1-90.
3. FOR APPROACH SLAB INSTALLATION (TYPE C) DETAILS, SEE STD. DWG. AS-2-15.

DESIGN AGENCY
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COLUMBUS, OHIO 43215

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DATE 03/01/19
STRUCTURE FILE NUMBER 13003336
REVISED

RAILING AND SIDEWALK SECTIONS
BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

CLE-32-3.50
PID No. 103954

47 / 54
633
736

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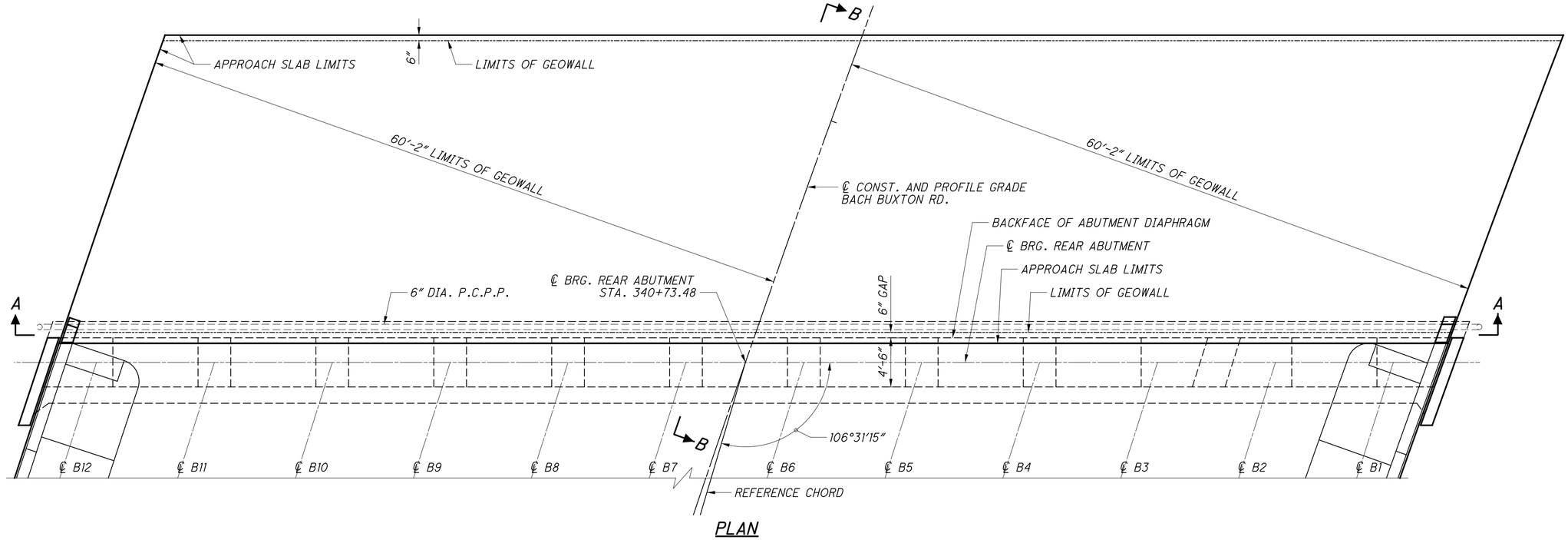
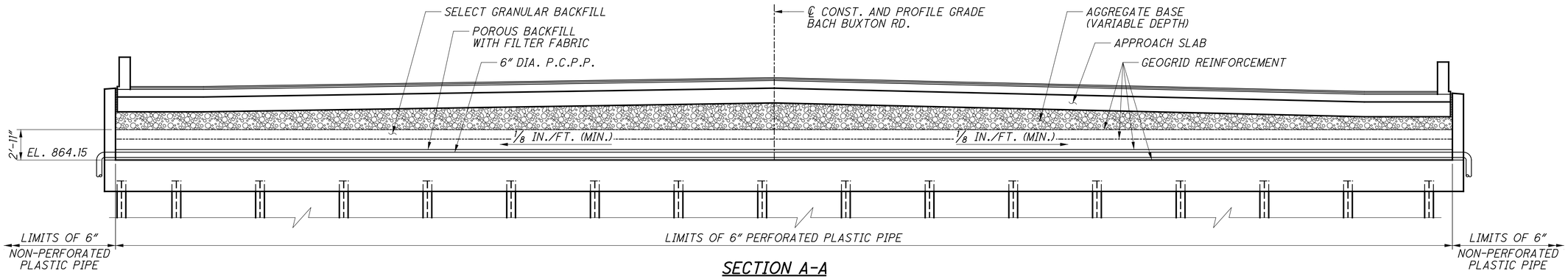
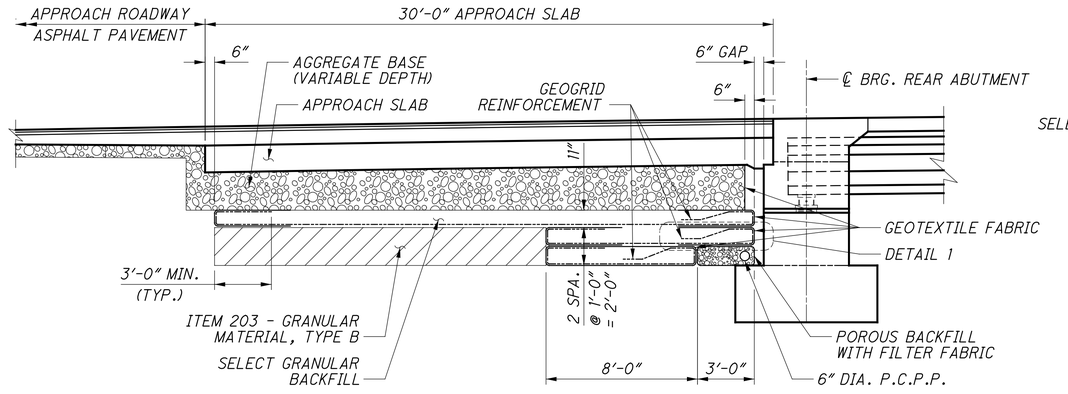


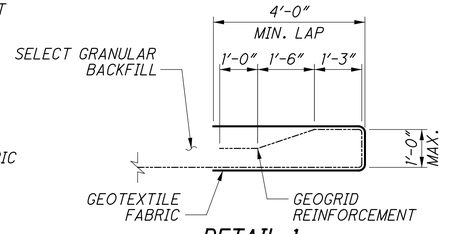
PLAN



SECTION A-A



SECTION B-B



DETAIL 1

NOTES:

1. GEOTEXTILE FABRIC SHALL BE INSTALLED DIRECTLY BELOW THE POROUS BACKFILL, SELECT GRANULAR BACKFILL, AND AGGREGATE BASE.
2. MINIMUM GEOTEXTILE FABRIC LAP LENGTH IS 4'-0". REFER TO DETAIL 1.
3. SELECT GRANULAR BACKFILL AND BEDDING MATERIAL SHALL BE UNIFORMILY COMPACTED AS DIRECTED BY THE ENGINEER.
4. REFER TO SUPPLEMENTAL SPECIFICATION 863 FOR MATERIAL SPECIFICATIONS OF THE GEOGRID REINFORCEMENT OF SOIL EMBANKMENT. REFER TO SUPPLEMENTAL SPECIFICATION 840 FOR MATERIAL SPECIFICATIONS OF SELECT GRANULAR BACKFILL. REFER TO ITEM 204 FOR MATERIAL SPECIFICATIONS OF THE GEOTEXTILE FABRIC AND TYPE B GRANULAR MATERIAL.
5. ESTIMATED QUANTITIES FOR AGGREGATE BASE IS INCLUDED WITH ROADWAY PLANS.

DESIGN AGENCY
TranSystems
400 W. NATIONWIDE BLVD, SUITE 225
COLUMBUS, OHIO 43215

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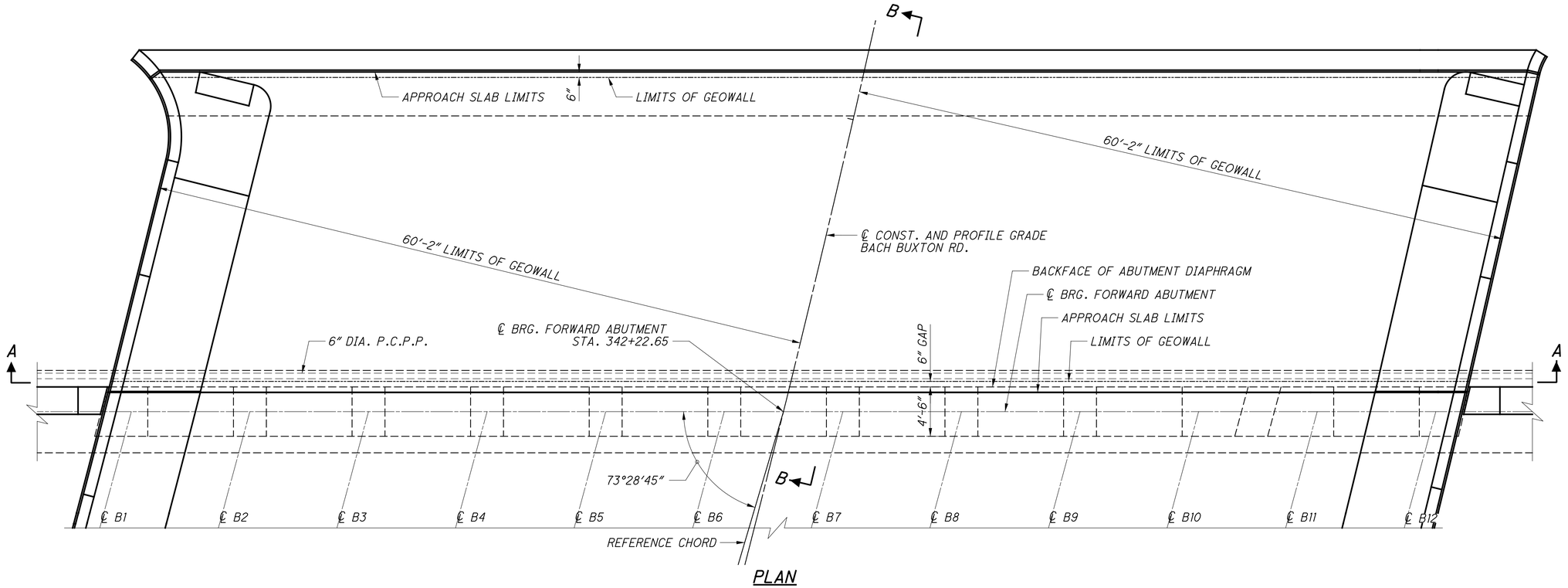
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		1300336	

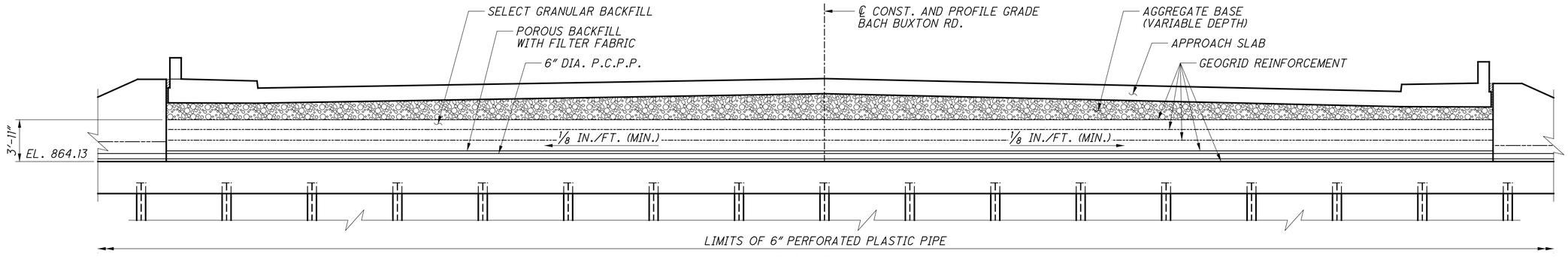
REAR ABUTMENT GEOWALL DETAILS

BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

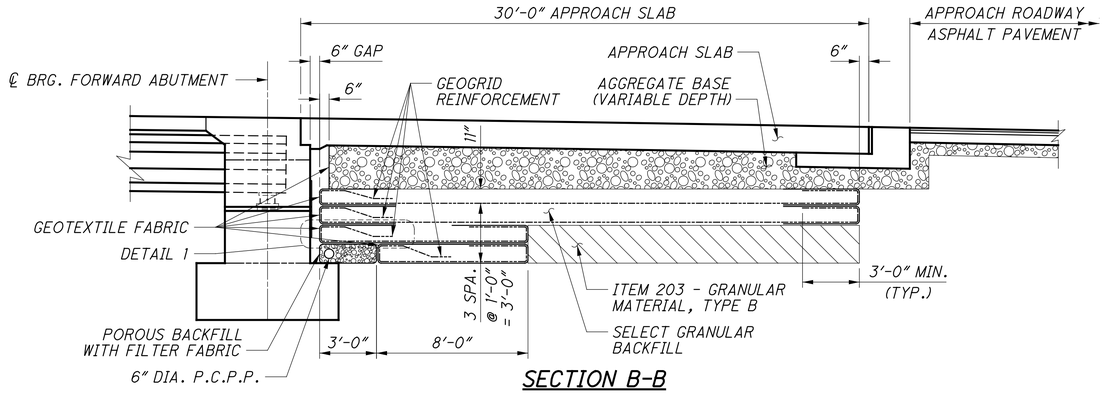
CLE-32-3.50
PID No. 103954



PLAN



SECTION A-A



SECTION B-B

NOTES:

1. GEOTEXTILE FABRIC SHALL BE INSTALLED DIRECTLY BELOW THE POROUS BACKFILL, SELECT GRANULAR BACKFILL, AND AGGREGATE BASE.
2. MINIMUM GEOTEXTILE FABRIC LAP LENGTH IS 4'-0". REFER TO DETAIL 1 ON SHEET 48/54.
3. SELECT GRANULAR BACKFILL AND BEDDING MATERIAL SHALL BE UNIFORMILY COMPACTED AS DIRECTED BY THE ENGINEER.
4. REFER TO SUPPLEMENTAL SPECIFICATION 863 FOR MATERIAL SPECIFICATIONS OF THE GEOGRID REINFORCEMENT OF SOIL EMBANKMENT. REFER TO SUPPLEMENTAL SPECIFICATION 840 FOR MATERIAL SPECIFICATIONS OF SELECT GRANULAR BACKFILL. REFER TO ITEM 204 FOR MATERIAL SPECIFICATIONS OF THE GEOTEXTILE FABRIC AND TYPE B GRANULAR MATERIAL.
5. ESTIMATED QUANTITIES FOR AGGREGATE BASE IS INCLUDED WITH ROADWAY PLANS.

DESIGN AGENCY
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COLUMBUS, OHIO 43215

DESIGNED	DRAWN	REVIEWED	DATE
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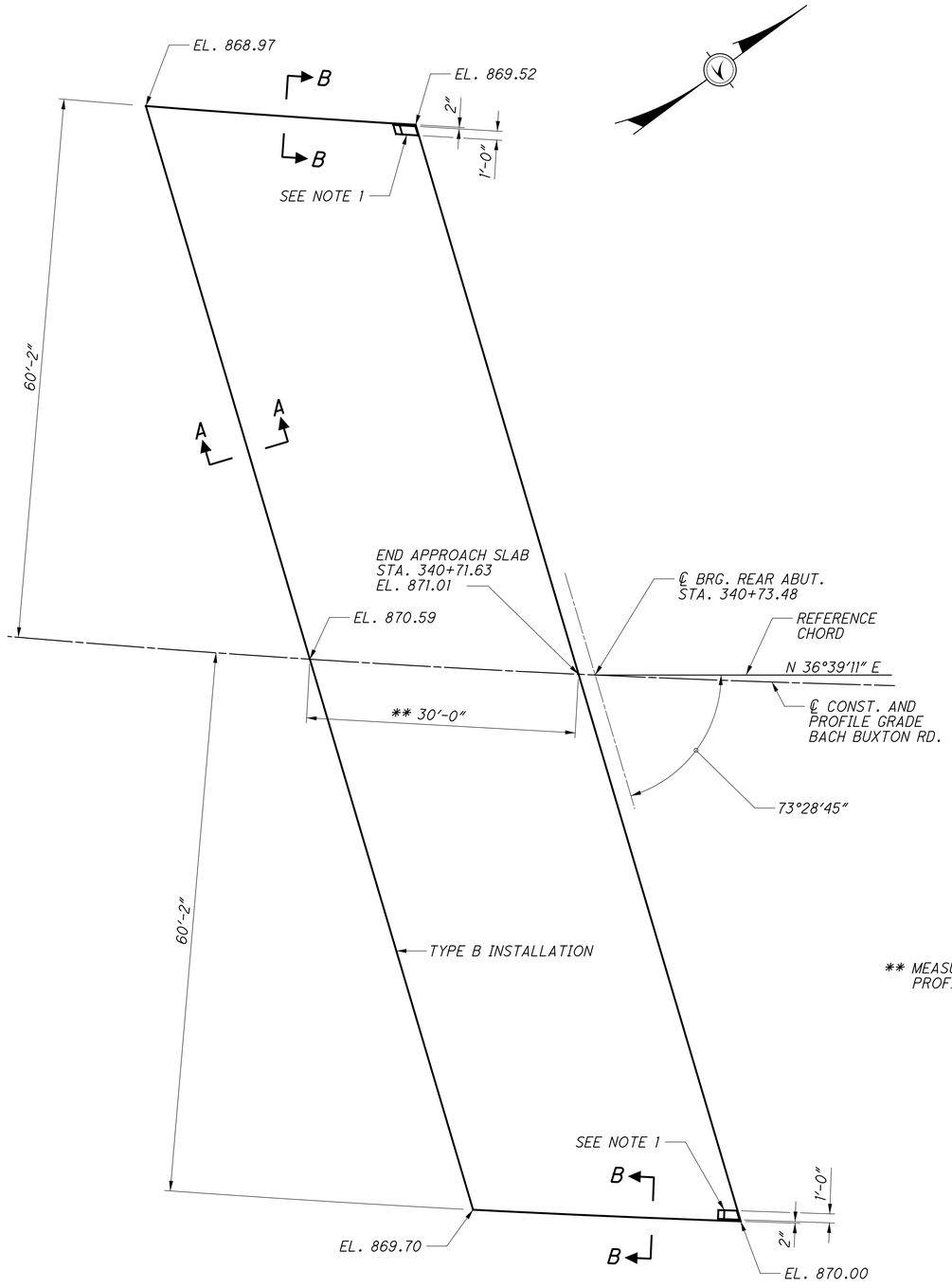
PJP		13003336	

FORWARD ABUTMENT GEOWALL DETAILS

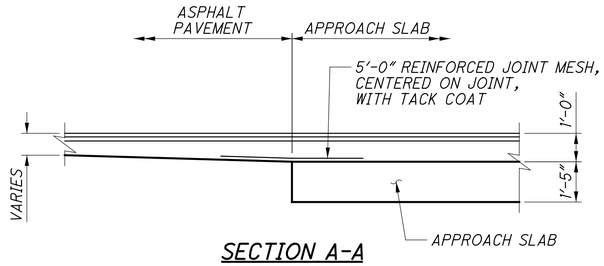
BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

CLE-32-3.50
PID No. 103954

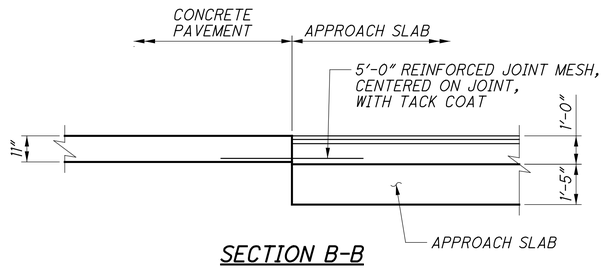


** MEASURED ALONG ℄ CONST. AND PROFILE GRADE BACH BUXTON RD.

REAR APPROACH SLAB PLAN



SECTION A-A



SECTION B-B

NOTES:

1. FOR SIDEWALK AND RAILING DETAILS, SEE SHEETS 43/54 AND 45/54.
2. FOR STANDARD APPROACH SLAB REINFORCING AND ADDITIONAL DETAILS NOT SHOWN, SEE STD. DWG.AS-1-15.
3. FOR REAR APPROACH SLAB INSTALLATION (TYPE B) ADDITIONAL DETAILS, SEE STD. DWG. AS-2-15.
4. APPROACH SLAB SURFACE ELEVATIONS ARE GIVEN AT TOP OF CONCRETE APPROACH SLAB, UNDERNEATH THE ASPHALT.

DESIGN AGENCY
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400 W. NATIONWIDE BLVD, SUITE 225
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DESIGNED	DRAWN	REVIEWED	DATE
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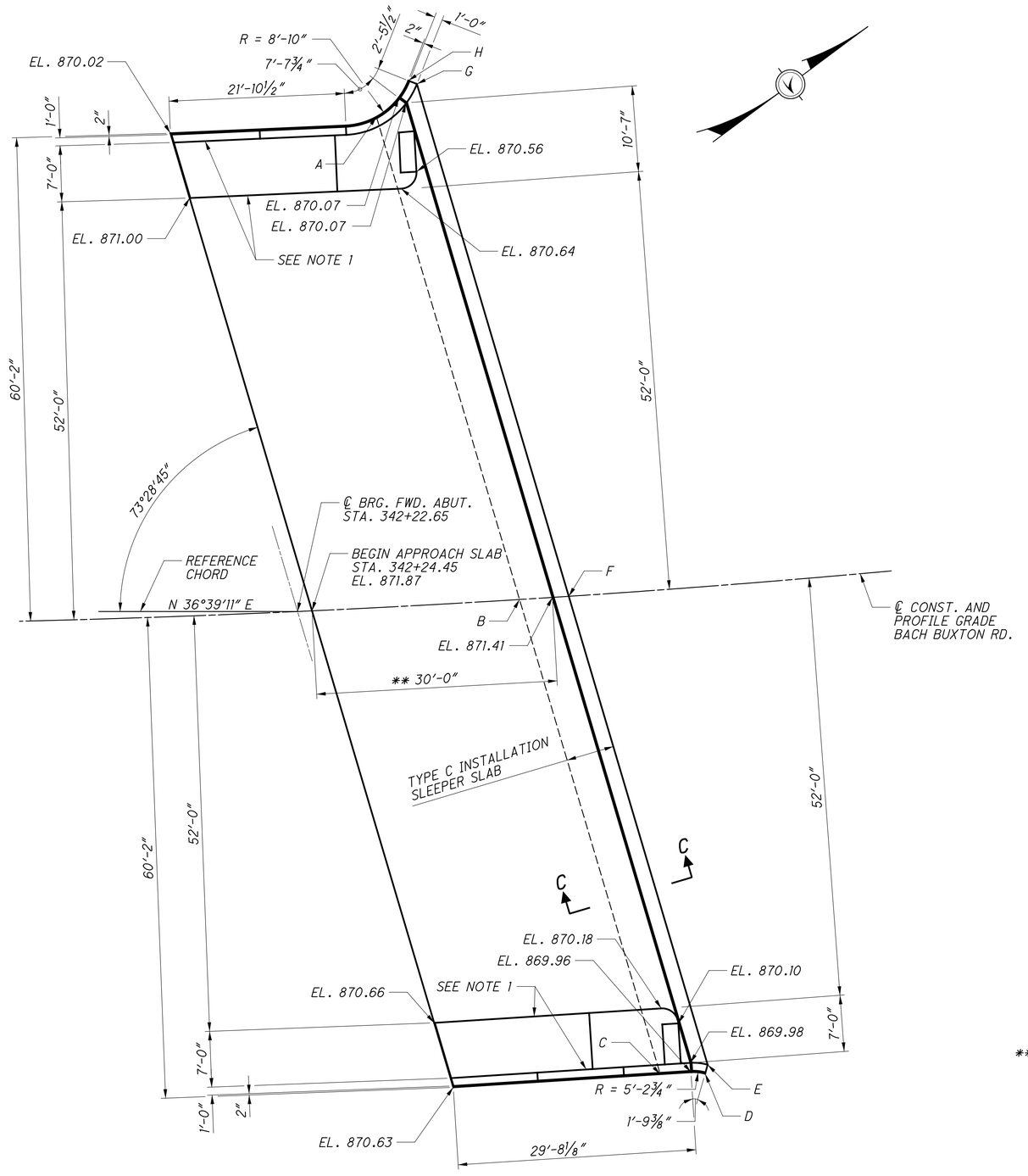
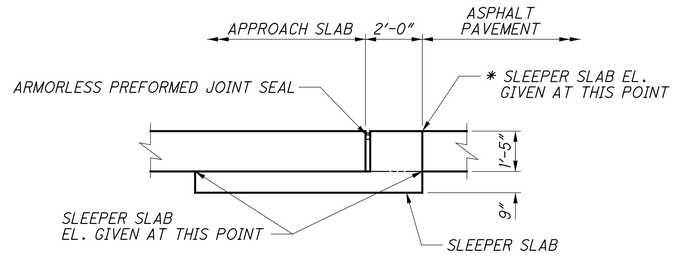
PJP		1300336	

REAR APPROACH SLAB
BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

CLE-32-3.50
PID No. 103954



FORWARD APPROACH SLAB PLAN



SECTION C-C

SLEEPER SLAB ELEVATION			
POINT	STATION	OFFSET	ELEVATION
A	342+35.76	61.05' LT	868.63
B	342+50.35	0	870.06
C	342+63.67	60.15' RT	868.61
D	342+69.05	60.50' RT	868.40
*D	342+69.05	60.50' RT	869.82
E	342+69.44	59.40' RT	868.41
*E	342+69.44	59.40' RT	869.83
F	342+56.50	0	869.95
*F	342+56.50	0	871.37
G	342+41.24	64.85' LT	868.51
*G	342+41.24	64.85' LT	869.93
H	342+40.14	65.33' LT	868.52
*H	342+40.14	65.33' LT	869.94

** MEASURED ALONG ℄ CONST. AND PROFILE GRADE BACH BUXTON RD.

NOTES:

1. FOR SIDEWALK AND RAILING DETAILS, SEE SHEETS 43/54 AND 45/54 .
2. FOR STANDARD APPROACH SLAB REINFORCING AND ADDITIONAL DETAILS NOT SHOWN, SEE STD. DWG.AS-1-15.
3. FOR FORWARD APPROACH SLAB INSTALLATION (TYPE C) DETAILS, SEE STD. DWG. AS-2-15.
4. FOR SLEEPER SLAB ELEVATIONS, SEE SECTION C-C. ALL OTHER ELEVATIONS ARE GIVEN AT TOP OF APPROACH SLAB SURFACE.

DESIGN AGENCY
TranSystems
400 W. NATIONWIDE BLVD, SUITE 225
COLUMBUS, OHIO 43215

DESIGNED BCS | DRAWN JDG | REVIEWED MSL | DATE 03/01/19
CHECKED PJP | REVISED | STRUCTURE FILE NUMBER 13003336

FORWARD APPROACH SLAB PLAN
BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

CLE-32-3.50
PID No. 103954

51/54
637/736

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
PIER REINFORCING STEEL											
P501	584	10'-1"	6142	2	3'-8"	3'-0"	3'-8"				
P502	48	30'-0"	1502	STR							
P503	28	5'-3"	153	2	0'-10"	3'-10"	0'-10"				
P504	64	7'-8"	512	STR							
P601	144	7'-8"	1659	STR							
P801	160	13'-5"	5732	2	3'-1"	7'-8"	3'-1"				
P901	40	24'-2"	3287	STR							
P902	20	25'-4"	1723	STR							
P903	28	34'-2"	3253	1	1'-7"	32'-10"					
P1101	32	18'-8"	3174	STR							
P1102	64	17'-8"	6007	1	2'-0"	16'-0"					
P1103	32	19'-6"	3315	STR							
SP501	4	505'-9"	2110	27	0'-3"	2'-6"	15'-8"				
SP502	4	531'-4"	2217	27	0'-3"	2'-6"	16'-6"				
		TOTAL	40,786								

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
SIDEWALK REINFORCING STEEL											
SW501	358	7'-7"	2832	STR							
SW502	353	2'-6"	920	2	0'-10"	1'-1"	0'-10"				
	1 SR	10'-7"			3'-1"						
SW503	OF	TO	110	42	TO	6'-10"	0'-7"	10"			0'-3½"
	9	12'-11"			5'-5"						
	1 SR	11'-7"			3'-2"						
SW504	OF	TO	121	42	TO	7'-9"	0'-7"	10"			0'-4"
	9	14'-3"			5'-10"						
SW505	90	30'-0"	2816	STR							
	1 SR	26'-8"			18'-3"						
SW506	OF	TO	258	42	TO	7'-9"	0'-7"	10"			0'-2½"
	9	28'-4"			19'-11"						
	1 SR	26'-10"			17'-4"						
SW507	OF	TO	260	42	TO	8'-10"	0'-7"	10"			0'-2½"
	9	28'-6"			19'-0"						
		TOTAL	7,317								

MARK	NUMBER REAR ABUT.	FORWARD ABUT.	PIER	TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
DIAPHRAGM REINFORCING STEEL														
D301			12	12	4'-9"	21	38	3'-0"	0'-3"	0'-8"	1'-3"			
D302			12	12	3'-4"	15	19	1'-8"	1'-0"	1'-4"				
D401			88	88	10'-3"	603	6	2'-6"	3'-5"	0'-8"				
D402			40	40	4'-3"	114	20	1'-7"	0'-3"	1'-0"	0'-9"	1'-7"		
D403			12	12	6'-6"	52	24	0'-4"	3'-0"				0'-3"	
D404	NOT USED													
D405	NOT USED													
D406	8	8		16	4'-2"	45	STR							
D407	6			6	5'-11"	24	37	4'-0"	1'-0"	0'-4"				
D408	24	24		48	4'-0"	128	STR							
D409		6		6	5'-11"	24	37	4'-0"	1'-0"	3"				
D501		74		74	15'-4"	1184	3	4'-4"	3'-0"					
D502	78	74		152	10'-9"	1704	2	3'-7"	3'-10"	3'-7"				
D503	24	24		48	12'-2"	609	3	4'-4"	1'-5"					
D504		3		3	11'-0"	35	3	4'-4"	0'-10"					
D505		3		3	7'-9"	24	2	2'-1"	3'-10"	2'-1"				
D506	78			78	13'-3"	1078	3	4'-4"	2'-0"					
D507	3			3	11'-9"	37	3	3'-10"	1'-9"					
D601			44	44	9'-7"	633	STR							
D602	NOT USED													
D603	NOT USED													
D604			88	88	2'-10"	374	1	1'-0"	2'-0"					
D801	32	36		68	30'-0"	5447	STR							
D802	4			4	26'-9"	286	STR							
D803		5		5	23'-3"	310	STR							
D804	NOT USED													
D805	NOT USED													
D806	NOT USED													
D807	4			4	30'-9"	328	1	1'-4"	29'-7"					
D808	4			4	19'-8"	209	1	1'-4"	18'-6"					
D809	1			1	18'-6"	49	STR							
D810	4			4	4'-1"	44	16	3'-3"						
D811	22	22		44	11'-4"	1331	17	9'-8"						
D812	8	8		16	10'-1"	431	18	4'-6"	3'-5"	3'-5"				
D813		4		4	29'-3"	312	1	1'-4"	28'-2"					
D814		4		4	17'-10"	190	1	1'-4"	16'-9"					
D815		1		1	16'-9"	45	STR							
D816		4		4	2'-7"	28	16	1'-9"						
D817	86	84		170	5'-1"	2307	18	2'-11"	1'-0"	1'-0"				
					TOTAL	18,021								

NOTES:

1. FOR NOTES AND BAR TYPES, SEE SHEET 53/54 .

DESIGN AGENCY
TranSystems
1105 SCHROCK ROAD, SUITE 400
COLUMBUS, OHIO 43229

DRAWN BCS | REVIEWED MSL | DATE 03/01/19
DESIGNED BCS | CHECKED PJP | REVISED | STRUCTURE FILE NUMBER 1300336

REINFORCING LIST
BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

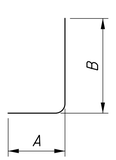
CLE-32-3.50
PID No. 103954

52/54

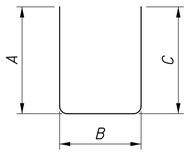
638/736

..\Sheets\032_0374_SL001.dgn 10/26/2021 1:36:12 PM mswhitt

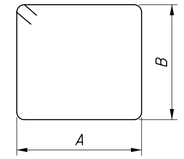
MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FORWARD	TOTAL				A	B	C	D	E	R	INC
ABUTMENT REINFORCING STEEL													
A501	40	46	86	30'-0"	2691	STR							
A502	NOT USED												
A503	12		12	0'-8"	8	STR							
A504	22		22	15'-9"	361	2	7'-8"	0'-8"	7'-8"				
A505	3		3	5'-4"	17	20	0'-7"	0'-10"	1'-10"	2'-0"	1'-6"		
A506	6		6	9'-8"	60	STR							
A507	2		2	10'-8"	22	2	4'-2"	2'-7"	4'-2"				
A508	96	123	219	20'-2"	4606	3	7'-2"	2'-7"					
A509	96	95	191	12'-1"	2407	2	4'-1"	4'-2"	4'-1"				
A510	23	29	52	6'-5"	348	2	1'-3"	4'-2"	1'-3"				
A511	30	36	66	7'-5"	511	2	1'-9"	4'-2"	1'-9"				
A512	42	30	72	8'-3"	620	2	2'-2"	4'-2"	2'-2"				
A513	22		22	8'-7"	197	2	4'-1"	0'-8"	4'-1"				
A514	3		3	4'-9"	15	20	2'-0"	1'-5"	1'-6"	0'-6"	0'-9"		
A515	10		10	19'-4"	202	STR							
A516	24		24	8'-1"	202	STR							
A517		2	2	9'-3"	19	2	3'-8"	2'-2"	3'-8"				
		1 SR	1 SR	10'-11"			4'-6"		4'-6"				
A518		OF	OF	TO	54	2	TO	2'-2"	TO				0'-8"
		4	4	14'-11"			6'-6"		6'-6"				
		1 SR	1 SR	16'-3"			7'-2"		7'-2"				
A519		OF	OF	TO	120	2	TO	2'-2"	TO				0'-7"
		6	6	22'-1"			10'-1"		10'-1"				
A520		2	2	22'-5"	47	2	10'-3"	2'-2"	10'-3"				
A521		4	4	6'-10"	29	STR							
A522		1	1	13'-8"	14	19	11'-10"	1'-8"	0'-9"				
A523		1	1	14'-1"	15	19	11'-10"	2'-1"	0'-11"				
		1 SR	1 SR	5'-4"									
A524		OF	OF	TO	27	STR							3'-4"
		3	3	12'-0"									
		1 SR	1 SR	5'-10"									
A525		OF	OF	TO	29	STR							3'-4"
		3	3	12'-6"									
A526		8	8	5'-11"	49	2	2'-0"	2'-2"	2'-0"				
A527		2	2	21'-7"	45	2	9'-10"	2'-2"	9'-10"				
		1 SR	1 SR	16'-3"			7'-2"		7'-2"				
A528		OF	OF	TO	118	2	TO	2'-2"	TO				6½"
		6	6	21'-7"			9'-10"		9'-10"				
		1 SR	1 SR	10'-11"			4'-6"		4'-6"				
A529		OF	OF	TO	54	2	TO	2'-2"	TO				0'-8"
		4	4	14'-11"			6'-6"		6'-6"				
A530		10	10	20'-5"	213	STR							
A531		4	4	19'-3"	80	STR							
A532		1	1	13'-11"	15	19	10'-11"	2'-9"	1'-3"				
A533		1	1	13'-6"	14	19	10'-11"	2'-4"	1'-1"				
		1 SR	1 SR	6'-6"									
A534		OF	OF	TO	31	STR							3'-4"
		3	3	13'-2"									
		1 SR	1 SR	6'-0"									
A535		OF	OF	TO	29	STR							3'-4"
		3	3	12'-8"									
A536		4	4	13'-8"	57	STR							
A801	32	36	68	30'-0"	5447	STR							
A802	4		4	29'-2"	312	STR							
A803	4		4	38'-5"	410	STR							
A804		4	4	32'-11"	352	STR							
A805		4	4	33'-4"	356	STR							
				TOTAL	20,203								



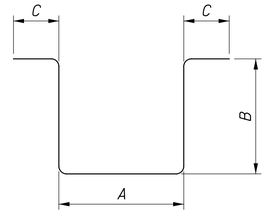
TYPE-1



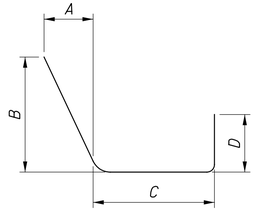
TYPE-2



TYPE-3



TYPE-6



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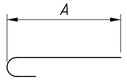
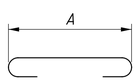
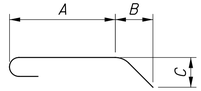


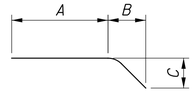
TYPE-16



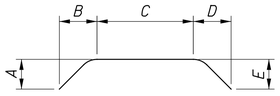
TYPE-17



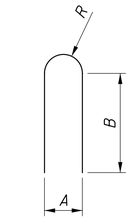
TYPE-18



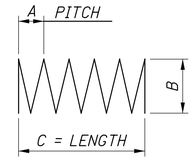
TYPE-19



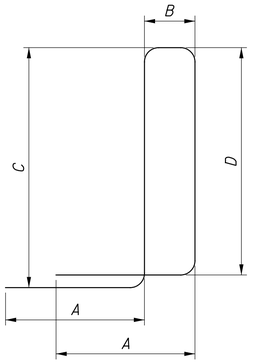
TYPE-20



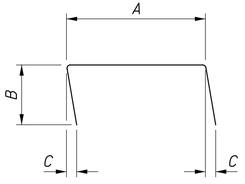
TYPE-24



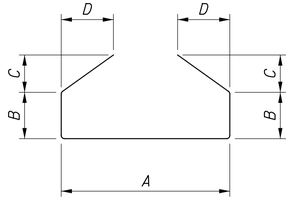
TYPE-27



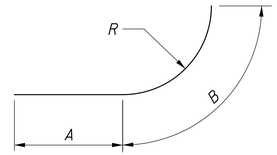
TYPE-30



TYPE-37



TYPE-38



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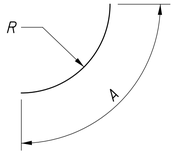
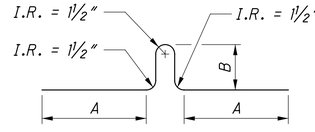
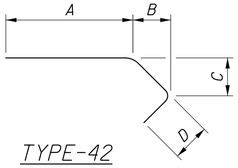


TYPE-40



TYPE-41



TYPE-42

NOTES:

1. ALL REINFORCING STEEL TO BE EPOXY COATED.
2. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE NUMBERS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR NUMBERS ARE USED INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE A P1001 IS A NUMBER 10 BAR. P501 IS A NUMBER 5 BAR. BAR DIMENSIONS ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS UNLESS OTHERWISE NOTED.

DESIGN AGENCY
TranSystems
1105 SCHROCK ROAD, SUITE 400
COLUMBUS, OHIO 43229

DESIGNED BCS | DRAWN JDG | CHECKED PJP | REVIEWED MSL | DATE 03/01/19 | REVISED | STRUCTURE FILE NUMBER 1300336

REINFORCING LIST
BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

CLE-32-3.50
PID No. 103954

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
DECK REINFORCING STEEL											
S401	600	9′-8″	3874	16	9′-2″						
S402	635	30′-0″	12725	STR							
S403	127	12′-7″	1068	STR							
	1 SR	3′-2″			2′-8″						
S404	OF	TO	20	16	TO						1′-5″
	5	8′-10″			8′-4″						
	1 SR	2′-7″			2′-1″						
S405	OF	TO	15	16	TO						2′-1″
	4	8′-10″			8′-4″						
S406	8	4′-0″	21	STR							
S407	260	4′-2″	724	41	1′-7″	6½″					
S501	645	30′-0″	20182	STR							
S502	129	15′-1″	2029	STR							
	1 SR	3′-3″			2′-8″						
S503	OF	TO	32	16	TO						1′-5″
	5	8′-11″			8′-4″						
	1 SR	2′-8″									
S504	OF	TO	29	STR							1′-5″
	5	8′-4″									
	1 SR	10′-4″			9′-9″						
S505	OF	TO	577	16	TO						1′-5″
	22	40′-1″			39′-6″						
	1 SR	9′-9″									
S506	OF	TO	565	STR							1′-5″
	22	39′-6″									
S507	564	30′-11″	18187	16	30′-4″						
S508	278	35′-6″	10293	STR							
	1 SR	7′-7″									
S509	OF	TO	233	STR							2′-0″
	12	29′-7″									
	1 SR	12′-9″									
S510	OF	TO	297	STR							2′-0″
	12	34′-9″									
S511	563	33′-4″	19574	STR							
S512	282	24′-0″	7059	STR							
	1 SR	13′-0″									
S513	OF	TO	443	STR							1′-6″
	17	37′-0″									
	1 SR	8′-7″									
S514	OF	TO	365	STR							1′-6″
	17	32′-7″									
	1 SR	12′-6″									
S515	OF	TO	332	STR							2′-0″
	13	36′-6″									
	1 SR	7′-7″									
S516	OF	TO	266	STR							2′-0″
	13	31′-7″									
S517	281	34′-0″	9965	STR							
	1 SR	7′-5″									
S518	OF	TO	415	STR							1′-6″
	19	34′-5″									
	1 SR	13′-1″									
S519	OF	TO	527	STR							1′-6″
	19	40′-1″									
	1 SR	11′-8″									
S520	OF	TO	411	STR							2′-1″
	15	40′-10″									
	1 SR	6′-7″									
S521	OF	TO	331	STR							2′-1″
	15	35′-9″									
S522	286	36′-0″	10739	STR							
	1 SR	11′-1″			10′-6″						
S523	OF	TO	355	16	TO						2′-0 ½″
	14	37′-7″			37′-0″						
	1 SR	10′-6″									
S524	OF	TO	347	STR							2′-0 ½″
	14	37′-0″									

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
DECK REINFORCING STEEL											
	1 SR	2′-8″			2′-1″						
S525	OF	TO	24	16	TO						2′-1″
	4	8′-11″			8′-4″						
	1 SR	2′-1″									
S526	OF	TO	22	STR							2′-1″
	4	8′-4″									
S527	128	31′-0″	4139	STR							
S528	128	35′-5″	4728	STR							
S529	6	22′-4″	140	STR							
S530	4	40′-7″	169	STR							
S531	6	19′-1″	119	STR							
S601	252	30′-0″	11355	STR							
S602	252	37′-0″	14005	STR							
		TOTAL	156,701								

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
RAILING REINFORCING STEEL (INCLUDED WITH ITEM 517 - RAILING (CONCRETE PARAPET WITH TWIN STEEL TUBE RAILING AND VANDAL PROTECTION FENCE), AS PER PLAN											
	2 SR	1′-4″									
R501	OF	TO	14	STR							0′-3″
	4	2′-1″									
R502	2	10′-3″	21	STR							
R503	2	10′-5″	22	STR							
R504	56	12′-4″	720	STR							
R505	NOT USED										
R506	56	6′-0″	350	STR							
R507	40	30′-0″	1252	STR							
R508	2	9′-5″	20	STR							
R509	2	9′-3″	19	STR							
R510	4	15′-1″	63	STR							
R511	6	10′-5″	65	STR							
R512	2	10′-7″	22	STR							
R513	4	21′-4″	89	STR							
R514	4	10′-10″	45	39	2′-9″	8′-1″				9′-9″	
R515	4	10′-5″	43	39	2′-9″	7′-8″				9′-3″	
R516	2	8′-1″	17	40	8′-1″					9′-9″	
R517	2	7′-8″	16	40	7′-8″					9′-3″	
R518	480	9′-8″	4840	30	1′-6″	0′-8″	3′-4″	3′-2″			
R519	26	12′-8″	344	30	1′-6″	0′-8″	4′-10″	4′-8″			
	1 SR	0′-11″									
R520	OF	TO	5	STR							0′-3″
	4	1′-8″									
	1 SR	1′-1″									
R521	OF	TO	6	STR							0′-3″
	4	1′-10″									
R522	2	10′-1″	21	STR							
R523	2	9′-11″	21	STR							
R524	2	8′-7″	18	STR							
R525	2	8′-8″	18	STR							
R526	4	14′-1″	59	STR							
R527	2	10′-4″	22	STR							
R528	2	10′-3″	21	STR							
R529	2	29′-5″	61	STR							
R530	2	29′-4″	61	STR							
R531	4	8′-0″	33	STR							
R532	20	1′-5″	30	STR							
R601	8	7′-1″	85	1	1′-0″	6′-3″					
R602	4	7′-3″	44	10	4′-2″	10″	2′-2″	1′-0″			
		TOTAL	8,467	FOR INFORMATION ONLY							

NOTE:

1. FOR NOTES AND BAR TYPES, SEE SHEET 53/54 .

DESIGN AGENCY
TranSystems
1105 SCHROCK ROAD, SUITE 400
COLUMBUS, OHIO 43229

DESIGNED	DRAWN	REVIEWED	DATE
BCS	JDG	MSL	03/01/19
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		13003336	

REINFORCING LIST
BRIDGE NO. CLE-32-0374
BACH BUXTON ROAD OVER SR-32

CLE-32-3.50
PID No. 103954

54/54

640
736

...\Sheets\032_0374_SL003.dgn 10/26/2021 1:36:16 PM mswhitt

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	1,194 CU. YD.
659, SEEDING AND MULCHING	10,753 SQ. YD.
659, REPAIR SEEDING AND MULCHING	538 SQ. YD.
659, INTER-SEEDING	538 SQ. YD.
659, COMMERICAL FERTILIZER	1.50 TON
659, LIME	2.22 ACRES
659, WATER	60 M GALS
659, MOWING	24 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.

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)

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

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

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

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

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

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A "W-BEAM RAIL SPLICE" AS SHOWN IN AASHTO M 180. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

PART WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND TO CONSTRUCT THE FULL PAVEMENT WIDTH IN STAGES, EXERCISE CARE TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LAP LONGITUDINAL JOINTS AS SHOWN ON STANDARD DRAWING BP-3.1.

ITEM 204 - PROOF ROLLING

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING. SEE PLAN SHEET 80 FOR ADDITIONAL INFORMATION.

ITEM 204 - PROOF ROLLING 17 HOURS.

PROTECTION OF RIGHT-OF-WAY LANDSCAPING

PRIOR TO BEGINNING WORK, THE CONTRACTOR, THE PROJECT ENGINEER, AND A REPRESENTATIVE OF THE MAINTAINING AGENCY WILL REVIEW AND RECORD ALL LANDSCAPING ITEMS WITHIN THE RIGHT OF WAY (BOTH WITHIN AND OUTSIDE THE CONSTRUCTION LIMITS) A RECORD OF THIS REVIEW WILL BE KEPT IN THE PROJECT ENGINEER'S FILES. PRIOR TO FINAL ACCEPTANCE, A FINAL REVIEW OF LANDSCAPING ITEMS WILL BE MADE.

CONSTRICT ALL ACTIVITIES, EQUIPMENT STORAGE, AND STAGING TO WITHIN THE CONSTRUCTION LIMITS. UNLESS OTHERWISE IDENTIFIED IN THE PLANS OR PROPOSAL, THE CONSTRUCTION LIMITS ARE IDENTIFIED AS 30 FEET FROM THE EDGE OF PAVEMENT.

SUBMIT A WRITTEN REQUEST TO THE PROJECT ENGINEER TO USE ANY AREA OUTSIDE THESE LIMITS. THE DOCUMENT SUBMITTED MUST CLEARLY IDENTIFY THE AREA AND EXPLAIN THE PROPOSED USE AND RESTORATION OF THE AREA. EXCEPT AS INDICATED ON SHEET ___ USE OF THESE AREAS FOR DISPOSAL OF WASTE MATERIAL AND CONSTRUCTION DEBRIS, EXCAVATION OF BORROW MATERIAL AND PLACEMENT OF PORTABLE PLANTS IS PROHIBITED. THE REQUEST MUST BE APPROVED, IN WRITING, BEFORE THE CONTRACTOR HAS PERMISSION TO USE THE AREA.

ANY ITEMS DAMAGED BEYOND THE CONSTRUCTION LIMITS AS DEFINED ABOVE WILL BE REPLACED IN KIND OR AS APPROVED BY THE PROJECT ENGINEER.

ITEM 253 - PAVEMENT REPAIR

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ACCOUNT FOR FULL DEPTH PAVEMENT REPAIR NEEDS IN AREAS OF PAVEMENT PLANING AND RESURFACING FOR USE AS DIRECTED BY THE ENGINEER. FULL DEPTH ASPHALT PAVEMENT IS ASSUMED TO BE 19.25" DEEP.

ITEM 253 - PAVEMENT REPAIR	5,670 CY

ITEM 254 - PATCHING PLANED SURFACE

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ACCOUNT FOR PATCHING AREAS OF THE PLANED SURFACE THAT THE ENGINEER DESIGNATES AS HAVING SPALLING OR DISLODGED UNSOUND PAVEMENT.

ITEM 253 - PATCHING PLANED SURFACE	10,600 SY

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.

ITEM 606 - IMPACT ATTENUATOR, TYPE 2 (BIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE TYPE 2 IMPACT ATTENUATORS AS LISTED ON THE OFFICE OF ROADWAY ENGINEERING'S WEB PAGE (REFER TO THE POSTED SHOP DRAWINGS FOR THE MOST CURRENT APPROVED PRODUCT MODELS). WHEN BI-DIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS. THE FACE OF THE IMPACT HEAD SHALL BE COVERED WITH TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, IMPACT ATTENUATOR, TYPE 2 ([BIDIRECTIONAL) 60 MPH, 34 IN], EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS/BACKSTOPS, TRANSITIONS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

ITEM 204 - EMBANKMENT, AS PER PLAN

ANY NEW EMBANKMENT REQUIRED TO ESTABLISH THE UPPER 12" OF THE DESIGN PAVEMENT SUBGRADE SHALL CONSIST OF NATURAL SOIL. THE NATURAL SOIL SHALL CONSIST OF COHESIVE MATERIAL CLASSIFYING AS A-7-6 OR A-6B PER THE ODOT SOIL CLASSIFICATION SYSTEM AND SHALL HAVE A PLASTICITY INDEX OF 16% OR GREATER. THE ITEM 204 EMBANKMENT, AS PER PLAN SHALL ALSO MEET THE SULFATE REQUIREMENTS OUTLINED IN SUPPLEMENT 1120. ALL OTHER ITEMS OUTLINED IN ITEM 204 SHALL APPLY TO THIS PAY ITEM. SHALE AND LIMESTONE BEDROCK EXCAVATED IN THE PROJECT AREA SHALL NOT BE UTILIZED AS EMBANKMENT WITHIN THE UPPER 12" OF THE DESIGN PAVEMENT SUBGRADE.

ITEM SPECIAL - FILL AND PLUG EXISTING CONDUIT

THIS ITEM SHALL CONSIST OF THE CONSTRUCTION OF BULK-HEADS IN EXISTING 12 AND 15 IN DIAMETER CONDUIT AND FILLING THE AREA THUS SEALED OFF WITH ITEM 613, SAND OR OTHER MATERIAL APPROVED BY THE ENGINEER.

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

THE FILL MATERIAL SHALL BE PUMPED INTO PLACE, OR PLACED 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, SHALL BE FILLED. THE LENGTH OF FILLED AND PLUGGED CONDUIT TO BE PAID FOR SHALL BE 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 IN ACCORDANCE WITH THE PROVISIONS OF 203, OR IT MAY BE REMOVED. THE LENGTH, MEASURED AS PROVIDED ABOVE, SHALL BE PAID FOR AT THE CONTRACT PRICE PER FOOT FOR, ITEM SPECIAL, FILL AND PLUG EXISTING CONDUIT.

CALCULATED MSW CHECKED WAA

GENERAL NOTES

CLE-32-2.65 (PHASE 7)

SHEET NUM.													PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
12	13	14	15	19	74	76	77	81	82	251			02/NHS/PV						
																		DRAINAGE	
						2							2	602	20000	2	CY	CONCRETE MASONRY	
							17,358						17,358	605	11110	17,358	FT	6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
	200												200	605	13300	200	FT	6" UNCLASSIFIED PIPE UNDERDRAINS	
							3,743						3,743	605	14020	3,743	FT	6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
	200												200	611	00406	200	FT	4" CONDUIT, TYPE F	
							704						704	611	00510	704	FT	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	
						341							341	611	05900	341	FT	15" CONDUIT, TYPE B	
						10							10	611	05901	10	FT	15" CONDUIT, TYPE B, AS PER PLAN	13
						5							5	611	07400	5	FT	18" CONDUIT, TYPE B, 706.02	
						105							105	611	10400	105	FT	24" CONDUIT, TYPE B	
						20							20	611	10400	20	FT	24" CONDUIT, TYPE B, 706.02	
						10							10	611	19400	10	FT	42" CONDUIT, TYPE B	
				2									2	611	98631	2	EACH	CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN	19
						12							12	611	99110	12	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1	
						7							7	611	99654	7	EACH	MANHOLE ADJUSTED TO GRADE	
						1							1	611	99660	1	EACH	MANHOLE RECONSTRUCTED TO GRADE	
	4						2						6	611	99710	6	EACH	PRECAST REINFORCED CONCRETE OUTLET	
																		PAVEMENT	
5,670													5,670	253	02000	5,670	CY	PAVEMENT REPAIR	
								105,877					105,877	254	01000	105,877	SY	PAVEMENT PLANING, ASPHALT CONCRETE (DEPTH AS SHOWN)	
10,600													10,600	254	01600	10,600	SY	PATCHING PLANED SURFACE	
			5										5	301	46000	5	CY	ASPHALT CONCRETE BASE, PG64-22	
								9,619					9,619	302	46000	9,619	CY	ASPHALT CONCRETE BASE, PG64-22	
			4					7,590					7,594	304	20000	7,594	CY	AGGREGATE BASE	
			2					18,067					18,069	407	20000	18,069	GAL	NON-TRACKING TACK COAT	
		28											28	410	12000	28	CY	TRAFFIC COMPACTED SURFACE, TYPE A OR B	
			1										1	441	50000	1	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	
								6,122					6,122	442	00100	6,122	CY	ANTI-SEGREGATION EQUIPMENT	
								5,684					5,684	442	10000	5,684	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446)	
								3,622					3,622	442	10100	3,622	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)	
																		WATER WORK	
									2				2	638	08704	2	EACH	6" CUTTING-IN SLEEVE	
									20				20	638	98600	20	FT	WATER WORK, MISC.: 6" DUCTILE IRON WATER MAIN AND DUCTILE IRON FITTINGS (CCWRD ITEM 2110)	214
																		SANITARY SEWER	
					1								1	611	99900	1	EACH	DRAINAGE STRUCTURE, MISC.: MANHOLE ADJUSTED TO GRADE	216
																		LIGHTING	
										74			74	625	00450	74	EACH	CONNECTION, FUSED PULL APART	
										15			15	625	00470	15	EACH	CONNECTION, UNFUSED BOLTED	
										9			9	625	00480	9	EACH	CONNECTION, UNFUSED PERMANENT	
										37			37	625	10494	37	EACH	LIGHT POLE, LOW MAST, ALM50	
										37			37	625	14306	37	EACH	MEDIAN LIGHT POLE FOUNDATION, 10' DEEP	
										24,881			24,881	625	23300	24,881	FT	NO. 2 AWG 2400 VOLT DISTRIBUTION CABLE	
										4,366			4,366	625	23400	4,366	FT	NO. 10 AWG POLE AND BRACKET CABLE	
										24			24	625	25504	24	FT	CONDUIT, 3", 725.051	
										140			140	625	25902	140	FT	CONDUIT, JACKED OR DRILLED, 725.04, 3"	
										37			37	625	26273	37	EACH	LUMINAIRE, LOW MAST, SOLID STATE (LED), AS PER PLAN, SYMMETRIC, 480 VOLT	250
										12			12	625	29000	12	FT	TRENCH	
										4			4	625	29930	4	EACH	MEDIAN JUNCTION BOX	
										2			2	625	30706	2	EACH	PULL BOX, 725.08, 24"	
										41			41	625	32000	41	EACH	GROUND ROD	
										2			2	625	34001	2	EACH	POWER SERVICE, AS PER PLAN	250
										12			12	625	36010	12	FT	UNDERGROUND WARNING/MARKING TAPE	
										1			1	625	75800	1	EACH	DISCONNECT CIRCUIT	

CALCULATED MSW CHECKED WAA

GENERAL SUMMARY

CLE-32-2.65 (PHASE 7)

RAMP M

RAMP L

RAMP K

RAMP K

275

RAMP H

SR32
(WESTBOUND)

32

SR32
(EASTBOUND)

MATCHLINE A-A

FOR CONTINUATION
SEE SHEET 44.

900'

RAMP C

900' TO NEXT SIGN TO REMAIN

ROAD WORK AHEAD

W20-1-48

TYPE A WARNING LIGHT

RAMP C

HATCHED AREA
SHOWS OVERLAP WITH
SHEET 43

RAMP A

RAMP B

RAMP M

RAMP N

RAMP G

ROADS SHOWN BY THIS LINESTYLE INDICATE ROADS OUTSIDE THE FIELD SURVEY LIMITS. LINES ARE FROM CLERMONT COUNTY GIS.

FOR LEGEND SEE SHEET 28.

N

0 25 50 100
HORIZONTAL
SCALE IN FEET

CALCULATED KCS
CHECKED SCS

MAINTENANCE OF TRAFFIC
PHASE 2 - BEGIN SR32 & I-275 INTERCHANGE

CLE-32-2.65
(PHASE 7)

RAMP N

RAMP M

RAMP C

RAMP C

HATCHED AREA
SHOWS OVERLAP WITH
SHEET 42

900'

900' TO NEXT SIGN TO REMAIN

W20-1-48 ROAD WORK AHEAD

TYPE A WARNING LIGHT

MATCHLINE A-A

FOR CONTINUATION
SEE SHEET 44.

RAMP A

500' FROM GORE

500' FROM GORE TO REMAIN

W20-1-48 ROAD WORK AHEAD

TYPE A WARNING LIGHT

RAMP A

RAMP B

1000' TO GORE TO REMAIN

W20-1-48 ROAD WORK AHEAD

TYPE A WARNING LIGHT

1000' TO GORE
(RAMP M & RAMP B)

RAMP B

RAMP M

MATCHLINE A-A

ROADS SHOWN BY THIS LINESTYLE INDICATE ROADS OUTSIDE THE FIELD SURVEY LIMITS. LINES ARE FROM CLERMONT COUNTY GIS.

FOR LEGEND SEE SHEET 28.

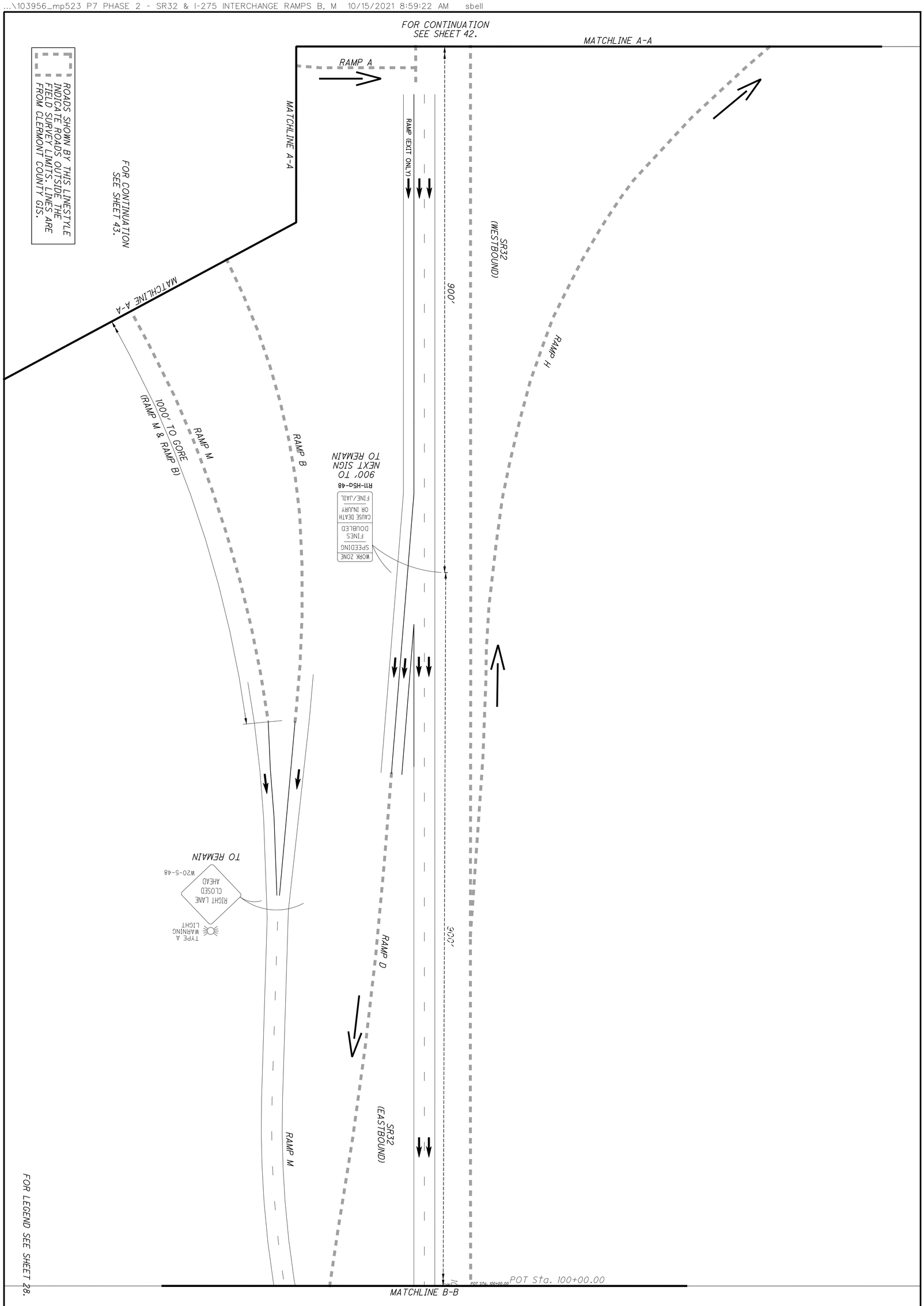
HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED KCS
CHECKED SCS

MAINTENANCE OF TRAFFIC
PHASE 2 - BEGIN SR32 & I-275, RAMPS B, M

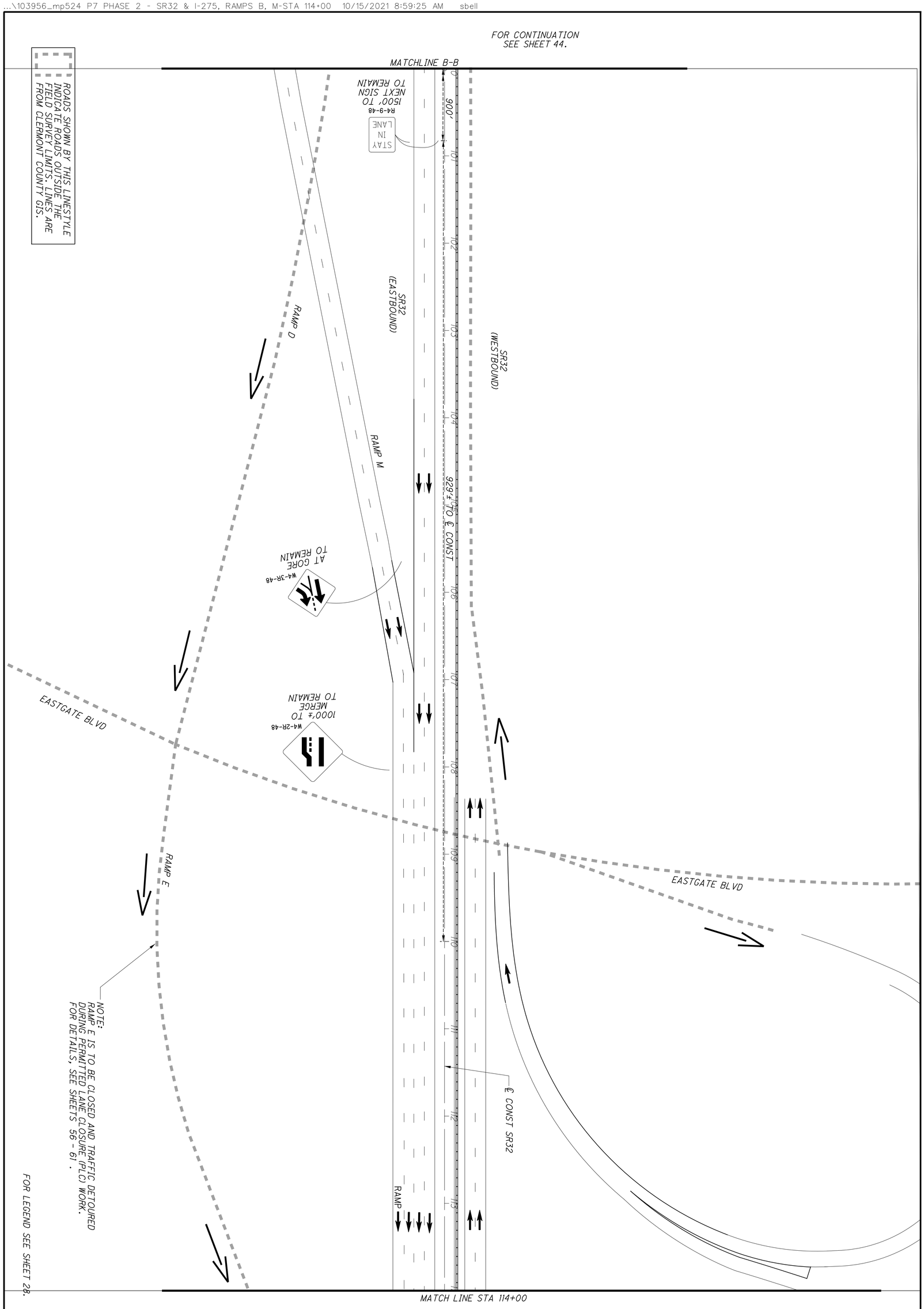
CLE-32-2.65
(PHASE 7)

...\103956_mp522 P7 PHASE 2 - BEGIN - SR32 & I-275 INTERCHANGE RAMPS B, M 10/15/2021 8:59:19 AM sbell

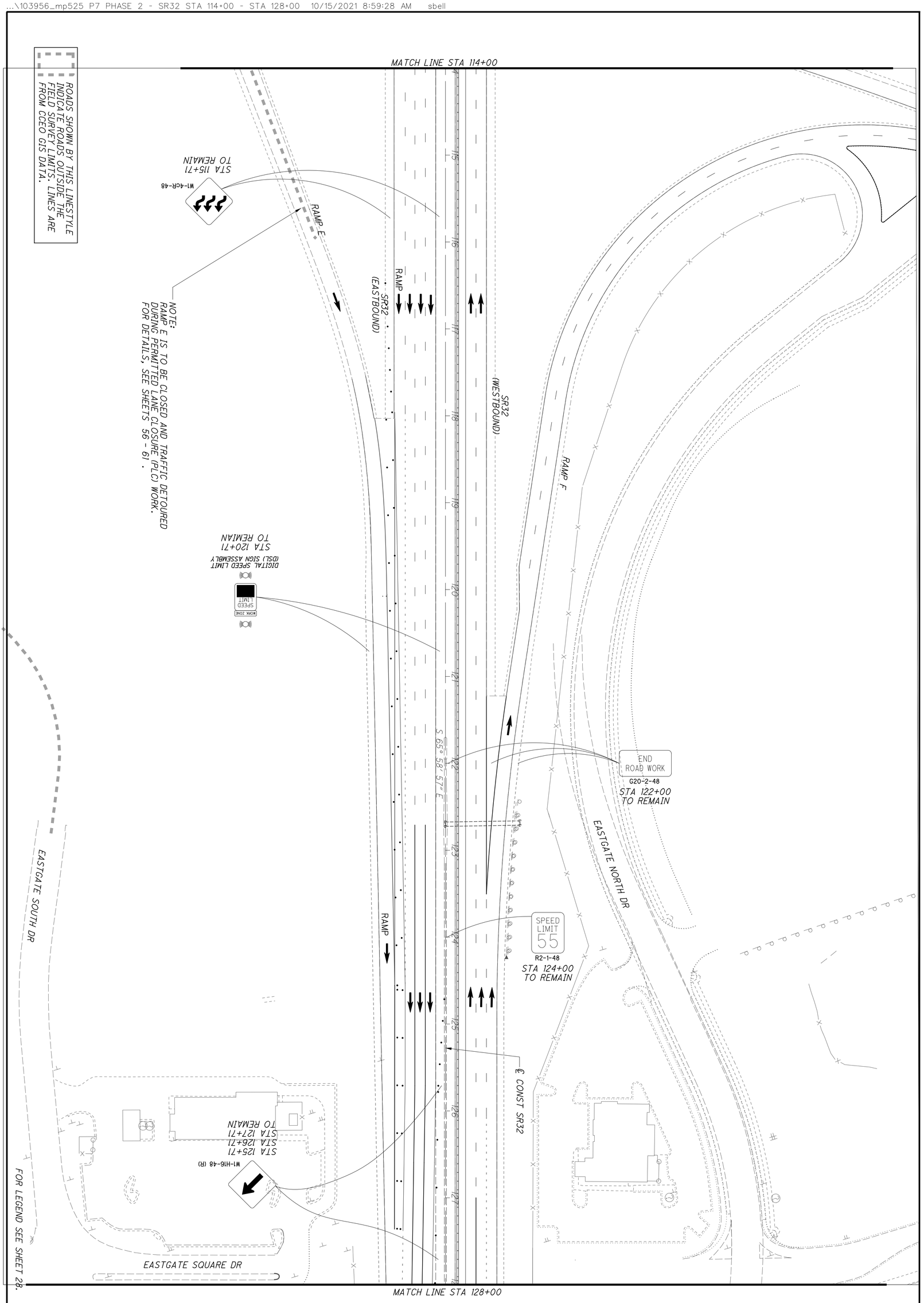


FOR LEGEND SEE SHEET 28.

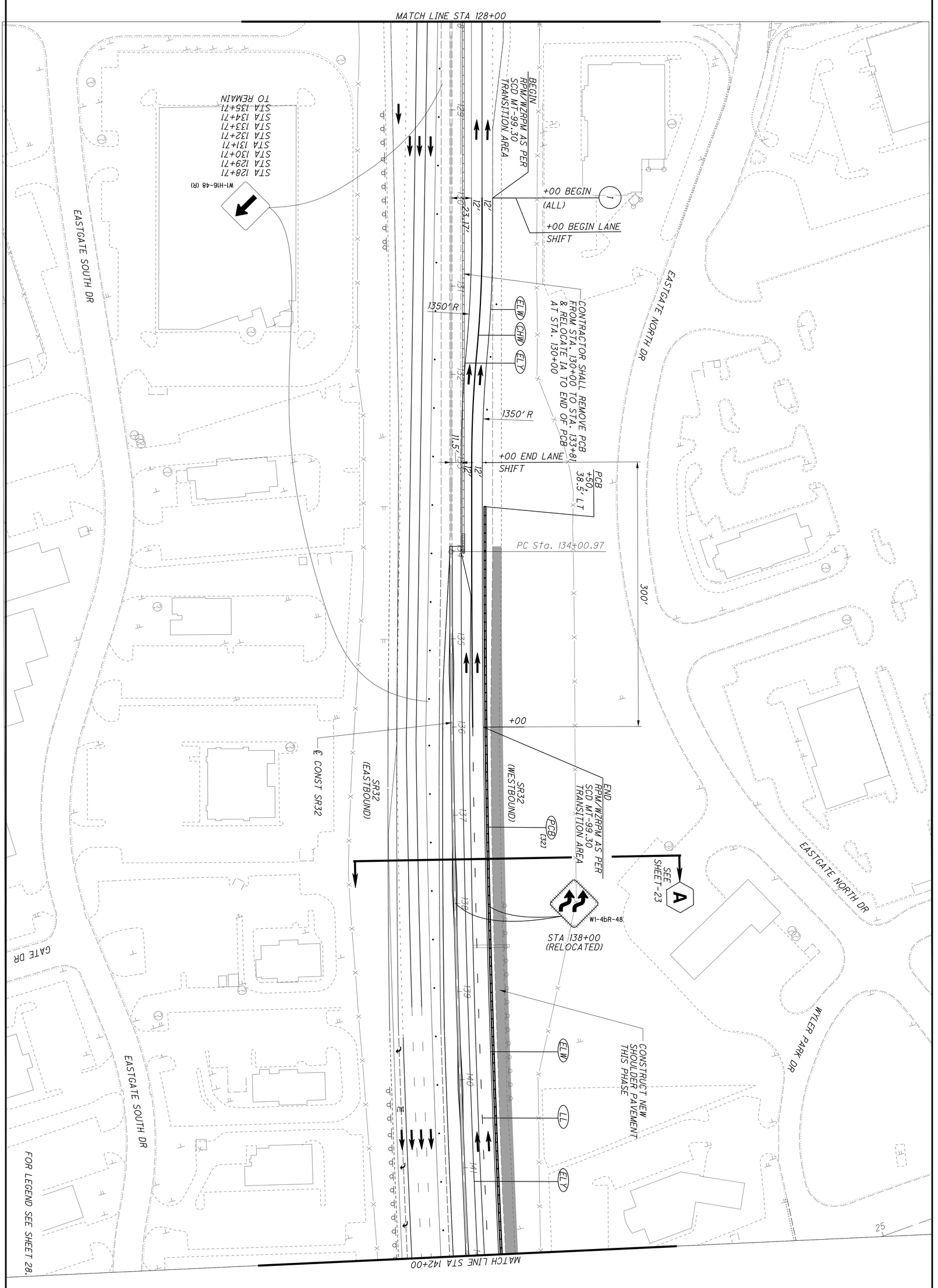
44 / 316	CLE-32-2.65 (PHASE 7)	MAINTENANCE OF TRAFFIC PHASE 2 - SR32 & I-275, RAMPS B, M	CALCULATED KCS / CHECKED SCS	0 25 50 100 HORIZONTAL SCALE IN FEET



45 / 316	CLE-32-2.65 (PHASE 7)	MAINTENANCE OF TRAFFIC PHASE 2-SR32 & I-275, RAMPS B, M-STA 114+00	CALCULATED KCS / CHECKED SCS	0 50 25 100 HORIZONTAL SCALE IN FEET



46 / 316	CLE-32-2.65 (PHASE 7)	MAINTENANCE OF TRAFFIC PHASE 2 - SR32 STA 114+00 TO STA 128+00	CALCULATED KCS / CHECKED SCS	0 25 50 100 HORIZONTAL SCALE IN FEET



47 / 316	CLE-32-2.65 (PHASE 7)	MAINTENANCE OF TRAFFIC PHASE 2 - SR32 STA 128+00 TO STA 142+00	CALCULATED KCS CHECKED SCS	0 50 25 100 HORIZONTAL SCALE IN FEET

PC Sta. 24+50.18

GLEN ESTE-WITHAMSVILLE RD

JOYCE DR

WB SR32
RIGHT-IN
MOVEMENT
CLOSED
FOLLOW DETOUR
SEE SHEET 21

ROAD CLOSED
R11-2-48
AT INTERSECTION WITH
GLEN ESTE-WITHAMSVILLE RD

PT Sta. 145+66.49

CONSTRUCT NEW SHOULDER PAVEMENT THIS PHASE

CONSTRUCT NEW SHOULDER PAVEMENT THIS PHASE

PCB
[32]

ELW

LL

ELY

SR32
(WESTBOUND)

℄ CONST SR32

11.5'

S 69° 52' 04" E

MATCH LINE STA 142+00

MATCH LINE STA 156+00

SR32
(EASTBOUND)

N 33° 30' 40" E

GLEN ESTE-WITHAMSVILLE RD

NOTE:
GLEN ESTE-WITHAMSVILLE ROAD IS TO BE CLOSED AND TRAFFIC DETOURED DURING PERMITTED LANE CLOSURE (PLC) WORK.
FOR DETAILS, SEE SHEETS 56 - 61 .

STA 149+50
TO REMAIN

W1-4dL-48

EASTGATE SOUTH DR

PT Sta. 16+05.64

FOR LEGEND SEE SHEET 28.

HORIZONTAL SCALE IN FEET
0 25 50 100

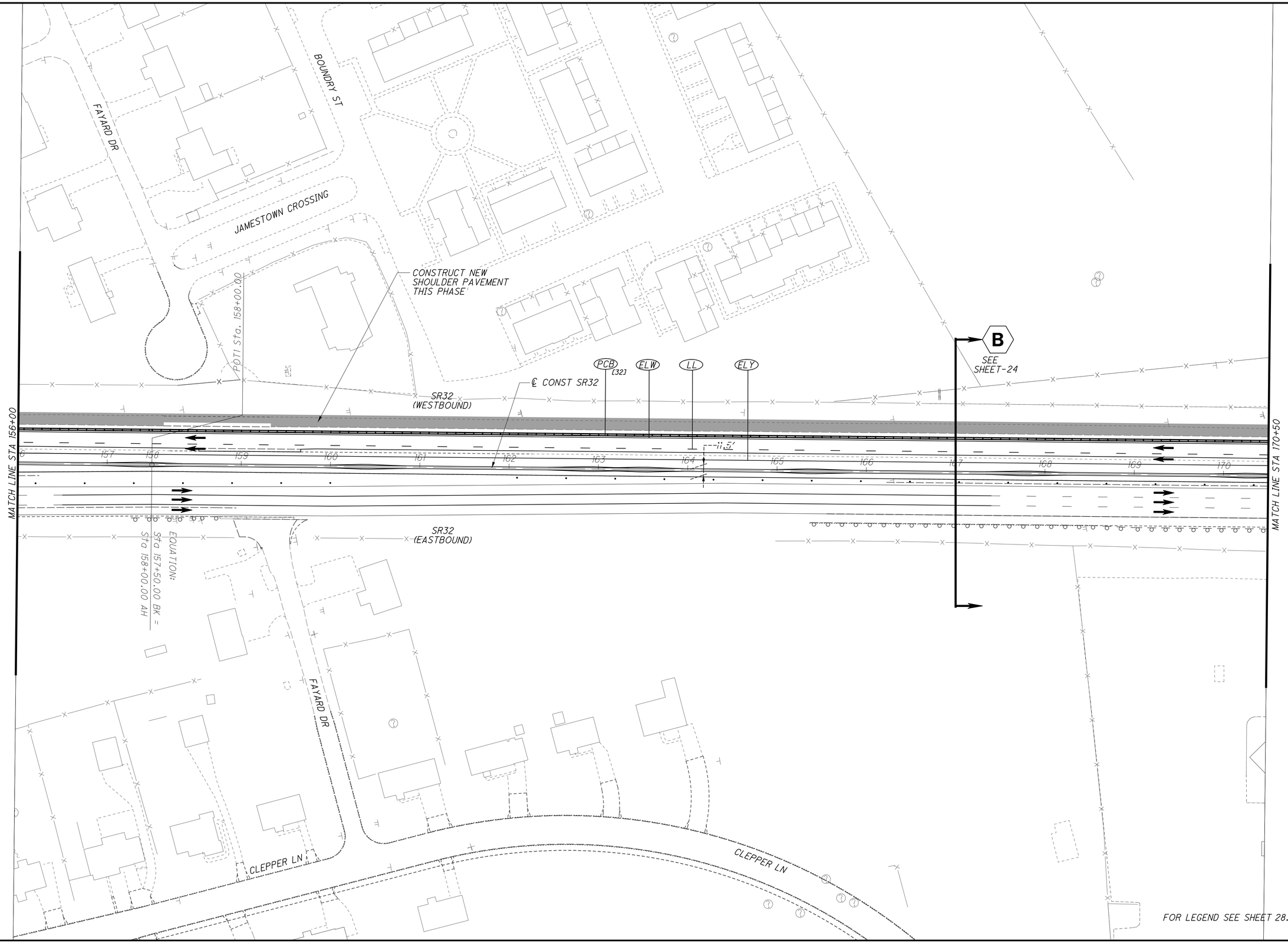
CALCULATED KCS
CHECKED SCS

MAINTENANCE OF TRAFFIC
PHASE 2 - SR32 STA 142+00 TO STA 156+00

CLE-32-2.65
(PHASE 7)

48
316

\103956_mp527 P7 PHASE 2 - SR32 STA 142-00 - STA 156+00 10/15/2021 8:59:36 AM sbell



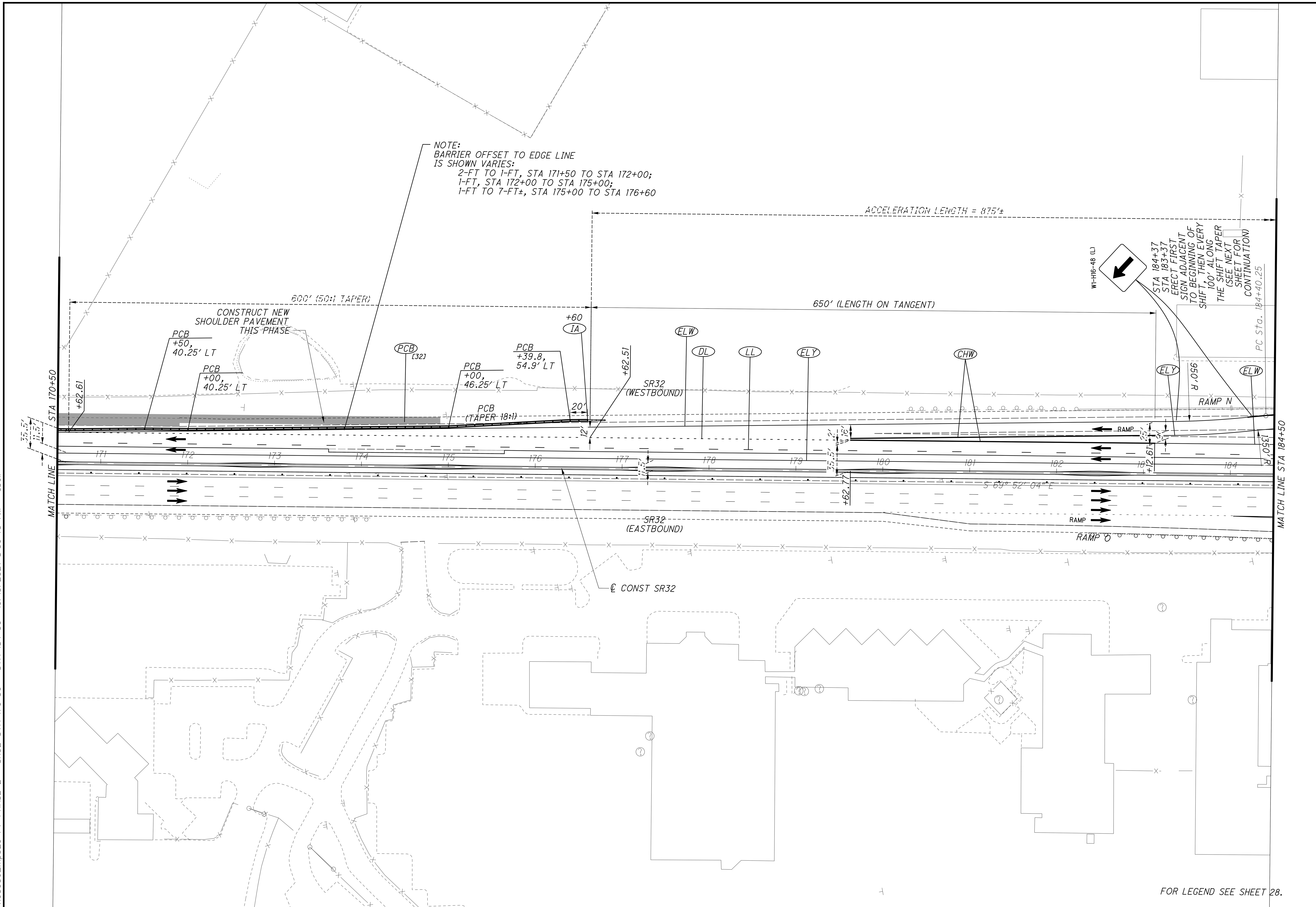
\103956_mp528 P7 PHASE 2 - SR32 STA 156+00 - STA 170+50 10/15/2021 8:59:41 AM sbell

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED KCS
CHECKED SCS

MAINTENANCE OF TRAFFIC
PHASE 2 - SR32 STA 156+00 TO STA 170+50

CLE-32-2.65
(PHASE 7)


NOTE:
BARRIER OFFSET TO EDGE LINE
IS SHOWN VARIES:
2-FT TO 1-FT, STA 171+50 TO STA 172+00;
1-FT, STA 172+00 TO STA 175+00;
1-FT TO 7-FT±, STA 175+00 TO STA 176+60
ACCELERATION LENGTH = 875'±
600' (50:1 TAPER)
650' (LENGTH ON TANGENT)
CONSTRUCT NEW
SHOULDER PAVEMENT
THIS PHASE
PCB
+50,
40.25' LT
PCB
+00,
40.25' LT
PCB
[32]
PCB
+00,
46.25' LT
PCB
+39.8,
54.9' LT
PCB
(TAPER 18:1)
+60
IA
+62.51
20'
12'
SR32
(WESTBOUND)
ELW
DL
LL
ELY
CHW
ELY
ELW
W1-H16-48 (L)
STA 184+37
STA 183+37
ERECT FIRST
SIGN ADJACENT
TO BEGINNING OF
SHIFT THEN EVERY
100' ALONG
THE SHIFT TAPER
(SEE NEXT
SHEET FOR
CONTINUATION)
PC Sta. 184+40.25
950' R
1350' R
RAMP N
RAMP
RAMP
RAMP O
STA 170+50
+62.61
MATCH LINE
MATCH LINE STA 184+50
171
172
173
174
175
176
177
178
179
180
181
182
184
+62.77
+12.61
S 69° 52' 04" E
SR32
(EASTBOUND)
℄ CONST SR32
FOR LEGEND SEE SHEET 28.

HORIZONTAL SCALE IN FEET (0, 25, 50, 100)

CALCULATED KCS

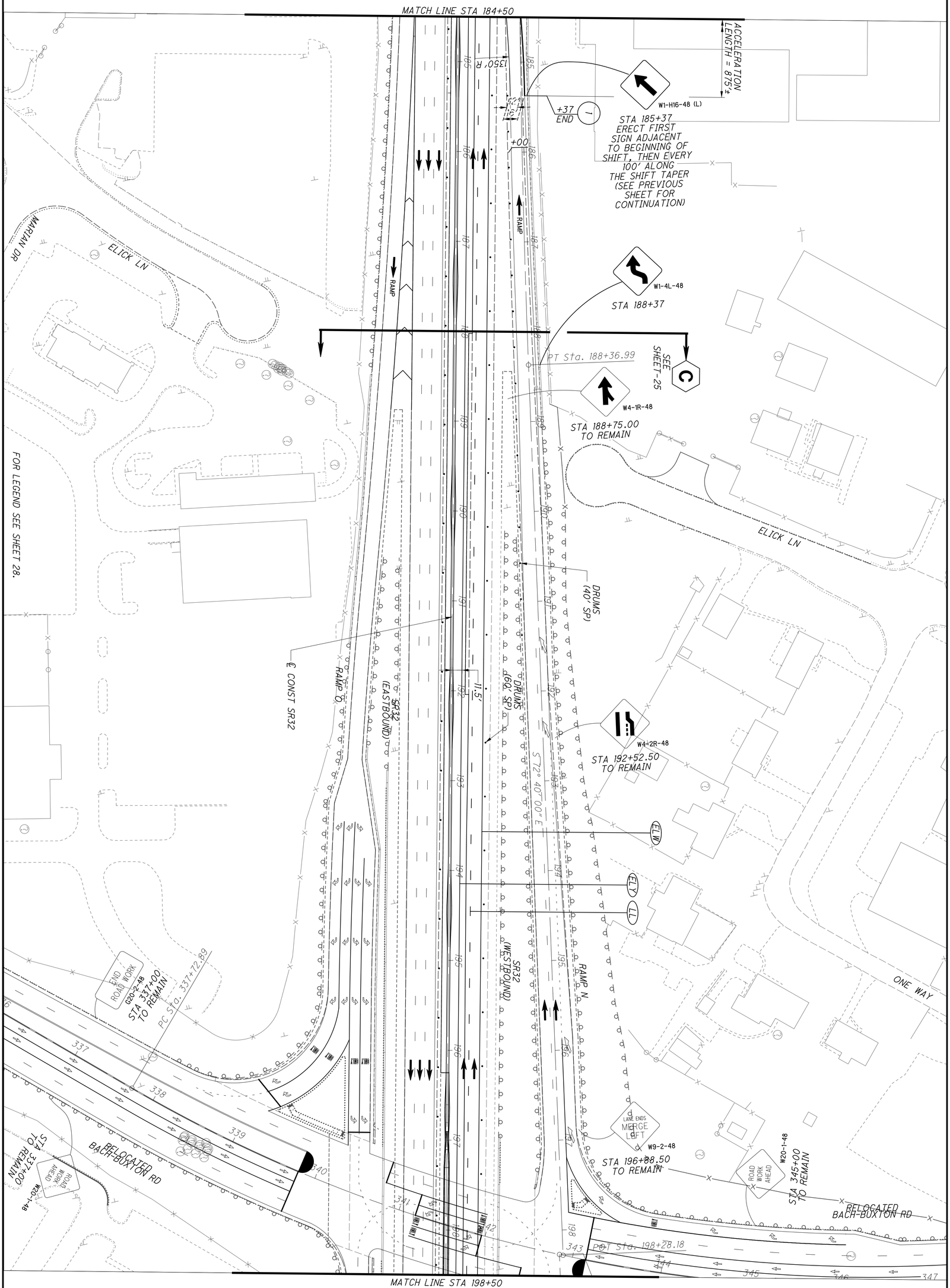
CHECKED SCS

MAINTENANCE OF TRAFFIC

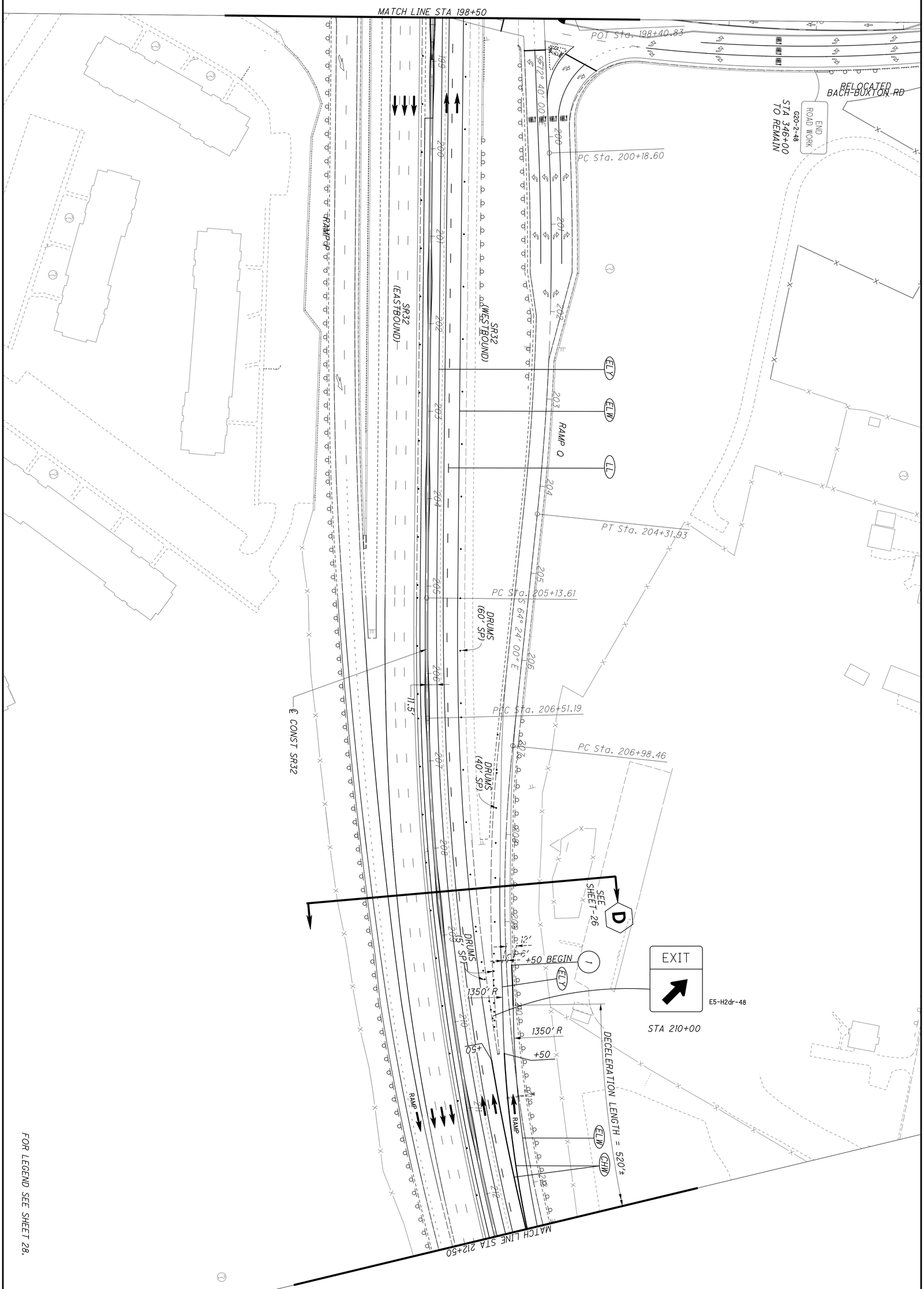
PHASE 2 - SR32 STA 170+50 TO STA 184+50

CLE-32-2.65 (PHASE 7)

...\103956_mp529 P7 PHASE 2 - SR32 STA 170+50 - STA 184+50 10/15/2021 8:59:45 AM sbell

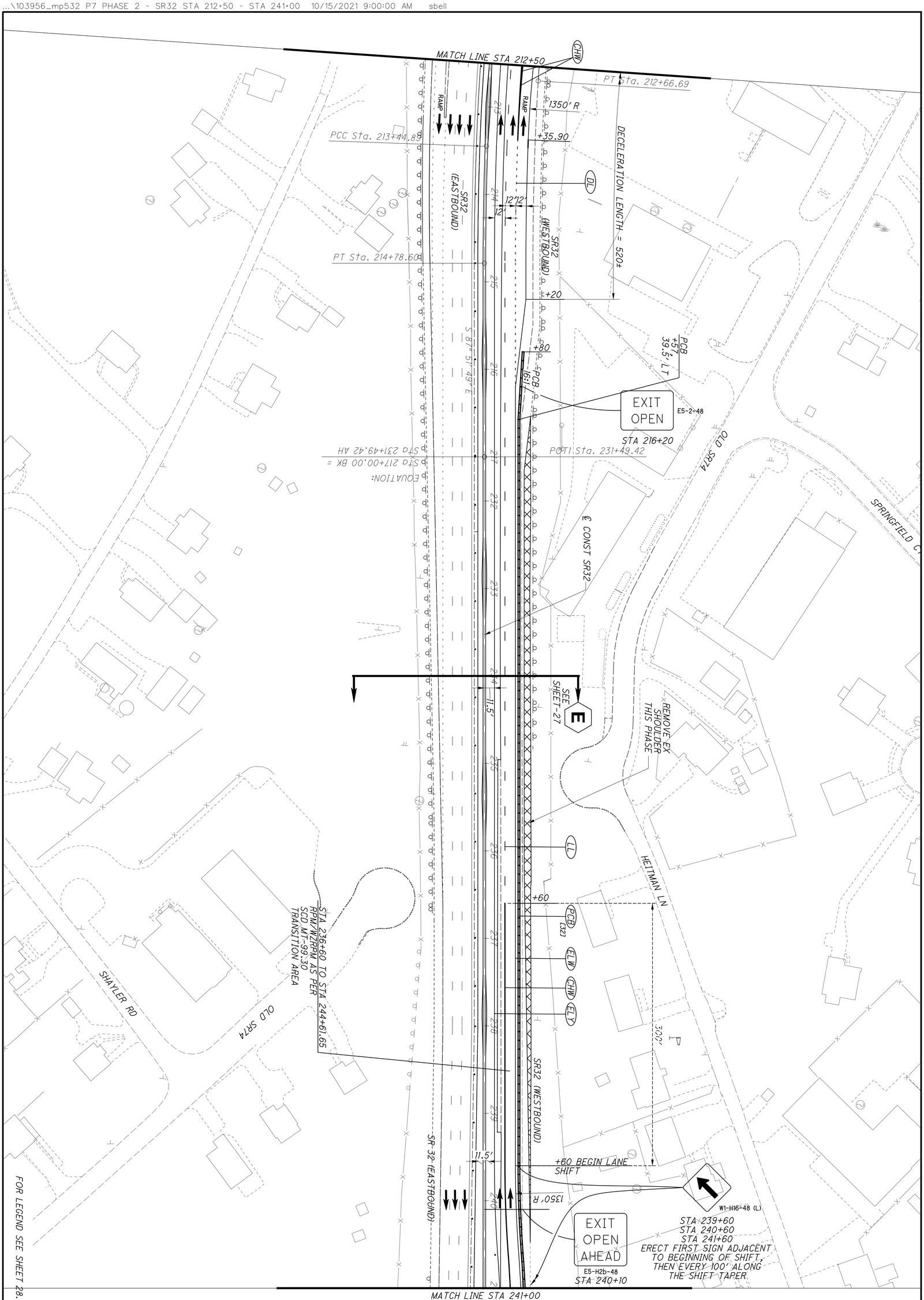


51 / 316	**CLE-32-2.65 (PHASE 7)**	**MAINTENANCE OF TRAFFIC PHASE 2 - SR32 STA 184+50 TO STA 198+50**	CALCULATED KCS / CHECKED SCS	0 50 25 100 HORIZONTAL SCALE IN FEET



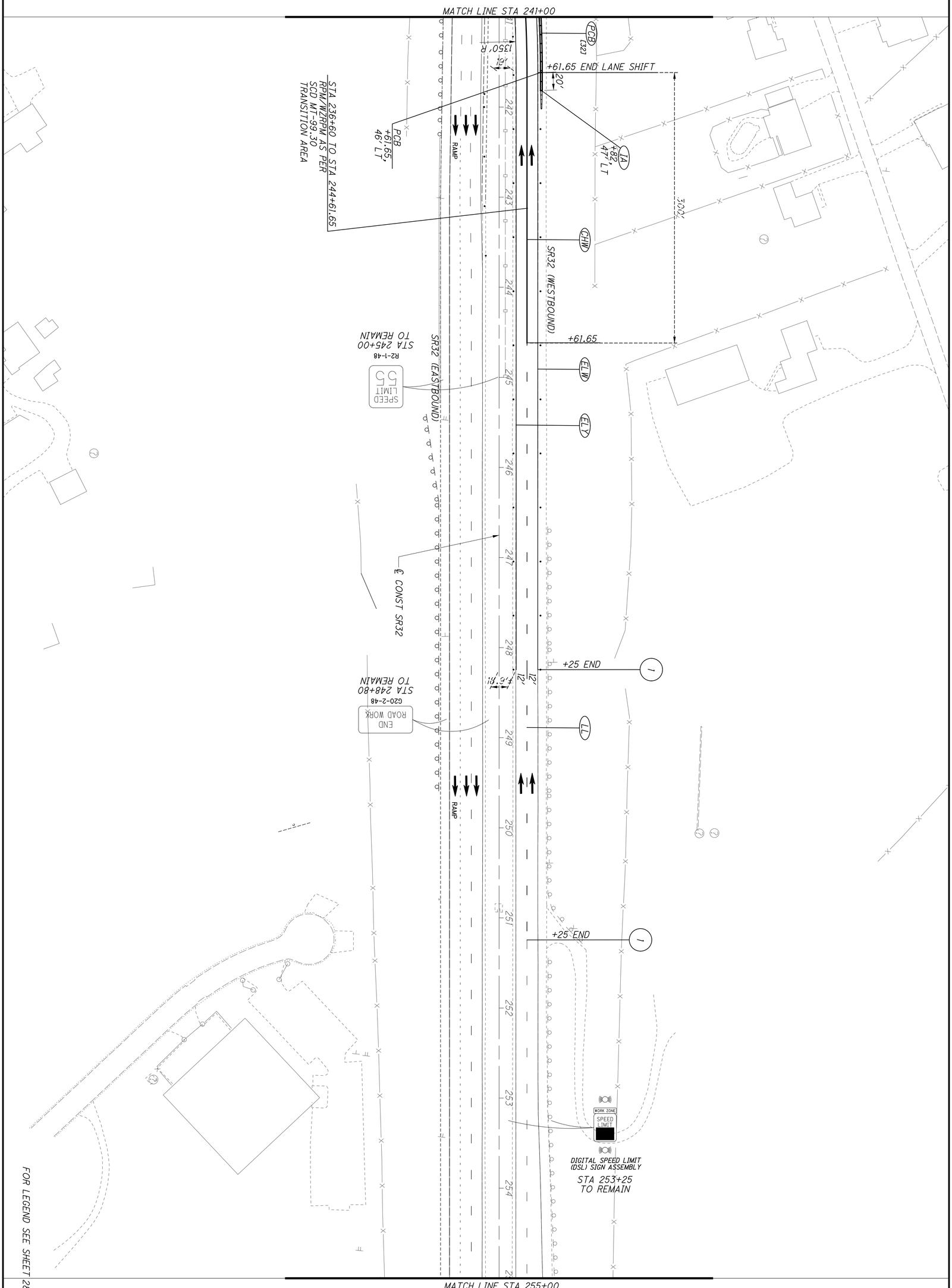
FOR LEGEND SEE SHEET 28.

52 / 316	**CLE-32-2.65 (PHASE 7)**	**MAINTENANCE OF TRAFFIC PHASE 2 - SR32 STA 198+50 TO STA 212+50**	CALCULATED KCS / CHECKED SCS	0 25 50 100 HORIZONTAL SCALE IN FEET



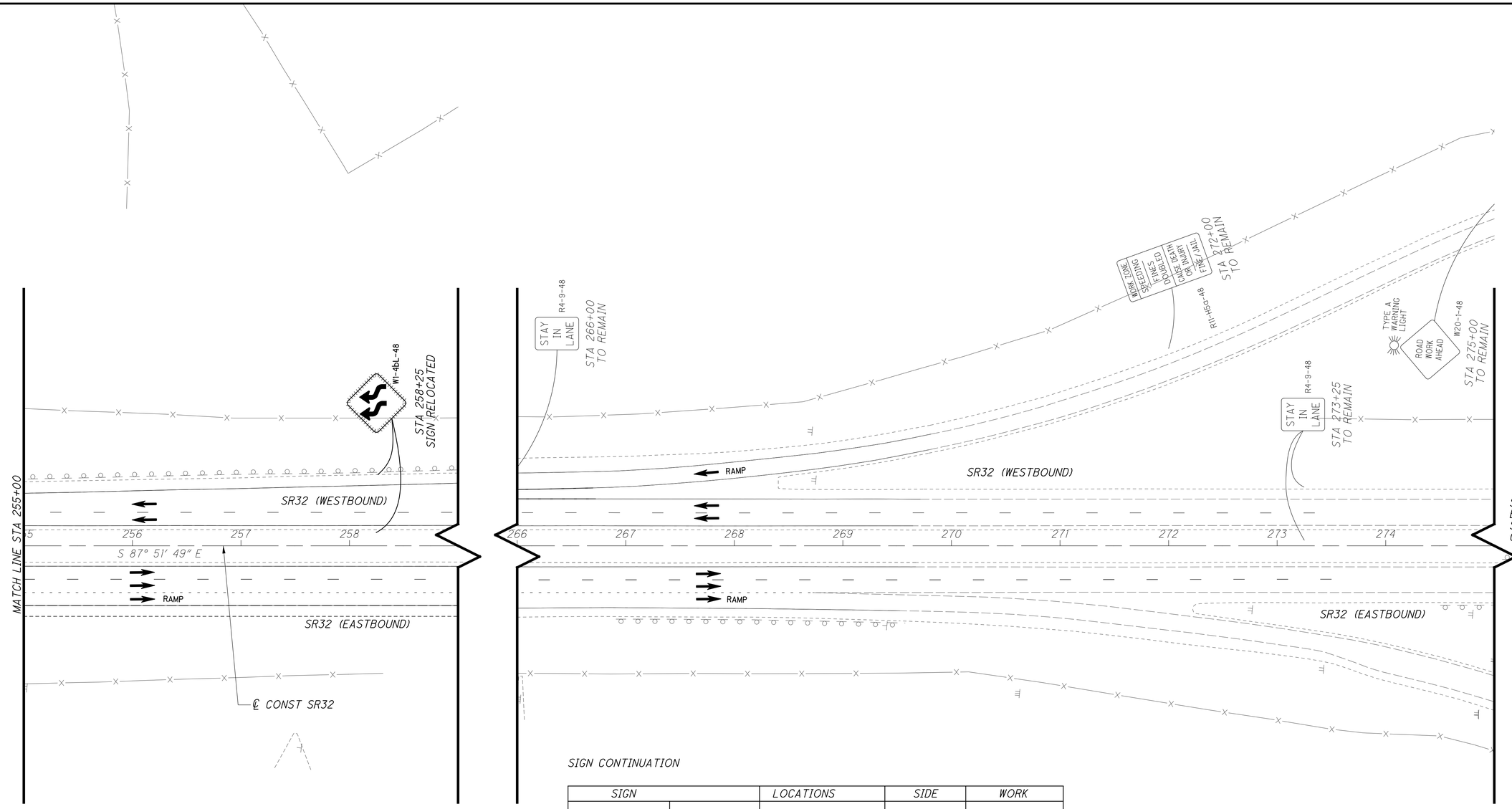
FOR LEGEND SEE SHEET 28.

53 / 316	**CLE-32-2.65 (PHASE 7)**	**MAINTENANCE OF TRAFFIC PHASE 2 - SR32 STA 212+50 TO STA 241+00**	CALCULATED KCS / CHECKED SCS	0 25 50 100 HORIZONTAL SCALE IN FEET



FOR LEGEND SEE SHEET 28.

54 / 316	**CLE-32-2.65 (PHASE 7)**	**MAINTENANCE OF TRAFFIC PHASE 2 - SR32 STA 241+00 TO STA 255+00**	CALCULATED KCS / CHECKED SCS	0 50 / 25 100 HORIZONTAL SCALE IN FEET



SIGN CONTINUATION

SIGN		LOCATIONS	SIDE	WORK
WORK ZONE / SPEEDING / FINES DOUBLED / CAUSE DEATH OR INJURY / FINE/JAIL	R11-H5a-48	SR 32 (WESTBOUND), 660' EAST OF R4-5L-48 SIGN	LT & RT	TO REMAIN
TYPE A WARNING LIGHT / ROAD WORK AHEAD	W20-1-48	SR 32 (WESTBOUND), 660' EAST OF R11-H5a-48 SIGN	LT & RT	TO REMAIN

FOR LEGEND SEE SHEET 28.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED KCS
CHECKED SCS

MAINTENANCE OF TRAFFIC
PHASE 2 - SR32 STA 255+00 TO END

CLE-32-2.65
(PHASE 7)

SHEET NUM.												PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
13	93	95	98	101	163	102						03/S>2/PV						
																	DRAINAGE	
		4.3										4.3	602	20000	4.3	CY	CONCRETE MASONRY	
		5.7										5.7	602	20001	5.7	CY	CONCRETE MASONRY, AS PER PLAN	162
100												100	605	13300	100	FT	6" UNCLASSIFIED PIPE UNDERDRAINS	
			10,017									10,017	605	14020	10,017	FT	6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
25												25	605	31100	25	FT	AGGREGATE DRAINS	
100												100	611	00406	100	FT	4" CONDUIT, TYPE F	
			864									864	611	00510	864	FT	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	
		1,855										1,855	611	04400	1,855	FT	12" CONDUIT, TYPE B	
		145										145	611	04600	145	FT	12" CONDUIT, TYPE C	
		177										177	611	05900	177	FT	15" CONDUIT, TYPE B	
		156										156	611	06100	156	FT	15" CONDUIT, TYPE C	
		531										531	611	07400	531	FT	18" CONDUIT, TYPE B	
		41										41	611	08200	41	FT	18" CONDUIT, TYPE F	
		146										146	611	11900	146	FT	27" CONDUIT, TYPE B	
		174										174	611	19400	174	FT	42" CONDUIT, TYPE B	
		20										20	611	98150	20	EACH	CATCH BASIN, NO. 3	
		7										7	611	98180	7	EACH	CATCH BASIN, NO. 3A	
		2										2	611	98230	2	EACH	CATCH BASIN, NO. 4	
		2										2	611	98410	2	EACH	CATCH BASIN, NO. 8	
		2										2	611	98630	2	EACH	CATCH BASIN ADJUSTED TO GRADE	
		5										5	611	99574	5	EACH	MANHOLE, NO. 3	
		132										132	611	97400	132	FT	CONDUIT, MISC.: 72" CONDUIT, TYPE A, VARIOUS MATERIALS	161
2												2	611	99710	2	EACH	PRECAST REINFORCED CONCRETE OUTLET	
																	PAVEMENT	
				1,091								1,091	254	01000	1,091	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 7.25" THICK	
				4,273								4,273	302	46000	4,273	CY	ASPHALT CONCRETE BASE, PG64-22	
				4,095								4,095	304	20000	4,095	CY	AGGREGATE BASE	
				3,042								3,042	407	10000	3,042	GAL	TACK COAT	
				22								22	441	50000	22	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	
				31								31	441	50300	31	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)	
				1,054								1,054	442	10000	1,054	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446)	
				1,148								1,148	442	10100	1,148	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)	
				297								297	452	12010	297	SY	8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P	
	6,587											6,587	609	26000	6,587	FT	CURB, TYPE 6	
	567											567	609	98000	567	FT	CURB, MISC.: CLERMONT COUNTY CURB AND GUTTER	152
																	WATER WORK	
						2						2	602	98200	2	CY	MASONRY, MISC.:CONCRETE ENCASEMENT (CCWRD ITEM 1170)	165
						12						12	638	08706	12	EACH	8" CUTTING-IN SLEEVE	
					4	5						9	638	08712	9	EACH	16" CUTTING-IN SLEEVE	
						1						1	638	10500	1	EACH	FIRE HYDRANT REMOVED AND RESET	
						2						2	638	98000	2	EACH	WATER WORK, MISC.:8" GATE VALVE WITH VALVE BOX (CCWRD 2210)	164
						4						4	638	98000	4	EACH	WATER WORK, MISC.:16" BUTTERFLY VALVE WITH VALVE BOX (CCWRD ITEM 2210)	164
						605						605	638	98600	605	FT	WATER WORK, MISC.:8" DUCTILE IRON WATER MAIN AND DUCTILE IRON FITTINGS (CCWRD ITEM 2110)	163
					40	575						615	638	98600	615	FT	WATER WORK, MISC.:16" DUCTILE IRON WATER MAIN AND DUCTILE IRON FITTINGS (CCWRD ITEM 2110)	163

CALCULATED MSW
CHECKED WAA

GENERAL SUMMARY

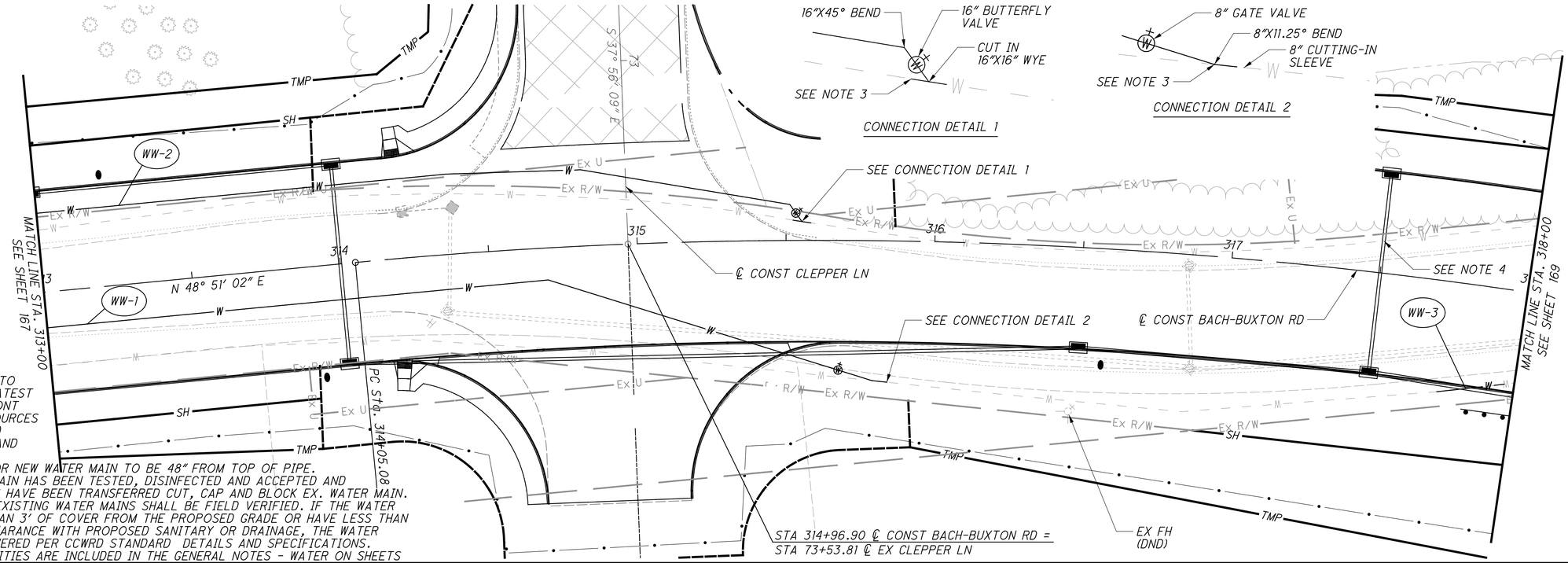
CLE-CR388 (PHASE 4)

PAV'T AREA	STATION FROM	STATION TO	SIDE	LENGTH (ALONG CURB OR EDGE LINE)	AREA (FROM CADD)	204 SUBGRADE COMPACTION	204 PROOF ROLLING	206 LIME STABILIZED SUBGRADE, 14" DEEP	206 LIME	206 CURING COAT	254 PAVEMENT PLANING, ASPHALT CONCRETE, 7.25" THICK	302 6" ASPHALT CONCRETE BASE, PG64-22	302 VARIABLE DEPTH ASPHALT CONCRETE BASE, PG64-22 (4.0"-6.8")	304 6" AGGREGATE BASE	304 8" AGGREGATE BASE	407 TACK COAT (SC) (@0.06 GAL/SY)	407 TACK COAT (IC) (@0.06 GAL/SY)	407 TACK COAT (@0.09 GAL/SY)	441 1-1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	441 1-3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448), PG64-22	442 1-1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446)	442 1-3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446)	452 8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1
				LF	SQ FT	SY	HR	SY	TON	SY	SY	CY	CY	CY	CY	GAL	GAL	GAL	CY	CY	CY	CY	SY
	BACH-BUXTON RD.																						
FULL DEPTH ASPH.	304+25.00	332+72.11	LT/RT		177,348.02		9.85	19,705.34	1,057.52	19,705.34		3,284.22		3,284.22		1,182.32	1,182.32				821.06	957.90	
+CURB TYPE 6	304+25.00	314+16.97	LT	1,022.54			0.09	170.42	9.15	170.42				18.94									
+CURB TYPE 6	315+65.40	330+91.40	LT	1,535.80			0.13	255.97	13.74	255.97				28.44									
+CURB TYPE 6	332+31.07	332+72.11	LT	39.09			0.003	6.52	0.35	6.52				0.72									
+CURB TYPE 6	304+25.00	314+12.53	RT	960.92			0.08	160.15	8.59	160.15				17.79									
+CURB TYPE 6	315+68.60	331+35.02	RT	1,558.75			0.13	259.79	13.94	259.79				28.87									
+CURB TYPE 6	332+43.25	332+72.11	RT	30.23			0.003	5.04	0.27	5.04				0.56									
ASHP. COMM. DRIVE	306+71.62	307+31.43	LT		1,059.85	117.76	0.06								26.17	7.07			4.09	5.72			
+ASPHALT EDGE COURSE	306+71.62	307+31.43	LT	79.81		13.30	0.01								1.64					0.29			
ASHP. COMM. DRIVE	314+12.53	315+68.60	RT		3,570.32	396.70	0.20								88.16	23.80			13.77	19.28			
+CURB TYPE 6	314+12.53	315+68.60	RT	162.42		27.07	0.01																
	CLEPPER LN.																						
RESURFACING	68+67.83	71+40.00	LT/RT		15,199.09													151.99			70.37		
FULL DEPTH ASPH.	71+40.00	73+29.10	LT		112.61		0.01	12.51	0.67	12.51		2.09		2.09		0.75	0.75				0.52	0.61	
+CURB TYPE 6	71+40.00	73+29.10	LT	218.75			0.02	36.46	1.96	36.46				4.05									
FULL DEPTH ASPH.	71+40.00	73+29.63	RT		85.05		0.00	9.45	0.51	9.45		1.58		1.58		0.57	0.57				0.39	0.46	
+CURB TYPE 6	71+40.00	73+29.63	RT	210.98			0.02	35.16	1.89	35.16				3.91									
VARIABLE OVERLAY	71+40.00	73+27.64	LT/RT		9,816.22						1,090.69		519.22			65.44	65.44				45.45	53.02	
	MARIAN DR.																						
FULL DEPTH ASPH.	50+00.00	53+31.05	LT/RT		14,102.09		0.78	1,566.90	84.09	1,566.90		261.15		261.15		94.01	94.01				65.29	76.17	
+CLERMONT C&G	50+00.00	51+22.47	LT		340.29		0.02	37.81	2.03	37.81				6.30									
+CURB TYPE 6	51+22.47	53+45.34	LT	239.31			0.02	39.89	2.14	39.89				4.43									
+CLERMONT C&G	50+00.00	51+20.00	RT		303.88		0.02	33.76	1.81	33.76				5.63									
+CURB TYPE 6	51+20.00	53+06.86	RT	223.18			0.02	37.20	2.00	37.20				4.13									
FULL DEPTH ASPH.	54+01.63	55+00.00	LT/RT		4,954.82		0.28	550.54	29.55	550.54		91.76		91.76		33.03	33.03				22.94	26.76	
+CURB TYPE 6	54+14.42	54+67.94	LT	77.27			0.01	12.88	0.69	12.88				1.43									
+CLERMONT C&G	54+67.94	54+96.22	LT		61.41		0.003	6.82	0.37	6.82				1.14									
+CURB TYPE 6	53+85.85	54+89.76	RT	119.10			0.01	19.85	1.07	19.85				2.21									
+CLERMONT C&G	50+00.00	51+22.47	RT		20.41		0.001	2.27	0.12	2.27				0.38									
ASHP. COMM. DRIVE	50+56.16	51+12.48	LT		1,127.47	125.27	0.06								27.84	7.52			4.35	6.09			
+CURB TYPE 6	50+56.16	51+12.48	LT	76.50		12.75	0.01																
	ELICK LN.																						
FULL DEPTH ASPH.	54+01.63	55+00.00	LT/RT		6,098.96		0.34	677.66	36.37	677.66		112.94		112.94		40.66	40.66				28.24	32.94	
+CLERMONT C&G	54+67.94	54+96.22	LT/RT	285.87			0.004	7.50	0.40	7.50				1.25									
CONC. COMM. DRIVE	40+15.29	40+59.54	LT		2,674.49	297.17	0.15								66.04	17.83							297.17
+CONC. EDGE COURSE	40+15.29	40+59.54	LT	89.53		14.92	0.01								1.11								
SUBTOTAL THIS SHEET						1,004.95	12.33	23,649.88	1,269.21	23,649.88	1,090.69	3,753.73	519.22	3,883.91	210.95	1,473.00	1,416.79	151.99	22.21	31.39	1054.24	1,147.86	297.17
SUBTOTAL CARRIED TO GENERAL SUMMARY						1,005	12	23,650	1,269	23,650	1,091	4,273		4,095		3,042			22	31	1054	1,148	297

CALCULATED MSW
CHECKED WAA

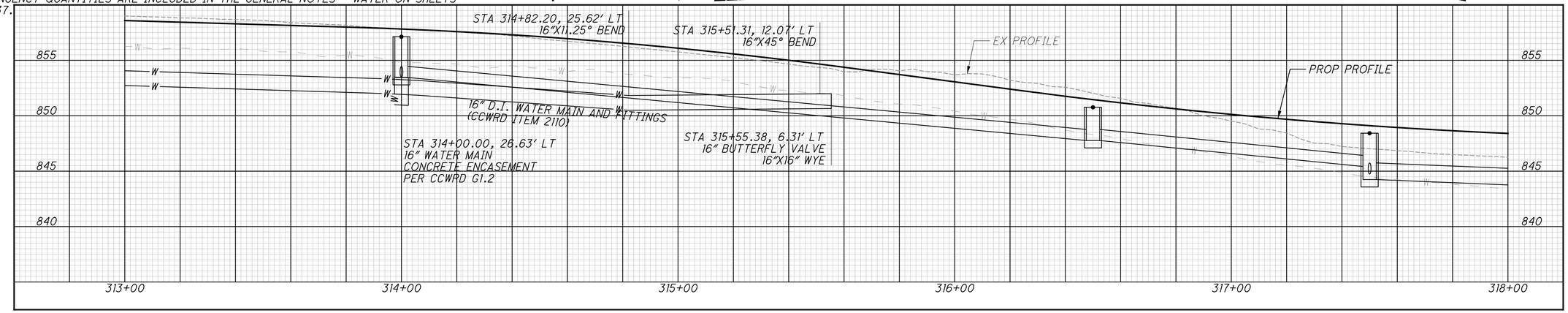
PAVEMENT ESTIMATED QUANTITIES

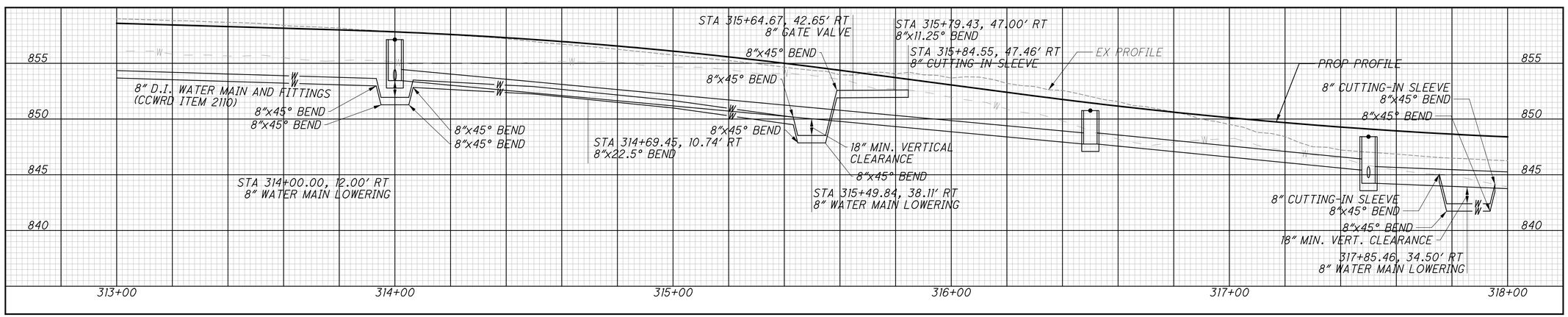
CLE-CR388 (PHASE 4)



NOTES:

1. ALL WATER WORK IS TO COMPLY WITH THE LATEST REVISION OF CLERMONT COUNTY WATER RESOURCES DEPARTMENT (CCWRD) STANDARD DETAILS AND SPECIFICATIONS.
2. STANDARD COVER FOR NEW WATER MAIN TO BE 48" FROM TOP OF PIPE.
3. AFTER NEW WATER MAIN HAS BEEN TESTED, DISINFECTED AND ACCEPTED AND AFTER ALL SERVICES HAVE BEEN TRANSFERRED CUT, CAP AND BLOCK EX. WATER MAIN.
4. THE DEPTH OF THE EXISTING WATER MAINS SHALL BE FIELD VERIFIED. IF THE WATER MAINS HAVE LESS THAN 3' OF COVER FROM THE PROPOSED GRADE OR HAVE LESS THAN 18" OF VERTICAL CLEARANCE WITH PROPOSED SANITARY OR DRAINAGE, THE WATER MAINS SHALL BE LOWERED PER CCWRD STANDARD DETAILS AND SPECIFICATIONS. CONTINGENCY QUANTITIES ARE INCLUDED IN THE GENERAL NOTES - WATER ON SHEETS 163/237.

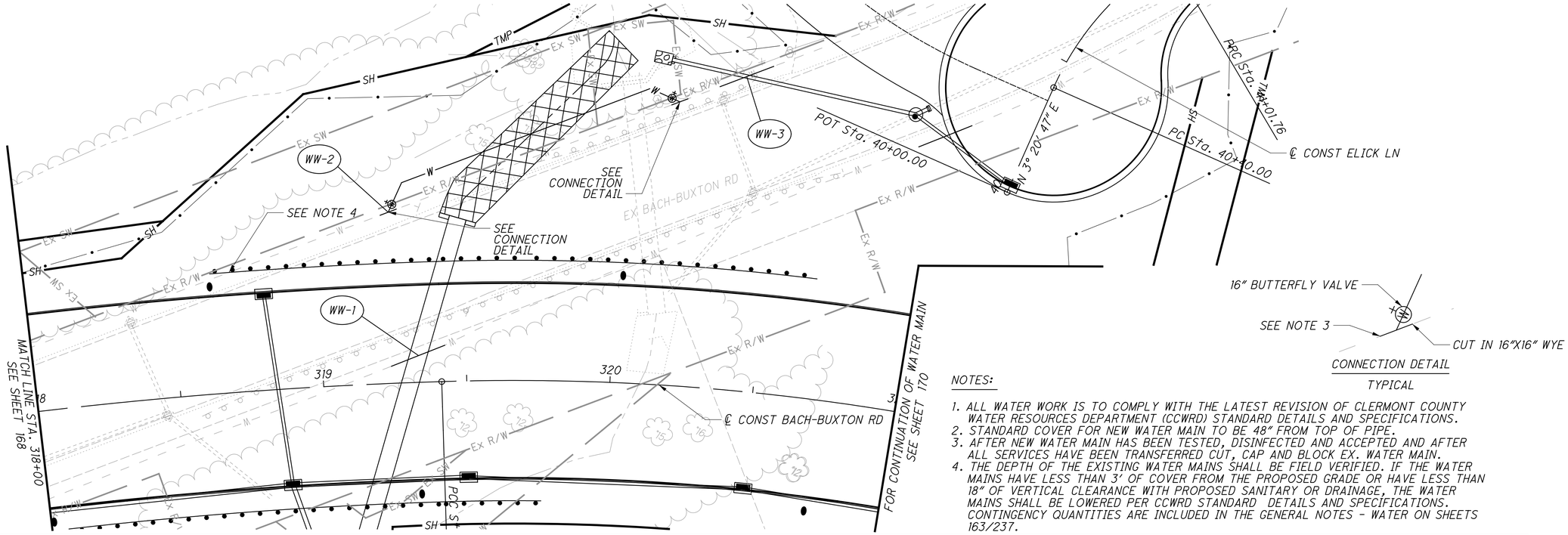




HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED
CHECKED

WATER WORKS PLAN AND PROFILE
BACH-BUXTON RD-STA 313+00 TO STA 318+00

CLE-CR388 (PHASE 4)



16" BUTTERFLY VALVE
SEE NOTE 3
CUT IN 16"X16" WYE

CONNECTION DETAIL
TYPICAL

NOTES:

1. ALL WATER WORK IS TO COMPLY WITH THE LATEST REVISION OF CLERMONT COUNTY WATER RESOURCES DEPARTMENT (CCWRD) STANDARD DETAILS AND SPECIFICATIONS.
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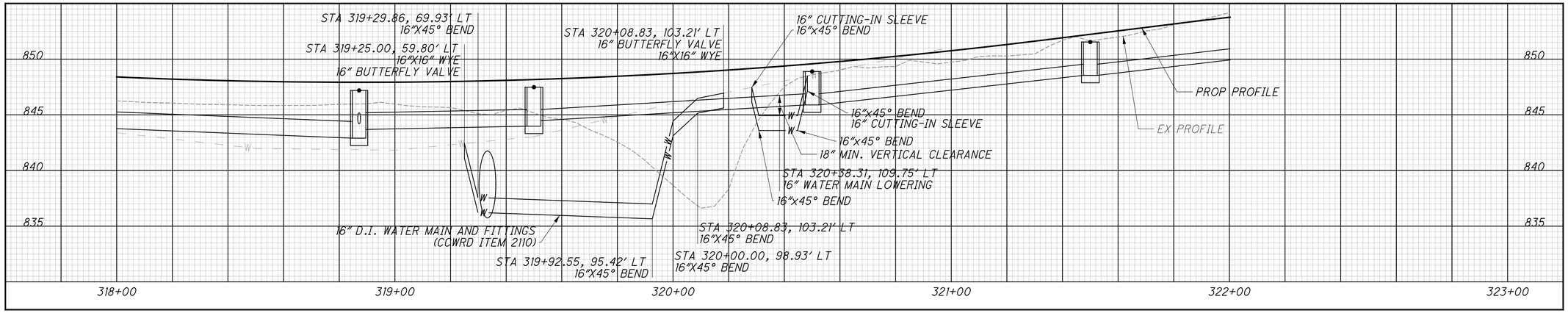

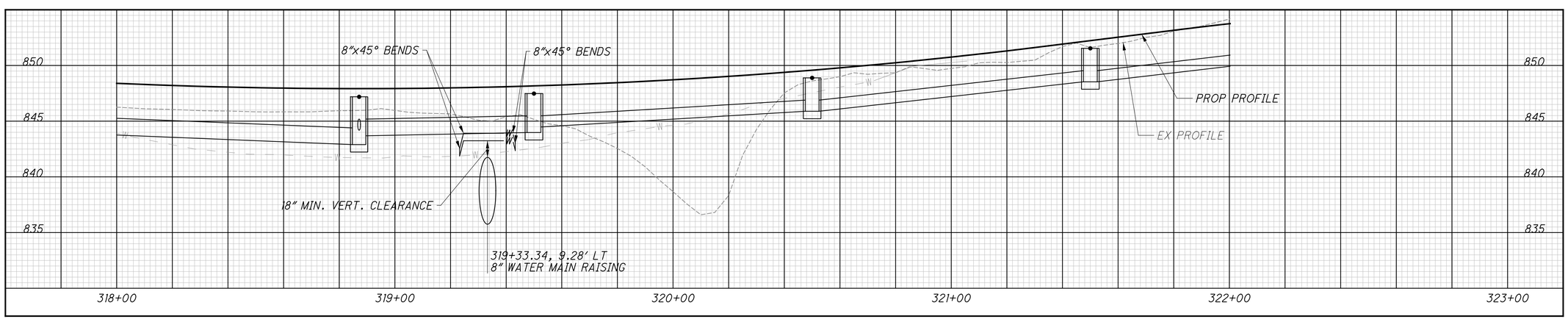

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED
CHECKED

WATER WORKS PLAN AND PROFILE
BACH-BUXTON RD-STA 318+00 TO STA 321+00

CLE-CR388
(PHASE 4)

169
245

...\312.06\Sheets\103953UP464.dgn 10/26/2021 4:27:19 PM nldonofrio