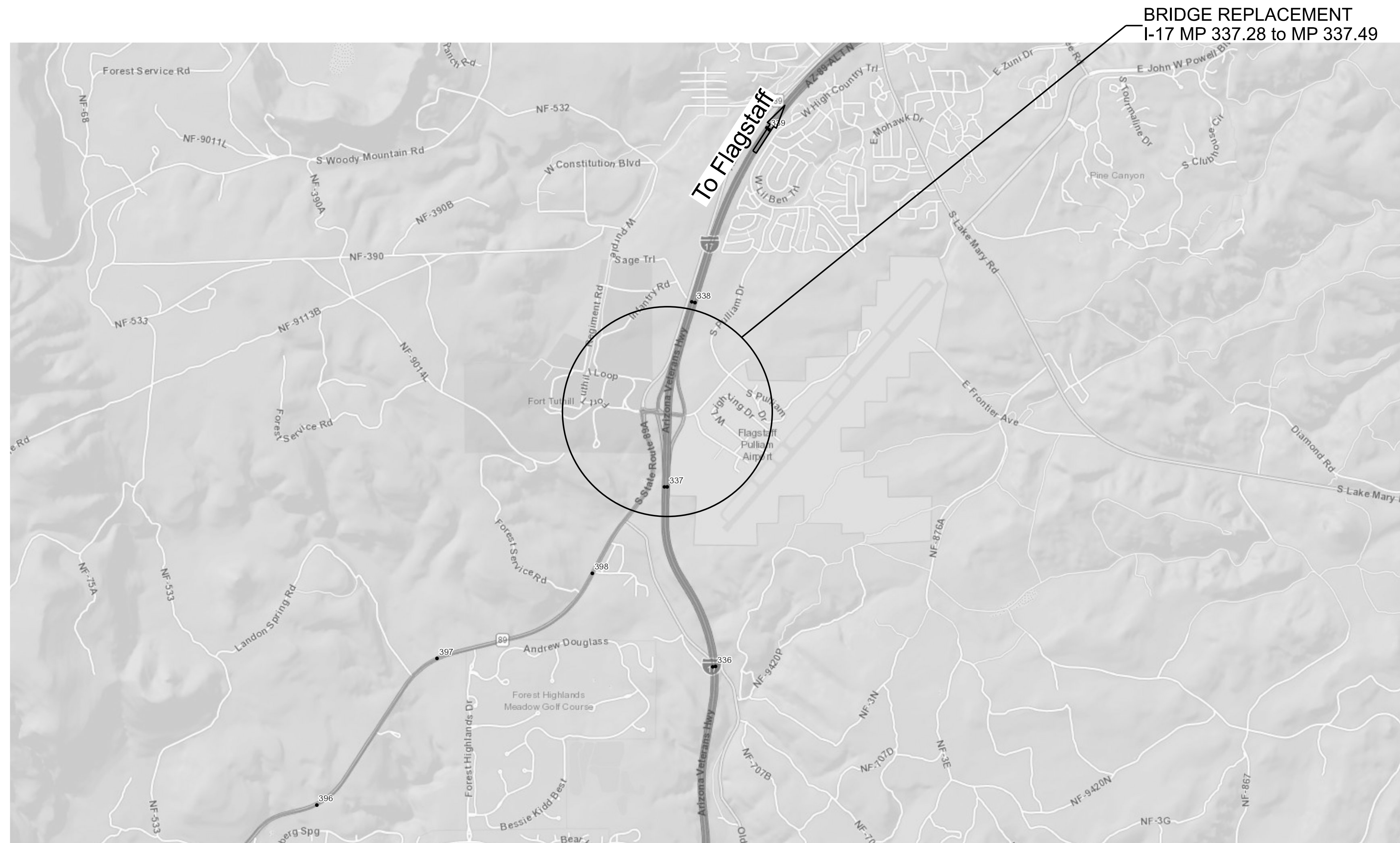
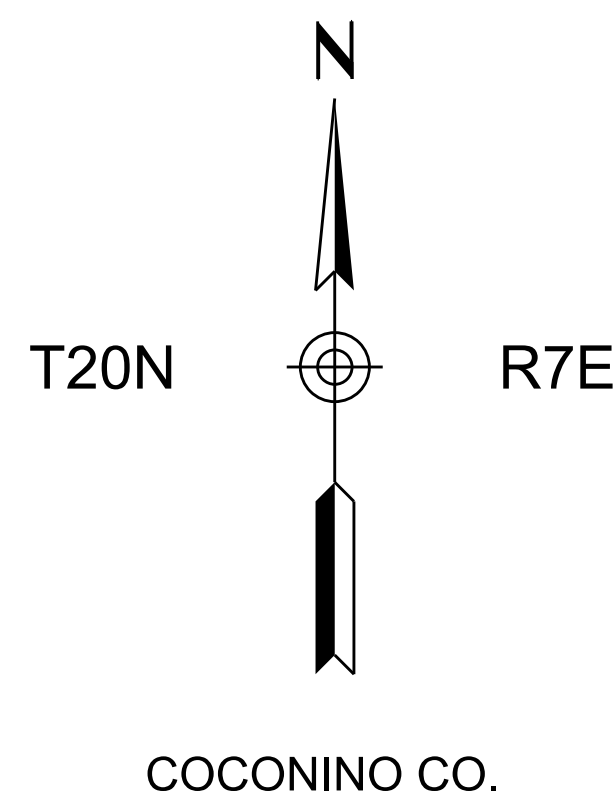


STATE OF ARIZONA
 DEPARTMENT OF TRANSPORTATION
 INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION



PROJECT PLANS

STATE HIGHWAY
 CORDES JCT-FLAGSTAFF HIGHWAY
 INTERSTATE 17



AIRPORT RD TI UP
PROJECT NO. 017 CN 337 F0362 01C
FEDERAL AID NO. 017-B(237)T

Constructed by:

Construction Company

Completion Date

Red-Lines by:

Construction Administrator Name & Company

Completion Date

Record Drawings by:

Record Drawings Designer Name & Company

Completion Date

ARIZONA DEPARTMENT OF TRANSPORTATION
 INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
 GREGORY BYRES, P.E., STATE ENGINEER

REC. DWGS. DATA	REC. DWG. DATE	1	OF	123
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ADOT STANDARD DRAWINGS

CONSTRUCTION STANDARDS
EFFECTIVE AUGUST 2023

DATE	STANDARD	SUBJECT TITLE	DATE	STANDARD	SUBJECT TITLE
5/12	C-01.10 SH 1	SYMBOL LEGEND	12/17	C-10.53	CONCRETE HALF BARRIER, 42" TYPE 'F' WITH GUTTER
5/12	C-01.10 SH 2	SYMBOL LEGEND	12/17	C-10.54 SH 1	CONCRETE HALF BARRIER, 32" TYPE 'F' AT PIERS, CAST-IN-PLACE
5/12	C-01.10 SH 3	SYMBOL LEGEND	12/17	C-10.54 SH 2	CONCRETE HALF BARRIER, 32" TYPE 'F' AT PIERS, PRECAST
5/12	C-01.10 SH 4	SYMBOL LEGEND	12/17	C-10.54 SH 3	CONCRETE HALF BARRIER, 32" TYPE 'F' AT PIERS, LAYOUT
12/17	C-01.30 SH 1	GENERAL ABBREVIATIONS	12/17	C-10.55 SH 1	CONCRETE HALF BARRIER, 42" TYPE 'F' AT PIERS, CAST-IN-PLACE
5/12	C-01.30 SH 2	GENERAL ABBREVIATIONS	12/17	C-10.55 SH 2	CONCRETE HALF BARRIER, 42" TYPE 'F' AT PIERS, PRECAST
5/12	C-01.30 SH 3	GENERAL ABBREVIATIONS	12/17	C-10.55 SH 3	CONCRETE HALF BARRIER, 42" TYPE 'F' AT PIERS, LAYOUT
5/12	C-02.10	SLOPES, RURAL DIVIDED HIGHWAYS	12/17	C-10.70 SH 1	CONCRETE HALF-BARRIER TRANSITION TO VERTICAL, 32" TYPE 'F' WITH CAISSONS
5/12	C-02.20	SLOPES, RURAL UNDIVIDED AND FRINGE-URBAN HIGHWAYS	12/17	C-10.70 SH 2	CONCRETE HALF-BARRIER TRANSITION TO VERTICAL, 32" TYPE 'F' WITH CAISSONS
5/12	C-02.30	SLOPES, MISCELLANEOUS ROADWAYS	12/17	C-10.70 SH 3	CONCRETE HALF-BARRIER TRANSITION TO VERTICAL, 32" TYPE 'F' WITH CAISSONS
5/12	C-03.10 SH 1	DITCHES, CHANNELS, DIKES AND BERMS, DITCHES AND CHANNELS	12/17	C-10.71 SH 1	CONCRETE HALF-BARRIER TRANSITION TO VERTICAL, 32" TYPE 'F' WITH CURB & GUTTER
5/12	C-03.10 SH 2	DITCHES, CHANNELS, DIKES AND BERMS, DIKES	12/17	C-10.71 SH 2	CONCRETE HALF-BARRIER TRANSITION TO VERTICAL, 32" TYPE 'F' WITH CURB & GUTTER
5/12	C-03.10 SH 3	DITCHES, CHANNELS, DIKES AND BERMS, DITCH DIKE	12/17	C-10.72 SH 1	CONCRETE HALF-BARRIER TRANSITION TO VERTICAL, 42" TO 32" TYPE 'F' WITH CAISSONS
5/12	C-03.10 SH 4	DITCHES, CHANNELS, DIKES AND BERMS, PIPE BERMS	12/17	C-10.72 SH 2	CONCRETE HALF-BARRIER TRANSITION TO VERTICAL, 42" TO 32" TYPE 'F' WITH CAISSONS
5/12	C-03.10 SH 5	DITCHES, CHANNELS, DIKES AND BERMS, HEADWALL BERMS	12/17	C-10.72 SH 3	CONCRETE HALF-BARRIER TRANSITION TO VERTICAL, 42" TO 32" TYPE 'F' WITH CAISSONS
12/17	C-04.10 SH 1	SPILLWAY, EMBANKMENT SINGLE INLET	12/17	C-10.73 SH 1	CONCRETE HALF-BARRIER TRANSITION TO VERTICAL, 42" TO 32" TYPE 'F' WITH GUTTER
12/17	C-04.10 SH 2	SPILLWAY, EMBANKMENT DOUBLE INLET	12/17	C-10.73 SH 2	CONCRETE HALF-BARRIER TRANSITION TO VERTICAL, 42" TO 32" TYPE 'F' WITH GUTTER
12/17	C-04.20 SH 1	DOWNDRAIN, EMBANKMENT SINGLE INLET	12/17	C-10.74	CONCRETE HALF-BARRIER TRANSITION, 42" TO 32" TYPE 'F'
12/17	C-04.20 SH 2	DOWNDRAIN, EMBANKMENT DOUBLE INLET	12/17	C-10.75 SH 1	CONCRETE HALF-BARRIER TRANSITION, TYPE 'F' TANGENT DEPARTURE TYPE 1
12/17	C-04.30	SPILLWAY LENGTH TABLE	12/17	C-10.75 SH 2	CONCRETE HALF-BARRIER TRANSITION, TYPE 'F' TANGENT DEPARTURE TYPE 2
12/17	C-04.40	DOWNDRAIN LENGTH TABLE	4/19	C-10.76	CONCRETE HALF-BARRIER TRANSITION, TYPE 'F' AT RADIUS, 32" TO 0"
5/12	C-04.50	DOWNDRAIN ENERGY DISSIPATOR	12/17	C-10.77	CONCRETE BARRIER TRANSITION TO GUARDRAIL END TERMINAL LAYOUT WITH CURB
5/12	C-05.10	CURB & GUTTER, CURB, GUTTER	12/17	C-10.78	CONCRETE HALF-BARRIER TRANSITION, 32" TYPE 'F' LOW SPEED APPROACH
5/12	C-05.12 SH 1	CURB & GUTTER TRANSITIONS	12/17	C-10.79	CONCRETE HALF-BARRIER TRANSITION, 42" TYPE 'F' TANGENT DEPARTURE
5/12	C-05.12 SH 2	CURB & GUTTER TRANSITIONS	5/12	C-11.10 SH 1	ROADWAY CATTLE GUARD
5/12	C-05.12 SH 3	CURB AND GUTTER TRANSITIONS	5/12	C-11.10 SH 2	ROADWAY CATTLE GUARD
5/12	C-05.20 SH 1	CONCRETE DRIVEWAYS & SIDEWALKS, DRIVEWAYS	5/12	C-11.10 SH 3	ROADWAY CATTLE GUARD
5/12	C-05.20 SH 2	CONCRETE DRIVEWAYS & SIDEWALKS, SIDEWALKS	5/12	C-11.10 SH 4	ROADWAY CATTLE GUARD
5/12	C-05.30 SH 1	SIDEWALK RAMP, TYPE A	5/12	C-11.20	CATTLE GUARD, DRAINAGE
5/12	C-05.30 SH 2	SIDEWALK RAMP, TYPE B	5/12	C-12.10 SH 1	FENCE, WOVEN WIRE
5/12	C-05.30 SH 3	SIDEWALK RAMP, TYPE C	5/12	C-12.10 SH 2	FENCE, BARBED WIRE
5/12	C-05.30 SH 4	SIDEWALK RAMP, TYPE D	5/12	C-12.10 SH 3	FENCE, TYPE 1 AND 2 GATES, FLOOD GATE
5/12	C-05.30 SH 5	SIDEWALK RAMP, TYPE E	5/12	C-12.10 SH 4	FENCE, FLOOD GATE INSTALLATION
5/12	C-05.30 SH 6	SIDEWALK RAMP, TYPE F	5/12	C-12.10 SH 5	FENCE, MISCELLANEOUS DETAILS
5/12	C-05.30 SH 7	SIDEWALK RAMP, DETECTABLE WARNING STRIP	5/12	C-12.20 SH 1	FENCE, CHAIN LINK, TYPE 1
5/12	C-05.40	MEDIAN PAVING AND NOSE TAPER	5/12	C-12.20 SH 2	FENCE, CHAIN LINK, TYPE 2
5/12	C-05.50	CONCRETE BUS BAY	5/12	C-12.20 SH 3	FENCE, CHAIN LINK, GATES
5/12	C-06.10 SH 1	DRIVEWAY & TURNOUT LAYOUTS	5/12	C-12.30 SH 1	FENCE, CHAIN LINK CABLE BARRIER
5/12	C-06.10 SH 2	DRIVEWAY & TURNOUT LAYOUTS	5/12	C-12.30 SH 2	FENCE, CHAIN LINK CABLE BARRIER
5/12	C-07.01 SH 1	PCCP JOINTS	5/12	C-12.30 SH 3	FENCE, CHAIN LINK CABLE BARRIER
5/12	C-07.01 SH 2	PCCP JOINTS	5/12	C-13.10 SH 1	PIPE CULVERT INSTALLATION
5/12	C-07.02	LOAD TRANSFER DOWEL ASSEMBLY	5/12	C-13.10 SH 2	PIPE CULVERT INSTALLATION
5/12	C-07.03 SH 1	PCCP JOINT LOCATIONS, MAINLINE SKEWED JOINTS	8/23	C-13.15	TYPICAL PIPE INSTALLATION
5/12	C-07.03 SH 2	PCCP JOINT LOCATIONS, MAINLINE SKEWED JOINTS	5/12	C-13.20	PIPE, REINFORCED CONCRETE END SECTION
5/12	C-07.03 SH 3	PCCP JOINT LOCATIONS, MAINLINE SKEWED JOINTS	5/12	C-13.25	PIPE, CORRUGATED METAL END SECTION
5/12	C-07.03 SH 4	PCCP JOINT LOCATIONS, MAINLINE SKEWED JOINTS	5/12	C-13.30	PIPE AND PIPE ARCH, CORRUGATED METAL, CONCRETE INVERT PAVING
5/12	C-07.03 SH 5	PCCP JOINT LOCATIONS, MAINLINE NON-SKEWED JOINTS	5/12	C-13.55	PIPE, CATTLE-VEHICLE PASS, MITERED END TREATMENT
5/12	C-07.03 SH 6	PCCP JOINT LOCATIONS, MAINLINE NON-SKEWED JOINTS	5/12	C-13.60	SLOTTED DRAIN DETAILS
5/12	C-07.03 SH 7	PCCP JOINT LOCATIONS, MAINLINE NON-SKEWED JOINTS	5/12	C-13.65	SLOTTED DRAIN INSTALLATION DETAILS
5/12	C-07.03 SH 8	PCCP JOINT LOCATIONS, MAINLINE NON-SKEWED JOINTS	5/12	C-13.70	STORM DRAIN CONNECTION DETAILS
5/12	C-07.04 SH 1	PCCP JOINT LOCATIONS, PARALLEL-TYPE ENTRANCE RAMP WITH AUXILIARY LANE	5/12	C-13.75	STORM DRAIN OUTLET BARRIER GATE
5/12	C-07.04 SH 2	PCCP JOINT LOCATIONS, PARALLEL-TYPE EXIT RAMP WITH AUXILIARY LANE	5/12	C-13.76	STORM DRAIN OUTLET AND STORM DRAIN PLUG
5/12	C-07.04 SH 3	PCCP JOINT LOCATIONS, TAPER-TYPE ENTRANCE RAMP	5/12	C-13.80	PIPE COLLAR DETAILS
5/12	C-07.04 SH 4	PCCP JOINT LOCATIONS, TAPER-TYPE EXIT RAMP	5/12	C-15.10	CATCH BASIN, TYPE 1
5/12	C-07.04 SH 5	PCCP JOINT LOCATIONS, CROSSROAD AND RAMP TERMINI	5/12	C-15.20 SH 1	CATCH BASIN, TYPE 3
8/21	C-07.06	TRENCH BACKFILL AND PAVEMENT REPLACEMENT	5/12	C-15.20 SH 2	CATCH BASIN, TYPE 3
5/12	C-08.20	PAVED GORE AREA	5/12	C-15.20 SH 3	CATCH BASIN, ACCESS FRAME AND COVER DETAILS
12/17	C-10.00	GUARDRAIL MEASUREMENT LIMITS	5/12	C-15.30	CATCH BASIN, TYPE 4
12/17	C-10.01	GUARDRAIL INSTALLATION	5/12	C-15.40 SH 1	CATCH BASIN, TYPE 5
12/17	C-10.03	W-BEAM GUARDRAIL, MGS BLOCKED-OUT TIMBER POST	5/12	C-15.40 SH 2	CATCH BASIN, TYPE 5
12/17	C-10.04	W-BEAM GUARDRAIL, MGS BLOCKED-OUT STEEL POST	5/12	C-15.50	CATCH BASIN, FRAME AND GRATE
12/17	C-10.05 SH 1	W-BEAM GUARDRAIL (MODIFIED) WITH FREEWAY CURB AND GUTTER	5/12	C-15.70 SH 1	CATCH BASIN, MISCELLANEOUS DETAILS
12/17	C-10.05 SH 2	W-BEAM GUARDRAIL (MODIFIED) WITH FREEWAY CURB AND GUTTER	5/12	C-15.70 SH 2	CATCH BASIN, MISCELLANEOUS DETAILS
12/17	C-10.06	W-BEAM GUARDRAIL LONG-SPAN	5/12	C-15.75	CATCH BASIN, DROP INLET
12/17	C-10.07 SH 1	W-BEAM GUARDRAIL, BOX CULVERT GUARDRAIL POST	5/12	C-15.80	CATCH BASIN, FLUSH
12/17	C-10.07 SH 2	W-BEAM GUARDRAIL, BOX CULVERT GUARDRAIL POST	5/12	C-15.81	CATCH BASIN, SIDE SLOPE
12/17	C-10.08 SH 1	W-BEAM GUARDRAIL, END ANCHOR	5/12	C-15.90	CATCH BASIN, MEDIAN DIKE, PRECAST
12/17	C-10.08 SH 2	W-BEAM GUARDRAIL, END ANCHOR	5/12	C-15.91 SH 1	FREEWAY CATCH BASIN DETAILS
12/17	C-10.09	GUARDRAIL POST ROCK INSTALLATION	5/12	C-15.91 SH 2	FREEWAY CATCH BASIN DETAILS
4/19	C-10.20 SH 1	GUARDRAIL END TERMINAL PAD LAYOUT FOR SOFTSTOP	5/12	C-15.92 SH 1	CATCH BASIN WITH TYPE 'F' CONCRETE HALF BARRIER
4/19	C-10.20 SH 2	GUARDRAIL END TERMINAL PAD LAYOUT FOR SOFTSTOP	5/12	C-15.92 SH 2	CATCH BASIN WITH TYPE 'F' CONCRETE HALF BARRIER
4/19	C-10.21 SH 1	GUARDRAIL END TERMINAL PAD LAYOUT FOR MSKT	5/12	C-16.40	IRRIGATION SLEEVES
4/19	C-10.21 SH 2	GUARDRAIL END TERMINAL PAD LAYOUT FOR MSKT	5/12	C-17.10	RAIL BANK PROTECTION FOR DRAINAGEWAYS, TYPES 1, 2 & 3
4/19	C-10.22 SH 1	GUARDRAIL END TERMINAL PAD LAYOUT FOR MAX-TENSION	5/12	C-17.15	RAIL BANK PROTECTION AT ABUTMENTS, TYPES 4, 5 & 6
4/19	C-10.22 SH 2	GUARDRAIL END TERMINAL PAD LAYOUT FOR MAX-TENSION	5/12	C-17.20	RAIL BANK PROTECTION FOR DRAINAGEWAYS, TYPES 7, 8 & 9
4/21	C-10.23 SH 1	GUARDRAIL END TERMINAL PAD LAYOUT FOR SGET	5/12	C-18.10 SH 1	MANHOLE, RISER DETAILS
4/21	C-10.23 SH 2	GUARDRAIL END TERMINAL PAD LAYOUT FOR SGET	5/12	C-18.10 SH 2	MANHOLE, BASE DETAILS, NORMAL INSTALLATION
11/19	C-10.26 SH 1	GUARDRAIL END TERMINAL PAD LAYOUT FOR MFLEAT	5/12	C-18.10 SH 3	MANHOLE, FRAME AND COVER DETAILS
11/19	C-10.26 SH 2	GUARDRAIL END TERMINAL PAD LAYOUT FOR MFLEAT	5/12	C-19.10 SH 1	FORD, CONCRETE WALLS
12/17	C-10.30 SH 1	GUARDRAIL TRANSITION TO CONCRETE BARRIER, TIMBER POST	5/12	C-19.10 SH 2	FORD, TYPES 1 AND 2
12/17	C-10.30 SH 2	GUARDRAIL TRANSITION TO CONCRETE BARRIER, TIMBER POST	5/12	C-21.10	SURVEY MONUMENT FRAME AND COVER
12/17	C-10.31 SH 1	GUARDRAIL TRANSITION TO CONCRETE BARRIER, STEEL POST	5/12	C-21.20	SURVEY MARKER
12/17	C-10.31 SH 2	GUARDRAIL TRANSITION TO CONCRETE BARRIER, STEEL POST	5/12		
12/17	C-10.38 SH 1	GUARDRAIL TAPER G4 TO MGS W-BEAM WITH STAGGERED POST			
12/17	C-10.38 SH 2	GUARDRAIL TAPER G4 TO MGS W-BEAM WITH OFFSET RAIL			
12/17	C-10.40	CONCRETE MEDIAN BARRIER, 32" TYPE 'F', CAST-IN-PLACE			
12/17	C-10.41	CONCRETE MEDIAN BARRIER, 42" TYPE 'F', CAST-IN-PLACE			
12/17	C-10.44 SH 1	CONCRETE MEDIAN BARRIER, 42" TYPE 'F' WITH VARIABLE HEIGHT SIDES, H=0" TO 26"			
12/17	C-10.44 SH 2	CONCRETE MEDIAN BARRIER, 42" TYPE 'F' WITH VARIABLE HEIGHT SIDES, H=0" TO 26"			
12/17	C-10.45 SH 1	CONCRETE MEDIAN BARRIER, 42" TYPE 'F' WITH VARIABLE HEIGHT SIDES, H=26" TO 60"			
12/17	C-10.45 SH 2	CONCRETE MEDIAN BARRIER, 42" TYPE 'F' WITH VARIABLE HEIGHT SIDES, H=26" TO 60"			
12/17	C-10.50 SH 1	CONCRETE HALF BARRIER, 32" TYPE 'F', CAST-IN-PLACE			
12/17	C-10.50 SH 2	CONCRETE HALF BARRIER, 32" TYPE 'F', PRECAST			
12/17	C-10.51	CONCRETE HALF BARRIER, 32" TYPE 'F' WITH SIDEWALK			
12/17	C-10.52	CONCRETE HALF BARRIER, 32" TYPE 'F' WITH GUTTER			

ADOT STANDARD DRAWINGS REVISION DATES and STANDARD NO.'s REVIEW			
CONSTRUCTION STANDARDS	NAME	DATE	
	<i>Lee T. Swanbark</i>	10/23/2023	
PROJECT NO.	017 CN 337 F0362 01C	1A	OF 123
RECORD DRAWING DATA	FEDERAL ID NO. 017-B(237)T	REC. DWG. DATE	OF

ADOT STANDARD DRAWINGS

TRAFFIC SIGNING & MARKING STANDARDS

(SHEET 1 OF 2)

EFFECTIVE NOVEMBER 2022

REVISION DATE	STANDARD NUMBER	SUBJECT : SIGNING AND MARKING DETAILS	REVISION DATE	STANDARD NUMBER	SUBJECT : SIGNING AND MARKING DETAILS
6/14	M-1	CURB MARKINGS FOR RAISED MEDIAN AND ISLANDS	6/14	M-20 SHT 1	CHIP SEAL MARKER USAGE FOR TEMPORARY MARKERS
1/20	M-2 SHT 1	INTERSECTION STRIPING	6/14	M-20 SHT 2	CHIP SEAL MARKER USAGE FOR TEMPORARY MARKERS
5/15	M-2 SHT 2	INTERSECTION STRIPING (TWO-LANE RURAL)	6/14	M-21	TRANSVERSE RUMBLE STRIP DETAILS
6/14	M-2 SHT 3	CENTERLINE AND REVERSE CURVE DETAILS	9/21	M-22 SHT 1	LONGITUDINAL RUMBLE STRIP GROOVE, PATTERN - AND LOCATION DETAILS
6/14	M-3	STRIPING AND DELINEATION FOR FREEWAY TERMINALS	9/21	M-22 SHT 2	LONGITUDINAL RUMBLE STRIP EXCEPTION DETAILS
6/14	M-4	PASSING LANE STRIPING DETAILS	9/21	M-22 SHT 3	ENTRANCE AND EXIT RAMPS RUMBLE STRIP INSTALLATION DETAILS
6/14	M-5	RAILROAD PAVEMENT MARKINGS	3/22	M-22 SHT 4	CENTERLINE RUMBLE STRIP GROOVE, PATTERN - AND LOCATION DETAILS
6/14	M-6	WORD MARKINGS	6/14	M-23	OBJECT MARKER DETAILS
6/14	M-7	PAVEMENT LETTERS	6/14	M-24	OBJECT MARKER PLACEMENT DETAILS
6/14	M-8	PAVEMENT LETTERS	2/21	M-26 SHT 1	DELINEATOR PLACEMENT AND SPACING
6/14	M-9	PAVEMENT NUMBERS	2/21	M-26 SHT 2	DELINEATOR PLACEMENT AND SPACING
6/14	M-10 SHT 1	PAVEMENT MARKING SYMBOLS	2/21	M-26 SHT 3	FLEXIBLE DELINEATOR ASSEMBLIES
6/14	M-10 SHT 2	PAVEMENT MARKING SYMBOLS	2/21	M-26 SHT 4	SQUARE STEEL POST DELINEATOR
6/14	M-11	TURN LANE PAVEMENT MARKINGS	2/21	M-26 SHT 5	DELINEATOR FOUNDATION DETAILS
6/14	M-12	WRONG-WAY ARROWS	2/21	M-27 SHT 1	DELINEATION DETAILS FOR MEDIAN CROSSOVERS
1/19	M-13	PREFERENTIAL LANE PAVEMENT MARKINGS	2/21	M-27 SHT 2	DELINEATION DETAILS FOR MEDIAN CROSSOVERS
6/14	M-14	STRIPING AND DELINEATION FOR TRUCK ESCAPE RAMPS	6/14	M-29	OFF- MAINLINE REFERENCE MARKER LOCATION DETAIL
8/20	M-15 SHT 1	PAVEMENT MARKING FOR FREEWAY ENTRANCE RAMP - TAPERED ACCELERATION LANE	6/14	M-30	OFF- MAINLINE REFERENCE MARKER DETAILS
8/20	M-15 SHT 2	PAVEMENT MARKING FOR FREEWAY ENTRANCE RAMP - PARALLEL ACCELERATION LANE	6/14	M-32	BRIDGE AND BARRIER MARKER DETAILS
8/20	M-15 SHT 3	PAVEMENT MARKING FOR FREEWAY ENTRANCE RAMP - PARALLEL ACCELERATION LANE WITH HOV BYPASS	6/14	M-33	BRIDGE AND BARRIER MARKER PLACEMENT AND INSTALLATION DETAILS
6/14	M-15 SHT 4	PAVEMENT MARKING FOR FREEWAY PARALLEL - ACCELERATION LANE	6/14	M-34	GUARDRAIL END TERMINAL DELINEATION DETAILS
8/20	M-16 SHT 1	PAVEMENT MARKING FOR FREEWAY EXIT RAMPS - TAPERED DECELERATION LANE	6/14	M-35	OBJECT MARKER FOR SAND BARREL CRASH CUSHION
8/20	M-16 SHT 2	PAVEMENT MARKING FOR FREEWAY EXIT RAMP - PARALLEL DECELERATION LANE			
8/20	M-17	FREEWAY LANE DROP PAVEMENT MARKINGS			
8/20	M-19 SHT 1	RAISED PAVEMENT MARKER PLAN LEGEND			
6/14	M-19 SHT 2	NON-REFLECTIVE RAISED PAVEMENT MARKER DETAILS			
6/14	M-19 SHT 3	RETROREFLECTIVE RAISED PAVEMENT MARKER DETAILS			
6/14	M-19 SHT 4	RETROREFLECTIVE RAISED PAVEMENT MARKER DETAILS			
5/15	M-19 SHT 5	PAVEMENT MARKING DETAILS FOR UNDIVIDED HIGHWAYS			
6/14	M-19 SHT 6	RETROREFLECTIVE RAISED PAVEMENT MARKERS (RPM) FOR UNDIVIDED HIGHWAYS			
8/20	M-19 SHT 7	FREEWAY AND DIVIDED HIGHWAY EDGE LINE AND LANE STRIPING			
5/15	M-19 SHT 8	LANE DROP MARKING AND RAMP OR INTERSECTION GUIDE STRIPING			
8/20	M-19 SHT 9	PAVEMENT MARKING CROSS-SECTION DETAILS FOR HIGHWAYS AND FREEWAYS			
3/22	M-19 SHT 10	CONTRAST LANE LINE FOR FREEWAY AND DIVIDED HIGHWAY			

ADOT STANDARD DRAWINGS REVISION DATES and STANDARD NO.'s REVIEW			
	NAME	DATE	
SIGNING & MARKING STANDARDS	<i>Lee T. Swenbank</i>	10/23/2023	
PROJECT NO.	017 CN 337 F0362 01C	1B-1	OF 123
RECORD DRAWING DATA	FEDERAL ID NO. 017-B(237)T	REC. DWG. DATE	OF

ADOT STANDARD DRAWINGS

TRAFFIC SIGNING & MARKING STANDARDS
(SHEET 2 OF 2)
EFFECTIVE NOVEMBER 2022

REVISION DATE	STANDARD NUMBER	SUBJECT : SIGNING AND MARKING DETAILS	REVISION DATE	STANDARD NUMBER	SUBJECT : SIGNING AND MARKING DETAILS
4/19	S-1 SHT 1	GENERAL SIGNING NOTES	6/14	S-12 SHT 1	TYPE A, B, AND DOWN ARROWS
6/14	S-2 SHT 1	S & W BREAKAWAY POST SELECTION CHART	6/14	S-12 SHT 2	TYPE C AND D ARROWS
6/14	S-2 SHT 2	S & W BREAKAWAY POST INSTALLATION DETAILS	6/14	S-12 SHT 3	C2 ARROW DETAIL
6/14	S-3 SHT 1	FLAT SHEET SIGNS SQUARE TUBE POST GENERAL NOTES	6/14	S-13	SIGN IDENTIFICATION DETAILS
6/14	S-3 SHT 2	SINGLE POST FLAT SHEET RECTANGULAR SIGN ASSEMBLY - 12, 18 AND 24 INCH WIDTHS	6/14	S-14 SHT 1	ROTATING OPEN/CLOSED SIGN
6/14	S-3 SHT 3	SINGLE POST FLAT SHEET RECTANGULAR SIGN ASSEMBLY - 30, 36, 42 AND 54 INCH WIDTHS	6/14	S-14 SHT 2	ROTATING OPEN/CLOSED SIGN DETAILS
6/14	S-3 SHT 4	TWO POST FLAT SHEET RECTANGULAR SIGN ASSEMBLY - 36, 42 AND 48 INCH WIDTHS	6/14	S-14 SHT 3	ROTATING OPEN/CLOSED SIGN MOUNTING DETAILS
6/14	S-3 SHT 5	TWO POST FLAT SHEET RECTANGULAR SIGN ASSEMBLY - 54, 60 AND 72 INCH WIDTHS	6/14	S-15 SHT 1	FOLDING RECTANGULAR SIGN ASSEMBLY
6/14	S-3 SHT 6	TWO POST FLAT SHEET RECTANGULAR SIGN ASSEMBLY - 84 - 144 INCH WIDTHS	6/14	S-15 SHT 2	FOLDING RECTANGULAR SIGN OPERATION
6/14	S-3 SHT 7	THREE POST FLAT SHEET RECTANGULAR SIGN ASSEMBLY - 48, 60 AND 72 INCH WIDTHS	6/14	S-15 SHT 3	FOLDING DIAMOND SIGN ASSEMBLY
6/14	S-3 SHT 8	THREE POST FLAT SHEET RECTANGULAR SIGN ASSEMBLY - 84 - 144 INCH WIDTHS	4/19	S-16 SHT 1	TEMPORARY WOOD POSTS
6/14	S-3 SHT 9	WARNING SIGN ASSEMBLY - SINGLE POST	4/19	S-16 SHT 2	TEMPORARY WOOD POSTS SELECTION CHART
6/14	S-3 SHT 10	WARNING SIGN ASSEMBLY - TWO POST	6/14	S-17	END OF ROAD BARRICADE
6/14	S-3 SHT 11	WARNING SIGN ASSEMBLY - THREE POST	7/19	S-18 SHT 1	ALUMINUM GRAFFITI SHIELD EXIT AND GUIDE SIGN ASSEMBLY
6/14	S-3 SHT 12	MULTIPLE ROUTE MARKER ASSEMBLIES	7/19	S-18 SHT 2	ALUMINUM GRAFFITI SHIELD RIGHT RIDER SIDE PANEL
6/14	S-3 SHT 13	SPECIAL SIGN ASSEMBLIES	7/19	S-18 SHT 3	ALUMINUM GRAFFITI SHIELD LEFT RIDER SIDE PANEL
6/14	S-3 SHT 14	STRINGER DETAILS FOR SQUARE TUBE POSTS	7/19	S-18 SHT 4	ALUMINUM GRAFFITI SHIELD CORNER
6/14	S-3 SHT 15	SQUARE TUBE SIGN POST FOUNDATION	7/19	S-18 SHT 5	ALUMINUM GRAFFITI SHIELD SPLICE PLATE
6/14	S-3 SHT 16	SQUARE TUBE POST SLIP BASE DETAILS	7/19	S-18 SHT 6	ALUMINUM GRAFFITI SHIELD FIN
6/14	S-4	W SHAPE BREAKAWAY POST FUSE PLATE AND HINGE DETAILS	7/19	S-18 SHT 7	ALUMINUM GRAFFITI SHIELD TOP PANEL
6/22	S-5	W SHAPE BREAKAWAY POST DETAILS	7/19	S-18 SHT 8	ALUMINUM GRAFFITI SHIELD SIDE PANEL
6/22	S-6	S4x7.7 BREAKAWAY POST DETAILS	7/19	S-18 SHT 9	ALUMINUM GRAFFITI SHIELD RIGHT TRANSITION FROM RIDER
6/14	S-7 SHT 1	ALUMINUM EXTRUSION SIGN PANEL DETAILS	7/19	S-18 SHT 10	ALUMINUM GRAFFITI SHIELD LEFT TRANSITION FROM RIDER
6/14	S-7 SHT 2	ALUMINUM EXTRUSION AUXILIARY SIGN INSTALLATION DETAILS	7/19	S-18 SHT 11	ALUMINUM GRAFFITI SHIELD SPLICE PLATE FOR FIN
5/15	S-7 SHT 3	ALUMINUM EXTRUSION EXIT PANEL INSTALLATION DETAIL	12/18	C-1	SAND BARREL CRASH CUSHION
6/14	S-8 SHT 1	FLAT SHEET ALUMINUM PANEL ON BREAKAWAY POSTS INSTALLATION DETAIL	12/18	C-2	SAND BARREL CRASH CUSHION TYPICAL INSTALLATION
6/14	S-8 SHT 2	ALUMINUM EXTRUSION SIGN TO PERFORATED POSTS INSTALLATION DETAIL	6/14	C-3 SHT 1	PRECAST CONCRETE BARRIER STRUCTURAL DETAILS
8/22	S-9 SHT 1	SIGN INSTALLATION ON POLE	6/14	C-3 SHT 2	PRECAST CONCRETE BARRIER PIN AND LOOP ASSEMBLY
8/22	S-9 SHT 2	SIGNS (BACK TO BACK) INSTALLATION ON POLE	6/14	C-4 SHT 1	MEDIAN CROSSOVER
8/22	S-9 SHT 3	SIGN INSTALLATION ON SIGNAL POLE	6/14	C-4 SHT 2	TYPICAL END TREATMENTS FOR DETOURS USING TEMPORARY CONCRETE BARRIER (TCB)
8/22	S-9 SHT 4	SIGN INSTALLATION ON POLE BAND-TYPE CLAMP	6/14	C-5 SHT 1	APPROACH PLATE AND TRANSITION SECTION FOR TEMPORARY CONCRETE BARRIER
6/14	S-10	MILEPOST AND REFERENCE LOCATION SIGNS	6/14	C-5 SHT 2	APPROACH PLATE AND TRANSITION SECTION FOR TEMPORARY CONCRETE BARRIER
11/22	S-11 SHT 1	TAPERED TUBE SIGN STRUCTURE SINGLE BEAM			
4/19	S-11 SHT 2	TAPERED TUBE SIGN STRUCTURE SINGLE BEAM POST AND BEAM DETAILS			

ADOT STANDARD DRAWINGS REVISION DATES and STANDARD NO.'s REVIEW			
	NAME	DATE	
SIGNING & MARKING STANDARDS	<i>Lee T. Swenbank</i>	10/23/2023	
PROJECT NO.	017 CN 337 F0362 01C	1B-2	OF 123
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ADOT STANDARD DRAWINGS
TRAFFIC SIGNAL AND LIGHTING STANDARDS
(SHEET 1 OF 2)
EFFECTIVE NOVEMBER 2022

REVISION DATE	STANDARD NUMBER	SUBJECT : TRAFFIC SIGNALS AND LIGHTING DETAILS
	T.S. 0	ABBREVIATIONS, SYMBOLS AND DEFINITIONS
05/15	0-1	STANDARD ABBREVIATIONS
01/12	0-2 SHT 1	PLAN SYMBOLS
01/12	0-2 SHT 2	PLAN SYMBOLS
01/12	0-2 SHT 3	PLAN SYMBOLS
03/10	0-3 SHT 1	STANDARD DEFINITIONS
03/10	0-3 SHT 2	STANDARD DEFINITIONS
11/22	0-4	REFERENCE DOCUMENTS AND GENERAL REQUIREMENTS
	T.S. 1	PULL BOXES
09/11	1-1 SHT 1	LIGHT DUTY - LIGHT WEIGHT NO. 5 AND NO. 7 PULL BOX
09/11	1-1 SHT 2	LIGHT DUTY - LIGHT WEIGHT NO. 5 AND NO. 7 SLOPE WALL BODY PULL BOX DETAILS
03/15	1-2	HEAVY DUTY NO. 5 AND NO. 7 STRAIGHT BODY WALL PULL BOX DETAILS
09/11	1-3	REPLACEMENT LID SIZING FOR EXISTING NO. 5 AND NO. 7 PULL BOXES
09/11	1-4 SHT 1	TYPICAL PULL BOX INSTALLATION AND WIRING DETAILS
09/11	1-4 SHT 2	TYPICAL PULL BOX INSTALLATION AND WIRING DETAILS
09/11	1-4 SHT 3	TYPICAL PULL BOX INSTALLATION DETAILS
09/11	1-5 SHT 1	ELECTRICAL CONDUIT COVER AND TRENCH REQUIREMENTS
09/11	1-5 SHT 2	CONDUIT EXPANSION COUPLINGS
09/11	1-6	CONDUCTOR REQUIREMENTS
03/10	1-7	TRAFFIC SIGNAL IMSA CABLE COLOR CODES
09/11	1-8 SHT 1	FRONT OF BARRIER JUNCTION BOX
09/11	1-8 SHT 2	BACK OF BARRIER JUNCTION BOX
09/11	1-9	TOP OF BARRIER JUNCTION BOX DETAILS
09/11	1-10	TOP OF BARRIER JUNCTION BOX DETAILS
10/13	1-11 SHT 1	HEAVY DUTY LIGHTING NO. 4 AND NO. 6 PULL BOX
10/13	1-11 SHT 2	HEAVY DUTY LIGHTING NO. 4 AND NO. 6 PULL BOX
03/15	1-11 SHT 3	HEAVY DUTY LIGHTING NO. 4 AND NO. 6 PULL BOX LID
03/15	1-12 SHT 1	PRECAST HEAVY DUTY LIGHTING NO. 4B AND NO. 6B PULL BOX
03/15	1-12 SHT 2	PRECAST HEAVY DUTY LIGHTING NO. 4B AND NO. 6B PULL BOX
	T.S. 2	FOUNDATIONS
03/10	2-1	FOUNDATION FOR TYPE II LOAD CENTER CABINET
03/10	2-2	FOUNDATION FOR TYPE IV LOAD CENTER CABINET
03/10	2-3	FOUNDATION FOR TYPE III CONTROL CABINET
03/10	2-4	FOUNDATION FOR TYPE IV AND V CONTROL CABINETS
03/10	2-5	FOUNDATION FOR TYPE 340 CONTROL CABINET
03/10	2-6	METER PEDESTAL CABINET FOUNDATION AND BASE
03/15	2-7	TRAFFIC SIGNAL UPS CABINET FOUNDATION DETAIL
	T.S. 3	CABINETS
12/12	3-0	NOTES FOR TYPE II AND IV LOAD CENTER CABINETS
03/10	3-1	TYPE II LOAD CENTER CABINET
03/10	3-2	TYPE IV LOAD CENTER CABINET
03/10	3-3	TYPE II OR IV LOAD CENTER CABINET WIRING DETAILS 240/480 3W W/DISCONNECT
03/10	3-4 SHT 1	PHOTO ELECTRIC CELL MOUNTING DETAILS
03/10	3-4 SHT 2	PHOTO ELECTRIC CELL MOUNTING DETAILS
03/10	3-5 SHT 1	TYPE I AND II METER PEDESTAL CABINET
12/12	3-5 SHT 2	METER PEDESTAL CABINET
03/10	3-6	TYPE III CONTROL CABINET
03/10	3-7	POLE MOUNTED TYPE III CONTROL CABINET
03/10	3-8 SHT 1	POLE MOUNT DETAILS FOR TYPE III CONTROL CABINET
03/10	3-8 SHT 2	POLE MOUNT DETAILS FOR TYPE III CONTROL CABINET
03/10	3-9 SHT 1	TYPE IV AND V CONTROL CABINET NOTES
03/10	3-9 SHT 2	TYPE IV CONTROL CABINET
03/10	3-9 SHT 3	TYPE V CONTROL CABINET
03/10	3-10	CABINET EXTENSION OR ELEVATOR BASE
03/10	3-11	CONTROL CABINET MOUNTED SERVICE ENCLOSURE
03/10	3-12 SHT 1	120/240 OR 240/480 VOLT, SINGLE PHASE UTILITY PULL SECTION AND SERVICE DISCONNECT DETAILS
03/10	3-12 SHT 2	120/240 OR 240/480 VOLT, SINGLE PHASE UTILITY PULL SECTION AND SERVICE DISCONNECT DETAILS
03/10	3-13 SHT 1	TRAFFIC SIGNALS AND LIGHTING MODEL 345 CABINET DETAILS
03/10	3-13 SHT 2	TRAFFIC SIGNALS AND LIGHTING MODEL 345 CABINET DETAILS
03/10	3-13 SHT 3	TRAFFIC SIGNALS AND LIGHTING MODEL 345 CABINET CAGE DETAILS

REVISION DATE	STANDARD NUMBER	SUBJECT : TRAFFIC SIGNALS AND LIGHTING DETAILS
	T-SL. 4	POLES AND POSTS
11/22	4.01	TYPE A POLE
11/22	4.02	TYPE S POLE
11/22	4.03	TYPE T POLE
11/22	4.04	TYPE S AND TYPE T STEEL TWIN LUMINAIRE MOUNTING BRACKET AND EXTENSIONS
11/22	4.05	ALUMINUM TYPE S POLE
11/22	4.06	ALUMINUM TYPE T POLE
11/22	4.07	TYPE G POLE
11/22	4.08	ALUMINUM TYPE G POLE
11/22	4.09	ALUMINUM TYPE H POLE
11/22	4.10	ALUMINUM TYPE I POLE
11/22	4.11	GENERAL NOTES FOR TRAFFIC SIGNALS AND LIGHTING POLES WITH MAXIMUM LOADING CASE
04/19	4.12	TYPE J POLES (25-J, 30-J, 35-J, AND 40-J) WITH 25 FT TO 40 FT MAST ARM SPAN LENGTH
04/19	4.13	TYPE Q POLES (25-QL, 30-QL, 35-QL, AND 40-QL) WITH 25 FT TO 40 FT MAST ARM SPAN LENGTH WITH LUMINAIRES
04/19	4.14	TYPE K POLES (45-K, 50-K, AND 55-K) WITH 45 FT TO 55 FT MAST ARM SPAN LENGTH
04/19	4.15	TYPE R POLES (45-RL, 50-RL, AND 55-RL) WITH 45 FT TO 55 FT MAST ARM SPAN LENGTH WITH LUMINAIRES
11/22	4.16	TYPE V POLES (60-V AND 65-V) WITH 60 FT TO 65 FT MAST ARM SPAN LENGTH
11/22	4.17	TYPE W POLES (60-WL AND 65-WL) WITH 60 FT TO 65 FT MAST ARM SPAN LENGTH WITH LUMINAIRES
11/22	4.18	POLE HAND HOLE DETAILS
11/22	4.19	TYPE U POLE (ELLIPTICAL BASE) DETAILS
11/22	4.20	TYPE U POLE (ROUND POLE WITH SQUARE BASE) NOTES
04/19	4.21	TYPE U POLE (ROUND POLE WITH SQUARE BASE) FOUNDATION DETAILS
04/19	4.22	TYPE U POLE (ROUND POLE WITH SQUARE BASE) DEATILS 1
04/19	4.23	TYPE U POLE (ROUND POLE WITH SQUARE BASE) DEATILS 2
04/19	4.24	TYPE U POLE (ROUND POLE WITH SQUARE BASE) PIPE TENON DETAILS
04/19	4.25	TYPE U POLE (ROUND POLE WITH SQUARE BASE) TWIN LUMINAIRE BRACKET DETAILS
04/19	4.26	EQUIPMENT MOUNTING HEIGHT DETAILS
04/19	4.27	PEDESTRIAN PUSH BUTTON POST "TYPE PB POLE"
11/22	4.28	POLE FOUNDATION ANCHOR BOLTS
04/19	4.29	STEEL MAST ARM DETAILS LUMINAIRE AND SIGNAL ARMS TO 20'
04/19	4.30	ALUMINUM TRUSS MAST ARM DETAILS FOR TYPE G, H, AND I POLES
04/19	4.31	SIGNAL MAST ARM TENON DETAIL
04/19	4.32	TYPICAL HIGHWAY LIGHTING OFFSETS IN CUT AND FILL SECTIONS
11/22	4.33	STEEL ADAPTER PLATE FOR 30 FT ALUMINUM TYPE "G" OR TYPE "S" LIGHT POLES
	T.S. 5	POLE BASES - SPECIAL
05/21	5-0	TYPE 2 AND 3 CAST ALUMINUM BREAK-AWAY BASES
04/19	5-1	TYPE 2 CAST ALUMINUM BREAK-AWAY BASE
04/19	5-2	TYPE 3 CAST ALUMINUM BREAK-AWAY BASE
05/21	5-3	INSTALLATION DETAILS FOR POLE FOUNDATIONS WITH TYPE 2 AND 3 BREAK-AWAY BASES
	T.S. 6	HIGHWAY TRAFFIC DATA DETECTORS
03/10	6-1	TYPE C VEHICLE DETECTOR LOOPS FOR TRAFFIC COUNTERS
03/10	6-2 SHT 1	TYPE SA AND SB SPEED/VEHICLE CLASSIFICATION SYSTEMS
03/10	6-2 SHT 2	TYPE SA SPEED/VEHICLE CLASSIFICATION SYSTEMS
03/10	6-2 SHT 3	TYPE SB SPEED/VEHICLE CLASSIFICATION SYSTEMS
12/12	6-3	PIEZOELECTRIC WEIGHT SENSOR AND LOOP LANE LAYOUT
12/12	6-4 SHT 1	DETECTOR LOOPS AND PIEZOELECTRIC SENSOR DETAILS
12/12	6-4 SHT 2	DETECTOR LOOPS AND PIEZOELECTRIC SENSOR DETAILS
03/15	6-4 SHT 3	DETAIL A PIEZOELECTRIC SENSOR DETAILS
12/12	6-4 SHT 4	DETAIL B DETECTOR LOOP DETAILS
12/12	6-4 SHT 5	DETECTOR LOOPS AND PIEZOELECTRIC SENSOR DETAILS
03/10	6-5	MICROLOOPS FOR SPEED/VEHICLE CLASSIFICATION
03/10	6-6	QUARTZ PIEZOELECTRIC WEIGHT SENSOR AND LOOP LANE LAYOUT
03/10	6-7	TRAFFIC DATA COLLECTION CABINET INSTALLATION DETAILS
03/10	6-8	TYPE MPD CABINET POLE, BASE AND FOUNDATION INSTALLATION DETAILS

ADOT STANDARD DRAWINGS REVISION DATES and STANDARD NO.'s REVIEW			
		NAME	DATE
TRAFFIC SIGNAL & LIGHTING STANDARDS		<i>Lee T. Swenbank</i>	10/23/2023
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TRAFFIC SIGNAL AND LIGHTING STANDARDS
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EFFECTIVE NOVEMBER 2022

REVISION DATE	STANDARD NUMBER	SUBJECT : TRAFFIC SIGNALS AND LIGHTING DETAILS
	T.S. 7	TRAFFIC SIGNAL DETECTORS
03/10	7-1 SHT 1	LOOP DETECTOR LOCATION SAWCUT PATTERNS AND INSTALLATION DETAILS
03/10	7-1 SHT 2	SAW CUT AND CORING DETAILS
03/15	7-1 SHT 3	SAW CUT AND CORING DETAILS
03/10	7-1 SHT 4	TYPICAL DETECTOR LOOP LEAD-IN ROAD TO PULL BOX DETAIL
03/10	7-1 SHT 5	LOOP DETECTOR LOCATION AND INSTALLATION DETAILS
03/10	7-2	PRE-FORMED LOOP DETECTORS FOR RAMP METERING AND COUNTING
03/10	7-3	PRE-FORMED LOOP DETECTORS IN BRIDGE DECK
03/10	7-4	PRE-FORMED LOOP DETECTORS IN PCCP
03/10	7-5	TYPICAL PRE-FORMED LOOP DETECTOR STUB-OUT DETAIL
	T.S. 8	SIGNAL ASSEMBLIES
08/19	8-0	TRAFFIC SIGNAL VEHICLE FACE ASSEMBLY REQUIREMENTS AND DETAILS
08/19	8-1	VEHICLE TRAFFIC SIGNAL FACE ASSEMBLY
08/19	8-2	VEHICLE TRAFFIC SIGNAL FACE ASSEMBLY
10/13	8-4 SHT 1	12-INCH VEHICLE TRAFFIC SIGNAL HOUSING/SECTION
01/12	8-4 SHT 2	12-INCH VEHICLE TRAFFIC SIGNAL HOUSING/SECTION NOTES
01/12	8-4 SHT 3	VEHICLE TRAFFIC SIGNAL HOUSING/SECTION DETAILS
03/10	8-4 SHT 4	VISORS FOR 8-INCH AND 12-INCH VEHICLE TRAFFIC SIGNAL FACE ASSEMBLIES
01/12	8-5	FLASHING BEACON SIGNAL FACE ASSEMBLY
01/12	8-6	LED LAMP FOR PROGRAMMED VISIBILITY SIGNAL
01/12	8-7 SHT 1	PEDESTRIAN SIGNAL ASSEMBLY REQUIREMENTS AND DETAILS
01/12	8-7 SHT 2	PEDESTRIAN SIGNAL ASSEMBLY HOUSING
01/12	8-7 SHT 3	PEDESTRIAN SIGNAL ASSEMBLY VISOR
	T.S. 9	MOUNTING ASSEMBLIES - SIGNAL
03/10	9-0 SHT 1	MOUNTING ASSEMBLY GENERAL REQUIREMENTS
03/10	9-0 SHT 2	MOUNTING ASSEMBLY GENERAL REQUIREMENTS
03/10	9-1	TYPE I AND II MOUNTING ASSEMBLIES
03/10	9-2	TYPE III AND IV MOUNTING ASSEMBLIES
10/13	9-3	TYPE V MOUNTING ASSEMBLY
03/10	9-4	TYPE VI MOUNTING ASSEMBLY
03/10	9-5	TYPE VII MOUNTING ASSEMBLY
03/10	9-6	TYPE VIII MOUNTING ASSEMBLY
03/10	9-7	TYPE IX MOUNTING ASSEMBLY
03/10	9-8	TYPE X MOUNTING ASSEMBLY
03/10	9-9	TYPE XI MOUNTING ASSEMBLY
	T.S. 10	MOUNTING CASTINGS - SIGNAL
03/10	10-1	MISCELLANEOUS SIGNAL MOUNTING PARTS
03/10	10-2	MAST ARM SIGNAL MOUNTING PLUMBIZER
03/10	10-3	SIGNAL MOUNTING POLE PLATE DETAILS
03/10	10-4	TERMINAL COMPARTMENT, SIDE MOUNTED AND POLE TOP MOUNTED
	T.S. 11	PEDESTRIAN DETAILS
03/15	11-1	TYPE I PEDESTRIAN PUSH BUTTON HOUSING ASSEMBLY
03/15	11-2	CAN STYLE PEDESTRIAN PUSH BUTTON
	T.S. 12	FLASHERS
03/10	12-1 SHT 1	ADVANCE WARNING FLASHER POLE DETAIL
03/10	12-1 SHT 2	ADVANCE WARNING FLASHER POLE SIGN MOUNTING DETAILS
03/10	12-1 SHT 3	ADVANCE WARNING FLASHER POLE DETAIL
	T.S. 13	ILLUMINATION - SIGNS
03/10	13-1	SIGN LIGHTING DETAIL FOR TUBULAR SIGN STRUCTURES
03/10	13-2	FUSE PANEL DETAILS FOR SIGN LIGHTING
03/15	13-3	PLACEMENT OF LIGHTING FIXTURES FOR OVERHEAD SIGNS
	T.S. 14	ILLUMINATION - SPECIAL
03/10	14-1 SHT 1	HIGH PRESSURE SODIUM (HPS) LAMPS
03/10	14-1 SHT 2	HIGH PRESSURE SODIUM (HPS) LAMPS
03/10	14-1 SHT 3	HIGH PRESSURE SODIUM (HPS) LAMPS
03/10	14-2	PEDESTRIAN BRIDGE LIGHTING DETAILS

REVISION DATE	STANDARD NUMBER	SUBJECT : TRAFFIC SIGNALS AND LIGHTING DETAILS
	T.S. 15	SPAN WIRE SIGNALS AND LIGHTING
04/19	15-0 SHT 1	GENERAL NOTES
04/19	15-0 SHT 2	GENERAL NOTES
04/19	15-0 SHT 3	GENERAL NOTES
04/19	15-1 SHT 1	STEEL POLE TYPICAL DETAILS
04/19	15-1 SHT 2	STEEL POLE FOUNDATION DETAILS
04/19	15-1 SHT 3	STEEL POLE ATTACHMENT DETAILS
04/19	15-1 SHT 4	WOOD POLE TYPICAL DETAILS
04/19	15-1 SHT 5	WOOD POLE TYPICAL DETAILS
04/19	15-1 SHT 6	TYPICAL DETAILS
01/12	15-2	HANGER AND BALANCE ADJUSTER TYPICAL DETAILS
01/12	15-3 SHT 1	SIGNAL ASSEMBLY DETAILS
01/12	15-3 SHT 2	CONDUCTOR ENTRANCE HEADS TYPE A, B AND C
01/12	15-3 SHT 3	ALUMINUM PIPE EXTENSION AND TYPICAL DETAILS
01/12	15-4 SHT 1	ADJUSTABLE SIGN HANGER TYPICAL DETAILS
01/12	15-4 SHT 2	ADJUSTABLE SIGN HANGER TYPICAL DETAILS
01/12	15-4 SHT 3	ADJUSTABLE SIGN HANGER TYPICAL DETAILS
01/12	15-5	ADJUSTABLE HANGER TOP AND EXTENSION DETAILS
01/12	15-6	SIGNAL TETHER CLAMP TYPICAL DETAILS
01/12	15-7	POLE BAND TYPICAL DETAILS
01/12	15-8	WEATHERHEAD TYPICAL DETAILS

ADOT STANDARD DRAWINGS REVISION DATES and STANDARD NO.'s REVIEW			
TRAFFIC SIGNAL AND LIGHTING STANDARDS	NAME	DATE	
	<i>Lee T. Swenbank</i>	10/23/2023	
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ADOT STANDARD DRAWINGS

ITS STANDARDS
EFFECTIVE OCTOBER 2021

REVISION DATE	STANDARD NUMBER	SUBJECT : ITS STANDARDS
July-14	FM-0.01	SYMBOLS AND ABBREVIATIONS
July-20	FM-1.01	TRENCH DETAILS, FMS TRUNKLINE
July-20	FM-1.02	TRENCH UNDER PAVEMENT, FMS TRUNKLINE
Aug-13	FM-1.03	BURIED CONDUIT AROUND OBSTRUCTION, DIRECTIONAL DRILLING
Aug-13	FM-1.04	CONDUIT REQUIREMENTS FOR DMS, RMC TO PVC CONDUIT CONNECTION, THROUGH WALL CONDUIT
Aug-13	FM-1.05	CONDUIT MOUNTING DETAILS
Aug-13	FM-1.06	CONDUIT EXPANSION, COUPLING AND JUNCTION BOX, INSTALLATION PLAN
Aug-13	FM-1.07	FMS TRUNK LINE IN BOX GIRDER BRIDGE
Aug-13	FM-1.08	FMS TRUNKLINE IN I-BEAM OR I-GIRDER BRIDGE
Aug-13	FM-2.01	PULL BOX ADJACENT TO FMS PULL BOX
Aug-13	FM-2.02	PULL BOX NO. 9 CABINET CONDUIT INTERFACE PLANS
Oct-21	FM-2.03	PULL BOX NO. 9 DETAILS
Aug-13	FM-2.04	NO. 9 PULL BOX CONDUIT ROUTING AND CABLE RACKING DETAILS
Aug-13	FM-2.05	No. 9 PULL BOX TORSION ASSIST COVER
Aug-13	FM-2.06	PULL BOX NO. 7 TYPICAL INSTALLATION
Aug-13	FM-2.07	BURIED PULL BOX NO. 7 TYPICAL INSTALLATION
Oct-21	FM-2.08	SPLIT NO. 9 PULL BOX
Aug-13	FM-3.01	RAMP METER CABINET DETAILS (SHEET 1 of 2)
Aug-13	FM-3.02	RAMP METER CABINET DETAILS (SHEET 2 of 2)
Aug-13	FM-3.03	RAMP METER CABINET SPECIAL DETAILS
Aug-13	FM-3.04	RAMP METER CABINET ACCESSORIES
Aug-13	FM-3.05	RAMP METER FIELD PANEL DETAILS
Aug-13	FM-3.06	RAMP METER FIELD PANEL CONNECTIONS
Aug-13	FM-3.07	RAMP METER SIGNAL POWER INTERRUPT RELAY AND PIN ASSIGNMENTS
Aug-13	FM-3.08	POWER DISTRIBUTION ASSEMBLY CONNECTOR AND INSTALLATION DETAILS
Aug-13	FM-3.09	POWER DISTRIBUTION ASSEMBLY #4 (PDA4) SCHEMATIC DIAGRAM
Aug-13	FM-3.10	RAMP METER CI HARNESS CONNECTIONS
Aug-13	FM-3.11	CCTV CABINET DETAILS (SHEET 1 of 2)
Aug-13	FM-3.12	CCTV CABINET DETAILS (SHEET 2 of 2)
Aug-13	FM-3.13	CABINET NUMBER DECAL DETAIL
Aug-13	FM-3.14	TRANSFORMER CABINET, EXTERNAL POWER DISCONNECT
Aug-13	FM-3.15	TRANSFORMER, 3kVA & 7.5kVA, DRY TYPE DETAILS AND WIRING DIAGRAMS
Aug-13	FM-3.16	TRANSFORMER, 10kVA & 25kVA, DRY TYPE DETAILS AND WIRING DIAGRAMS
Aug-13	FM-3.17	CLEAR ZONES, UNPROTECTED EQUIPMENT
Aug-13	FM-3.18	TYPE II LOAD CENTER
Aug-13	FM-3.19	TYPE IV LOAD CENTER FOUNDATION AND CABINET DETAIL
Aug-13	FM-3.20	TYPE IV MODIFIED LOAD CENTER
July-14	FM-3.21	RAMP METER CABINET FOUNDATION W/O TRANSFORMER
July-14	FM-3.22	RAMP METER CABINET WITH TRANSFORMER, FOUNDATION
July-14	FM-3.23	SKYLINE 336S DMS CABINET FOUNDATION DETAILS
July-14	FM-3.23A	SKYLINE 332 DMS CABINET FOUNDATION DETAILS
July-14	FM-3.24	SKYLINE 336S DMS & TRANSFORMER CABINET FOUNDATION DETAILS
July-14	FM-3.24A	SKYLINE 332 DMS & TRANSFORMER CABINET FOUNDATION DETAILS
July-14	FM-3.25	NOT USED
Aug-13	FM-3.26	TRANSFORMER CABINET FOUNDATION
Oct-17	FM-3.27	DAKTRONICS DMS CABINET FOUNDATION DETAILS
Oct-17	FM-3.28	DAKTRONICS DMS & TRANSFORMER CABINET FOUNDATION DETAILS
Aug-13	FM-3.29	DMS CABINET ADAPTER AND ELEVATOR BASE DETAILS
Aug-13	FM-4.01	CCTV CABINET BLOCK DIAGRAM
Aug-13	FM-4.02	FREEWAY MANAGEMENT SYSTEM CABINET BLOCK ETHERNET DIAGRAM
Aug-13	FM-4.03	DMS CABINET ETHERNET BLOCK DIAGRAM
Aug-13	FM-5.01	DETECTION DEFINITION
Jun-16	FM-5.02	TYPICAL DETECTOR LOOP INSTALLATION DETAILS
Aug-13	FM-5.03	TYPICAL PREFORMED DETECTOR LOOP INSTALLATION DETAILS
Aug-13	FM-5.04	DETECTOR LOOP IN AC PAVEMENT INSTALLATION LAYOUT
Aug-13	FM-5.05	DETECTOR LOOP IN PCCP PAVEMENT INSTALLATION LAYOUT
Aug-13	FM-5.06	DETECTOR LOOP TEST FORM 1
Aug-13	FM-5.07	DETECTOR LOOP TEST FORM 2 PART A
Aug-13	FM-5.08	DETECTOR LOOP TEST FORM 2 PART B
Apr-19	FM-6.01	RAMP METER DETAILS
Apr-19	FM-6.02	SINGLE-LANE RAMP METER
Apr-19	FM-6.03	SINGLE-LANE RAMP METER WITH FRONTAGE ROAD
Apr-19	FM-6.04	TWO-LANE RAMP METER
Apr-19	FM-6.05	TWO-LANE RAMP METER WITH FRONTAGE ROAD
Apr-19	FM-6.06	RAMP METER WITH OBSTRUCTION INSTALLATION DETAILS
Apr-19	FM-7.01	CCTV POLE CCTV CABINET MOUNTING DETAILS AND FIELD ORIENTATION
Apr-19	FM-7.02	CCTV POLE AND MOUNTING DETAILS
Apr-19	FM-7.03	CCTV POLE MOUNTING PLATE DETAILS

ADOT STANDARD DRAWINGS REVISION DATES and STANDARD NO.'s REVIEW			
	NAME	DATE	
ITS STANDARD DRAWINGS	<i>Lee T. Swenbark</i>	10/23/2023	
PROJECT NO.	017 CN 337 F0362 01C	1E	OF 123
RECORD DRAWING DATA	FEDERAL ID NO. 017-B(237)T	REC. DWG. DATE	OF

REFERENCES

I-17-2(9)138
 017 CN 335 H0209 04C
 City of Flagstaff 03-90030
 089A CN 398 H4134 01C
 017 CN 311 H8934 01C
 017 CN 311 F0207 01C

LENGTH OF PROJECT

Exst I-17 Southbound
 Sta 7231+67.94 to 7241+66.85 = 998.91'
 Gross Length = 998.91'
 Mile Post 337.29 to 337.48 = 0.19 Miles

Exst I-17 Northbound
 Sta 7231+21.00 to 7242+27.26 = 1106.26'
 Gross Length = 1106.26'
 Mile Post 337.28 to 337.49 = 0.21 Miles

JW Powell Blvd
 Sta 16+31.80 to 18+81.45 = 249.65'
 Sta 18+81.45 to 21+25.54 - BRIDGE EXCEPTION
 Sta 21+25.54 to 25+34.30 = 408.76'
 Gross Length = 658.41' = 0.12 Miles
 Net Length = 658.41'

Exst JW Powell Blvd
 Sta 25+30.20 to 27+04.46 = 174.26'
 Gross Length = 174.26' = 0.03 Miles

Exst JW Powell Ramp A
 Sta 0+00.00 to 1+07.93 = 107.93'
 Gross Length = 107.93' = 0.02 Miles

Exst JW Powell Ramp B
 Sta 21+84.78 to 22+66.00 = 81.22'
 Gross Length = 81.22' = 0.02 Miles

Exst JW Powell Ramp C
 Sta 0+00.00 to 1+45.35 = 145.35'
 Gross Length = 145.35' = 0.03 Miles

Exst JW Powell Ramp D
 Sta 18+71.78 to 20+75.93 = 204.15'
 Gross Length = 204.15' = 0.04 Miles

INDEX OF SHEETS

Sheet No.	Drawing No.	Sheet Type
1	N/A	Cover Sheet
1A, 1B, 1C, 1D, 1E	N/A	Standard Drawings
2	G-01.01	Design Sheet
3-6	G-02.01 - G-02.04	Pavement Structural Sections & Typical Sections
7-8	G-03.01 - G-03.02	Barrier Summary Sheets
9	G-06.01	New Pipe Summary Sheet
10-12	G-09.01 - G-09.03	Detail Sheets
13	C-01.01	Survey Control Sheet
14	C-01.02	Survey Control Plan Sheet
15-18	C-02.01 - C-02.04	Geometric Layout Sheets
19-21	C-03.01 - C-03.03	Geometric Data Sheets
22-24	C-04.01 - C-04.03	Removal Plans
25	C-06.01	Plan Sheet: I-17
26-27	C-06.02 - C-06.03	Plan and Profile Sheets: JW Powell
28-31	C-07.01 - C-07.04	Staking Sheets
32	C-08.01	Detour Plan & Profile Sheet
33	D-01.01	Drainage Plan Sheet
34	D-01.02	Drainage Pipe Profile
35-36	T-01.01 - T-01.02	Traffic Control Notes
37-46	T-02.01 - T-02.10	Construction Sequencing
47	T-03.01	Traffic Control Quantities
48-52	T-04.01 - T-04.05	Traffic Control Details
53-64	T-05.01 - T-05.12	Traffic Control Plans
65-67	T-07.01 - T-07.03	Pavement Marking Notes, Quantities & Plans
68	T-08.01	Signing Notes and Quantities
69-72	T-09.01 - T-09.04	Sign Summary Sheets
73-74	T-10.01 - T-10.02	Signing Sheets
75	T-11.01	Lighting General Notes
76-78	T-11.02 - T-11.04	Lighting Plans & Schedules
79-99	S-1.01 - S-1.21	Structures Sheets
100-108	SF-1.01 - SF-1.09	Foundation Data Sheets
109-113	BA-1.01 - BA-1.05	Aesthetics Notes, Plan, Elevation & Details
114	EC-1.01	Control Measure Index Sheet
115	EC-1.02	Erosion Control Summary Sheet
116-118	EC-2.01 - EC-2.03	Erosion Control Detail Sheets
119-121	EC-3.01 - EC-3.03	Erosion Control Plans
122	U-01.01	Utility Key Map, Legend & General Notes
123	U-02.01	Utility Plan

DESIGN DATA

2024 I-17 AADT = 33,504
 2044 I-17 AADT = 47,073
 2024 JWP AADT = 5,582
 2044 JWP AADT = 7,820

Min Design Speed:
 I-17 (Mainline) = 65 MPH (Posted)
 I-17 (Service Ramps) = 50 MPH
 JW Powell Blvd = 30 MPH

MIDPOINT OF PROJECT

Central Zone
 State Plane Coordinates
 X=769,800
 Y=1,507,900

GENERAL NOTES

The roadway plans have been designed utilizing the Construction Standard Drawings (C-Series) and current revisions. Refer to the 1A sheet for a listing of current revision dates.

The project roadway shall be striped by the contractor in accordance with the current edition of the Signing and Marking Standard Drawings (M&S-Series) and the pavement marking plans.

For R/W information not shown, see Right-of-Way project No. A-3-T-309, A-3-T-534A, I-17-2(7), I-17-2-803 & 089A CN 399 H4134.

Pavement lift thickness is nominal.

Where only the horizontal location of an existing utility is shown, the location is approximate. Where both the horizontal and vertical location of an existing utility is shown, the location has been verified by field survey methods. The contractor shall comply with all current Arizona 811 laws and Section 107.15 of the Specifications.

Delineators, object markers and mile post markers shall be removed and reset as required at no additional cost to the Department.

The average project elevation is 7000'.

New Right of Way and easements are not required.

Slope rounding shall be applied per Std C-02 series unless otherwise noted.

An Average User Delay Cost of \$10,000/day has been established for this project.

The pavement shoulders shall be treated with a rumble strip: see Traffic sheets.

EARTHWORK QUANTITIES

Roadway Excavation ▲■	2,385 CY
Shrink	311 CY
Structural Excavation ◆	245 CY
Shrink	37 CY
Miscellaneous Excavation ●	16 CY
Shrink	3 CY
Structure Backfill ◆	125 CY
Miscellaneous Embankment ●	444 CY
Embankment (Incl Gnd Comp) ■	1,535 CY
Waste	316 CY


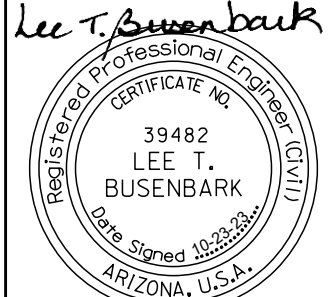

- ▲ Pay Item
- Incl Detour Cst & Removal of Roundabout Center Island Grading
- ◆ Incl in Bridge Items
- For Information Only Incl Remove Detour & Roundabout Grading Items

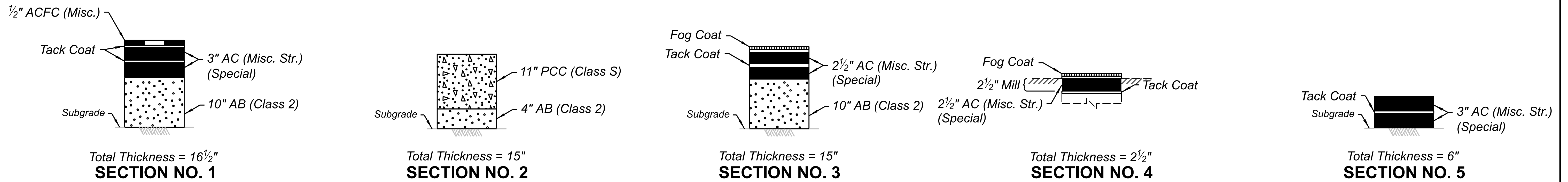
EARTHWORK FACTORS

Station	Shrink/Swell	Ground Compaction
Entire Project	15% Shrink	0.5'

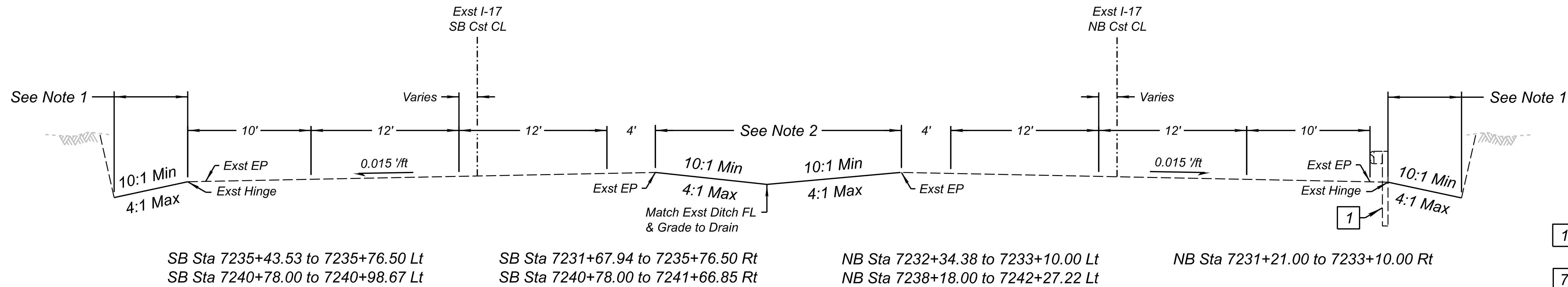
ABBREVIATIONS

- A Exst Ramp A Cst CL
- B Exst Ramp B Cst CL
- AP Angle Point
- C Exst Ramp C Cst CL
- CL Construction Centerline
- D Exst Ramp D Cst CL
- JWP JW Powell Blvd Cst CL
- NB Exst I-17 NB Cst CL
- NPI Non Pay Item
- PSS Pavement Structural Section
- SB Exst I-17 Cst CL
- TC Top Back of Curb
- XJWP Exst JW Powell Cst CL

		DESIGN	NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SECTION	ROUTE	F.H.W.A. Arizona Division	STATE	PROJECT NO.	FEDERAL ID NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
		DRAWN	J.NOYES	10/23		I-17							
		CHECKED	L.BUSENBARK	10/23	 HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL: (602) 522-7700	MILEPOST	I-17 AIRPORT RD TI UP						
						337.39							STRUCTURE NO.



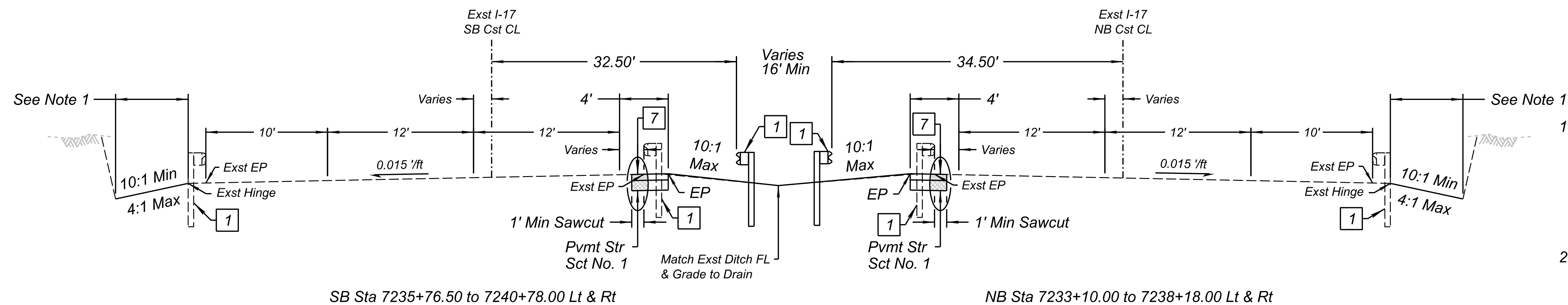
PAVEMENT STRUCTURAL SECTIONS



TYPICAL SECTION

LEGEND

- 1 Guardrail or Conc Barrier, See Plans for Details
- 7 Rumble Strip, See Plans for Details
- Asphalt Pavment
- Aggregate Base



TYPICAL SECTION

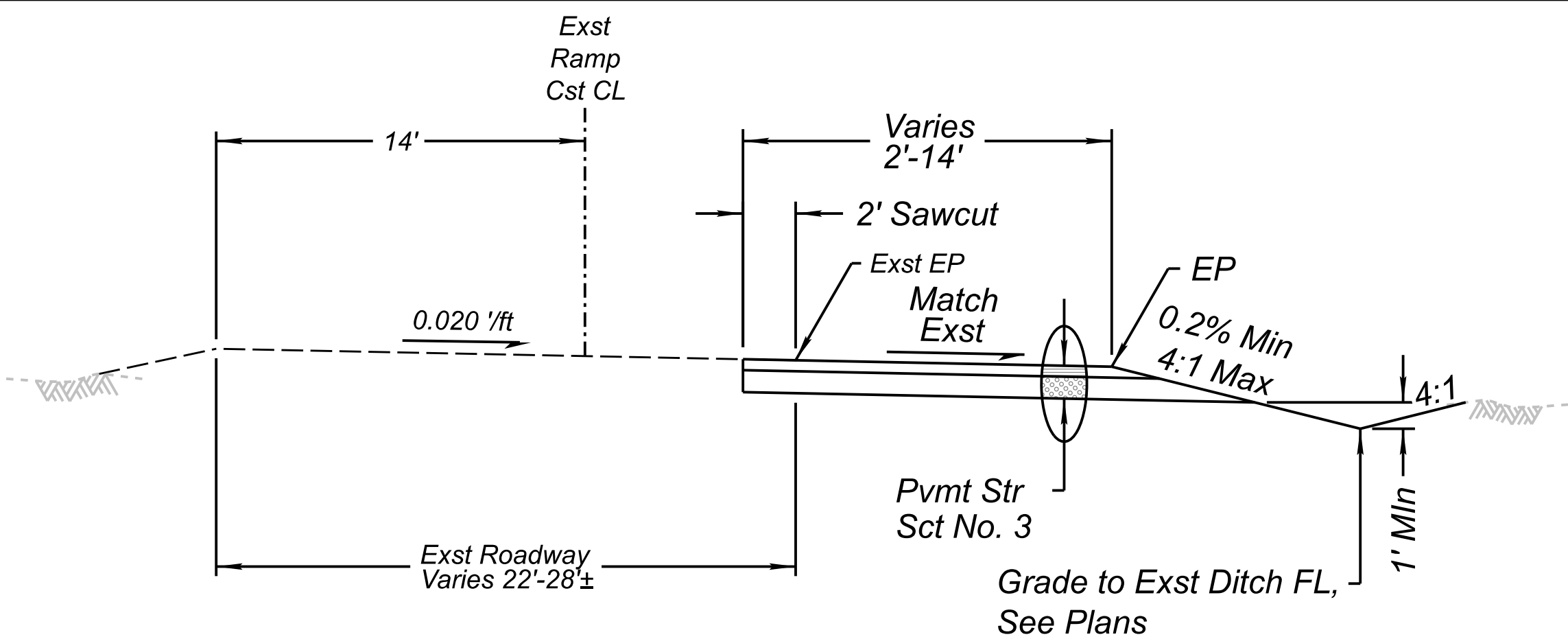
NOTES

1. The contractor shall reshape and grade the outside shoulder slope to provide a smooth slope and ensure proper drainage due to the removal of the guardrail and construction activities. This work will be paid for under Item 2040001.
2. The contractor shall reshape and grade the exst median to provide a smooth slope and ensure proper drainage due to construction activities. This work will be paid for under Item 2040001.

 Call 811 or click Arizona811.com	 Lee T. Busenbark 39482 LEE T. BUSENBARK State of Arizona, U.S.A.	DESIGN	J.NOYES	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SECTION	ROUTE	I-17	STATE	PROJECT NO.	FEDERAL ID NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
		DRAWN	J.NOYES	10/23		MILEPOST	337.39		ARIZ.	017 CN 337	017-B(237)T	3	
 HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL (602) 522-7700		CHECKED		L.BUSENBARK	PAVEMENT STRUCTURAL SECTIONS & TYPICAL SECTIONS I-17		LOCATION I-17 AIRPORT RD TI UP		TRACS NO. F0362 01C		DWG NO. G-02.01 ____ OF ____		

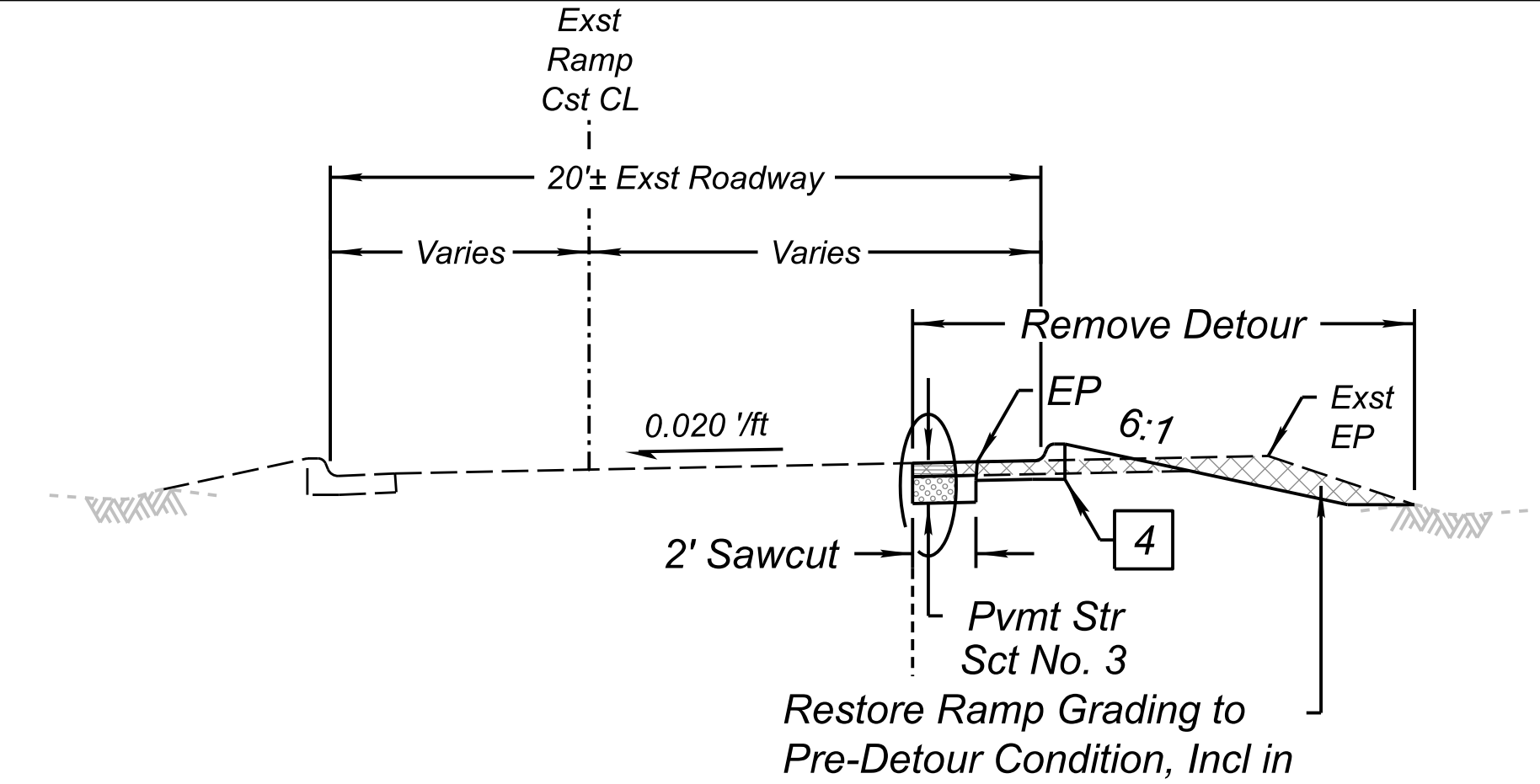
LEGEND

- 2 Conc Single Curb, See Plans for Details
- 4 Conc Curb & Gutter, See Plans for Details
- 6 Conc Truck Apron, See Detail A
- Roadway Excavation
- Remove Detour
- Roundabout Center Island Grading
- Asphalt Pavment
- Aggregate Base
- P.C.C.P or Concrete



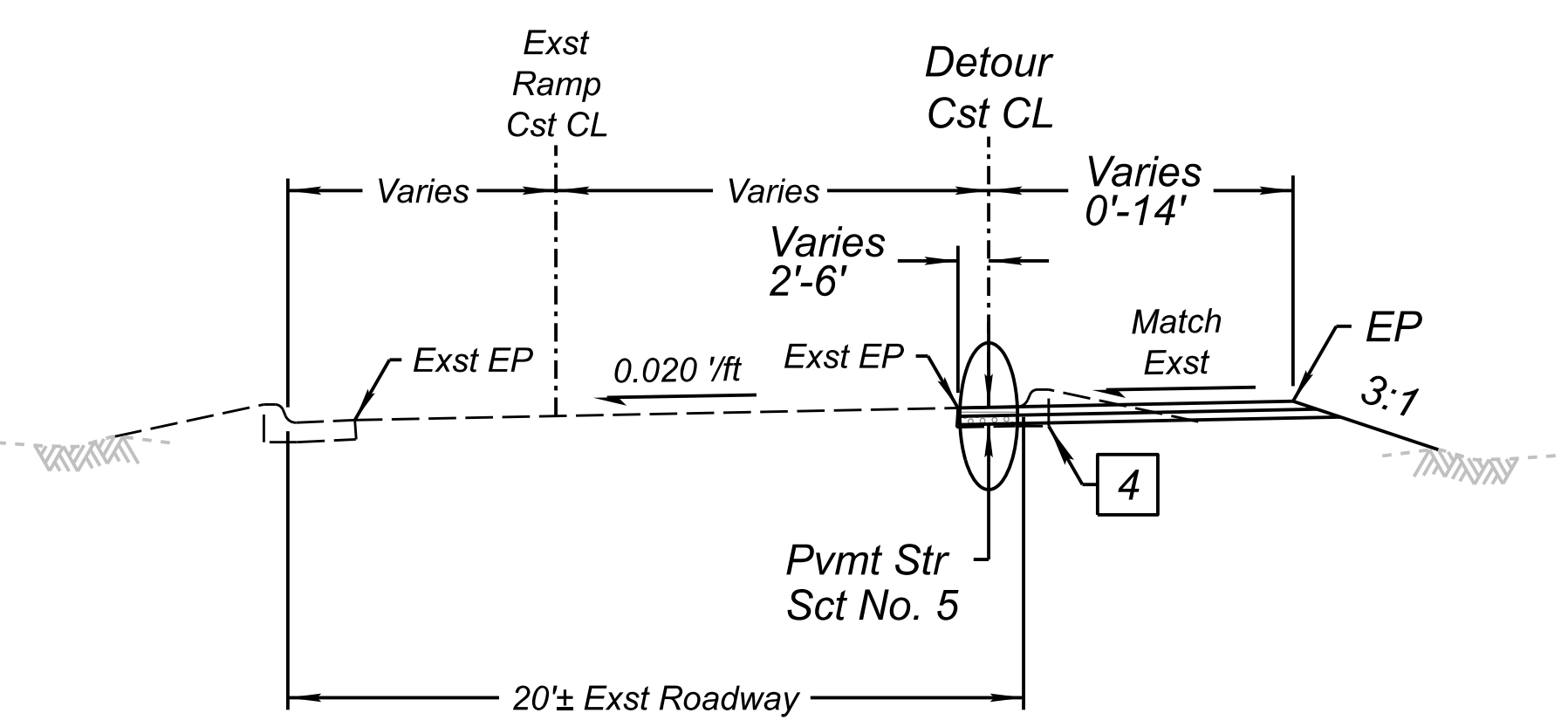
Ramp A Sta 0+00.00 to 1+07.93
Ramp B Sta 21+84.78 to 22+66.00

TYPICAL SECTION



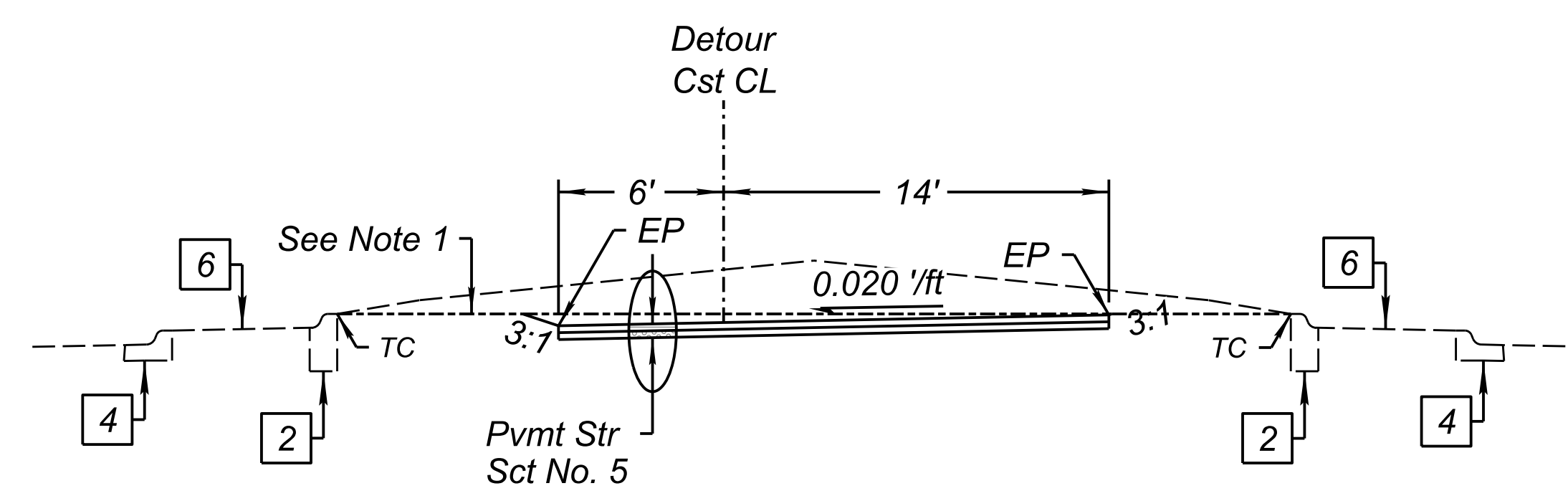
Ramp C Sta 0+00.00 to 1+45.35
Ramp D Sta 19+48.27 to 20+75.93

TYPICAL SECTION



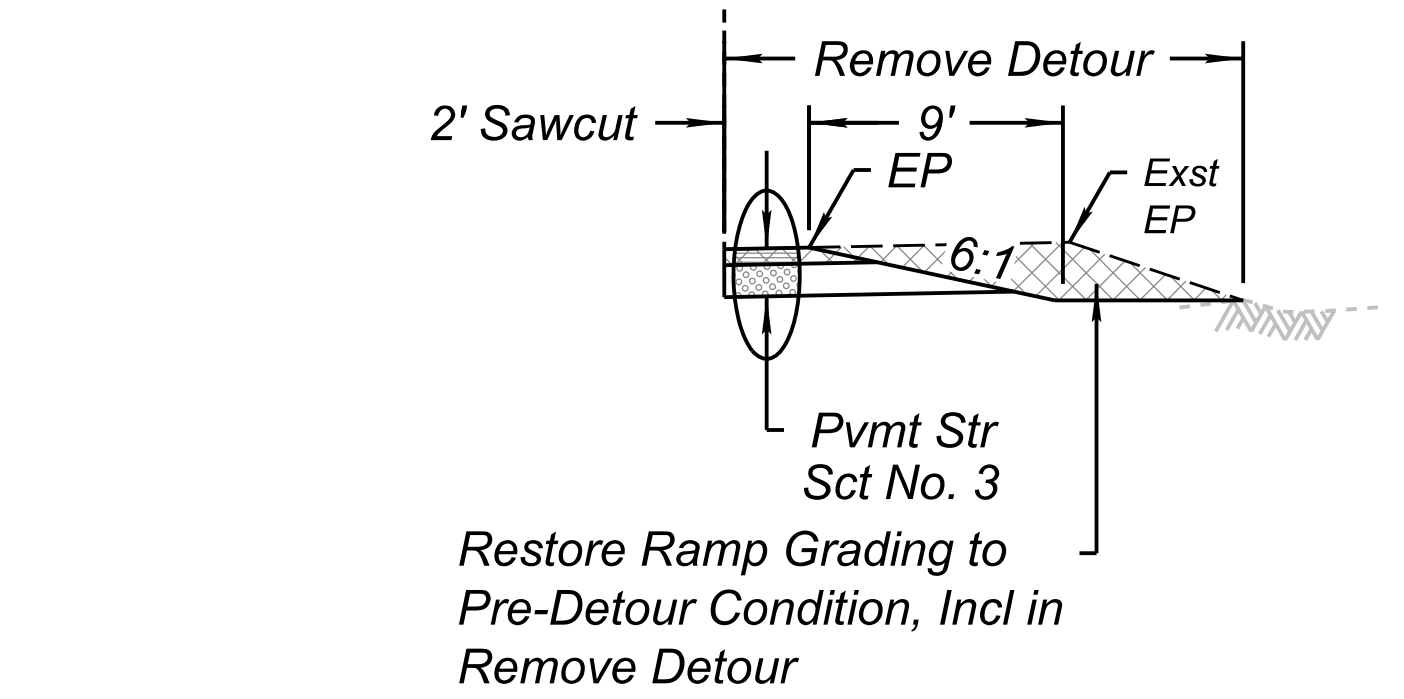
Detour Sta 8+03.75 to 9+32.25
Detour Sta 10+68.17 to 11+46.36

TYPICAL SECTION



Detour Sta 9+47.95 to 10+52.79

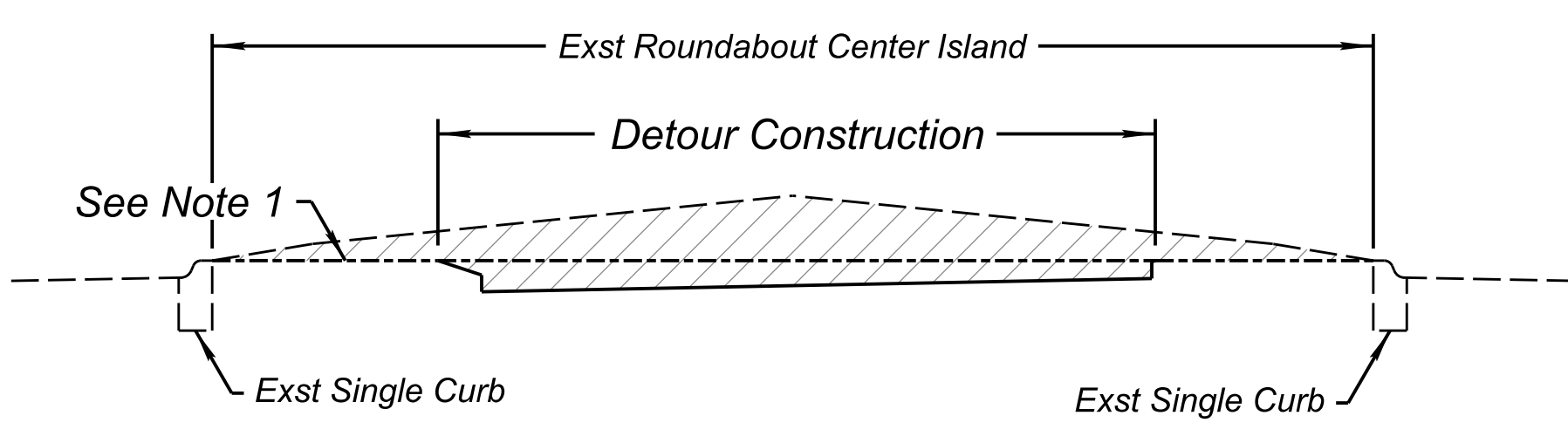
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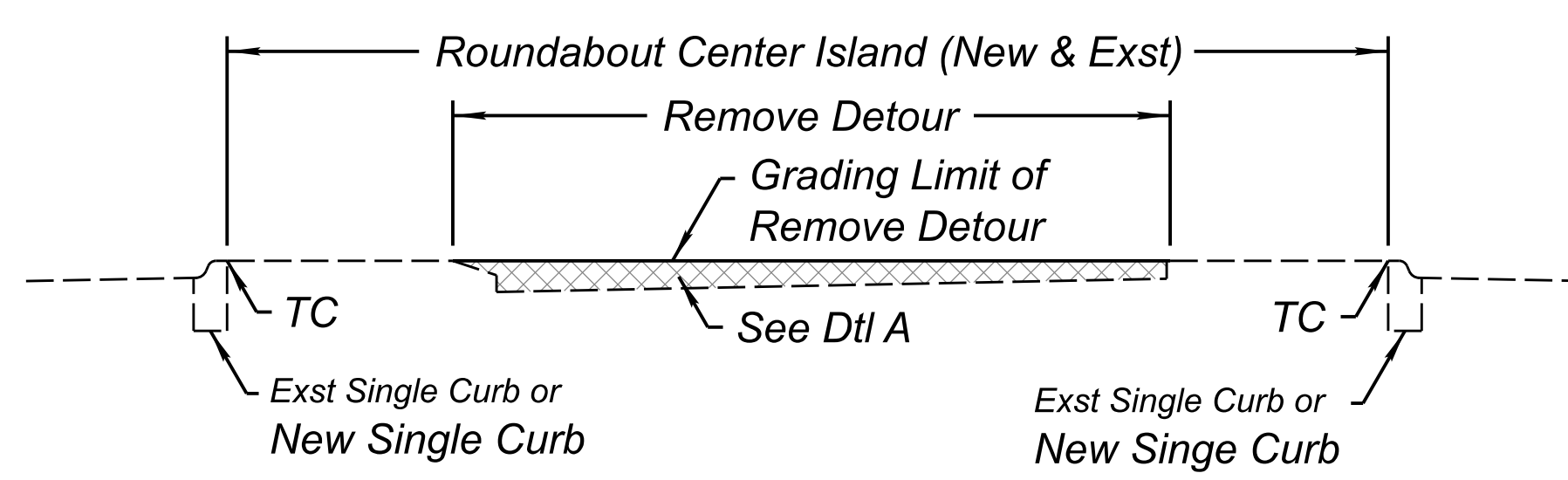
Ramp D Sta 18+71.78 to 19+48.27

NOTES

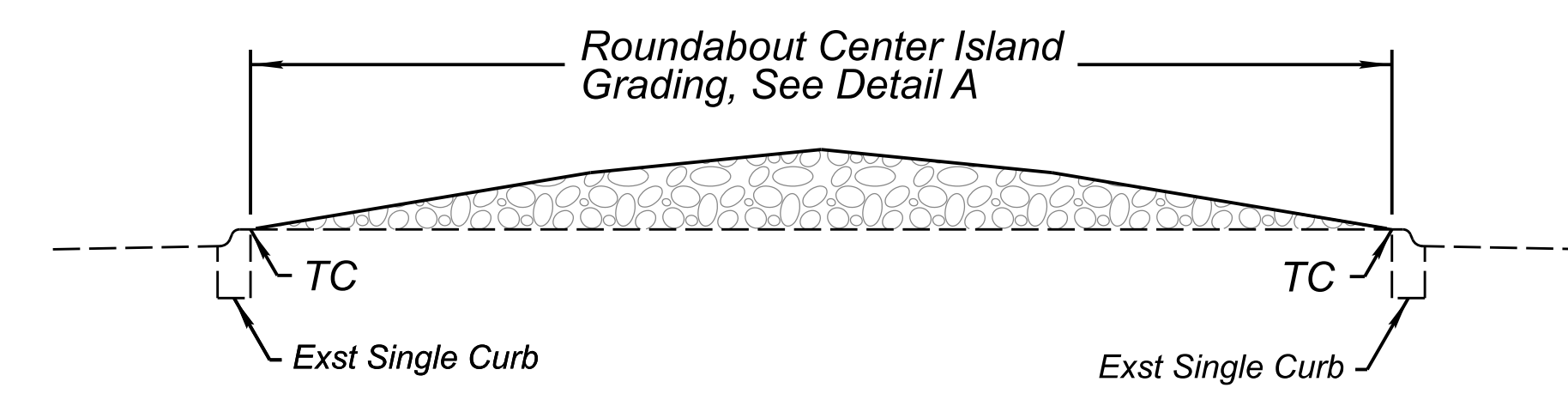
1. Remove exst roundabout center island grading during detour construction. Removal shall be from the back of the exst Type A single curb and includes the entire center island of the roundabout. This work will be paid for as Roadway Excavation.



Roundabout Center Island
Phase 1: Detour Construction
GRADING TYPICAL SECTION



Roundabout Center Island
Phase 4: Remove Detour
GRADING TYPICAL SECTION



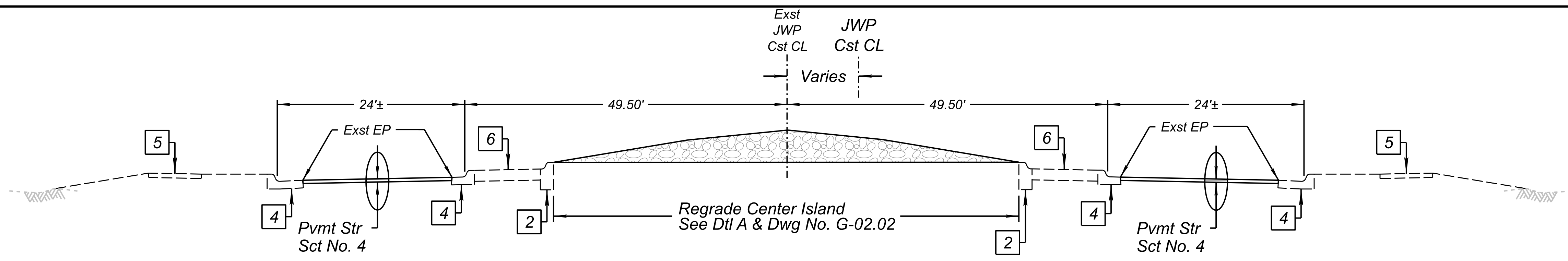
Roundabout Center Island
Phase 4: Finish Grading
GRADING TYPICAL SECTION

	DESIGN: J. NOYES 10/23 DRAWN: J. NOYES 10/23 CHECKED: L. BUSENBARK 10/23	NAME: J. NOYES DATE: 10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SECTION	ROUTE: I-17 MILEPOST: 337.39 STRUCTURE NO.:	F.H.W.A. Arizona Division STATE: ARIZ. PROJECT NO.: 017 CN 337 FEDERAL ID NO.: 017-B(237)T SHEET NO.: 4 TOTAL SHEETS: 123	RECORD DRAWING
		HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL: (602) 522-7700		TYPICAL SECTIONS RAMPS & DETOUR	LOCATION: I-17 AIRPORT RD TI UP TRACS NO.: F0362 01C	DWG NO.: G-02.02 OF

LEGEND

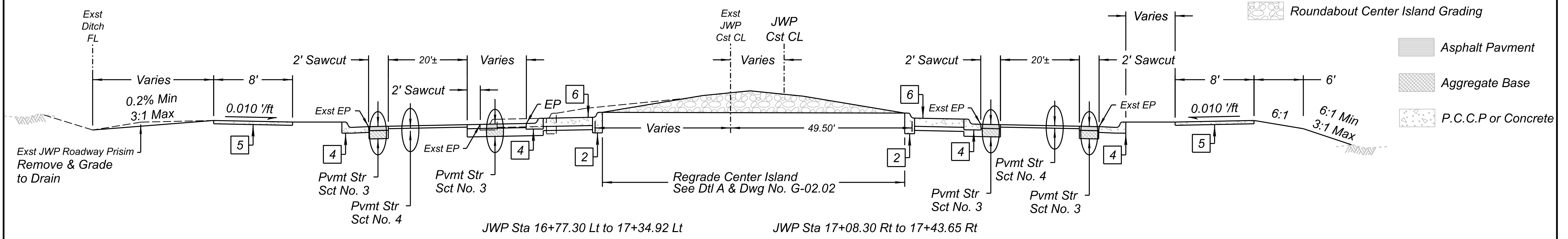
- 1 Guardrail or Conc Barrier, See Plans for Details
- 2 Conc Single Curb, See Plans for Details
- 3 Conc Median Paving, See Plans for Details
- 4 Conc Curb & Gutter, See Plans for Details
- 5 Conc Sidewalk, See Plans for Details
- 6 Conc Truck Apron, See Detail A
- 8 Variable Width Gutter, See Detail C

- Roundabout Center Island Grading
- Asphalt Pavment
- Aggregate Base
- P.C.C.P or Concrete



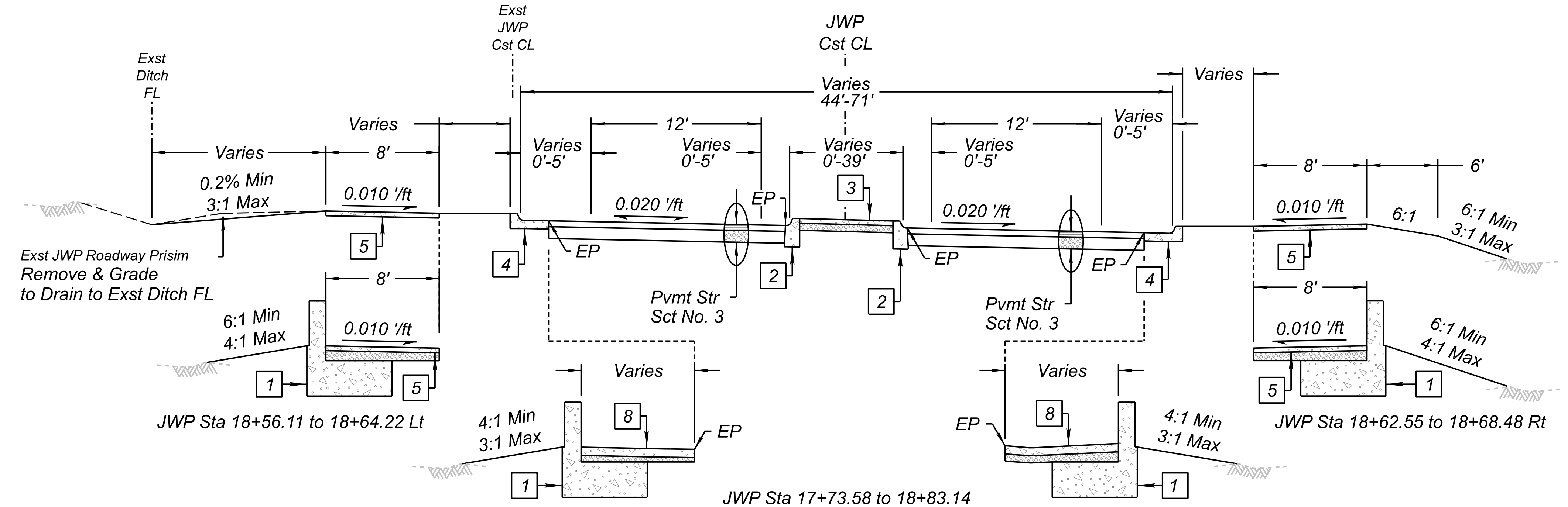
JWP Sta 16+31.80 Lt to 16+77.30 Lt
 JWP Sta 17+34.92 Lt to 17+73.58 Lt
 JWP Sta 16+31.80 Rt to 17+08.30 Rt
 JWP Sta 17+43.65 Rt to 17+73.58 Rt

TYPICAL SECTION



JWP Sta 16+77.30 Lt to 17+34.92 Lt
 JWP Sta 17+08.30 Rt to 17+43.65 Rt

TYPICAL SECTION



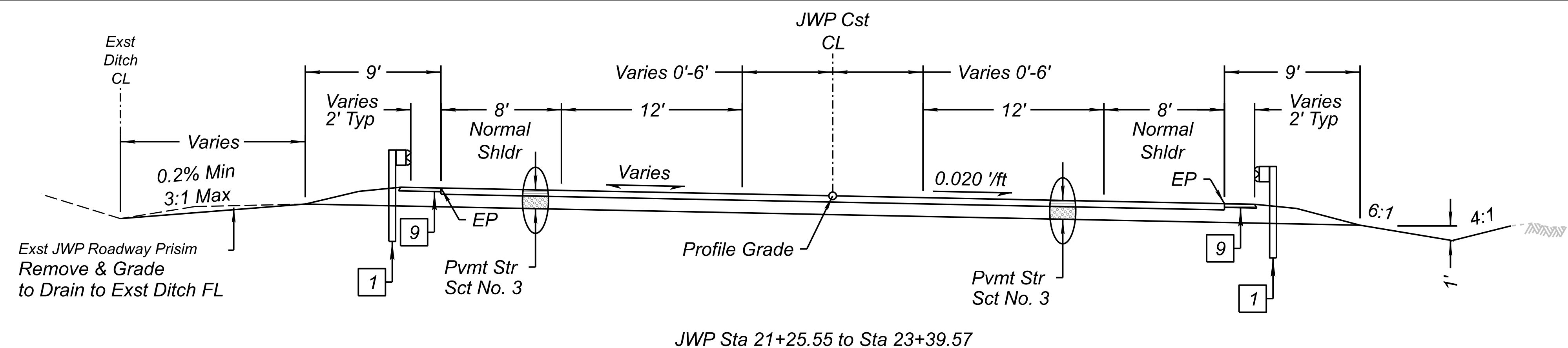
JWP Sta 18+56.11 to 18+64.22 Lt
 JWP Sta 17+73.58 to 18+83.14
 JWP Sta 18+64.22 to 18+79.76 Lt
 JWP Sta 18+68.48 to 18+83.14 Rt

TYPICAL SECTION

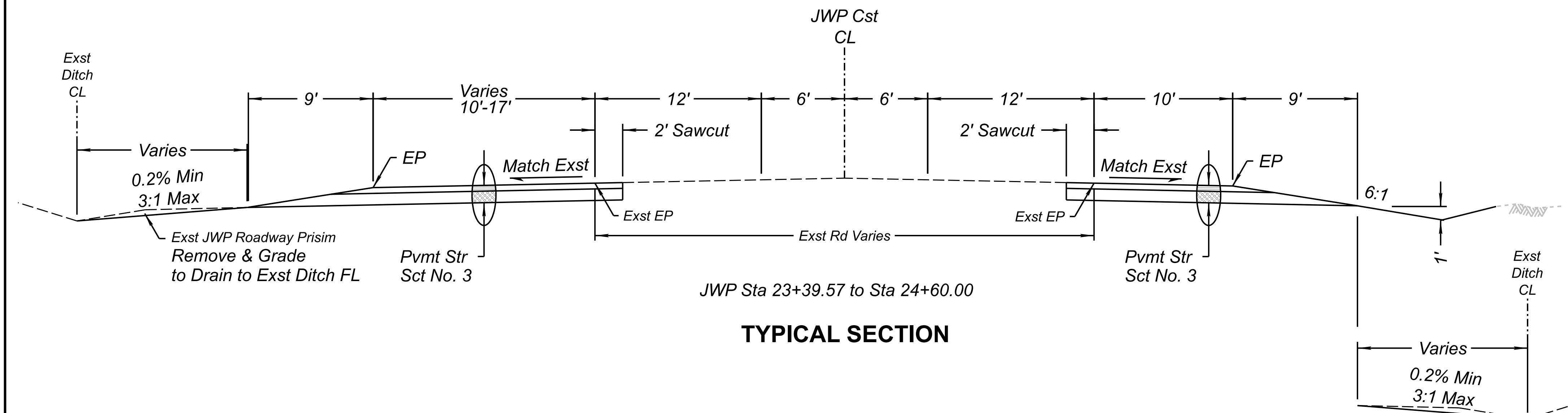
	NAME: J. NOYES DATE: 10/23 DRAWN: J. NOYES DATE: 10/23 CHECKED: L. BUSENBARK DATE: 10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SECTION	ROUTE: I-17 MILEPOST: 337.39 STRUCTURE NO.:	F.H.W.A. Arizona Division STATE: ARIZ. PROJECT NO.: 017 CN 337 FEDERAL ID NO.: 017-B(237)T SHEET NO.: 5 TOTAL SHEETS: 123	RECORD DRAWING
	HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL: (602) 522-7700	TYPICAL SECTIONS JW POWELL	LOCATION: I-17 AIRPORT RD TI UP TRACS NO.: F0362 01C	DWG NO.: G-02.03 OF	

LEGEND

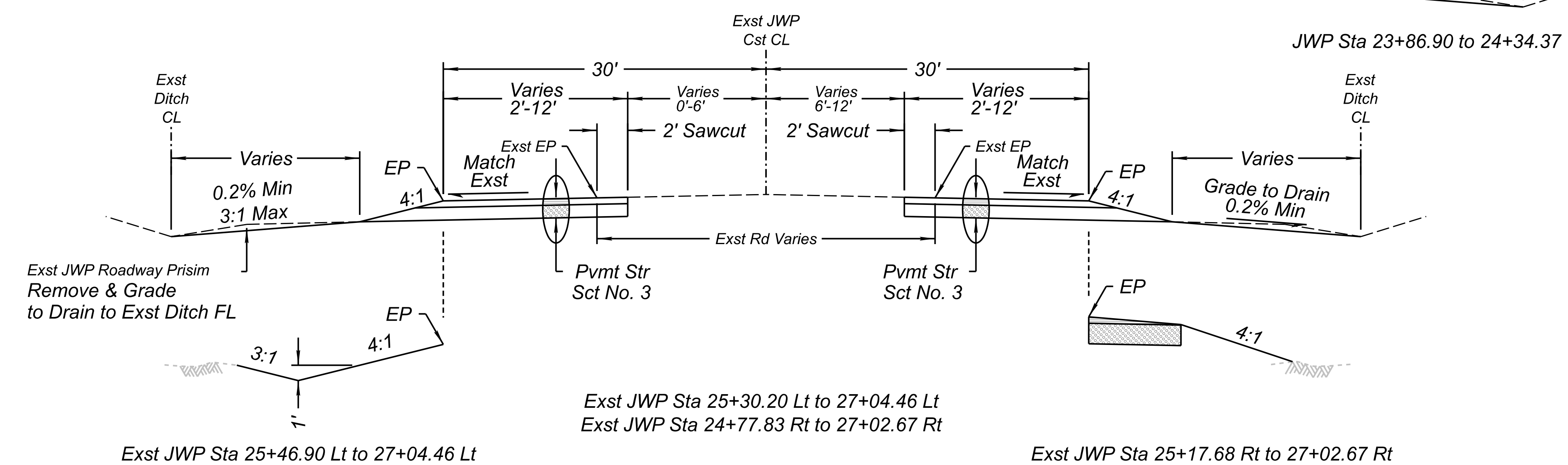
- 1 Guardrail or Conc Barrier, See Plans for Details
- 9 3" AC (Misc. Str.) (Special) per Std C-10.03, See Plans for Details
- Asphalt Pavment
- Aggregate Base



TYPICAL SECTION

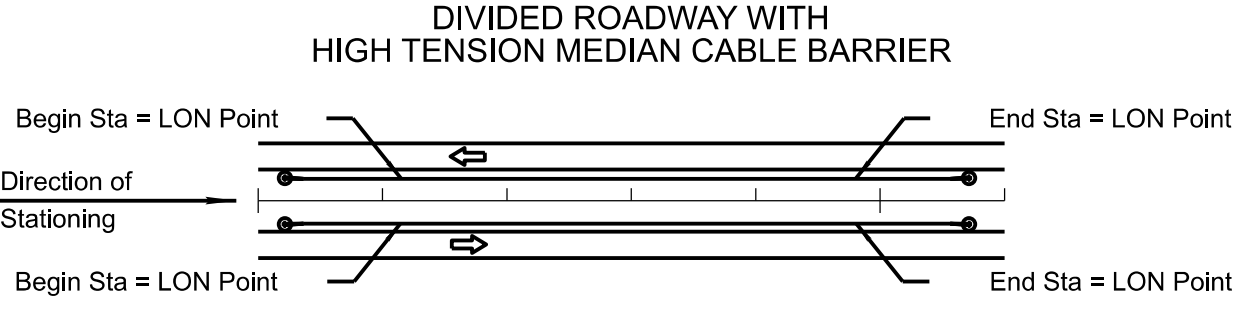
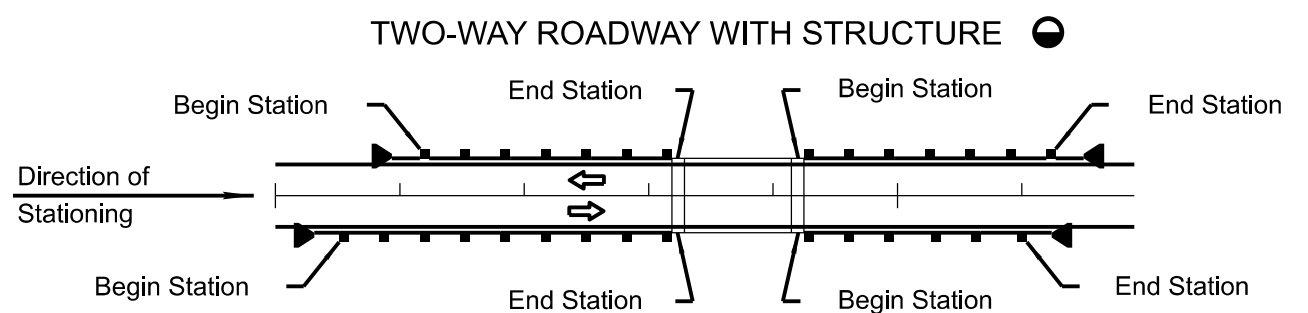
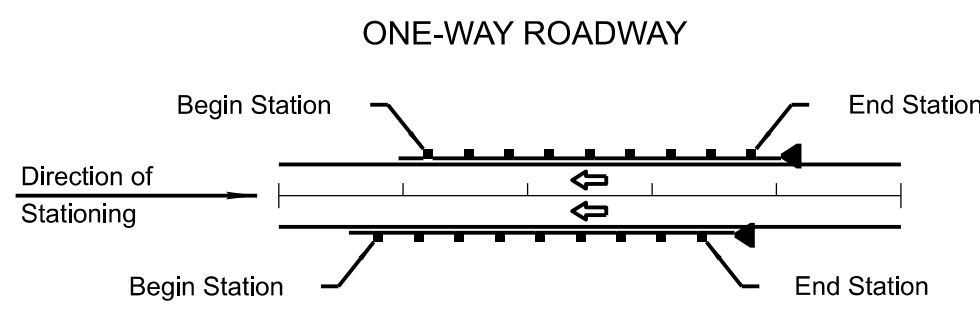


TYPICAL SECTION



TYPICAL SECTION

		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>NAME</th> <th>DATE</th> </tr> <tr> <td>J.NOYES</td> <td>10/23</td> </tr> <tr> <td>J.NOYES</td> <td>10/23</td> </tr> <tr> <td>L.BUSENBARK</td> <td>10/23</td> </tr> </table>	NAME	DATE	J.NOYES	10/23	J.NOYES	10/23	L.BUSENBARK	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SECTION	ROUTE I-17	F.H.W.A. Arizona Division	STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 6	TOTAL SHEETS 123	RECORD DRAWING
	NAME	DATE																	
	J.NOYES	10/23																	
J.NOYES	10/23																		
L.BUSENBARK	10/23																		
TYPICAL SECTIONS JW POWELL				MILEPOST 337.39	LOCATION I-17 AIRPORT RD TI UP					DWG NO. G-02.04									
				STRUCTURE NO.	TRACS NO. F0362 01C					_____ OF _____									



LOCATION	Plan Reference Number	C-10.01 Guardrail Installation	C-10.03 (Timber)	C-10.04 (Steel) Detail	Length (Linear Feet) (0.0)	C-10.06 Long Span	C-10.07 Box Culvert Posts (Each)	Shop Curved Guardrail Length (Linear Feet) (0.0)	Remove Existing Length (Linear Feet) (0.0)	Length (Linear Feet) (0.0)	BARRIER		CABLE	TRANSITION		END TREATMENT		REMARKS			
											CONCRETE BARRIER	RAIL		NEW	EXISTING						
7235+75 I-17 NB, Lt	1	X	X		75.0																
7237+19 I-17 NB, Lt																					Maintain exst ditch flowline; omit terminal pavement
7235+81 I-17 SB, Rt	2	X	X		75.0																
7237+25 I-17 SB, Rt																					
18+57 JWP, Lt	3								22.0												
18+80 JWP, Lt																					See Detail C
18+64 JWP, Rt	4								25.0												
18+84 JWP, Rt																					See Detail C
21+23 JWP, Lt	5	X	X		12.5																
22+09 JWP, Lt																					
21+28 JWP, Rt	6	X	X																		
21+89 JWP, Rt																					No guardrail. Transition from C-10.30 to C-10.08
7232+22 I-17 NB, Rt	7							475.0													
7237+44 I-17 NB, Rt																					Includes removal of end terminals and transitions to barrier rail.
7233+76 I-17 NB, Lt	8							325.0													
7237+48 I-17 NB, Lt																					Includes removal of end terminals and transitions to barrier rail.
7236+45 I-17 SB, Rt	9							362.5													
7240+43 I-17 SB, Rt																					Includes removal of end terminals and transitions to barrier rail.
7236+50 I-17 SB, Lt	10							312.5													
7239+94 I-17 SB, Lt																					Includes removal of end terminals and transitions to barrier rail.
18+52 JWP, Lt	11							50.0													
19+00 JWP, Lt																					Includes removal of end terminals, anchors & transition to barrier rail. Barrier rail included in bridge removal.
18+25 JWP, Rt	12							87.5													
19+01 JWP, Rt																					Includes removal of end terminals, anchors & transition to barrier rail. Barrier rail included in bridge removal.
					162.5			1612.5	47.0						2						

REV. DATE: 4/21

- THE ZEROS IN PARENTHESES (0.0) INDICATE THE DIMENSIONAL PRECISION FOR THAT COLUMN
- LENGTH IS FROM LENGTH OF NEED (LON) POINT TO LON POINT. ACTUAL SEGMENT LENGTH VARIES DEPENDING ON TERMINAL TYPE. SEE SPECIAL PROVISIONS.
- SEE BRIDGE SHEETS FOR BRIDGE BARRIER DETAILS AND QUANTITIES
- SPECIFY TYPE 1 OR 2 UNDER 'REMARKS'
- SPECIFY GUTTER WIDTH UNDER "REMARKS"
- ALLOWABLE END TREATMENT OPTIONS ARE INDICATED WITH THE NUMBER '1' IN THE SPACE. BLANK SPACES ARE NOT VIABLE ALTERNATIVES
- ARRAY TYPE AND ANGLE IS NOTED UNDER 'REMARKS'
- NOTE: FOR RECORD DRAWING PREPARATION - CIRCLE END TREATMENT INSTALLED

	NAME: J.NOYES DATE: 10/23 DRAWN: J.NOYES DATE: 10/23 CHECKED: L.BUSENBARK DATE: 10/23	ROUTE: I-17 MILEPOST: 337.39 STRUCTURE NO.:	F.H.W.A. Arizona Division STATE: ARIZ. PROJECT NO.: 017 CN 337 FEDERAL ID NO.: 017-B(237)T SHEET NO.: 7 TOTAL SHEETS: 123 RECORD DRAWING
	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SECTION BARRIER SUMMARY SHEET		LOCATION: I-17 AIRPORT RD TI UP TRACS NO.: F0362 01C DWG NO.: G-03.01 OF

NOTE:
THE ZEROS IN PARENTHESES (0, 0.0 & 0.000) INDICATE
THE DIMENSIONAL PRECISION FOR THAT COLUMN

NOTE:
FOR PIPE CULVERT PLACEMENT SEE
STANDARD DRAWINGS C-13.10 AND C-13.15

NOTE:
PIPE OPTIONS SELECTED ARE THOSE REQUIRED TO
MEET MINIMUM SERVICE LIFE.
ALLOWABLE PIPE OPTIONS ARE INDICATED WITH THE
LETTER 'X' IN THE SPACE. BLANK SPACES ARE NOT
ALLOWABLE ALTERNATES.

CSP - CORRUGATED STEEL PIPE CAP - CORRUGATED ALUMINUM PIPE
RCP - REINFORCED CONCRETE PIPE
NRCP - NON-REINFORCED CONCRETE PIPE
NRCPCP - NON-REINFORCED CAST-IN-PLACE CONCRETE PIPE
CHDPEP - CORRUGATED HIGH-DENSITY POLYETHYLENE PIPE
CPPP - CORRUGATED POLYPROPYLENE PIPE

Station	Plan Reference Number	Controlling Fill Height Range	Size, Corrugated	Size, Smooth	Length (0)	Skew (0)	DESCRIPTION				CSP			CAP			RCP			END TREATMENT										QUANTITIES		REMARKS									
							In.	In.	Ft.	Degree	In.	Coating	In.	In.	In.	In.	Each	Catch Basin, Manhole, Headwall & Junction Structure				Cubic Yard																			
							Corrugation	Wall Thickness (0.000)	Zinc	Bituminous Coated Zinc	Aluminum	Bituminous Coated Aluminum	Corrugation	Wall Thickness (0.000)	Uncoated	Bituminous Coated	Class - Non-Trench	Class - Trench	Class	Minimum Wall Thickness (0)	AASHTO M-294 Type S	AASHTO M-330 Type S	C-13.20 & C-13.25	Detail	Size, (In) Manhole	Standard or Detail	S-Single / D-Double	Location	H (0.0)	L Wing (0.0)	L 18" Slotted Drain (0)		L 24" Slotted Drain (0)	Type	Elevation (0.00)	Depth	L (0.0)	Ft.	Grate	Inlet Depression C-15.70	Pipe Excavation (0)
JWP Blvd 18+03.48, 30.76' Rt to	001	1	18	30			A	0.064	X	X	A	0.060	X				X	X			C-15.20	D	RT	3.6	3.5						7009.91	1	18								CB 001 TO
JWP Blvd 18+11.06, 64.83' Rt																					*																		SALVAGED END SECTION		

REV. DATE: MAR 2022

RANGE NO.	1	2	3	4	5	6	7	8	9	10	11	12	
FILL	>	1	3	5	8	11	15	20	25	30	40	55	70
HEIGHT (Ft.)	≤	3	5	8	11	15	20	25	30	40	55	70	90

SHOULD FIELD CONDITIONS VARY FROM THE RANGE INDICATED, CONTACT DESIGN FOR RE-EVALUATION OF PIPE DESIGN REQUIREMENTS.

<input checked="" type="checkbox"/> A	2 7/8 x 1/2	D	6x2
B	3x1	E	3x1 or 9x2 1/2
C	9x2 1/2		

*REUSE EXST SALVAGED END SECTION



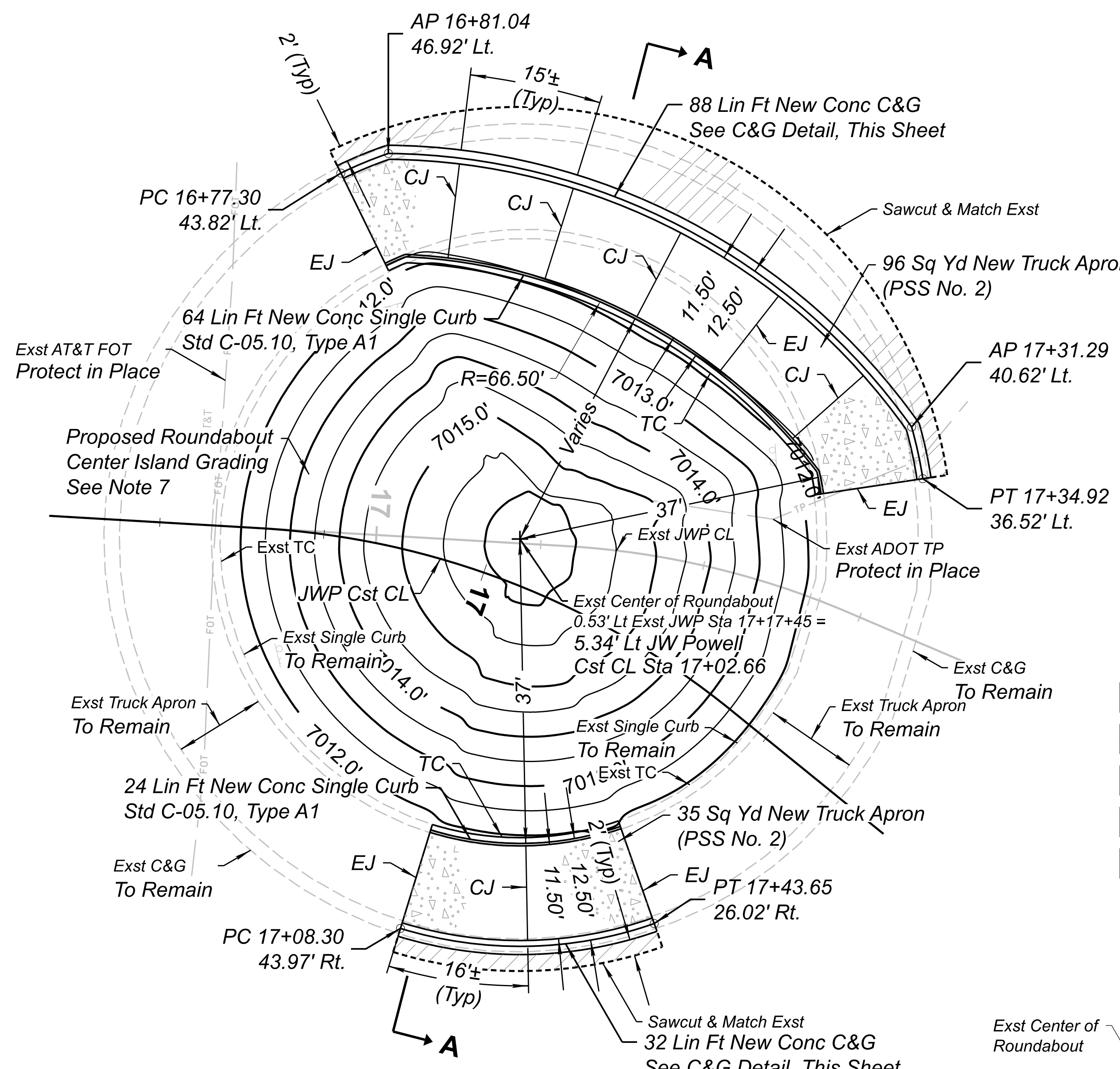
DESIGN	NAME	DATE
DESIGN	E. Grace	09/23
DRAWN	J. Wotring	09/23
CHECKED	J. Holzmeister	09/23

Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
DRAINAGE DESIGN SECTION

NEW PIPE SUMMARY SHEET

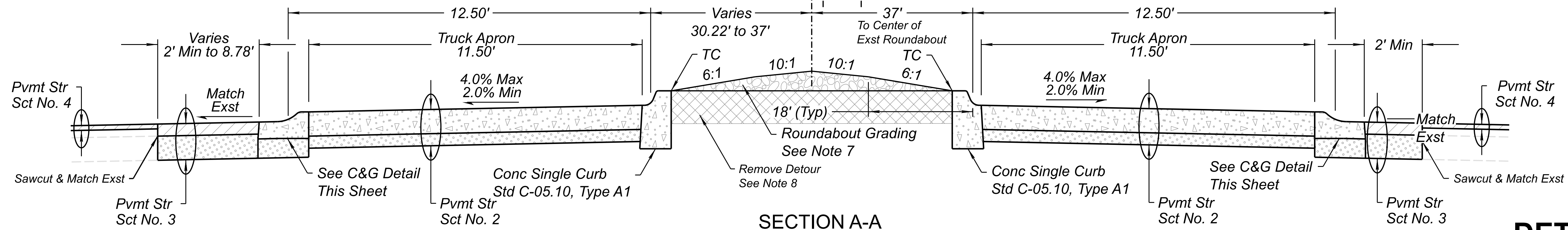
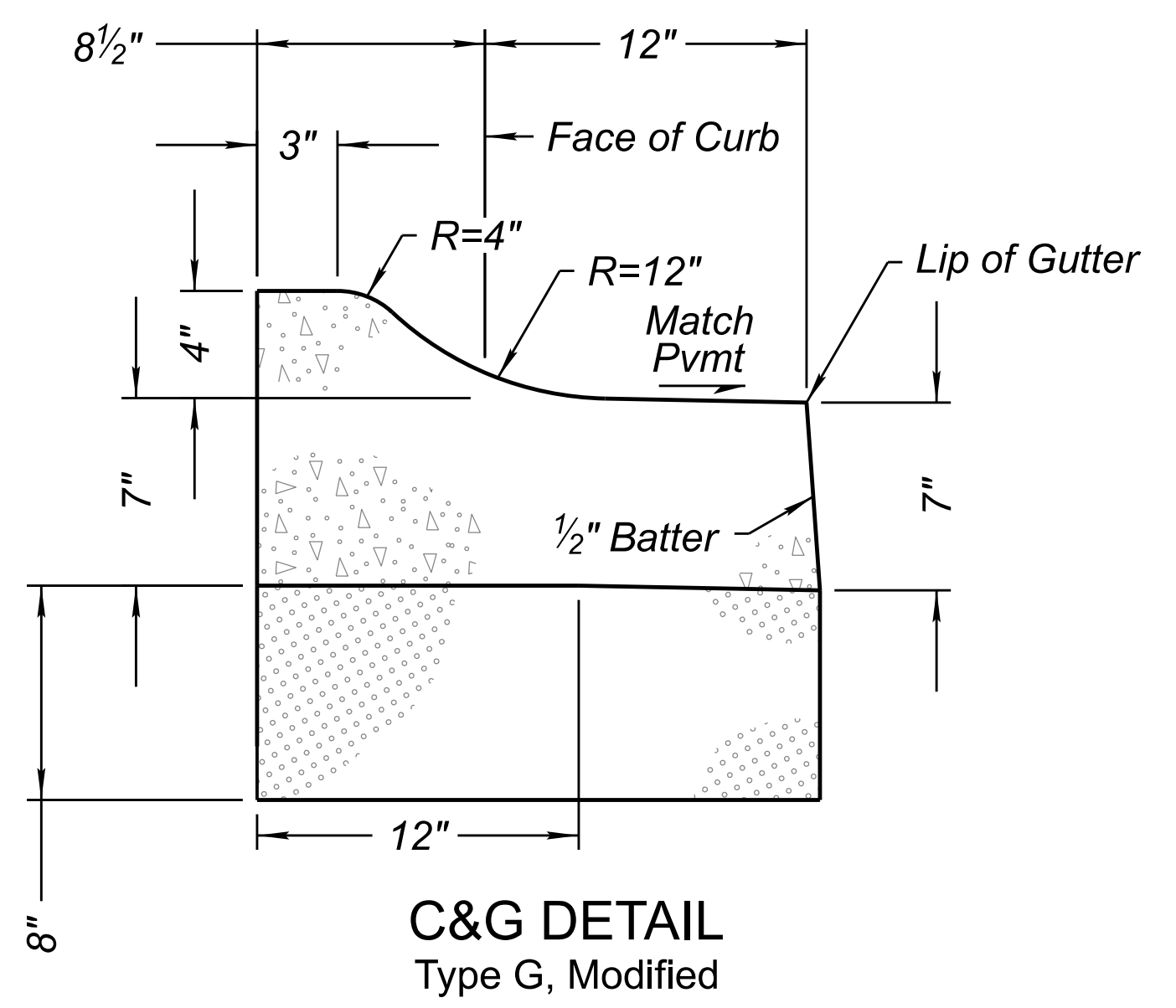
ROUTE	STATE	PROJECT NO.	FEDERAL ID NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
I-17	ARIZ.	017 CN 337	017-B(237)T	9	123	
LOCATION	I-17 AIRPORT RD TI UP					DWG NO. G-06.01
TRACS NO.	F0362 01C					OF



- ABBREVIATIONS**
- AP Angle Point
 - CJ Contraction Joint
 - EJ Expansion Joint
 - JWP JW Powell Blvd
 - TC Top Back of Curb

- NOTES:**
1. All stations & offsets are referenced from the JWP Cst CL.
 2. All dimensions are to the face of Curb, unless otherwise noted.
 3. Conc pvmt for the Truck Apron will be paid for as Item No. 6010725.
 4. For Conc C&G Details not shown, See Std C-05.10, Type G.
 5. Conc C&G, Type G, Modified will be paid separately as Item No. 9080084.
 6. Conc Single Curb, Type A1 will be paid separately as Item No. 9080041.
 7. Roundabout center island grading will be paid separately as Item No. 9240046. Grading may be modified in the field and shall conform to Section A-A. The entire roundabout center island shall be included in the grading and shall not include the Remove Detour grading, See Note 8. Proposed contour interval is 1' majors and 0.5' minors.
 8. Remove Detour will be paid for as Item No. 2020152 and includes restoring the center island grading to the same elevation as the new or existing back of single curb as shown and labeled (TC or Exst TC) on this sheet.

- LEGEND:**
- Asphalt Pavement
 - Concrete Truck Apron or Concrete Curb & Gutter
 - Aggregate Base, Class 2
 - Remove Detour, See Note 8
 - Roundabout Grading, See Note 7

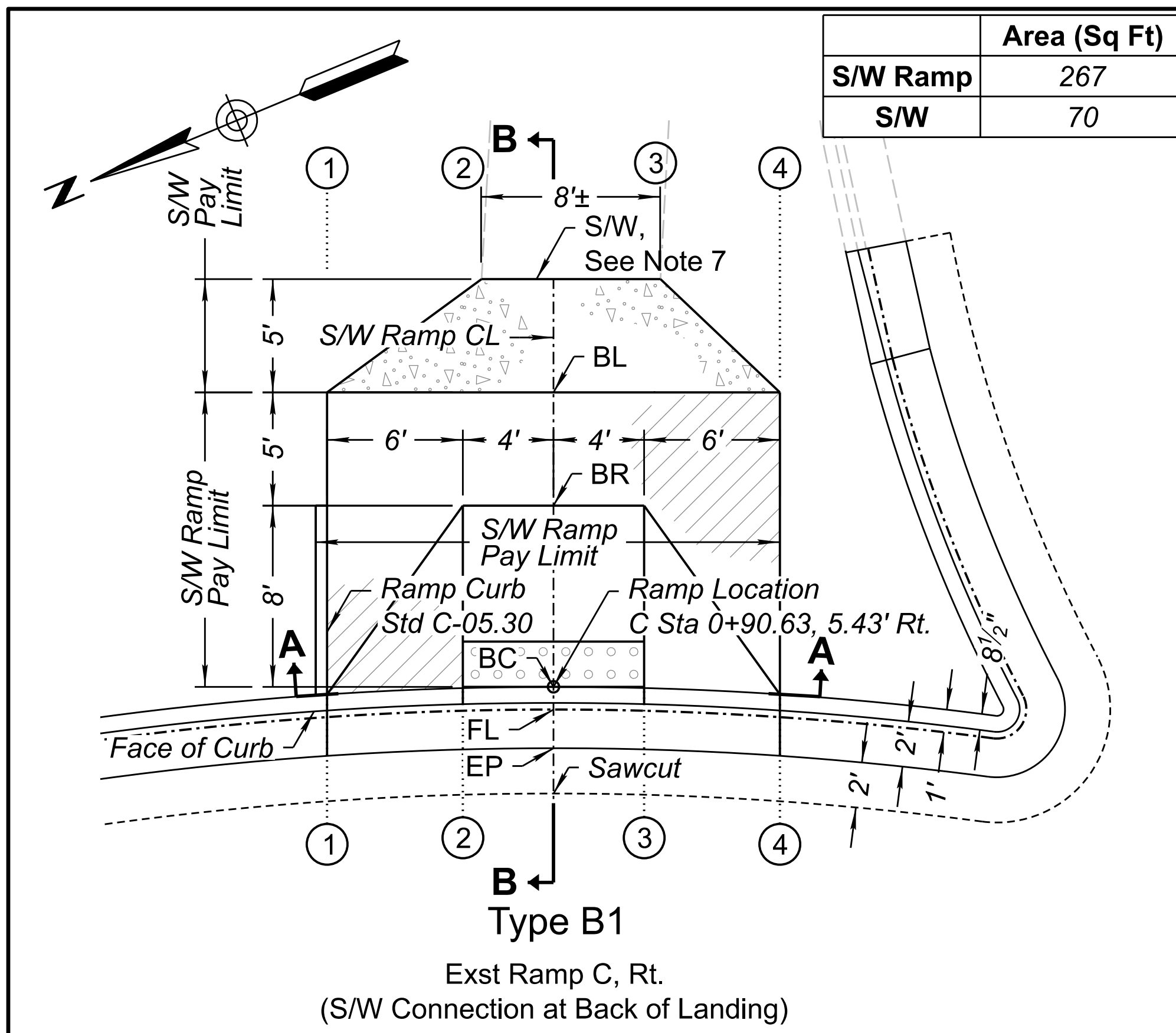


SECTION A-A

DETAIL A

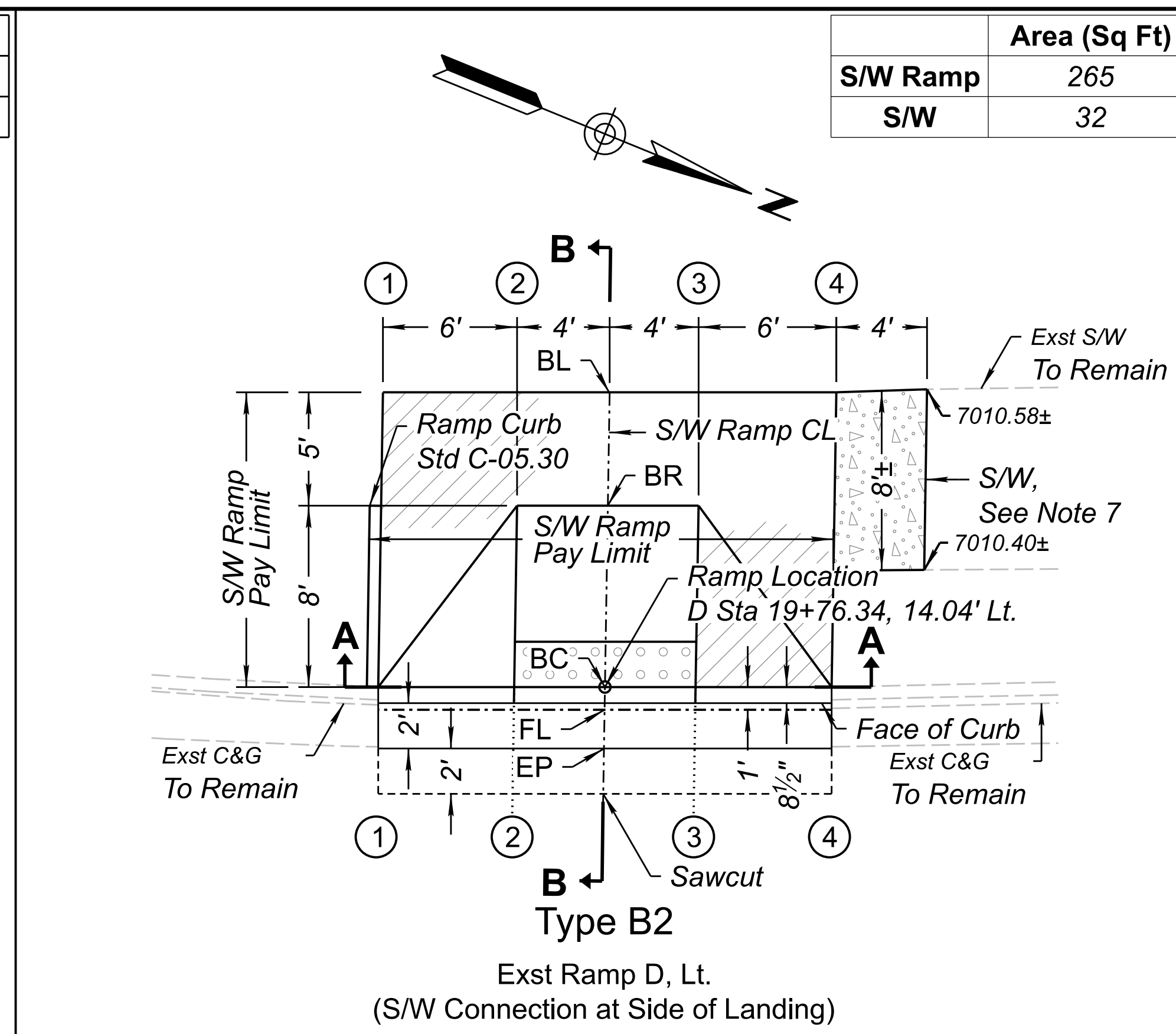
ROUNDBOUT CENTER ISLAND MODIFICATIONS

	NAME: J.NOYES DATE: 10/23 DESIGN: J.NOYES DRAWN: J.NOYES CHECKED: L.BUSENBARK DATE: 10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SECTION	ROUTE: I-17 MILEPOST: 337.39 STRUCTURE NO.:	F.H.W.A. Arizona Division STATE: ARIZ. PROJECT NO.: 017 CN 337 FEDERAL ID NO.: 017-B(237)T SHEET NO.: 10 TOTAL SHEETS: 123	RECORD DRAWING
	LOCATION: I-17 AIRPORT RD TI UP TRACS NO.: F0362 01C	DWG NO.: G-09.01 OF			



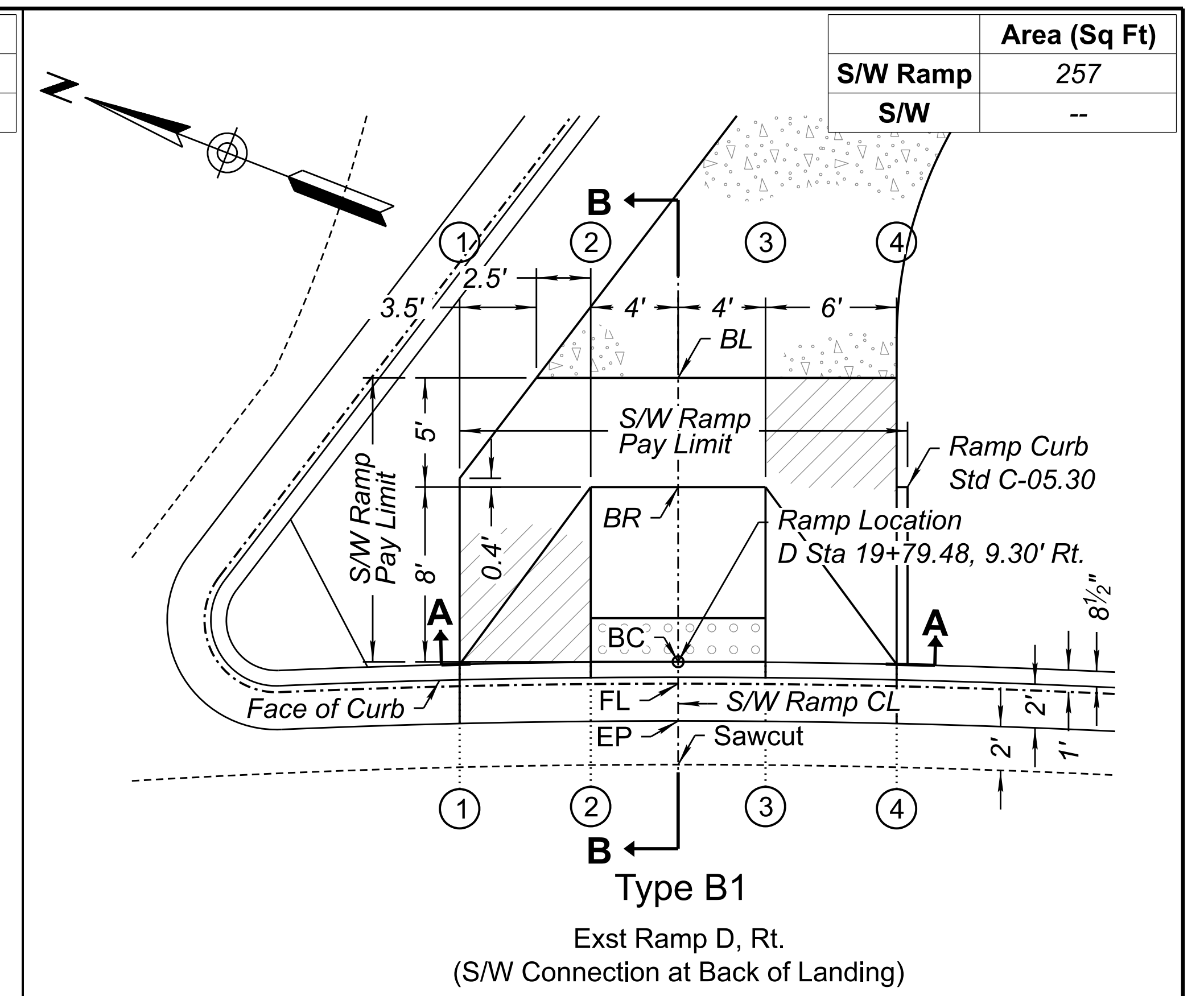
Type B1
Exst Ramp C, Rt.
(S/W Connection at Back of Landing)

Elevation (Feet)				
	1	2	3	4
Sawcut	7010.18±	7010.24±	7010.31±	7010.37±
EP	7010.18	7010.24	7010.32	7010.38
FL	7010.21	7010.27	7010.35	7010.41
BC	7010.71	7010.29	7010.37	7010.91
BR	--	7010.79	7010.87	--
BL	7010.76	--	--	7010.96
S/W	--	7010.95±	7010.88±	--



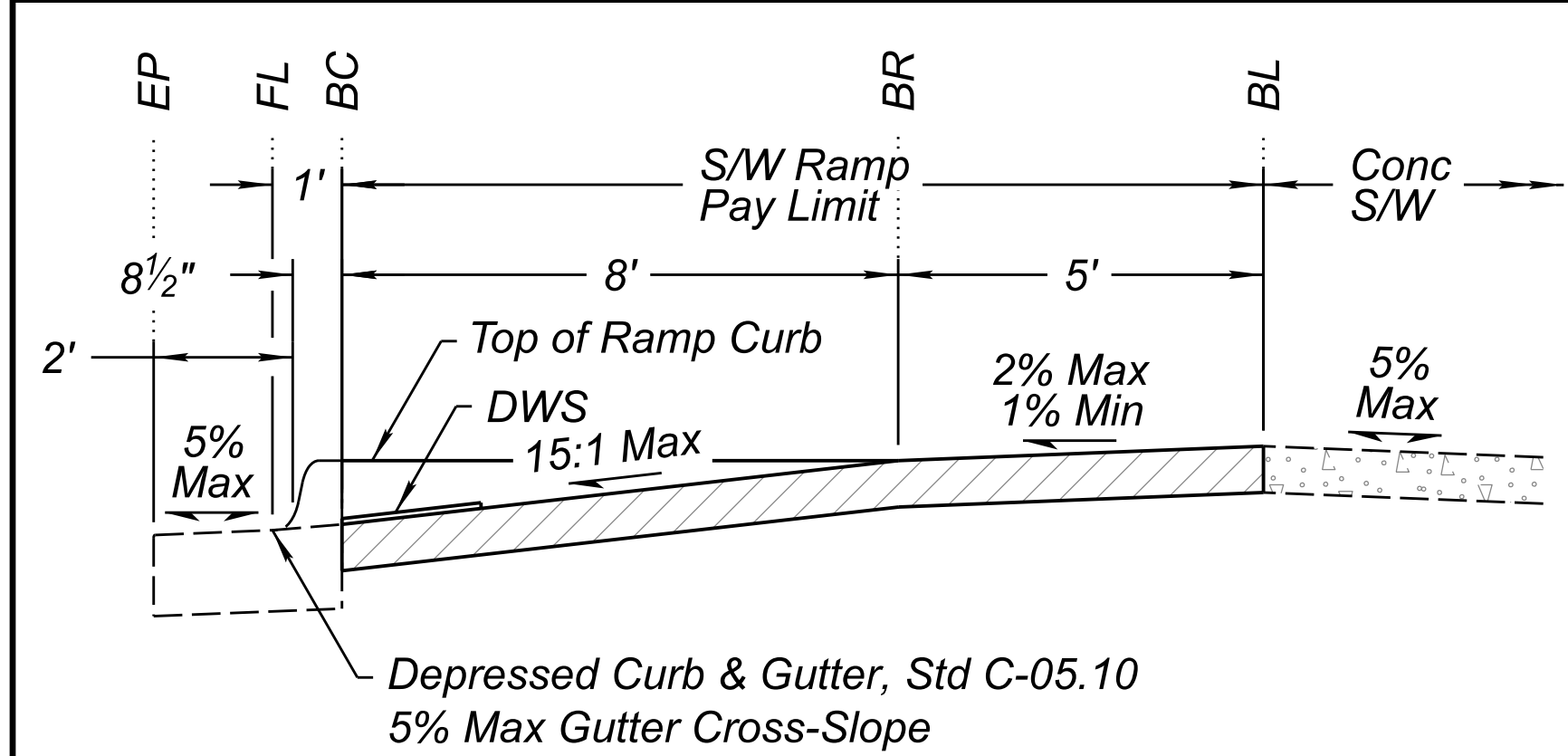
Type B2
Exst Ramp D, Lt.
(S/W Connection at Side of Landing)

Elevation (Feet)				
	1	2	3	4
Sawcut	7009.69±	7009.80±	7009.88±	7009.95±
EP	7009.65	7009.76	7009.84	7009.91
FL	7009.58	7009.69	7009.77	7009.84
BC	7010.08	7009.73	7009.81	7010.34
BR	--	7010.23	7010.31	--
BL	7010.13	--	--	7010.39
S/W	--	--	--	--



Type B1
Exst Ramp D, Rt.
(S/W Connection at Back of Landing)

Elevation (Feet)				
	1	2	3	4
Sawcut	7010.20±	7010.12±	7010.00±	7009.90±
EP	7010.24	7010.16	7010.04	7009.94
FL	7010.27	7010.19	7010.07	7009.97
BC	7010.77	7010.21	7010.09	7010.47
BR	7010.77	7010.71	7010.59	--
BL	--	7010.76	--	7010.57
S/W	--	--	--	--



SECTION B-B
(NTS)
S/W Connection at Back of Landing Shown,
S/W Connect at Side of Landing Similar

ABBREVIATIONS:

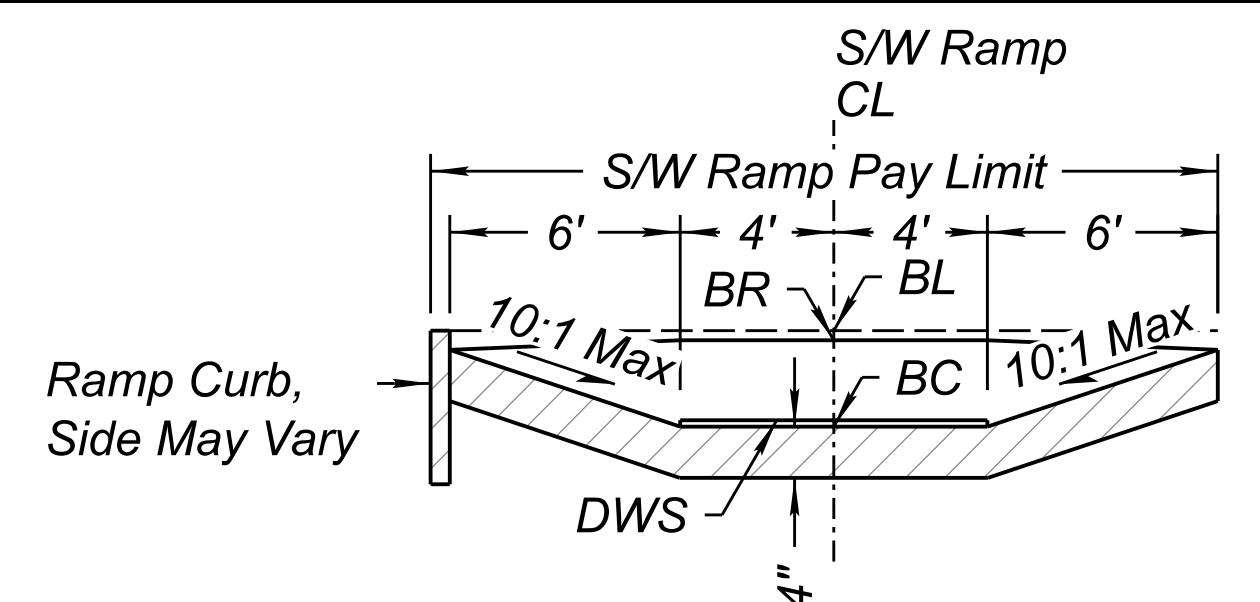
- Not Applicable
- BC Back of Curb
- BL Back of Landing
- BR Back of Ramp
- C Exst Ramp C Cst CL
- C&G Curb & Gutter
- D Exst Ramp D Cst CL
- DWS Detectable Warning Strip
- EP Edge of Pvmt / Lip of Gutter
- FL Flowline
- NTS Not to Scale
- S/W Sidewalk

LEGEND:

- Conc S/W Ramp, See Notes
- 4" Thick Conc S/W, Std C-05.20, See Notes
- Detectable Warning Strip, Std C-05.30, See Notes

NOTES:

1. For Details not shown, see Std C-05.30, Type B, except as modified herein.
2. Ramp Location is at the back of curb and CL of the ramp.
3. All Dimensions are from the S/W Ramp CL.
4. Conc S/W will be paid separately as Item No. 9080201.
5. Conc S/W Ramp (Including Detectable Warning Strip & Ramp Curb) will be paid separately as Item No. 9080297.
6. Conc C&G will be paid separately as Item No. 9080081.
7. Remove Exst C&G or S/W to the nearest joint & match exst, See Plans.

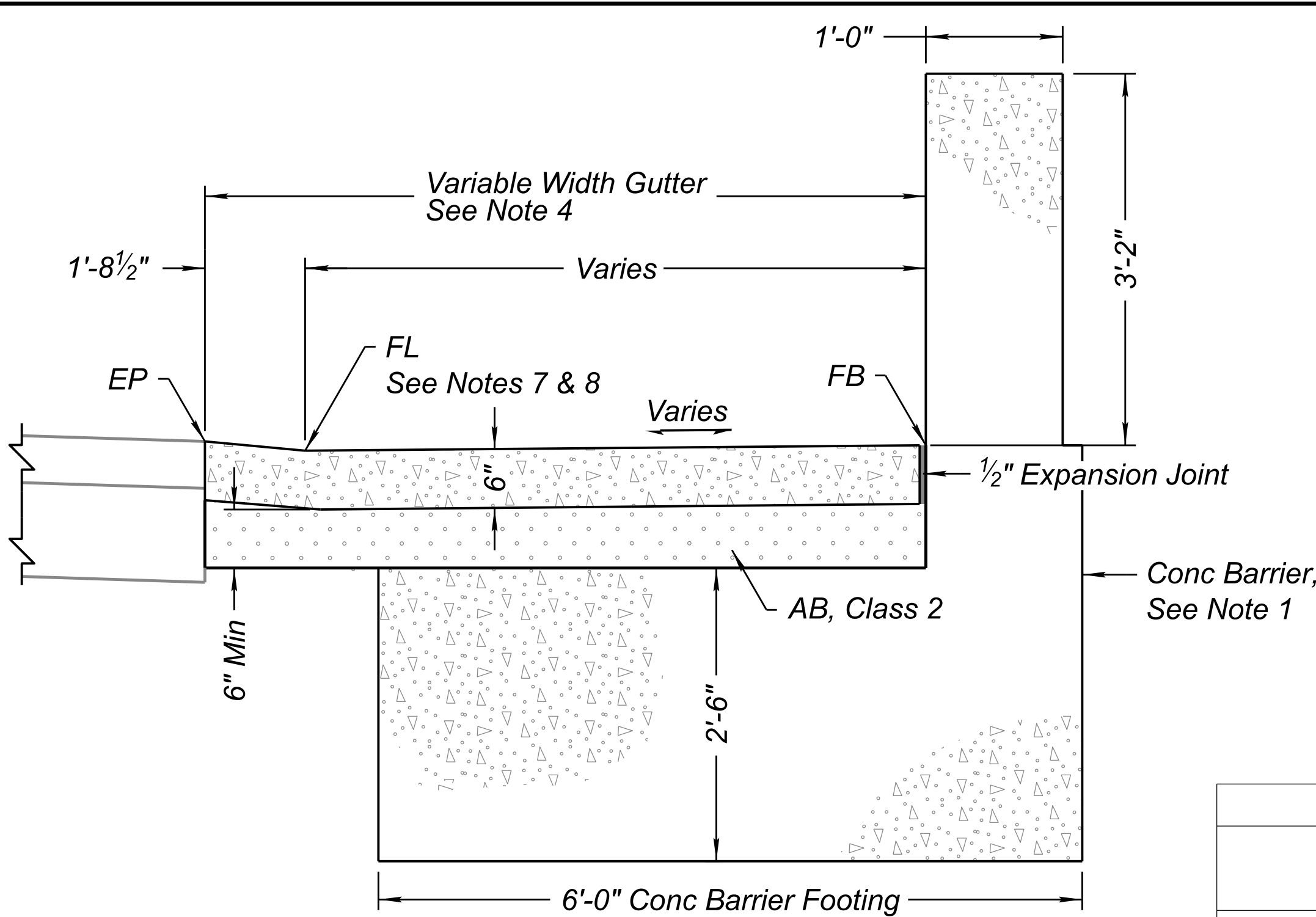


SECTION A-A
(NTS)

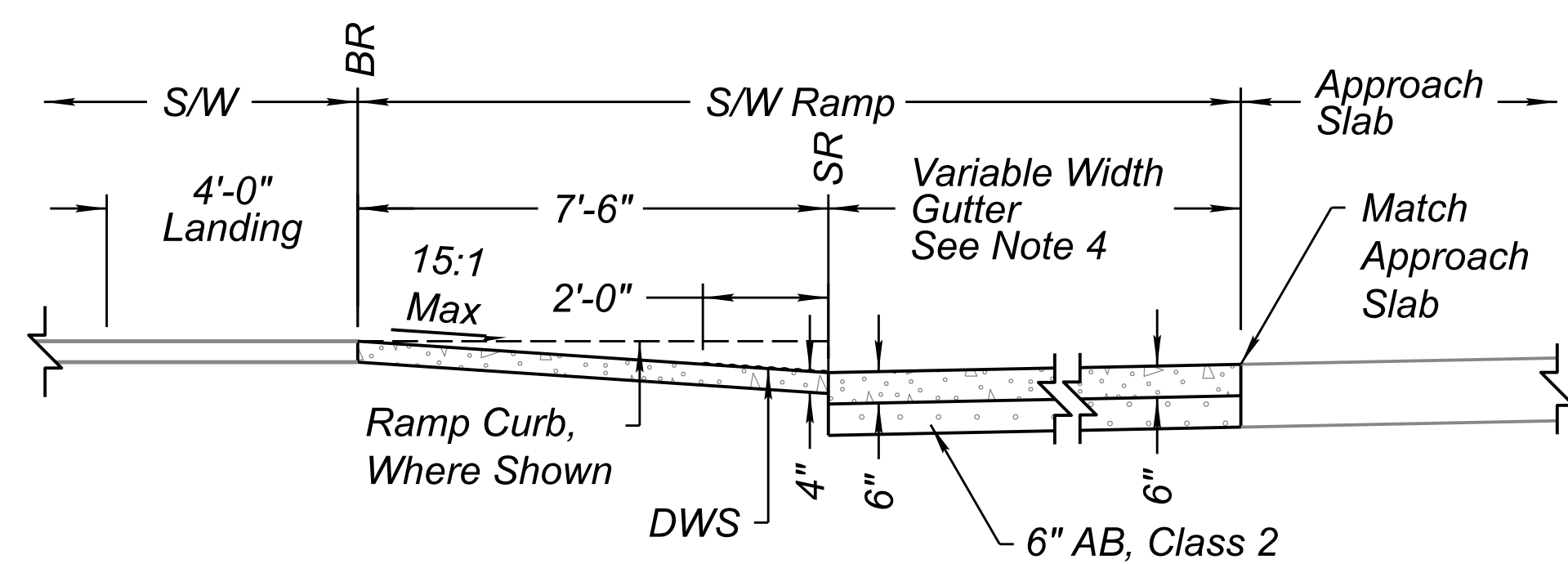
DETAIL B

CONCRETE SIDEWALK RAMP, TYPE B MODIFIED

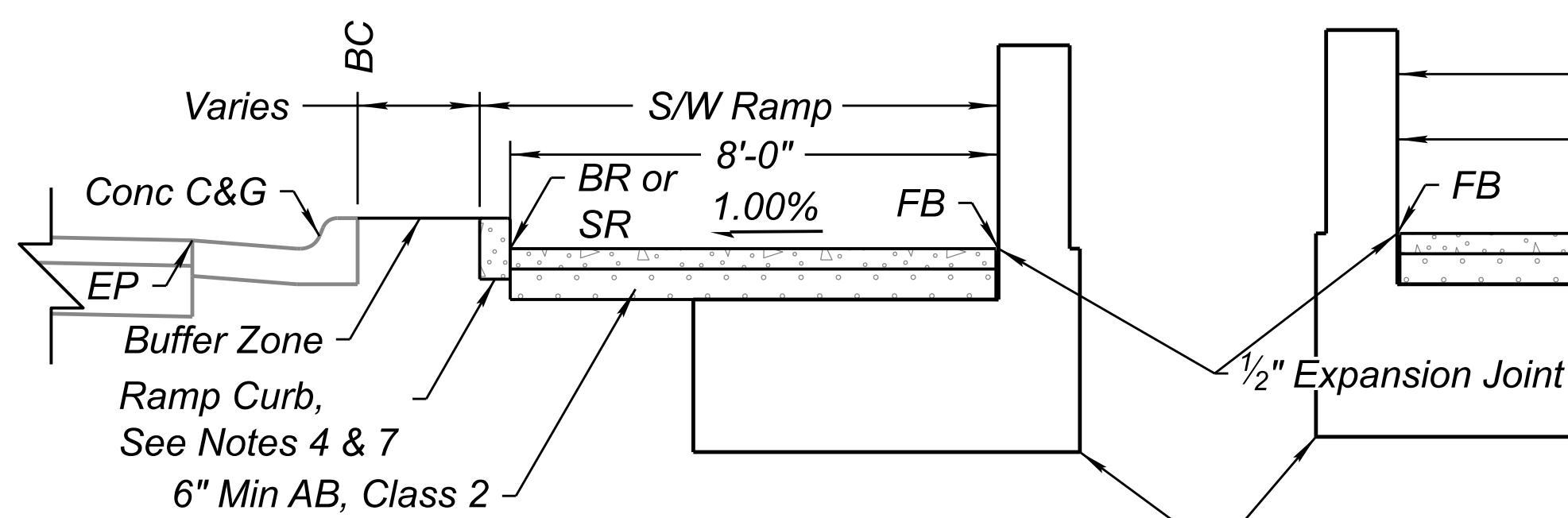
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				DETAIL SHEET		I-17 AIRPORT RD TI UP TRACS NO. F0362 01C DWG NO. G-09.02 OF



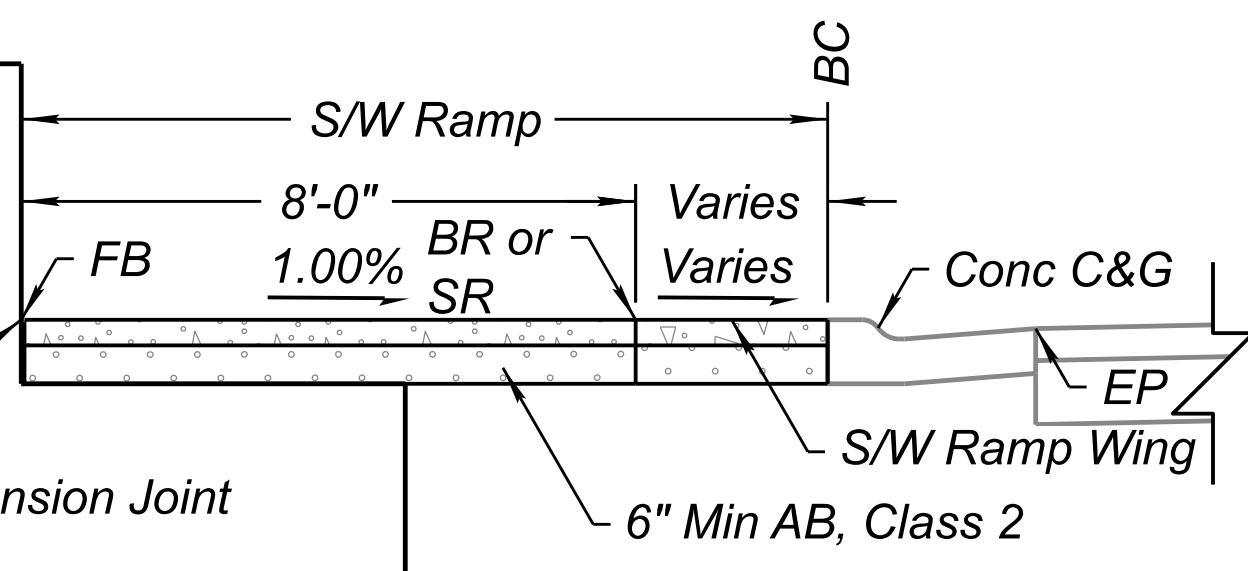
SECTION A-A



SECTION B-B



SECTION C-C



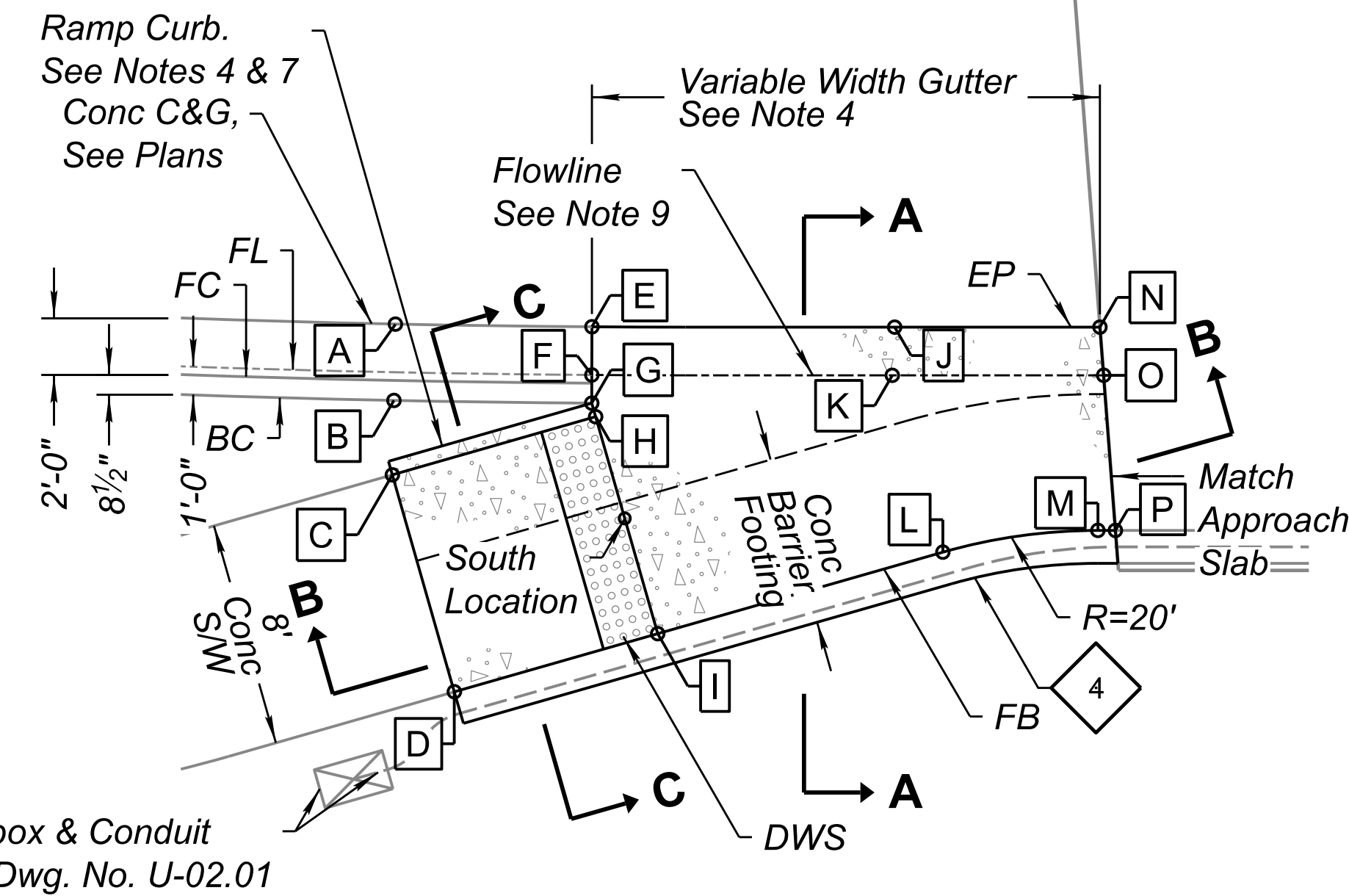
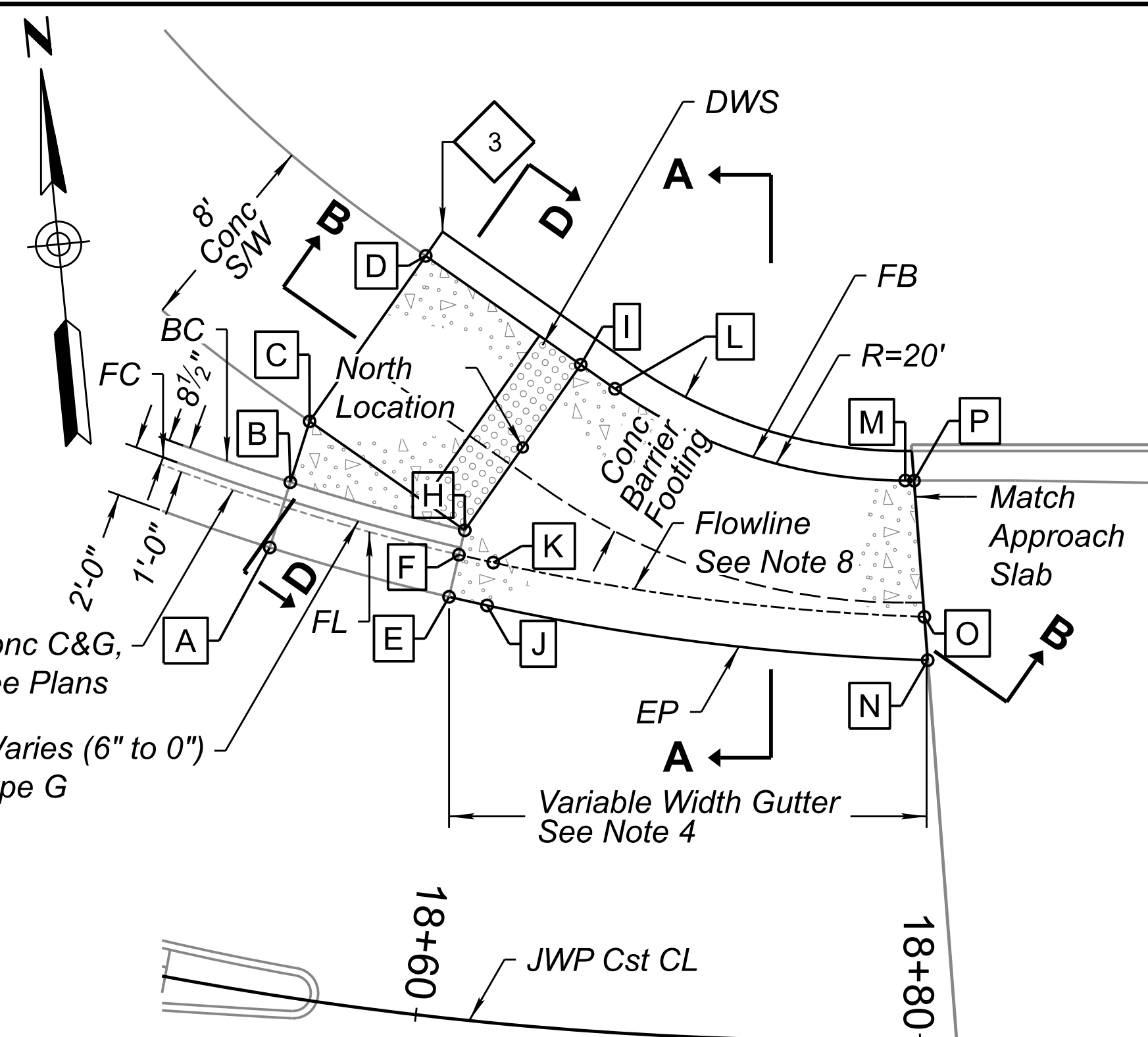
SECTION D-D

NOTES:

- For Details not shown, see Std SD 1.10, Section D-D, modify as shown. Omit Thrie Beam Connection.
- For Details & Notes not shown, see Std C-05.30.
- Conc S/W will be paid separately as Item No. 9080201.
- Conc S/W Ramp, including Ramp Wings, Ramp Curb & Variable Width Gutter, will be paid as Item No. 9080299.
- Conc Barrier will be paid separately as Item No. 6011150.
- Conc C&G will be paid separately as Item No. 9080081.
- See Std C-05.30, Sht 1 of 7 for Ramp Curb details.
- Gutter depression not applicable, match pavement cross slope.
- Transition gutter depression from 1 1/8" at point F to a 2% cross slope at point O. Match the bridge approach slab cross slope.

Location	S/W Ramp Area (Sq Ft)
North	208
South	219

Location	Conc S/W Ramp					
	North			South		
	Station	Offset	Elev	Station	Offset	Elev
	18+61.87	22.78' Lt	--	18+67.25	22.19' Rt	--
A	18+51.06	17.45' Lt	7011.68 EP	18+59.49	16.10' Rt	7011.15 EP
B	18+51.46	20.14' Lt	7012.22 BC	18+59.73	18.79' Rt	7011.51 BC
C	18+51.85	22.64' Lt	7012.22 BR	18+59.96	21.42' Rt	7011.51 BR
D	18+56.11	29.83' Lt	7012.30 FB	18+62.55	28.82' Rt	7011.59 FB
E	18+59.30	16.58' Lt	7011.82 EP	18+65.78	15.50' Rt	7011.29 EP
F	18+59.51	18.27' Lt	7011.86 FL	18+65.89	17.20' Rt	7011.15 FL
G	--	--	--	18+65.96	18.20' Rt	7011.65 BC
H	18+59.64	19.27' Lt	7011.92 BC/SR	18+66.12	18.67' Rt	7011.16 SR
I	18+64.22	26.26' Lt	7012.00 FB	18+68.48	26.19' Rt	7011.24 FB
J	18+61.09	16.42' Lt	7011.85 EP	18+75.51	15.02' Rt	7011.50 EP
K	18+61.09	18.12' Lt	7011.89 FL	18+75.46	16.72' Rt	7011.44 FL
L	18+65.96	25.42' Lt	7011.98 FB/PC	18+77.09	22.98' Rt	7011.40 FB/PC
M	18+79.42	22.17' Lt	7012.33 FB/PT	18+82.52	22.21' Rt	7011.51 FB/PT
N	18+80.30	15.05' Lt	7012.21 EP	18+82.59	15.00' Rt	7011.65 EP
O	18+80.17	16.77' Lt	7012.24 FL	18+82.74	17.00' Rt	7011.61 FL
P	18+79.76	22.17' Lt	7012.35 FB	18+83.14	22.21' Rt	7011.52 FB



ABBREVIATIONS:

- Not Applicable
- BC Back of Curb
- BR Back of Ramp
- C&G Curb & Gutter
- DWS Detectable Warning Strip
- EP Edge of Pvmnt / Lip of Gutter
- FB Face of Barrier
- FL Flowline
- NTS Not to Scale
- SR Sidewalk Ramp
- S/W Sidewalk


LEGEND:


- [Symbol] Conc S/W Ramp, See Notes
- [Symbol] Aggregate Base
- [Symbol] Detectable Warning Strip, Std C-05.30, See Notes

DETAIL C

CONCRETE SIDEWALK RAMP, SPECIAL

	NAME: J.NOYES DATE: 10/23 DESIGN: J.NOYES DRAWN: J.NOYES CHECKED: L.BUSENBARK DATE: 10/23	ROUTE: I-17 MILEPOST: 337.39 STRUCTURE NO.:	F.H.W.A. Arizona Division STATE: ARIZ. PROJECT NO.: 017 CN 337 FEDERAL ID NO.: 017-B(237)T SHEET NO.: 12 TOTAL SHEETS: 123	RECORD DRAWING
	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SECTION	LOCATION: I-17 AIRPORT RD TI UP TRACS NO.: F0362 01C	DWG NO.: G-09.03 OF	

PRIMARY STATIC NETWORK CONTROL (ADJUSTED)				
Point 	Ground (E)	Ground (N)	Elevation	Description
1	770164.388	1509986.933	7002.360	Purple Sage
2	795978.800	1385545.568	6392.264	Q 345
3	790941.108	1405414.254	6484.299	Tree
4	782926.479	1438097.600	6630.836	MP 4
5	769532.627	1450034.966	6687.050	G 345
6	784476.245	1534301.457	7111.312	Flagstaff NCMN RM 3
7	770205.537	1509972.666	7001.253	PK Nail CK Shot
26	784476.279	1534301.260	7111.639	CK PT 6 Flagstaff NCMC RM3

SECONDARY CONTROL POINTS				
Point 	Ground (E)	Ground (N)	Elevation	Description
11	768727.580	1504229.328	6912.845	Set Pavement Nail PP1
12	769839.648	1503976.686	6937.863	Set 60D Nail PP2
13	768761.195	1505838.259	6985.401	Set 60D Nail PP3
14	769558.974	1505612.748	6977.577	Set Pavement Nail PP4
15	768808.153	1506951.697	7003.434	Set Pavement Nail PP5
16	770425.310	1505275.398	6985.219	Set 60D Nail PP6
17	769768.313	1508896.778	6974.999	Set 60D Nail PP7
18	770363.569	1508423.098	6995.623	Set 60D Nail PP8
19	770155.718	1509926.042	7001.570	Set 60D Nail PP9
20	770803.147	1509667.247	6984.356	Set 60D Nail PP10
21	769076.252	1507835.282	6991.486	Set Pavement Nail PP11
24	770826.767	1507113.970	7003.864	Set 60D Nail PP14
25	769988.420	1507581.132	7003.150	Set Pavement Nail PP15

GENERAL NOTES

The following parameters were set for the basis of this survey:

System: HARN/AZ Arizona State Plane
 Zone: Central Zone
 Datum: HARN/AZ

Units = International Feet
 (1 Feet = 0.3048 Meters exactly)

Direct satellite measurements were made on each point in the geocentric coordinate system of WGS 84 and automatic translations were made to the North American Datum of 1983 and to the ground scaled version of the State Plane grid system.

A ground adjustment factor of 1.0004380000 was provided by ADOT and used by ADOT Field Survey for project F0362 and utilized for this project.

Basis of Bearings:

ADOT Engineering Survey Services surveyed and provided coordinates for the project, using direct GPS satellite measurements. Coordinates are based on NAD 83/92, Arizona State Plane Central Zone (0202), international feet, with a Grid Adjustment Factor (GAF) of 1.000438 applied.





Basis of Alignments and Stations:


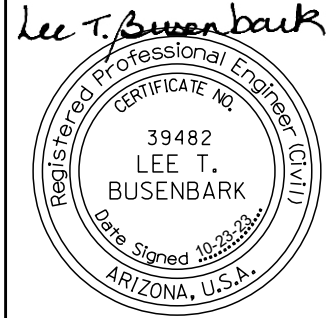
Best fit alignment was derived from ESS project PM 3787, in 2007.

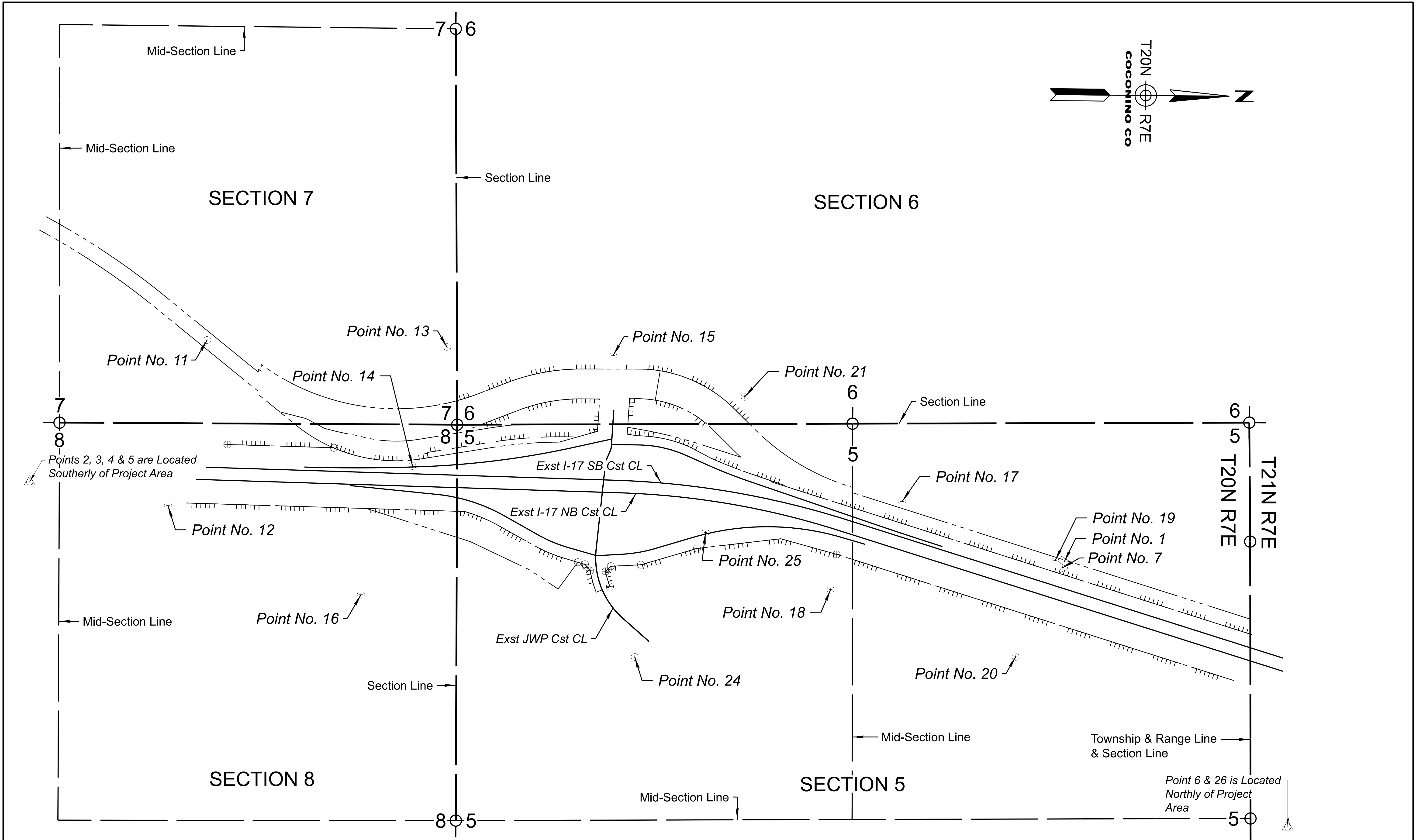
Basis of Elevations:

NGS Monument marked "G345", with elevation 6,687.05 feet (NAVD '88), was held as basis of elevations for this project.

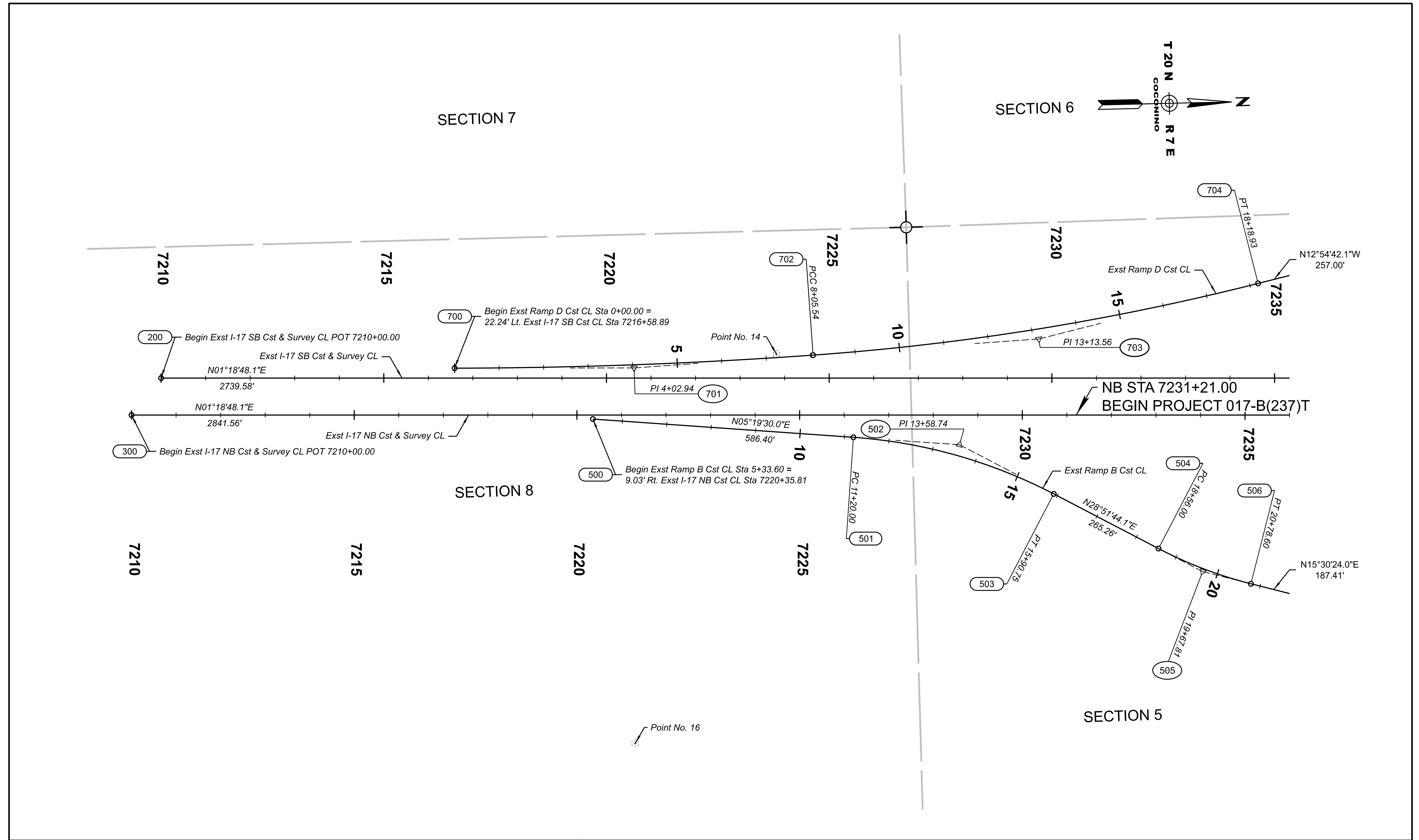
LEGEND

-  Primary Control Point
-  Secondary Control Point
-  Geometric Control Point
-  Geometric Curve Number

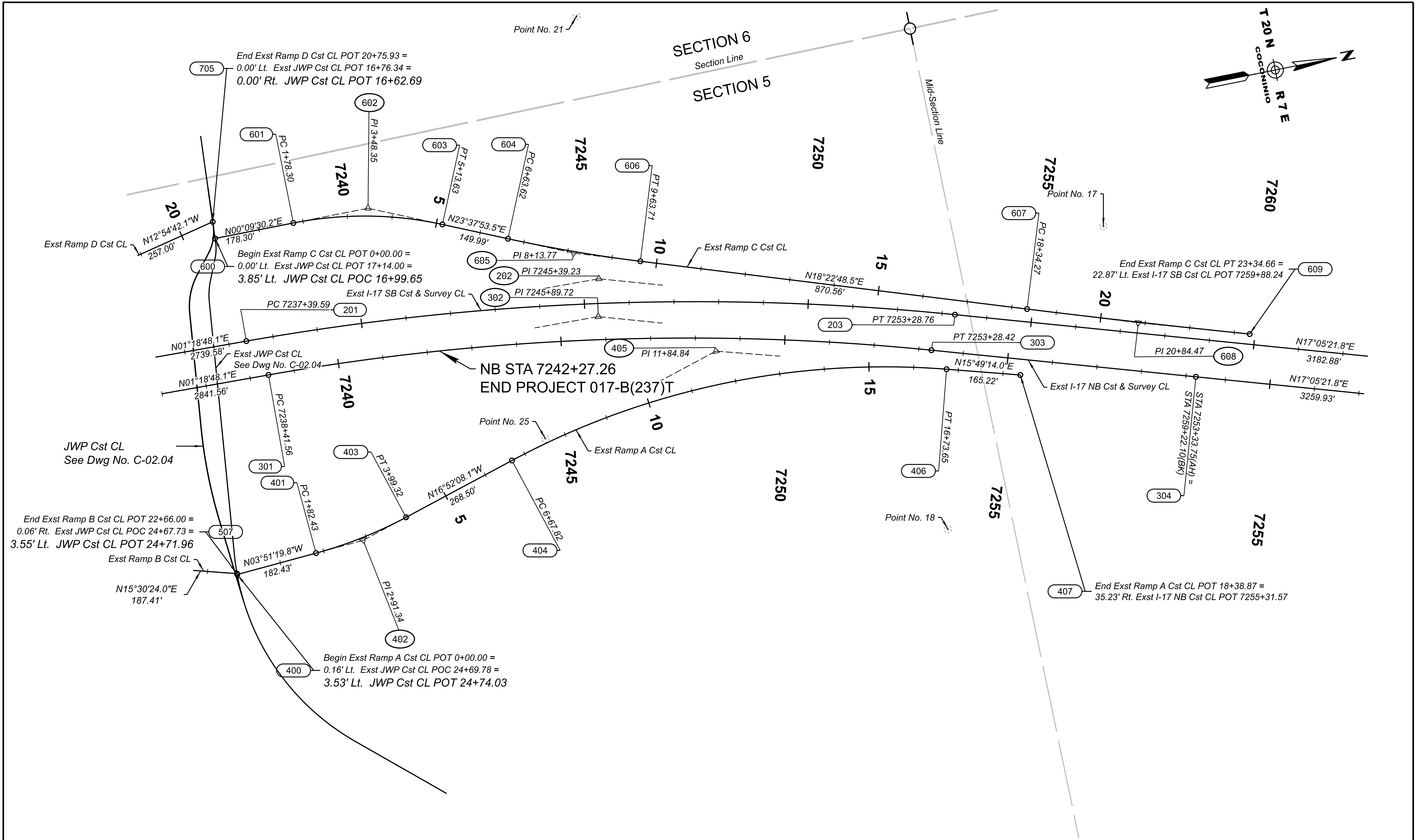
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		DRAWN	J.NOYES	10/23		MILEPOST	337.39		LOCATION	I-17 AIRPORT RD TI UP				DWG NO.	C-01.01				
CHECKED	L.BUSENBARK	10/23	STRUCTURE NO.			SURVEY CONTROL SHEET	TRACS NO.	F0362 01C											OF



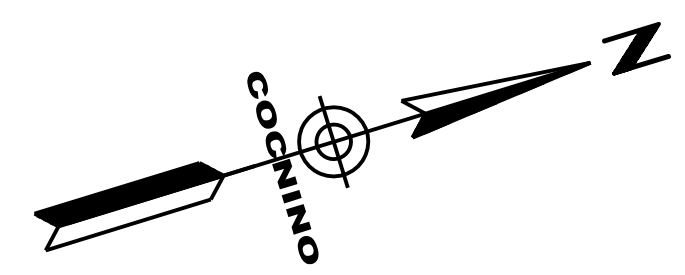
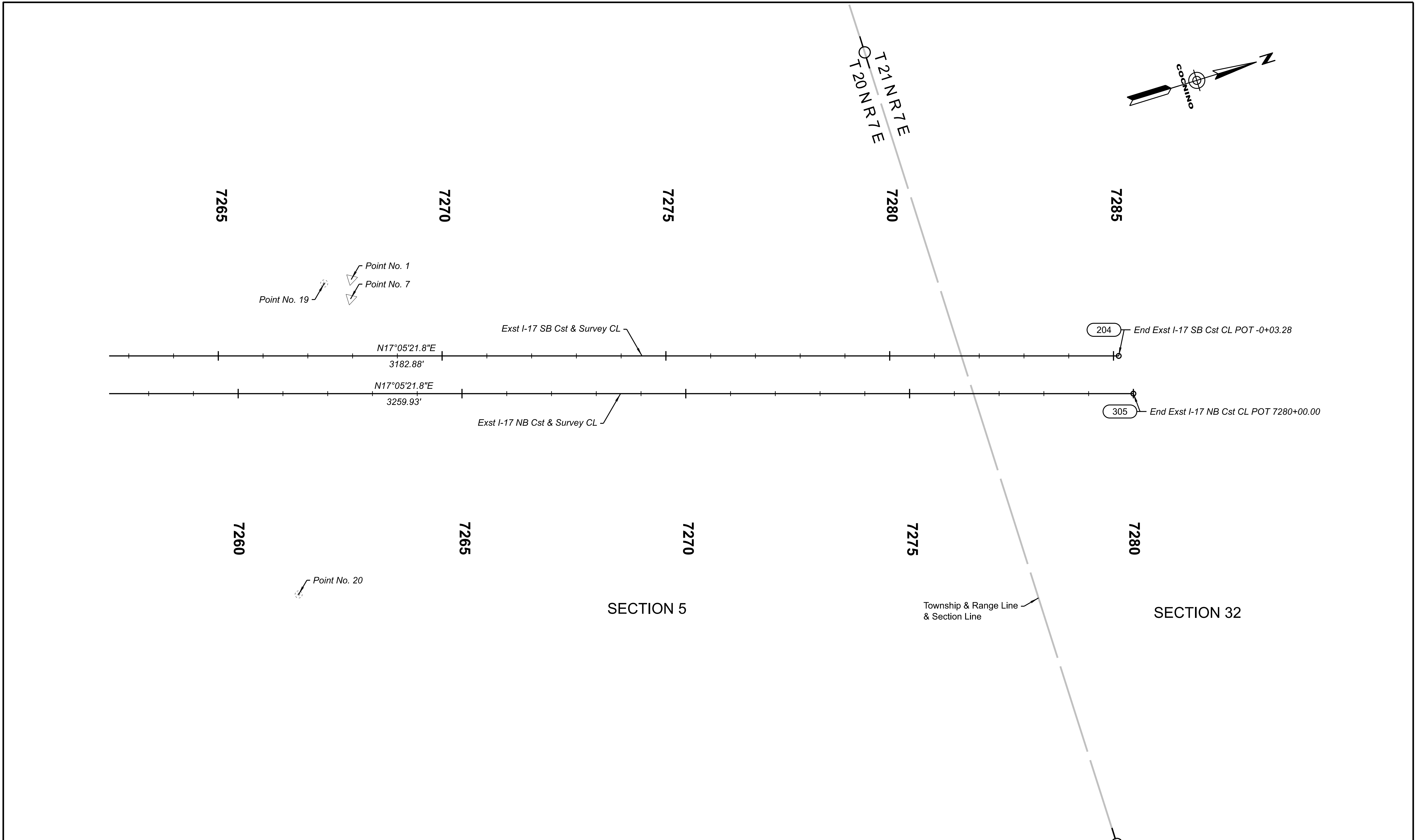
		DESIGN J.NOYES 10/23 DRAWN J.NOYES 10/23 CHECKED L.BUSENBARK 10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SECTION SURVEY CONTROL PLAN SHEET	ROUTE I-17 MILEPOST 337.39 STRUCTURE NO.	F.H.W.A. Arizona Division STATE ARIZ.	PROJECT NO. 017 CN 337 FEDERAL ID NO. 017-B(237)T	SHEET NO. 14 TOTAL SHEETS 123	RECORD DRAWING
		HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL: (602) 522-7700		LOCATION I-17 AIRPORT RD TI UP TRACS NO. F0362 01C			DWG NO. C-01.02 ____ OF ____	



		NAME: J. NOYES DATE: 10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SECTION	ROUTE: I-17 MILEPOST: 337.39 STRUCTURE NO.:	F.H.W.A. Arizona Division STATE: ARIZ.	PROJECT NO.: 017 CN 337 FEDERAL ID NO.: 017-B(237)T	SHEET NO.: 15 TOTAL SHEETS: 123	RECORD DRAWING
		DESIGN: J. NOYES DRAWN: J. NOYES CHECKED: L. BUSENBARK		HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL: (602) 522-7700	LOCATION: I-17 AIRPORT RD TI UP TRACS NO.: F0362 01C	DWG NO.: C-02.01 OF		






	DESIGN J.NOYES 10/23 DRAWN J.NOYES 10/23 CHECKED L.BUSENBARK 10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SECTION GEOMETRIC LAYOUT SHEET	ROUTE I-17 MILEPOST 337.39 STRUCTURE NO.	F.H.W.A. Arizona Division STATE ARIZ. LOCATION I-17 AIRPORT RD TI UP TRACS NO. F0362 01C	PROJECT NO. 017 CN 337 FEDERAL ID NO. 017-B(237)T SHEET NO. 16 TOTAL SHEETS 123	RECORD DRAWING DWG NO. C-02.02 OF
			HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL: (602) 522-7700	STATE OF ARIZONA PROFESSIONAL ENGINEER LEE T. BUSENBARK No. 39482 State of Arizona		

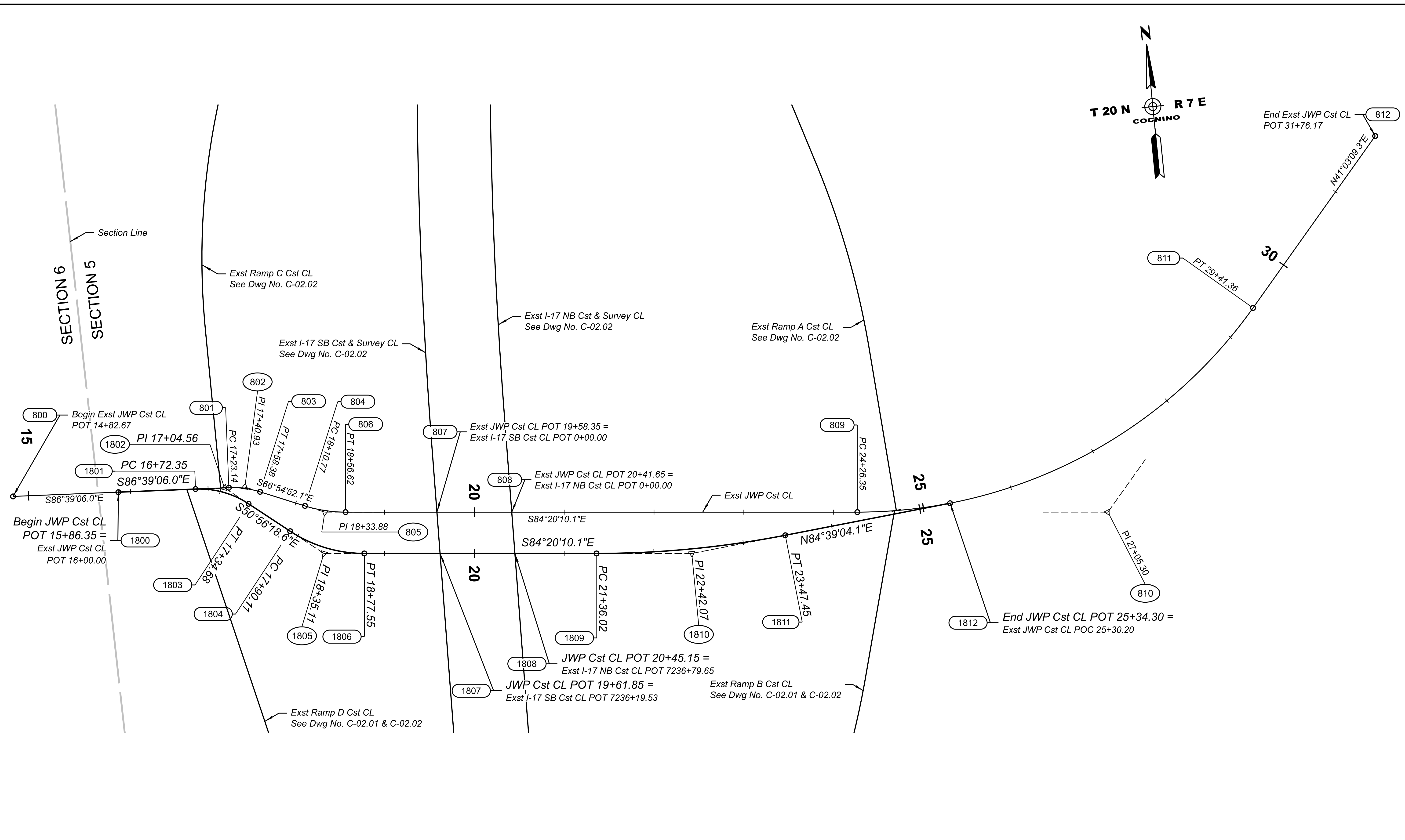
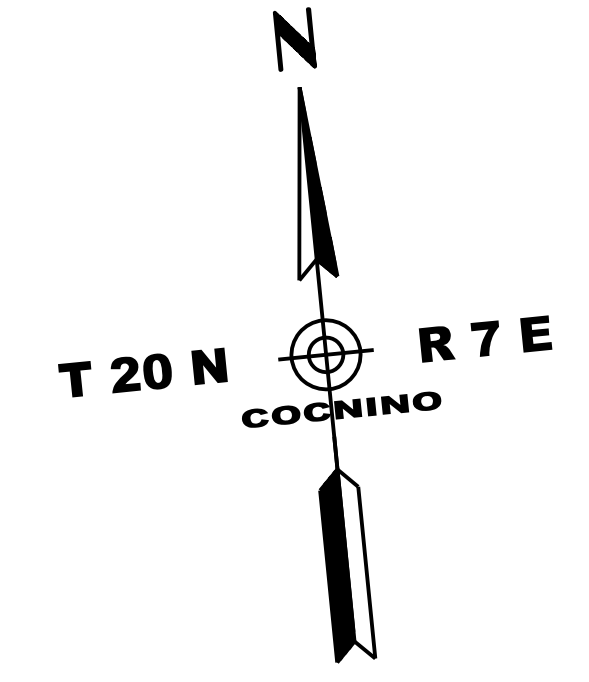


SECTION 5

SECTION 32

Township & Range Line
& Section Line

		<table border="1"> <tr> <th>NAME</th> <th>DATE</th> </tr> <tr> <td>DESIGN J.NOYES</td> <td>10/23</td> </tr> <tr> <td>DRAWN J.NOYES</td> <td>10/23</td> </tr> <tr> <td>CHECKED L.BUSENBARK</td> <td>10/23</td> </tr> </table>	NAME	DATE	DESIGN J.NOYES	10/23	DRAWN J.NOYES	10/23	CHECKED L.BUSENBARK	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SECTION	ROUTE I-17	F.H.W.A. Arizona Division	STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 17	TOTAL SHEETS 123	RECORD DRAWING
		NAME	DATE																
		DESIGN J.NOYES	10/23																
DRAWN J.NOYES	10/23																		
CHECKED L.BUSENBARK	10/23																		
 HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL: (602) 522-7700	MILEPOST 337.39	LOCATION I-17 AIRPORT RD TI UP			DWG NO. C-02.03 ____ OF ____														
GEOMETRIC LAYOUT SHEET		STRUCTURE NO.	TRACS NO. F0362 01C																



		DESIGN	J.NOYES	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SECTION	ROUTE	I-17	F.H.W.A. Arizona Division STATE: ARIZ. PROJECT NO.: 017 CN 337 FEDERAL ID NO.: 017-B(237)T SHEET NO.: 18 TOTAL SHEETS: 123 RECORD DRAWING	
		DRAWN	J.NOYES	10/23		MILEPOST	337.39		
		CHECKED	L.BUSENBARK	10/23		STRUCTURE NO.			
HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL: (602) 522-7700					GEOMETRIC LAYOUT SHEET				LOCATION: I-17 AIRPORT RD TI UP TRACS NO.: F0362 01C DWG NO.: C-02.04 OF

**Horizontal Elements Table Report
Exst I-17 SB Survey CL**

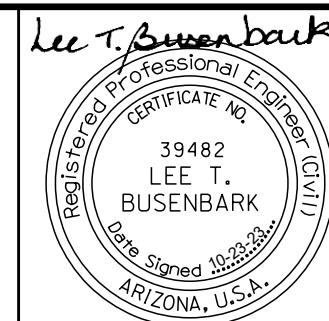
Point Number	Point Type	Station	Northing	Easting	Delta	Direction	Radius	Tangent	Length	External
200	POT	7210+00.00	1504230.138	769580.601						
201	PC	7237+39.59	1506969.006	769643.394						
202	PI	7245+39.23	1507768.439	769661.722	15°46'34"	Right	5,771.58 ft	799.64 ft	1,589.17 ft	55.13 ft
203	PT	7253+28.76	1508532.775	769896.708						
204	POT	7285+11.64	1511575.126	770832.041						

**Horizontal Elements Table Report
Exst I-17 NB Survey CL**

Point Number	Point Type	Station	Northing	Easting	Delta	Direction	Radius	Tangent	Length	External
300	POT	7210+00.00	1504161.812	769662.114						
301	PC	7238+41.56	1507002.627	769727.244						
302	PI	7245+89.72	1507750.591	769744.392	15°14'34"	Right	5,400.00 ft	748.16 ft	1,486.86 ft	51.58 ft
303	PT	7253+28.42	1508465.719	769964.249						
304	EqnBk	7259+22.10	1509033.189	770138.711						
	EqnAhd	7253+33.75								
305	POT	7280+00.00	1511581.717	770922.224						

**Horizontal Elements Table Report
Exst Ramp A Survey CL**

Point Number	Point Type	Station	Northing	Easting	Delta	Direction	Radius	Tangent	Length	External
400	POT	0+00.00	1506846.520	770150.767						
401	PC	1+82.43	1507028.537	770138.500						
402	PI	2+91.34	1507137.204	770131.177	13°0'48"	Left	954.93 ft	108.91 ft	216.89 ft	6.19 ft
403	PT	3+99.32	1507241.431	770099.572						
404	PC	6+67.82	1507498.380	770021.657						
405	PI	11+84.84	1507993.150	769871.628	32°41'22"	Right	1,762.95 ft	517.02 ft	1,005.83 ft	74.25 ft
406	PT	16+73.65	1508490.582	770012.580						
407	POT	18+38.87	1508649.544	770057.623						



	NAME	DATE
DESIGN	J.NOYES	10/23
DRAWN	J.NOYES	10/23
CHECKED	L.BUSENBARK	10/23

HDR
HDR, INC.
20 E. THOMAS ROAD
SUITE 2500
PHOENIX, AZ 85012
TEL. (602) 522-7700

ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
ROADWAY DESIGN SECTION

ROUTE
I-17
MILEPOST
337.39
STRUCTURE NO.

F.H.W.A. Arizona Division	STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 19	TOTAL SHEETS 123	RECORD DRAWING
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GEOMETRIC DATA SHEET

LOCATION I-17 AIRPORT RD TI UP		DWG NO. C-03.01
TRACS NO. F0362 01C	___ OF ___	

**Horizontal Elements Table Report
Exst Ramp B Survey CL**


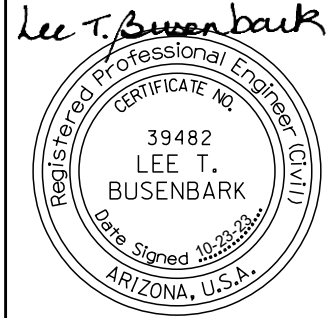

Point Number	Point Type	Station	Northing	Easting	Delta	Direction	Radius	Tangent	Length	External
500	POT	05+33.60	1505197.138	769694.883						
501	PC	11+20.00	1505781.007	769749.304						
502	PI	13+58.74	1506018.717	769771.460	23°32'14"	Right	1,145.92 ft	238.74 ft	470.75 ft	24.61 ft
503	PT	15+90.75	1506227.802	769886.701						
504	PC	18+56.00	1506460.109	770014.742						
505	PI	19+67.81	1506558.024	770068.710	13°21'20"	Left	954.93 ft	111.80 ft	222.59 ft	6.52 ft
506	PT	20+78.60	1506665.758	770098.601						
507	POT	22+66.00	1506846.343	770148.704						

**Horizontal Elements Table Report
Exst Ramp C Survey CL**

Point Number	Point Type	Station	Northing	Easting	Delta	Direction	Radius	Tangent	Length	External
600	POT	0+00.00	1506945.570	769404.768						
601	PC	1+78.30	1507123.869	769405.261						
602	PI	3+48.35	1507293.919	769405.731	23°28'23"	Right	818.51 ft	170.05 ft	335.33 ft	17.48 ft
603	PT	5+13.63	1507449.709	769473.896						
604	PC	6+63.62	1507587.121	769534.020						
605	PI	8+13.77	1507724.680	769594.208	5°15'05"	Left	3,274.16 ft	150.15 ft	300.09 ft	3.44 ft
606	PT	9+63.71	1507867.170	769641.554						
607	PC	18+34.27	1508693.319	769916.059						
608	PI	20+84.47	1508930.760	769994.953	1°15'04"	Left	22,918.31 ft	250.20 ft	500.39 ft	1.37 ft
609	PT	23+34.69	1509169.867	770068.645						

**Horizontal Elements Table Report
Exst Ramp D Survey CL**

Point Number	Point Type	Station	Northing	Easting	Delta	Direction	Radius	Tangent	Length	External
700	PC	0+00.00	1504889.367	769573.474						
701	PI	4+02.94	1505292.207	769582.263	4°01'40"	Left	11,459.16 ft	402.94 ft	805.54 ft	7.08 ft
702	PCC	8+05.54	1505694.670	769562.735						
703	PI	13+13.56	1506202.093	769538.115	10°08'02"	Left	5,729.58 ft	508.02 ft	1,013.39 ft	22.48 ft
704	PT	18+18.93	1506697.268	769424.599						
705	POT	20+75.93	1506947.770	769367.172						


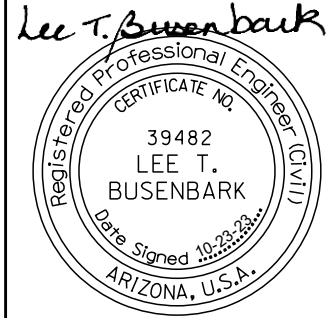

		NAME: J.NOYES DATE: 10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SECTION	ROUTE: I-17	F.H.W.A. Arizona Division	STATE: ARIZ.	PROJECT NO.: 017 CN 337	FEDERAL ID NO.: 017-B(237)T	SHEET NO.: 20	TOTAL SHEETS: 123	RECORD DRAWING
		DESIGN: J.NOYES DRAWN: J.NOYES CHECKED: L.BUSENBARK		MILEPOST: 337.39		LOCATION: I-17 AIRPORT RD TI UP			DWG NO.: C-03.02		
 HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL: (602) 522-7700			GEOMETRIC DATA SHEET		TRACS NO.: F0362 01C		_____ OF _____				

**Horizontal Elements Table Report
Exst JW Powell Blvd Cst & Survey CL**

Point Number	Point Type	Station	Northing	Easting	Delta	Direction	Radius	Tangent	Length	External
800	POT	14+82.67	1506959.081	769173.837						
801	PC	17+23.14	1506945.037	769413.888						
802	PI	17+40.93	1506943.997	769431.656	19°44'14"	Right	102.31 ft	17.80 ft	35.24 ft	1.54 ft
803	PT	17+58.38	1506937.018	769448.029						
804	PC	18+10.77	1506916.474	769496.227						
805	PI	18+33.88	1506907.416	769517.479	17°25'18"	Left	150.78 ft	23.10 ft	45.85 ft	1.76 ft
806	PT	18+56.62	1506905.136	769540.468						
807	POT	19+58.35	1506895.096	769641.699						
808	POT	20+41.65	1506886.875	769724.590						
809	PC	18+10.77	1506916.474	769496.227						
810	PI	18+33.88	1506907.416	769517.479	17°25'18"	Left	150.78 ft	23.10 ft	45.85 ft	1.76 ft
811	PT	18+56.62	1506905.136	769540.468						
812	POT	18+10.77	1506916.474	769496.227						

**Horizontal Elements Table Report
JW Powell Blvd Cst CL**

Point Number	Point Type	Station	Northing	Easting	Delta	Direction	Radius	Tangent	Length	External
1800	POT	15+86.35	1506952.228	769290.963						
1801	PC	16+72.35	1506947.205	769376.817						
1802	HPI	17+04.56	1506945.324	769408.978	35°42'47"	Right	100.00 ft	32.22 ft	62.33 ft	5.06 ft
1803	PT	17+34.68	1506925.023	769433.992						
1804	PC	17+90.11	1506890.092	769477.033						
1805	HPI	18+35.11	1506861.736	769511.974	33°23'51"	Left	150.00 ft	45.00 ft	87.43 ft	6.60 ft
1806	PT	18+77.55	1506857.295	769556.753						
1807	POT	19+61.85	1506848.975	769640.642						
1808	POT	20+45.15	1506840.755	769723.533						
1809	PC	21+36.02	1506831.786	769813.968						
1810	HPI	22+42.07	1506821.320	769919.492	11°00'46"	Left	1,100.00 ft	106.04 ft	211.43 ft	5.10 ft
1811	PT	18+77.55	1506857.295	769556.753						
1812	POT	25+34.30	1506848.624	770211.109						

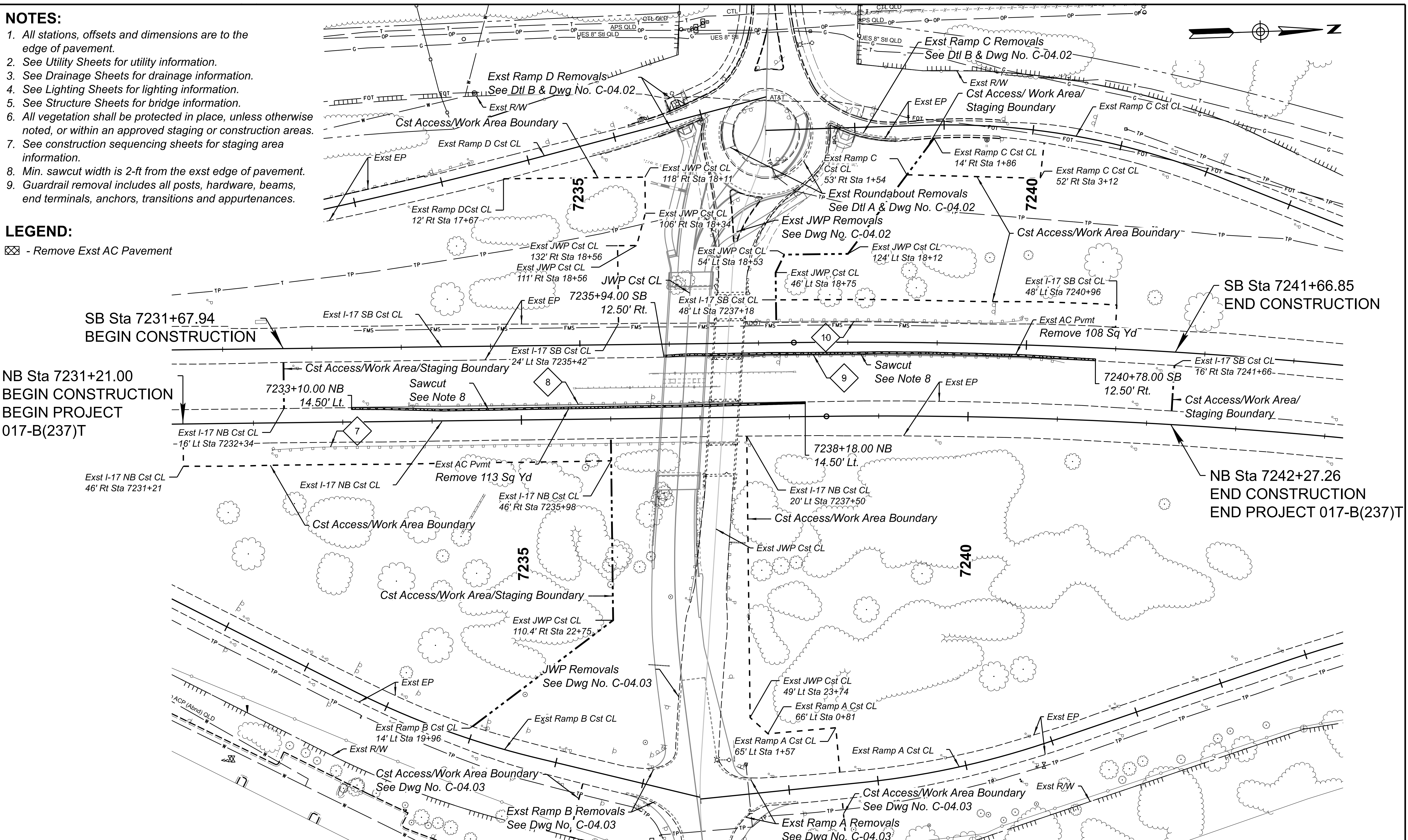
		NAME: J.NOYES DATE: 10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SECTION	ROUTE: I-17	F.H.W.A. Arizona Division	STATE: ARIZ.	PROJECT NO.: 017 CN 337	FEDERAL ID NO.: 017-B(237)T	SHEET NO.: 21	TOTAL SHEETS: 123	RECORD DRAWING
		DESIGN: J.NOYES DRAWN: J.NOYES CHECKED: L.BUSENBARK		MILEPOST: 337.39 STRUCTURE NO.		LOCATION: I-17 AIRPORT RD TI UP			DWG NO.: C-03.03		
 HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL: (602) 522-7700			GEOMETRIC DATA SHEET		TRACS NO.: F0362 01C		_____ OF _____				

NOTES:

1. All stations, offsets and dimensions are to the edge of pavement.
2. See Utility Sheets for utility information.
3. See Drainage Sheets for drainage information.
4. See Lighting Sheets for lighting information.
5. See Structure Sheets for bridge information.
6. All vegetation shall be protected in place, unless otherwise noted, or within an approved staging or construction areas.
7. See construction sequencing sheets for staging area information.
8. Min. sawcut width is 2-ft from the exst edge of pavement.
9. Guardrail removal includes all posts, hardware, beams, end terminals, anchors, transitions and appurtenances.

LEGEND:

☒ - Remove Exst AC Pavement



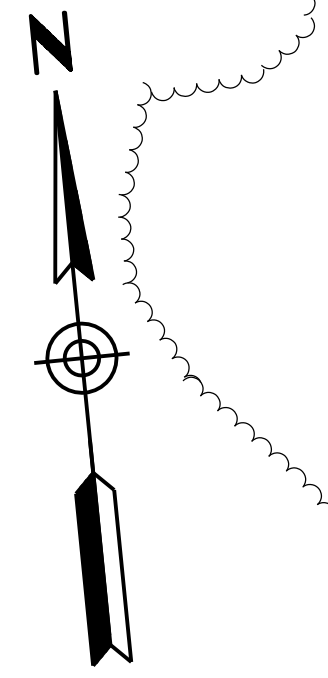
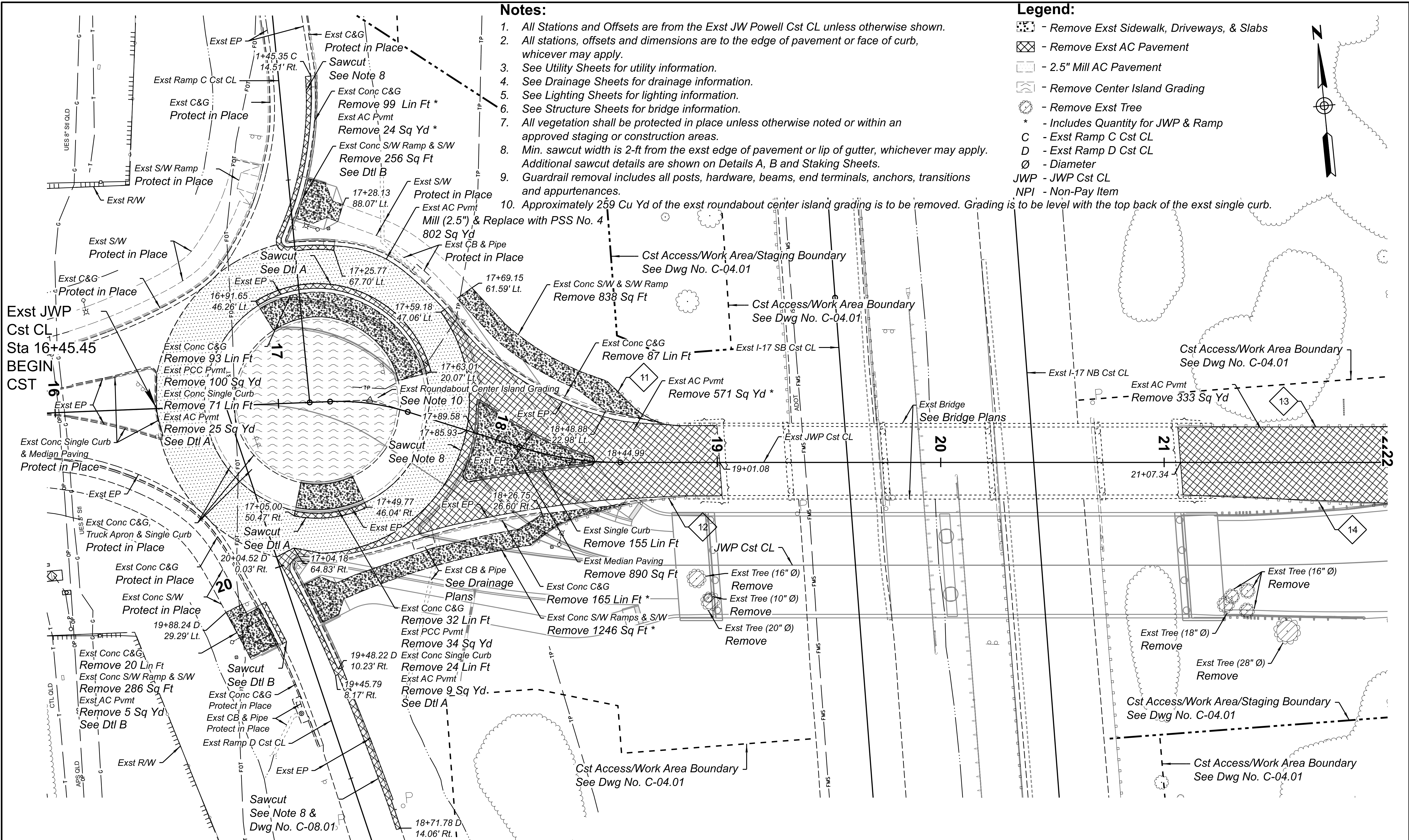
<p>! CAUTION ! HIGH PRESSURE GAS PROTECT IN PLACE</p>	<p>! CAUTION ! OVERHEAD POWER LINE PROTECT IN PLACE</p>			<p>NAME: J.NOYES DATE: 10/23</p>	<p>ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SECTION</p>	<p>ROUTE: I-17 MILEPOST: 337.39</p>	<p>F.H.W.A. Arizona Division STATE: ARIZ. PROJECT NO.: 017 CN 337 FEDERAL ID NO.: 017-B(237)T</p>	<p>SHEET NO.: 22 TOTAL SHEETS: 123</p>	<p>RECORD DRAWING</p>
				<p>CHECKED: L.BUSENBARK DATE: 10/23</p>		<p>DR. INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL: (602) 522-7700</p>			

Notes:

1. All Stations and Offsets are from the Exst JW Powell Cst CL unless otherwise shown.
2. All stations, offsets and dimensions are to the edge of pavement or face of curb, whichever may apply.
3. See Utility Sheets for utility information.
4. See Drainage Sheets for drainage information.
5. See Lighting Sheets for lighting information.
6. See Structure Sheets for bridge information.
7. All vegetation shall be protected in place unless otherwise noted or within an approved staging or construction areas.
8. Min. sawcut width is 2-ft from the exst edge of pavement or lip of gutter, whichever may apply. Additional sawcut details are shown on Details A, B and Staking Sheets.
9. Guardrail removal includes all posts, hardware, beams, end terminals, anchors, transitions and appurtenances.
10. Approximately 259 Cu Yd of the exst roundabout center island grading is to be removed. Grading is to be level with the top back of the exst single curb.

Legend:

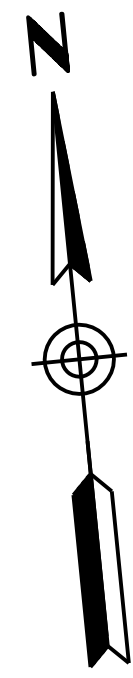
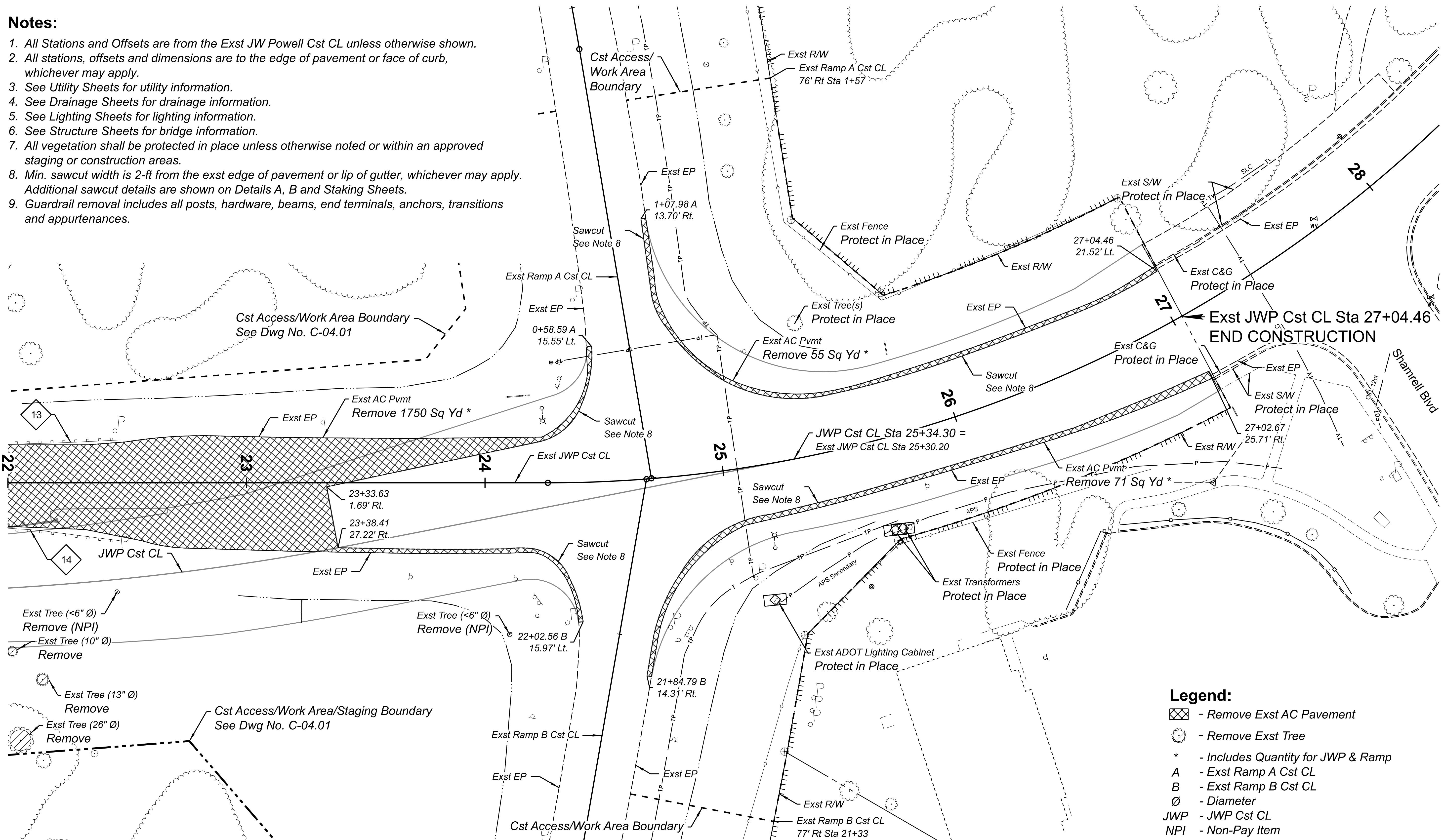
- Remove Exst Sidewalk, Driveways, & Slabs
- Remove Exst AC Pavement
- 2.5" Mill AC Pavement
- Remove Center Island Grading
- Remove Exst Tree
- * - Includes Quantity for JWP & Ramp
- C - Exst Ramp C Cst CL
- D - Exst Ramp D Cst CL
- Ø - Diameter
- JWP - JWP Cst CL
- NPI - Non-Pay Item



<p>! CAUTION ! HIGH PRESSURE GAS PROTECT IN PLACE</p>	<p>! CAUTION ! OVERHEAD POWER LINE PROTECT IN PLACE</p>			DESIGN	NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SECTION	ROUTE	F.H.W.A. Arizona Division	STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO.	TOTAL SHEETS 123	RECORD DRAWING
				DRAWN	J.NOYES	10/23		MILEPOST					I-17 337.39		
				CHECKED	L.BUSENBARK	10/23	REMOVAL PLAN EXST JW POWELL BLVD STA 16+00 TO STA 22+00	STRUCTURE NO.			TRACS NO.	F0362 01C			OF

Notes:

1. All Stations and Offsets are from the Exst JW Powell Cst CL unless otherwise shown.
2. All stations, offsets and dimensions are to the edge of pavement or face of curb, whichever may apply.
3. See Utility Sheets for utility information.
4. See Drainage Sheets for drainage information.
5. See Lighting Sheets for lighting information.
6. See Structure Sheets for bridge information.
7. All vegetation shall be protected in place unless otherwise noted or within an approved staging or construction areas.
8. Min. sawcut width is 2-ft from the exst edge of pavement or lip of gutter, whichever may apply. Additional sawcut details are shown on Details A, B and Staking Sheets.
9. Guardrail removal includes all posts, hardware, beams, end terminals, anchors, transitions and appurtenances.

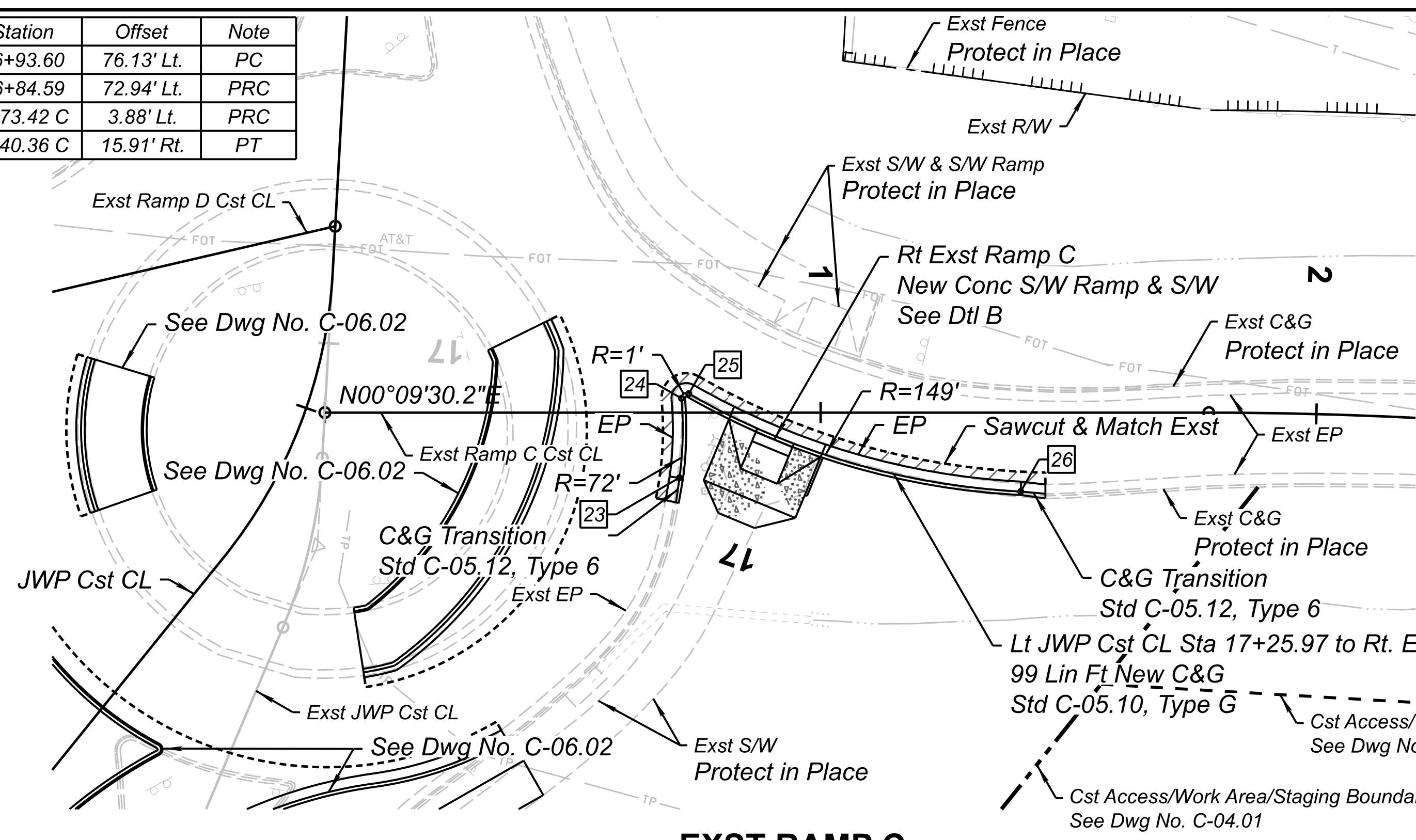
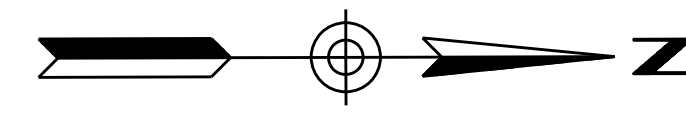


- 13
- 14
- Exst Tree (<6" Ø) Remove (NPI)
- Exst Tree (10" Ø) Remove
- Exst Tree (13" Ø) Remove
- Exst Tree (26" Ø) Remove

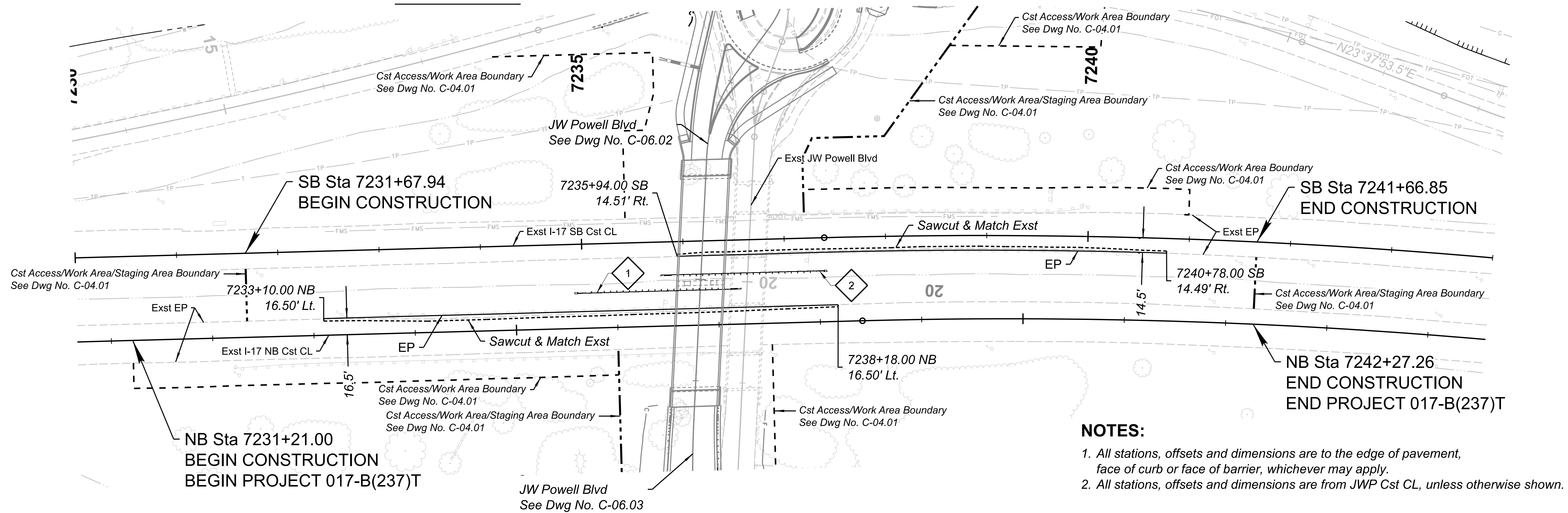
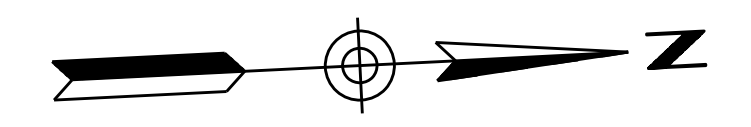
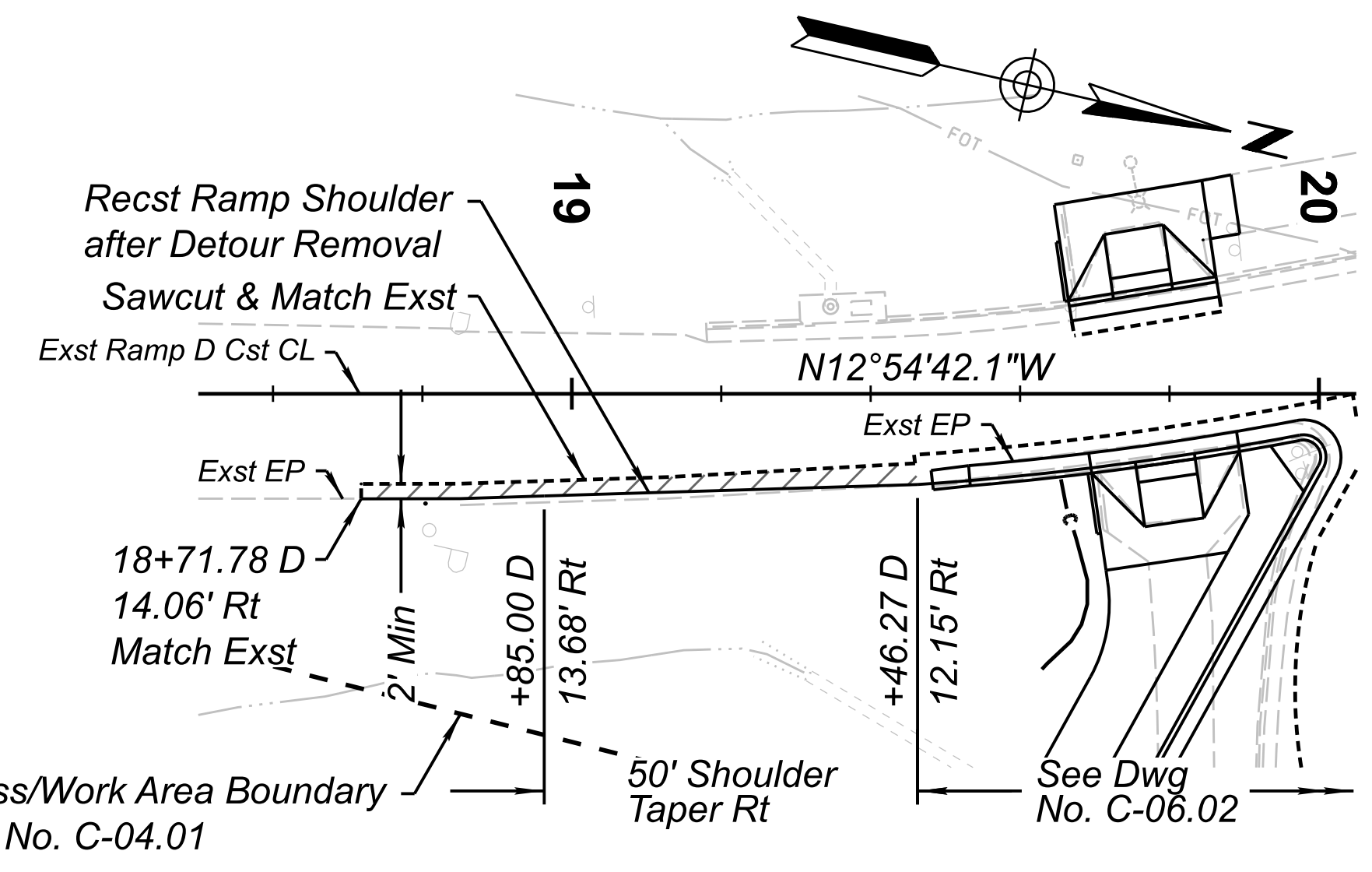
- Legend:**
- ☒ - Remove Exst AC Pavement
 - ⊗ - Remove Exst Tree
 - * - Includes Quantity for JWP & Ramp
 - A - Exst Ramp A Cst CL
 - B - Exst Ramp B Cst CL
 - Ø - Diameter
 - JWP - JWP Cst CL
 - NPI - Non-Pay Item
 - XJWP - Exst JWP Cst CL

	DESIGN J.NOYES 10/23 DRAWN J.NOYES 10/23 CHECKED L.BUSENBARK 10/23	NAME J.NOYES DATE 10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SECTION	ROUTE I-17	F.H.W.A. Arizona Division STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 24	TOTAL SHEETS 123	RECORD DRAWING
	HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL: (602) 522-7700	MILEPOST 337.39		LOCATION I-17 AIRPORT RD TI UP						

Pt No.	Station	Offset	Note
23	16+93.60	76.13' Lt.	PC
24	16+84.59	72.94' Lt.	PRC
25	0+73.42 C	3.88' Lt.	PRC
26	1+40.36 C	15.91' Rt.	PT



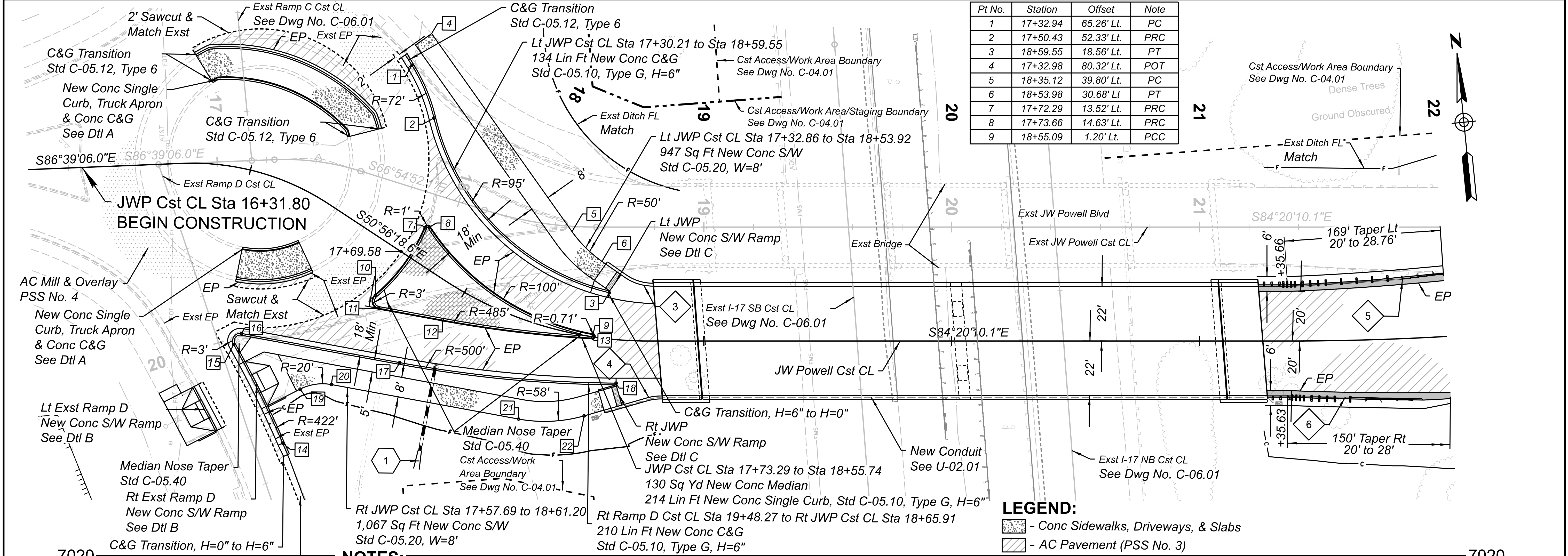
- LEGEND:**
- New Sidewalks, Driveways, & Slabs
 - New AC Pavement
 - C - Exst Ramp C Cst CL
 - NB - Exst I-17 NB Cst CL
 - SB - Exst I-17 SB Cst CL
 - # - Point Number (Pt No.)



NOTES:

- All stations, offsets and dimensions are to the edge of pavement, face of curb or face of barrier, whichever may apply.
- All stations, offsets and dimensions are from JWP Cst CL, unless otherwise shown.

! CAUTION ! HIGH PRESSURE GAS PROTECT IN PLACE	! CAUTION ! OVERHEAD POWER LINE PROTECT IN PLACE		DESIGN	J. NOYES	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SECTION	ROUTE	I-17	F.H.W.A. Arizona Division	STATE	ARIZ.	PROJECT NO.	017 CN 337	FEDERAL ID NO.	017-B(237)T	SHEET NO.	25	TOTAL SHEETS	123	RECORD DRAWING	
			DRAWN	J. NOYES	10/23		STATE	ARIZ.		PROJECT NO.	017 CN 337	FEDERAL ID NO.	017-B(237)T	SHEET NO.	25	TOTAL SHEETS	123				
Contact Arizona 811 at least two full working days before you begin excavation 			CHECKED	L. BUSENBARK	10/23	HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL: (602) 522-7700	MILEPOST	337.39	LOCATION	I-17 AIRPORT RD TI UP						DWG NO.	C-06.01				
							STRUCTURE NO.		TRACS NO.	F0362 01C											OF



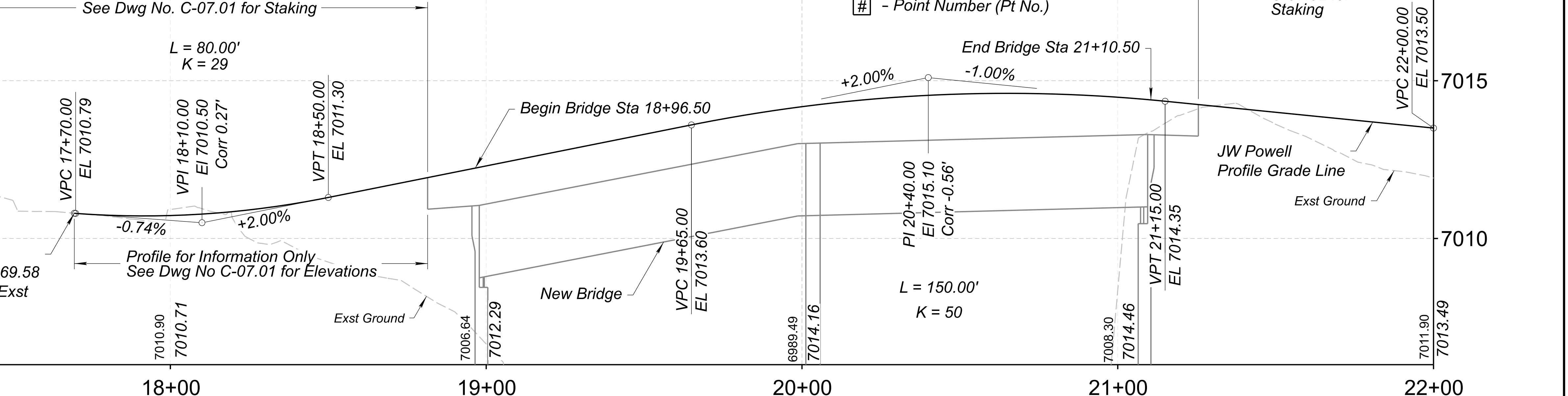
Pt No.	Station	Offset	Note
1	17+32.94	65.26' Lt.	PC
2	17+50.43	52.33' Lt.	PRC
3	18+59.55	18.56' Lt.	PT
4	17+32.98	80.32' Lt.	POT
5	18+35.12	39.80' Lt.	PC
6	18+53.98	30.68' Lt.	PT
7	17+72.29	13.52' Lt.	PRC
8	17+73.66	14.63' Lt.	PRC
9	18+55.09	1.20' Lt.	PCC

- LEGEND:**
- Conc Sidewalks, Driveways, & Slabs
 - AC Pavement (PSS No. 3)
 - Concrete Median Pavement, Rough Broom Finish
 - AC Pavement per Std C-10.01
 - D - Exst Ramp D Cst CL
 - # - Point Number (Pt No.)

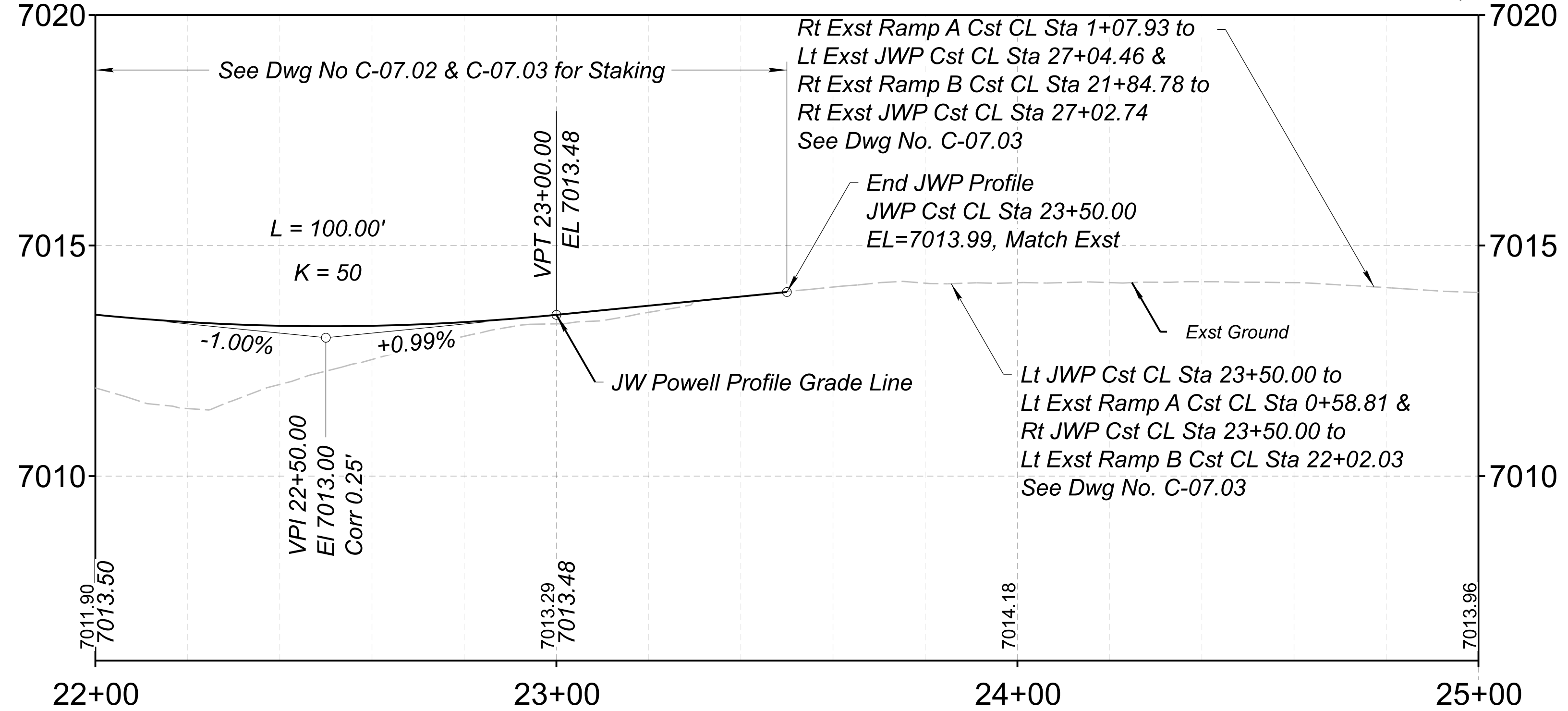
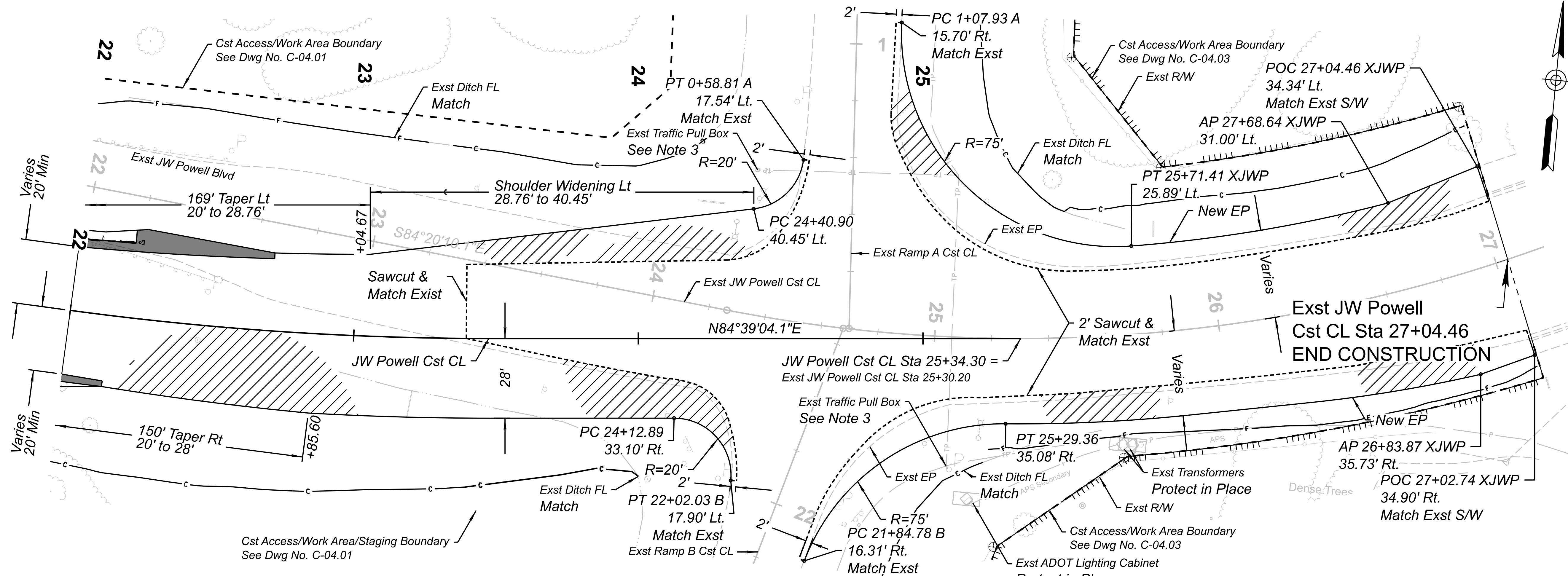
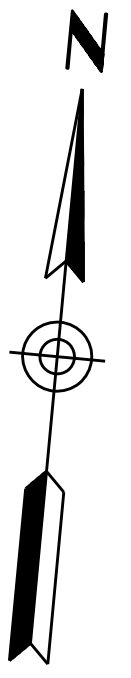
- NOTES:**
- All stations, offsets and dimensions are to the edge of pavement, face of curb, face of barrier, or edge of sidewalk, whichever may apply.
 - All stations and offsets are referenced from JWP Cst CL, unless otherwise shown.

Exst Ramp D Rt. Shoulder
See Dwg No. C-06.01

Pt No.	Station	Offset	Note
10	17+75.54	20.45' Rt.	PRC
11	17+74.69	24.06' Rt.	PT
12	17+98.03	14.09' Rt.	PC
13	18+85.18	0.80' Rt.	PCC
14	19+53.26 D	11.62' Rt.	PC
15	19+97.37 D	5.55' Rt.	PRC
16	17+32.73	63.03' Rt.	PT
17	17+93.03	37.74' Rt.	PC
18	18+65.91	17.49' Rt.	PT
19	17+66.09	68.78' Rt.	PC
20	17+75.67	60.25' Rt.	PT
21	18+35.45	38.89' Rt.	PC
22	18+56.17	32.07' Rt.	PT

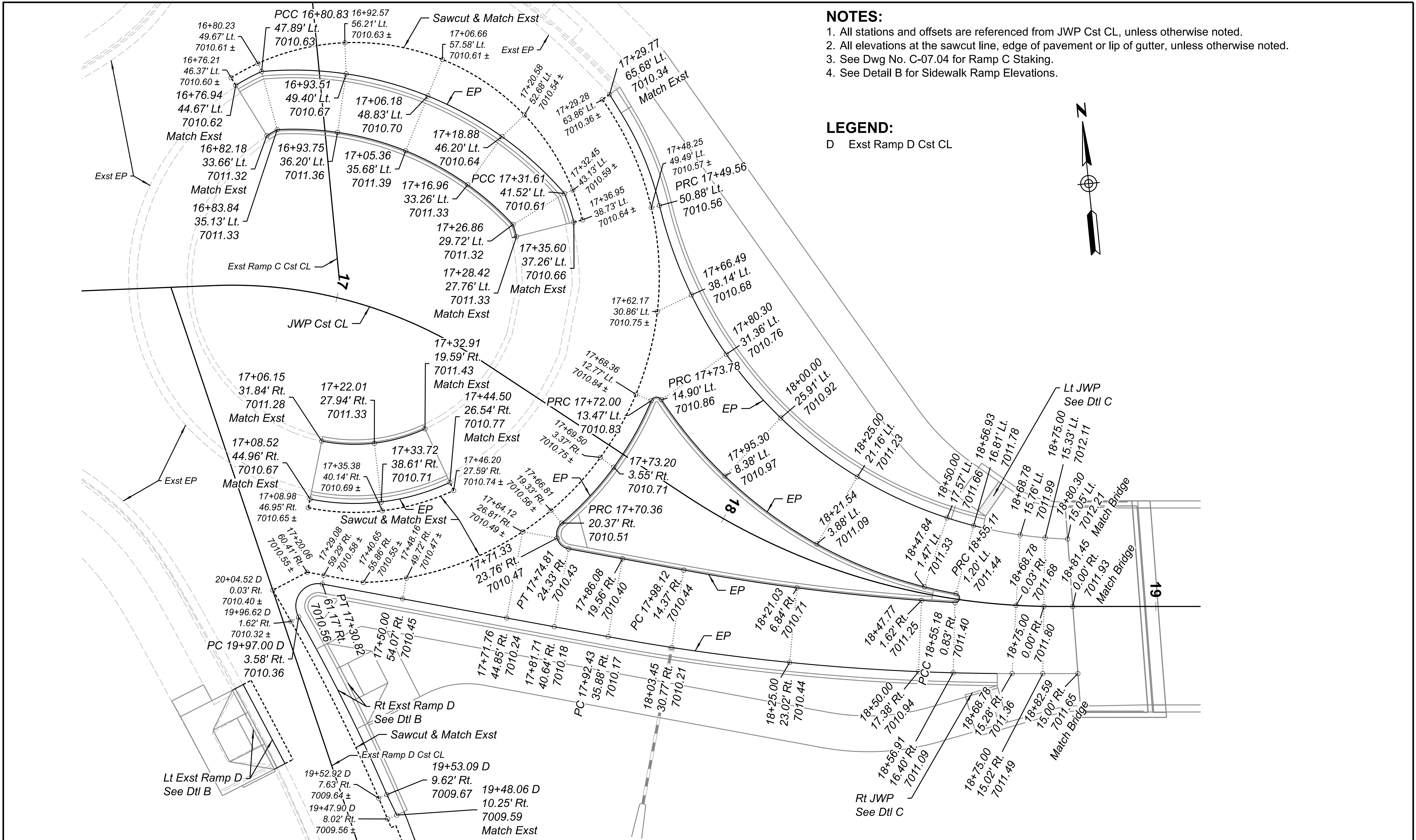


<p>! CAUTION ! HIGH PRESSURE GAS PROTECT IN PLACE</p>	<p>! CAUTION ! OVERHEAD POWER LINE PROTECT IN PLACE</p>			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>DESIGN</td><td>J.NOYES</td><td>10/23</td></tr> <tr><td>DRAWN</td><td>J.NOYES</td><td>10/23</td></tr> <tr><td>CHECKED</td><td>L.BUSENBARK</td><td>10/23</td></tr> </table>	DESIGN	J.NOYES	10/23	DRAWN	J.NOYES	10/23	CHECKED	L.BUSENBARK	10/23	<p>ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SECTION</p>	<p>ROUTE I-17</p> <p>MILEPOST 337.39</p> <p>STRUCTURE NO.</p>	<p>F.H.W.A. Arizona Division</p> <p>STATE ARIZ.</p> <p>PROJECT NO. 017 CN 337</p> <p>FEDERAL ID NO. 017-B(237)T</p> <p>SHEET NO. 26</p> <p>TOTAL SHEETS 123</p> <p>RECORD DRAWING</p>
				DESIGN	J.NOYES	10/23										
DRAWN	J.NOYES	10/23														
CHECKED	L.BUSENBARK	10/23														
<p>PLAN AND PROFILE SHEET JW POWELL BLVD STA 16+00.00 TO STA 22+00.00</p>				<p>LOCATION I-17 AIRPORT RD TI UP</p> <p>TRACS NO. F0362 01C</p>		<p>DWG NO. C-06.02</p> <p>OF</p>										



- LEGEND:**
- AC Pavement (PSS No. 3)
 - AC Pavement per Std C-10.01
 - A - Exst Ramp A Cst CL
 - B - Exst Ramp B Cst CL
 - JWP - JW Powell Cst CL
 - XJWP - Exst JW Powell Cst CL
- NOTES:**
1. All stations, offsets and dimensions are to the edge of pavement, face of curb, face of barrier, or edge of sidewalk, whichever may apply.
 2. All stations and offsets are referenced from JWP Cst CL, unless otherwise noted.
 3. Adjust exst traffic pull box to grade, see Lighting Plans.

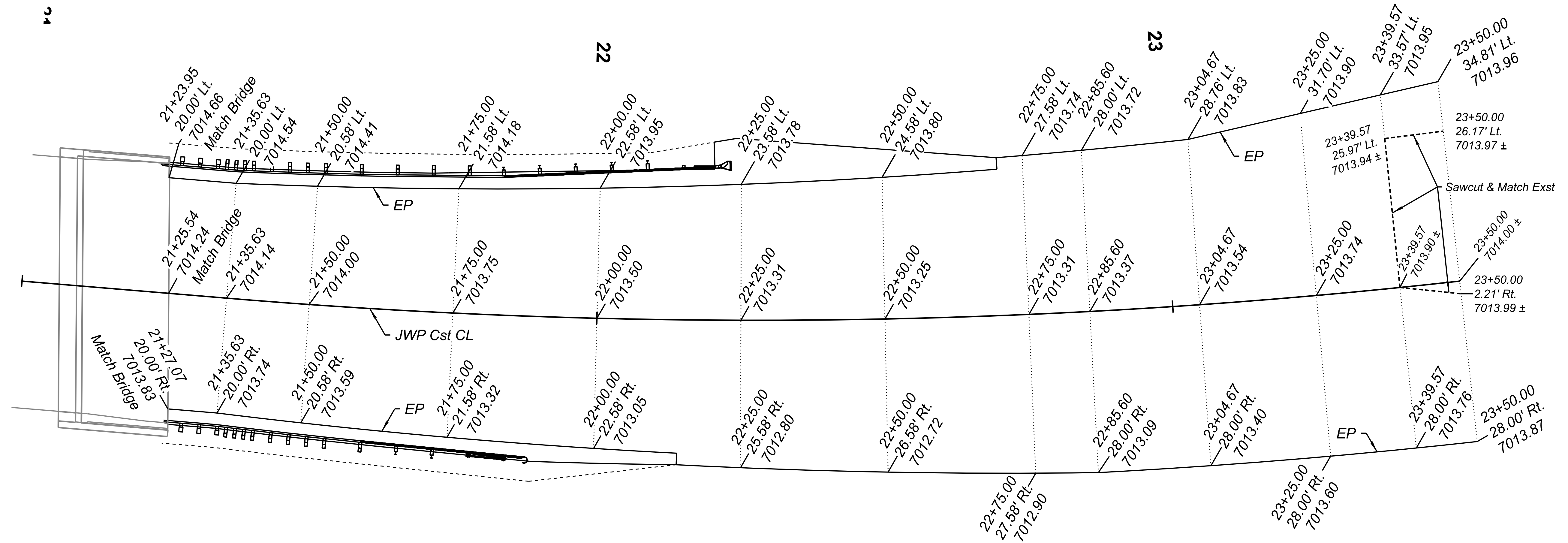
 ARIZONA Call 811 or click Arizona811.com	 LEE T. BUSENBARK 39482 State Engineer ARIZONA, U.S.A.	DESIGN	J.NOYES	DATE	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SECTION	ROUTE	I-17	STATE	ARIZ.	PROJECT NO.	017 CN 337	FEDERAL ID NO.	017-B(237)T	SHEET NO.	27	TOTAL SHEETS	123	RECORD DRAWING
		DRAWN	J.NOYES	10/23	MILEPOST		337.39	LOCATION											
		CHECKED	L.BUSENBARK	10/23		PLAN AND PROFILE SHEET JW POWELL BLVD STA 22+00.00 TO STA 27+10.00				TRACS NO. F0362 01C				OF					


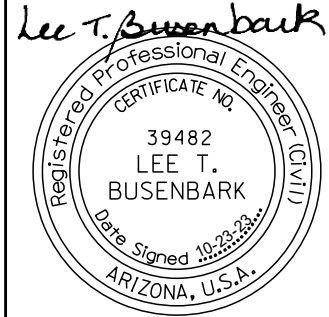



		DESIGN J.NOYES 10/23 DRAWN J.NOYES 10/23 CHECKED L.BUSEBARK 10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SECTION	ROUTE I-17 MILEPOST 337.39 STRUCTURE NO.	F.H.W.A. Arizona Division LOCATION I-17 AIRPORT RD TI UP TRACS NO. F0362 01C	STATE ARIZ. PROJECT NO. 017 CN 337 FEDERAL ID NO. 017-B(237)T	SHEET NO. 28 TOTAL SHEETS 123	RECORD DRAWING
		HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL: (602) 522-7700		STAKING SHEET JWP STA 16+75 TO 18+82 EXST RAMP D STA 19+50 TO 20+10	DWG NO. C-07.01 OF			

NOTES:

1. All stations and offsets are referenced from JWP Cst CL, unless otherwise noted.
2. All elevations at the sawcut line, edge of pavement or lip of gutter, unless otherwise noted.



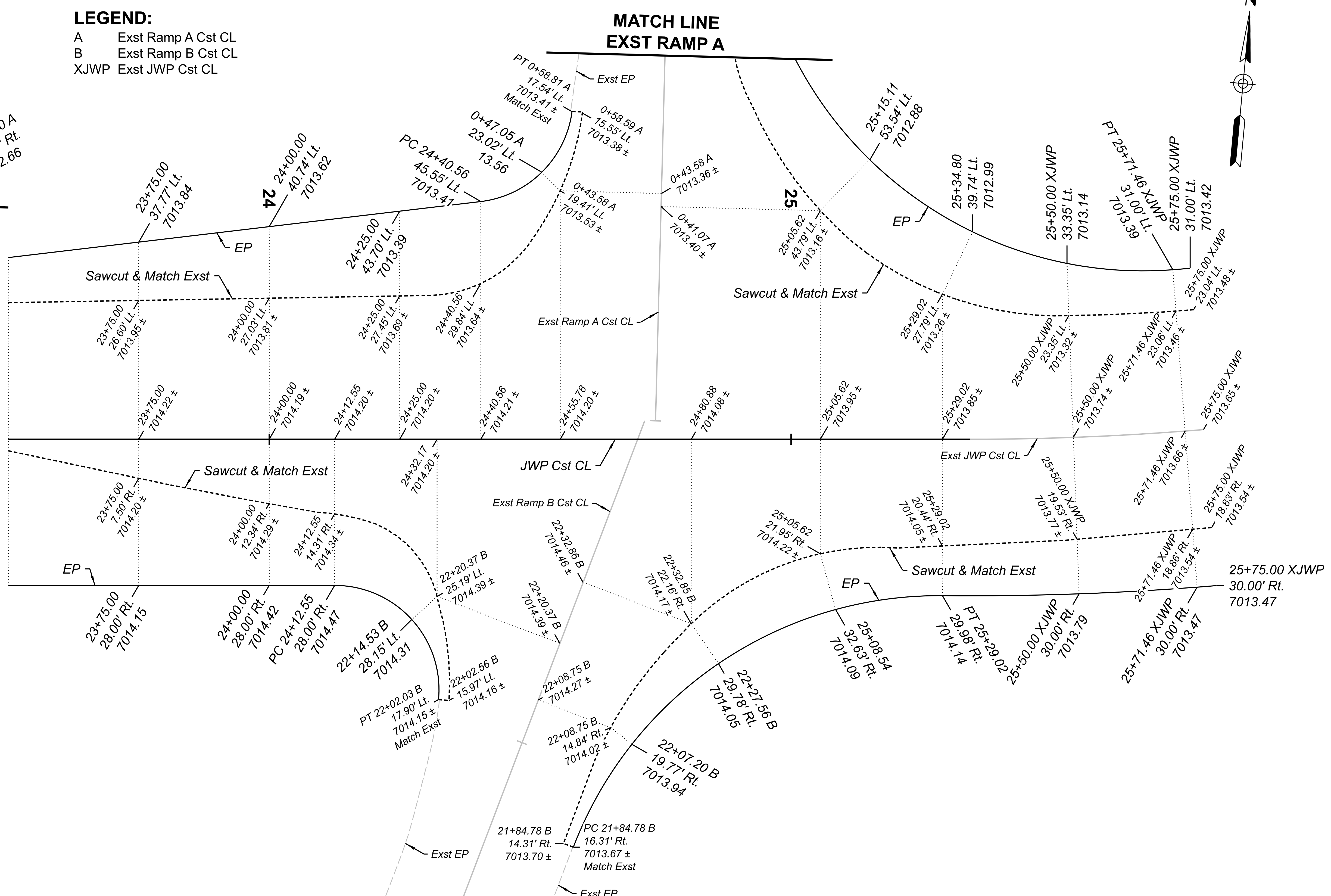
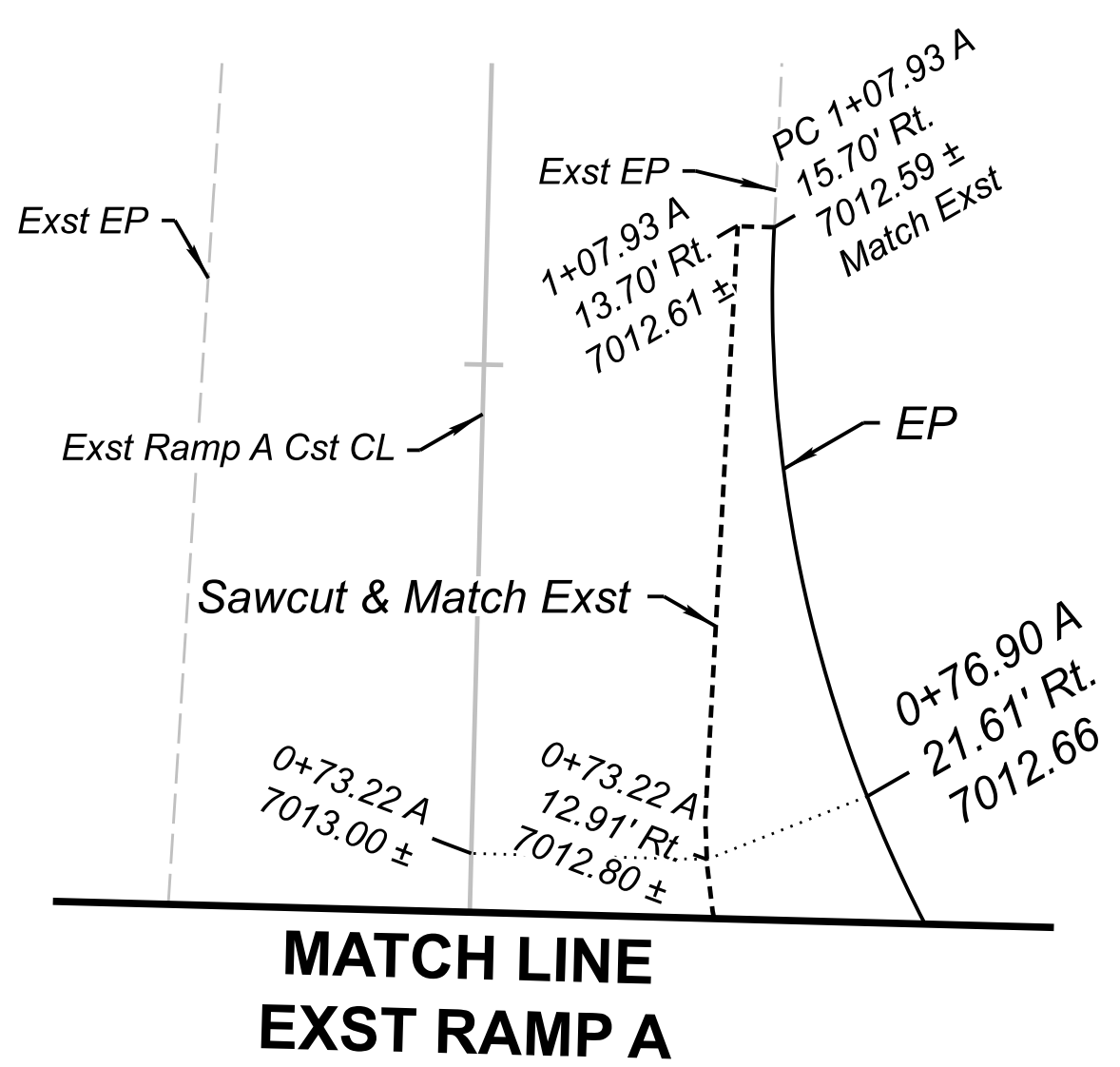
 <p>Contact Arizona 811 at least two full working days before you begin excavation</p>		<table border="1"> <tr> <th>NAME</th> <th>DATE</th> </tr> <tr> <td>DESIGN J.NOYES</td> <td>10/23</td> </tr> <tr> <td>DRAWN J.NOYES</td> <td>10/23</td> </tr> <tr> <td>CHECKED L.BUSENBARK</td> <td>10/23</td> </tr> </table>	NAME	DATE	DESIGN J.NOYES	10/23	DRAWN J.NOYES	10/23	CHECKED L.BUSENBARK	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SECTION	ROUTE I-17	F.H.W.A. Arizona Division	STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 29	TOTAL SHEETS 123	RECORD DRAWING
		NAME	DATE																
		DESIGN J.NOYES	10/23																
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CHECKED L.BUSENBARK	10/23																		
HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL. (602) 522-7700	MILEPOST 337.39	LOCATION I-17 AIRPORT RD TI UP																	
	STRUCTURE NO.	TRACS NO. F0362 01C																	




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LEGEND:

- A Exst Ramp A Cst CL
- B Exst Ramp B Cst CL
- XJWP Exst JWP Cst CL



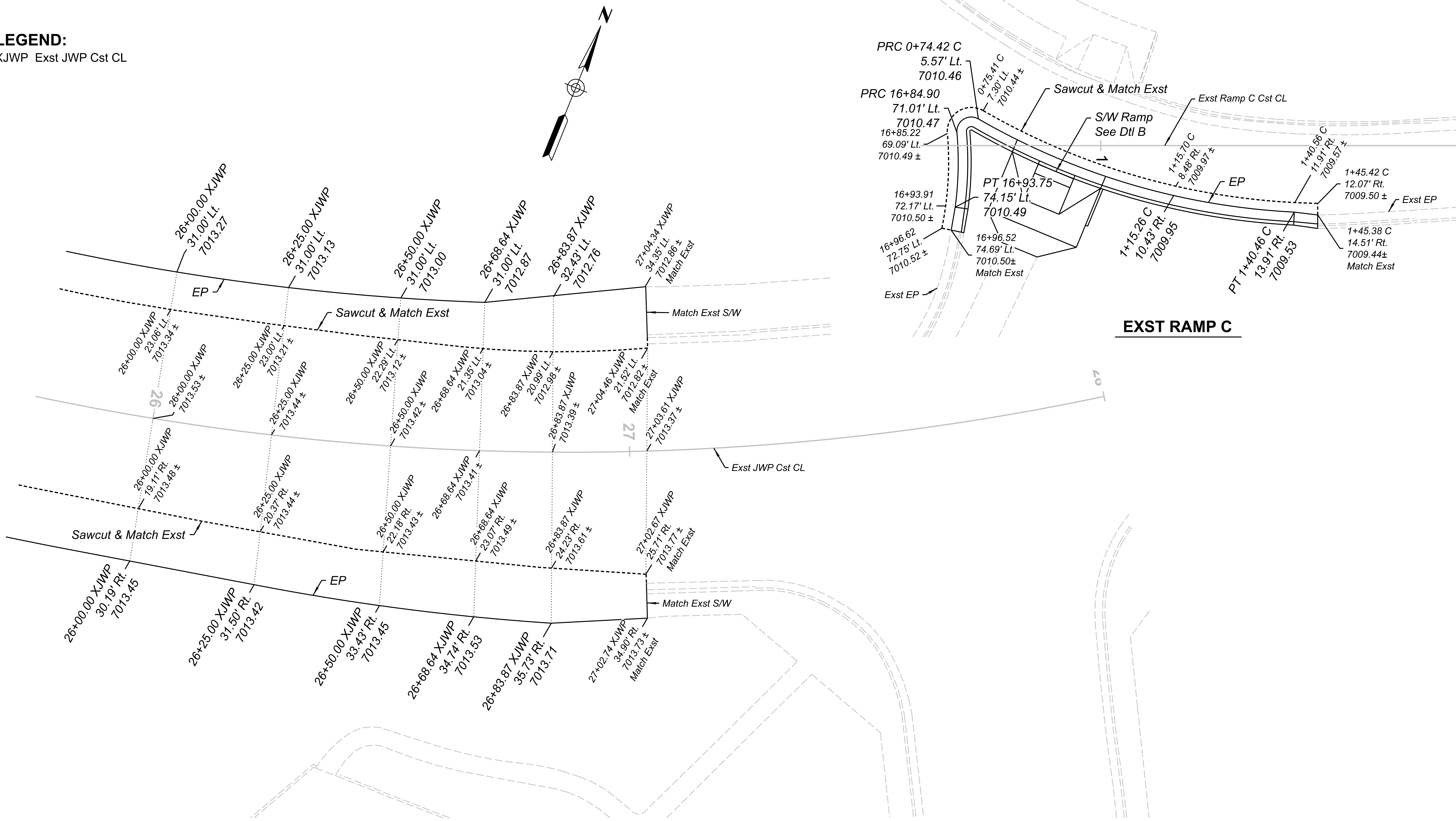
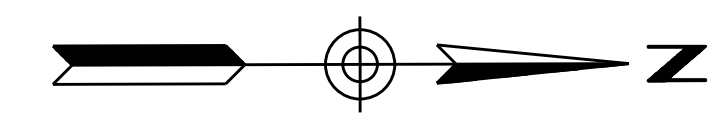
 <p>LEE T. BUSENBARK 39482 Professional Engineer Arizona, U.S.A.</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><th>NAME</th><th>DATE</th></tr> <tr><td>DESIGN J.NOYES</td><td>10/23</td></tr> <tr><td>DRAWN J.NOYES</td><td>10/23</td></tr> <tr><td>CHECKED L.BUSENBARK</td><td>10/23</td></tr> </table>	NAME	DATE	DESIGN J.NOYES	10/23	DRAWN J.NOYES	10/23	CHECKED L.BUSENBARK	10/23	<p>ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SECTION</p> <p>STAKING SHEET JWP STA 23+50 TO EXST JWP 25+75</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>ROUTE</td><td>I-17</td></tr> <tr><td>MILEPOST</td><td>337.39</td></tr> <tr><td>STRUCTURE NO.</td><td></td></tr> </table>	ROUTE	I-17	MILEPOST	337.39	STRUCTURE NO.		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>F.H.W.A. Arizona Division</td><td>STATE</td><td>ARIZ.</td></tr> <tr><td>PROJECT NO.</td><td>017 CN 337</td><td>FEDERAL ID NO.</td><td>017-B(237)T</td></tr> <tr><td>SHEET NO.</td><td>30</td><td>TOTAL SHEETS</td><td>123</td></tr> </table>	F.H.W.A. Arizona Division	STATE	ARIZ.	PROJECT NO.	017 CN 337	FEDERAL ID NO.	017-B(237)T	SHEET NO.	30	TOTAL SHEETS	123	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>LOCATION</td><td>I-17 AIRPORT RD TI UP</td></tr> <tr><td>TRACS NO.</td><td>F0362 01C</td></tr> </table>	LOCATION	I-17 AIRPORT RD TI UP	TRACS NO.	F0362 01C	<p>RECORD DRAWING</p> <p>DWG NO. C-07.03</p> <p>OF</p>
	NAME	DATE																																	
DESIGN J.NOYES	10/23																																		
DRAWN J.NOYES	10/23																																		
CHECKED L.BUSENBARK	10/23																																		
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NOTES:



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2. All elevations at the sawcut line, edge of pavement or lip of gutter, unless otherwise noted.

LEGEND:

XJWP Exst JWP Cst CL



EXST RAMP C

 <p>Contact Arizona 811 at least two full working days before you begin excavation</p> <p>ARIZONA 811</p> <p>Call 811 or click Arizona811.com</p>	 <p>Lee T. Busenbark</p> <p>39482</p> <p>LEE T. BUSENBARK</p> <p>State Engineer</p> <p>ARIZONA, U.S.A.</p>	<table border="1"> <thead> <tr> <th>DESIGN</th> <th>NAME</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>J.NOYES</td> <td>J.NOYES</td> <td>10/23</td> </tr> <tr> <td>DRAWN</td> <td>J.NOYES</td> <td>10/23</td> </tr> <tr> <td>CHECKED</td> <td>L.BUSENBARK</td> <td>10/23</td> </tr> </tbody> </table>	DESIGN	NAME	DATE	J.NOYES	J.NOYES	10/23	DRAWN	J.NOYES	10/23	CHECKED	L.BUSENBARK	10/23	<p>ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SECTION</p>	<p>ROUTE I-17</p> <p>MILEPOST 337.39</p> <p>STRUCTURE NO.</p>	<p>F.H.W.A. Arizona Division</p> <p>STATE ARIZ.</p> <p>PROJECT NO. 017 CN 337</p> <p>FEDERAL ID NO. 017-B(237)T</p> <p>SHEET NO. 31</p> <p>TOTAL SHEETS 123</p>	<p>RECORD DRAWING</p>
		DESIGN	NAME	DATE														
		J.NOYES	J.NOYES	10/23														
DRAWN	J.NOYES	10/23																
CHECKED	L.BUSENBARK	10/23																
<p>HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL: (602) 522-7700</p>		<p>STAKING SHEET EXST JWP STA 25+75 TO 28+00</p>		<p>LOCATION I-17 AIRPORT RD TI UP</p> <p>TRACS NO. F0362 01C</p>		<p>DWG NO. C-07.04</p> <p>OF</p>												
<p>LBUSENBA 7/29/2023 6:20:41 PM c:\pwworking\west01\d2513136\0362sk04.dgn \ Model Name: Stk04</p>																		

! CAUTION !
HIGH PRESSURE GAS
PROTECT IN PLACE

! CAUTION !
OVERHEAD POWER LINE
PROTECT IN PLACE

NOTES:

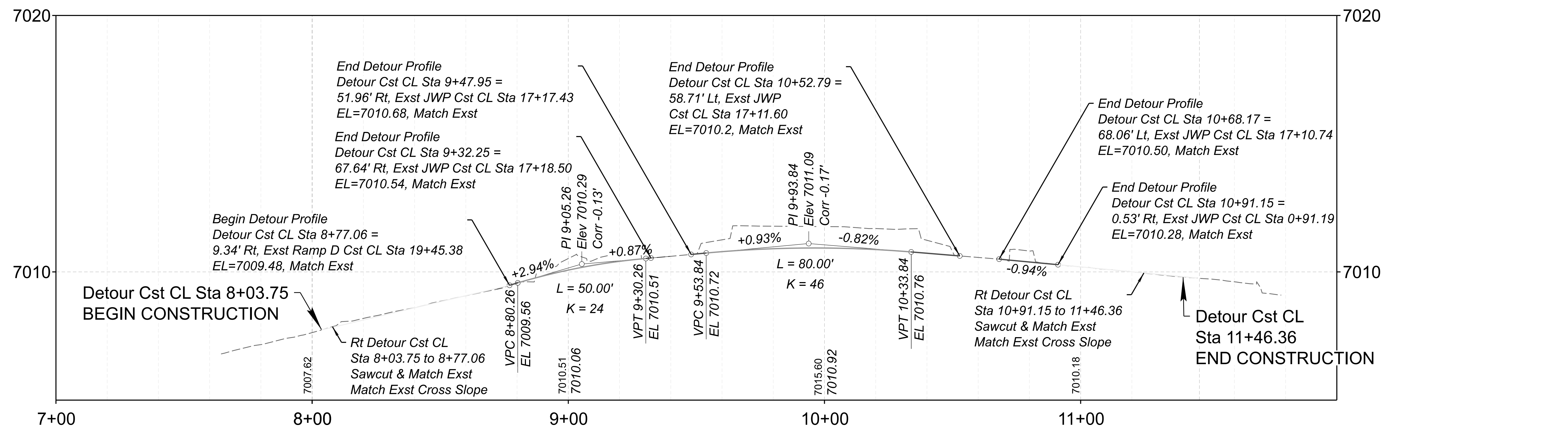
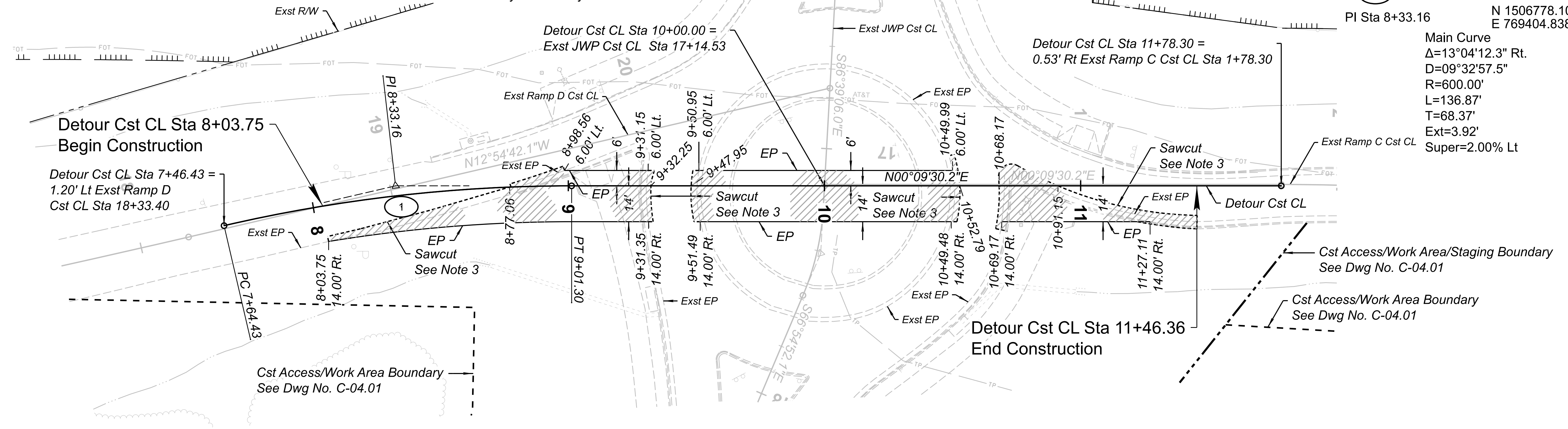
1. All stations, offsets and dimensions are to the edge of pavement.
2. All stations and offsets are referenced from the Detour Cst CL, unless otherwise shown.
3. See Dwg No. C-04.02 for sawcut & removal information. Removals shall be coordinated with the project phasing and detour construction. No drop-offs allowed.
4. Detour may be field adjusted.

LEGEND:

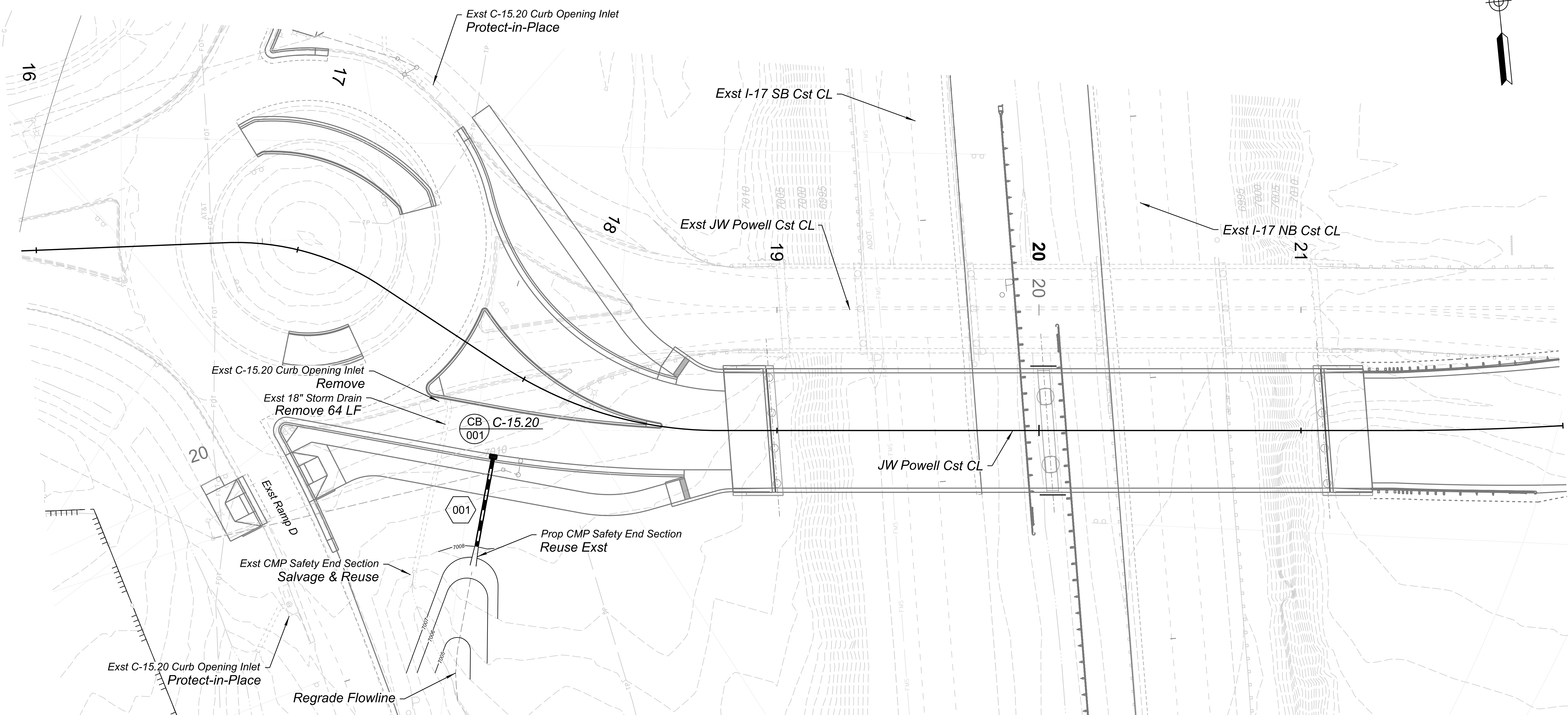
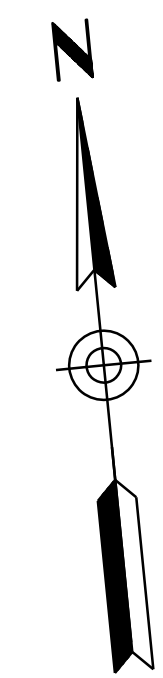
- Detour Pavement (PSS No. 5)

1 CURVE DATA

PI Sta 8+33.16 N 1506778.104
E 769404.838
Main Curve
Δ=13°04'12.3" Rt.
D=09°32'57.5"
R=600.00'
L=136.87'
T=68.37'
Ext=3.92'
Super=2.00% Lt

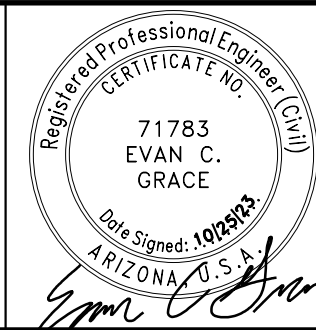
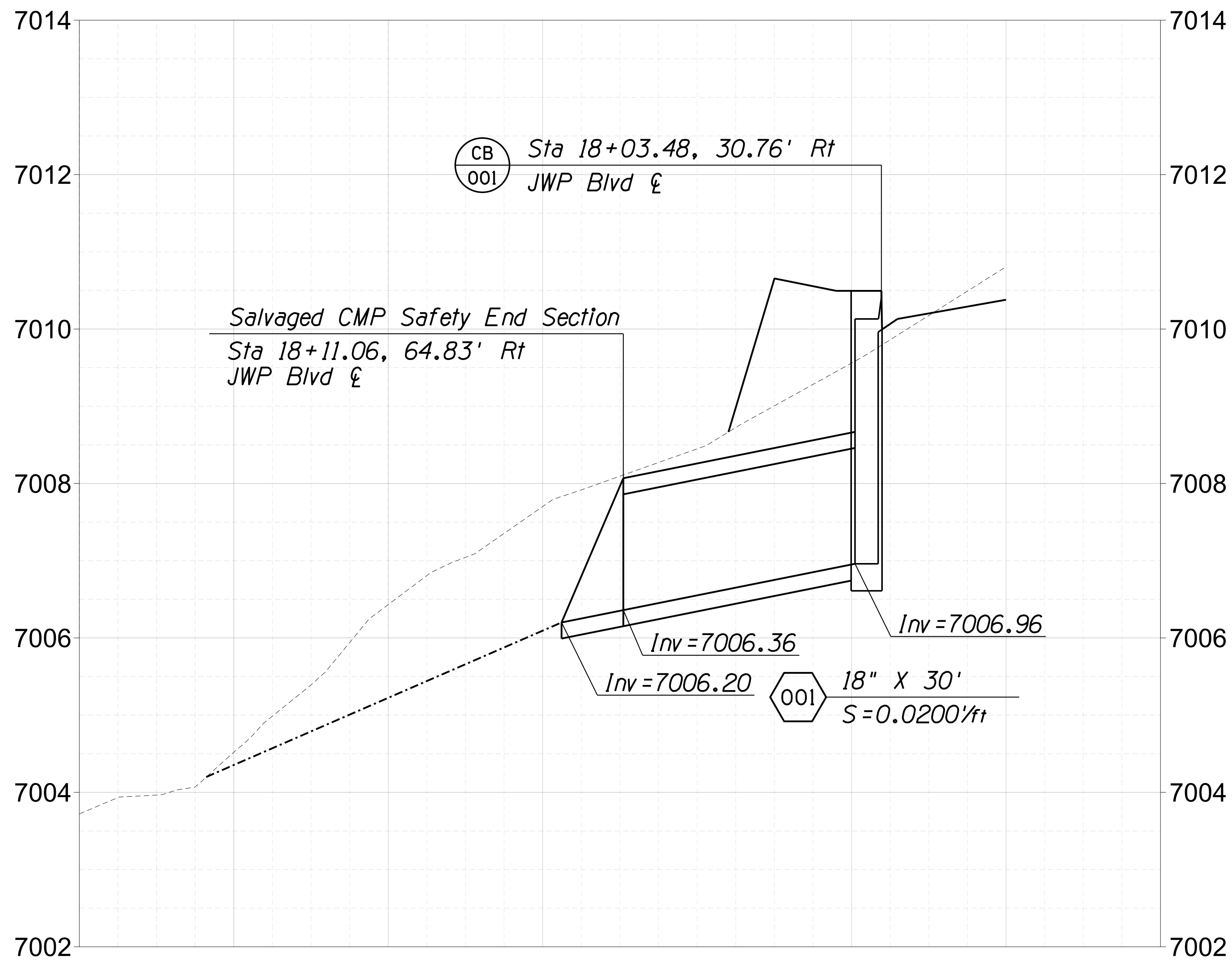


	DESIGN	J.NOYES	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SECTION	ROUTE	I-17	F.H.W.A. Arizona Division STATE: ARIZ.	PROJECT NO.	017 CN 337	FEDERAL ID NO.	017-B(237)T	SHEET NO.	32	TOTAL SHEETS	123	RECORD DRAWING
	DRAWN	J.NOYES	10/23		CHECKED	L.BUSENBARK		10/23	MILEPOST	337.39	LOCATION	I-17 AIRPORT RD TI UP			DWG NO.	C-08.01
HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL: (602) 522-7700				DETOUR PLAN & PROFILE SHEET		STRUCTURE NO.	TRACS NO. F0362 01C			OF						



- Notes:**
1. Removal and resetting of existing metal safety end section shall be paid under Item No. 2020401 REMOVE AND RESET (METAL SAFETY END SECTION)(18").
 2. Removal of existing C-15.20 catch basin shall be paid under Item No. 2020007 REMOVAL OF MISCELLANEOUS CONCRETE.

	<table border="1"> <tr><th>NAME</th><th>DATE</th></tr> <tr><td>DESIGN E. Grace</td><td>09/23</td></tr> <tr><td>DRAWN J. Wotring</td><td>09/23</td></tr> <tr><td>CHECKED J. Holzmeister</td><td>09/23</td></tr> </table>	NAME	DATE	DESIGN E. Grace	09/23	DRAWN J. Wotring	09/23	CHECKED J. Holzmeister	09/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION DRAINAGE DESIGN SECTION	ROUTE I-17 MILEPOST 337.39 STRUCTURE NO.	F.H.W.A. Arizona Division STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 33	TOTAL SHEETS 123	RECORD DRAWING
	NAME	DATE															
	DESIGN E. Grace	09/23															
DRAWN J. Wotring	09/23																
CHECKED J. Holzmeister	09/23																
Design <small>4649 E COTTON GIN LOOP 82 PHOENIX, AZ 85040 602.438.2221</small>				DRAINAGE PLAN SHEET				LOCATION I-17 AIRPORT RD TI UP		DWG NO. D-01.01							
				TRACS NO. F0362 01C		OF											



	NAME	DATE
DESIGN	E. Grace	09/23
DRAWN	J. Wotring	09/23
CHECKED	J. Holzmeister	09/23

J Design
4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
DRAINAGE DESIGN SECTION

ROUTE
I-17

MILEPOST
337.39

STRUCTURE NO.


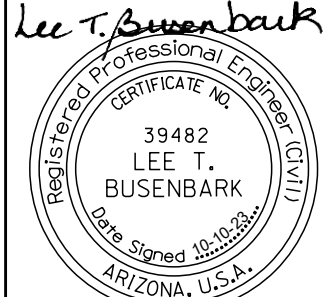

DRAINAGE PIPE PROFILE

ROUTE	STATE	PROJECT NO.	FEDERAL ID NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
I-17	ARIZ.	017 CN 337	017-B(237)T	34	123	
LOCATION I-17 AIRPORT RD TI UP						DWG NO. D-01.02
TRACS NO. F0362 01C						OF

TRAFFIC CONTROL NOTES

1. The construction sequencing and traffic control plans represent a suggested method for traffic control during construction. The contractor is responsible for the actual phasing and traffic control plans for the project.
 - a. The contractor shall prepare and submit traffic control plans for each work activity in this project, to both the Engineer and all affected local municipalities, for review and approval. The contractor shall obtain all necessary permits prior to implementing traffic control within the City of Flagstaff right-of-way.
 - b. The contractor shall submit the traffic control plans in advance of construction activities that require traffic control. See Special Provisions for additional information.
 - c. The traffic control plans shall be in accordance with the requirements of Section 701 of the ADOT Standard Specifications for Road and Bridge Construction, 2021, the requirements of Part 6 of the Manual on Uniform Traffic Control Devices (MUTCD) 2009, the ADOT Traffic Control Design Guidelines, 2019, the Arizona Supplement to the MUTCD, 2009, and the Special Provisions.
 - d. No measurement or direct payment will be made for developing the traffic control plans, the cost being considered as included in the price of the contract bid items.
2. All drawings are schematic only and not to scale.
3. Adjustments to the details of these traffic control plans and requirements may be necessary due to construction activities, as approved by the Engineer.
4. The contractor is responsible to ensure that the project is developed in accordance with applicable Federal, State, and Local regulations, statutes, policies, procedures, and guidelines.
5. The contractor shall abide by the traffic control requirements contained in Subsection 104.04 - Maintenance of Traffic and the requirements of the Special Provisions. See Special Provisions for additional information on allowable days and times for closures, restrictions and detours of I-17 mainline and JW Powell Blvd traffic.
6. The contractor shall perform work in the most safe, efficient and expeditious manner consistent with the traffic plans, the Special Provisions and as approved by the Engineer.
7. The contractor shall provide a schedule of daily activities and corresponding traffic control schemes. The information shall be provided in advance or during the weekly construction meeting in accordance with the requirements of Section 108 of the Standard Specifications and the Special Provisions and shall specify the limits of the work activities and related traffic control plan by location, direction and time.
8. The schedule and the related traffic control shall be developed such that access is maintained to all adjacent businesses. The layout, format and content of the schedule shall be suitable for public release and acceptable to the Engineer. The schedule and related traffic control shall be updated as necessary.
9. The contractor shall maintain access to the roadway for emergency at all times throughout the project.
10. The contractor shall maintain two-way traffic on I-17 & JW Powell at all times, except as permitted by the Special Provisions.
11. The contractor shall perform all work requiring traffic control on I-17, on/off ramps, and JW Powell at night time only, unless otherwise approved by the Engineer. The work activities which do not require lane restrictions or closure of I-17 or on/off ramps or JW Powell can be performed during day time as approved by the Engineer.
12. The contractor shall submit a request for the full ramp closure to the Engineer, see the Special Provisions for additional information.
13. Interstate shoulder closure for sign removal and replacement or new sign installation within the gore area may be performed during the daytime hours Monday through Friday as approved by the Engineer. Shoulder closure traffic control shall conform to Figure TA-5 (no barriers required) of Part 6 of the Manual on Uniform Traffic Control Devices (MUTCD), 2009 edition. In addition, an attenuator truck equipped with a flashing arrow board shall be located in advance of the work zone during each work activity. Truck mounted attenuators shall be installed as per manufacturer recommendation. Proper Roll-Ahead distance shall be provided.


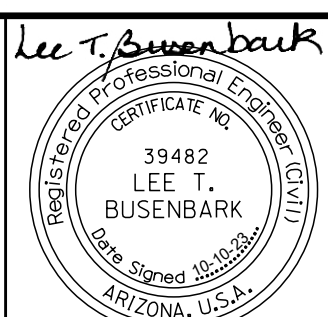

14. For work on the shoulders, such as rumble strip placement, lane closures shall generally conform to Typical Application 33 of the 2009 Manual on Uniform Traffic Control Devices.
15. The contractor shall provide uniformed officer with vehicle during installation and removal of advance warning signs, installation and removal of temporary concrete barrier, and during all other construction activities as approved by the Engineer.
16. All existing pavement markings shall be protected in place.
17. The contractor shall provide adequate portable lighting to perform all night work. No measurement or payment shall be made for lighting, the cost being considered as included in the price of contract items.
18. Warning lights on all traffic control devices within the temporary traffic control zone shall be in compliance with Section 6F.83 Warning Lights of the 2009 MUTCD, 2009 and the ADOT Traffic Control Design Guidelines, 2019.
19. All temporary traffic control devices shall be displayed to traffic during the one-hour period prior to the start of the construction work activities and removed during the one-hour period immediately following the completion of the work construction activities, unless otherwise directed by the Engineer. The temporary traffic control signs may be installed sooner but they must be covered or turned away from traffic. The cost for covering or turning them will be considered part of the sign installation cost. No further compensation will be made. These signs shall be removed within 24-hours or sooner after the completion of the construction activities.
20. When traffic control items are not in use, the contractor shall remove these items to a location at least 30-feet (I-17) or 20-feet (JW Powell) from the edge of the paved roadway or completely removed from the work area, including all supports without sign panels, at no additional cost to the Department.
21. The contractor shall utilize drums, barricades Type 2 or vertical panels for channelization devices. The Engineer may allow the contractor to substitute barricades Type 2 with vertical panels on cross roads. On I-17 NB and SB, channelization devices shall be placed 40-feet on center on tapers and 80-feet on center on tangents, except as otherwise approved by the Engineer.
22. Type "C" steady-burning yellow lights shall be mounted on all channelization devices during night time construction activities.
23. Barricades and other devices shall have sand bags placed in their bases, as appropriate to prevent them from being knocked down or blown over. The cost of placement and removal of the sand bags will be considered as included in the price of the contract bid item for barricades.
24. Type 3 barricades shall be placed across each roadway to be closed. A 48-inch x 30-inch "ROAD CLOSED" or "RAMP CLOSED" sign, as appropriate, shall be attached to one of the Type 3 barricades closing the roadway. A Type A flashing warning light shall be mounted on each end of each Type 3 barricade.
25. For temporary concrete barrier setups off the roadway, the contractor shall ensure the earthen material or aggregate base under the temporary concrete barrier and between the barrier and the roadway is 10:1 or flatter. There shall be no measurement or payment for the placement, maintenance, and removal of earthen material or aggregate base in connection with these setups.
26. Temporary concrete barrier and temporary concrete barrier markers shall be in accordance with the requirements of Standard Drawings C-3, M-32 and M-33 of the ADOT Signing and Marking Standard Drawings, 2014. The contractor may install the barrier markers Type BM-1 (white) or BM-2 (yellow) either consistently on the sides or consistently on the top of the barrier and shall be installed at 20-foot spacing. The cost for the barriers markers will be considered as included in the price of the temporary concrete barrier contract item.
27. Temporary Impact Attenuators shall meet the requirements NCHRP 350 Test Level 3 for a speed 62 miles per hour.

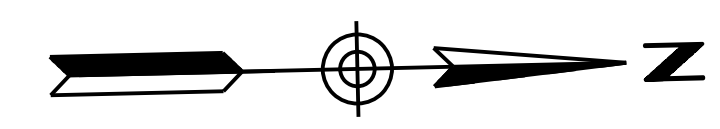
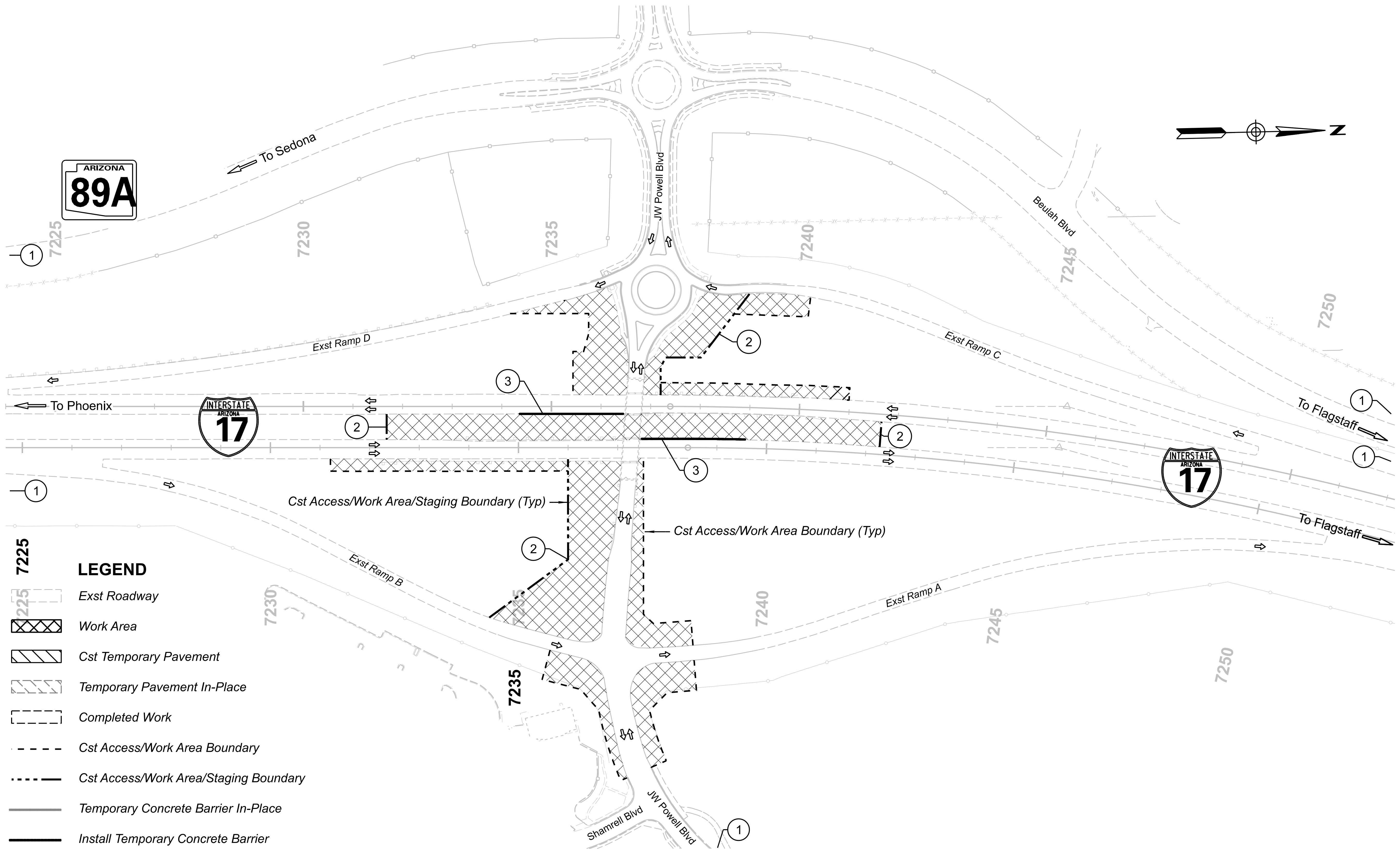
		<table border="1"> <tr> <th>NAME</th> <th>DATE</th> </tr> <tr> <td>L.BUSENBARK</td> <td>10/23</td> </tr> <tr> <td>L.BUSENBARK</td> <td>10/23</td> </tr> <tr> <td>R.SRIPADA</td> <td>10/23</td> </tr> </table>	NAME	DATE	L.BUSENBARK	10/23	L.BUSENBARK	10/23	R.SRIPADA	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION TRAFFIC DESIGN SECTION	ROUTE I-17	F.H.W.A. Arizona Division STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 35	TOTAL SHEETS 123	RECORD DRAWING
		NAME	DATE															
L.BUSENBARK	10/23																	
L.BUSENBARK	10/23																	
R.SRIPADA	10/23																	
 HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL: (602) 522-7700	MILEPOST 337.39	LOCATION I-17 AIRPORT RD TI UP			DWG NO. T-01.01													
TRAFFIC CONTROL NOTES				STRUCTURE NO.	TRACS NO. F0362 01C			_____ OF _____										


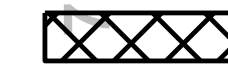
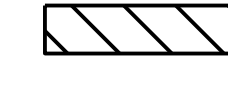

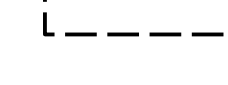




TRAFFIC CONTROL NOTES CONTINUED




- 28. Sequential flashing warning lights are to improve driver recognition of lane closures by providing clear directional guidance and to enhance the visibility of work zone entrances/exits. Sequential Flashing Warning Lights shall be used only during nighttime for the merge taper of lane closure on I-17 NB and SB, and as directed by the Engineer. See project Special Provisions of Item number 7017030. Successive flashing of the lights of the sequential flashing warning lights shall occur from the upstream end of the merging taper to the downstream end of the merging taper in order to identify the vehicle path.
- 29. The sequential flashing warning lights shall have a minimum mounting height of 36-inches to the bottom of the lens.
- 30. The contractor shall utilize a flashing arrow panel in the sequential chevron mode for each closure of a through lane. The contractor shall not utilize a flashing arrow panel in connection with any shifting taper.
- 31. Ensure that that placement of the channelization devices will accommodate the large commercial trucks turning movements.
- 32. All construction signs shall have black letters on fluorescent orange background, except as otherwise indicated.
- 33. The retroreflective sheeting on all construction signs and delineation for impact attenuators shall meet the requirements of Section 380 "SIGN MATERIALS" of the current ADOT Traffic Engineering Guidelines and Processes and Chapter 2A of the Manual on Uniform Traffic Control Devices, 2009.
- 34. Routine maintenance on all temporary signs and devices shall be conducted at least once during a 24-hour period.
- 35. All existing signs in conflict with the construction signs shall be removed, relocated, or completely covered in place, as approved by the Engineer, at no additional cost to the Department. The contractor shall store and reinstall items which have been removed or relocated in a manner approved by the Engineer at no additional cost to the Department. The contractor shall replace any signing damaged by their operation at no additional cost to the Department.
- 36. All advance warning signs that are to remain for the duration of the project shall be mounted on spring stands, light poles or on existing utility poles. All advance warning signs used for individual activities shall be installed on portable sign stands (Spring Type) at least 5-feet above the pavement except as otherwise approved by the sign manufacturer to meet the requirement of MASH (AASHTO Manual for Assessing Safety Hardware).
- 37. The nearest edge or corner of all construction signs shall be approximately 12-feet from the nearest edge of pavement, 6-feet behind guardrail or concrete barrier, and 6 feet behind concrete curb.
- 38. Type "A" low-intensity flashing warning lights shall be required on all construction signs except the "End Road Work Thank you" sign.
- 39. Flags shall be mounted on top of all construction signs except the "END ROAD WORK THANK YOU" sign.
- 40. Speed limit signing is preliminary and is subject to review and change by the Engineer as dictated by field conditions.
- 41. The contractor shall install signing for Double Fines in work zones. Double Fines signs placement shall conform to Figure SA-12 of the ADOT Traffic Control Design Guidelines, 2019. Such signing shall only be in place during working periods when workers are present in accordance with the signing guidelines for double fines in work zones.
- 42. Where no closure is necessary but where there is construction alongside a roadway under construction, the contractor shall place a 48-inch x 48-inch "ROAD WORK AHEAD" and "SHOULDER WORK AHEAD" sign as directed by the Engineer to alert the public to the construction activities.
- 43. Any adjustment to the warning signs spacing deemed necessary due to construction site geometric condition, shall be approved by the Engineer.

- 44. Changeable Message Boards shall be used to notify the traveling public in advance of lane closures. The contractor shall provide lane reduction, detour, and closure information to the Engineer at least 14 calendar days in advanced of these maintenance of traffic activities to enable the Engineer to coordinate with ADOT Community Relations to notify the public and stakeholders and to coordinate messages on the changeable message boards.
- 45. Place "Road Work Ahead" sign on cross roads at 100-feet in advance of intersections.
- 46. Placement and location of the flagger station shall be in accordance with Chapter 6E of the MUTCD, 2009.

		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 30%;">NAME</th> <th style="width: 30%;">DATE</th> </tr> <tr> <td>DESIGN L.BUSENBARK</td> <td>10/23</td> </tr> <tr> <td>DRAWN L.BUSENBARK</td> <td>10/23</td> </tr> <tr> <td>CHECKED R.SRIPADA</td> <td>10/23</td> </tr> </table>	NAME	DATE	DESIGN L.BUSENBARK	10/23	DRAWN L.BUSENBARK	10/23	CHECKED R.SRIPADA	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION TRAFFIC DESIGN SECTION	ROUTE I-17	F.H.W.A. Arizona Division	STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 36	TOTAL SHEETS 123	RECORD DRAWING
		NAME	DATE																
DESIGN L.BUSENBARK	10/23																		
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	HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL: (602) 522-7700	MILEPOST 337.39	TRAFFIC CONTROL NOTES	STRUCTURE NO.	LOCATION I-17 AIRPORT RD TI UP			TRACS NO. F0362 01C			DWG NO. T-01.02 ____ OF ____								




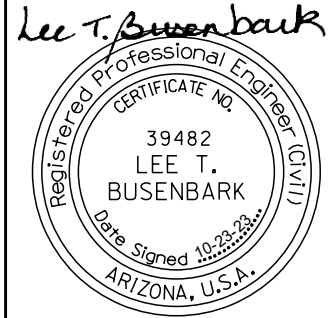

- 7225 LEGEND**
-  Exst Roadway
 -  Work Area
 -  Cst Temporary Pavement
 -  Temporary Pavement In-Place
 -  Completed Work
 -  Cst Access/Work Area Boundary
 -  Cst Access/Work Area/Staging Boundary
 -  Temporary Concrete Barrier In-Place
 -  Install Temporary Concrete Barrier

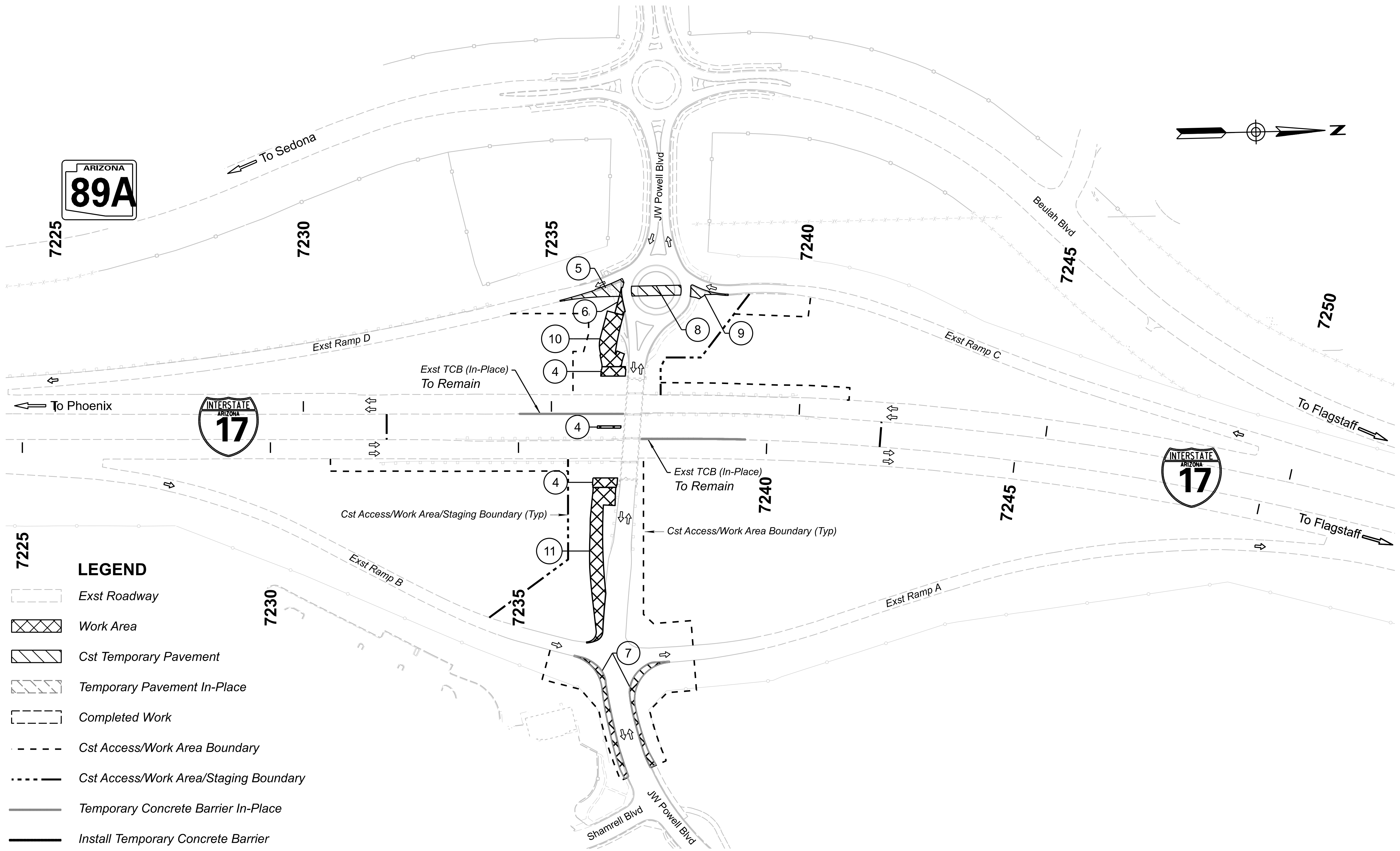
		DESIGN	L.BUSENBARK	DATE	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION TRAFFIC DESIGN SECTION	ROUTE	F.H.W.A. Arizona Division				STATE	PROJECT NO.	FEDERAL ID NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
		DRAWN	L.BUSENBARK	10/23			337.39	I-17 AIRPORT RD TI UP									
		CHECKED	R.SRIPADA	10/23				CONSTRUCTION SEQUENCING PHASE 1A									
						HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL (602) 522-7700		LOCATION TRACS NO. F0362 01C		DWG NO. T-02.01 ____ OF ____							

PHASE 1A

PHASE DURATION	25 CALENDAR DAYS*	
SEQUENCE OF CONSTRUCTION	MAINTENANCE OF TRAFFIC	NOTES
<p><i>Preconstruction Activities</i></p> <p>1. Install advance construction warning signs.</p> <p>2. Site Preparation of staging areas and construction access.</p> <p>3. Install Temporary Concrete Barrier Rt Exst I-17 SB Sta 7234+35 to 7236+35 and Lt Exst I-17 NB Sta 7237+45 to 7239+45 for contractor work at pier. See Dwg No. T-05.01 to T-05.04 for additional information.</p> <p>No roadway or shoulder improvements</p>	<p>For all phases of construction utilize barricades, vertical sign panels, speed reductions and flagging as needed. See Detail TC1, TC2 and Dwg No. T-05.01 to T-05.04.</p> <p>Maintain traffic on existing I-17 and JW Powell (JWP) lanes including interchange ramps, except as noted.</p>	<p>At the end of this phase, close all sidewalks from the east side of the SR 89A roundabout to the west side of Shamrell Blvd. See Detail TC1 for additional information.</p>

* It is assumed that the Advanced Warning Signs will be in place for approximately 302 calendar days and Pedestrian Detour Signs will be in Place for approximately 177 days. It is assumed the installation of the Advanced warning on I-17 will take 2-days in each direction (NB/SB), installation of the temporary concrete barrier will take 1-day in each direction on I-17(NB/SB), and installation of Advanced warning on JWP will take 2-days.

		<table border="1"> <thead> <tr> <th></th> <th>NAME</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>DESIGN</td> <td>L.BUSENBARK</td> <td>10/23</td> </tr> <tr> <td>DRAWN</td> <td>L.BUSENBARK</td> <td>10/23</td> </tr> <tr> <td>CHECKED</td> <td>R.SRIPADA</td> <td>10/23</td> </tr> </tbody> </table>		NAME	DATE	DESIGN	L.BUSENBARK	10/23	DRAWN	L.BUSENBARK	10/23	CHECKED	R.SRIPADA	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION TRAFFIC DESIGN SECTION CONSTRUCTION SEQUENCING NOTES PHASE 1A	ROUTE I-17	F.H.W.A. Arizona Division STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 38	TOTAL SHEETS 123	RECORD DRAWING
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DRAWN	L.BUSENBARK	10/23																				
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 HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL (602) 522-7700	MILEPOST 337.39	LOCATION I-17 AIRPORT RD TI UP	TRACS NO. F0362 01C	DWG NO. T-02.02 ____ OF ____																		



- LEGEND**
- Exst Roadway
 - Work Area
 - Cst Temporary Pavement
 - Temporary Pavement In-Place
 - Completed Work
 - Cst Access/Work Area Boundary
 - Cst Access/Work Area/Staging Boundary
 - Temporary Concrete Barrier In-Place
 - Install Temporary Concrete Barrier

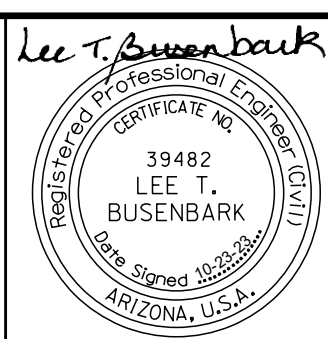
		<table border="1"> <tr> <th>NAME</th> <th>DATE</th> </tr> <tr> <td>DESIGN L.BUSENBARK</td> <td>10/23</td> </tr> <tr> <td>DRAWN L.BUSENBARK</td> <td>10/23</td> </tr> <tr> <td>CHECKED R.SRIPADA</td> <td>10/23</td> </tr> </table>	NAME	DATE	DESIGN L.BUSENBARK	10/23	DRAWN L.BUSENBARK	10/23	CHECKED R.SRIPADA	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION TRAFFIC DESIGN SECTION CONSTRUCTION SEQUENCING PHASE 1B	ROUTE I-17	F.H.W.A. Arizona Division LOCATION I-17 AIRPORT RD TI UP	STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 39	TOTAL SHEETS 123	RECORD DRAWING
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DRAWN L.BUSENBARK	10/23																		
CHECKED R.SRIPADA	10/23																		
	HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL (602) 522-7700	MILEPOST 337.39	TRACS NO. F0362 01C	DWG NO. T-02.03 ___ OF ___															

PHASE 1B

81 CALENDAR DAYS *

PHASE DURATION	81 CALENDAR DAYS *	NOTES
SEQUENCE OF CONSTRUCTION	MAINTENANCE OF TRAFFIC	NOTES
<p>4. Construct new JWP bridge abutments and pier.</p> <p>5. Rt Exst Ramp D Sta 18+72 to Sta 20+05, sawcut existing Ramp D 2-ft from lip of gutter and remove curb, gutter, sidewalk and sidewalk ramp. Remove only what is necessary for detour construction.</p> <p>Construct temporary pavement adjacent to existing Ramp D. See Detour Plans for details not shown here.</p> <p>6. Rt JWP Sta 17+40 to 17+89, construct EB departure permanent pavement. Do not construct curb, gutter, sidewalk or sidewalk ramps that interfere with detour.</p> <p>7. Rt Exst Ramp A Sta 1+08 to Rt Exst JWP Sta 27+05 and Rt Exst Ramp B Sta 21+85 to Rt Exst JWP Sta 27+05, sawcut existing Ramps A & B 2-ft from existing edge of pavement & construct permanent pavement. Match existing sidewalks. Relocate light pole on new foundation.</p> <p>8. Lt & Rt Exst JWP Sta 17+05 to 17+25, sawcut existing roundabout center island at the lip of gutter and remove curb, gutter, truck apron and center island grading.</p> <p>Construct temporary pavement through center of roundabout. See Detour Plans for details not shown here.</p> <p>9. Rt Exst Ramp C Sta 1+46 to Lt Exst JWP Sta Sta 17+26, sawcut existing JWP and existing Ramp C 2-ft from the lip of gutter and remove curb, gutter, sidewalk and sidewalk ramp. Relocate light pole on new foundation.</p> <p>Construct temporary pavement adjacent to existing Ramp C. See Detour Plans for details not shown here.</p> <p>10. Rt JWP Sta 17+89 to Abutment 1, construct permanent pavement, curb, gutter, sidewalk, drainage, and barrier. Install conduit and new light pole foundation. Provide temporary power from new light pole to the existing light pole. Existing light pole to remain until its relocation in Phase 2. Maintain exst drainage until removal in Phase 2.</p> <p>11. Lt & Rt Abutment 2 to JWP Sta 21+61, construct permanent pavement & guardrail. Rt JWP Sta 21+61 to 23+40, construct permanent pavement & guardrail. Rt JWP Sta 23+40 to 24+35, construct permanent pavement (variable width), match existing JWP & Ramp B.</p>	<p>Maintain traffic, pedestrians and bicycles from phase 1A.</p> <p>Maintain access to JWP, Ramp D, and the roundabout.</p> <p>Utilize MUTCD TA-44 "Work in the Vicinity of Entrance Ramp" for work along existing Ramps A & D.</p> <p>Utilize MUTCD TA-42 "Work in Vicinity of Exit Ramp" for work along existing Ramps B & C.</p> <p>Utilize Detail TC2 and TC3 and ADOT "Temporary Traffic Control Design Guidelines" Figure SA-10 "Exit Ramp Closure" to close JWP, Ramp C and Ramp D to traffic for work in the roundabout. Close JWP between the SR 89/Beulah Blvd roundabout and ramps A & B. See Special Provisions.</p> <p>JW POWELL: Utilize MUTCD TA-6 "Shoulder Work with Minor Encroachment" for work adjacent to JWP traffic during daytime work. Utilize Detail TC2 and TC3 for JW Powell nighttime closures.</p> <p>At completion of night work, remove I-17 detour and JWP restrictions & return to Typical Configurations. Close Detour per Detail TC3.</p>	<p>ALL ACTIVITIES: Maintain Pedestrian and Bicycle Detour from Phase 1A in place.</p> <p>Maintain TCB from Phase 1A in place.</p> <p>Protect all existing barriers and guardrails in place.</p> <p>Maintain existing street lighting unless noted otherwise.</p>

* It is assumed that the existing ramps and JW Powell will be closed for a total of 14 working days in this phase, see special provisions for additional information on closure requirements.



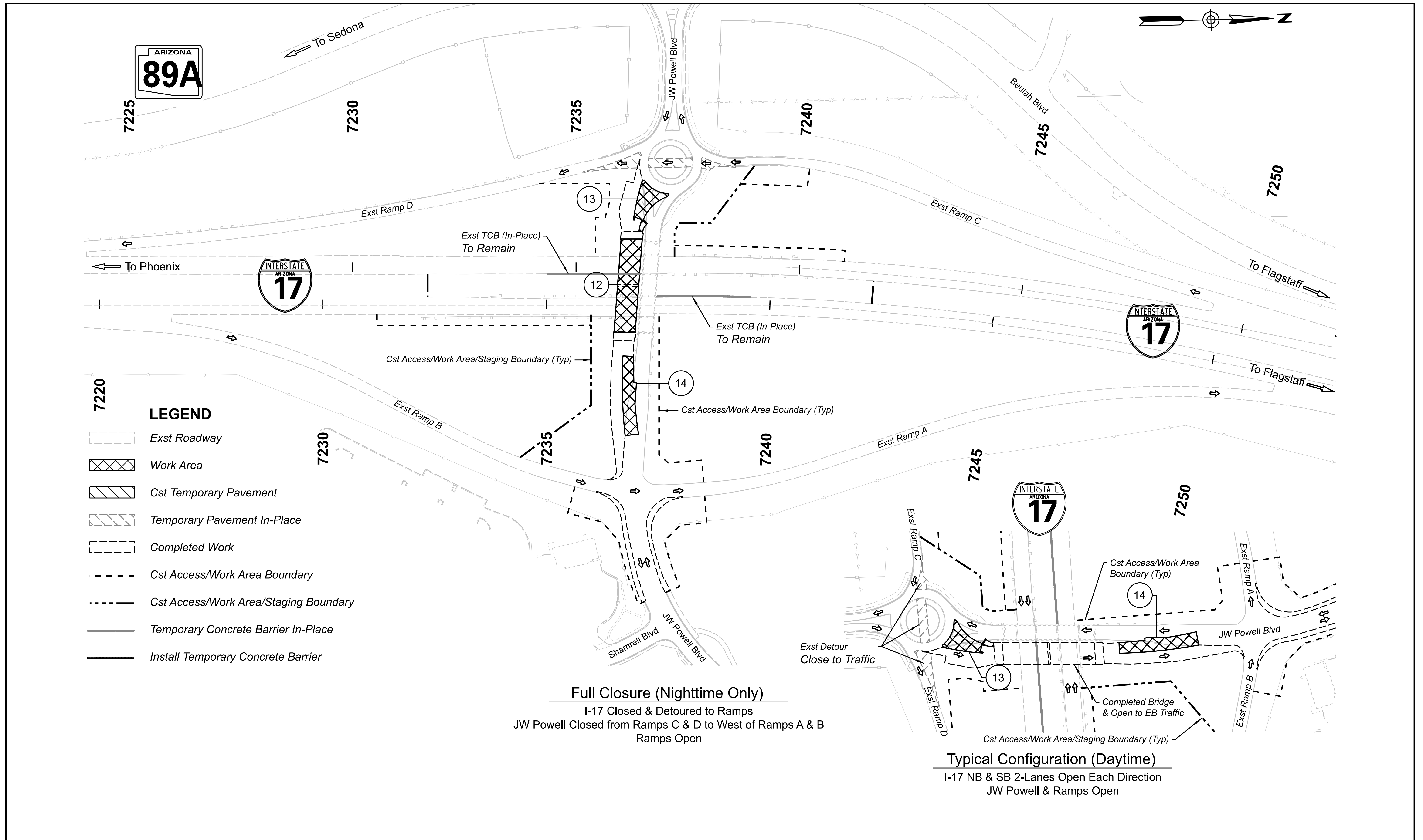
	NAME	DATE
DESIGN	L.BUSENBARK	10/23
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CHECKED	R.SRIPADA	10/23

HDR
HDR, INC.
20 E. THOMAS ROAD
SUITE 2500
PHOENIX, AZ 85012
TEL (602) 522-7700

ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
TRAFFIC DESIGN SECTION

CONSTRUCTION SEQUENCING NOTES
PHASE 1B

ROUTE I-17	F.H.W.A. Arizona Division	STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 40	TOTAL SHEETS 123	RECORD DRAWING
MILEPOST 337.39	LOCATION I-17 AIRPORT RD TI UP					DWG NO. T-02.04	
STRUCTURE NO.	TRACS NO. F0362 01C					OF	



LEGEND

- Exst Roadway
- Work Area
- Cst Temporary Pavement
- Temporary Pavement In-Place
- Completed Work
- Cst Access/Work Area Boundary
- Cst Access/Work Area/Staging Boundary
- Temporary Concrete Barrier In-Place
- Install Temporary Concrete Barrier

Full Closure (Nighttime Only)
 I-17 Closed & Detoured to Ramps
 JW Powell Closed from Ramps C & D to West of Ramps A & B
 Ramps Open

Typical Configuration (Daytime)
 I-17 NB & SB 2-Lanes Open Each Direction
 JW Powell & Ramps Open

		DESIGN L.BUSENBARK 10/23 DRAWN L.BUSENBARK 10/23 CHECKED R.SRIPADA 10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION TRAFFIC DESIGN SECTION CONSTRUCTION SEQUENCING PHASE 2	ROUTE I-17 MILEPOST 337.39 STRUCTURE NO.	F.H.W.A. Arizona Division STATE ARIZ.	PROJECT NO. 017 CN 337 FEDERAL ID NO. 017-B(237)T	SHEET NO. 41 TOTAL SHEETS 123	RECORD DRAWING
		HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL (602) 522-7700		LOCATION I-17 AIRPORT RD TI UP TRACS NO. F0362 01C	DWG NO. T-02.05 OF			

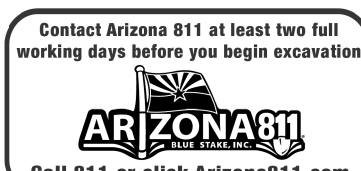

PHASE 2

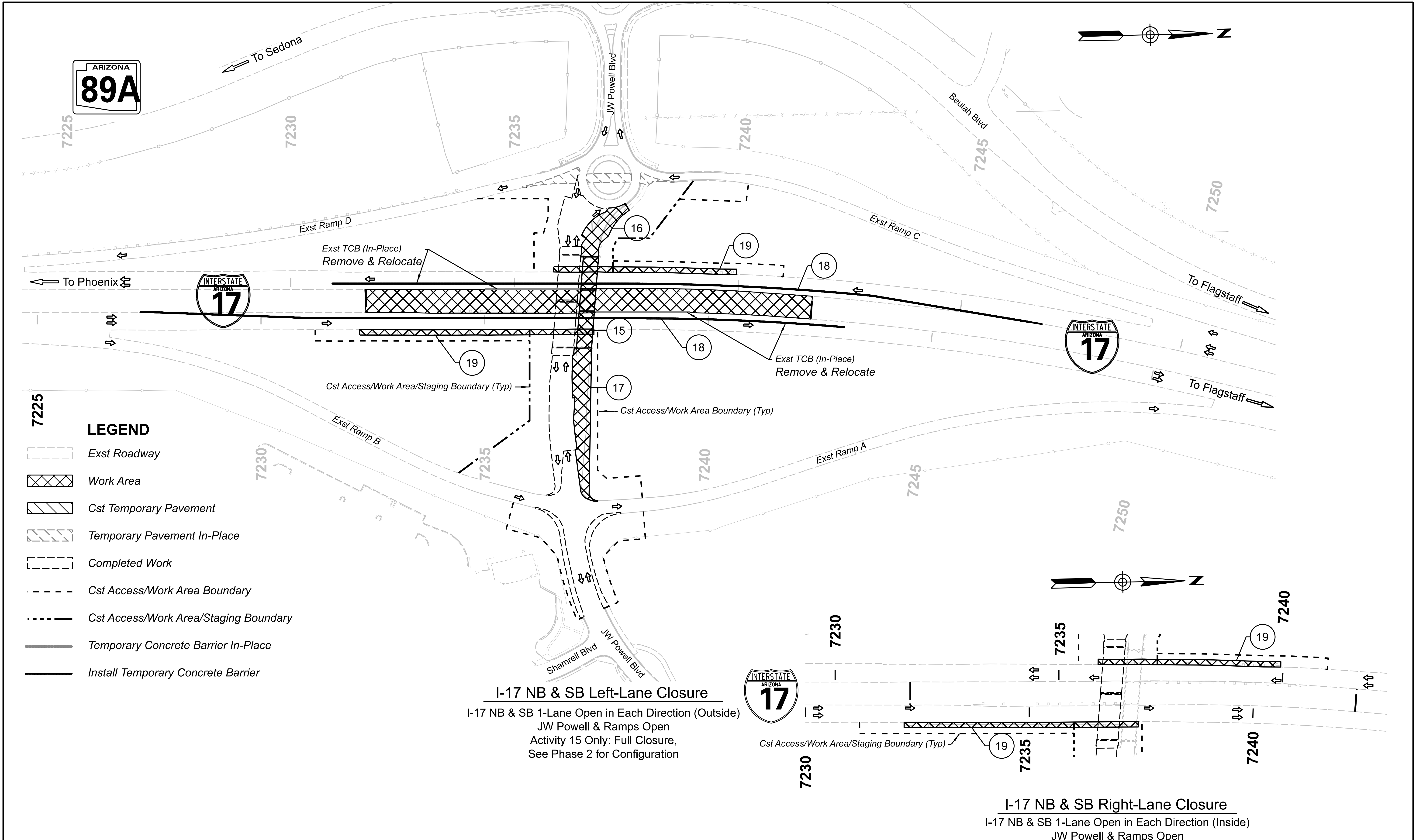
68 CALENDAR DAYS *

PHASE DURATION	68 CALENDAR DAYS *	NOTES
SEQUENCE OF CONSTRUCTION	MAINTENANCE OF TRAFFIC	NOTES
<p>12. Complete JWP Bridge Construction over I-17.</p> <p>13. Lt JWP Sta 17+72 to Abutment 1, remove exst catch basin & pipe and any other features in conflict with the construction of permanent pavement, curb, gutter, sidewalk ramp, and portion of median island. Relocate light pole to new foundation.</p> <p>14. Abutment 2 to Lt JWP Sta 23+40, remove any features in conflict with the construction of permanent pavement & guardrail.</p>	<p>I-17 NB & SB & JW POWELL CLOSURE: Utilize Detail TC2 and TC3 to close existing JWP to through traffic from east of Ramps C & D to west of existing Ramps A & B.</p> <p>Utilize Detail TC2, TC3, TC4 and TC5 to detour I-17 traffic onto existing ramps and detour pavement, where applicable. Close I-17 between existing ramps. See Special Provisions.</p> <p>Maintain existing Ramps C & D access, including access to JWP to the west of the roundabout, towards SR 89A.</p> <p>Maintain existing Ramps A & B access, including access to JWP to the east.</p> <p>JW POWELL: Utilize MUTCD TA-6 "Shoulder Work with Minor Encroachment" for work adjacent to JWP traffic during daytime work. Utilize Detail TC2 and TC3 for JW Powell nighttime closures.</p> <p>At completion of night work, remove I-17 detour and JWP restrictions & return to Typical Configurations. Close Detour per Detail TC3.</p>	<p>ALL ACTIVITIES: Maintain Pedestrian and Bicycle Detour from Phase 1A in place.</p> <p>Maintain TCB from Phase 1A in place.</p> <p>Maintain access for emergency vehicles across the JWP bridge during closures.</p> <p>The detour shall be closed and delineated with Type 2 and Type 3 barricades when not in use.</p> <p>ACTIVITY 12: Unless otherwise approved by ADOT, only one direction of I-17 may be closed at a time. Multiple closures will be required for certain construction activities, See Special Provisions for additional details.</p> <p>NB & SB I-17 to be free flow through ramp terminals at JWP, except when breaks are needed to accommodate right turn movements from WB JWP to Ramp A or EB JWP to Ramp D.</p> <p>Right turns from Ramp B and Ramp C are permitted.</p> <p>ACTIVITY 13 & 14: At the completion of the bridge construction, shift EB JWP traffic onto the new EB permanent pavement and new bridge, then back onto the existing JWP pavement.</p> <p>Maintain WB JWP traffic on the existing WB pavement and bridge. Complete the new median island construction and partial removal of the existing median island.</p> <p>Nighttime closures permitted on JW Powell for completion of tie-in work, See Special Provisions for additional details. I-17 shall remain open in both directions unless work is completed concurrently with the new bridge.</p>

At the completion of this Phase, shift WB JWP traffic onto the new WB permanent pavement and new bridge, then back onto the existing JWP pavement.

* It is assumed that the existing ramps and JW Powell will be closed for a total of 17 working days in this phase, see special provisions for additional information on closure requirements.

		<table border="1"> <tr> <th>NAME</th> <th>DATE</th> </tr> <tr> <td>L.BUSENBARK</td> <td>10/23</td> </tr> <tr> <td>L.BUSENBARK</td> <td>10/23</td> </tr> <tr> <td>R.SRIPADA</td> <td>10/23</td> </tr> </table>	NAME	DATE	L.BUSENBARK	10/23	L.BUSENBARK	10/23	R.SRIPADA	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION TRAFFIC DESIGN SECTION	ROUTE I-17	F.H.W.A. Arizona Division STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 42	TOTAL SHEETS 123	RECORD DRAWING
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HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL (602) 522-7700	MILEPOST 337.39	LOCATION I-17 AIRPORT RD TI UP			DWG NO. T-02.06													
CONSTRUCTION SEQUENCING NOTES PHASE 2					STRUCTURE NO.	TRACS NO. F0362 01C		_____ OF _____										



ARIZONA
89A

INTERSTATE
ARIZONA
17

INTERSTATE
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INTERSTATE
ARIZONA
17

LEGEND

- Exst Roadway
- Work Area
- Cst Temporary Pavement
- Temporary Pavement In-Place
- Completed Work
- Cst Access/Work Area Boundary
- Cst Access/Work Area/Staging Boundary
- Temporary Concrete Barrier In-Place
- Install Temporary Concrete Barrier

I-17 NB & SB Left-Lane Closure

I-17 NB & SB 1-Lane Open in Each Direction (Outside)
 JW Powell & Ramps Open
 Activity 15 Only: Full Closure,
 See Phase 2 for Configuration

I-17 NB & SB Right-Lane Closure

I-17 NB & SB 1-Lane Open in Each Direction (Inside)
 JW Powell & Ramps Open

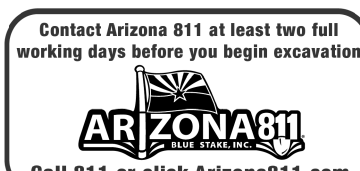

 Contact Arizona 811 at least two full working days before you begin excavation. Call 811 or click Arizona811.com		DESIGN L.BUSENBARK 10/23 DRAWN L.BUSENBARK 10/23 CHECKED R.SRIPADA 10/23	NAME L.BUSENBARK DATE 10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION TRAFFIC DESIGN SECTION CONSTRUCTION SEQUENCING PHASE 3	ROUTE I-17 MILEPOST 337.39 STRUCTURE NO.	F.H.W.A. Arizona Division STATE ARIZ.	PROJECT NO. 017 CN 337 FEDERAL ID NO. 017-B(237)T	SHEET NO. 43 TOTAL SHEETS 123	RECORD DRAWING		
		HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL (602) 522-7700				LOCATION I-17 AIRPORT RD TI UP		TRACS NO. F0362 01C		DWG NO. T-02.07 OF	
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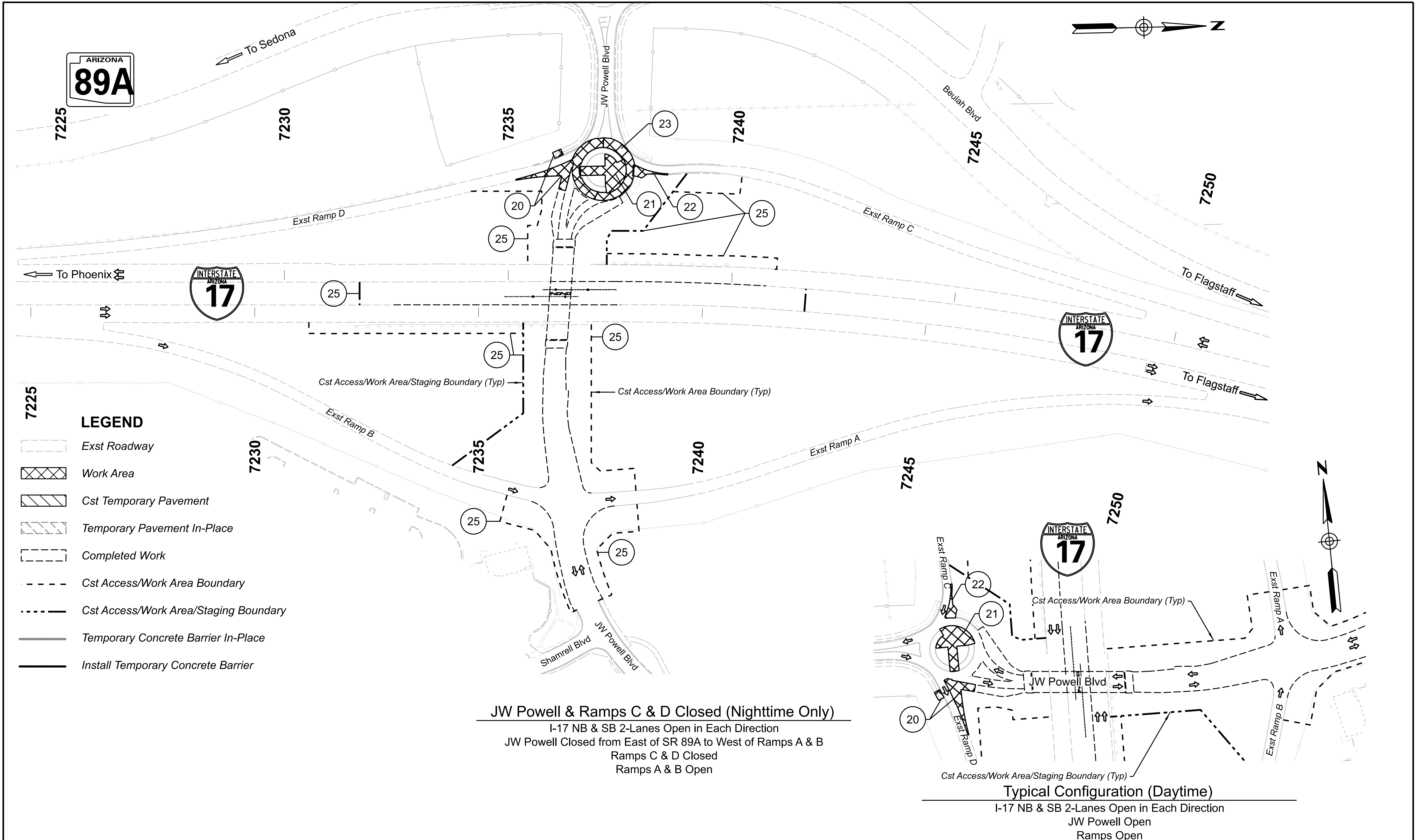
PHASE 3

63 CALENDAR DAYS

PHASE DURATION	MAINTENANCE OF TRAFFIC	NOTES
<p>SEQUENCE OF CONSTRUCTION</p> <p>15. Remove existing bridge over I-17 including barriers along piers. Paint new structure.</p> <p>16. Lt Exst JWP Sta 17+58 to existing Abutment 1, remove remaining roadway. Construct remaining permanent pavement, curb, gutter, sidewalk, sidewalk ramp, barrier and final grading. Construct median paving.</p> <p>17. Lt Exst JWP from existing Abutment 2 to Exst JWP Sta 24+47, remove remaining roadway. Construct remaining permanent pavement, guardrail, and final grading. Relocate light pole to new foundation.</p> <p>18. Install Temporary Concrete Barrier & Temporary Crash Cushions Rt Exst SB I-17 Sta 7230+92 to 7246+58 and Lt Exst NB I-17 Sta 7227+57 to 7243+03, See Dwg No. T-05.05 to T-05.08 for additional information.</p> <p>Remove existing guardrail, construct new permanent shoulder pavement, grade median, install rumble strips & install new guardrail.</p> <p>19. Lt Exst I-17 SB Sta 7235+87 to 7239+95 & Rt Exst I-17 NB Sta 7232+20 to 7237+44, remove existing guardrail. Grade ditch and fill guardrail post voids.</p>	<p>I-17 NB & SB & JW POWELL CLOSURE: Utilize Detail TC2 and TC3 to close existing JWP to through traffic from the east of Ramps C & D to west of existing Ramps A & B.</p> <p>Utilize Detail TC2, TC3, TC4 and TC5 to detour I-17 traffic onto existing ramps and detour pavement, where applicable. Close I-17 between existing ramps. See Special Provisions. Close I-17 between existing ramps.</p> <p>Maintain existing Ramps C & D access, including access to JWP to the west of the roundabout, towards SR 89A.</p> <p>Maintain existing Ramps A & B access, including access to JWP to the east.</p> <p>JW POWELL: Utilize MUTCD TA-6 "Shoulder Work with Minor Encroachment" for work adjacent to JWP traffic during daytime work. Utilize Detail TC2 and TC3 for JW Powell nighttime closures.</p> <p>I-17 NB & SB INSIDE LANE CLOSURE: Utilize Dwg No. T-05.05 to T-05.08 for work adjacent to the in inside I-17 shoulders.</p> <p>I-17 NB & SB OUTSIDE LANE CLOSURE: Utilize Dwg No. T-05.09 to T-05.12 for work adjacent to the outside I-17 shoulders.</p> <p>At completion of night work, remove I-17 detour and JWP restrictions & return to Typical Configurations. Close Detour per Detail TC3.</p>	<p>ALL ACTIVITIES: Maintain Pedestrian and Bicycle Detour from Phase 1A in place.</p> <p>Relocate TCB from Phase 1A.</p> <p>Maintain access for emergency vehicles across the JWP bridge during closures.</p> <p>The detour shall be closed and delineated with Type 2 and Type 3 barricades when not in use.</p> <p>ACTIVITY 15: See Phase 2, Activity 12 for I-17 & JW Powell closures.</p> <p>At the completion of the bridge construction, shift EB JWP traffic onto the new EB permanent pavement and new bridge, then back onto the existing JWP pavement.</p> <p>Maintain WB JWP traffic on the existing WB pavement and bridge.</p> <p>ACTIVITY 16 & 17: Nighttime closures permitted on JW Powell for completion of tie-in work, See Special Provisions for additional details. I-17 shall remain open in both directions unless work is completed concurrently with the new bridge.</p> <p>ACTIVITY 18: Existing hazards shall be removed prior to removal of existing barrier and guardrail. Barrier protection (TCB or new guardrail) shall be provided for new median pier prior to removal of existing guardrail.</p> <p>ACTIVITY 19: Work may also be completed concurrently with Activity 15 during a full closure.</p> <p>See Special Provisions for I-17 lane closure restrictions and requirements.</p>

* It is assumed that the existing ramps and JW Powell will be closed for a total of 17 working days in this phase, see special provisions for additional information on closure requirements. It is assumed it will take approximately 2-days to install the temporary concrete barrier in each direction on I-17 (NB/SB). It is assumed the outside shoulder work on I-17 (SB/NB) will take approximately 13-days.

		<table border="1"> <tr> <th>NAME</th> <th>DATE</th> </tr> <tr> <td>DESIGN L.BUSENBARK</td> <td>10/23</td> </tr> <tr> <td>DRAWN L.BUSENBARK</td> <td>10/23</td> </tr> <tr> <td>CHECKED R.SRIPADA</td> <td>10/23</td> </tr> </table>	NAME	DATE	DESIGN L.BUSENBARK	10/23	DRAWN L.BUSENBARK	10/23	CHECKED R.SRIPADA	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION TRAFFIC DESIGN SECTION	ROUTE I-17	F.H.W.A. Arizona Division STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 44	TOTAL SHEETS 123	RECORD DRAWING
		NAME	DATE															
DESIGN L.BUSENBARK	10/23																	
DRAWN L.BUSENBARK	10/23																	
CHECKED R.SRIPADA	10/23																	
HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL (602) 522-7700	MILEPOST 337.39	LOCATION I-17 AIRPORT RD TI UP	DWG NO. T-02.08															
			CONSTRUCTION SEQUENCING NOTES PHASE 3	STRUCTURE NO.	TRACS NO. F0362 01C	_____ OF _____												



JW Powell & Ramps C & D Closed (Nighttime Only)
 I-17 NB & SB 2-Lanes Open in Each Direction
 JW Powell Closed from East of SR 89A to West of Ramps A & B
 Ramps C & D Closed
 Ramps A & B Open

Typical Configuration (Daytime)
 I-17 NB & SB 2-Lanes Open in Each Direction
 JW Powell Open
 Ramps Open

LEGEND

- Exst Roadway
- Work Area
- Cst Temporary Pavement
- Temporary Pavement In-Place
- Completed Work
- Cst Access/Work Area Boundary
- Cst Access/Work Area/Staging Boundary
- Temporary Concrete Barrier In-Place
- Install Temporary Concrete Barrier

 Contact Arizona 811 at least two full working days before you begin excavation. Call 811 or click Arizona811.com	 LEE T. BUSENBARK PROFESSIONAL ENGINEER CIVIL ARIZONA, U.S.A.	NAME L.BUSENBARK 10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION TRAFFIC DESIGN SECTION CONSTRUCTION SEQUENCING PHASE 4	ROUTE I-17	F.H.W.A. Arizona Division STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 45	TOTAL SHEETS 123	RECORD DRAWING
		DESIGN L.BUSENBARK 10/23		MILEPOST 337.39						
 HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL (602) 522-7700		DRAWN L.BUSENBARK 10/23	TRACS NO. F0362 01C	DWG NO. T-02.09 OF						
		CHECKED R.SRIPADA 10/23								

PHASE 4

PHASE DURATION

60 CALENDAR DAYS

SEQUENCE OF CONSTRUCTION	MAINTENANCE OF TRAFFIC	NOTES
<p>20. Rt Exst Ramp D Sta 18+71 to JWP Sta 17+29, remove detour. Construct curb, gutter, sidewalk & sidewalk ramps.</p> <p>Lt Exst Ramp D Sta 19+65 to 19+98, remove curb, gutter and sidewalk. Construct curb, gutter, sidewalk, and sidewalk ramp.</p> <p>21. Lt & Rt JWP Sta 16+60 to 17+94, remove detour. Construct curb, gutter, truck apron and regrade center island of roundabout.</p> <p>22. Lt JWP Sta 16+96 to Rt Exst Ramp C Sta 1+46, remove detour. Construct curb, gutter, sidewalk, and sidewalk ramp.</p> <p>23. Mill & Overlay Roundabout. Install permanent striping.</p>	<p>Maintain 2-lanes in each direction on I-17.</p> <p>Maintain 1-lane in each direction on JW Powell, except when nighttime closures are permitted, see below.</p> <p>Maintain all ramps open, except when nighttime closures permitted, see below.</p> <p>JW POWELL & RAMPS C & D CLOSURE: Utilize Detail TC2 and TC3 and ADOT "Temporary Traffic Control Design Guidelines" Figure SA-10 "Exit Ramp Closure" to close JWP, Ramp C and Ramp D to traffic for all activities in this phase. Close JWP between the SR 89A/Beulah Blvd roundabout and ramps A & B. See Special Provisions.</p> <p>At completion of night work, remove JWP restrictions & return to Typical Configuration.</p>	<p>ALL ACTIVITIES: Maintain access for emergency vehicles across the JWP bridge during closures.</p> <p>The detour shall be closed and delineated with Type II and Type III barricades until completely removed.</p> <p>ACTIVITY 20, 21 & 22: Nighttime closures permitted on JW Powell for work at the roundabout, including Ramps C & D, See Special Provisions for additional details. I-17 shall remain open in both directions unless work is completed concurrently with the new bridge.</p> <p>At the completion of Activities 20, 21 and 22, remove the pedestrian and bicycle detour.</p>
<p>Final Construction Activities</p> <p>24. Install final Pavement Markings & Signs .</p> <p>25. Finish grading, site restoration, and seeding.</p> <p>26. Remove advanced warning signs.</p>	<p>Close shoulders as needed using the MUTCD TA-6 "Shoulder Closure Work with Minor Encroachment"</p>	


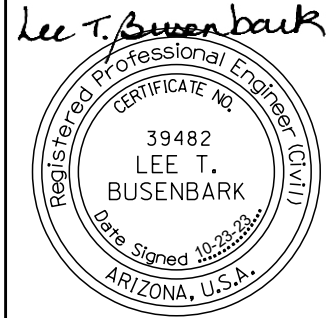
At the completion of this phase, construction is substantially complete, and traffic is in its permanent location.

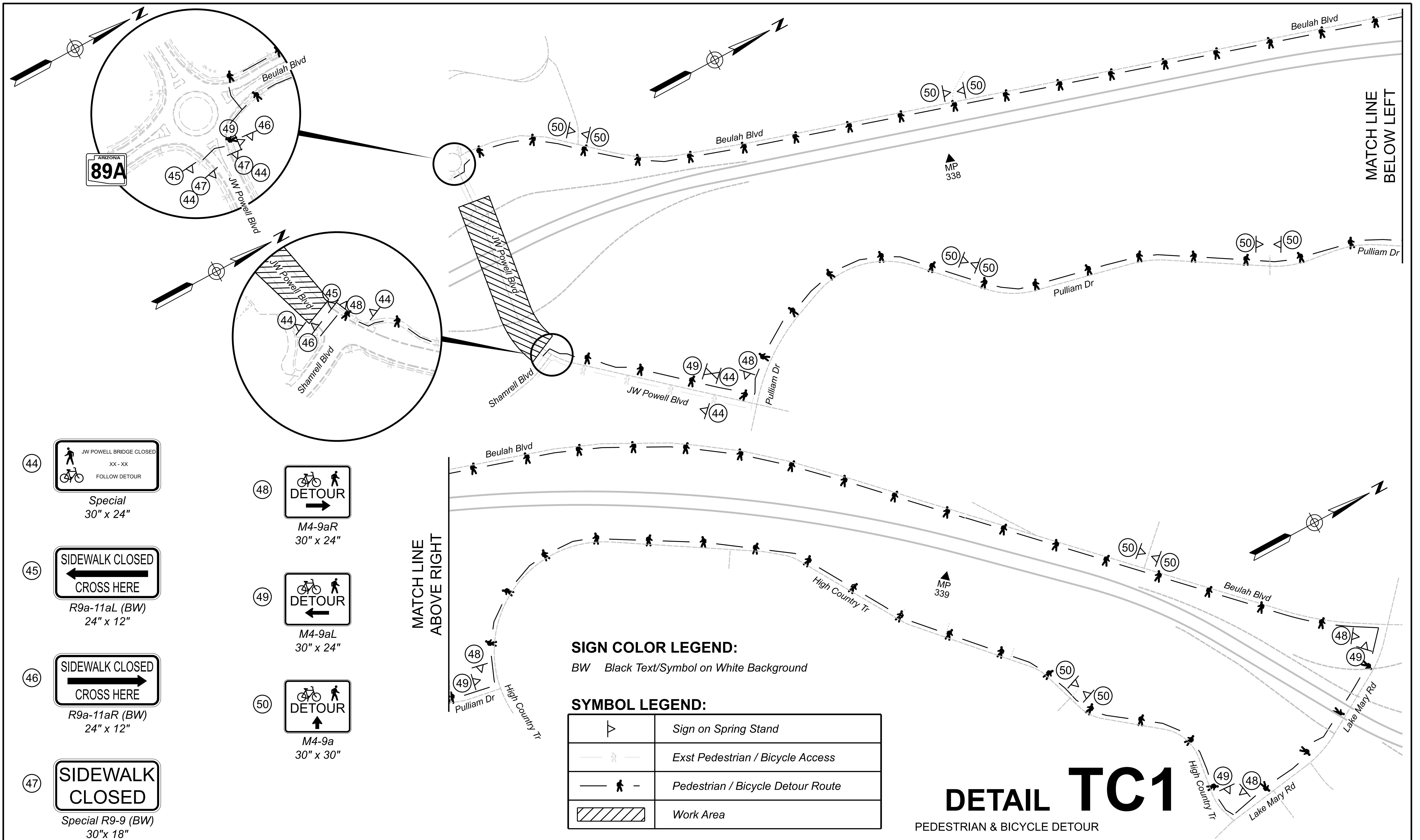
* It is assumed existing ramps C & D and JW Powell will be closed for a total of 14 working days for roundabout work, see special provisions for additional information on closure requirements. It is assumed the removal of the Advanced warning on I-17 will take 2-days in each direction (NB/SB), and removal of the Advanced warning on JWP will take 2-days.

		<table border="1"> <thead> <tr> <th>NAME</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>L.BUSENBARK</td> <td>10/23</td> </tr> <tr> <td>L.BUSENBARK</td> <td>10/23</td> </tr> <tr> <td>R.SRIPADA</td> <td>10/23</td> </tr> </tbody> </table>	NAME	DATE	L.BUSENBARK	10/23	L.BUSENBARK	10/23	R.SRIPADA	10/23	<p align="center">ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION TRAFFIC DESIGN SECTION</p>	<p>ROUTE I-17</p>	<p>F.H.W.A. Arizona Division</p>	<p>STATE ARIZ.</p>	<p>PROJECT NO. 017 CN 337</p>	<p>FEDERAL ID NO. 017-B(237)T</p>	<p>SHEET NO. 46</p>	<p>TOTAL SHEETS 123</p>	<p>RECORD DRAWING</p>
		NAME	DATE																
L.BUSENBARK	10/23																		
L.BUSENBARK	10/23																		
R.SRIPADA	10/23																		
<p>HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL (602) 522-7700</p>	<p align="center">CONSTRUCTION SEQUENCING NOTES PHASE 4</p>	<p>MILEPOST 337.39</p>	<p>LOCATION I-17 AIRPORT RD TI UP</p>	<p>DWG NO. T-02.10 ___ OF ___</p>															

APPROXIMATE TRAFFIC CONTROL QUANTITIES

Bid Item No.	Element of Work	Unit	Advance Warning	Phase 1a	Phase 1B	Phase 2	Phase 3	Phase 4	TOTAL
APPROXIMATE DURATION		CALENDAR DAYS	274	25	81	68	63	32	274
7015010	TEMPORARY CONCRETE BARRIER (INSTALLATION AND REMOVAL)	L.FT.	0	400	0	0	2,720	0	3,120
7015020	TEMPORARY IMPACT ATTENUATORS (INSTALLATION AND REMOVAL)	EACH	0	0	0	0	2	0	2
7015091	SPECIALTY SIGNS	SQ.FT.	30	0	32	71	0	0	133
7016020	TEMPORARY CONCRETE BARRIER (IN USE)	L.FT.-DAY	0	10,000	32,400	27,200	182,240	0	251,840
7016021	TEMPORARY IMPACT ATTENUATORS (IN USE)	EACH-DAY	0	0	0	0	134	0	134
7016030	BARRICADE (TYPE 1, TYPE 2, VERT.PANEL, TUBULAR MARKER)	EACH-DAY	33,154	374	9,443	7,048	5,031	938	55,988
7016031	BARRICADE (TYPE 3, HIGH LEVEL FLAG TREE)	EACH-DAY	0	0	42	102	36	70	250
7016033	PORTABLE SIGN STAND (SPRING TYPE)	EACH-DAY	8,484	128	2,084	2,089	2,699	140	15,624
7016035	WARNING LIGHT (TYPE A)	EACH-DAY	2,466	120	2,168	2,395	2,879	420	10,448
7016037	WARNING LIGHT (TYPE C)	EACH-DAY	33,154	374	9,443	6,242	4,671	938	54,822
7016050	TRUCK-MOUNTED ATTENAUTOR	EACH-DAY	4	2	0	0	0	4	10
7016051	TEMPORARY SIGN (LESS THAN 10 S.F.)	EACH-DAY	4,956	32	1,984	1,924	1,872	392	11,160
7016052	TEMPORARY SIGN (10 S.F. OR MORE)	EACH-DAY	2,466	96	246	704	1,260	84	4,856
7016061	FLASHING ARROW PANEL	EACH-DAY	0	4	0	34	58	0	96
7016067	CHANGEABLE MESSAGE BOARD (CONTRACTOR FURNISHED)	EACH-DAY	2,466	4	14	0	17	14	2,515
7016075	FLAGGING SERVICES (CIVILIAN)	HOUR	0	16	40	656	688	224	1,624
7016079	FLAGGING SERVICES (UNIFORMED OFFICER)	HOUR	32	16	224	408	568	336	1,584
7017030	SEQUENTIAL FLASHING WARNING LIGHT	EACH-DAY	0	0	0	806	846	0	1,652

		DESIGN: L.BUSENBARK 10/23 DRAWN: L.BUSENBARK 10/23 CHECKED: R.SRIPADA 10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION TRAFFIC DESIGN SECTION	ROUTE: I-17 MILEPOST: 337.39 STRUCTURE NO.:	F.H.W.A. Arizona Division STATE: ARIZ.	PROJECT NO.: 017 CN 337 FEDERAL ID NO.: 017-B(237)T	SHEET NO.: 47 TOTAL SHEETS: 123	RECORD DRAWING
		HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL (602) 522-7700		TRAFFIC CONTROL QUANTITIES	LOCATION: I-17 AIRPORT RD TI UP TRACS NO.: F0362 01C	DWG NO.: T-03.01 OF		



MATCH LINE
BELOW LEFT

MATCH LINE
ABOVE RIGHT

- 44
- 45
- 46
- 47
- 48
- 49
- 50

SIGN COLOR LEGEND:
BW Black Text/Symbol on White Background

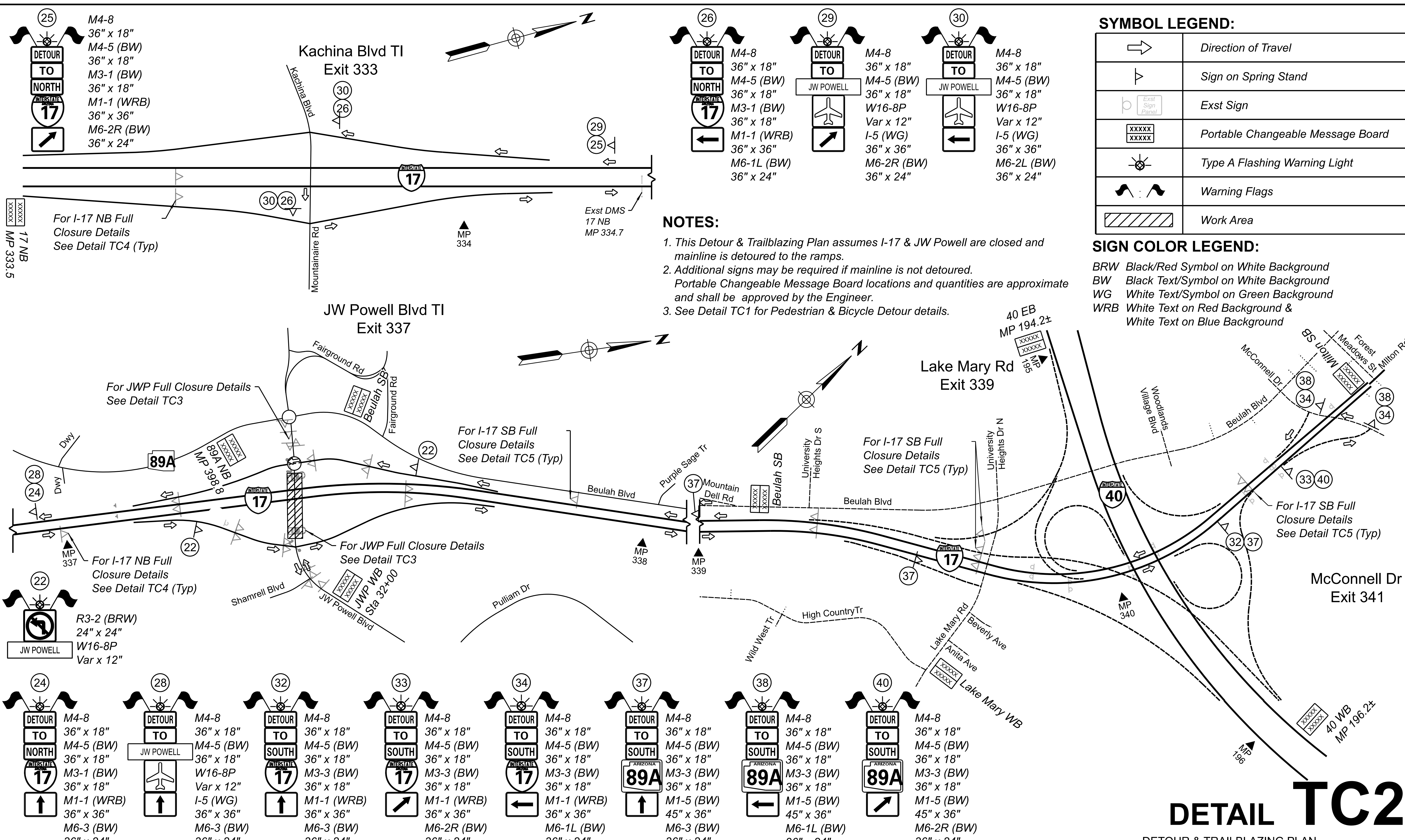
SYMBOL LEGEND:

	Sign on Spring Stand
	Exst Pedestrian / Bicycle Access
	Pedestrian / Bicycle Detour Route
	Work Area

DETAIL TC1

PEDESTRIAN & BICYCLE DETOUR

	NAME: L.BUSENBARK DATE: 10/23 DESIGN: L.BUSENBARK DRAWN: L.BUSENBARK CHECKED: R.SRIPADA DATE: 10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION TRAFFIC DESIGN SECTION	ROUTE: I-17 MILEPOST: 337.39 STRUCTURE NO.:	F.H.W.A. Arizona Division STATE: ARIZ. PROJECT NO.: 017 CN 337 FEDERAL ID NO.: 017-B(237)T SHEET NO.: 48 TOTAL SHEETS: 123	RECORD DRAWING
		HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL: (602) 522-7700	TRAFFIC CONTROL DETAIL	LOCATION: I-17 AIRPORT RD TI UP TRACS NO.: F0362 01C	DWG NO.: T-04.01 OF



SYMBOL LEGEND:

	Direction of Travel
	Sign on Spring Stand
	Exst Sign
	Portable Changeable Message Board
	Type A Flashing Warning Light
	Warning Flags
	Work Area

SIGN COLOR LEGEND:

BRW Black/Red Symbol on White Background
 BW Black Text/Symbol on White Background
 WG White Text/Symbol on Green Background
 WRB White Text on Red Background & White Text on Blue Background

- NOTES:**
1. This Detour & Trailblazing Plan assumes I-17 & JW Powell are closed and mainline is detoured to the ramps.
 2. Additional signs may be required if mainline is not detoured. Portable Changeable Message Board locations and quantities are approximate and shall be approved by the Engineer.
 3. See Detail TC1 for Pedestrian & Bicycle Detour details.

25
 M4-8 36" x 18"
 M4-5 (BW) 36" x 18"
 M3-1 (BW) 36" x 18"
 M1-1 (WRB) 36" x 36"
 M6-2R (BW) 36" x 24"

26
 M4-8 36" x 18"
 M4-5 (BW) 36" x 18"
 M3-1 (BW) 36" x 18"
 M1-1 (WRB) 36" x 36"
 M6-1L (BW) 36" x 24"

29
 M4-8 36" x 18"
 M4-5 (BW) 36" x 18"
 W16-8P Var x 12"
 I-5 (WG) 36" x 36"
 M6-2R (BW) 36" x 24"

30
 M4-8 36" x 18"
 M4-5 (BW) 36" x 18"
 W16-8P Var x 12"
 I-5 (WG) 36" x 36"
 M6-2L (BW) 36" x 24"

22
 R3-2 (BRW) 24" x 24"
 W16-8P Var x 12"
 JW POWELL

24
 M4-8 36" x 18"
 M4-5 (BW) 36" x 18"
 M3-1 (BW) 36" x 18"
 M1-1 (WRB) 36" x 36"
 M6-3 (BW) 36" x 24"

28
 M4-8 36" x 18"
 M4-5 (BW) 36" x 18"
 W16-8P Var x 12"
 I-5 (WG) 36" x 36"
 M6-3 (BW) 36" x 24"

32
 M4-8 36" x 18"
 M4-5 (BW) 36" x 18"
 M3-3 (BW) 36" x 18"
 M1-1 (WRB) 36" x 36"
 M6-3 (BW) 36" x 24"

33
 M4-8 36" x 18"
 M4-5 (BW) 36" x 18"
 M3-3 (BW) 36" x 18"
 M1-1 (WRB) 36" x 36"
 M6-2R (BW) 36" x 24"

34
 M4-8 36" x 18"
 M4-5 (BW) 36" x 18"
 M3-3 (BW) 36" x 18"
 M1-1 (WRB) 36" x 36"
 M6-1L (BW) 36" x 24"

37
 M4-8 36" x 18"
 M4-5 (BW) 36" x 18"
 M3-3 (BW) 36" x 18"
 M1-5 (BW) 45" x 36"
 M6-3 (BW) 36" x 24"

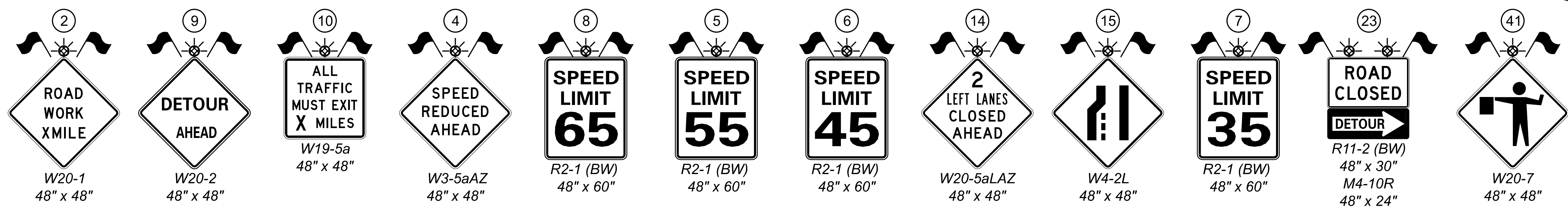
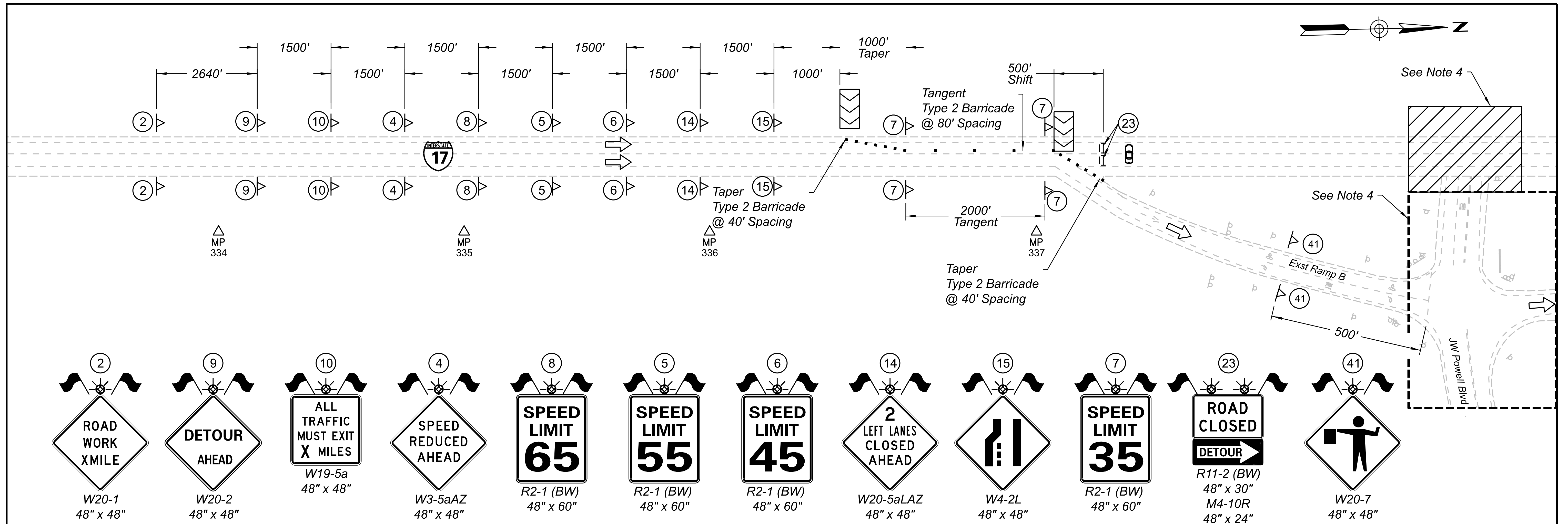
38
 M4-8 36" x 18"
 M4-5 (BW) 36" x 18"
 M3-3 (BW) 36" x 18"
 M1-5 (BW) 45" x 36"
 M6-1L (BW) 36" x 24"

40
 M4-8 36" x 18"
 M4-5 (BW) 36" x 18"
 M3-3 (BW) 36" x 18"
 M1-5 (BW) 45" x 36"
 M6-2R (BW) 36" x 24"

DETAIL TC2

DETOUR & TRAILBLAZING PLAN

	NAME: L.BUSENBARK DATE: 10/23 DESIGN: L.BUSENBARK DRAWN: L.BUSENBARK CHECKED: R.SRIPADA	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION TRAFFIC DESIGN SECTION	ROUTE: I-17 MILEPOST: 337.39 STRUCTURE NO.:	F.H.W.A. Arizona Division STATE: ARIZ. PROJECT NO.: 017 CN 337 FEDERAL ID NO.: 017-B(237)T SHEET NO.: 49 TOTAL SHEETS: 123	RECORD DRAWING
		HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL: (602) 522-7700	TRAFFIC CONTROL DETAIL	LOCATION: I-17 AIRPORT RD TI UP TRACS NO.: F0362 01C	DWG NO.: T-04.02 OF



NOTES:

- Distances between signs are minimum and may be field adjusted.
- Flagger (Uniformed Officer with Vehicle) shall be present as long as the ramps are being utilized for detouring I-17 traffic.
- All existing permanent signs and temporary construction signs that are not applicable for this phase of construction shall be covered or removed according to Section 701 of the Specification at no additional cost to the Department.
- See Detail TC2 for JW Powell and Airport Detour and Trailblazing details.
See Detail TC3 for JW Powell Full Closure details.
See Detail TC5 for I-17 SB Full Closure and Detour to Ramps details.
- All speed limit reductions shall be approved by the Engineer.
- Provide two (2) Type A lights per each Type 3 barricade.
- Sequential Flashing Warning lights (SFWLs) shall be installed on Type 2 barricades along merging tapers.

SYMBOL LEGEND:

	Direction of Travel
	Sign on Spring Stand
	Type 2 Barricade
	Type 3 Barricade
	Exst Sign
	Flashing Arrow Panel
	Type A Flashing Warning Light
	Warning Flags
	Flagger (Uniformed Officer with Vehicle)
	Work Area

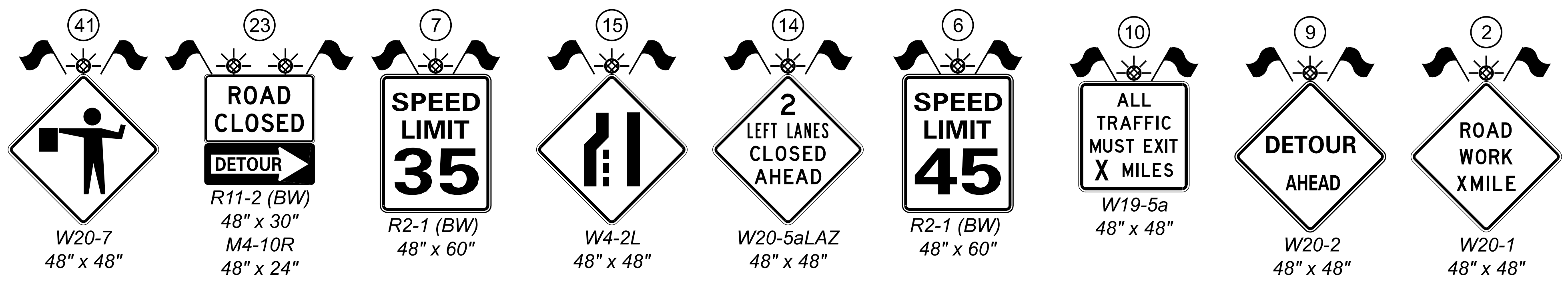
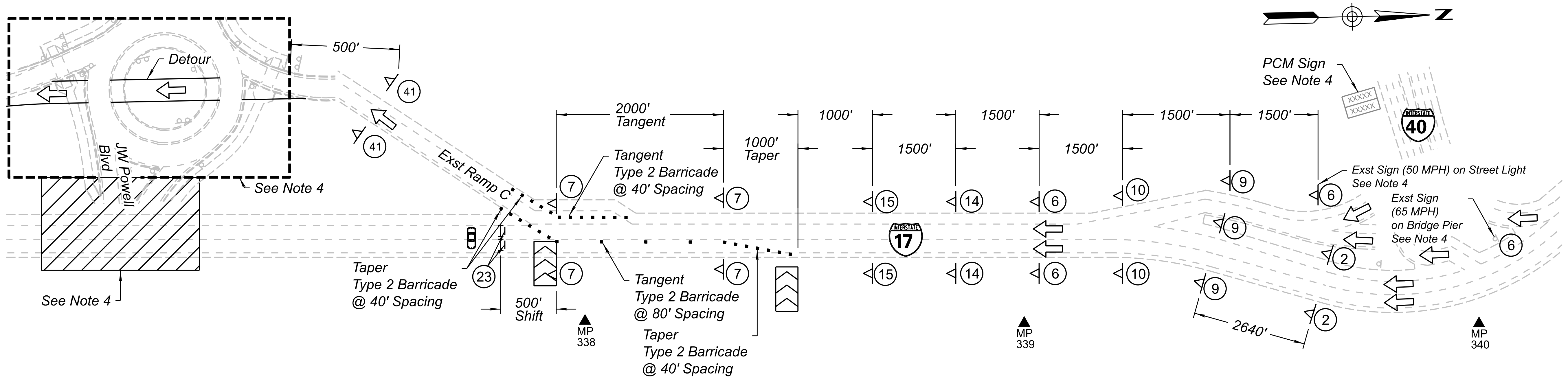
SIGN COLOR LEGEND:

BW Black Text/Symbol on White Background

DETAIL TC4

I-17 NB FULL CLOSURE & DETOUR TO RAMPS

 ARIZONA Call 811 or click Arizona811.com	 LEE T. BUSENBARK State Expires 10/23 ARIZONA, U.S.A.	DESIGN L.BUSENBARK 10/23 DRAWN L.BUSENBARK 10/23 CHECKED R.SRIPADA 10/23	NAME L.BUSENBARK DATE 10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION TRAFFIC DESIGN SECTION	ROUTE I-17 MILEPOST 337.39 STRUCTURE NO.	F.H.W.A. Arizona Division ARIZ.	STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 51	TOTAL SHEETS 123	RECORD DRAWING
		 HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL: (602) 522-7700	TRAFFIC CONTROL DETAIL	LOCATION I-17 AIRPORT RD TI UP	TRACS NO. F0362 01C	DWG NO. T-04.04 OF						



SYMBOL LEGEND:

	Direction of Travel
	Sign on Spring Stand
	Type 2 Barricade
	Sign on Type 3 Barricade
	Exst Sign
	Flashing Arrow Panel
	Portable Changeable Message Board
	Type A Flashing Warning Light
	Warning Flags
	Flagger (Uniformed Officer with Vehicle)
	Work Area

NOTES:

- Distances between signs are minimum and may be field adjusted.
- Flagger (Uniformed Officer with Vehicle) shall be present as long as the ramps are being utilized for detouring I-17 traffic.
- All existing permanent signs and temporary construction signs that are not applicable for this phase of construction shall be covered or removed according to Section 701 of the Specification at no additional cost to the Department.
- See Detail TC2 for JW Powell and Airport Detour and Trailblazing details. See Detail TC3 for JW Powell Full Closure details. See Detail TC4 for I-17 NB Full Closure & Detour to Ramps details.
- All speed limit reductions shall be approved by the Engineer.
- Provide two (2) Type A lights per each Type 3 barricade.
- Sequential Flashing Warning lights (SFWLs) shall be installed on Type 2 barricades along merging tapers.

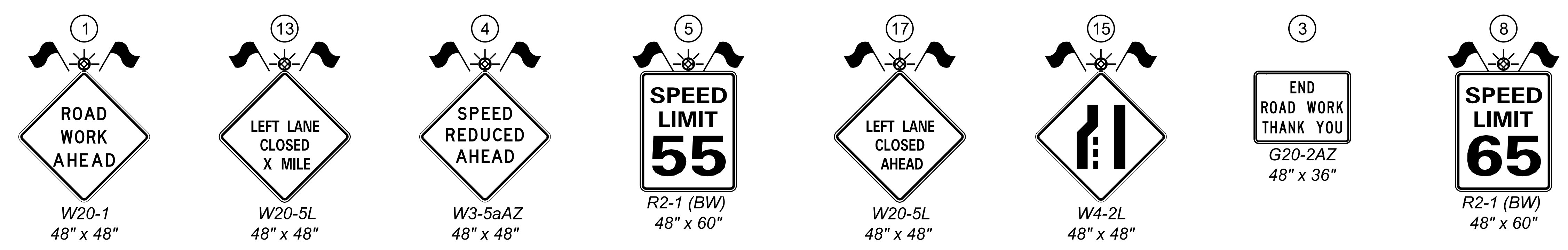
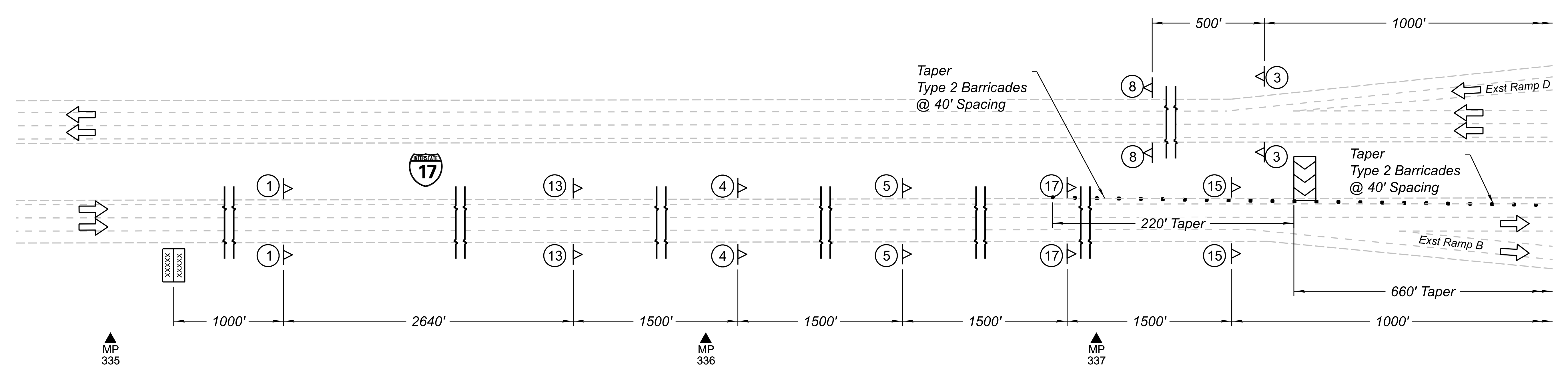
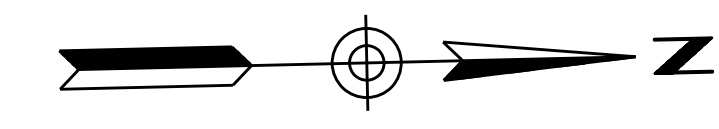
SIGN COLOR LEGEND:

BW Black Text/Symbol on White Background

DETAIL TC5

I-17 SB FULL CLOSURE & DETOUR TO RAMPS

	DESIGN L.BUSENBARK 10/23 DRAWN L.BUSENBARK 10/23 CHECKED R.SRIPADA 10/23	NAME L.BUSENBARK DATE 10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION TRAFFIC DESIGN SECTION	ROUTE I-17 MILEPOST 337.39 STRUCTURE NO.	F.H.W.A. Arizona Division STATE ARIZ.	PROJECT NO. 017 CN 337 FEDERAL ID NO. 017-B(237)T	SHEET NO. 52 TOTAL SHEETS 123	RECORD DRAWING
	HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL: (602) 522-7700	TRAFFIC CONTROL DETAIL		LOCATION I-17 AIRPORT RD TI UP TRACS NO. F0362 01C	DWG NO. T-04.05 OF			



SYMBOL LEGEND:

	Direction of Travel
	Sign on Spring Stand
	Type 2 Barricade
	Flashing Arrow Panel
	Portable Changeable Message Board
	Type A Flashing Warning Light
	Warning Flags

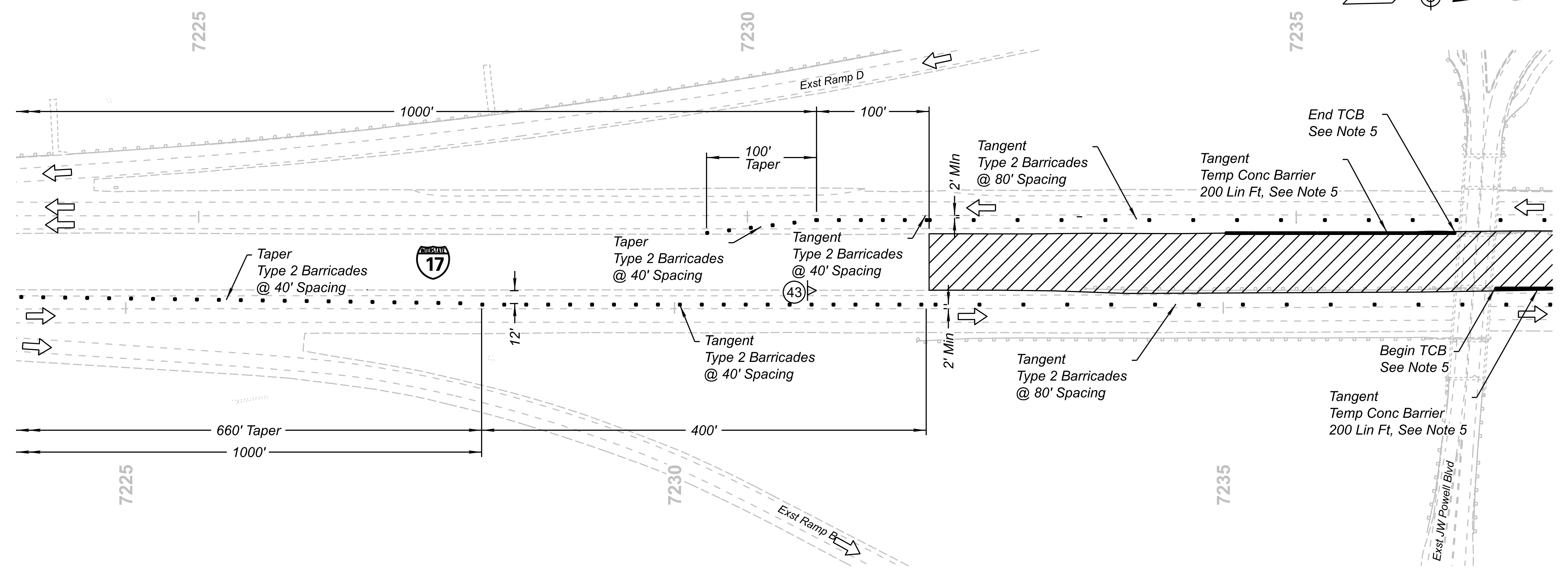
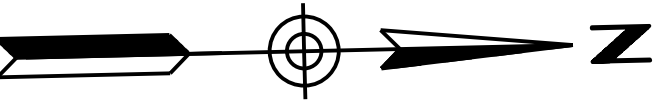
SIGN COLOR LEGEND:

BW Black Text/Symbol on White Background

NOTES:

- Distances between signs are minimum and may be field adjusted.
- All existing permanent signs and temporary construction signs that are not applicable for this phase of construction shall be covered or removed according to Section 701 of the Specification at no additional cost to the Department.
- All speed limit reductions shall be approved by the Engineer.
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		DESIGN L.BUSENBARK 10/23 DRAWN L.BUSENBARK 10/23 CHECKED R.SRIPADA 10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION TRAFFIC DESIGN SECTION	ROUTE I-17 MILEPOST 337.39 STRUCTURE NO.	F.H.W.A. Arizona Division STATE ARIZ. PROJECT NO. 017 CN 337 FEDERAL ID NO. 017-B(237)T SHEET NO. 53 TOTAL SHEETS 123	RECORD DRAWING
		HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL (602) 522-7700		TRAFFIC CONTROL PLAN PHASE 1A	LOCATION I-17 AIRPORT RD TI UP TRACS NO. F0362 01C	DWG NO. T-05.01 OF



R4-7 (BW)
36" x 48"

SIGN COLOR LEGEND:

BW Black Text/Symbol on White Background

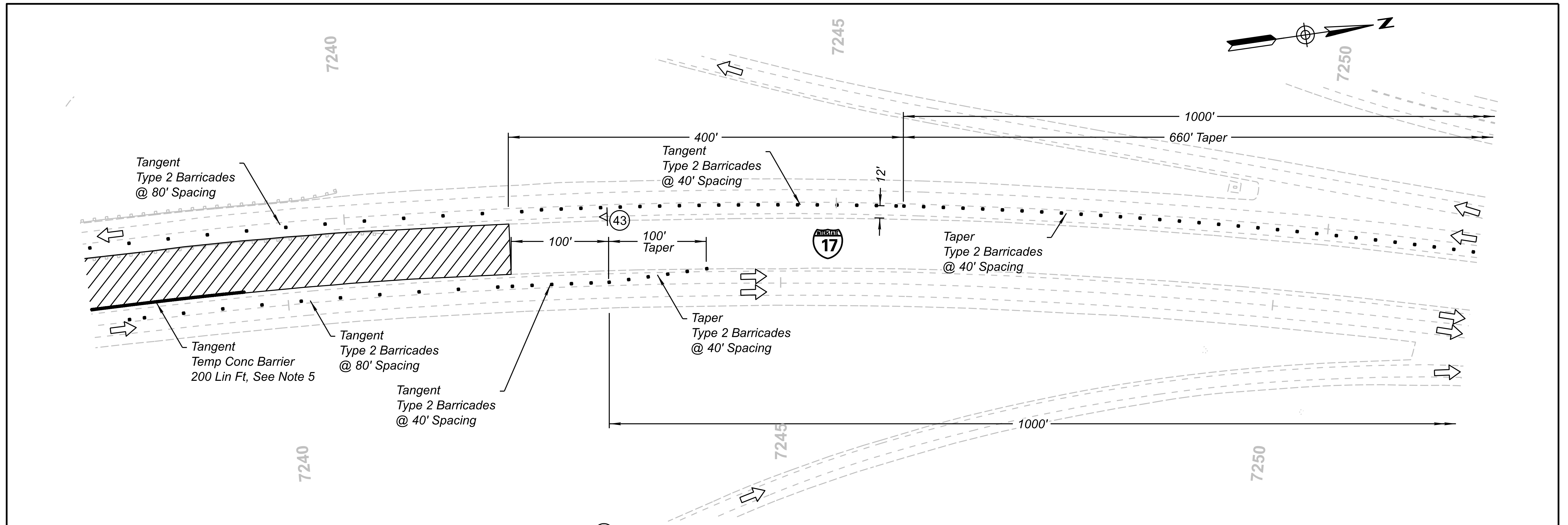
NOTES:

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- Furnish & Install temp conc barrier along edge of mainline shoulder. Maintain a 2-ft minimum shoulder width from the edge of travel lane. At the existing median pier locations, connect the TCB to the existing barrier per Std Dtl C-5 or as approved by the Engineer.

SYMBOL LEGEND:

	Direction of Travel
	Sign on Spring Stand
	Type 2 Barricade
	Exst Sign
	Temporary Concrete Barrier See Std Dwg C-3 for Details.
	Type A Flashing Warning Light
	Warning Flags
	Work Area

		<table border="1" style="font-size: 8px;"> <tr><th>NAME</th><th>DATE</th></tr> <tr><td>L.BUSENBARK</td><td>10/23</td></tr> <tr><td>L.BUSENBARK</td><td>10/23</td></tr> <tr><td>R.SRIPADA</td><td>10/23</td></tr> </table>	NAME	DATE	L.BUSENBARK	10/23	L.BUSENBARK	10/23	R.SRIPADA	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION TRAFFIC DESIGN SECTION	ROUTE I-17 MILEPOST 337.39 STRUCTURE NO.	F.H.W.A. Arizona Division STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 54	TOTAL SHEETS 123	RECORD DRAWING
		NAME	DATE															
L.BUSENBARK	10/23																	
L.BUSENBARK	10/23																	
R.SRIPADA	10/23																	
			TRAFFIC CONTROL PLAN PHASE 1A	LOCATION I-17 AIRPORT RD TI UP			TRACS NO. F0362 01C		DWG NO. T-05.02 ____ OF ____									



SIGN COLOR LEGEND:

BW Black Text/Symbol on White Background



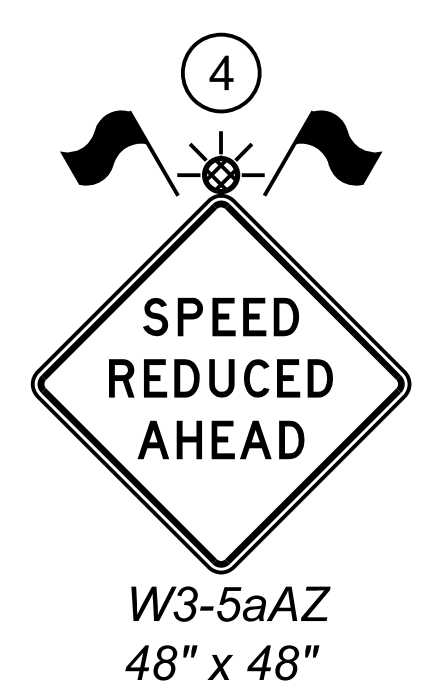
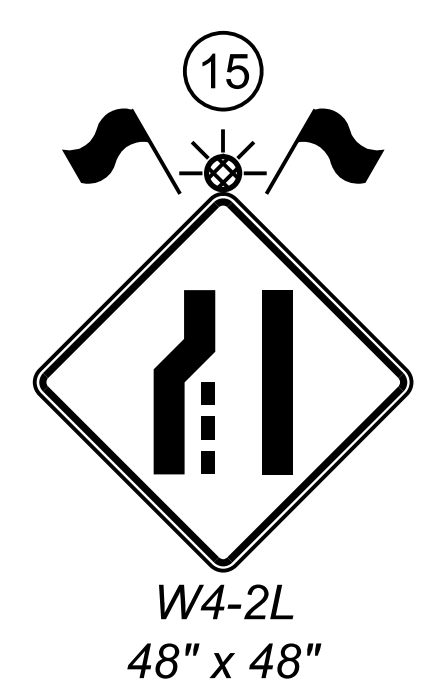
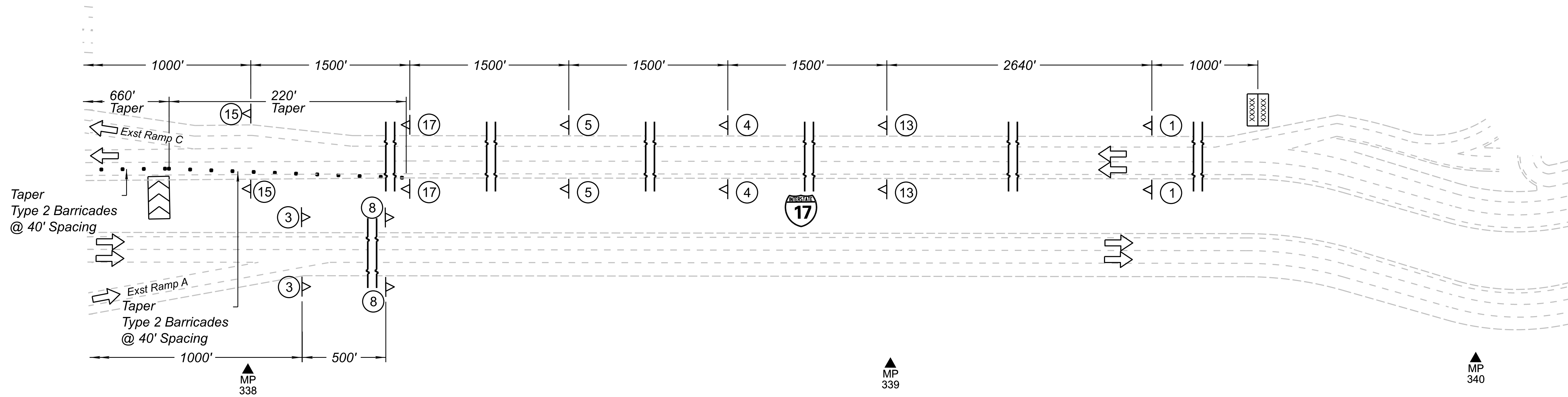
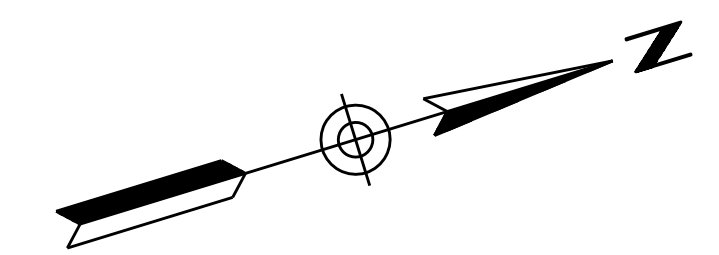
NOTES:

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- All existing permanent signs and temporary construction signs that are not applicable for this phase of construction shall be covered or removed according to Section 701 of the Specification at no additional cost to the Department.
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SYMBOL LEGEND:

	Direction of Travel
	Sign on Spring Stand
	Type 2 Barricade
	Temporary Concrete Barrier See Std Dwg C-3 for Details.
	Type A Flashing Warning Light
	Warning Flags
	Work Area

		<table border="1"> <tr> <th>DESIGN</th> <th>NAME</th> <th>DATE</th> </tr> <tr> <td></td> <td>L.BUSENBARK</td> <td>10/23</td> </tr> <tr> <th>DRAWN</th> <td>L.BUSENBARK</td> <td>10/23</td> </tr> <tr> <th>CHECKED</th> <td>R.SRIPADA</td> <td>10/23</td> </tr> </table>	DESIGN	NAME	DATE		L.BUSENBARK	10/23	DRAWN	L.BUSENBARK	10/23	CHECKED	R.SRIPADA	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION TRAFFIC DESIGN SECTION	ROUTE I-17	F.H.W.A. Arizona Division	STATE	PROJECT NO.	FEDERAL ID NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
		DESIGN	NAME	DATE																			
	L.BUSENBARK	10/23																					
DRAWN	L.BUSENBARK	10/23																					
CHECKED	R.SRIPADA	10/23																					
	HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL: (602) 522-7700	MILEPOST 337.39	ARIZ.	017 CN 337	017-B(237)T	55	123																
TRAFFIC CONTROL PLAN PHASE 1A				STRUCTURE NO.	LOCATION: I-17 AIRPORT RD TI UP				DWG NO. T-05.03														
TRACS NO. F0362 01C					_____ OF _____																		



SIGN COLOR LEGEND:
 BW Black Text/Symbol on White Background

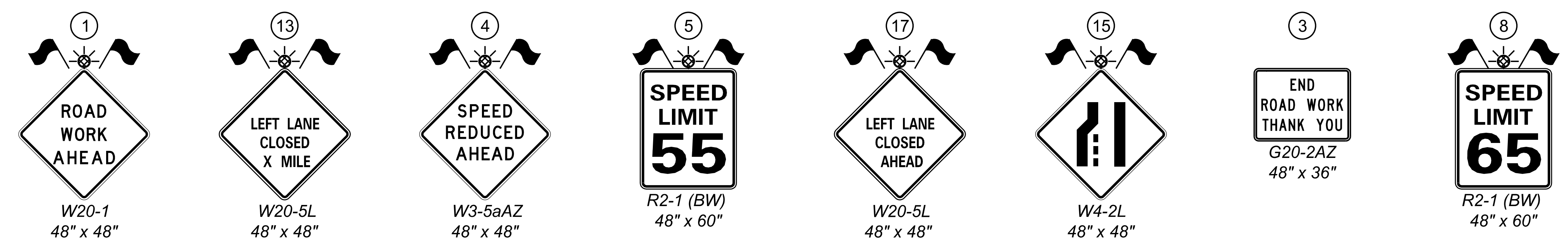
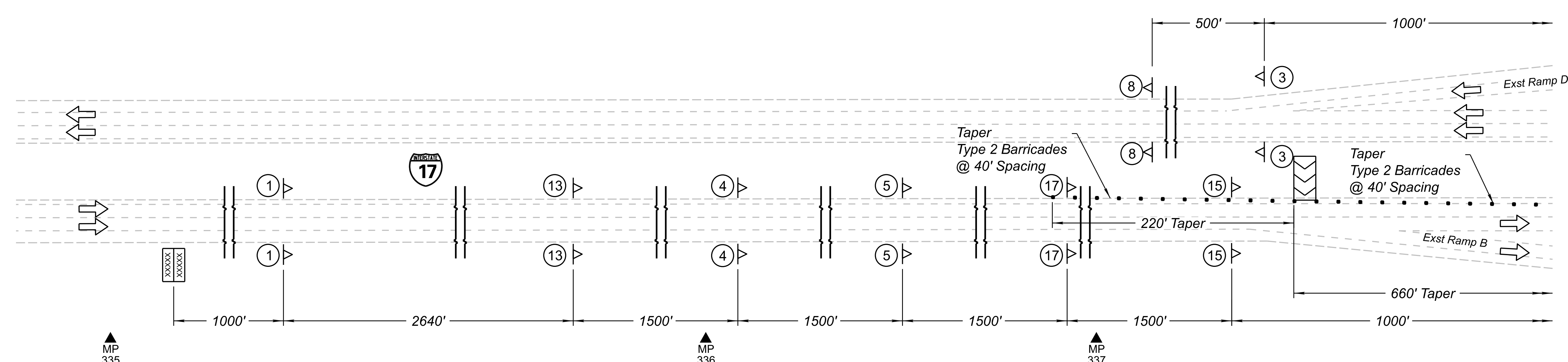
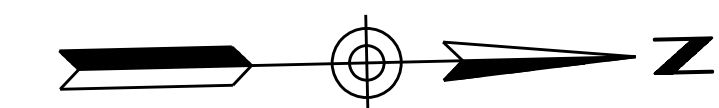
SYMBOL LEGEND:

	Direction of Travel
	Sign on Spring Stand
	Type II Barricade
	Flashing Arrow Panel
	Portable Changeable Message Board
	Type A Flashing Warning Light
	Warning Flags

NOTES:

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 ARIZONA	 LEE T. BUSENBARK 39482 ARIZONA, U.S.A.	DESIGN	L.BUSENBARK	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION TRAFFIC DESIGN SECTION	ROUTE	I-17	STATE	ARIZ.	PROJECT NO.	017 CN 337	FEDERAL ID NO.	017-B(237)T	SHEET NO.	56	TOTAL SHEETS	123	RECORD DRAWING
		DRAWN	L.BUSENBARK	10/23		MILEPOST	337.39			LOCATION	I-17 AIRPORT RD TI UP				DWG NO.	T-05.04		
		CHECKED	R.SRIPADA	10/23	HDR HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL: (602) 522-7700			TRACS NO. F0362 01C				OF						



SIGN COLOR LEGEND:

BW Black Text/Symbol on White Background

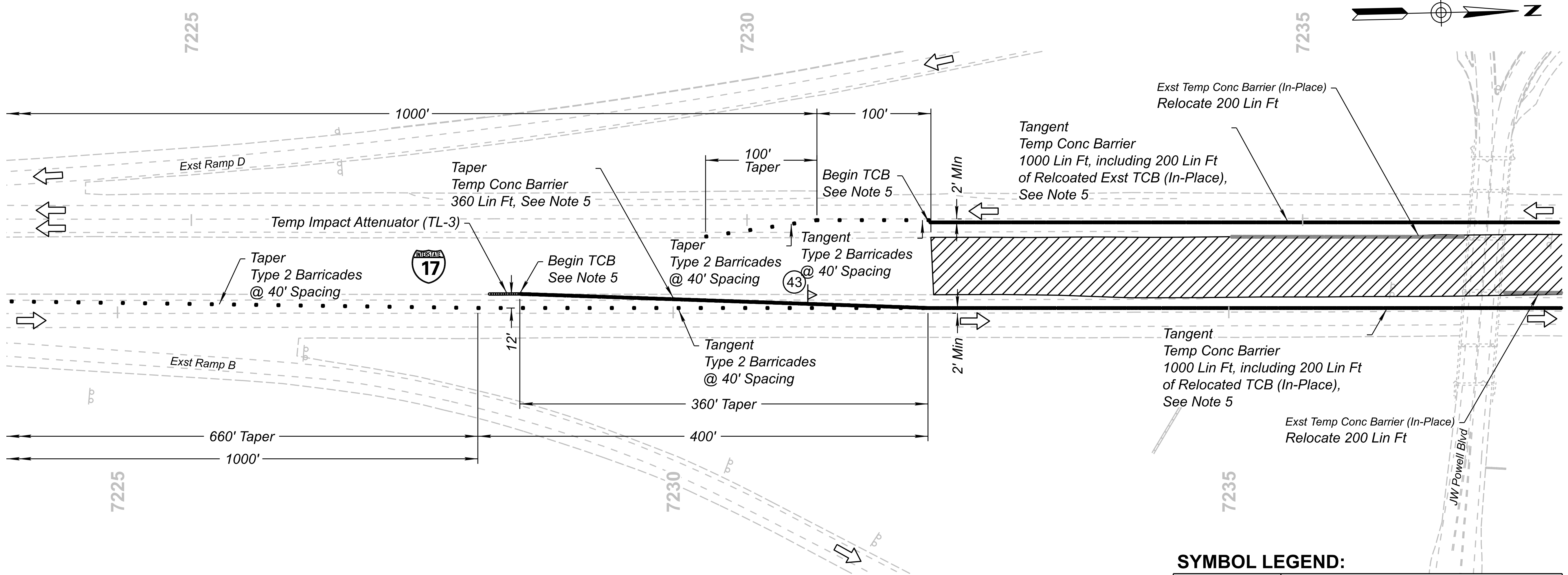
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SYMBOL LEGEND:

	Direction of Travel
	Sign on Spring Stand
	Type 2 Barricade
	Flashing Arrow Panel
	Portable Changeable Message Board
	Type A Flashing Warning Light
	Warning Flags

		DESIGN	L.BUSENBARK	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION TRAFFIC DESIGN SECTION	ROUTE	I-17	STATE	ARIZ.	PROJECT NO.	017 CN 337	FEDERAL ID NO.	017-B(237)T	SHEET NO.	57	TOTAL SHEETS	123	RECORD DRAWING
		DRAWN	L.BUSENBARK	10/23		MILEPOST	337.39			LOCATION	I-17 AIRPORT RD TI UP				DWG NO.	T-05.05		
CHECKED	R.SRIPADA	10/23				STRUCTURE NO.					TRACS NO.	F0362 01C						



SIGN COLOR LEGEND:

BW Black Text/Symbol on White Background

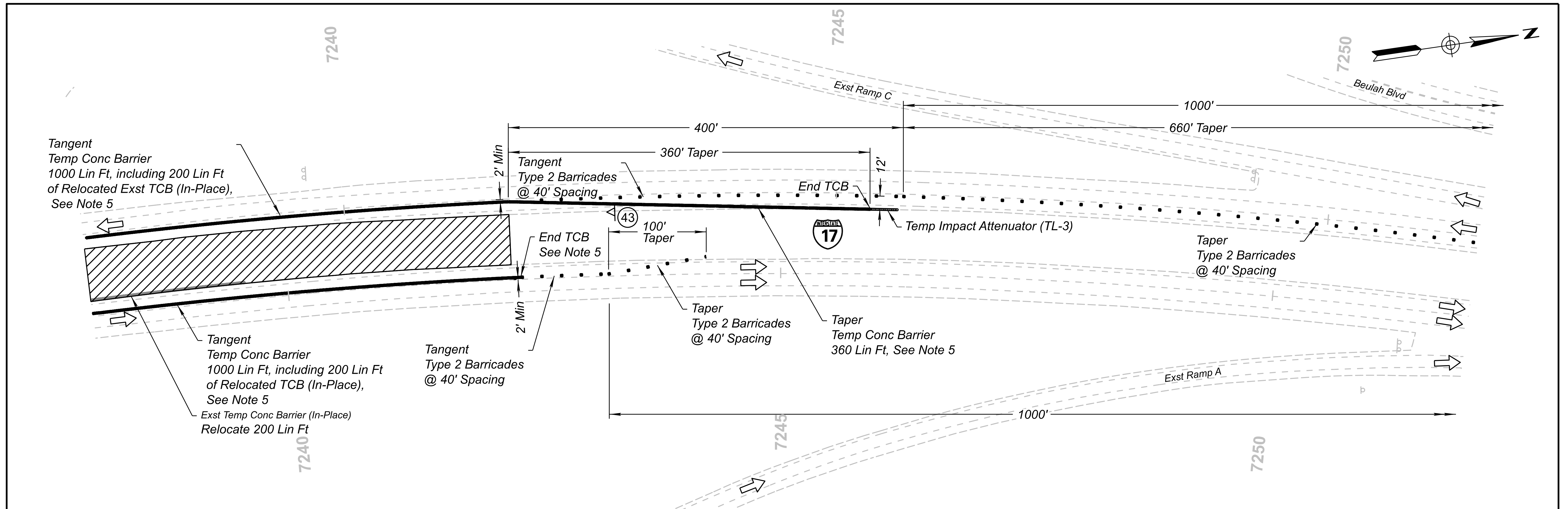
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SYMBOL LEGEND:

	Direction of Travel
	Sign on Spring Stand
	Type 2 Barricade
	Exst Sign
	Temporary Concrete Barrier See Std Dwg C-3 for Details.
	Temporary Concrete Barrier In-Place
	Temporary Attenuator (TL-3)
	Flashing Arrow Panel
	Portable Changeable Message Board
	Type A Flashing Warning Light
	Warning Flags
	Work Area

 Contact Arizona 811 at least two full working days before you begin excavation. Call 811 or click Arizona811.com		DESIGN	L.BUSENBARK	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION TRAFFIC DESIGN SECTION	ROUTE	I-17	F.H.W.A. Arizona Division	STATE	ARIZ.	PROJECT NO.	017 CN 337	FEDERAL ID NO.	017-B(237)T	SHEET NO.	58	TOTAL SHEETS	123	RECORD DRAWING
		DRAWN	L.BUSENBARK	10/23		MILEPOST	337.39				LOCATION	I-17 AIRPORT RD TI UP				DWG NO.	T-05.06		
CHECKED	R.SRIPADA	10/23	 HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL (602) 522-7700			STRUCTURE NO.	TRACS NO. F0362 01C				OF								



SIGN COLOR LEGEND:

BW Black Text/Symbol on White Background



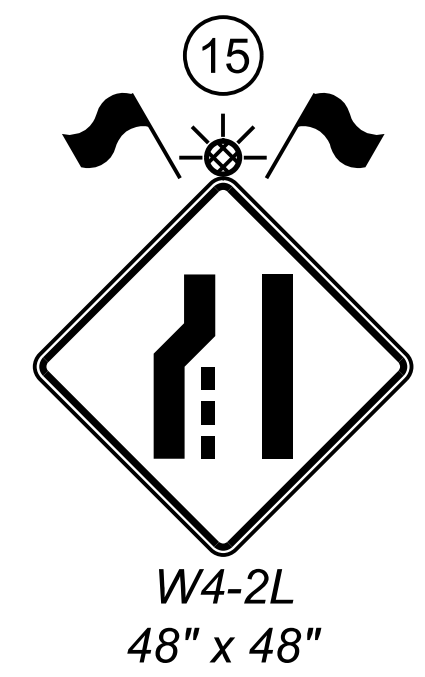
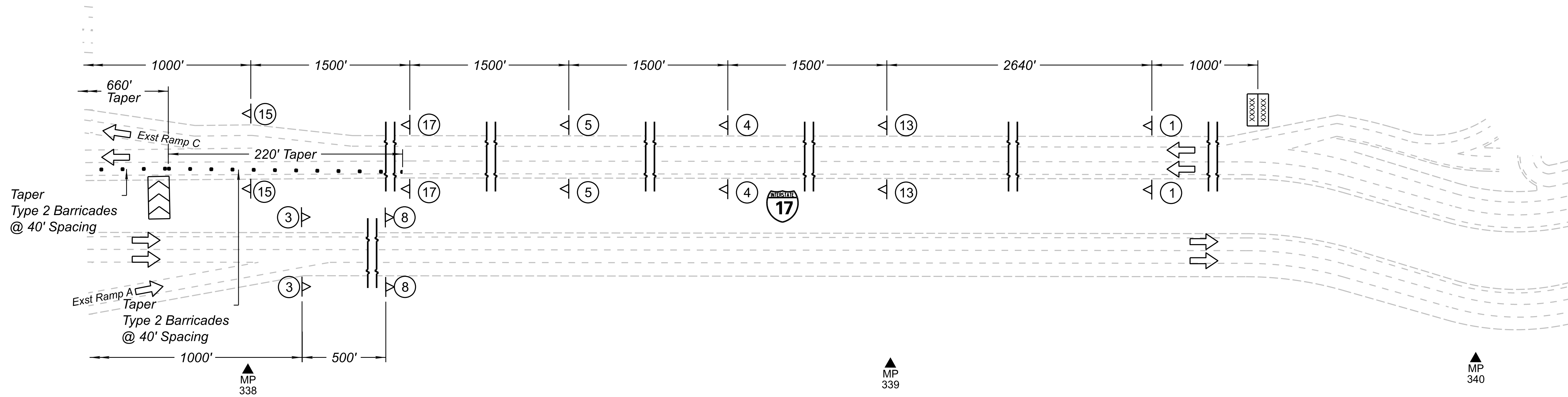
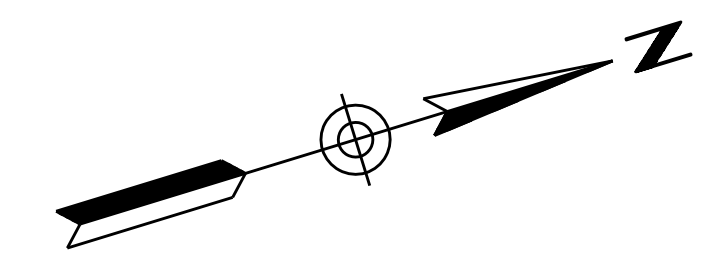
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SYMBOL LEGEND:

	Direction of Travel
	Sign on Spring Stand
	Type 2 Barricade
	Exst Sign
	Temporary Concrete Barrier See Std Dwg C-3 for Details.
	Temporary Concrete Barrier In-Place
	Temporary Attenuator (TL-3)
	Flashing Arrow Panel
	Portable Changeable Message Board
	Type A Flashing Warning Light
	Warning Flags
	Work Area

		DESIGN L.BUSENBARK 10/23 DRAWN L.BUSENBARK 10/23 CHECKED R.SRIPADA 10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION TRAFFIC DESIGN SECTION	ROUTE I-17 MILEPOST 337.39 STRUCTURE NO.	F.H.W.A. Arizona Division STATE ARIZ.	PROJECT NO. 017 CN 337 FEDERAL ID NO. 017-B(237)T	SHEET NO. 59 TOTAL SHEETS 123	RECORD DRAWING
				HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL (602) 522-7700	TRAFFIC CONTROL PLAN PHASE 3 INSIDE LANE CLOSURE	LOCATION I-17 AIRPORT RD TI UP TRACS NO. F0362 01C	DWG NO. T-05.07 OF	



NOTES:

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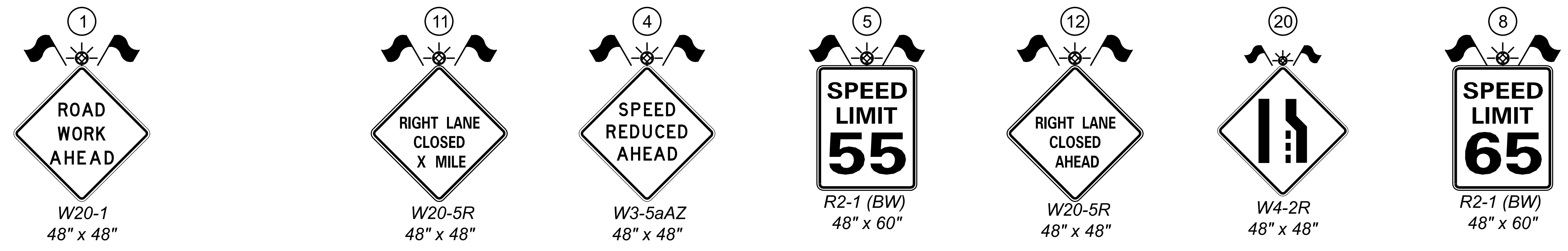
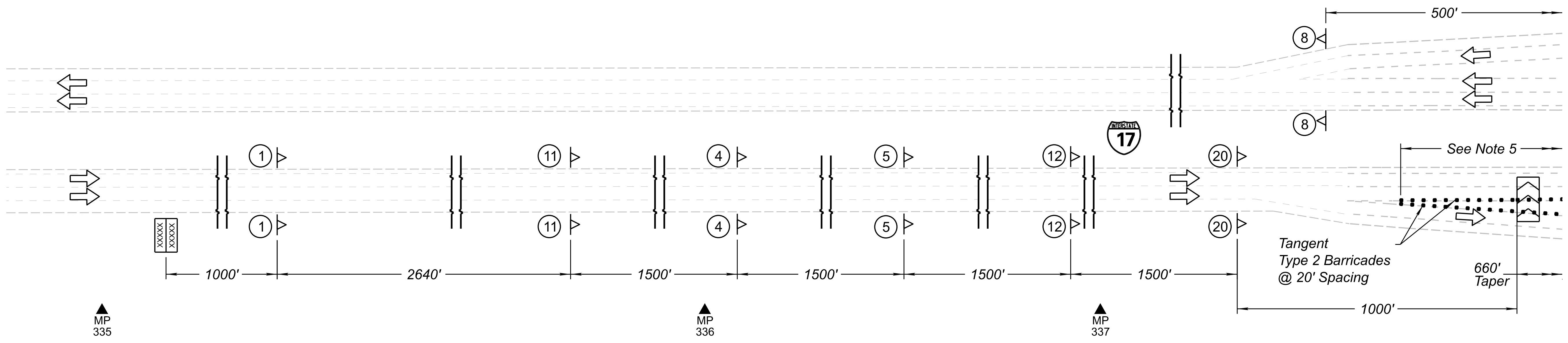
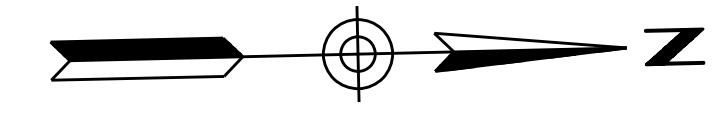
SIGN COLOR LEGEND:

BW Black Text/Symbol on White Background

SYMBOL LEGEND:

	Direction of Travel
	Sign on Spring Stand
	Type 2 Barricade
	Flashing Arrow Panel
	Portable Changeable Message Board
	Type A Flashing Warning Light
	Warning Flags

		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>DESIGN</th> <th>NAME</th> <th>DATE</th> </tr> <tr> <td>L.BUSENBARK</td> <td>L.BUSENBARK</td> <td>10/23</td> </tr> <tr> <th>DRAWN</th> <td>L.BUSENBARK</td> <td>10/23</td> </tr> <tr> <th>CHECKED</th> <td>R.SRIPADA</td> <td>10/23</td> </tr> </table>	DESIGN	NAME	DATE	L.BUSENBARK	L.BUSENBARK	10/23	DRAWN	L.BUSENBARK	10/23	CHECKED	R.SRIPADA	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION TRAFFIC DESIGN SECTION	ROUTE I-17 MILEPOST 337.39 STRUCTURE NO.	F.H.W.A. Arizona Division STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 60	TOTAL SHEETS 123	RECORD DRAWING
	DESIGN	NAME	DATE																			
L.BUSENBARK	L.BUSENBARK	10/23																				
DRAWN	L.BUSENBARK	10/23																				
CHECKED	R.SRIPADA	10/23																				
TRAFFIC CONTROL PLAN PHASE 3 INSIDE LANE CLOSURE				LOCATION I-17 AIRPORT RD TI UP		TRACS NO. F0362 01C		DWG NO. T-05.08 OF														



NOTES:

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3. All speed limit reductions shall be approved by the Engineer.
4. Sequential Flashing Warning lights (SFWLs) shall be installed on Type 2 barricades along merging tapers.
5. See ADOT Temporary Traffic Control Design Guidelines, Figure SA-17.

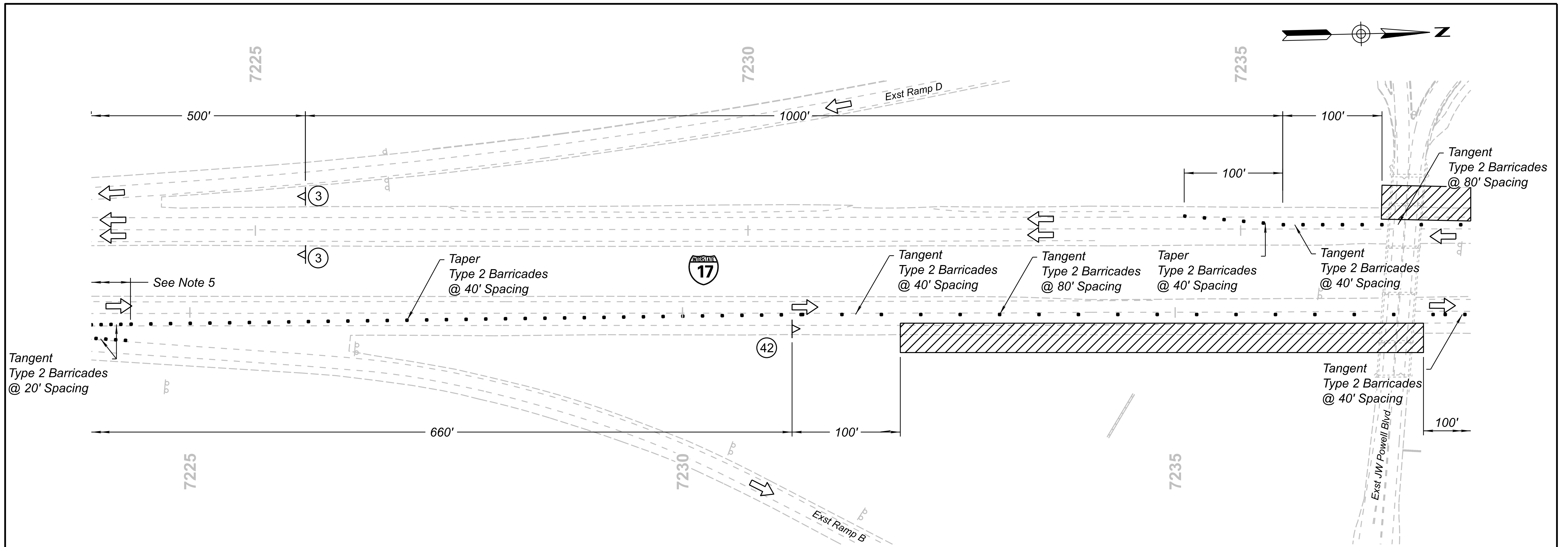
SIGN COLOR LEGEND:

BW Black Text/Symbol on White Background

SYMBOL LEGEND:

	Direction of Travel
	Sign on Spring Stand
	Type 2 Barricade
	Flashing Arrow Panel
	Portable Changeable Message Board
	Warning Flags
	Type A Flashing Warning Light

 Contact Arizona 811 at least two full working days before you begin excavation. Call 811 or click Arizona811.com		DESIGN	L.BUSENBARK	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION TRAFFIC DESIGN SECTION	ROUTE	I-17	STATE	F.H.W.A. Arizona Division	PROJECT NO.	017 CN 337	FEDERAL ID NO.	017-B(237)T	SHEET NO.	61	TOTAL SHEETS	123	RECORD DRAWING	
		DRAWN	L.BUSENBARK	10/23		MILEPOST	337.39		LOCATION		I-17 AIRPORT RD TI UP				DWG NO.		T-05.09		
		CHECKED	R.SRIPADA	10/23	 HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL: (602) 522-7700	STRUCTURE NO.		TRACS NO.	F0362 01C										
						TRAFFIC CONTROL PLAN PHASE 3 OUTSIDE LANE CLOSURE													



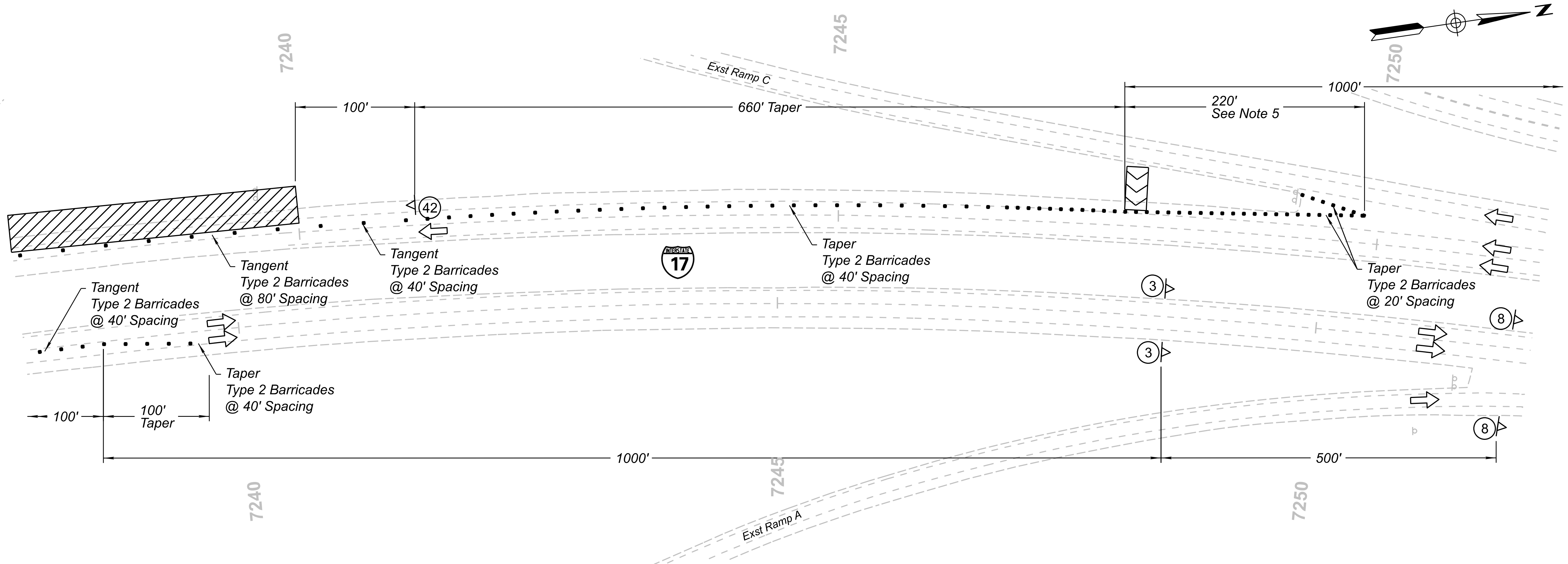
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SIGN COLOR LEGEND:
BW Black Text/Symbol on White Background

SYMBOL LEGEND:

	Direction of Travel
	Sign on Spring Stand
	Type 2 Barricade
	Exst Sign
	Warning Flags
	Type A Flashing Warning Light
	Work Area

 Contact Arizona 811 at least two full working days before you begin excavation Call 811 or click Arizona811.com		DESIGN L.BUSENBARK 10/23 DRAWN L.BUSENBARK 10/23 CHECKED R.SRIPADA 10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION TRAFFIC DESIGN SECTION HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL (602) 522-7700	ROUTE I-17 MILEPOST 337.39 STRUCTURE NO.	F.H.W.A. Arizona Division STATE ARIZ. PROJECT NO. 017 CN 337 FEDERAL ID NO. 017-B(237)T SHEET NO. 62 TOTAL SHEETS 123	RECORD DRAWING
		TRAFFIC CONTROL PLAN PHASE 3 OUTSIDE LANE CLOSURE		LOCATION I-17 AIRPORT RD TI UP TRACS NO. F0362 01C	DWG NO. T-05.10 OF	



NOTES:

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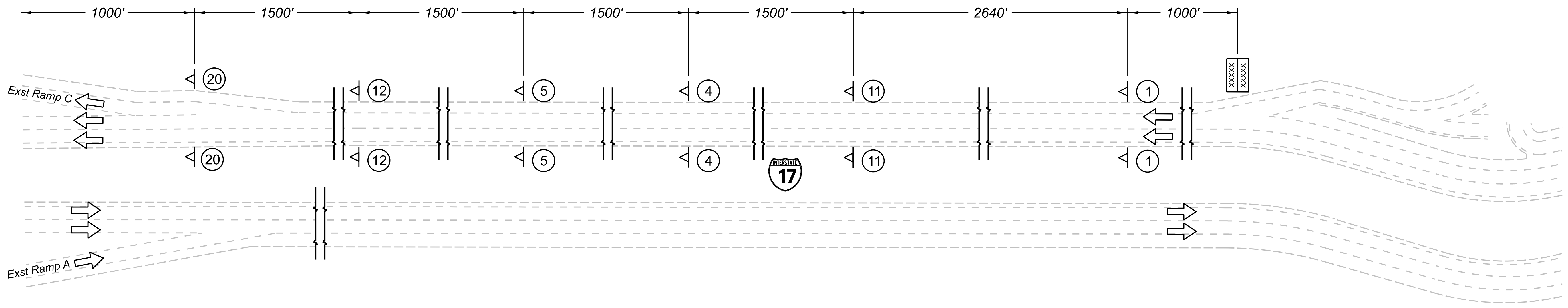
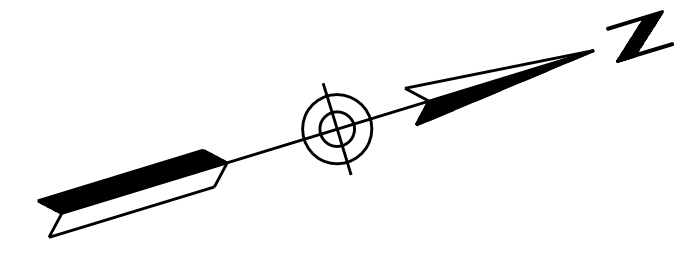
SIGN COLOR LEGEND:
 BW Black Text/Symbol on White Background

SYMBOL LEGEND:

	Direction of Travel
	Sign on Spring Stand
	Exst Sign Panel
	Type 2 Barricade
	Flashing Arrow Panel
	Type A Flashing Warning Light
	Warning Flags
	Work Area



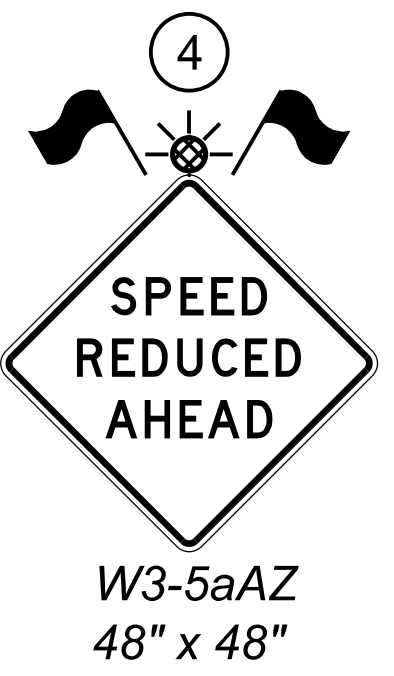
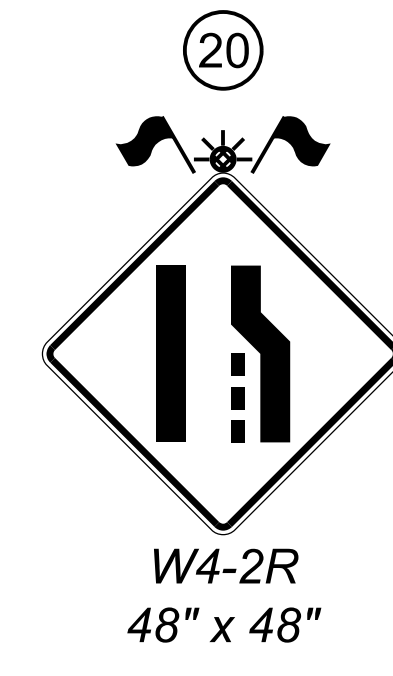
 Contact Arizona 811 at least two full working days before you begin excavation. Call 811 or click Arizona811.com		DESIGN L.BUSENBARK 10/23 DRAWN L.BUSENBARK 10/23 CHECKED R.SRIPADA 10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION TRAFFIC DESIGN SECTION HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL: (602) 522-7700	ROUTE I-17 MILEPOST 337.39 STRUCTURE NO.	F.H.W.A. Arizona Division STATE ARIZ. PROJECT NO. 017 CN 337 FEDERAL ID NO. 017-B(237)T SHEET NO. 63 TOTAL SHEETS 123	RECORD DRAWING
		TRAFFIC CONTROL PLAN PHASE 3 OUTSIDE LANE CLOSURE		LOCATION I-17 AIRPORT RD TI UP TRACS NO. F0362 01C	DWG NO. T-05.11 OF	



MP 338

MP 339

MP 340



SIGN COLOR LEGEND:

BW Black Text/Symbol on White Background

SYMBOL LEGEND:

	Direction of Travel
	Sign on Spring Stand
	Portable Changeable Message Board
	Warning Flags
	Type A Flashing Warning Light

NOTES:

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				MILEPOST 337.39 STRUCTURE NO.		LOCATION I-17 AIRPORT RD TI UP TRACS NO. F0362 01C	DWG NO. T-05.12 OF				

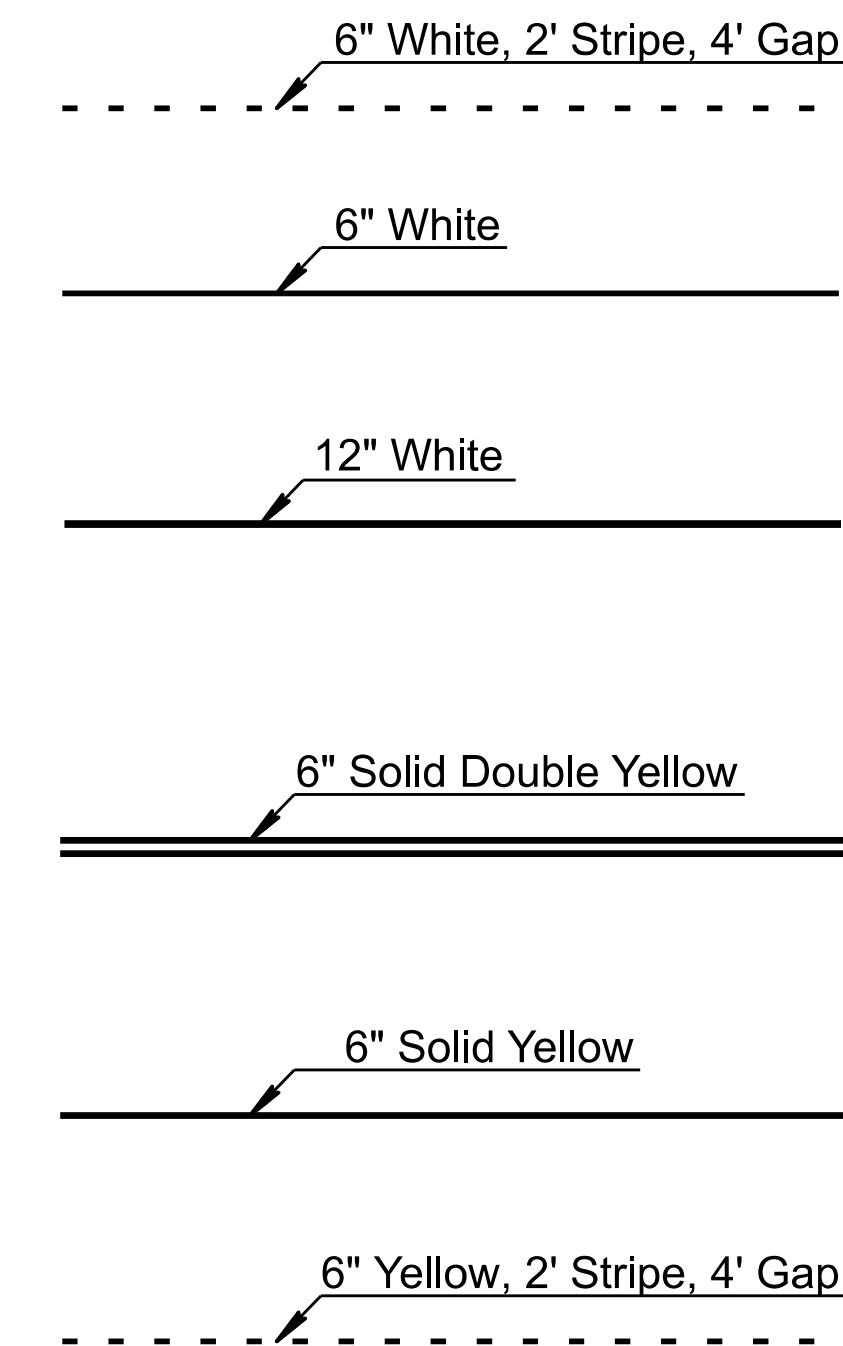
PAVEMENT MARKING NOTES:

- Final striping shall be a two-part epoxy pavement marking material placed at a minimum of 30 calendar days after the initial striping. The two-part material shall conform to the requirements of the Special Provisions.
- It is the contractor's responsibility to ensure that the final surface course is placed so that the striping is offset one foot clear of any construction joint, unless otherwise directed by the Engineer.
- The contractor shall be responsible for the layout and installation of permanent pavement markings on the final surface course following control points that have been set no more than 50 feet apart along the lines to be striped.
- The contractor shall break the center lines and edge lines adjacent to turnouts across any intersections with dedicated roadways or as otherwise directed by the Engineer. In addition, the contractor shall not place any center lines within 10 feet of the nearest edge of pavement of the intersecting roadway.
- The pavement marking drawings are schematic only and not to scale. The contractor shall follow all dimensions and details when installing pavement markings.
- The contractor shall remove curing compound from any new concrete before striping materials are applied.
- Contractor to provide one green delineator assembly at the end of each new guardrail run installed with the project. Delineators shall be per ADOT Standard Drawing No. M-26 (3 of 5).
- The contractor shall install 12 inch ground-in rumble strips continuously along the inside edge of I-17 mainline in the areas where pavement removal is occurring. See table below. The ground-in rumble strips shall conform to the details shown on ADOT Standard Drawing No. M-22.
- The contractor shall install new yellow 6 inch epoxy pavement markings continuously along the inside edge of I-17 mainline in the areas where pavement removal is occurring. See table below.
- Contractor to provide four new yellow delineator assemblies (two for each direction) between the station limits shown below where existing guardrail is to be removed. Delineators shall be per ADOT Standard Drawing No. M-26 (3 of 5).

APPROXIMATE PAVEMENT MARKING QUANTITIES				
BID ITEM NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	PAY QUANTITY 4" EQU
7030026	DELINEATOR ASSEMBLY (FLEXIBLE) (CONCRETE FOUNDATION)	EACH	8	8
7050033	PAVEMENT MARKING, PREFORMED, TYPE II SINGLE ARROW	EACH	5	5
7050046	PAVEMENT MARKING, PREFORMED, TYPE III, LEGEND	EACH	2	2
7080201	WATERBORNE-TYPE I PAVEMENT MARKING (PAINTED) (WHITE)	L.FT.	2,200	2,200
7080202	WATERBORNE-TYPE I PAVEMENT MARKING (PAINTED) (YELLOW)	L.FT.	3,382	3,382
7080301	PAINT BULL NOSE	EACH	5	5
7090001	DUAL COMPONENT PAVEMENT MARKING (WHITE EPOXY)	L.FT.	2,200	4,110
7090002	DUAL COMPONENT PAVEMENT MARKING (YELLOW EPOXY)	L.FT.	4,374	5,478
7090014	REMOVAL OF CURING COMPOUND FOR STRIPING	L.FT.	840	1,260
9280037	GROUND-IN RUMBLE STRIPS (12 INCH)	L.FT.	992	992

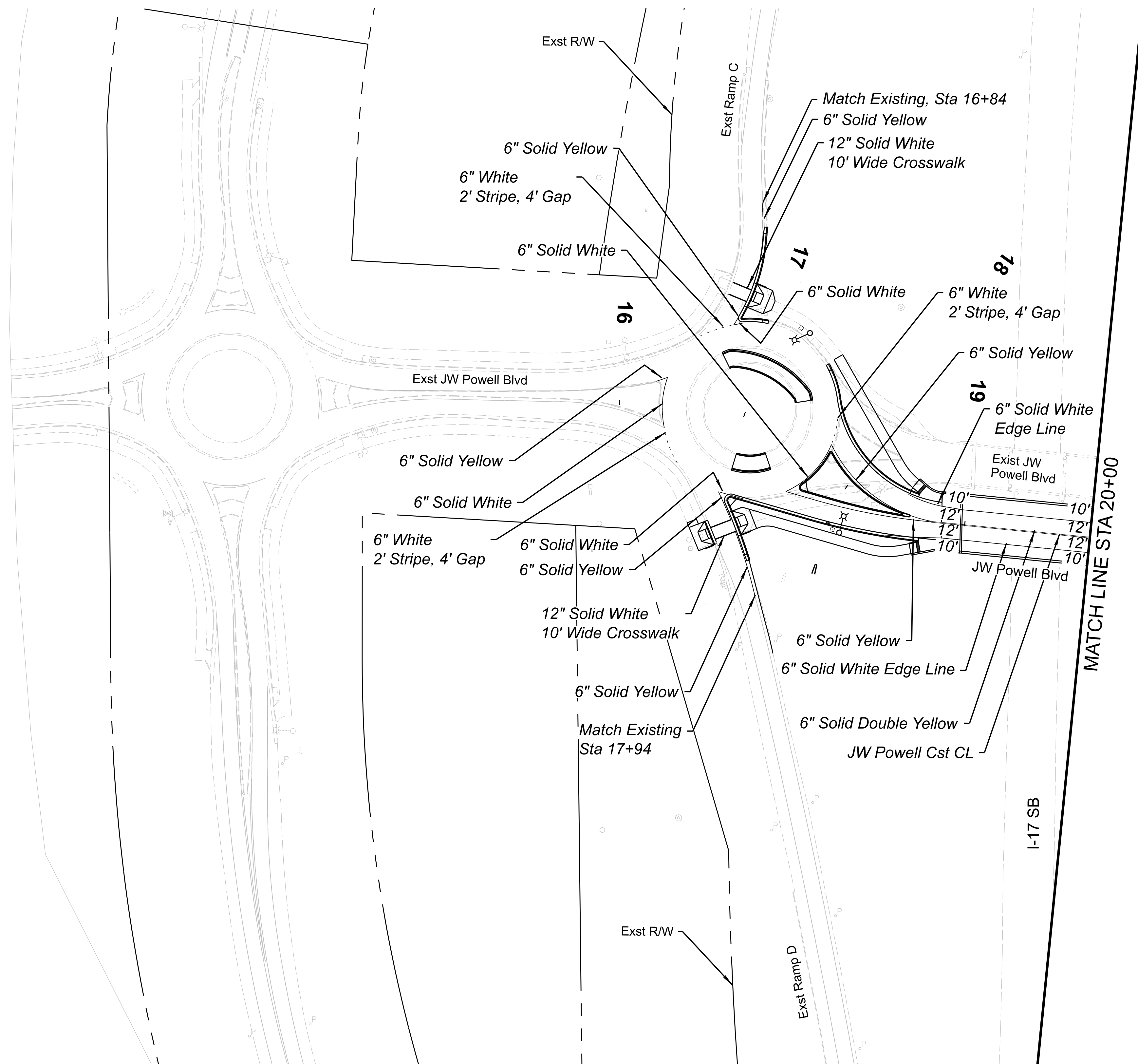
PAVEMENT MARKING DETAILS


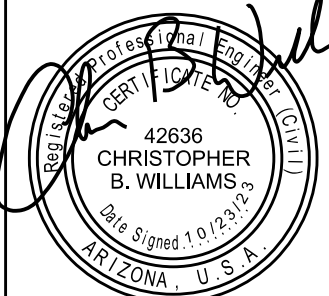

MARKING CODE

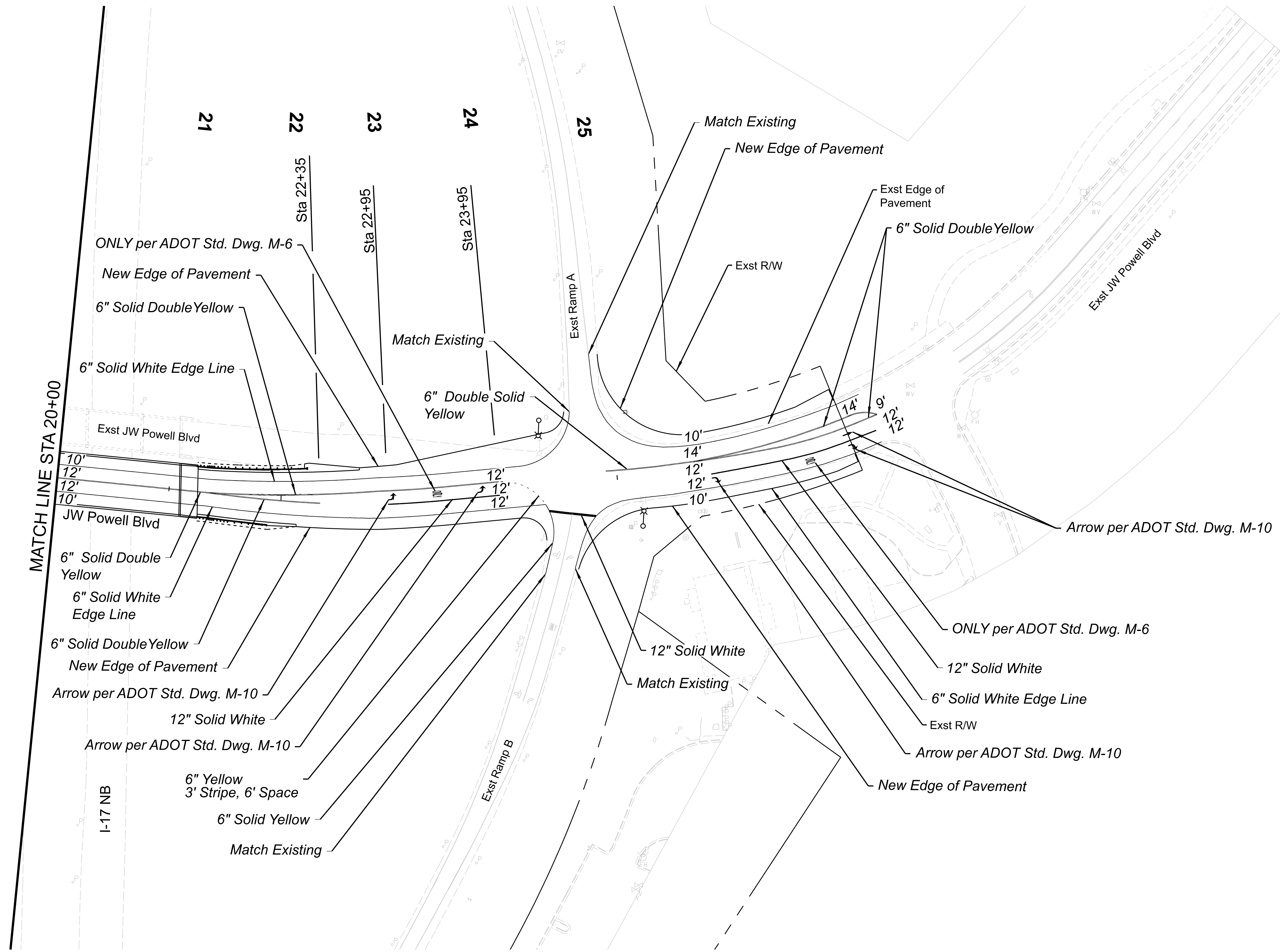



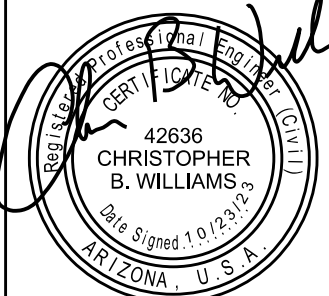
I-17 MAINLINE RUMBLE STRIP AND YELLOW PAVEMENT MARKING REPLACEMENT SUMMARY		
Direction	Begin Station	End Station
NB	7233+10	7238+18
SB	7235+94	7240+78

		<table border="1"> <tr> <th>NAME</th> <th>DATE</th> </tr> <tr> <td>DESIGN R. NEIFFER</td> <td>10/23</td> </tr> <tr> <td>DRAWN R. NEIFFER</td> <td>10/23</td> </tr> <tr> <td>CHECKED C. WILLIAMS</td> <td>10/23</td> </tr> </table>	NAME	DATE	DESIGN R. NEIFFER	10/23	DRAWN R. NEIFFER	10/23	CHECKED C. WILLIAMS	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION TRAFFIC DESIGN SECTION	ROUTE I-17	F.H.W.A. Arizona Division	STATE	PROJECT NO.	FEDERAL ID NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
		NAME	DATE																
DESIGN R. NEIFFER	10/23																		
DRAWN R. NEIFFER	10/23																		
CHECKED C. WILLIAMS	10/23																		
Y2K ENGINEERING 1921 S. Alma School Rd, Suite 204 Mesa, Arizona 85210 www.y2keng.com	MILEPOST 337.39	ARIZ.	017 CN 337	017-B(237)T	65	123													
PAVEMENT MARKING NOTES AND QUANTITIES				STRUCTURE NO.	LOCATION I-17 AIRPORT RD TI UP			DWG NO. T-07.01											
					TRACS NO. F0362 01C				____ OF ____										



 <p>Contact Arizona 811 at least two full working days before you begin excavation.</p>	 <p>42636 CHRISTOPHER B. WILLIAMS Exp. 12/31/23 ARIZONA U.S.A.</p>	<table border="1"> <thead> <tr> <th>NAME</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>DESIGN R. NEIFFER</td> <td>10/23</td> </tr> <tr> <td>DRAWN R. NEIFFER</td> <td>10/23</td> </tr> <tr> <td>CHECKED C. WILLIAMS</td> <td>10/23</td> </tr> </tbody> </table>	NAME	DATE	DESIGN R. NEIFFER	10/23	DRAWN R. NEIFFER	10/23	CHECKED C. WILLIAMS	10/23	<p>ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION TRAFFIC DESIGN SECTION</p>	<p>ROUTE I-17 MILEPOST 337.39 STRUCTURE NO.</p>	<p>F.H.W.A. Arizona Division STATE ARIZ. PROJECT NO. 017 CN 337 FEDERAL ID NO. 017-B(237)T SHEET NO. 66 TOTAL SHEETS 123</p>	<p>RECORD DRAWING</p>
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DESIGN R. NEIFFER	10/23													
DRAWN R. NEIFFER	10/23													
CHECKED C. WILLIAMS	10/23													
<p>Y2K ENGINEERING 1921 S. Alma School Rd., Suite 204 Mesa, Arizona 85210 www.y2keng.com</p> 	<p>PAVEMENT MARKING JOHN WESLEY POWELL BLVD BEGIN PROJECT TO STA 20+00</p>	<p>LOCATION I-17 AIRPORT RD TI UP DWG NO. T-07.02</p>	<p>TRACS NO. F0362 01C OF</p>											







 Contact Arizona 811 at least two full working days before you begin excavation.		DESIGN R. NEIFFER 10/23 DRAWN R. NEIFFER 10/23 CHECKED C. WILLIAMS 10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION TRAFFIC DESIGN SECTION	ROUTE I-17 MILEPOST 337.39 STRUCTURE NO.	F.H.W.A. Arizona Division STATE ARIZ.	PROJECT NO. 017 CN 337 FEDERAL ID NO. 017-B(237)T	SHEET NO. 67 TOTAL SHEETS 123	RECORD DRAWING
		Y2K ENGINEERING 1921 S. Alma School Rd., Suite 204 Mesa, Arizona 85210 www.y2keng.com		PAVEMENT MARKING JOHN WESLEY POWELL BLVD STA 20+00 TO END PROJECT	LOCATION I-17 AIRPORT RD TI UP TRACS NO. F0362 01C	DWG NO. T-07.03 OF		

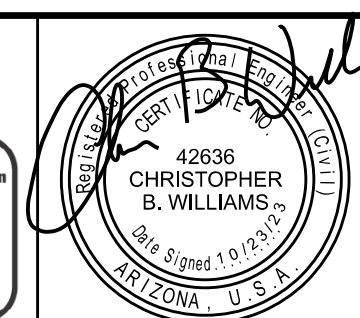
SIGNING NOTES:

1. All signs shall be in compliance with the Manual on Uniform Traffic Control Devices (MUTCD Signing and Marking Standard Drawings, and the ADOT Traffic Engineering Manual of Approved Signs.
2. The sign locations and the post lengths are approximate. The contractor shall verify the sign locations and actual post lengths with the Engineer prior to installing signs.
3. Unless otherwise noted, the bottom of each sign shall be at least 7 feet above the nearest edge of pavement and at least 7 feet above the ground under the sign.
4. Offsets for all signs shall be measured from the edge of the roadway to the nearest edge of the sign.
5. All new signs shall be fabricated of flat sheet aluminum as indicated in Section 608 of the Specifications.
6. The retroreflective sheeting on all new signs shall meet criteria established in Section 1007 of the Specifications.
7. All new signs shall be installed on new square tube posts with foundations as indicated in ADOT Standard Drawings.
8. The Engineer may modify the signing plans.
9. Shop drawings will be required.
10. The contractor shall remove existing signing where indicated in the sign summary.
11. The contractor shall inventory all signs to be removed and relocated and note damaged signs to the Engineer at the time of removal. All signs damaged by removal shall be replaced by the contractor at no additional cost to the Department.
12. Slip bases for new and relocated signs shall be new.

APPROXIMATE SIGNING QUANTITIES			
BID ITEM NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY
2020155	REMOVE (SIGNS)	EACH	20
6070004	BREAKAWAY SIGN POST W6X12	L.FT.	36
6070006	BREAKAWAY SIGN POST W8X18	L.FT.	62
6070024	FOUNDATION FOR BREAKAWAY SIGN POST W6X12	EACH	2
6070026	FOUNDATION FOR BREAKAWAY SIGN POST W8X18	EACH	4
6070038	SLIP BASE	EACH	19
6070054	SIGN POST (PERFORATED) (2S)	L.FT.	42
6070055	SIGN POST (PERFORATED) (2½S)	L.FT.	148
6070057	SIGN POST (PERFORATED) (2½T)	L.FT.	114
6070060	FOUNDATION FOR SIGN POST (CONCRETE)	EACH	30
6080005	REGULATORY, WARNING, OR MARKER SIGN PANEL	SQ.FT.	148
6080025	FLAT SHEET ALUMINUM SIGN PANEL	SQ.FT.	60
6080120	SIGN (RELOCATE PANEL)	EACH	7

SIGN LEGEND

Existing	New	Description
		Single Post Ground Mounted Sign
		Multi-Post Ground Mounted Sign



	NAME	DATE
DESIGN	R. NEIFFER	10/23
DRAWN	R. NEIFFER	10/23
CHECKED	C. WILLIAMS	10/23

Y2K ENGINEERING
1921 S. Alma School Rd, Suite 204
Mesa, Arizona 85210
www.y2keng.com

ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
TRAFFIC DESIGN SECTION

SIGNING NOTES AND QUANTITIES

ROUTE I-17	F.H.W.A. Arizona Division	STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 68	TOTAL SHEETS 123	RECORD DRAWING
MILEPOST 337.39	LOCATION I-17 AIRPORT RD TI UP					DWG NO. T-08.01	
STRUCTURE NO.	TRACS NO. F0362 01C					____ OF ____	


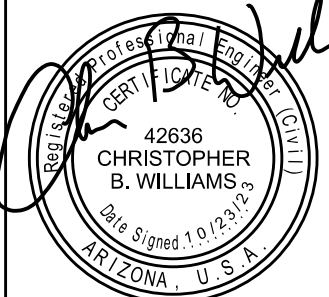
Plan Sheet No.	Sign Number	MOAS Sign Code	Work					Offset (ft)	Mounting Height (ft)	Background Color	Panel				Bid Item Number	Ground Mounted					Overhead		Remarks		
			New	Existing							Width (in)	Height (in)	Area (sq ft)	Type		Foundations	Post		Stringer		Structure Type	No. of Lights			
				Replace Panel	Relocate Panel	Modify Legend	Remove										To Remain	Type	Total Length (ft)	New Slipbases				Type	Total Length (ft)
T-10.01	EB01	GUIDE					X			GR	(Arrow) Flagstaff Phoenix (Arrow)										Existing to remain				
T-10.01	E 16+32	R1-2					X			WH	YIELD										Existing to remain				
T-10.01	E 16+42	R1-2					X			WH	YIELD										Existing to remain				
T-10.01	E 16+78	R6-4A	X				X	16	4	WH	ROUNDAABOUT DIRECTIONAL (3 ARROWS)	48	24	8	RWM	6080005	2	2 1/2 S	12	2		Remove existing, install new			
T-10.01	E 17+21	W11-2					X			YL	PEDESTRIAN CROSSING SYMBOL										Existing to remain				
	+	W16-7pL					X			YL	LEFT DIAGONAL ARROW PLAQUE										Existing to remain				
T-10.01	E 17+45	M9-10(337J)					X			GR	OMRM 337J										Existing to remain				
T-10.01	E 17+39	M3-3	X				X	4	7	BL	SOUTH	24	12	2	F-DA	6080025	1	2 1/2 T	12	1		Remove existing, install new			
	+	M1-1a	X				X			BL	INTERSTATE 17	24	24	4	F-DA	6080025						Remove existing, install new			
	+	M6-2R	X				X			BL	DIAGONAL ARROW RIGHT	24	18	3	F-DA	6080025						Remove existing, install new			
T-10.01	E 17+80	D1-1		X				6	7	GR	JW Powell Blvd (DIAGONAL ARROW)	132	36		RWM	6080120	2	2 1/2 T	24	2		Relocate existing to new posts			
	+	I-5	X				X			GR	AIRPORT SYMBOL	24	24	4	RWM	6080005						Remove existing, install new			
T-10.02	E 20+05	D3-1		X						GR	JW Powell Blvd				F-DA	6080120						Relocate existing to new bridge			
T-10.02	E 21+38	R2-1(30)	X					15	7	WH	SPEED LIMIT 30	30	36	7.5	RWM	6080005	1	2 1/2 S	12			Install new behind guard rail			
T-10.02	E 23+18	GUIDE		X				16	7	GR	(LEFT ARROW) INTERSTATE 17 , 89A Flagstaff				EXT	6080120	2	W6x12	36			Relocate existing to new posts			
T-10.02	E 23+65	I-5	X				X	16	7	GR	AIRPORT SYMBOL	24	24	4	RWM	6080005	1	2S	11			Remove existing, install new			
	+	M6-3	X				X			GR	ARROW SYMBOL	24	18	3	RWM	6080005						Remove existing, install new			

Notes:
1. The Engineer shall verify post lengths and elevations.
2. The Engineer may shift a sign in order to achieve a more desirable location.
3. Quantities are approximate and for the contractor's information only.
4. Offsets are measured from white edge line to edge of sign panel closet to roadway. Where there is no white edge line, measurement shall be taken from face of curb.

Panel Types:
RWM: Regulatory, Warning, or Marker
F-DA: Flat-sheet aluminum with direct applied or silk-screened characters
F-Dem: Flat-sheet aluminum with demountable characters
Ext: Aluminum extrusions
Incr: Aluminum sheet increment

Post Types:
2S: 2" Single Perforated
2 1/2S: 2 1/2" Single Perforated
2T: 2" Telescoping
2 1/2T: 2 1/2" Telescoping
S4x7.7: Breakaway
W6x12: Breakaway
W8x18: Breakaway
W10x22: Breakaway

Stringer Types:
P: Square-tube post
T: T-section (WT 3x6)
Sheeting Type:
-ASTM XI

		DESIGN	R. NEIFFER	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION TRAFFIC DESIGN SECTION	ROUTE	I-17	F.H.W.A. Arizona Division	STATE	ARIZ.	PROJECT NO.	017 CN 337	FEDERAL ID NO.	017-B(237)T	SHEET NO.	69	TOTAL SHEETS	123	RECORD DRAWING
		DRAWN	R. NEIFFER	10/23		MILEPOST	337.39		LOCATION	I-17 AIRPORT RD TI UP				DWG NO.	T-09.01				
CHECKED	C. WILLIAMS	10/23	STRUCTURE NO.			TRACS NO.	F0362 01C				OF								

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SIGN SUMMARY
JOHN WESLEY POWELL BLVD
EAST BOUND


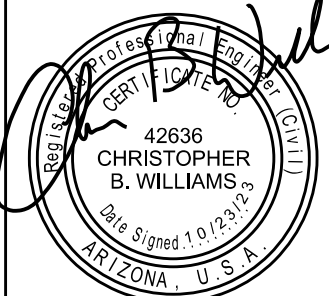
Plan Sheet No.	Sign Number	MOAS Sign Code	Work					Offset (ft)	Mounting Height (ft)	Background Color	Panel				Bid Item Number	Ground Mounted					Overhead		Remarks		
			New	Existing							Width (in)	Height (in)	Area (sq ft)	Type		Foundations	Post		Stringer		Structure Type	No. of Lights			
				Replace Panel	Relocate Panel	Modify Legend	Remove										To Remain	Type	Total Length (ft)	New Slipbases				Type	Total Length (ft)
T-10.02	E 24+05	R6-1L	X			X			18	7	WH	ONE WAY (Left)	36	12	3	RWM	6080005	1	2 1/2 S	8					Remove existing, install new
	+	R6-1R	X			X					WH	ONE WAY (Right)	36	12	3	RWM	6080005								Remove existing, install new
T-10.02	E 24+18	R1-1	X			X			10	7	RD	STOP	36	36	3	RWM	6080005	1	2 1/2 S	8					Remove existing, install new
T-10.02	E 24+23	R5-1	X			X			12	3	WH	DO NOT ENTER	48	48	16	RWM	6080005	2	2 1/2 S	20	2				Remove existing, install new
	+	R5-1A	X			X					RD	WRONG WAY	48	36	12	RWM	6080005								Remove existing, install new
T-10.02	E 24+74	R1-1	X			X			10	7	RD	STOP	36	36	3	RWM	6080005	1	2 1/2 S	8					Remove existing, install new
T-10.02	E 24+87	R5-1	X			X			12	3	WH	DO NOT ENTER	48	48	16	RWM	6080005	2	2 1/2 S	20	2				Remove existing, install new
	+	R5-1A	X			X					RD	WRONG WAY	48	36	12	RWM	6080005								Remove existing, install new
T-10.02	E 25+02	R6-1L						X			WH	ONE WAY (Left)													
	+	R6-1R						X			WH	ONE WAY (Right)													
T-10.02	EB02	R3-8SR	X			X			17	7	WH	Intersection Lane Control	30	30	6.3	RWM	6080005	1	2S	10					Remove existing, install new
T-10.02	EB03	STREET						X			GR	(2) SHAMRELL Blvd													Existing to remain
	+	STREET						X			GR	(2) JW POWELL Blvd													Existing to remain
	+	R1-1						X			RD	STOP													Existing to remain
T-10.02	EB04	R2-1(40)						X			WH	SPEED LIMIT 40													Existing to remain
	+	R7-9						X			WH	NO PARKING BIKE LANE													Existing to remain

Notes:
1. The Engineer shall verify post lengths and elevations.
2. The Engineer may shift a sign in order to achieve a more desirable location.
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2 1/2T: 2 1/2" Telescoping
S4x7.7: Breakaway
W6x12: Breakaway
W8x18: Breakaway
W10x22: Breakaway

Stringer Types:
P: Square-tube post
T: T-section (WT 3x6)
Sheeting Type:
-ASTM XI

		DESIGN	R. NEIFFER	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION TRAFFIC DESIGN SECTION	ROUTE	I-17	F.H.W.A. Arizona Division	STATE	ARIZ.	PROJECT NO.	017 CN 337	FEDERAL ID NO.	017-B(237)T	SHEET NO.	70	TOTAL SHEETS	123	RECORD DRAWING
		DRAWN	R. NEIFFER	10/23		MILEPOST	337.39		LOCATION	I-17 AIRPORT RD TI UP				DWG NO.	T-09.02				
CHECKED	C. WILLIAMS	10/23	STRUCTURE NO.			TRACS NO.	F0362 01C				OF								

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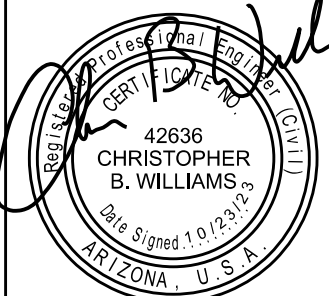
Plan Sheet No.	Sign Number	MOAS Sign Code	Work					Offset (ft)	Mounting Height (ft)	Background Color	Panel				Bid Item Number	Ground Mounted					Overhead		Remarks		
			New	Existing							Width (in)	Height (in)	Area (sq ft)	Type		Foundations	Post		Stringer		Structure Type	No. of Lights			
				Replace Panel	Relocate Panel	Modify Legend	Remove										To Remain	Type	Total Length (ft)	New Slipbases				Type	Total Length (ft)
T-10.01	WB01	GUIDE					X			GR	(Arrow) Sedona Flagstaff (Arrow)											Existing to remain			
T-10.01	WB02	INFO								BL	LODGING											Existing to remain			
T-10.01	W 16+22	D1-1								GR	89A Sedona (Diagonal Arrow)											Existing to remain			
	+	R11-2								WH	ROAD CLOSED (FLIP SIGN)											Existing to remain			
T-10.01	W 16+60	R1-2								WH	YIELD											Existing to remain			
	+	R5-1								WH	DO NOT ENTER											Existing to remain			
T-10.01	W 16+78	R6-4A	X				X		16	4	WH	ROUNDAABOUT DIRECTIONAL (3 ARROWS)	48	24	8	RWM	6080005	2	2 1/2 S	18	2		Remove existing, install new		
T-10.01	W 16+79	W11-2									PEDESTRIAN CROSSING SYMBOL											Existing to remain			
	+	W16-7pL									LEFT DIAGONAL ARROW PLAQUE											Existing to remain			
T-10.01	W 16+87	R5-1	X				X		4	7	WH	DO NOT ENTER	36	36	9	RWM	6080005	1	2 1/2 S	10			Remove existing, install new		
	+	R1-2	X				X				YIELD	36	36	9	RWM	6080005						Remove existing, install new			
T-10.01	W 17+29	R6-4A	X				X		16	4	WH	ROUNDAABOUT DIRECTIONAL (3 ARROWS)	48	24	8	RWM	6080005	2	2 1/2 S	12	2		Remove existing, install new		
T-10.01	W 17+45	R1-2	X				X		4	7	WH	YIELD	36	36	9	RWM	6080005	1	2 1/2 S	10			Remove existing, install new		
T-10.01	W 17+80	R1-2	X				X		4	7	WH	YIELD	36	36	9	RWM	6080005	1	2 1/2 S	10			Remove existing, install new		
T-10.01	W 18+37	R4-7	X				X		4	7	WH	KEEP RIGHT	24	30	5	RWM	6080005	1	2S	10			Remove existing, install new		
T-10.02	W 20+02	D3-1									GR	JW Powell Blvd					F-DA	6080120					Relocate existing to new bridge		
T-10.02	W 21+86	D1-1							15	7	GR	(Arrow) 89A Sedona (Arrow) Fort Tuthill County Park (Arrow) Phoenix	108	132			EXT	6080120	2	W8x18	42			Relocate existing to new posts	

Notes:
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2T: 2" Telescoping
2 1/2T: 2 1/2" Telescoping
S4x7.7: Breakaway
W6x12: Breakaway
W8x18: Breakaway
W10x22: Breakaway

Stringer Types:
P: Square-tube post
T: T-section (WT 3x6)
Sheeting Type:
-ASTM XI

		DESIGN	R. NEIFFER	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION TRAFFIC DESIGN SECTION	ROUTE	I-17	F.H.W.A. Arizona Division	STATE	ARIZ.	PROJECT NO.	017 CN 337	FEDERAL ID NO.	017-B(237)T	SHEET NO.	71	TOTAL SHEETS	123	RECORD DRAWING
		DRAWN	R. NEIFFER	10/23		MILEPOST	337.39		LOCATION	I-17 AIRPORT RD TI UP				DWG NO.	T-09.03				
CHECKED	C. WILLIAMS	10/23	STRUCTURE NO.			SIGN SUMMARY JOHN WESLEY POWELL BLVD WEST BOUND		TRACS NO. F0362 01C		OF									


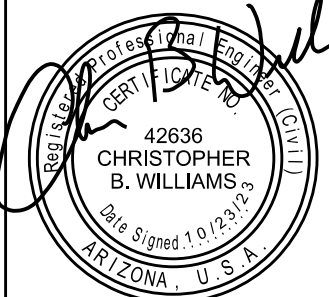
Plan Sheet No.	Sign Number	MOAS Sign Code	Work					Offset (ft)	Mounting Height (ft)	Background Color	Panel				Bid Item Number	Ground Mounted					Overhead		Remarks				
			New	Existing							Width (in)	Height (in)	Area (sq ft)	Type		Foundations	Post		Stringer		Structure Type	No. of Lights					
				Replace Panel	Relocate Panel	Modify Legend	Remove										To Remain	Type	Total Length (ft)	New Slipbases				Type	Total Length (ft)		
T-10.02	W 23+18	W2-6	X					16	7	YL	CIRCULAR INTERSECTION ARROWS	30	30	6.5	RWM	6080005											Install new on back of guide sign
	+	W13-P	X							YL	15 MPH	18	18	2.5	RWM	6080005											Install new on back of guide sign
T-10.02	W 23+46	W2-6	X			X		22	7	YL	CIRCULAR INTERSECTION ARROWS	30	30	6.5	RWM	6080005	1	2S	11								Remove existing, install new
	+	W13-P	X			X				YL	15 MPH	18	18	2.5	RWM	6080005											Remove existing, install new
T-10.02	W 24+17	CUSTOM		X				31	7	WH	OVER 40 FEET (Length Restriction) USE I-17	156	84	91	EXT	6080120	2	W8x18	20								Relocate existing to new posts Relocate existing to new posts
T-10.02	W 24+44	W3-1	X			X		15	7	BL	SOUTH	24	12	2	F-DA	6080025	1	2 1/2 T	15	1							Remove existing, install new
	+	M1-1a(17)	X			X				BL	INTERSTATE 17	24	24	4	F-DA	6080025											Remove existing, install new
	+	M6-3	X			X				BL	ARROW	24	18	3	F-DA	6080025											Remove existing, install new
	+	M1-5b(89A)	X			X				WH	ARIZONA 89A	30	24	5	F-DA	6080025											Remove existing, install new
	+	M6-3	X			X				WH	ARROW	24	18	3	F-DA	6080025											Remove existing, install new
T-10.02	W 24+45	W3-1	X			X		15	7	BL	NORTH	24	12	2	F-DA	6080025	1	2 1/2 T	15	1							Remove existing, install new
	+	M1-1a(17)	X			X				BL	INTERSTATE 17	24	24	4	F-DA	6080025											Remove existing, install new
	+	M6-1R	X			X				BL	ARROW (Right)	24	18	3	F-DA	6080025											Remove existing, install new
	+	M1-5b(89A)	X			X				WH	ARIZONA 89A	30	24	5	F-DA	6080025											Remove existing, install new
	+	M6-1R	X			X				WH	ARROW (Right)	24	18	3	F-DA	6080025											Remove existing, install new
T-10.02	W 25+30	W3-1	X			X		15	7	BL	NORTH	24	12	2	F-DA	6080025	1	2 1/2 T	15	1							Remove existing, install new
	+	M1-1a(17)	X			X				BL	INTERSTATE 17	24	24	4	F-DA	6080025											Remove existing, install new
	+	M6-1L	X			X				BL	ARROW (Left)	24	18	3	F-DA	6080025											Remove existing, install new
	+	M1-5b(89A)	X			X				WH	ARIZONA 89A	30	24	5	F-DA	6080025											Remove existing, install new
	+	M6-L	X			X				WH	ARROW (Left)	24	18	3	F-DA	6080025											Remove existing, install new
T-10.02	WB03	D1-2		X				15	7	GR	(Arrow) Phoenix Flagstaff (Arrow)				F-DA	6080120	3	2 1/2 T	33	3							Relocate existing to new posts
T-10.02	WB04	R2-1(30)				X		4	7	WH	SPEED LIMIT 30																Existing to remain

Notes:
1. The Engineer shall verify post lengths and elevations.
2. The Engineer may shift a sign in order to achieve a more desirable location.
3. Quantities are approximate and for the contractor's information only.
4. Offsets are measured from white edge line to edge of sign panel closet to roadway. Where there is no white edge line, measurement shall be taken from face of curb.

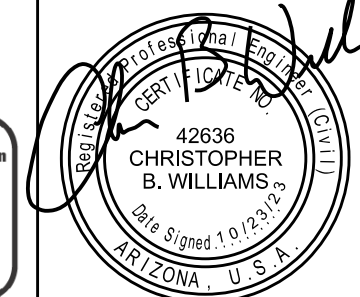
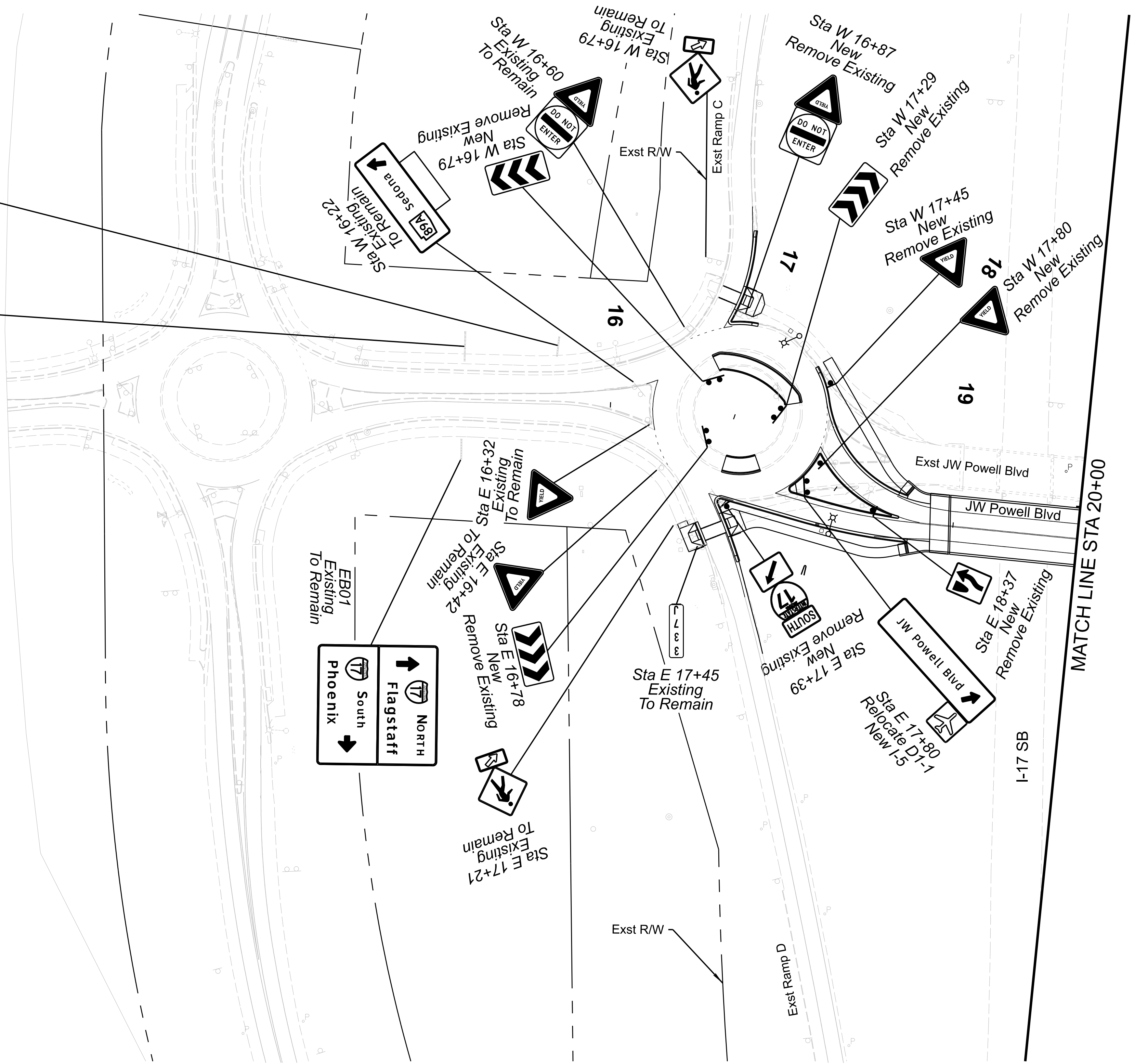
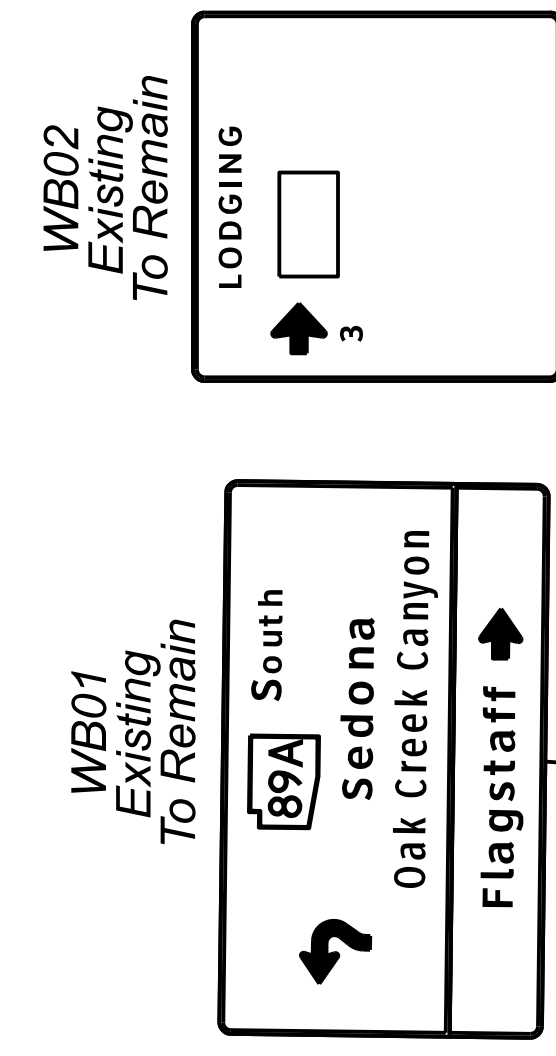
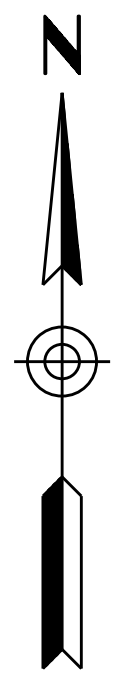
Panel Types:
RWM: Regulatory, Warning, or Marker
F-DA: Flat-sheet aluminum with direct applied or silk-screened characters
F-Dem: Flat-sheet aluminum with demountable characters
Ext: Aluminum extrusions
Incr: Aluminum sheet increment

Post Types:
2S: 2" Single Perforated
2 1/2S: 2 1/2" Single Perforated
2T: 2" Telescoping
2 1/2T: 2 1/2" Telescoping
S4x7.7: Breakaway
W6x12: Breakaway
W8x18: Breakaway
W10x22: Breakaway

Stringer Types:
P: Square-tube post
T: T-section (WT 3x6)
Sheeting Type:
-ASTM XI

		DESIGN	R. NEIFFER	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION TRAFFIC DESIGN SECTION	ROUTE	I-17	F.H.W.A. Arizona Division	STATE	ARIZ.	PROJECT NO.	017 CN 337	FEDERAL ID NO.	017-B(237)T	SHEET NO.	72	TOTAL SHEETS	123	RECORD DRAWING
		DRAWN	R. NEIFFER	10/23		MILEPOST	337.39		LOCATION	I-17 AIRPORT RD TI UP				DWG NO.	T-09.04				
CHECKED	C. WILLIAMS	10/23	STRUCTURE NO.			TRACS NO.	F0362 01C	OF											

Y2K ENGINEERING
1921 S. Alma School Rd, Suite 204
Mesa, Arizona 85210
www.y2keng.com



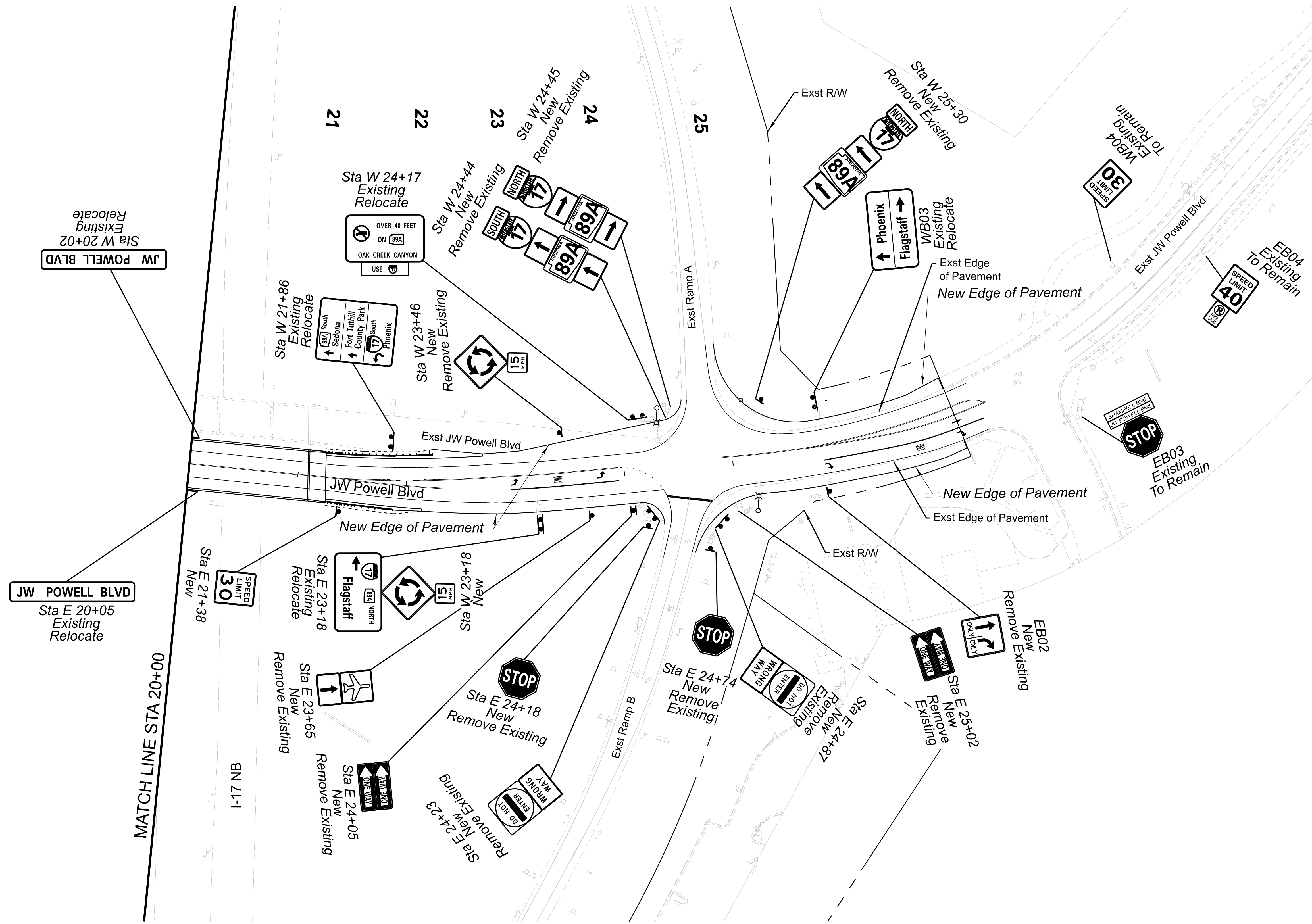
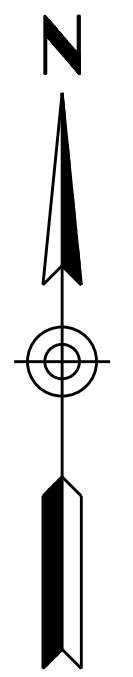
	NAME	DATE
DESIGN	R. NEIFFER	10/23
DRAWN	R. NEIFFER	10/23
CHECKED	C. WILLIAMS	10/23

YJK ENGINEERING
 1921 S. Alma School Rd, Suite 204
 Mesa, Arizona 85210
 www.yjkeng.com

ARIZONA DEPARTMENT OF TRANSPORTATION
 INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
TRAFFIC DESIGN SECTION
 SIGNING
 JOHN WESLEY POWELL BLVD
 BEGIN PROJECT TO STA 20+00

ROUTE
 I-17
 MILEPOST
 337.39
 STRUCTURE NO.

F.H.W.A. Arizona Division	STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 73	TOTAL SHEETS 123	RECORD DRAWING
LOCATION I-17 AIRPORT RD TI UP						DWG NO. T-10.01
TRACS NO. F0362 01C						___ OF ___


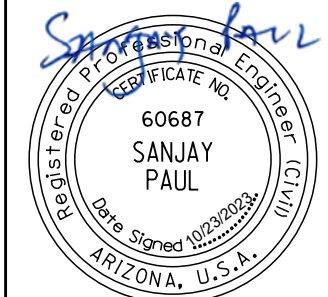



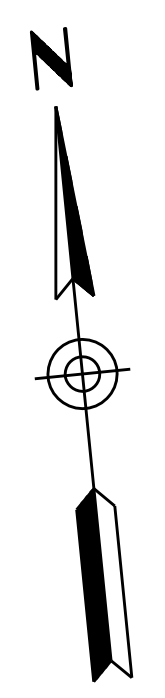
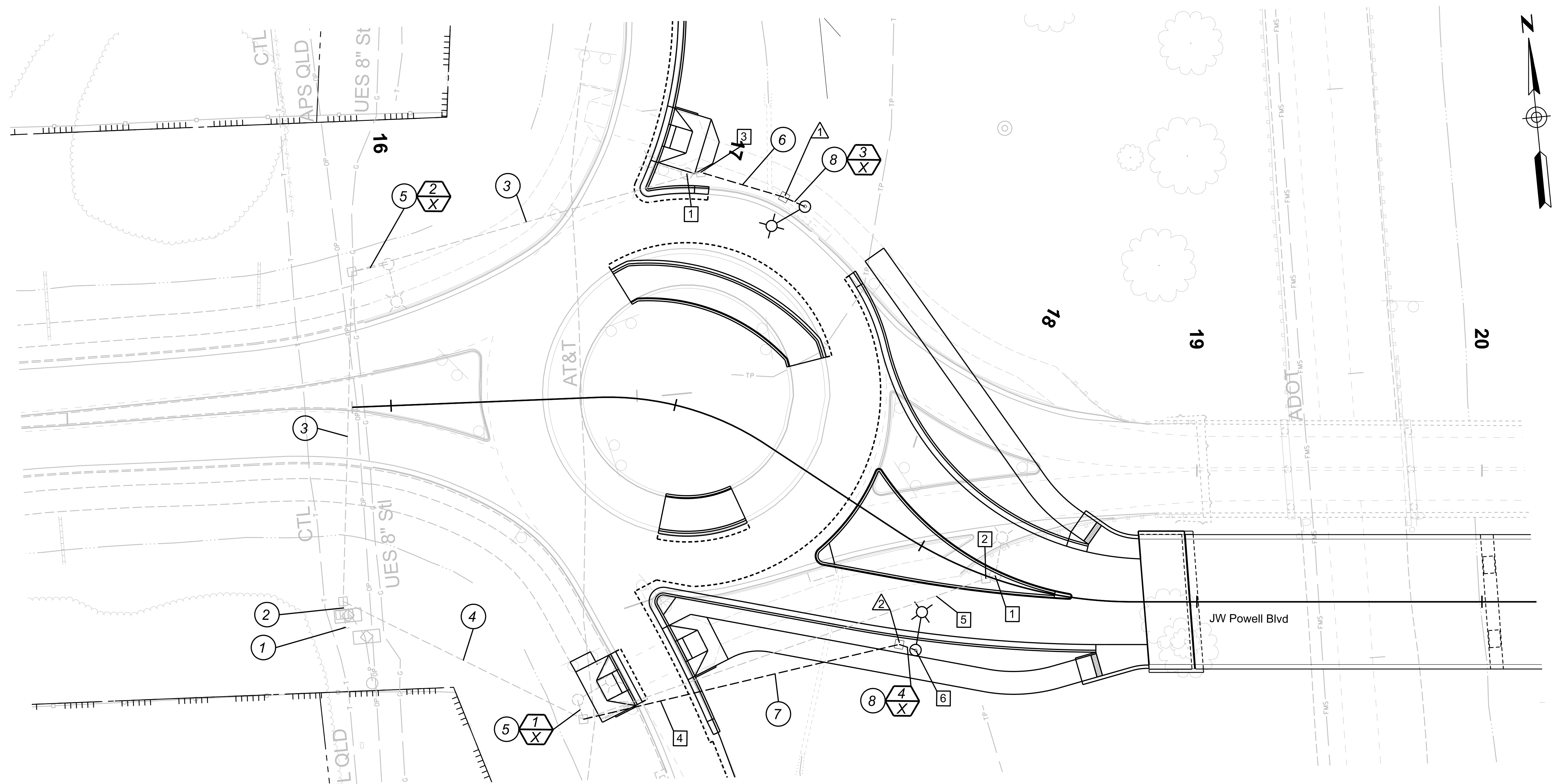
		DESIGN R. NEIFFER 10/23 DRAWN R. NEIFFER 10/23 CHECKED C. WILLIAMS 10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION TRAFFIC DESIGN SECTION SIGNING JOHN WESLEY POWELL BLVD STA 20+00 TO END PROJECT	ROUTE I-17 MILEPOST 337.39 STRUCTURE NO.	F.H.W.A. Arizona Division LOCATION I-17 AIRPORT RD TI UP TRACS NO. F0362 01C	STATE ARIZ. PROJECT NO. 017 CN 337 FEDERAL ID NO. 017-B(237)T	SHEET NO. 74 TOTAL SHEETS 123	RECORD DRAWING
		Y2K ENGINEERING 1921 S. Alma School Rd, Suite 204 Mesa, Arizona 85210 www.y2keng.com		DWG NO. T-10.02 OF				

ROADWAY LIGHTING GENERAL NOTES:

1. The location of utilities, including existing roadway lighting features (poles, luminaires, pull boxes and conduit) are approximate. The contractor shall be responsible, per section 730-6 of the ADOT Standard Specifications, for contacting all utilities (including ADOT) for exact locations prior to any construction activity. The contractor is responsible for maintaining proper clearances as required by the utility company.
2. Each luminaire shall be Individually fused with In- line connectors in the nearest adjacent pull box per ADOT Std. Dwg. T.S. 1-4.
3. Breakaway bases for type "G" poles shall be type 2 breakaway bases per ADOT Std. Dwg. T.S. 5-1 and shall be included in item #7310261 Pole Foundation (Type G) (Slip Away Base). Foundations for type "G" poles shall be per ADOT Std. Dwg. T-SL 4.07 and shall be included in item #7310261 Pole Foundation (Type G) (Slip Away Base).
4. All work shall conform to ADOT Standard Specifications, Standard Drawings for Traffic Signals and Lighting (latest edition), and the Special Provisions.
5. Contractor shall coordinate the construction work requirements of the lighting plans with the construction work requirements of the total project plan set(s). Contractor's work shall be installed in a timely and coordinated basis with the other contractors working within the project limits. Lighting shall be maintained throughout construction. Refer to construction phasing plans for suggested timing of light pole relocations.
6. The plans show the general path and location of the conduit in relation to major physical features. The locations of other utilities and other objects along the conduit path may not be shown in the plans but shall be identified by the contractor as the conduit route is marked just prior to installation. The information on the drawings concerning the type and location of existing underground and overhead utilities is approximate and has not been independently verified by the Engineer. The contractor shall determine the exact location of all existing utilities and shall be fully responsible for any and all damages which might result from the contractor's failure to locate and preserve any and all underground and overhead utilities. Repairing utility facilities damaged by the contractor shall be replaced in kind at no additional cost to the Department.
7. The contractor shall place warning tape in all trenches in which new conduit is placed per section 732-2.02 and 732-3.02 of the ADOT Standard Specifications. The cost of the warning tape and installation shall be included in the cost of the conduit and not paid for separately.
8. The contractor shall perform a ground resistance test for each installed ground rod and each pole foundation grounding coil in accordance with section 732-3.03 of the ADOT Standard Specifications. All test results shall be documented and submitted to the Engineer.
9. Contractor shall ensure all new pole foundations have been inspected by the traffic signal Inspector prior to placement of concrete. Placement of all poles shall provide 10 feet minimum clearance from poles/arms/fixtures and all features to any electrical high voltage power lines. Top of foundation shall match the finished surrounding grade.
10. No separate measurement or payment shall be made for removal of existing conduit and pull boxes. This shall be considered included in the cost of Item #2020053 Remove (Pole Foundation).
11. The relocated light poles will be connected to existing power sources. No separate measurement or payment will be made for completing the required connections. This shall be considered included in the cost of Item #7310832 Relocate Existing Light Poles.

ROADWAY LIGHTING POLE AND LUMINAIRE QUANTITIES			
Item Number	Item Description	Unit	Quantity
2020053	REMOVE (POLE FOUNDATION)	EACH	4
7310261	POLE FOUNDATION (TYPE G) (SLIP AWAY BASE)	EACH	4
7310832	RELOCATE EXISTING LIGHT POLES	EACH	4
7320050	ELECTRICAL CONDUIT (2") (PVC)	L.FT.	200
7320410	PULL BOX (NO. 5)	EACH	2
7320440	PULL BOX (NO. 5) (HEAVY DUTY)	EACH	1
7320482	RESET AND/OR RELOCATE EXISTING PULL BOXES	L.SUM	1
7320650	CONDUCTORS	L.SUM	1
7320740	REMOVAL OF EXISTING CONDUCTORS	L.FT.	150

		<table border="1"> <tr> <th>NAME</th> <th>DATE</th> </tr> <tr> <td>DESIGN M. SUNDBLOM</td> <td>10/23</td> </tr> <tr> <td>DRAWN M. SUNDBLOM</td> <td>10/23</td> </tr> <tr> <td>CHECKED S. PAUL</td> <td>10/23</td> </tr> </table>	NAME	DATE	DESIGN M. SUNDBLOM	10/23	DRAWN M. SUNDBLOM	10/23	CHECKED S. PAUL	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION TRAFFIC DESIGN SECTION	ROUTE I-17	F.H.W.A. Arizona Division	STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 75	TOTAL SHEETS 123	RECORD DRAWING
		NAME	DATE																
DESIGN M. SUNDBLOM	10/23																		
DRAWN M. SUNDBLOM	10/23																		
CHECKED S. PAUL	10/23																		
 HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL: (602) 522-7700	LIGHTING GENERAL NOTES	MILEPOST 337.39	LOCATION I-17 AIRPORT RD TI UP			TRACS NO. F0362 01C		DWG NO. T-11.01 ____ OF ____											



LEGEND

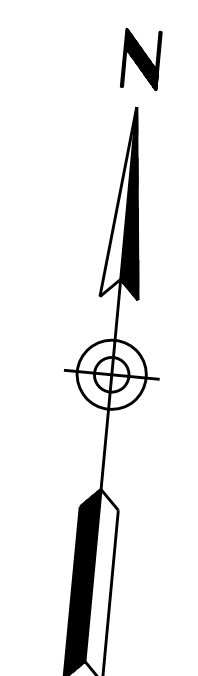
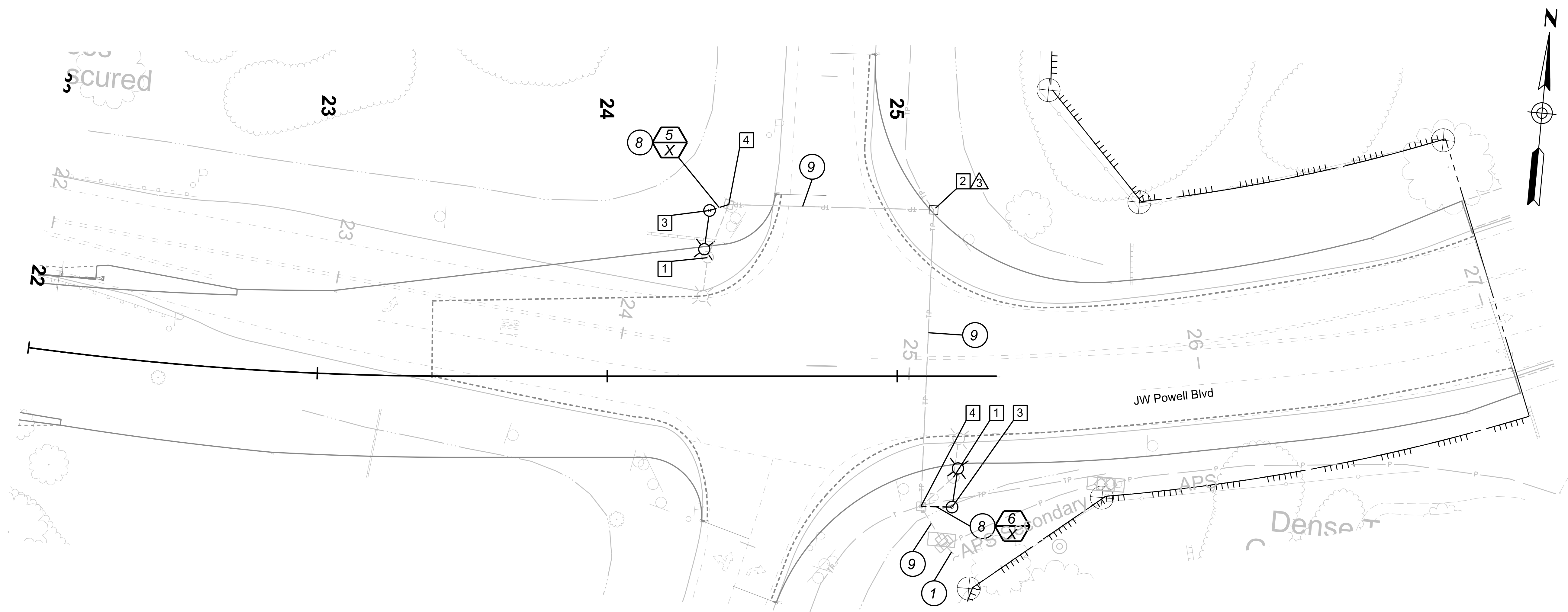
Existing	Proposed
	Pull Box
	Conduit
	Luminaire
	Meter Pedestal

	Pole Number
	Circuit
	Conduit Run Number
	Construction Note
	Pull Box Number

Lighting Construction Notes:

- 1 Remove existing pole foundation and relocate existing pole on new foundation.
- 2 Remove existing pull box.
- 3 Extend existing conduit to new pull box.
- 4 Directional drill conduit underneath roadway.
- 5 Remove existing conduit and conductors.
- 6 Match the existing circuitry of relocated pole. See Note 11 on DWG T-11.01.

		DESIGN	M. SUNDBLOM	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION TRAFFIC DESIGN SECTION	ROUTE	I-17	STATE	F.H.W.A. Arizona Division	PROJECT NO.	017 CN 337	FEDERAL ID NO.	017-B(237)T	SHEET NO.	76	TOTAL SHEETS	123	RECORD DRAWING
		DRAWN	M. SUNDBLOM	10/23		MILEPOST	337.39											
HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL: (602) 522-7700						STRUCTURE NO.					TRACS NO.	F0362 01C				OF		



LEGEND

Existing	Proposed
	Pull Box
	Conduit
	Luminaire
	Meter Pedestal

	Pole Number Circuit
	Conduit Run Number
	Construction Note
	Pull Box Number

Lighting Construction Notes:

- 1** Remove existing pole foundation and relocate existing pole on new foundation.
- 2** Remove existing pull box. Replace with new pull box and extend existing conduit to new pull box.
- 3** Connect new wiring at the existing pull box locations and match the existing circuitry of relocated pole.
- 4** Reset existing pull box to finished grade per Item #7320482, which includes both pull boxes on this sheet. Construction shall be in accordance with Section 732 of the Standard Specifications.

		<table border="1" style="font-size: 8px;"> <tr><th>NAME</th><th>DATE</th></tr> <tr><td>M. SUNDBLOM</td><td>10/23</td></tr> <tr><td>M. SUNDBLOM</td><td>10/23</td></tr> <tr><td>S. PAUL</td><td>10/23</td></tr> </table>	NAME	DATE	M. SUNDBLOM	10/23	M. SUNDBLOM	10/23	S. PAUL	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION TRAFFIC DESIGN SECTION	ROUTE I-17	F.H.W.A. Arizona Division	STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 77	TOTAL SHEETS 123	RECORD DRAWING
		NAME	DATE																
M. SUNDBLOM	10/23																		
M. SUNDBLOM	10/23																		
S. PAUL	10/23																		
	HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL (602) 522-7700	LIGHTING PLAN	MILEPOST 337.39	LOCATION I-17 AIRPORT RD TI UP			TRACS NO. F0362 01C		DWG NO. T-11.03 ____ OF ____										

POLE AND LUMINAIRE SCHEDULE

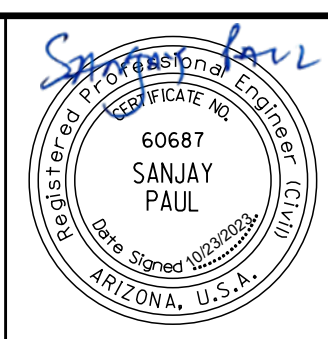
POLE NO.	CIRCUIT	ROADWAY	STATION	OFFSET	POLE		FOUNDATION		LUMINAIRE				MAINTENANCE UNIT NO.
					TYPE	MASTARM	TYPE	BASE	TYPE	WATT	TYPE	DIST. TYPE	
1	EX	John Wesley Powell Blvd	EX	EX	EX	EX	EX	EX	EX	EX	EX	EX	EX
2	EX	John Wesley Powell Blvd	EX	EX	EX	EX	EX	EX	EX	EX	EX	EX	EX
3	EX	John Wesley Powell Blvd	17+16	81' LT	EX	EX	Std	B/A-2	EX	EX	EX	EX	EX
4	EX	John Wesley Powell Blvd	18+13	34' RT	EX	EX	Std	B/A-2	EX	EX	EX	EX	EX
5	EX	John Wesley Powell Blvd	24+35	57' LT	EX	EX	Std	B/A-2	EX	EX	EX	EX	EX
6	EX	John Wesley Powell Blvd	25+19	45' RT	EX	EX	Std	B/A-2	EX	EX	EX	EX	EX

CONDUCTOR SCHEDULE

AWG	CONDUIT RUN NUMBER	CONDUIT SIZE IN INCHES	1	2	3	4	5	6	7	8	9
			EX	EX	EX	EX	EX	2	2	2	EX
#8	Lighting (pull box to pole)					EX				2	
#8	Lighting Circuit A (EX)	S	EX								
	Lighting Circuit B (EX)		EX								
#10	Lighting Circuit C (EX)		EX	EX			2				
	Lighting Circuit D (EX)		EX		EX			2			
#8	Insulated Bond (Green)		EX	EX	EX	EX	1	1	1		

PULL BOX SCHEDULE

ADOT STD. DWG. NO.	PULL BOX NO.	TYPE	ROADWAY	STATION	OFFSET
T.S. 1-1 (1/2)	1	NO. 5	John Wesley Powell Blvd	17+11	81' Lt
T.S. 1-1 (1/2)	2	NO. 5	John Wesley Powell Blvd	18+08	34' Rt
T.S. 1-2	3	NO. 5 (HD)	John Wesley Powell Blvd	25+13	57' Lt



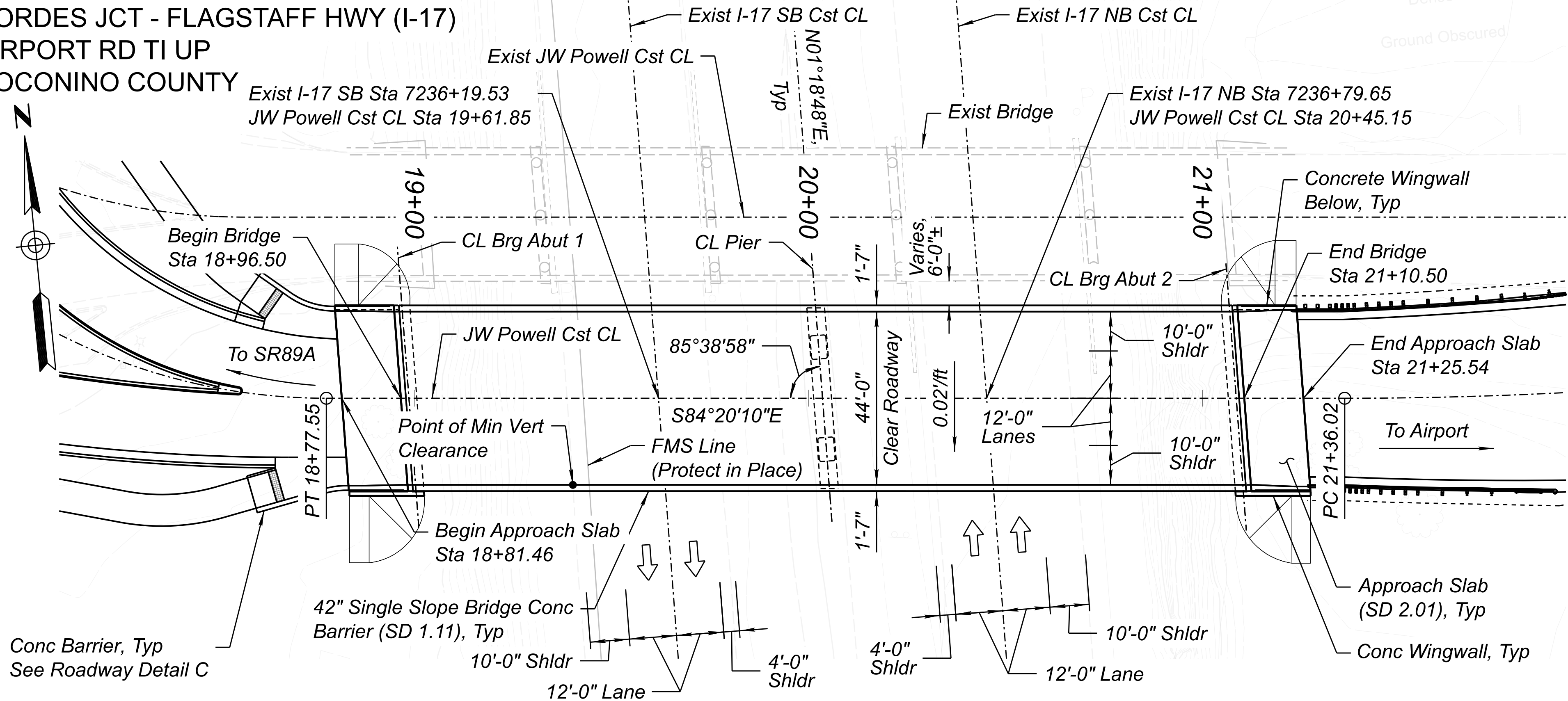
DESIGN	NAME	DATE
DESIGN	M. SUNDBLOM	10/23
DRAWN	M. SUNDBLOM	10/23
CHECKED	S. PAUL	10/23

ARIZONA DEPARTMENT OF TRANSPORTATION
 INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
TRAFFIC DESIGN SECTION

HDR
 HDR, INC.
 20 E. THOMAS ROAD
 SUITE 2500
 PHOENIX, AZ 85012
 TEL: (602) 522-7700

ROUTE I-17	F.H.W.A. Arizona Division	STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 78	TOTAL SHEETS 123	RECORD DRAWING
MILEPOST 337.39	LOCATION I-17 AIRPORT RD TI UP				DWG NO. T-11.04		
STRUCTURE NO.	TRACS NO. F0362 01C				OF		

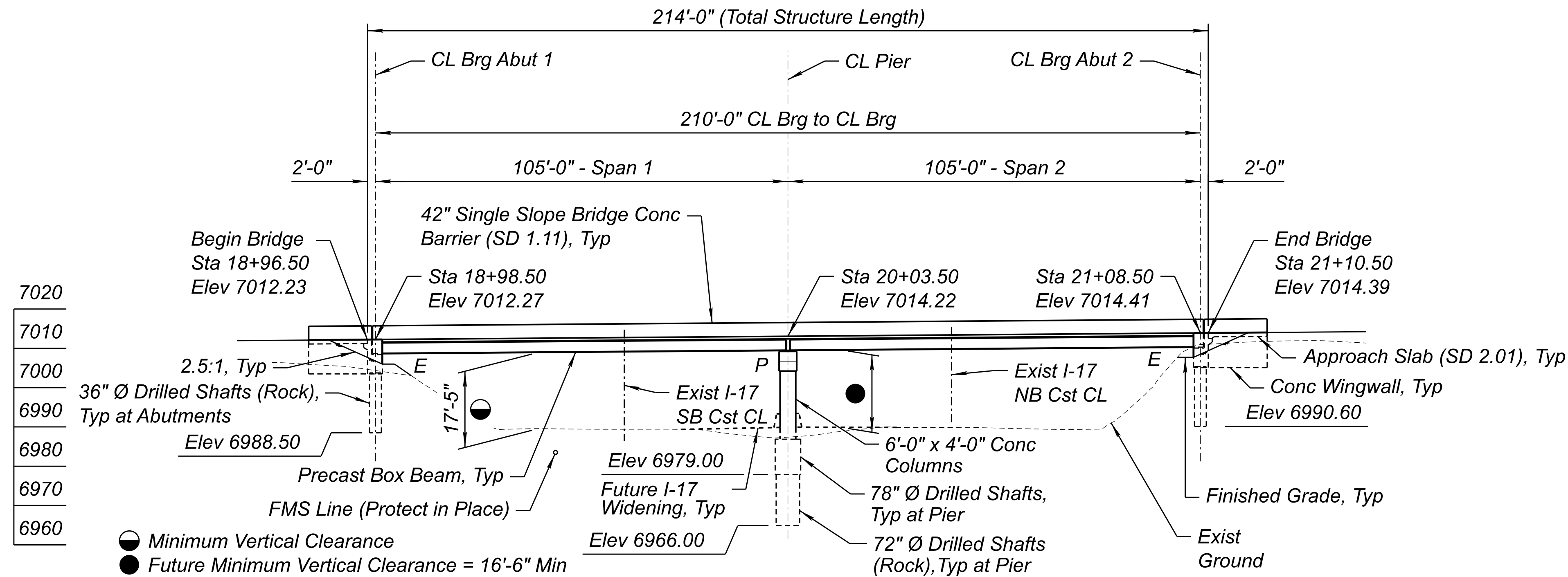
**CORDES JCT - FLAGSTAFF HWY (I-17)
AIRPORT RD TI UP
COCONINO COUNTY**



PLAN

New 2-Span Adjacent Precast, Prestressed Concrete Box Beam Underpass
 Skew = 4°21'2" Lt
 Scale: 1" = 20'-0"

1



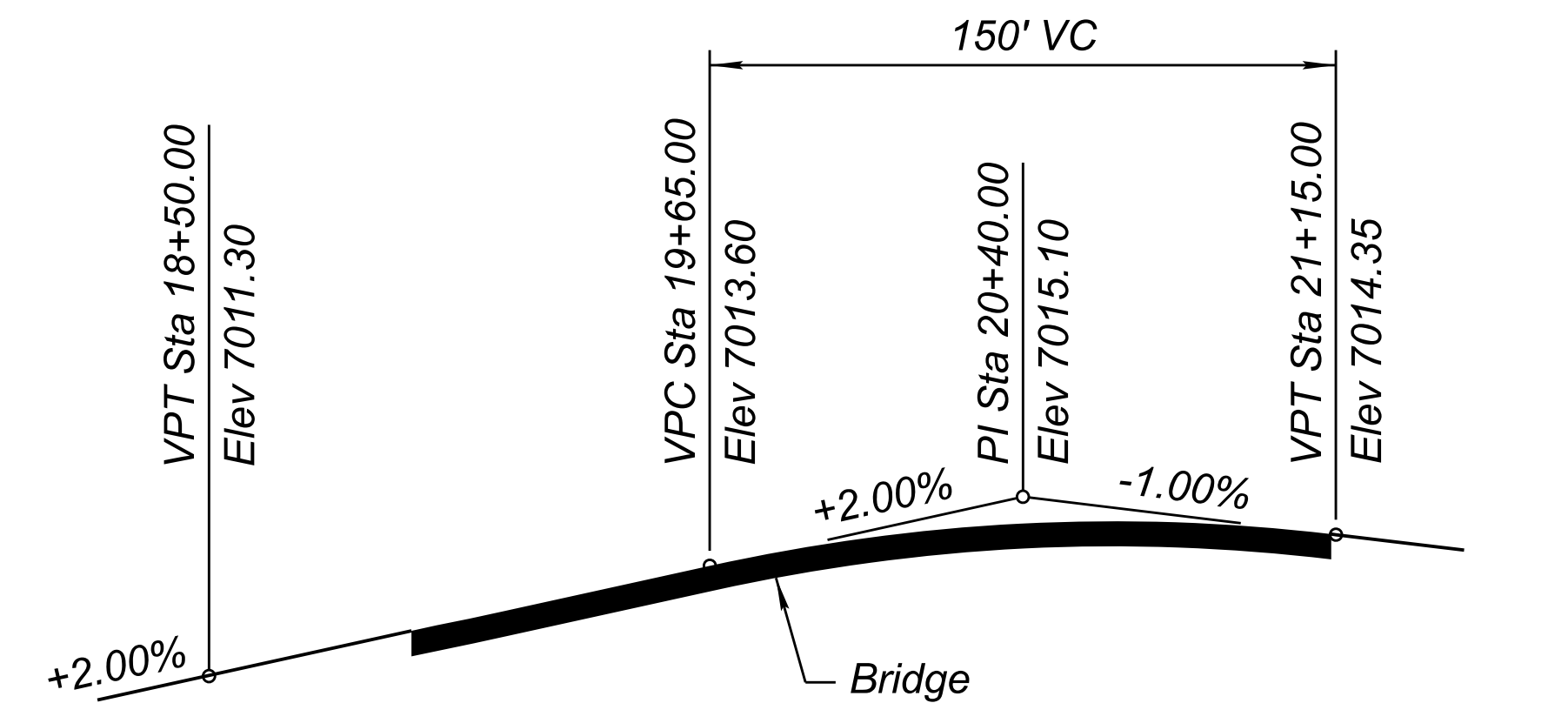
ELEVATION

Scale: 1" = 20'-0"

2

INDEX OF DRAWINGS

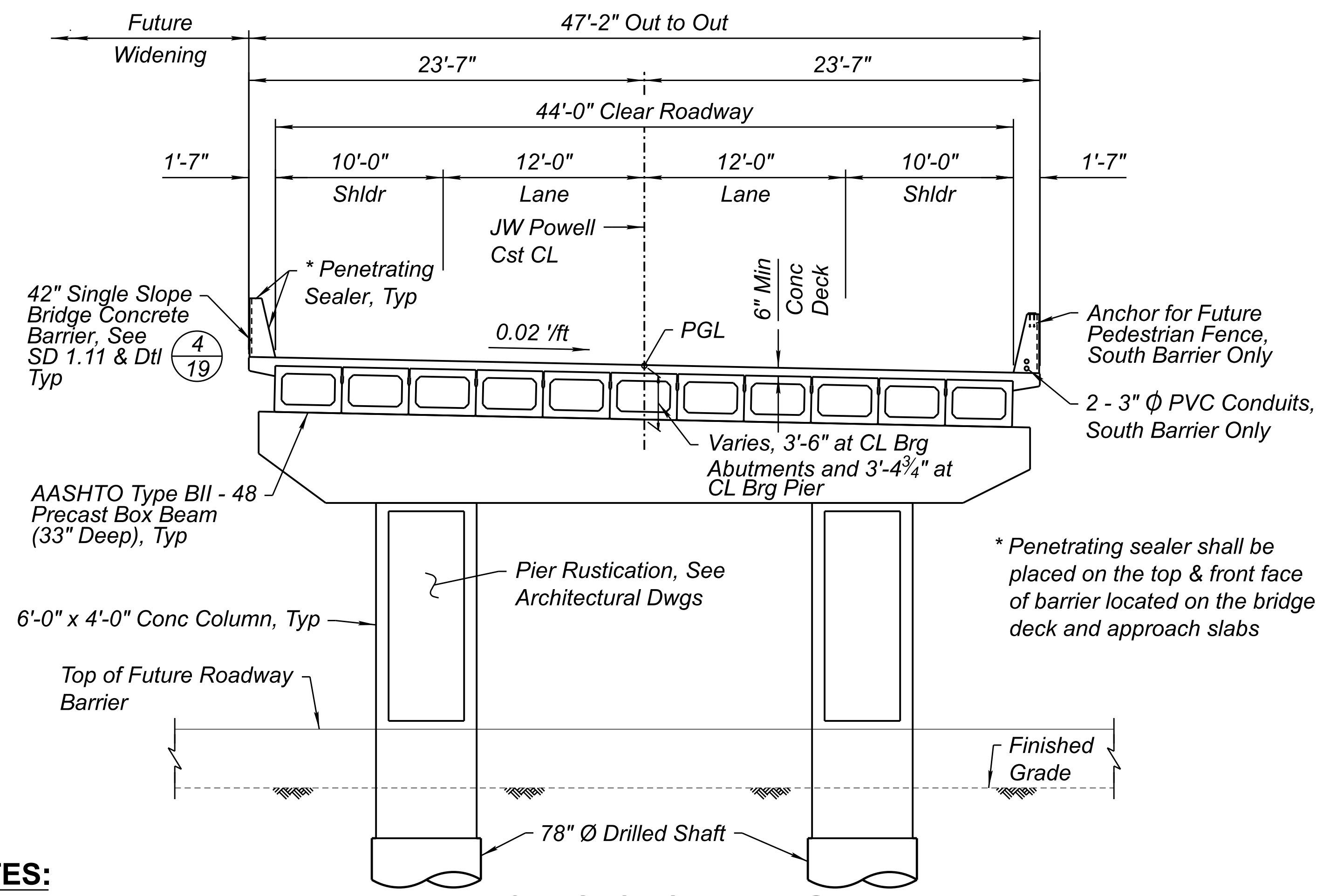
DWG NO	TITLE
S - 1.01	GENERAL PLAN & ELEVATION
S - 1.02	TYPICAL SECTION, GENERAL NOTES & QUANTITIES
S - 1.03	BRIDGE REMOVAL DETAILS
S - 1.04	FOUNDATION PLAN
S - 1.05	DRILLED SHAFT DETAILS
S - 1.06	ABUTMENT 1 PLAN & ELEVATION
S - 1.07	ABUTMENT 2 PLAN & ELEVATION
S - 1.08	ABUTMENT DETAILS - 1
S - 1.09	ABUTMENT DETAILS - 2
S - 1.10	WINGWALL DETAILS
S - 1.11	PIER PLAN & ELEVATION
S - 1.12	PIER DETAILS
S - 1.13	DECK PLAN
S - 1.14	BOX BEAM DETAILS - 1
S - 1.15	BOX BEAM DETAILS - 2
S - 1.16	BOX BEAM DETAILS - 3
S - 1.17	DECK SECTION & DETAILS
S - 1.18	MISCELLANEOUS DETAILS - 1
S - 1.19	MISCELLANEOUS DETAILS - 2
S - 1.20	CAMBER DETAILS
S - 1.21	SCREED ELEVATIONS
SF - 1.01 TO SF - 1.09	FOUNDATION DATA



PROFILE GRADE - JW POWELL CONSTRUCTION CL

Not to Scale

	DESIGN	DL	DATE	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION BRIDGE GROUP	ROUTE	I-17	F.H.W.A. Arizona Division STATE ARIZ.	PROJECT NO.	017 CN 337	FEDERAL ID NO.	017-B(237)T	SHEET NO.	79	TOTAL SHEETS	123	RECORD DRAWING
	DRAWN	RID	DATE	10/23		MILEPOST	337.39		LOCATION	I-17 AIRPORT RD TI UP				DWG NO.	S - 1.01		
	CHECKED	TVW/GSL	DATE	10/23		STRUCTURE NO.	20256		TRACS NO.	F0362 01C				OF			
HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL (602) 522-7700					GENERAL PLAN & ELEVATION												



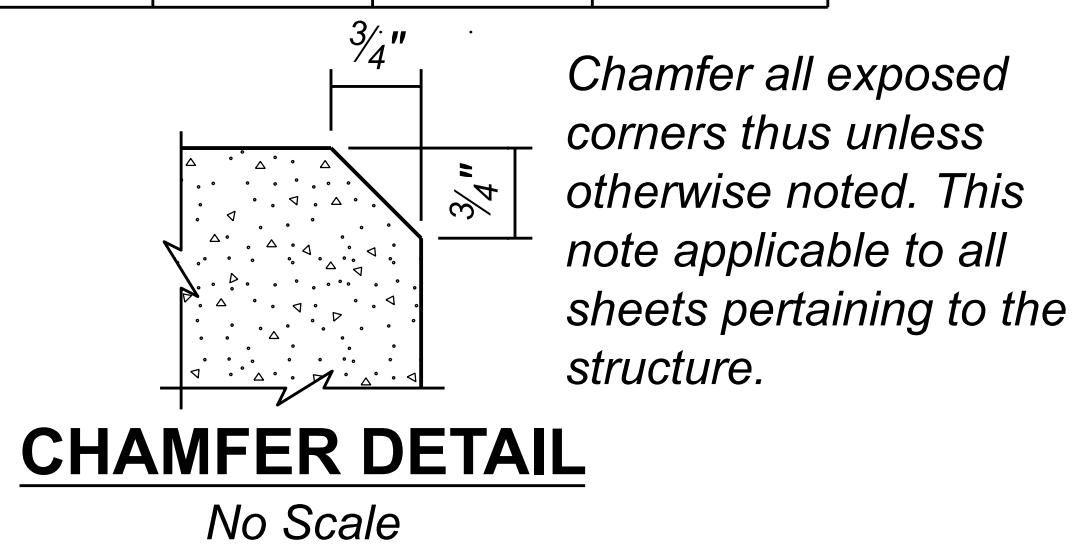
- NOTES:**
- Existing structure not shown for clarity.
 - Conduits are paid for with Item #7320070.

TYPICAL SECTION
(Looking Ahead Station)
Scale: 3/16" = 1'-0"

APPROXIMATE QUANTITIES

Item	Structural Excavation	Structure Backfill	Class 'S' Concrete 3500 psi	Silica Fume Concrete 4500 psi	Reinforcing Steel (Uncoated)	Reinforcing Steel (Epoxy Coated)	Type BII - 48 Precast Box Beam	Drilled Shaft (Rock) (36")	Drilled Shaft (78")	Drilled Shaft (Rock) (72")
	CY	CY	CY	CY	LB	LB	LF	LF	LF	LF
Abutment 1	70	45	55		9,245	1,155		61		
Pier	60	35	70		23,910				18	26
Abutment 2	115	45	55		9,245	1,155		61		
Superstructure				252		76,085	2,316			
Total	245	125	180	252	42,400	78,395	2,316	122	18	26
As Built Total										

Deck Joint Assembly (Flangeless Strip Seal) (SD 3.03).....	88 LF
Single Slope Bridge Concrete Barrier and Transition (42") (SD 1.11).....	488 LF
Approach Slab (SD 2.01).....	1,418 SF
Bridge Deck Texturing (Sawed Grooves).....	1,181 SY
Remove Bridge.....	1 LS
Miscellaneous Work (Anchor for Future Fence).....	36 EA
Miscellaneous Work (Penetrating Sealer).....	2,165 SF



GENERAL NOTES:

Construction Specifications - Arizona Department of Transportation (ADOT) Standard Specifications for Road and Bridge Construction, Edition 2021, and the Special Provisions.

Design Specifications - AASHTO LRFD Bridge Design Specifications, 8th Edition 2017 except as superseded by ADOT Bridge Design Guidelines.

Dead Load - Dead load includes allowance of 25 pounds per square foot (psf) for future wearing surface.

Loading Class - HL-93.

Girders designed using transformed section properties.

The bridge site is Site Class B with peak ground acceleration (PGA) = 0.102g and horizontal response spectral acceleration coefficient at 0.2 sec return period (Ss) of 0.240g, and horizontal response spectral acceleration coefficient at 1.0 sec return period (S1) of 0.070g. The bridge site is classified as Seismic Zone 1.

Inventory and operating ratings for HL-93 are in accordance with AASHTO Manual for Bridge Evaluation, 3rd Edition 2018 with Interim Revisions through 2019 and with the Load and Resistance Factor Rating Method.

Inventory Load Rating Factor 1.09
Operating Load Rating Factor 2.24

All concrete shall be Class "S" unless noted otherwise.

Reinforcing steel shall conform to ASTM Specification A615. All reinforcing shall be furnished as Grade 60. All reinforcing steel located in, or that portion extending into the deck, barrier and approach slab shall be epoxy coated, and shall conform to ASTM A775.

All welding shall conform to ANSI/AASHTO/AWS Bridge Welding Code, D1.5, latest edition.

All mechanical splices shall conform to the requirements for mechanical connections in Section 605-3.02 of the ADOT Standard Specifications for Road and Bridge Construction.

All bends/hooks shall meet the requirements of AASHTO LRFD, Article 5.10.2. All bend dimensions for reinforcing steel shall be out to out of bars. All placement dimensions for reinforcing steel shall be to center of bars unless noted otherwise.

All reinforcing steel shall have 2 inch clear cover unless noted otherwise.

Strengths:

Deck Slab & Pier Diaphragm (Silica Fume).....	f' c = 4.5 ksi
Bridge Barriers and Approach Slabs.....	f' c = 4.0 ksi
Abutments, Pier, Drilled Shafts & Wingwalls.....	f' c = 3.5 ksi
All Other Class "S" Concrete.....	f' c = 3.0 ksi
Grade 60 Transverse Deck Reinforcing.....	fs = 24.0 ksi
All Other Grade 60 Reinforcing Steel.....	fy = 60.0 ksi
Prestressing Steel.....	fpu = 270.0 ksi
(0.6" Diameter 7-Wire Low Relaxation Strands)	

Barriers shall not be slip formed. Barriers shall be constructed after spans have taken dead load deflection.

Chamfer all exposed corners 3/4" unless noted otherwise. See Chamfer Detail this sheet.

All construction joints shall be roughened to 1/4" amplitude unless noted otherwise.

Dimensions shall not be scaled from drawings.

Contractor shall coordinate all existing conditions during construction of project. Utility information shown on the plans may not be complete or accurately depict the location of the facilities shown. The contractor shall coordinate the location of all existing, new, relocated and abandoned utilities with the project plans and notify respective owners before commencing the work of excavation. Conflicts shall be brought to the attention of the Engineer and resolved prior to proceeding with the work.

Existing Bridge - The contractor shall remove the existing bridge in accordance with Section 202 of the Standard Specifications and as noted on the project plans and in the Special Provisions. See Dwg S-1.03.

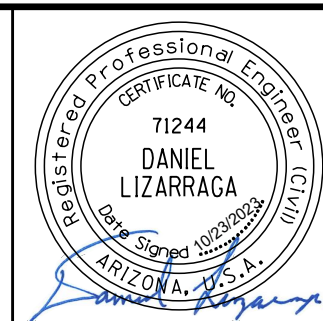
LEGEND:

- Title Marker: ① - Title Number
- Section/Detail Marker: ① - Section/Detail Number
- Elevation Marker: ① - Drawing Number *
- ② - Elevation Number
- ② - Drawing Number *

STANDARD DRAWING LIST:

ADOT Bridge Group SD Drawings - SD 1.11, SD 2.01, SD 3.03, SD 5.01 and SD 5.02.

* "-" Indicates Section/Detail/Elevation is located on same dwg.



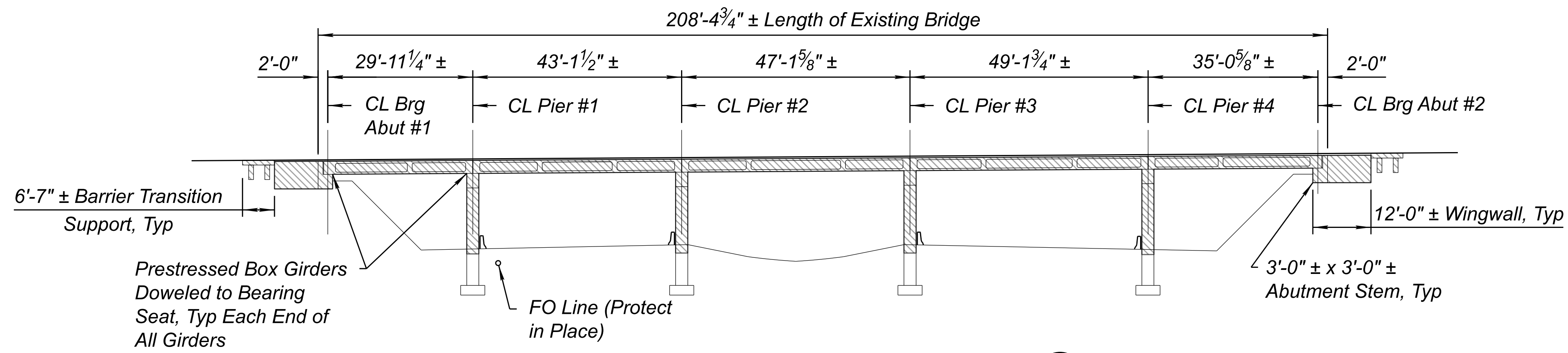
DESIGN: TVW 10/23
DRAWN: RID 10/23
CHECKED: DL 10/23

HDR, INC.
20 E. THOMAS ROAD
SUITE 2500
PHOENIX, AZ 85012
TEL: (602) 522-7700

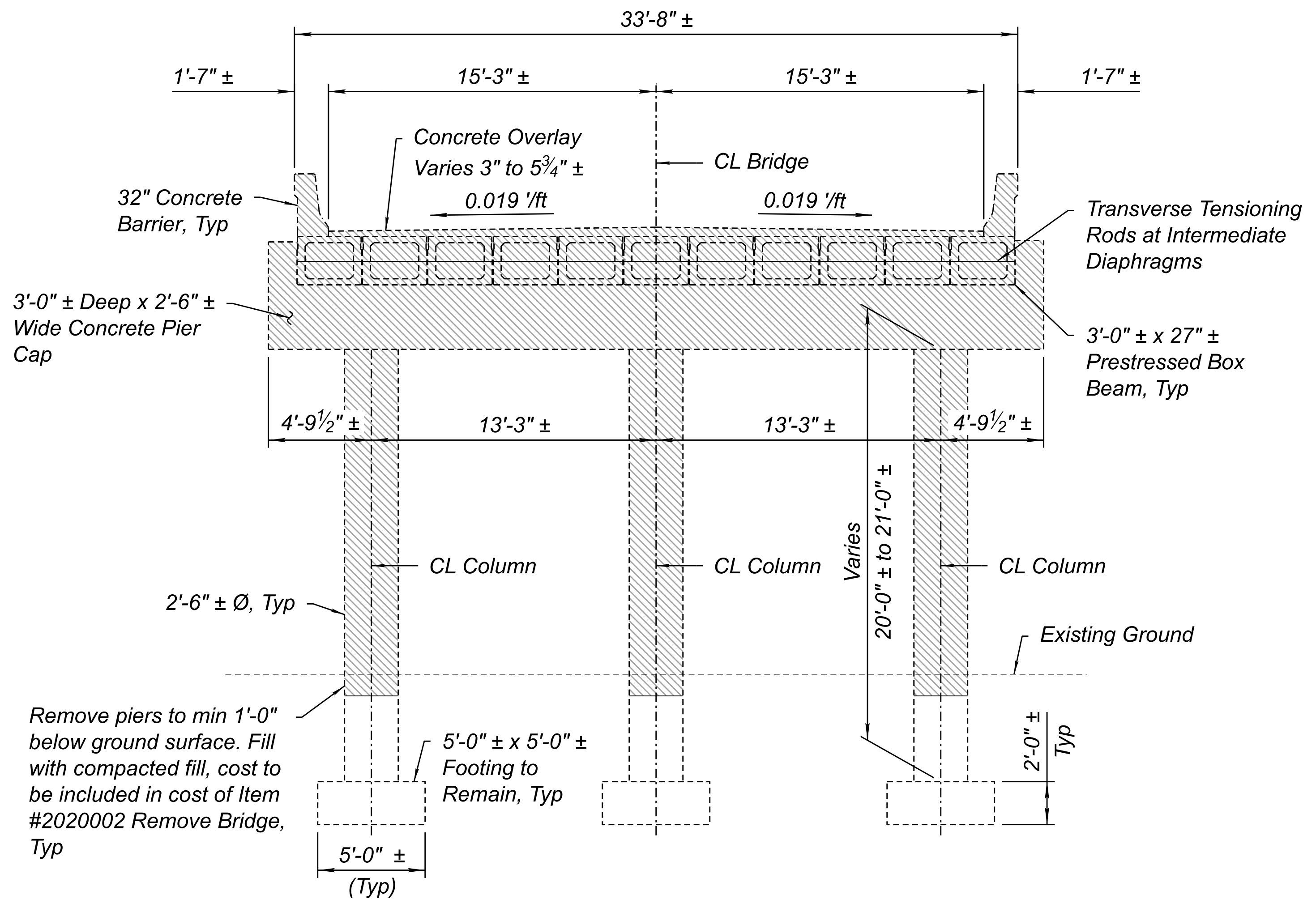
ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
BRIDGE GROUP

TYPICAL SECTION, GENERAL
NOTES & QUANTITIES

ROUTE I-17	F.H.W.A. Arizona Division	STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 80	TOTAL SHEETS 123	RECORD DRAWING
MILEPOST 337.39	LOCATION I-17 AIRPORT RD TI UP						DWG NO. S-1.02
STRUCTURE NO. 20256	TRACS NO. F0362 01C						OF



EXISTING BRIDGE ELEVATION
 Existing 5-Span Prestressed Box Beam Bridge #632
 (Looking North)
 Scale: 1/16" = 1'-0"



EXISTING BRIDGE TYPICAL SECTION AT PIER
 Scale: 1/4" = 1'-0"

REMOVAL NOTES:

- Proposed features not shown for clarity.
- All existing features, details and dimensions are based on record drawings. The contractor shall review record drawings and field verify.
- Bridge removal shall be paid for under Item #2020002. See Special Provisions for additional information and requirements.
- Bridge removal shall consider overall project phasing, which is the responsibility of the contractor.
- In addition to the requirements of subsection 202-3.05 of the Standard Specifications, at least 10 days before beginning any bridge removal operations, either wholly or in part, the contractor shall submit to the Engineer, for review and approval, details of the proposed removal operations showing the methods and sequence of removal and equipment to be used.

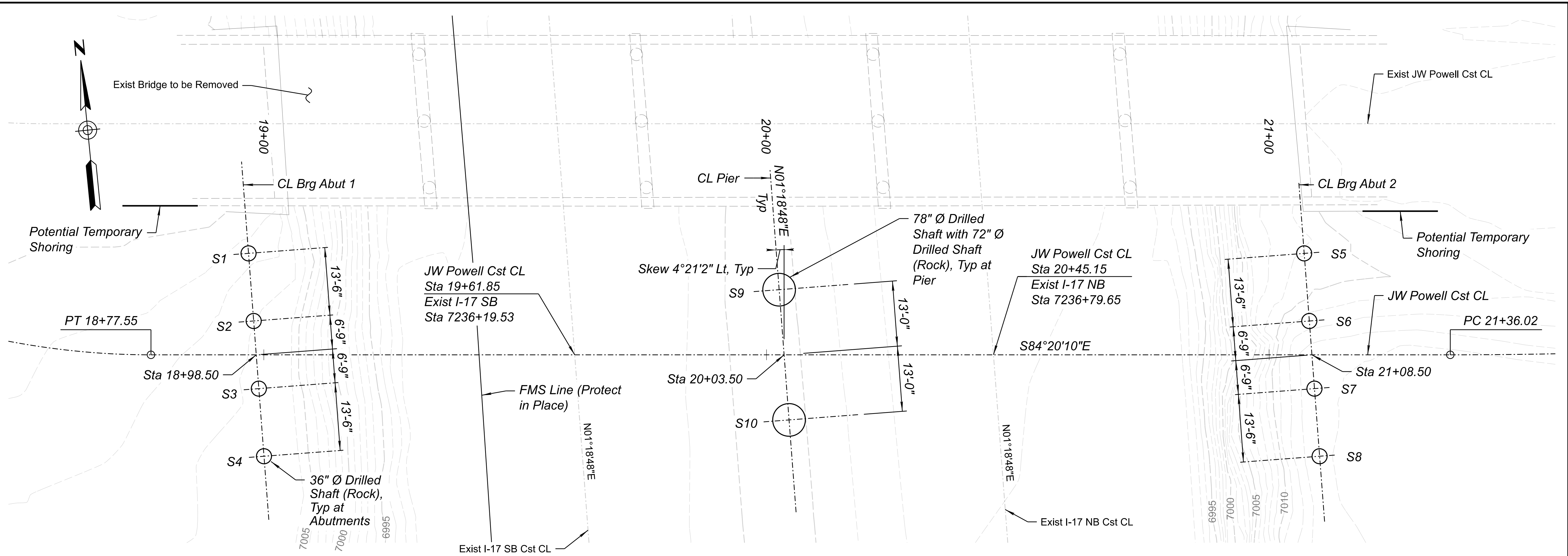
LEGEND:

Limits of Bridge Removal

EXISTING BRIDGE NOTES:

- The existing bridge, Structure No. 632, was constructed by the Arizona Highway Department under Project No. I-IG-17-2(9) in 1960.
- The original bridge rail H-2-1 with concrete curb was replaced with a 32" barrier, the original wingwalls and barrier transition were modified, and the original 2" AC overlay was removed and replaced with a 2" rubberized asphalt overlay by the Arizona Department of Transportation under Project No. IR-17-2(103) in 1992.
- The asphalt overlay was replaced with a new crowned (1.9%) variable depth concrete overlay by the Arizona Department of Transportation under Project No. BR-017-B(213)A in 2012.

	DESIGN	GSL	DATE	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION BRIDGE GROUP	ROUTE	I-17	F.H.W.A. Arizona Division STATE ARIZ.	PROJECT NO.	017 CN 337	FEDERAL ID NO.	017-B(237)T	SHEET NO.	81	TOTAL SHEETS	123	RECORD DRAWING
	DRAWN	RID	DATE	10/23		MILEPOST	337.39		LOCATION	I-17 AIRPORT RD TI UP				DWG NO.	S - 1.03		
	CHECKED	DL	DATE	10/23		STRUCTURE NO.	20256		TRACS NO.	F0362 01C				OF			
HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL: (602) 522-7700																	



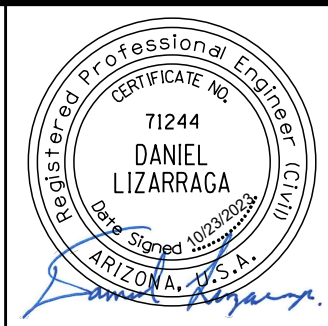
FOUNDATION PLAN ①
 1'-0" Contour Interval
 Scale: 1" = 10'-0"

FOUNDATION NOTES:

1. SX indicates drilled shaft number.
2. The contractor shall review the Geotechnical Foundation Report prepared by HDR, dated September 8, 2023.
3. The contractor may select any one of the abutment drilled shafts as the required confirmation shaft.
4. See Dwg S-1.05 for drilled shaft notes and details.

TEMPORARY SHORING NOTES:

1. The contractor shall be responsible for providing temporary shoring as required to maintain traffic, for protection of the workers, or as otherwise needed to accomplish the work. Limits and type of shoring to be determined by the contractor.
2. The contractor shall submit a plan outlining construction procedures, shoring requirements, and shoring design to the Engineer for review and approval prior to proceeding with the work. Shoring shall conform to the Design and Construction Specifications noted in the General Notes.
3. Temporary shoring shall remain in place until no longer required to complete the work.
4. No additional payment will be made for temporary shoring.

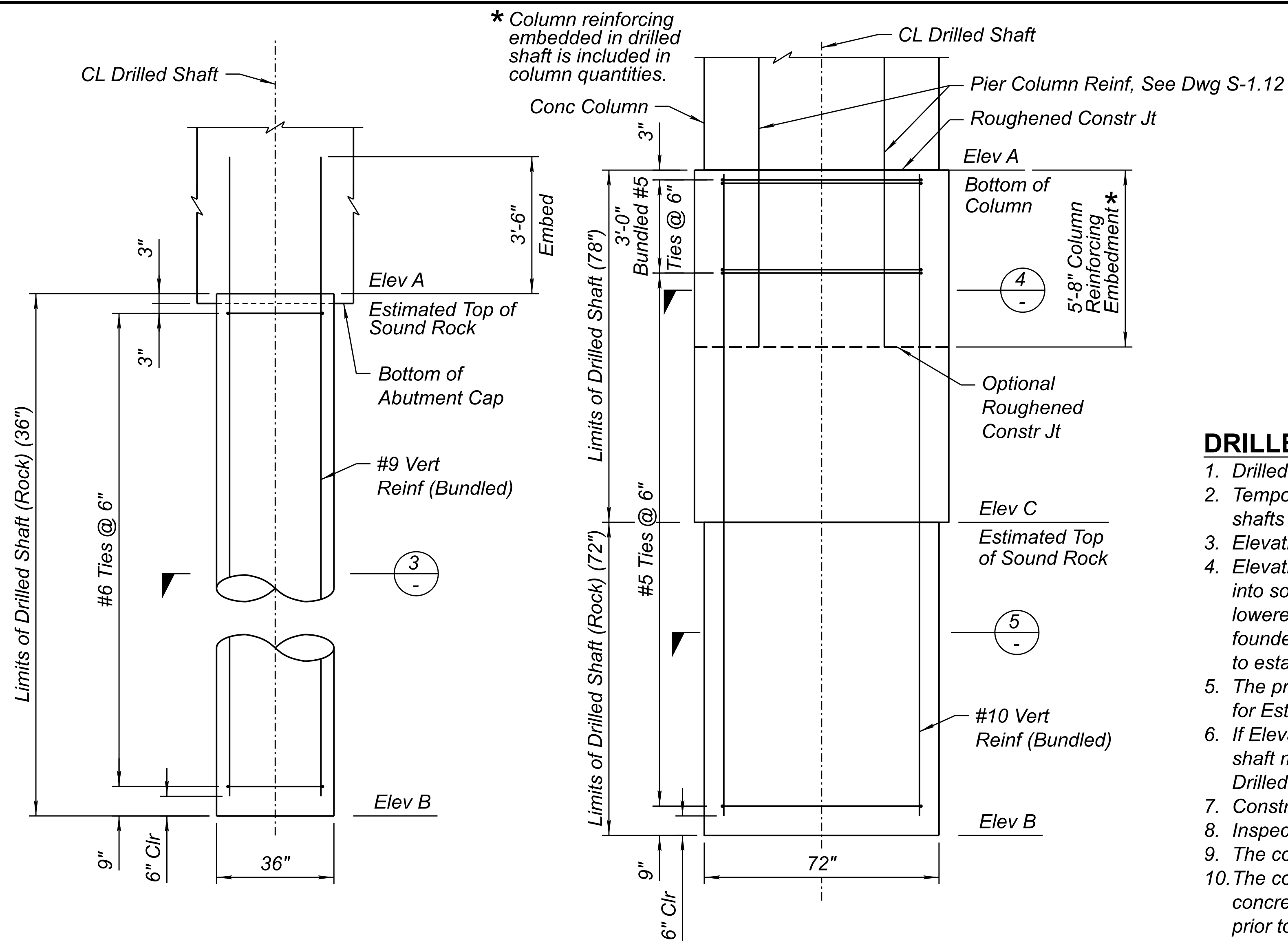


	NAME	DATE
DESIGN	TVW	10/23
DRAWN	RID	10/23
CHECKED	DL	10/23

HDR
 HDR, INC.
 20 E. THOMAS ROAD
 SUITE 2500
 PHOENIX, AZ 85012
 TEL: (602) 522-7700

ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION BRIDGE GROUP		ROUTE I-17
FOUNDATION PLAN		MILEPOST 337.39
		STRUCTURE NO. 20256

F.H.W.A. Arizona Division	STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 82	TOTAL SHEETS 123	RECORD DRAWING
LOCATION I-17 AIRPORT RD TI UP				DWG NO. S - 1.04		
TRACS NO. F0362 01C				OF		



DRILLED SHAFT DATA TABLE						
Location	Top of Drilled Shaft Elev A (1)	Bottom of Drilled Shaft Elev B (1)	Top of Rock at Pier Elev C (1)	Total Unfactored Load (kips) (2)	Total Unfactored Load (kips) (3)	Estimated Design Settlement (in) (4)
Abutment 1	7003.75	6988.50		645	645	0.01
Pier	6988.00	6966.00	6979.00	1520	1520	0.01
Abutment 2	7005.85	6990.60		645	645	0.01

- ① See notes 3 to 6 for specifics on rock.
- ② No increase for redundancy or group efficiency effects.
- ③ Increased for redundancy or group efficiency effects, where applicable.
- ④ Estimated Design Settlement is the portion of the Total Settlement that occurs after the completion of the superstructure. Settlement of shafts embedded in rock is negligible.

DRILLED SHAFT NOTES:

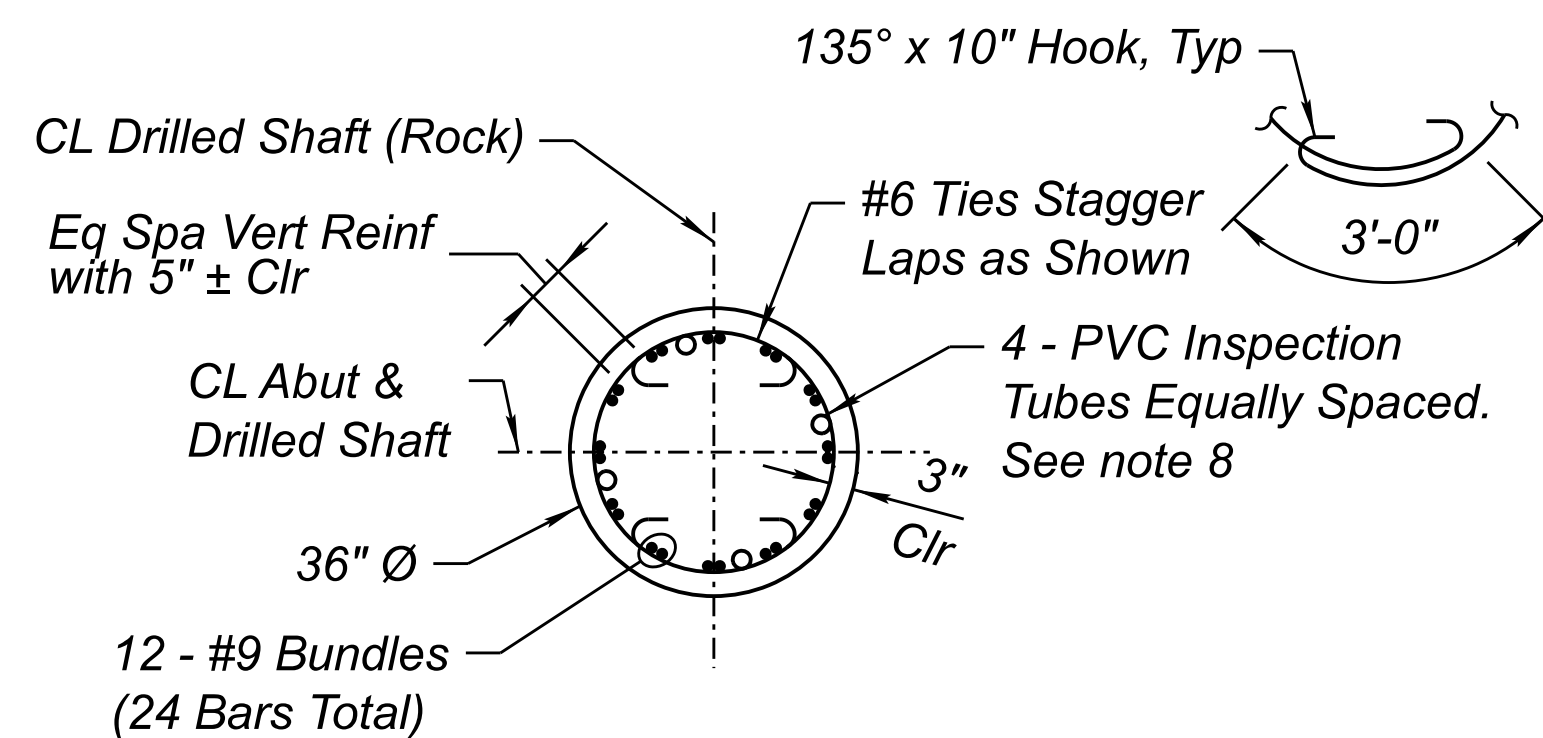
1. Drilled shafts shall be constructed in accordance with the requirements of Section 609 of the Specifications.
2. Temporary or permanent casing may be required at the pier to stabilize the excavation above the top of sound rock. The pier drilled shafts have been designed to account for loss of friction above the Elevation for Estimated Top of Sound Rock.
3. Elevation for Estimated Top of Sound Rock for each shaft is based on interpreted data and shall be considered tentative.
4. Elevation B (Bottom of Drilled Shaft) is dependent on Elevation for Estimated Top of Sound Rock and is based on 15'-0" embedment into sound rock at the abutments and 13'-0" embedment into sound rock at the pier. If Elevation for Estimated Top of Sound Rock is lowered, Elevation B shall also be lowered to provide the required embedment. Elevation B also assumes the drilled shaft tip is founded in sound rock. If voids or poor rock conditions are encountered at the planned tip elevation, the excavation shall be extended to establish a drilled shaft tip in sound rock.
5. The project Geotechnical Engineer or designated representative shall be present during drilling to help confirm/determine Elevation for Estimated Top of Sound Rock and Elevation B.
6. If Elevation B is lowered less than 3 feet, the reinforcing cage need not be extended and the clearance to the bottom of the drilled shaft may be increased accordingly. If Elevation B is lowered more than 3 feet, the project Bridge Engineer shall be consulted. Drilled shaft vertical reinforcement shall not be spliced unless approved by the project Bridge Engineer.
7. Construction joints not shown on the plans require the approval of the Engineer prior to construction.
8. Inspection tubes shall not be attached to the longitudinal reinforcement and shall be placed between longitudinal reinforcement.
9. The contractor shall orientate the drilled shaft reinforcing cage as required to avoid conflicts with the reinforcing in the abutment caps.
10. The contractor shall be responsible for providing support of the reinforcing cage during fabrication, erection, and placement of concrete. Plans showing reinforcing cage support and methods of erection shall be submitted to the Engineer for review and approval prior to construction.
11. All reinforcing steel in the drilled shafts, including reinforcing extending into the abutment, shall be included in the pay item for drilled shafts.

ABUTMENT DRILLED SHAFT ELEVATION ①

Scale: 1/2" = 1'-0"

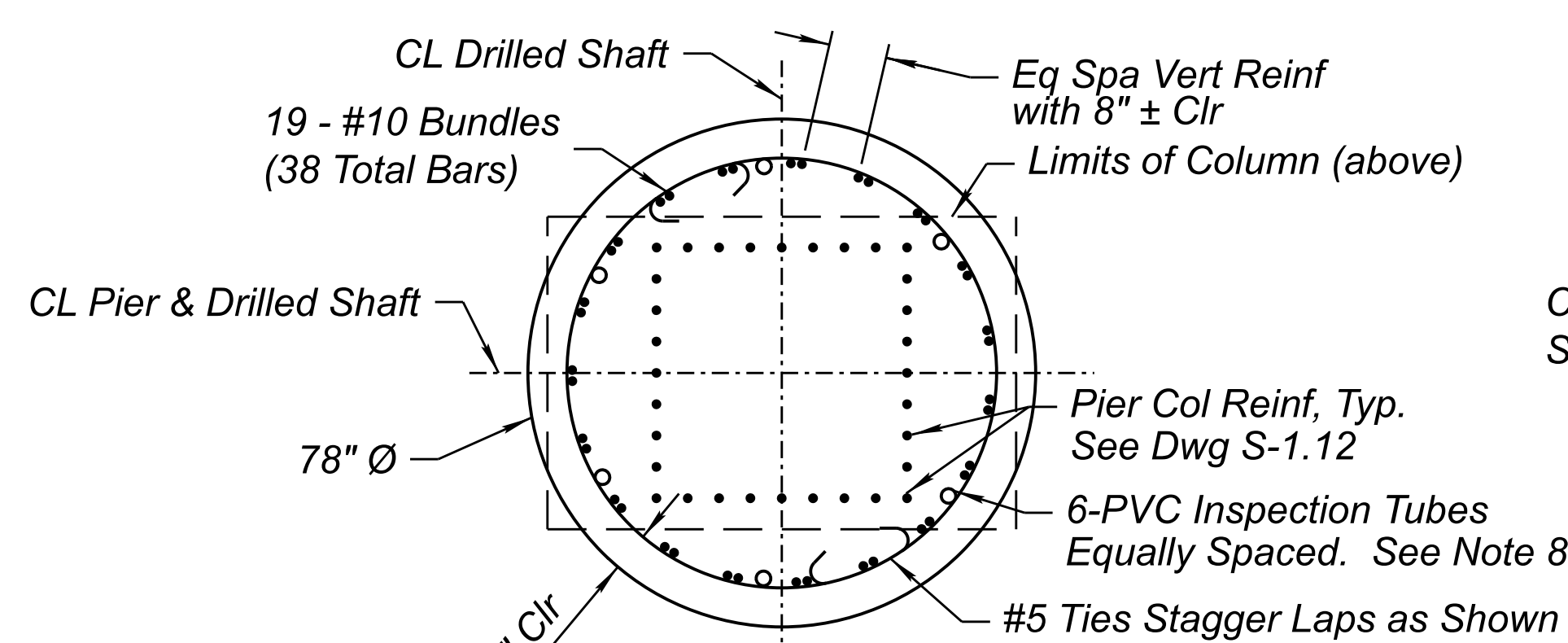
PIER DRILLED SHAFT ELEVATION ②

Scale: 1/2" = 1'-0"



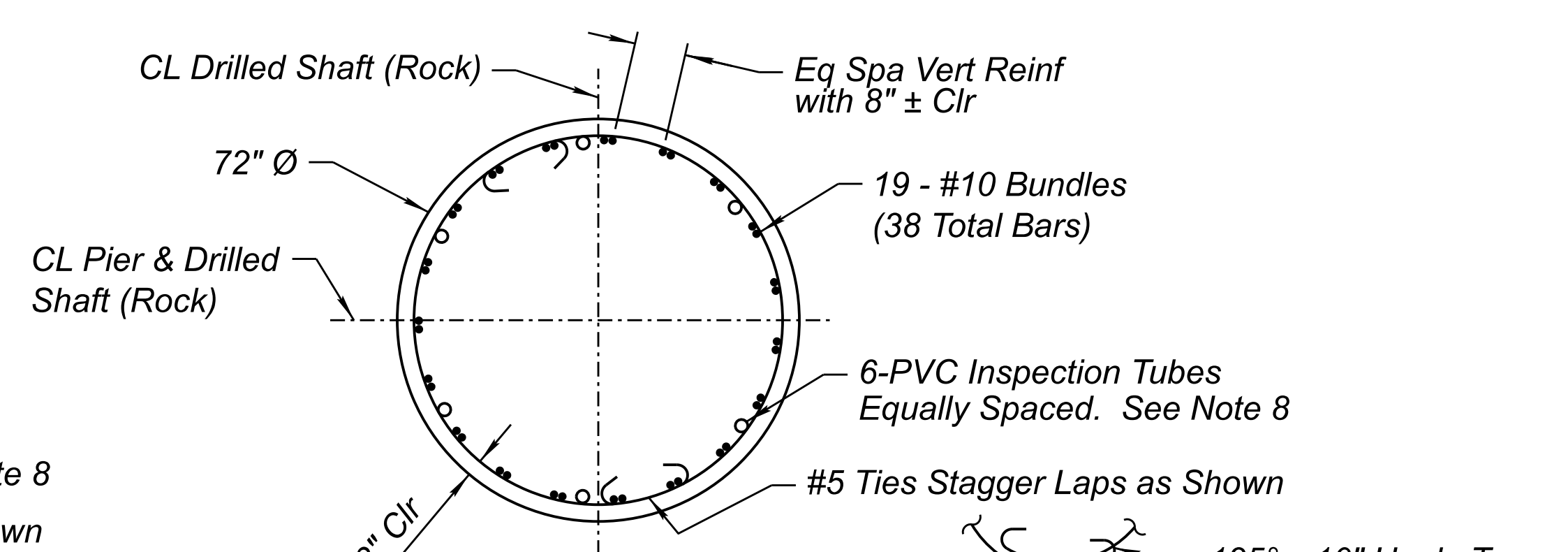
SECTION ③

Scale: 1/2" = 1'-0"



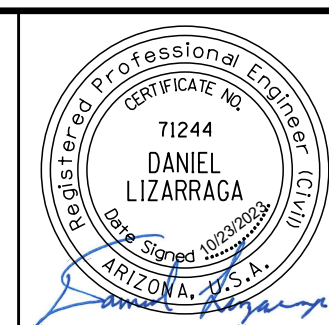
SECTION ④

Scale: 1/2" = 1'-0"



SECTION ⑤

Scale: 1/2" = 1'-0"



NAME	DATE
DESIGN TVW	10/23
DRAWN RID	10/23
CHECKED DL	10/23

HDR, INC.
20 E. THOMAS ROAD
SUITE 2500
PHOENIX, AZ 85012
TEL: (602) 522-7700

ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
BRIDGE GROUP

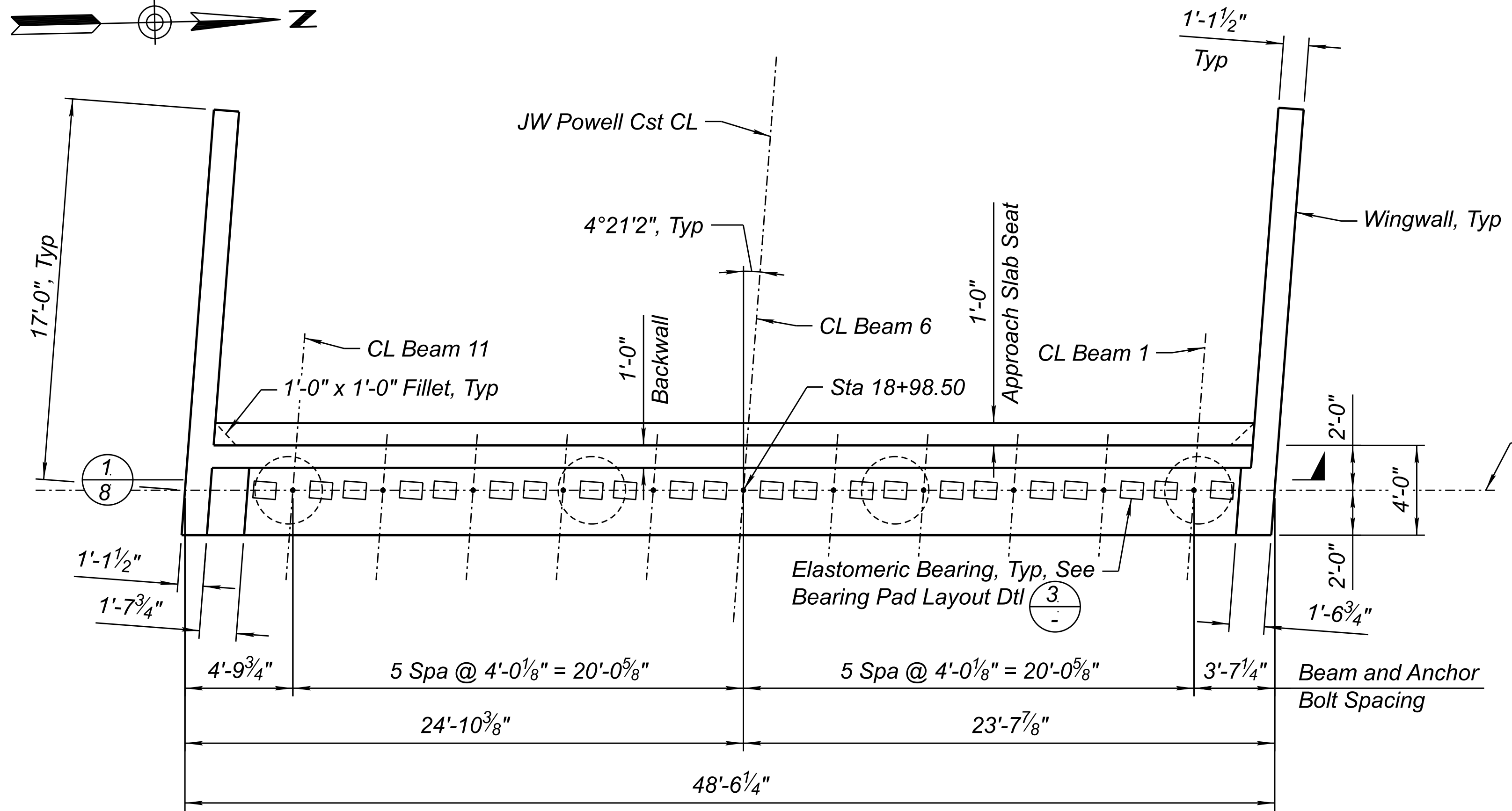
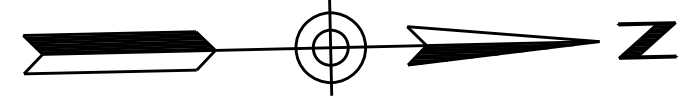
ROUTE I-17
MILEPOST 337.39
STRUCTURE NO. 20256

DRILLED SHAFT DETAILS

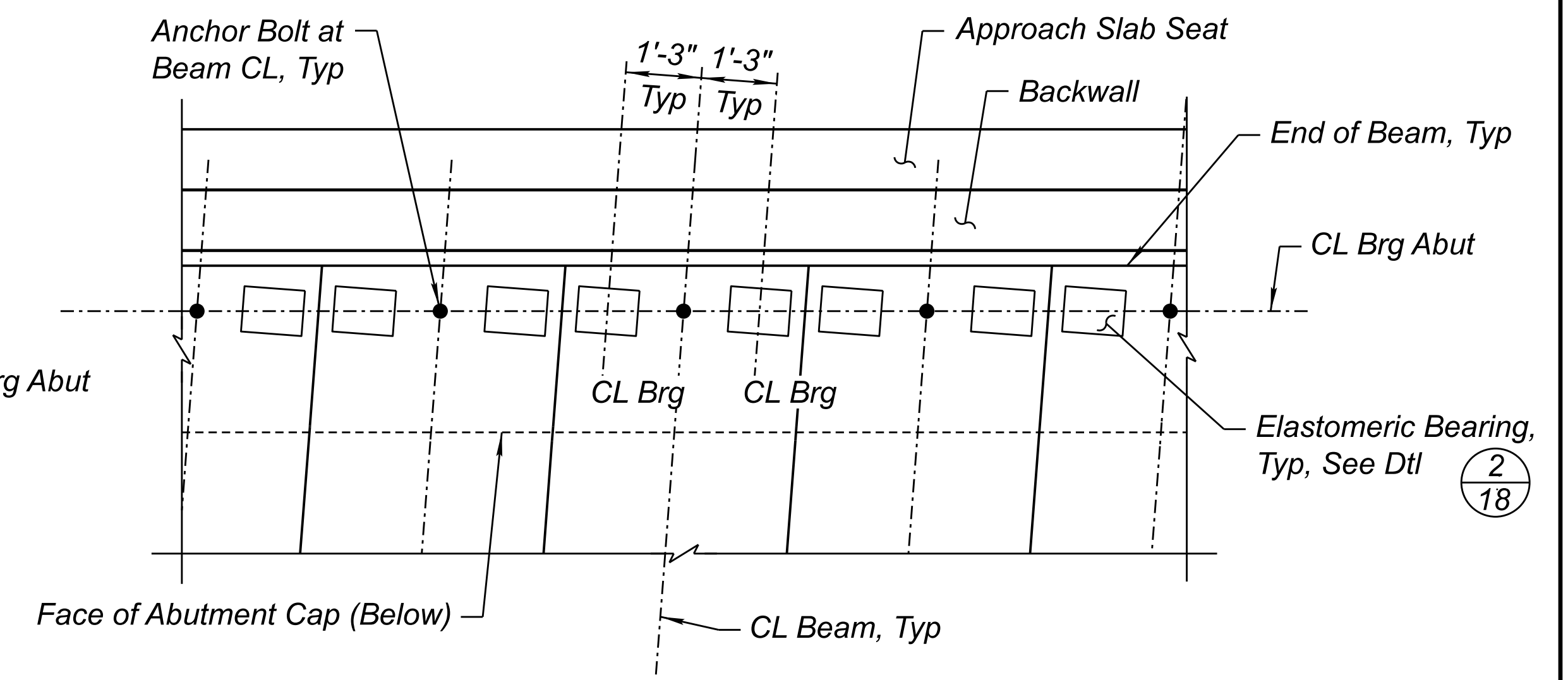
STATE	PROJECT NO.	FEDERAL ID NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
ARIZ.	017 CN 337	017-B(237)T	83	123	

LOCATION I-17 AIRPORT RD TI UP
TRACS NO. F0362 01C

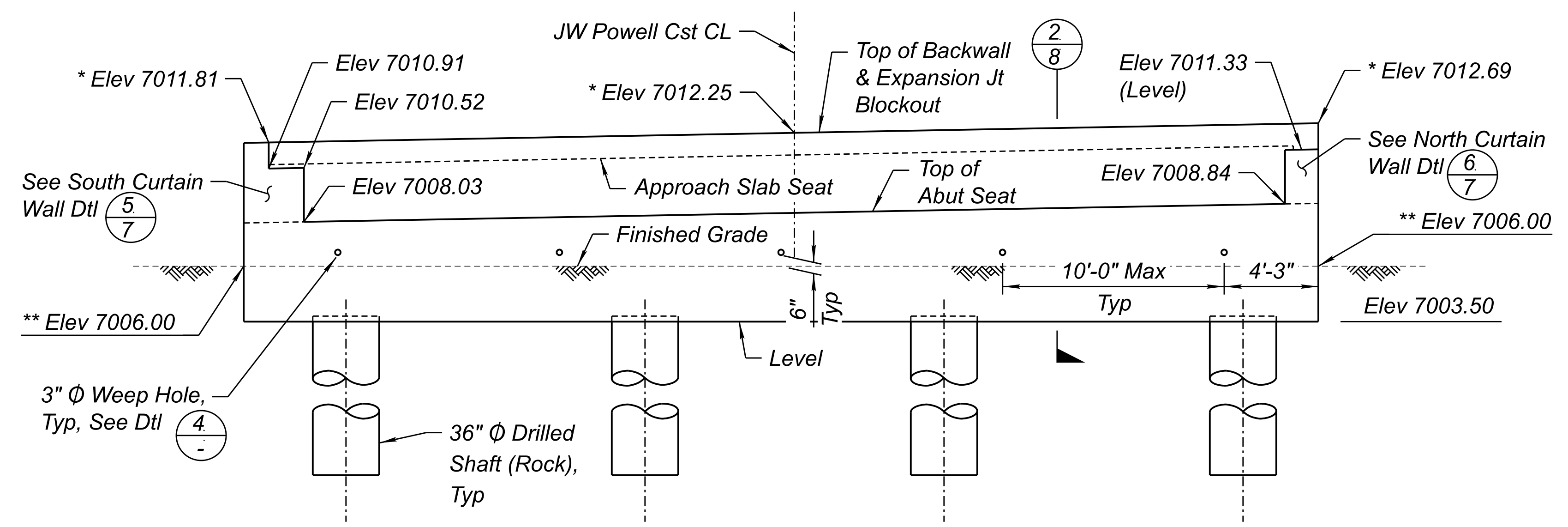
DWG NO. S - 1.05
OF



ABUTMENT 1 PLAN
Scale: 1/4" = 1'-0"

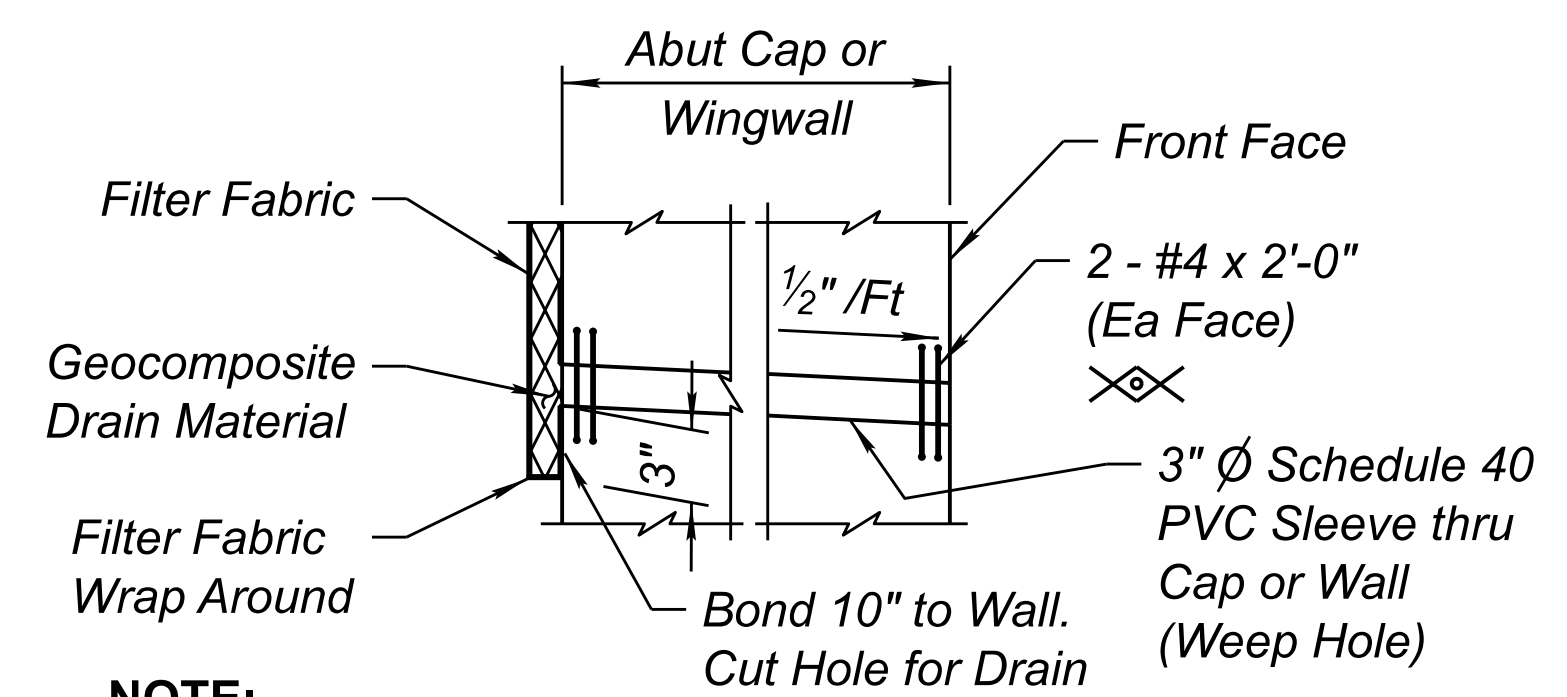


BEARING PAD LAYOUT DETAIL
Scale: 1/2" = 1'-0"



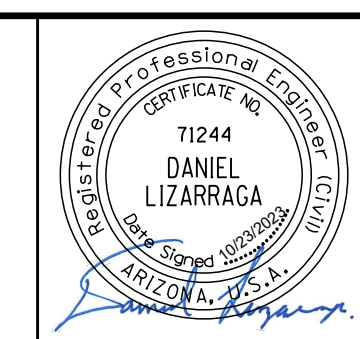
Elevations shown at centerline bearing abutment, unless noted otherwise
* Elevation shown at the front face of backwall
** Elevation shown at the front face of abutment cap

ABUTMENT 1 ELEVATION
(Looking Back Station)
Scale: 1/4" = 1'-0"



NOTE:
Filter fabric shall be installed per manufacturer's recommendations.

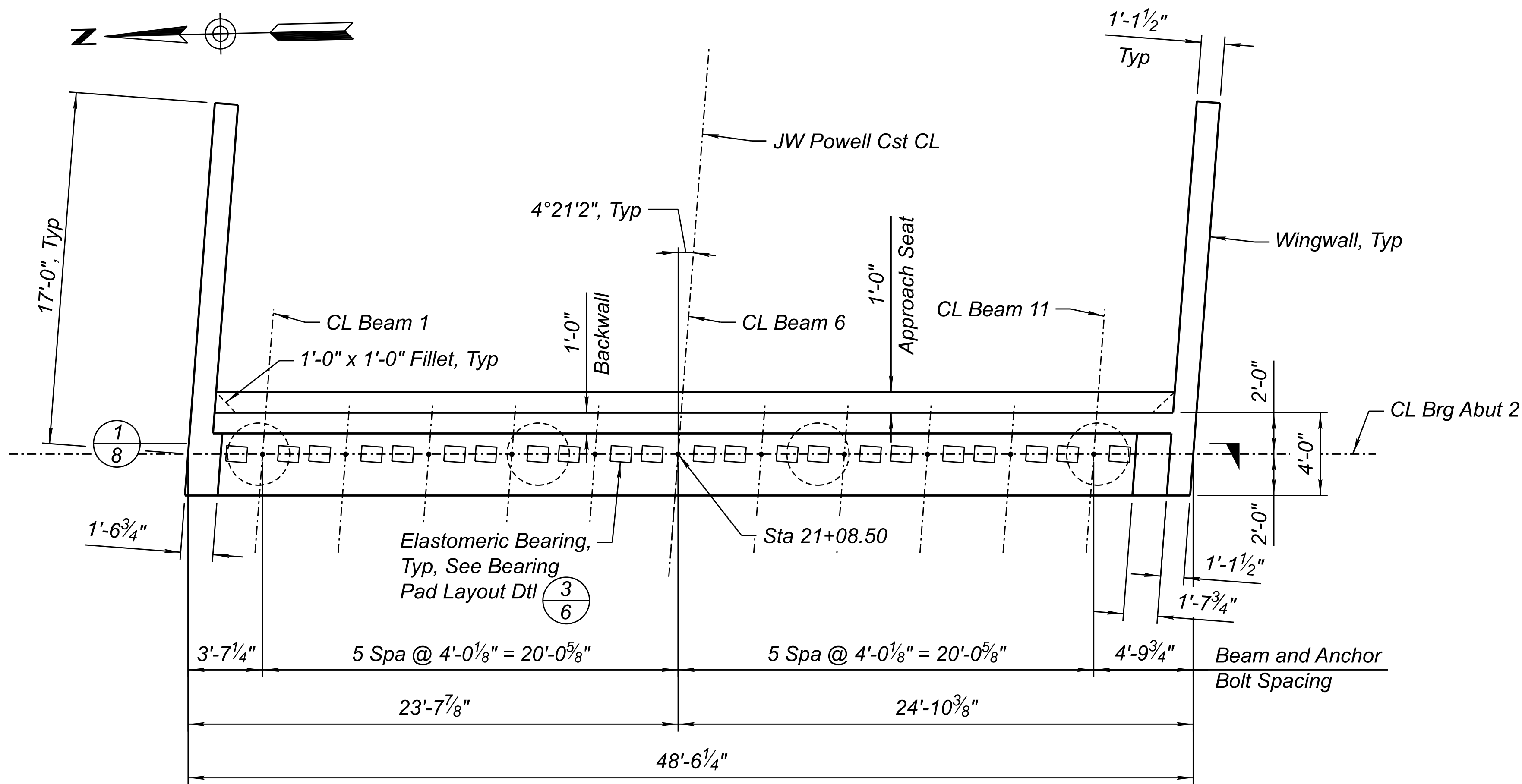
WEEP HOLE DETAIL
No Scale



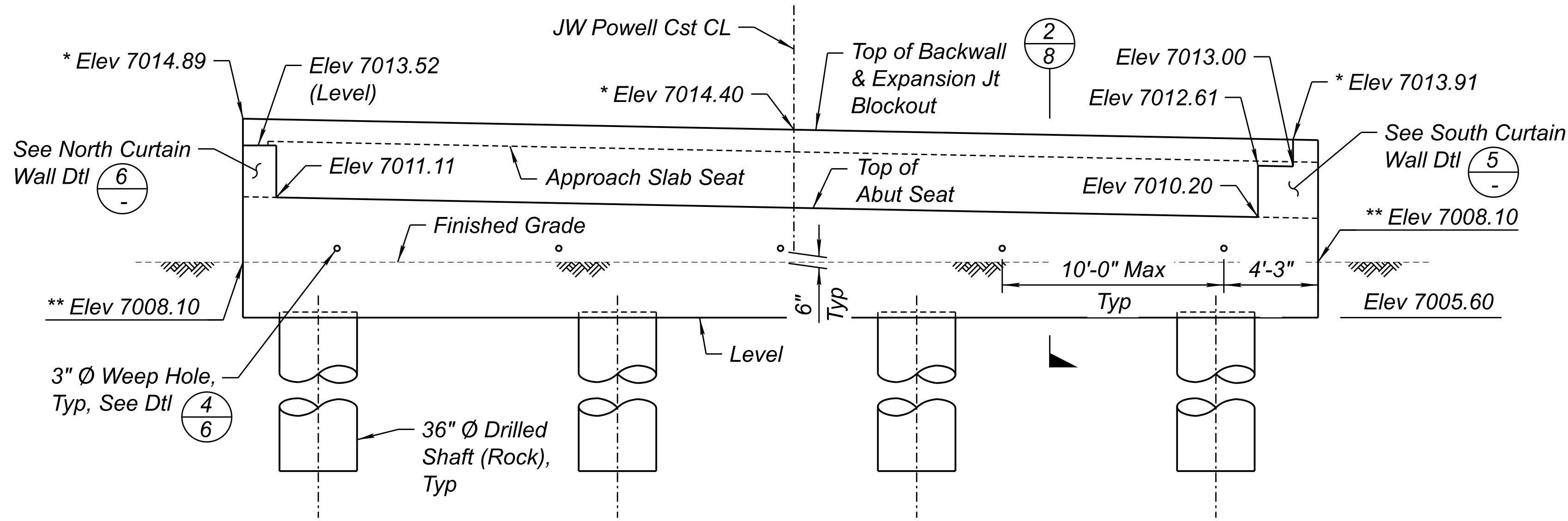
HDR
HDR, INC.
20 E. THOMAS ROAD
SUITE 2500
PHOENIX, AZ 85012
TEL (602) 522-7700

ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
BRIDGE GROUP
ABUTMENT 1 PLAN & ELEVATION

ROUTE I-17	F.H.W.A. Arizona Division	STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 84	TOTAL SHEETS 123	RECORD DRAWING
MILEPOST 337.39	LOCATION I-17 AIRPORT RD TI UP						DWG NO. S-1.06
STRUCTURE NO. 20256	TRACS NO. F0362 01C						OF

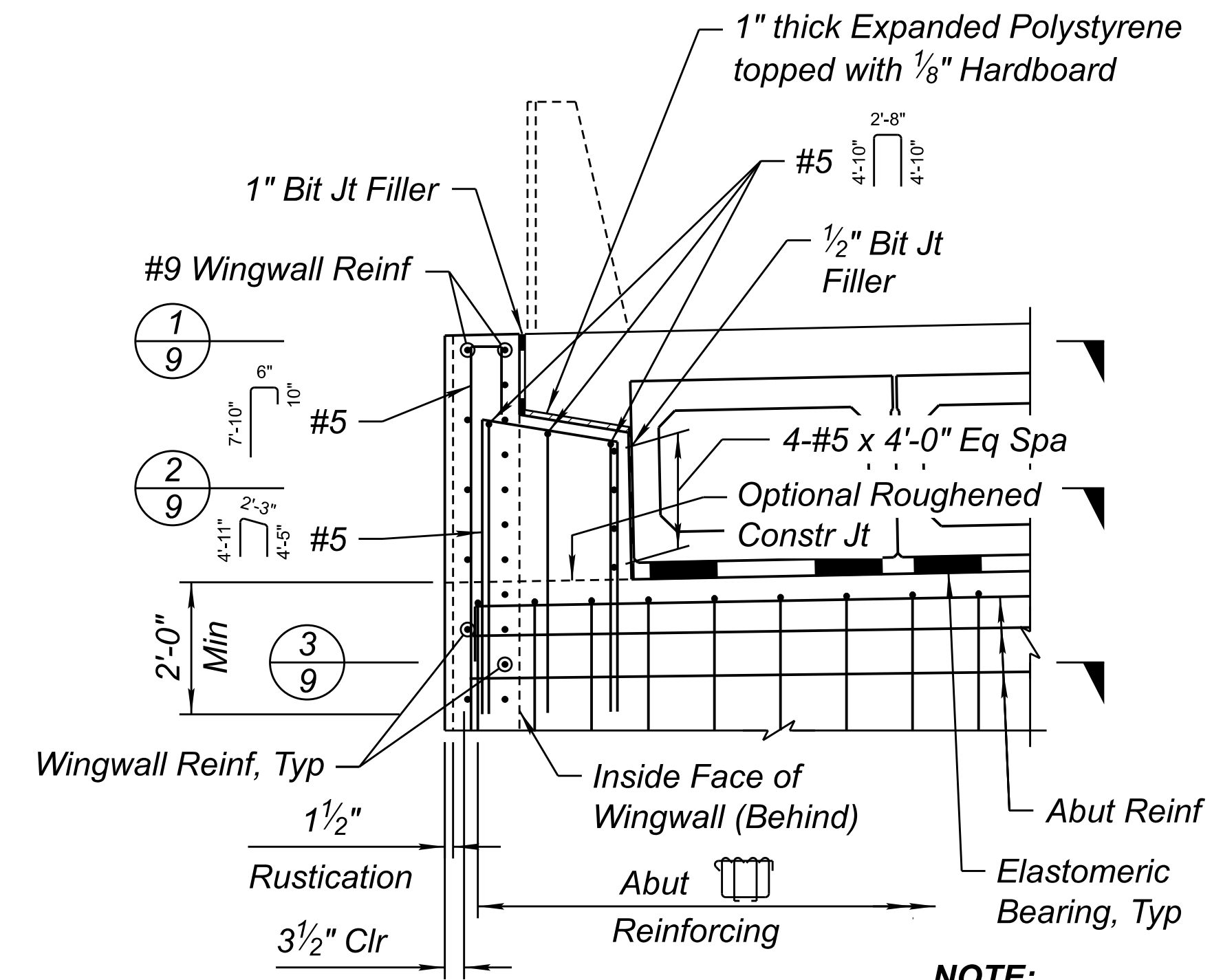


ABUTMENT 2 PLAN
Scale: 1/4" = 1'-0"



Elevations shown at centerline bearing abutment, unless noted otherwise
 * Elevation shown at the front face of backwall
 ** Elevation shown at the front face of abutment cap

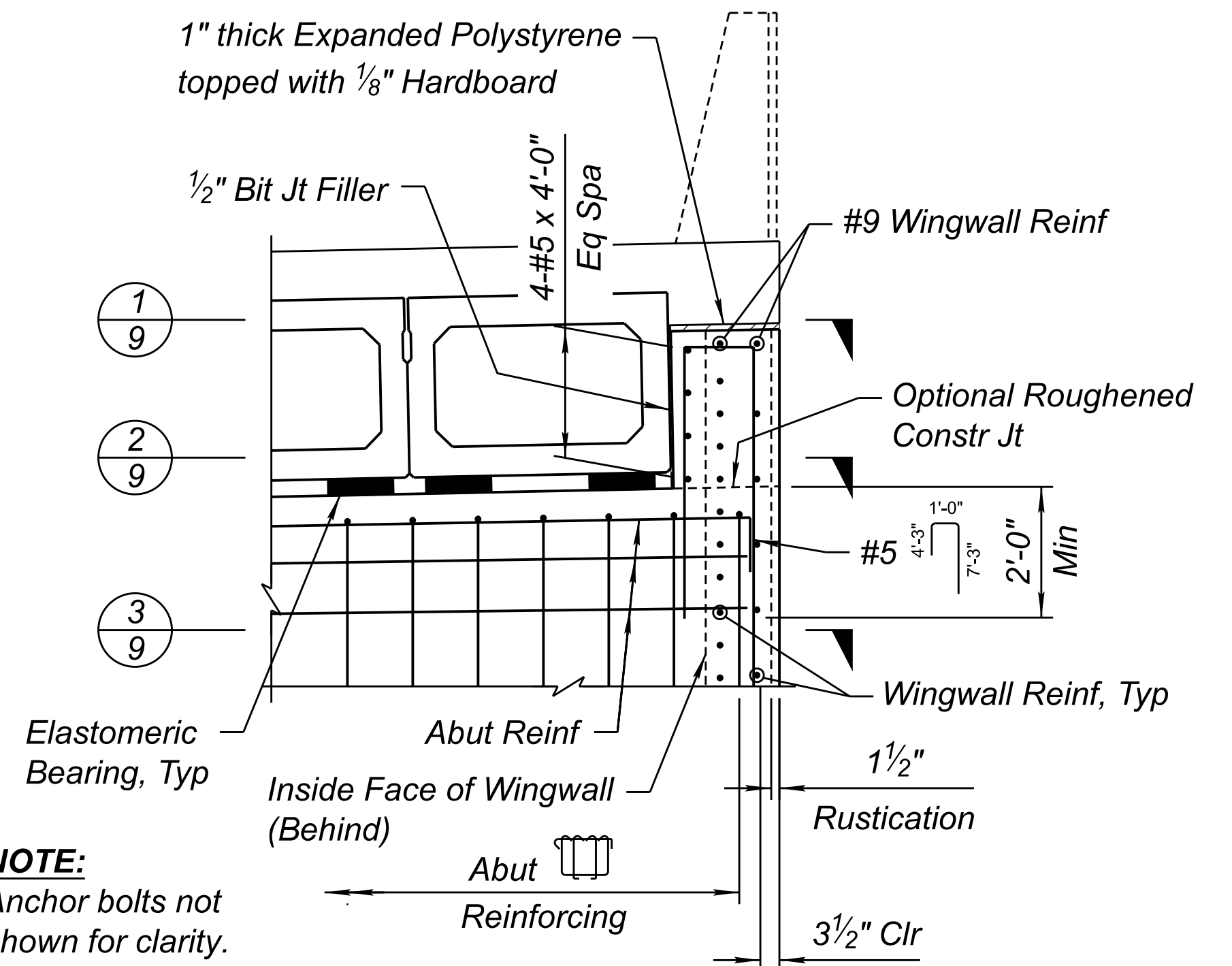
ABUTMENT 2 ELEVATION
(Looking Ahead Station)
Scale: 1/4" = 1'-0"



NOTE:
Anchor bolts not shown for clarity.

SOUTH CURTAIN WALL DETAIL

(Abut 1 Shown, Abut 2 Similar & Opp Hand)
Scale: 1/2" = 1'-0"

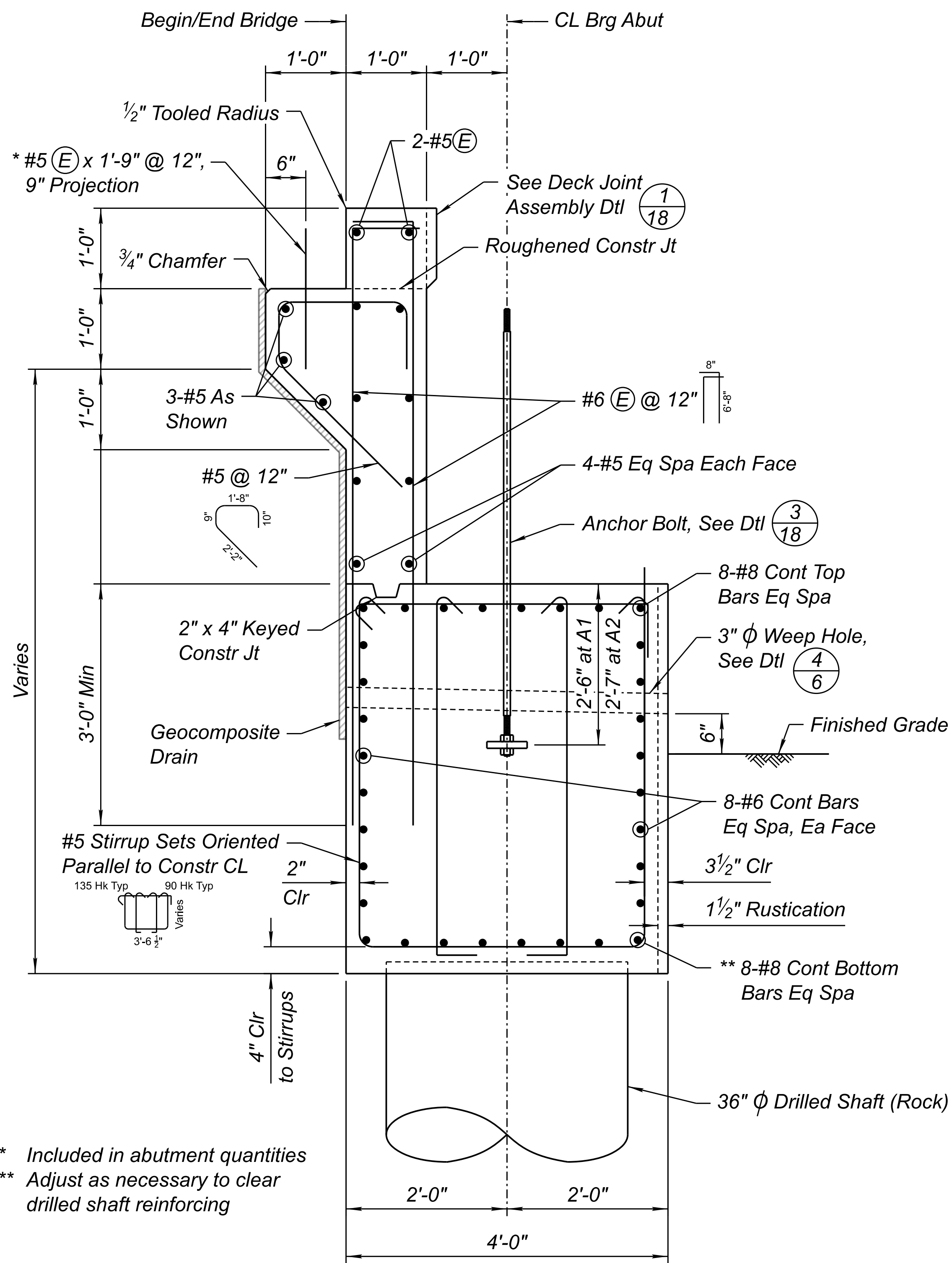


NOTE:
Anchor bolts not shown for clarity.

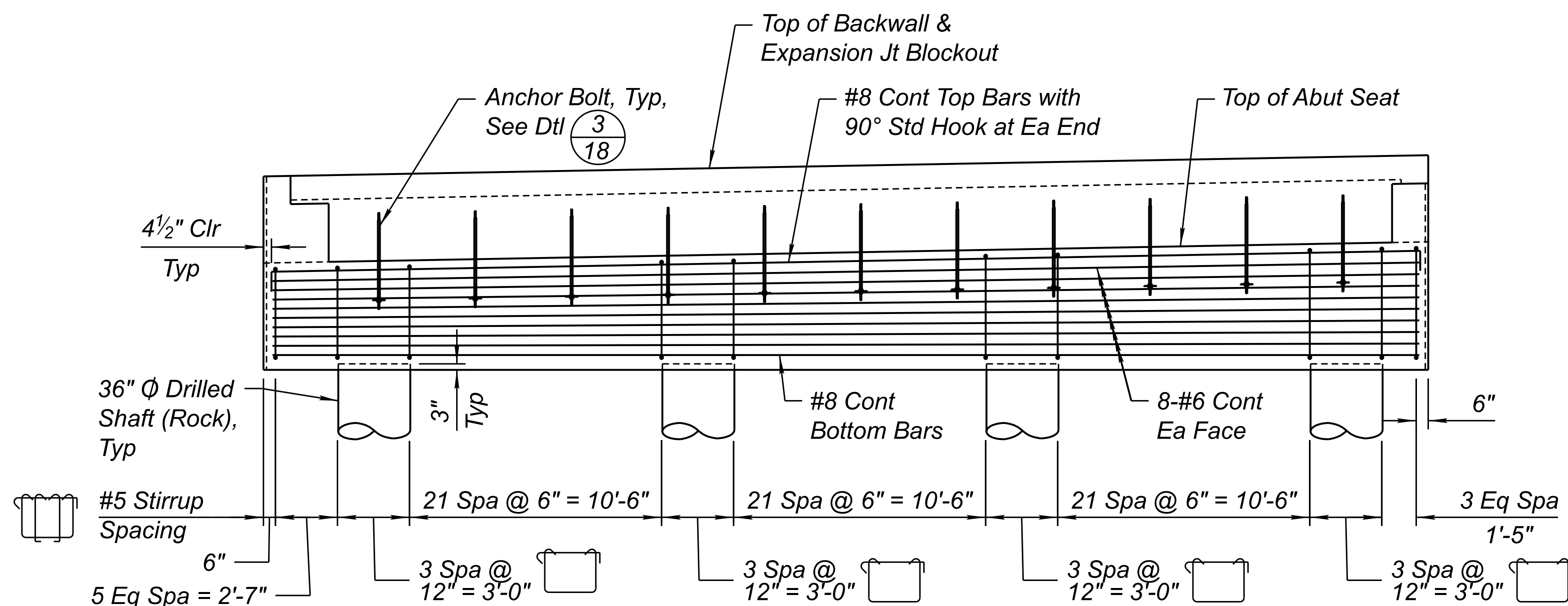
NORTH CURTAIN WALL DETAIL

(Abut 1 Shown, Abut 2 Similar & Opp Hand)
Scale: 1/2" = 1'-0"

	DESIGN	DL	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION BRIDGE GROUP	ROUTE	I-17	F.H.W.A. Arizona Division STATE: ARIZ.	PROJECT NO.	017 CN 337	FEDERAL ID NO.	017-B(237)T	SHEET NO.	85	TOTAL SHEETS	123	RECORD DRAWING
	DRAWN	RID	10/23		MILEPOST	337.39		LOCATION	I-17 AIRPORT RD TI UP				DWG NO.	S - 107		
	CHECKED	TVW	10/23	HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL: (602) 522-7700	STRUCTURE NO.	20256	TRACS NO.	F0362 01C				OF				



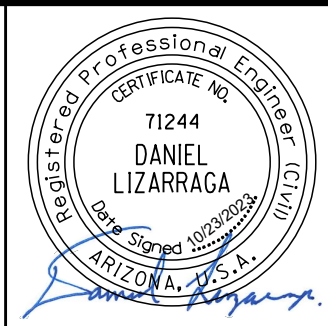
SECTION 2 2
 Scale: 1" = 1'-0"



SECTION 1 1
 (Abut 1 Shown, Abut 2 Similar)
 Scale: 1/4" = 1'-0"

NOTE:
 Backwall, wingwall, curtain wall and drilled shaft reinforcing not shown for clarity.

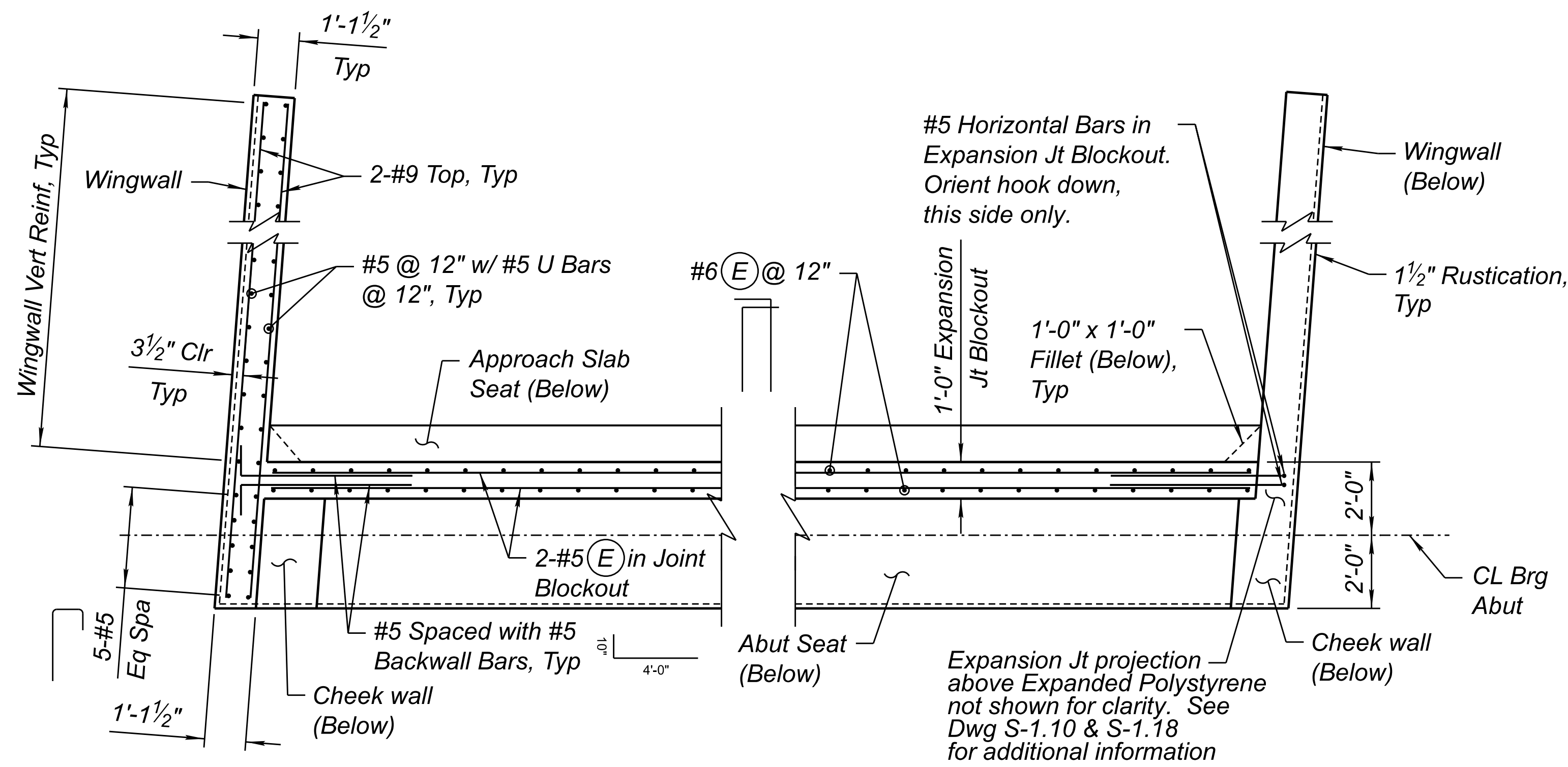
- NOTES:**
1. (E) Denotes epoxy coated bars.
 2. Stem top, side and bottom bars shall not be spliced.
 3. Backwall horizontal reinforcement may be spliced as required with the following minimum lap length:
 #5 bars = 3'-0"



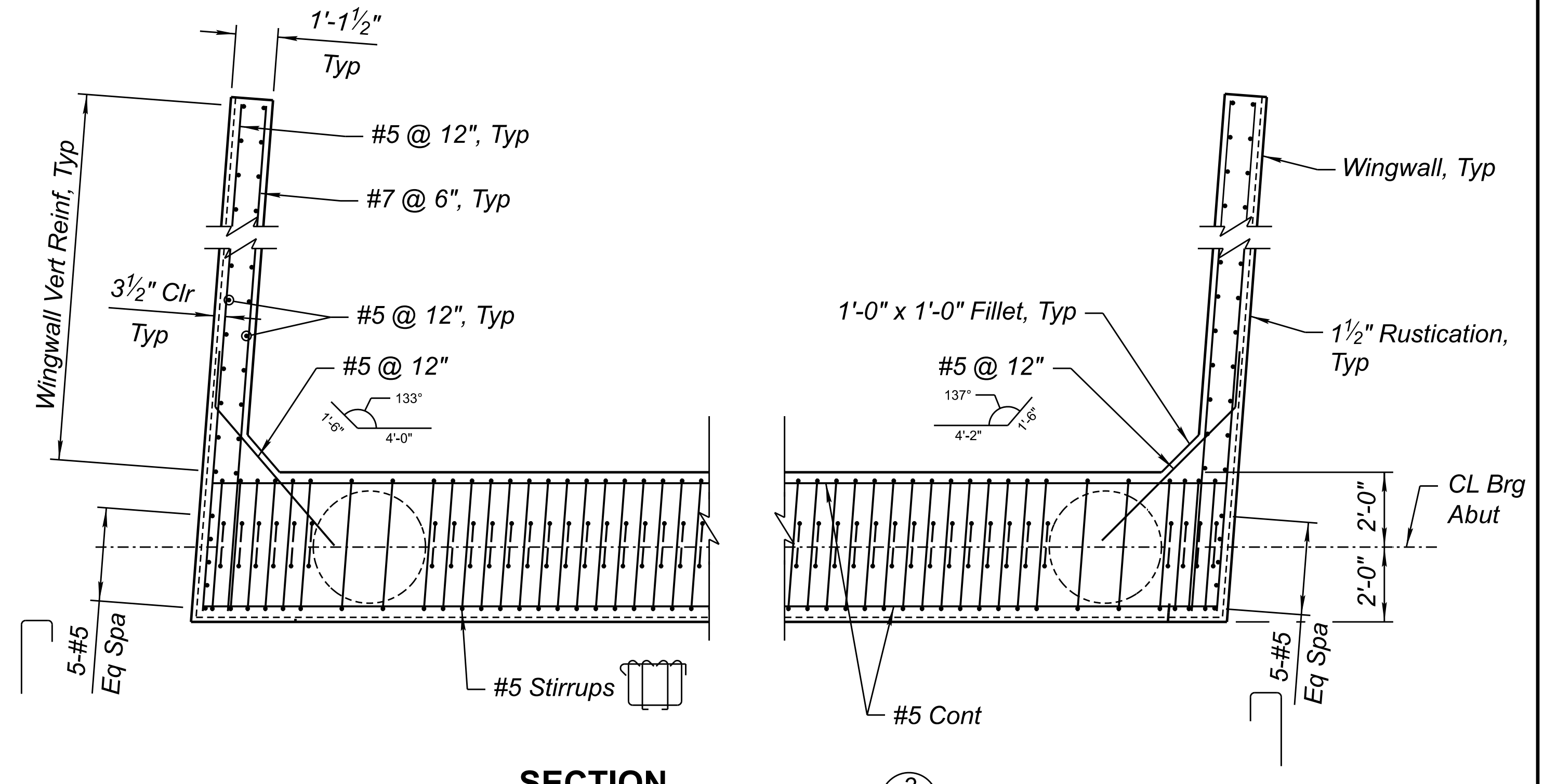
DESIGN	NAME	DATE
TVW		10/23
DRAWN	RID	10/23
CHECKED	DL	10/23

HDR
 HDR, INC.
 20 E. THOMAS ROAD
 SUITE 2500
 PHOENIX, AZ 85012
 TEL (602) 522-7700

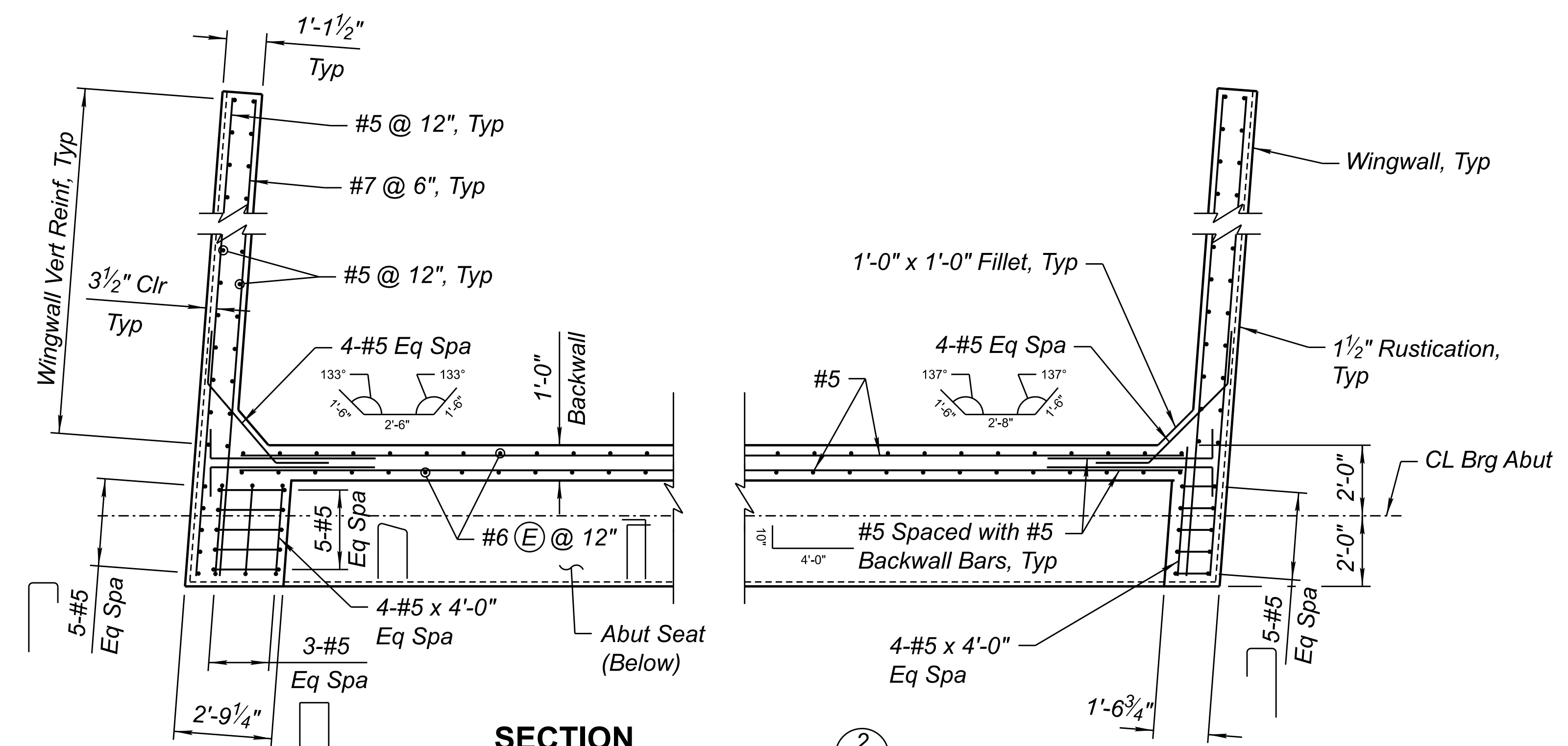
ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION BRIDGE GROUP		ROUTE I-17	F.H.W.A. Arizona Division	STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 86	TOTAL SHEETS 123	RECORD DRAWING
ABUTMENT DETAILS - 1		MILEPOST 337.39	LOCATION I-17 AIRPORT RD TI UP			DWG NO. S - 108			
		STRUCTURE NO. 20256	TRACS NO. F0362 01C			OF			



SECTION 1
 (Abut 1 Shown, Abut 2 Similar) 1
 Scale: 3/8" = 1'-0"



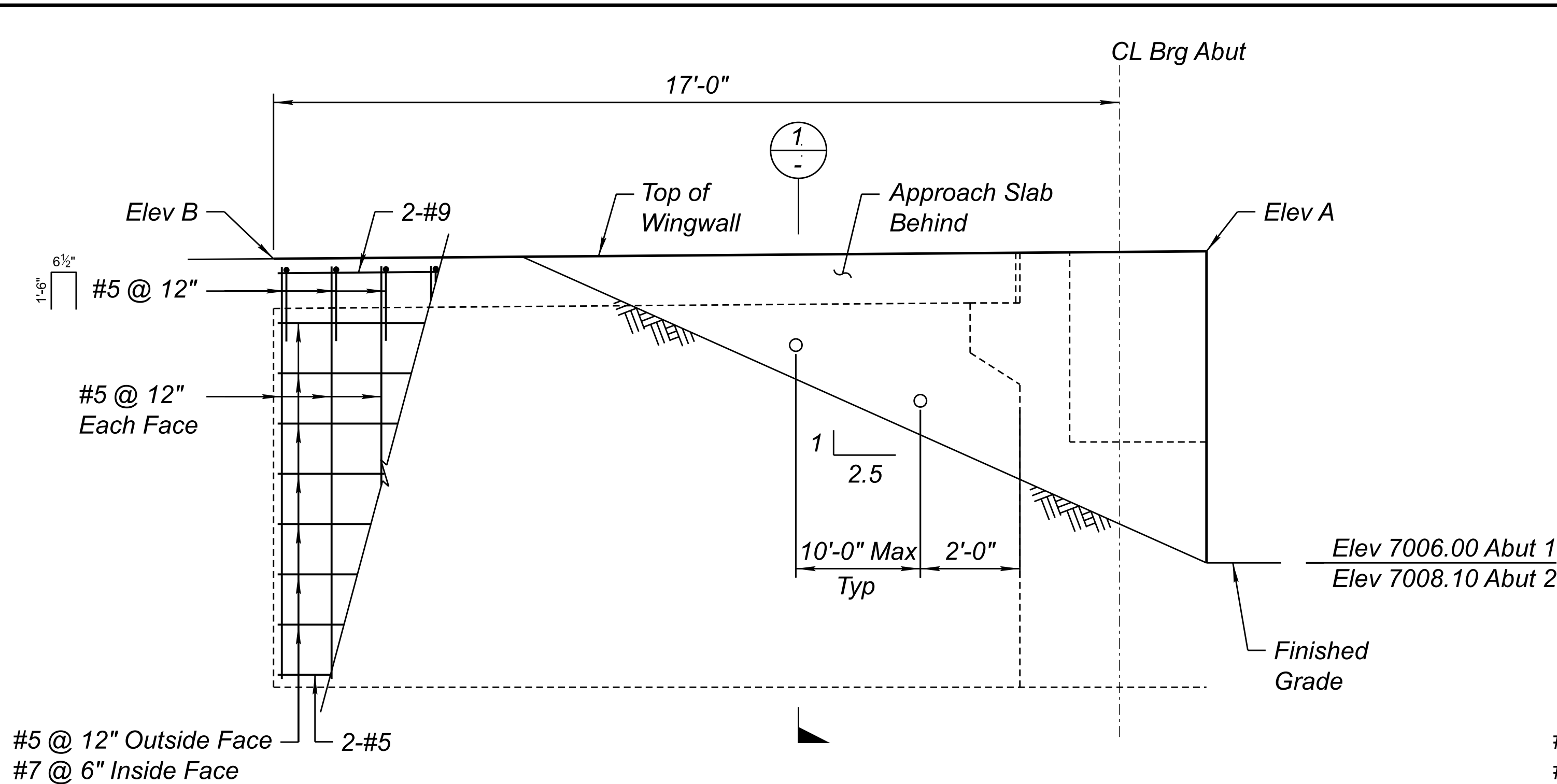
SECTION 3
 (Abut 1 Shown, Abut 2 Similar) 3
 Scale: 3/8" = 1'-0"



SECTION 2
 (Abut 1 Shown, Abut 2 Similar) 2
 Scale: 3/8" = 1'-0"

- NOTES:**
1. (E) Denotes epoxy coated bars.
 2. See Dwg S-1.08 for reinforcing notes.

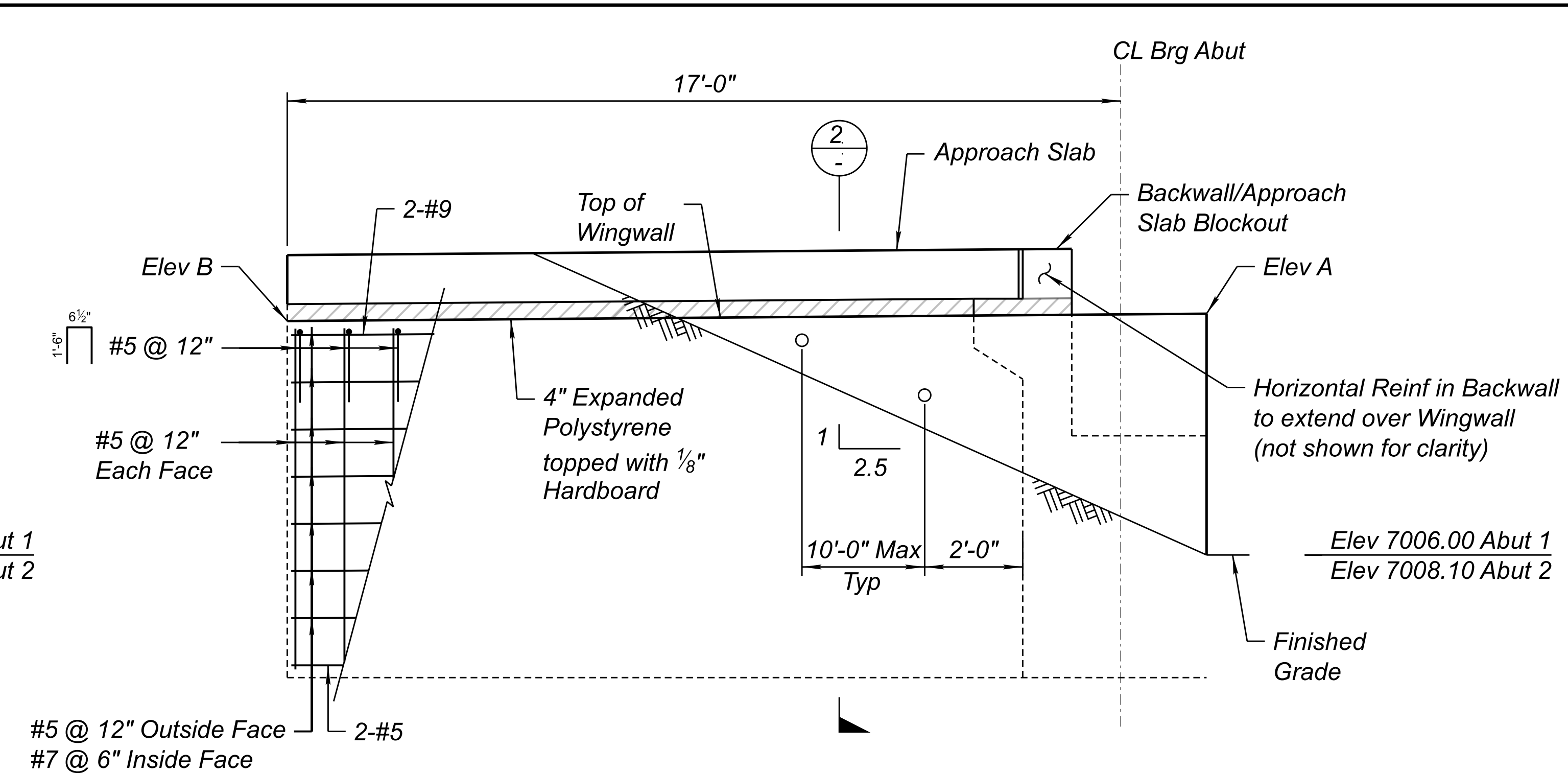
	DESIGN	DL	DATE	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION BRIDGE GROUP	ROUTE	I-17	F.H.W.A. Arizona Division STATE ARIZ.	PROJECT NO.	017 CN 337	FEDERAL ID NO.	017-B(237)T	SHEET NO.	87	TOTAL SHEETS	123	RECORD DRAWING
	DRAWN	RID	DATE	10/23		MILEPOST	337.39		LOCATION	I-17 AIRPORT RD TI UP				DWG NO.	S - 1.09		
	CHECKED	TVW	DATE	10/23		STRUCTURE NO.	20256		TRACS NO.	F0362 01C				OF			



SOUTH WINGWALL ELEVATION

(Abut 1 Rt Shown, Abut 2 Rt Opposite Hand)
Scale: 1/2" = 1'-0"

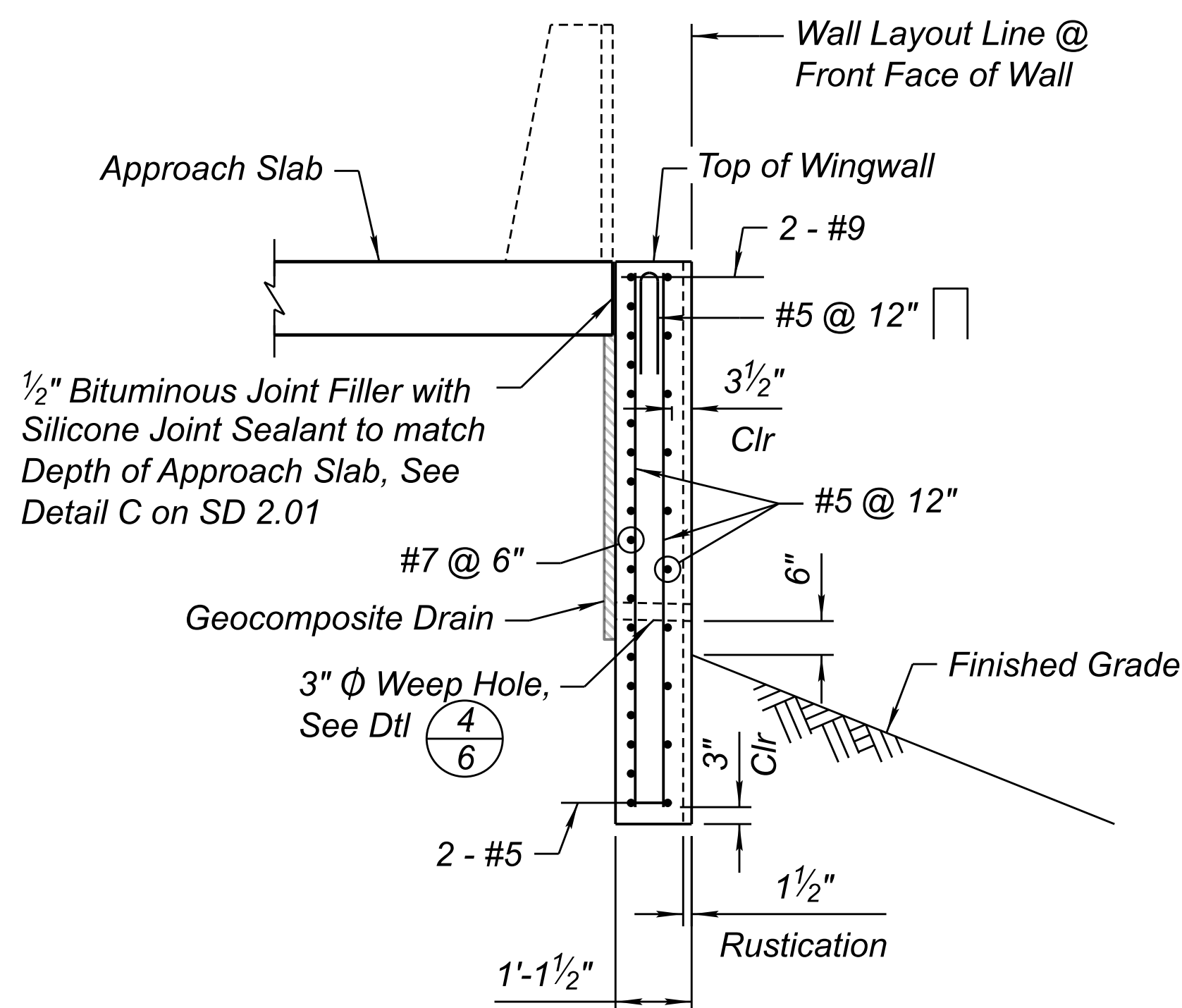
1



NORTH WINGWALL ELEVATION

(Abut 2 Lt Shown, Abut 1 Lt Opposite Hand)
Scale: 1/2" = 1'-0"

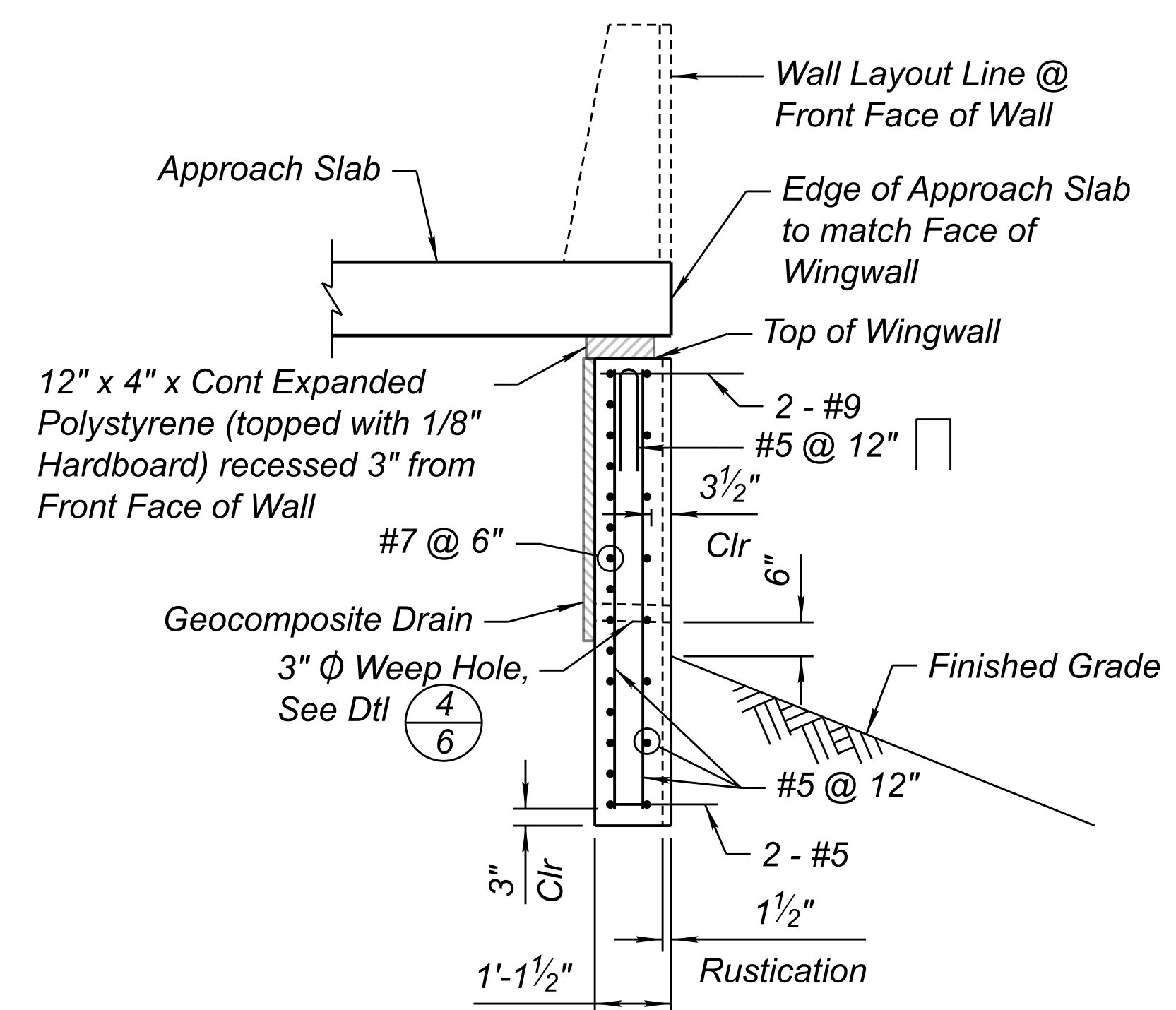
2



SECTION

Scale: 1/2" = 1'-0"

1

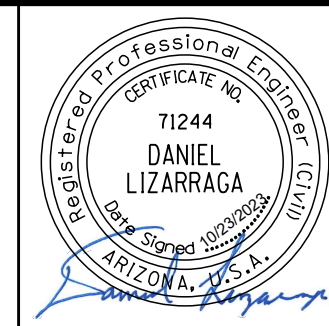


SECTION

Scale: 1/2" = 1'-0"

2

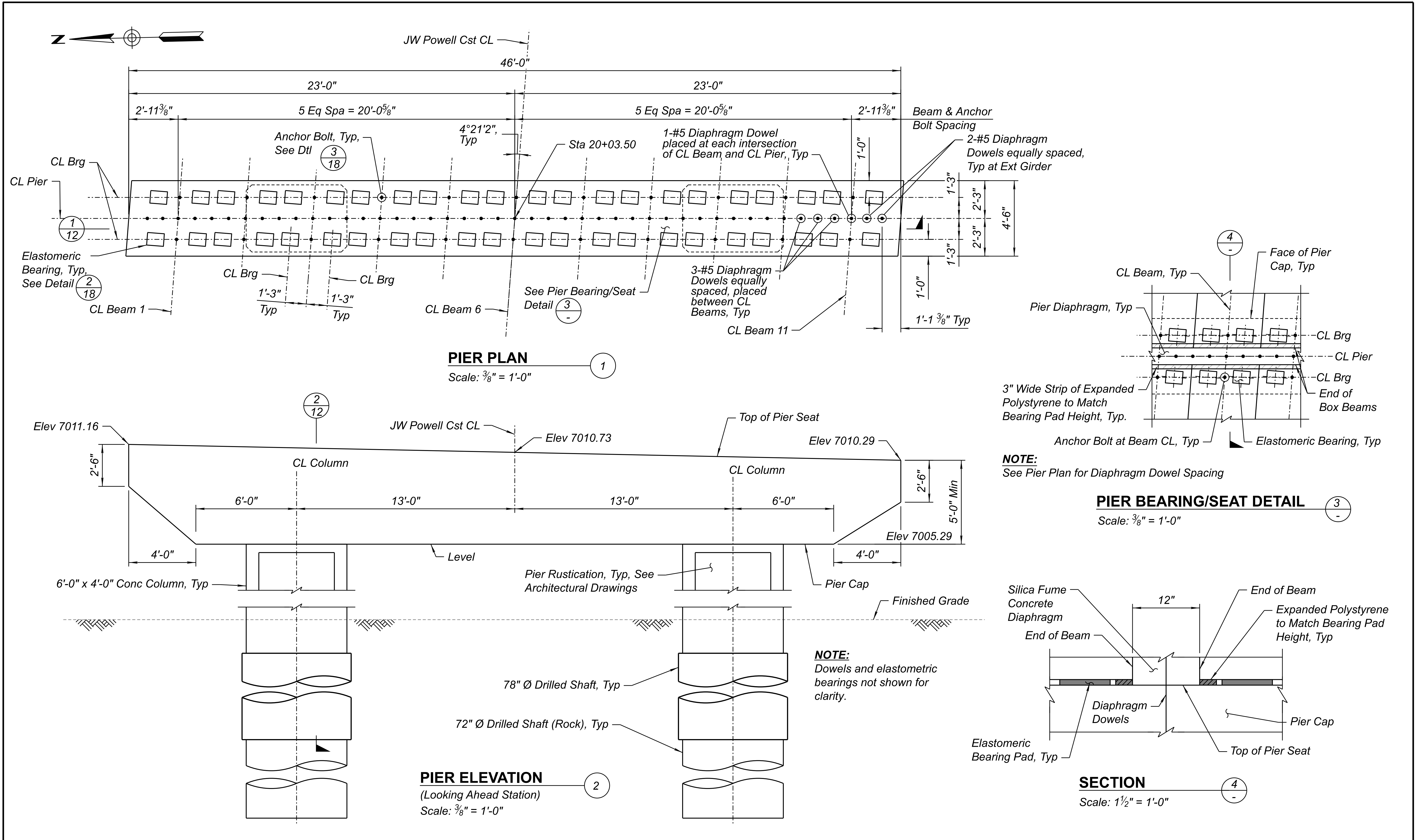
Wingwall	Elev A	Elev B
Abut 1 Lt	7011.65	7011.02
Abut 1 Rt	7011.87	7011.50
Abut 2 Lt	7013.82	7013.39
Abut 2 Rt	7013.94	7013.75



HDR
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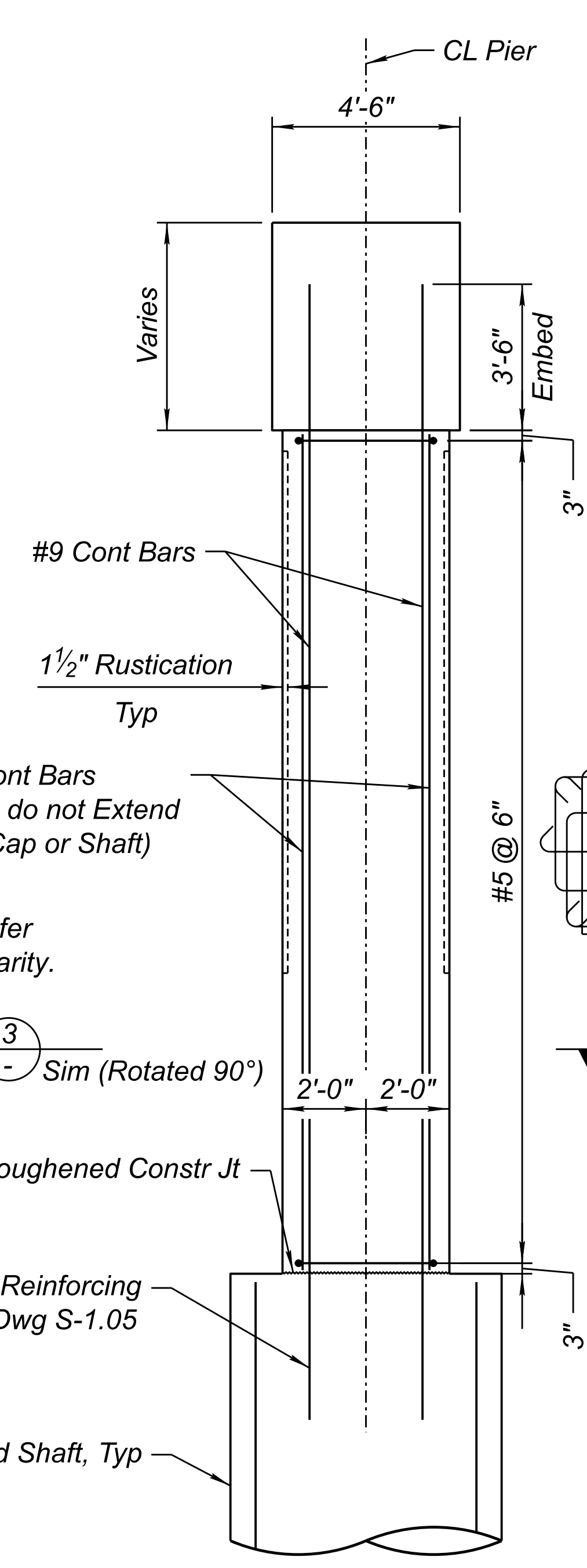
ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
BRIDGE GROUP
WINGWALL DETAILS

ROUTE I-17	F.H.W.A. Arizona Division	STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 88	TOTAL SHEETS 123	RECORD DRAWING
MILEPOST 337.39	LOCATION I-17 AIRPORT RD TI UP						DWG NO. S - 1.10
STRUCTURE NO. 20256	TRACS NO. F0362 01C						OF

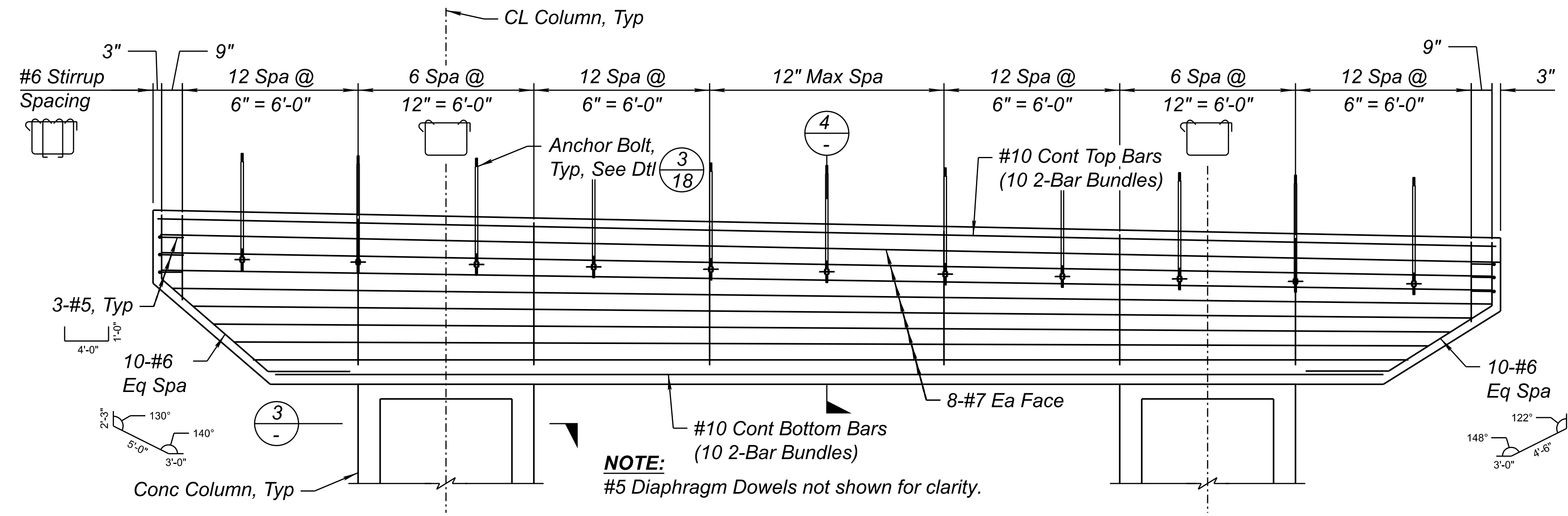


	DESIGN	DL	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION BRIDGE GROUP	ROUTE	I-17	F.H.W.A. Arizona Division STATE ARIZ.	PROJECT NO.	017 CN 337	FEDERAL ID NO.	017-B(237)T	SHEET NO.	89	TOTAL SHEETS	123	RECORD DRAWING
	DRAWN	RID	10/23		MILEPOST	337.39		LOCATION	I-17 AIRPORT RD TI UP				DWG NO.	S - 1.11		
	CHECKED	TVW	10/23		STRUCTURE NO.	20256		TRACS NO.	F0362 01C				OF			

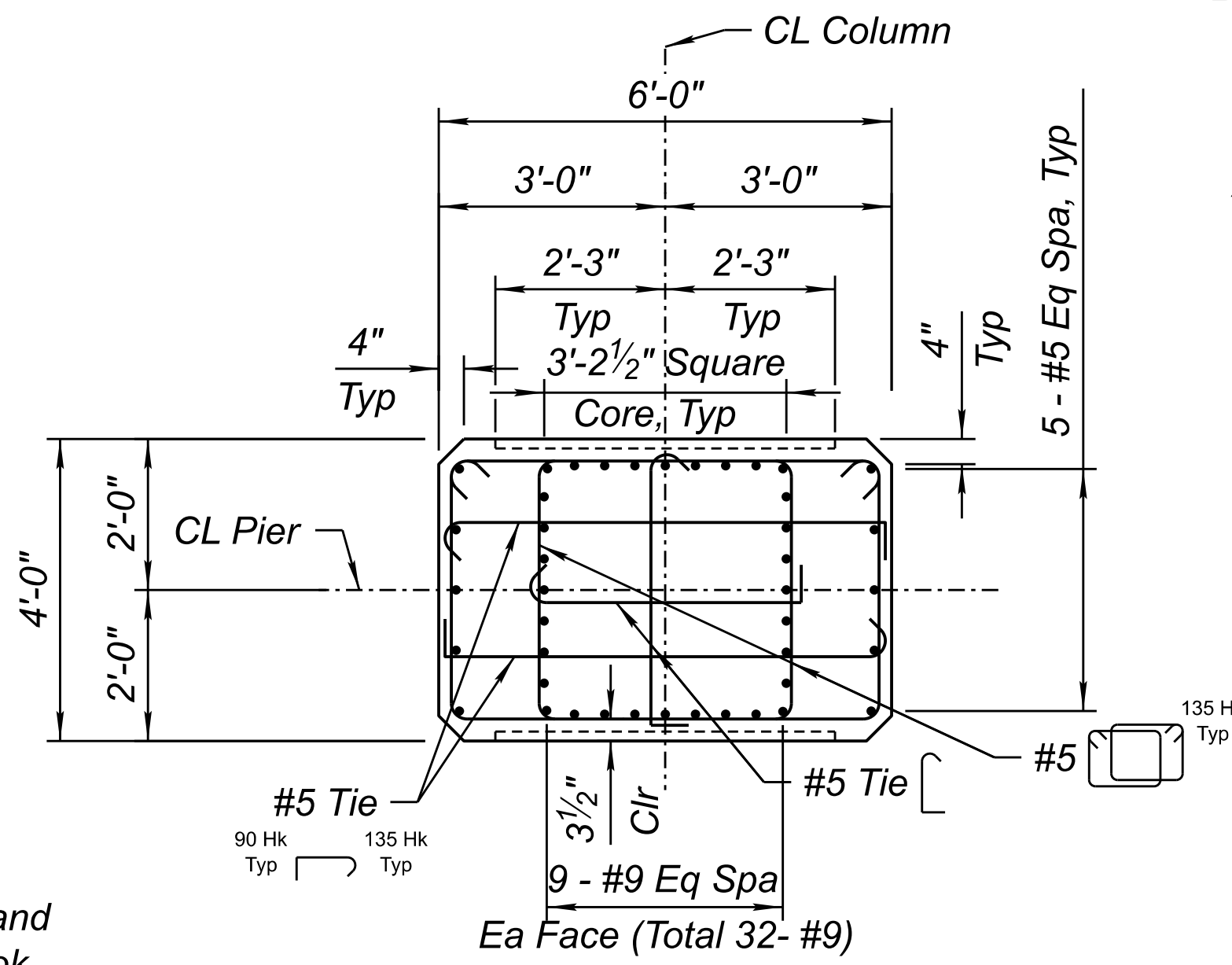
HDR, INC.
20 E. THOMAS ROAD
SUITE 2500
PHOENIX, AZ 85012
TEL (602) 522-7700



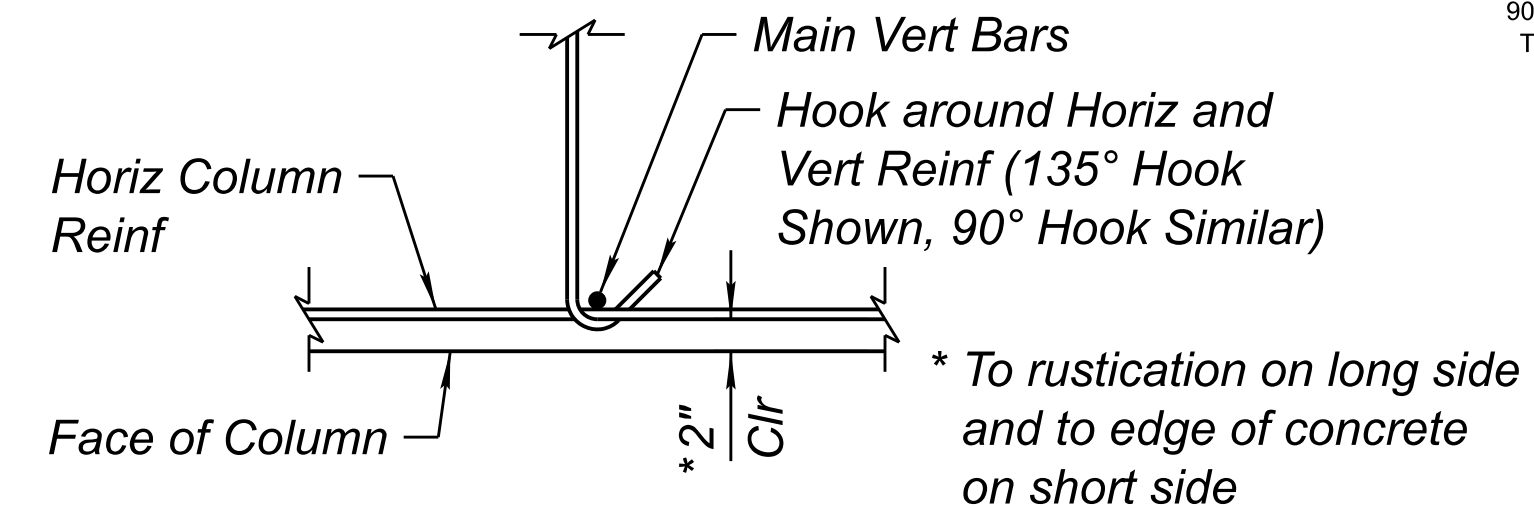
SECTION 2
Scale: 3/8" = 1'-0"



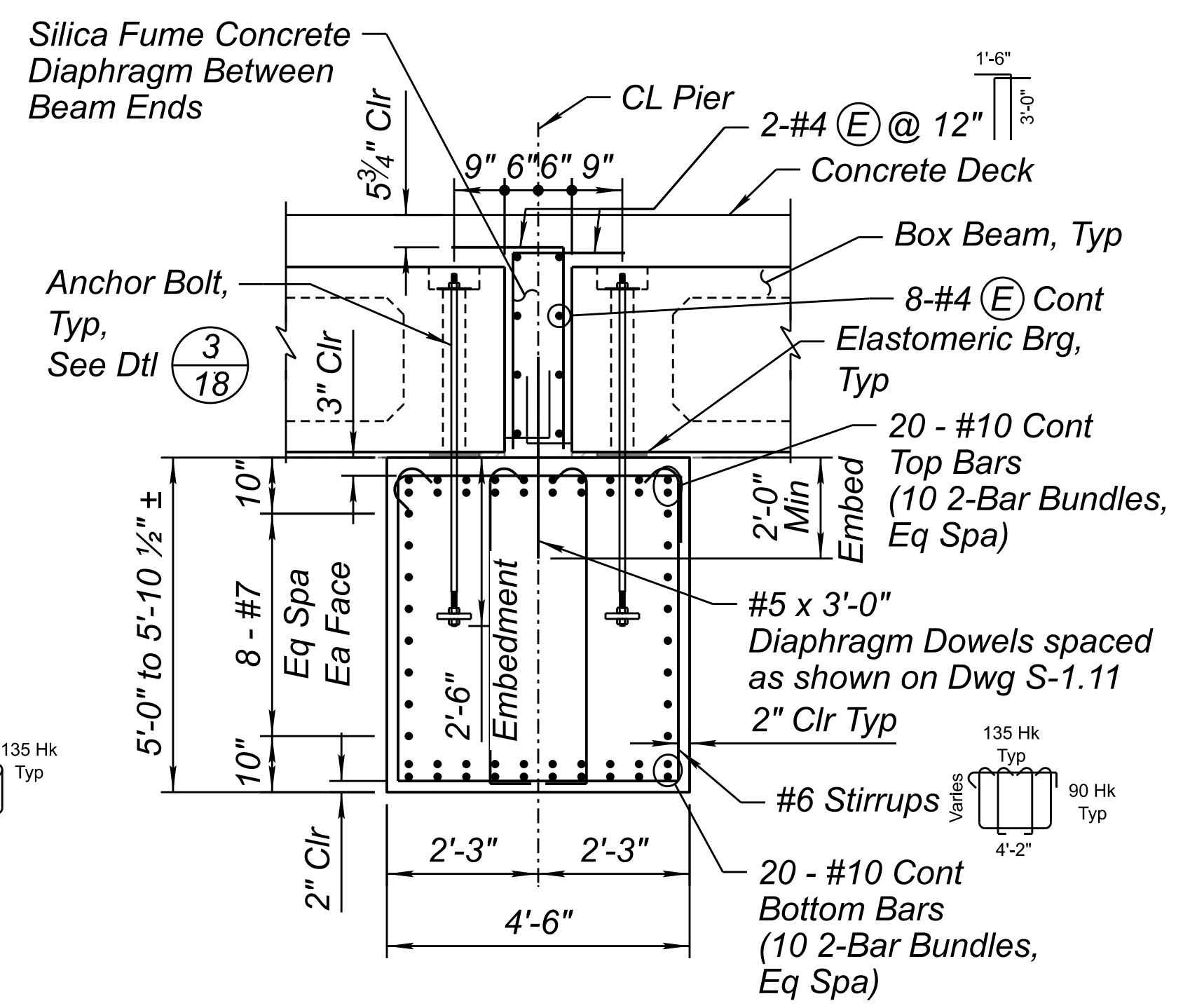
SECTION 1
Scale: 3/8" = 1'-0"



SECTION 3
Scale: 1/2" = 1'-0"



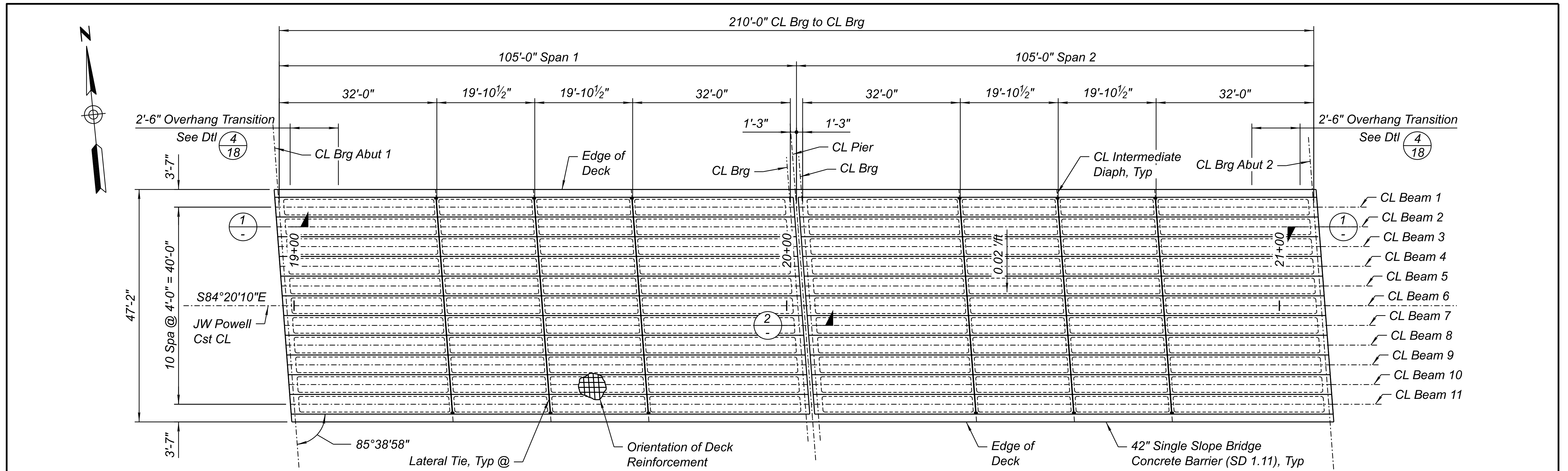
TIE DETAIL 5
No Scale



SECTION 4
Scale: 1/2" = 1'-0"

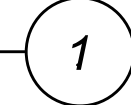
- NOTES:**
1. Continuous horizontal side reinforcement in the pier cap may be spliced as required with the following minimum lap lengths:
#7 bars: 4'-0"
 2. Top and Bottom #10 bars shall not be spliced.
 3. Bars shall not be spliced within lap length of adjacent bars.
 4. Bottom #10 bars may be adjusted horizontally as required to avoid column reinforcing.

	DESIGN	TVW	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION BRIDGE GROUP	ROUTE	I-17	F.H.W.A. Arizona Division STATE: ARIZ. PROJECT NO. 017 CN 337 FEDERAL ID NO. 017-B(237)T SHEET NO. 90 TOTAL SHEETS 123 RECORD DRAWING
	DRAWN	RID	10/23		MILEPOST	337.39	
	CHECKED	DL	10/23	HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL: (602) 522-7700	STRUCTURE NO.	20256	TRACS NO. F0362 01C DWG NO. S - 1.12 OF
					PIER DETAILS		



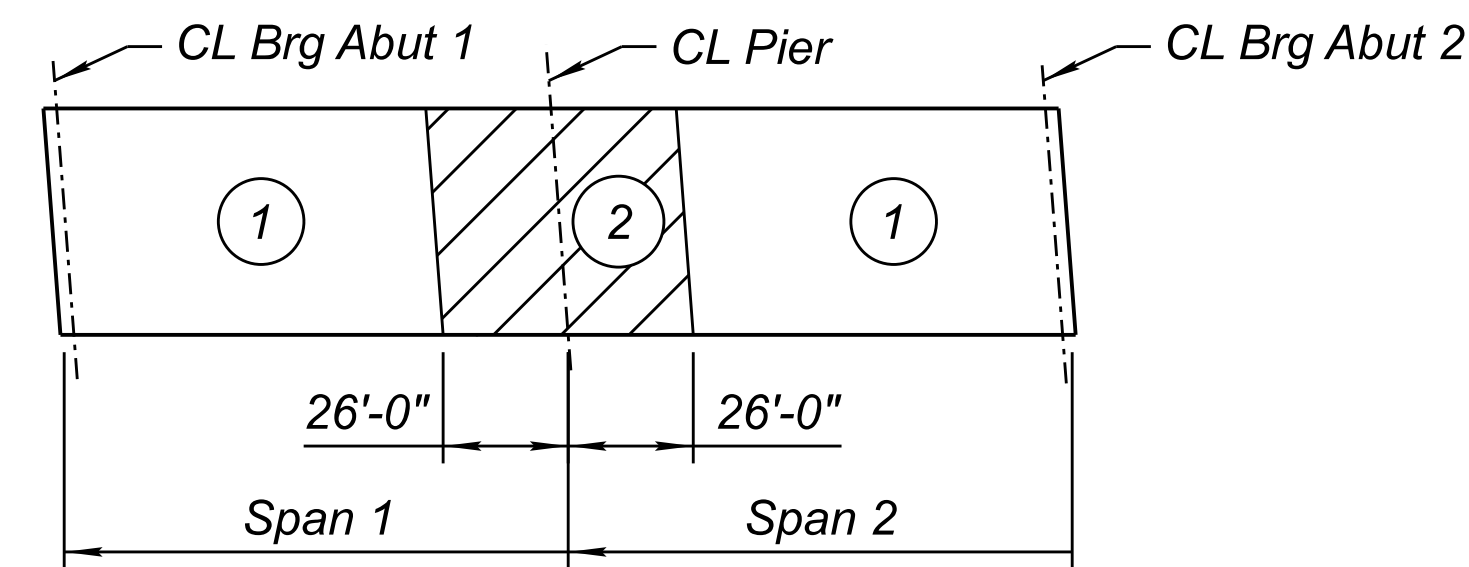
DECK PLAN

Scale: 1" = 10'-0"



NOTES:

1. Approach slabs not shown for clarity.
2. See Dwg S-1.02 for roadway dimensions.



DECK PLACING SEQUENCE PLAN

Scale: 1" = 40'-0"



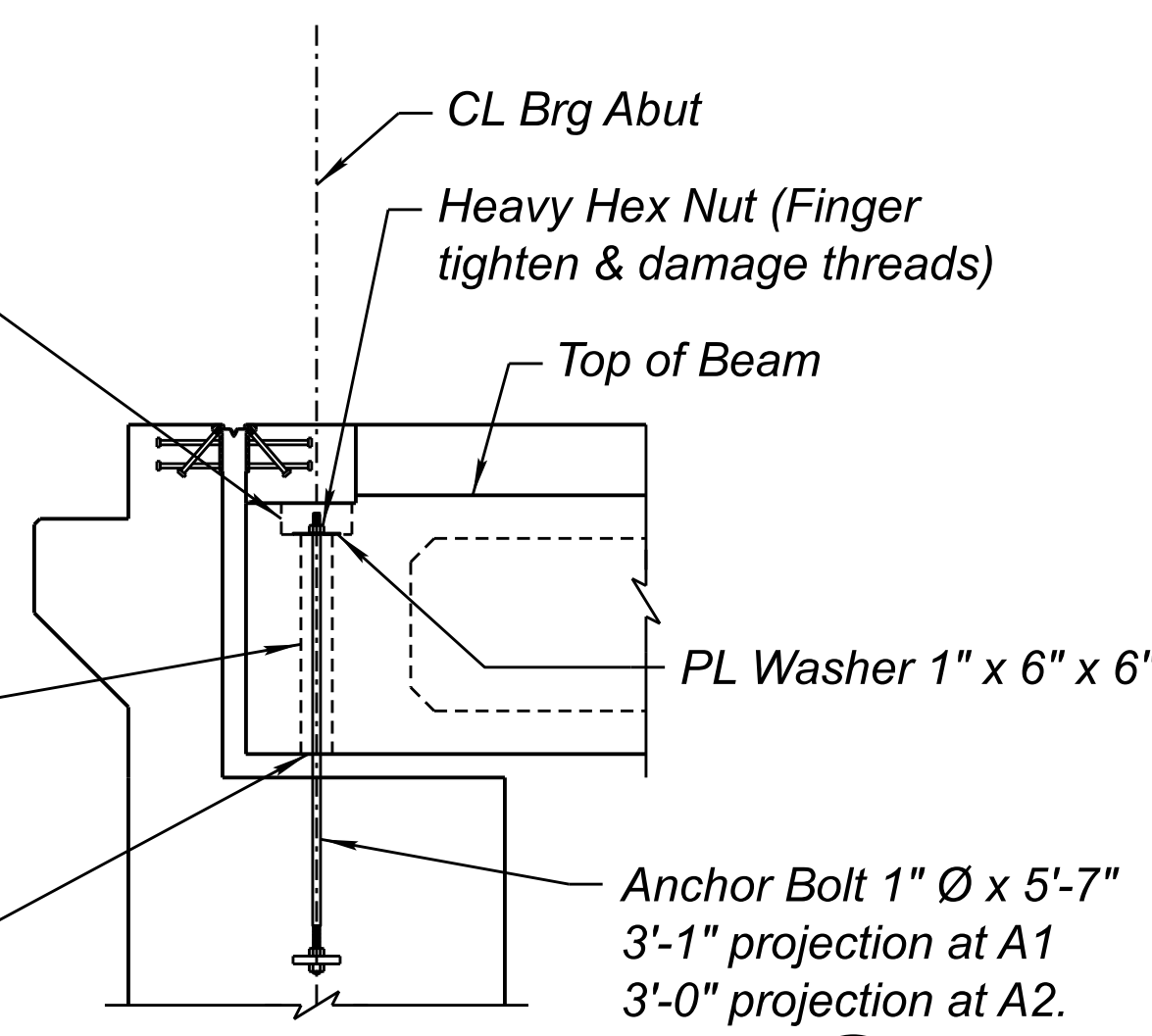
POUR SEQUENCE NOTES:

1. Numbers ① and ② indicate placing sequence of deck concrete. Pour ② section a minimum of 12 hours after adjacent ① sections have been poured.
2. Pinned pier diaphragm shall be poured concurrent with the deck pour.
3. Section ① and ② may be poured consecutively but only in the direction from ① to ② and a minimum of 12 hours after the adjacent ① section has been poured.
4. The contractor shall submit a deck pour schedule to the Engineer for approval prior to placing concrete.
5. Screed equipment is to be placed perpendicular with the girders. Grooving of the bridge deck shall be perpendicular to the direction of traffic.

9" x 9" Anchorage Recess filled with hot poured sealant (ASTM D3406). Cap top of sealant with hardboard prior to pouring expansion joint breakout.

4" Ø hole filled with hot poured sealant (ASTM D3406)

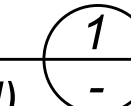
Seal bottom of hole prior to placing sealant



SECTION

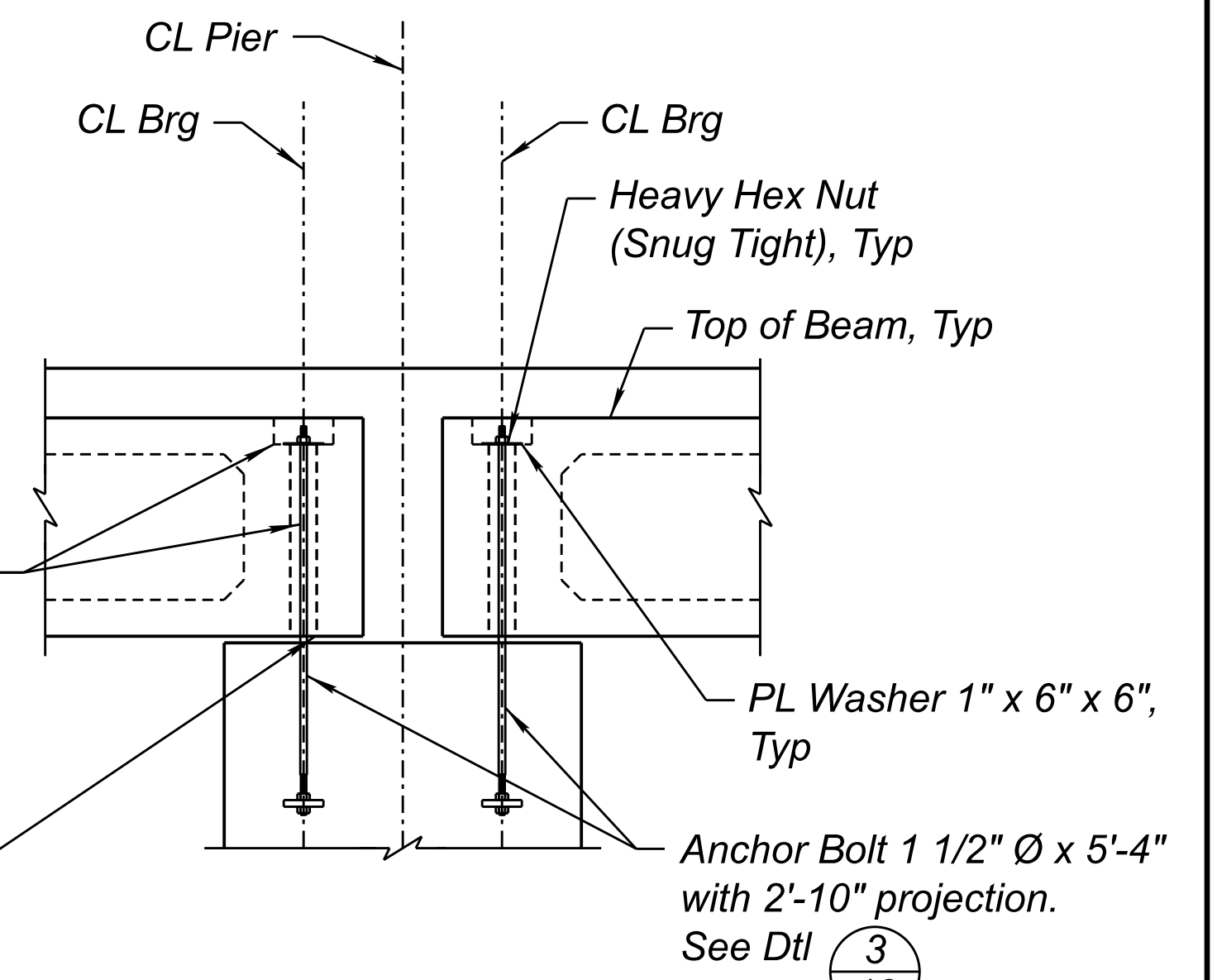
(Abutment 1 Shown, Abutment 2 Similar & Opp Hand)

Scale: ½" = 1'-0"



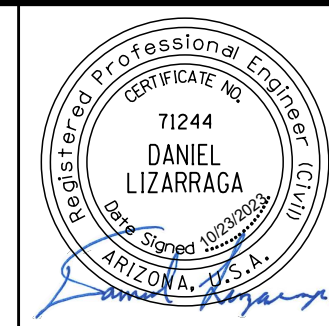
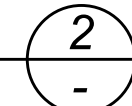
4" Ø hole and 9" x 9" Anchorage Recess filled with non-shrink grout (5,000 psi min), Typ

Seal bottom of hole prior to placing grout, Typ



SECTION

Scale: ½" = 1'-0"

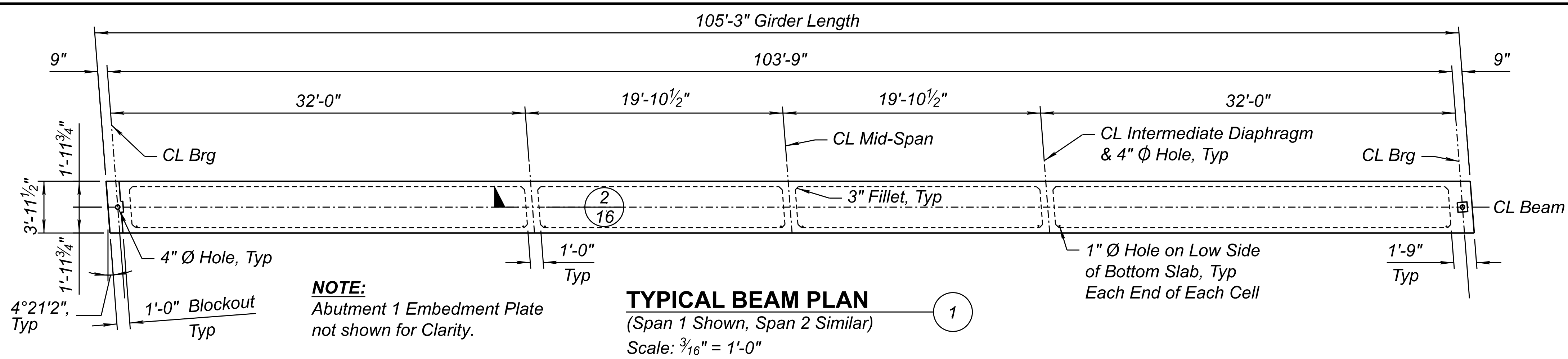


DESIGN	DL	DATE
DRAWN	RID	10/23
CHECKED	TVW	10/23

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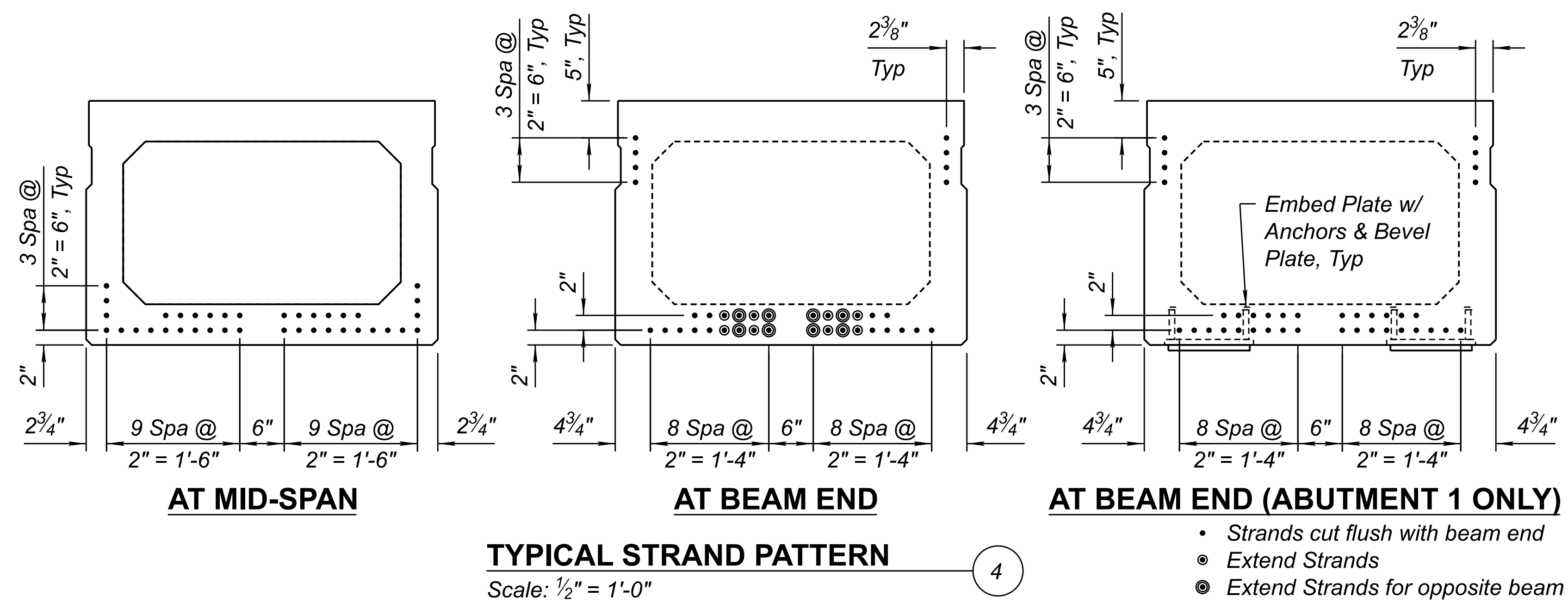
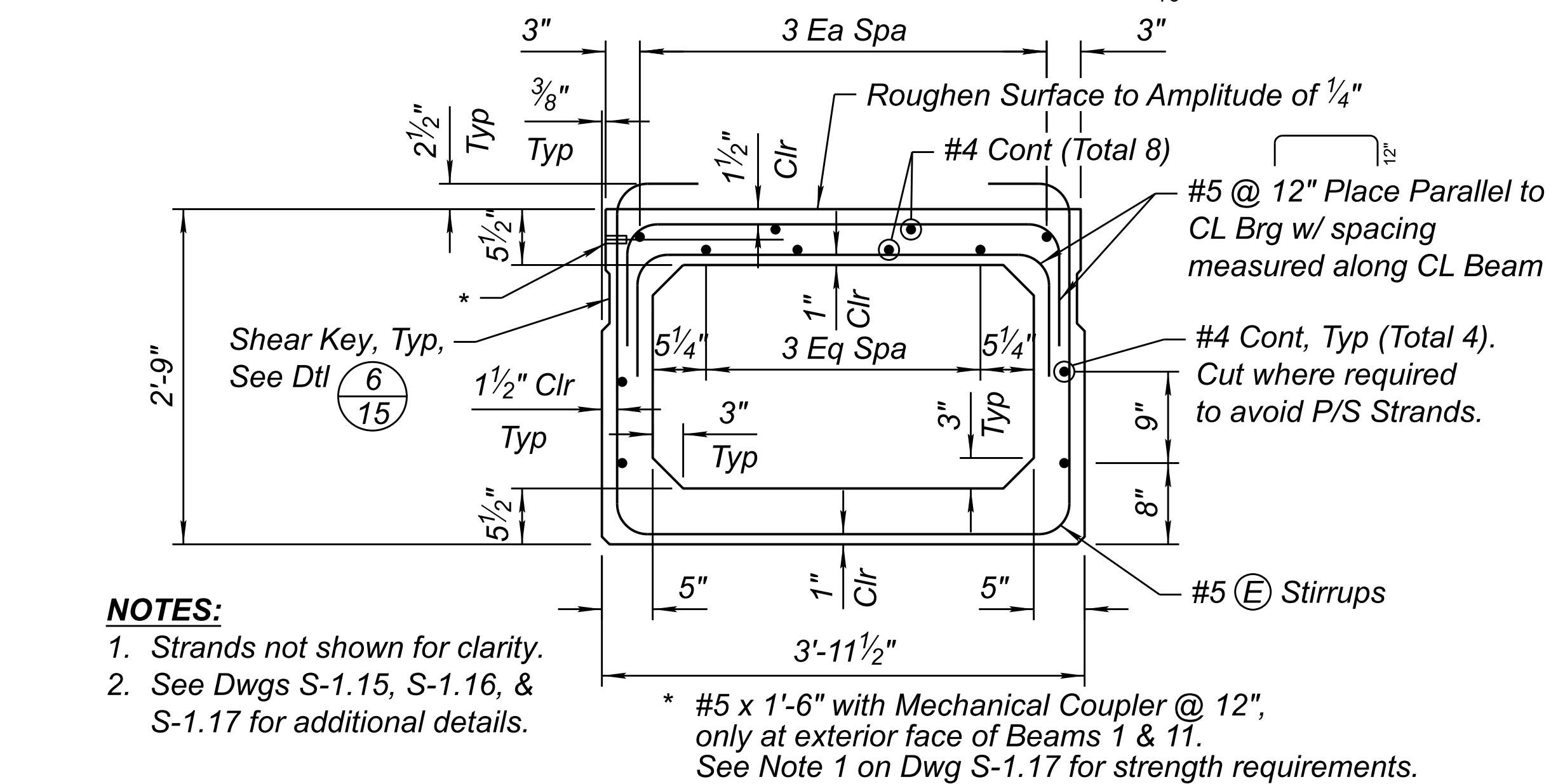
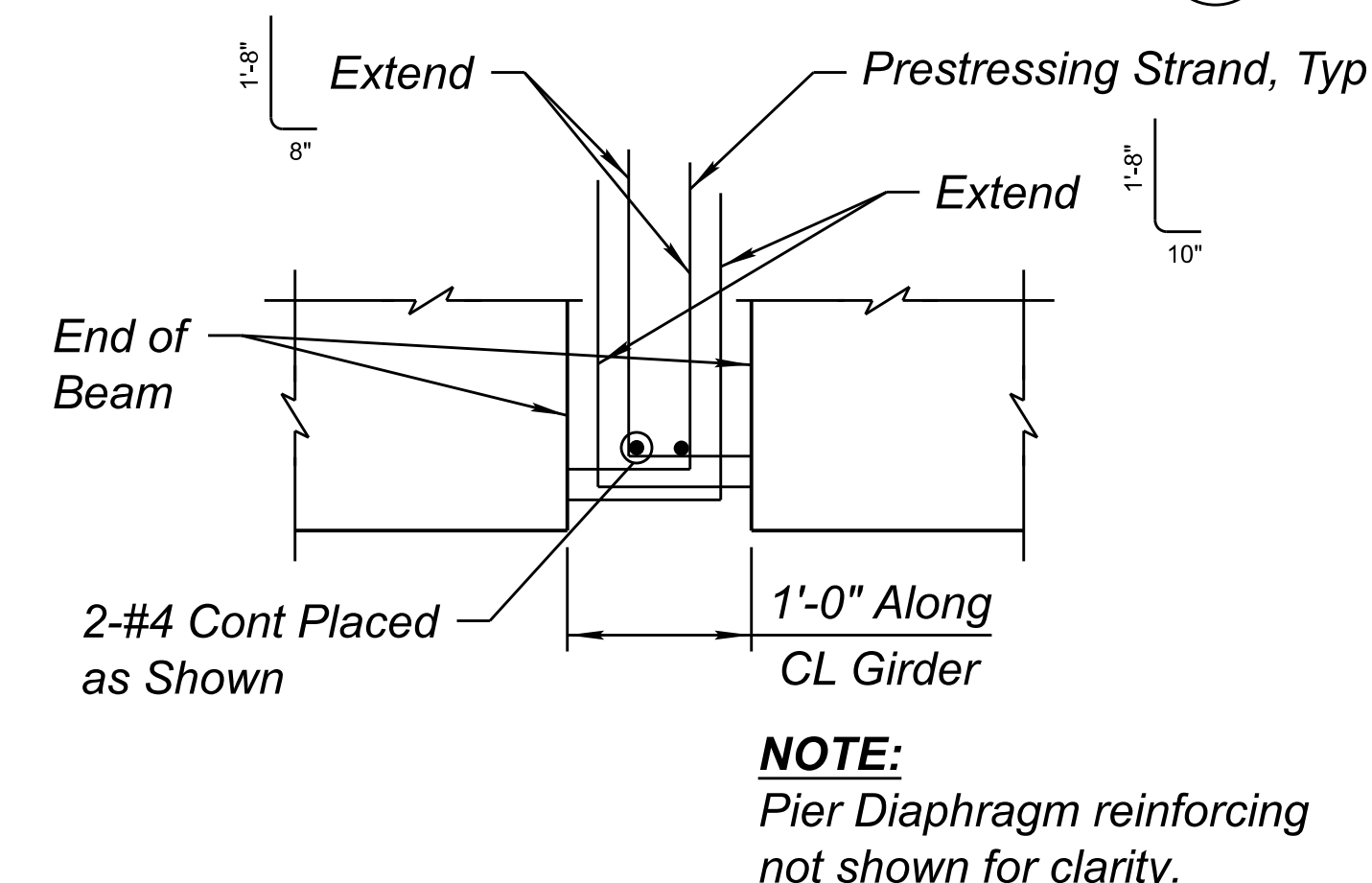
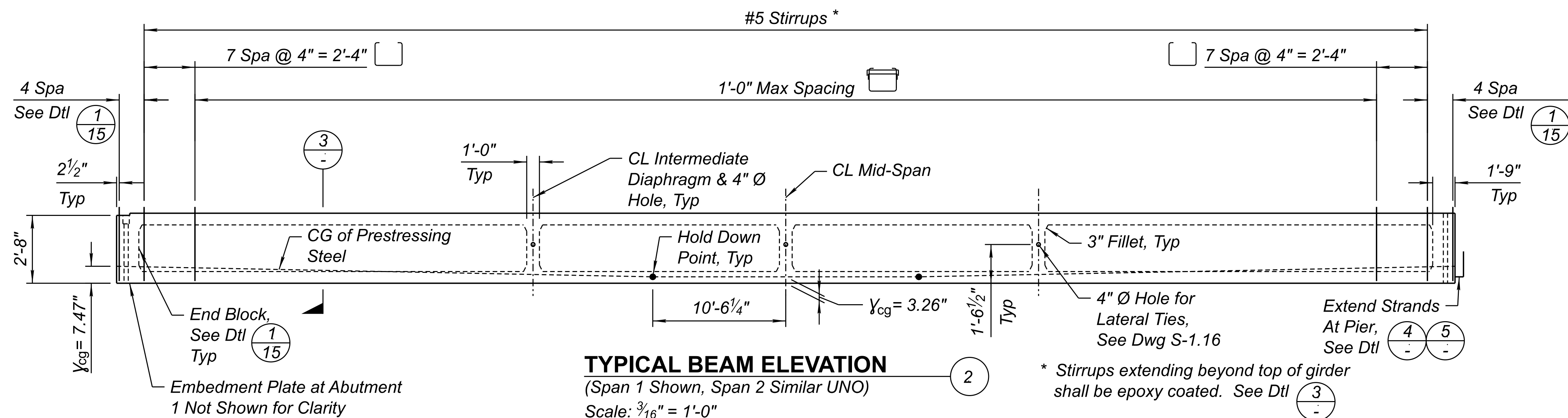
ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION BRIDGE GROUP	
ROUTE I-17	MILEPOST 337.39
STRUCTURE NO. 20256	

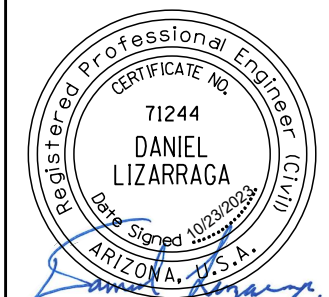
F.H.W.A. Arizona Division	STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 91	TOTAL SHEETS 123	RECORD DRAWING
LOCATION I-17 AIRPORT RD TI UP						DWG NO. S-1.13
TRACS NO. F0362 01C						OF

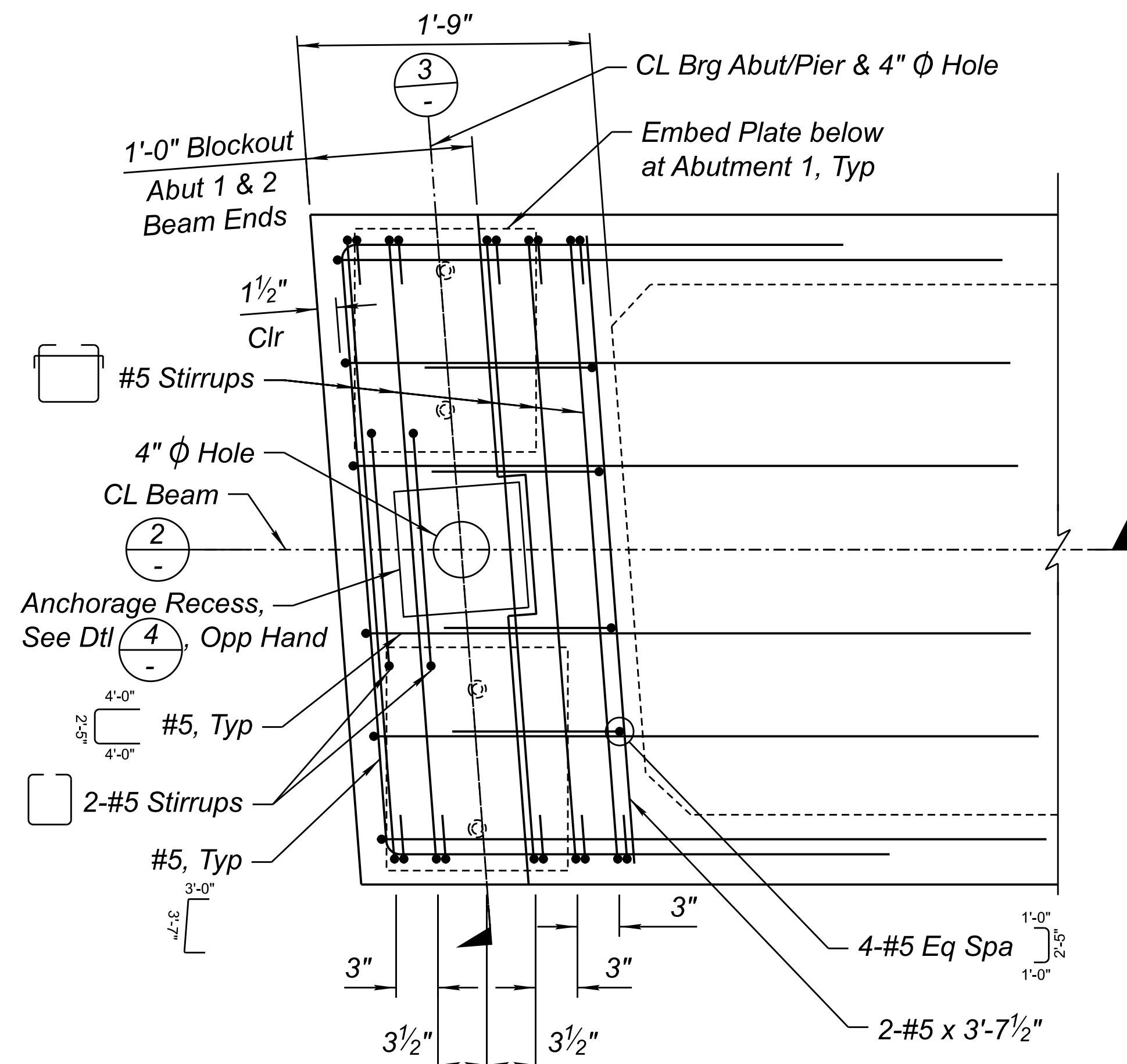


PRESTRESSED BOX BEAM NOTES:

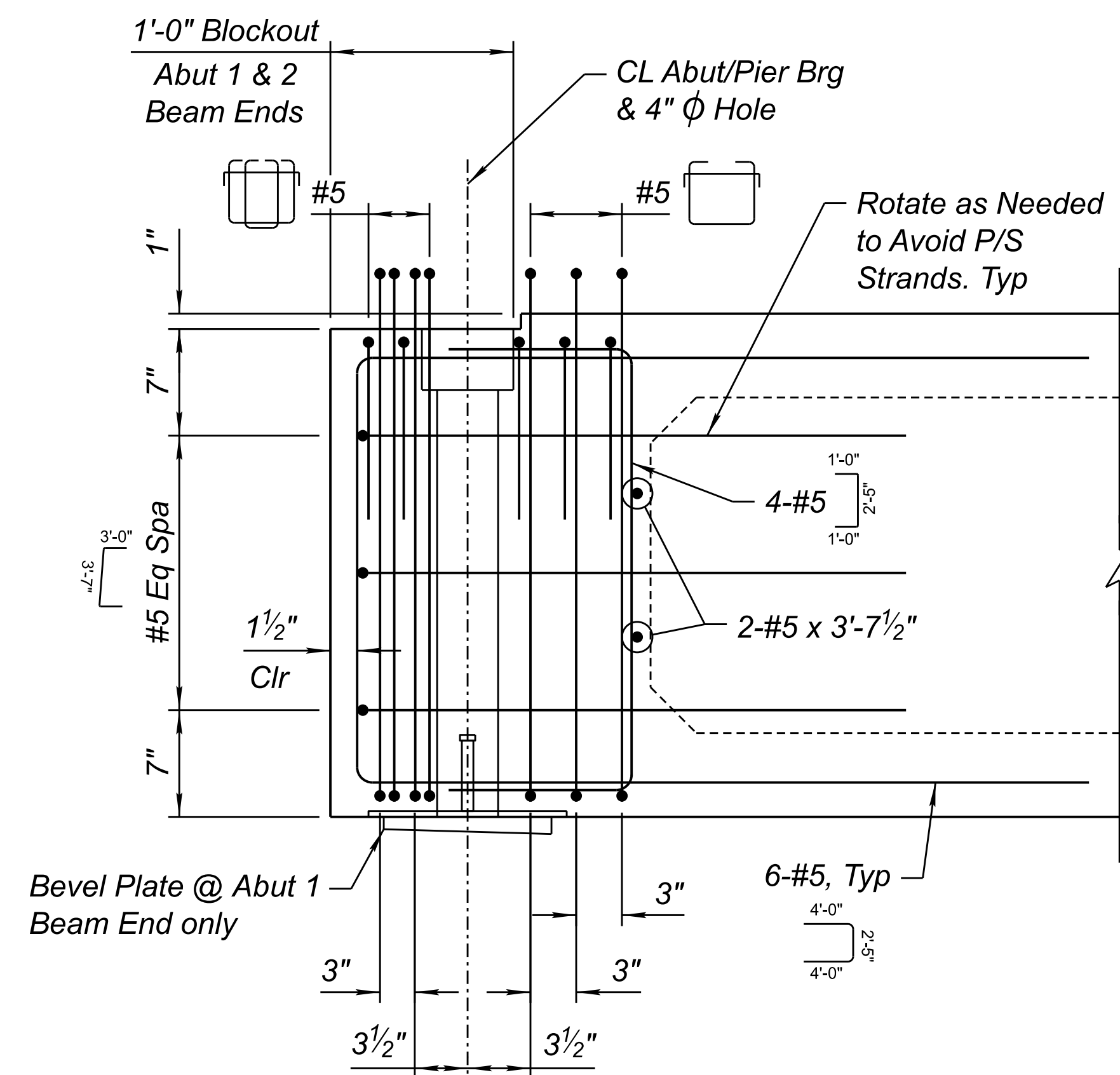
- See General Notes on Dwg S - 1.02 for additional notes.
- 38 - 0.6" Ø 7-wire low relaxation strands.
Pi = 1,670 kips Initial Tension before losses.
Pw = 1,279 kips Working Force remaining after all losses.
f'ci = 7,000 psi minimum concrete compressive strength at transfer.
f'c = 9,000 psi minimum concrete compressive strength at 28 days.
- The use of masked strands shall not be allowed.
- All low relaxation strands shall be stressed to 0.75 pu.
- All beams shall be prestressed by the pretensioning method only.
- Ends of beams shall be constructed to be vertical when erected.
- The contractor shall adjust the dimensions shown on the drawings to account for elastic shortening, creep and shrinkage occurring between the time of casting and the erection of the girder.
- Strands that are to be cut, shall be cut flush with the concrete at each end and coated with an approved asphatic material. See Dtl (4/-)



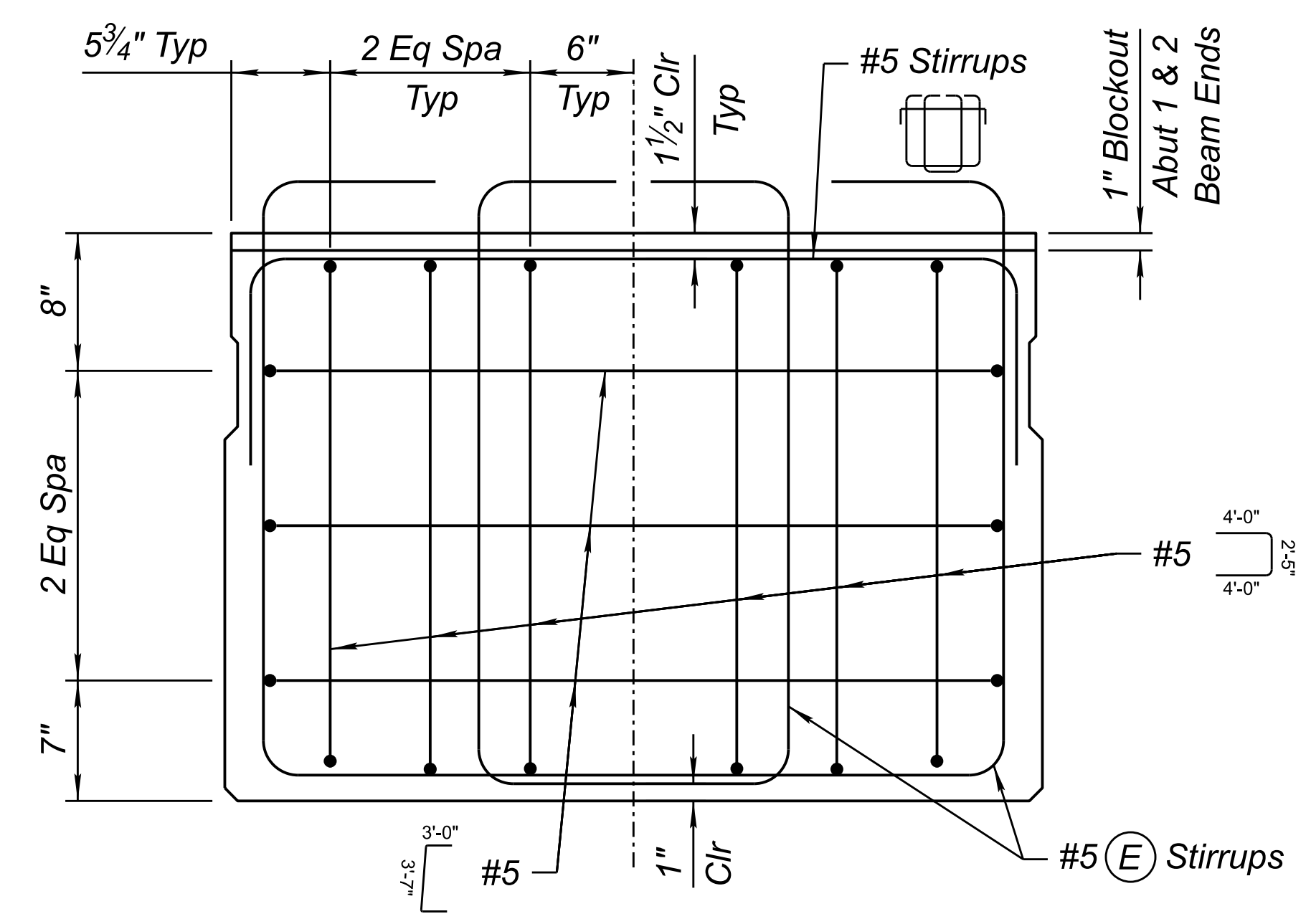
	DESIGN	TVW	DATE	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION BRIDGE GROUP	ROUTE	I-17	F.H.W.A. Arizona Division ARIZ.	PROJECT NO.	017 CN 337	FEDERAL ID NO.	017-B(237)T	SHEET NO.	92	TOTAL SHEETS	123	RECORD DRAWING
	DRAWN	RID	DATE	10/23		MILEPOST	337.39		LOCATION	I-17 AIRPORT RD TI UP				DWG NO.	S-1.14		
	CHECKED	DL	DATE	10/23		STRUCTURE NO.	20256		TRACS NO.	F0362 01C				OF			
HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL (602) 522-7700					BOX BEAM DETAILS - 1												



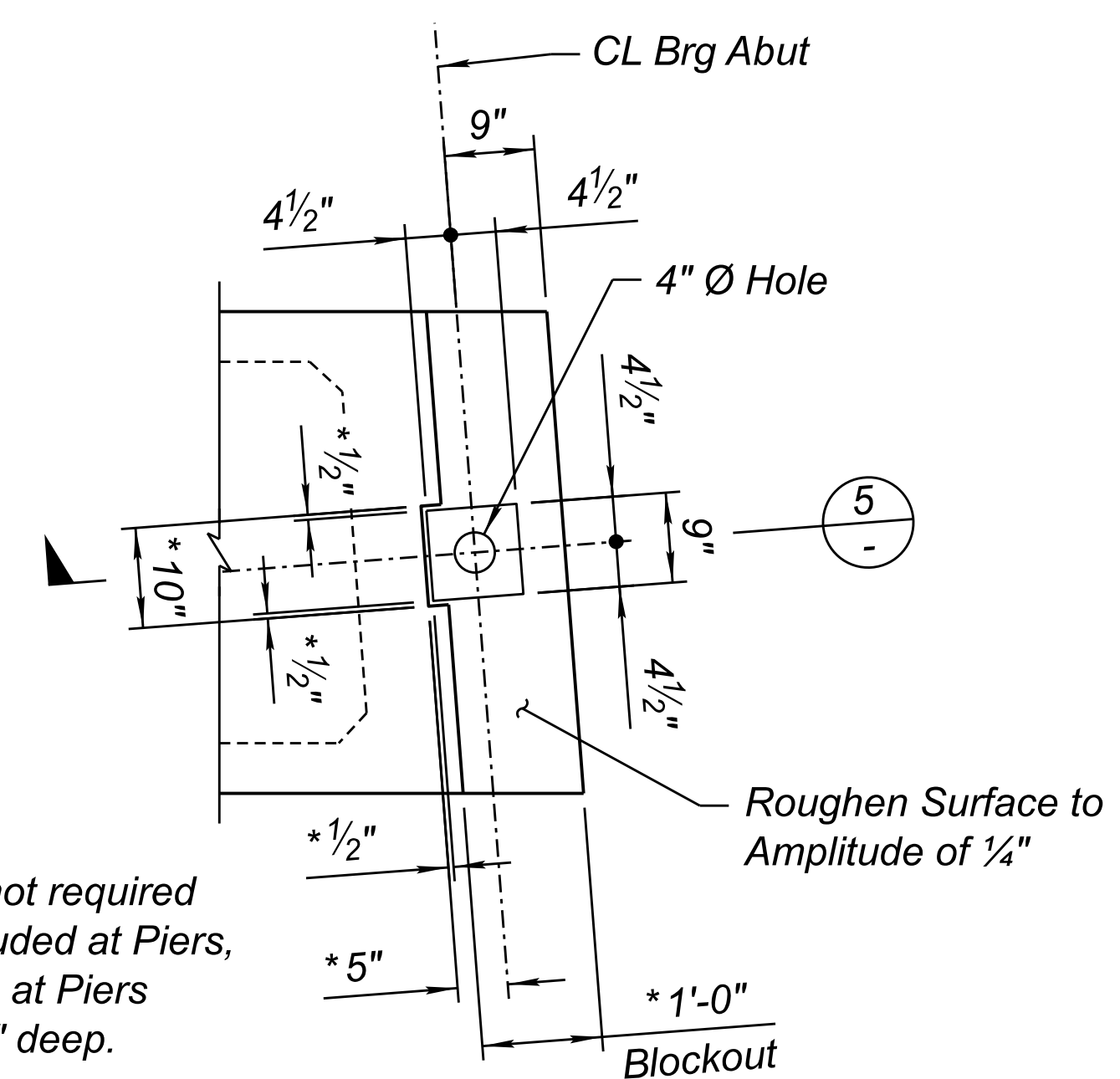
BEAM END BLOCK DETAIL (1)
Scale: 1 1/2" = 1'-0"



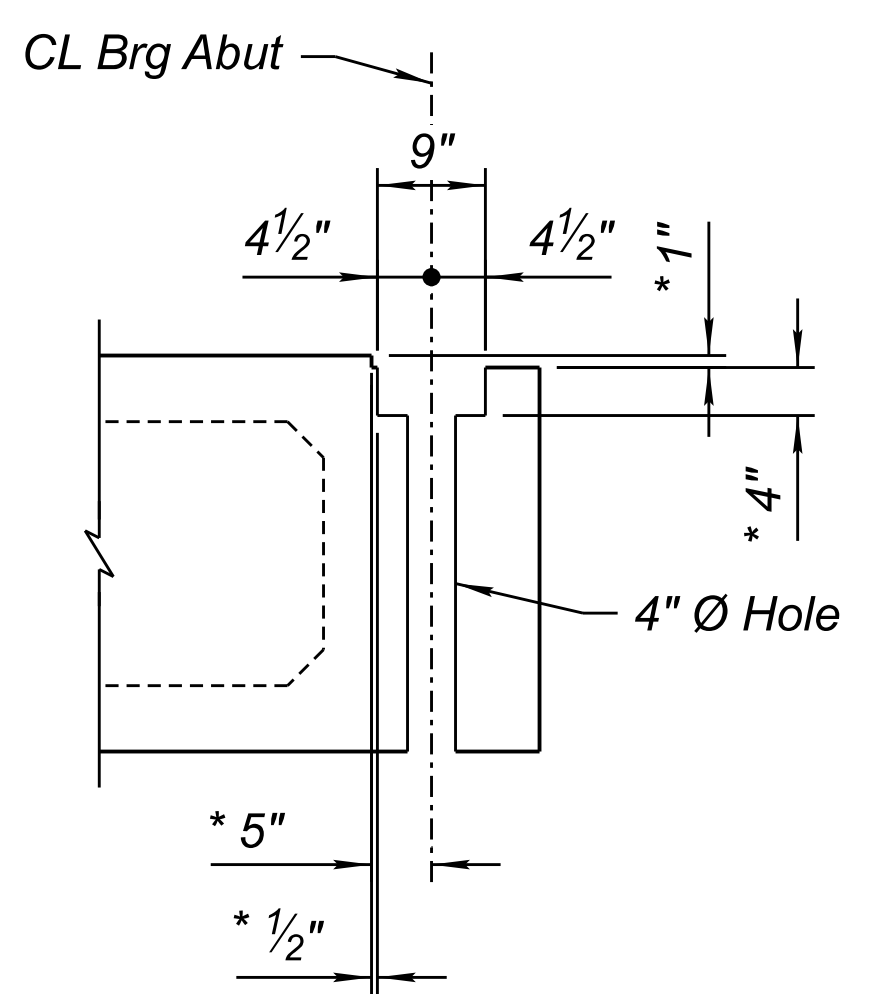
BEAM END BLOCK - SECTION (2)
Scale: 1 1/2" = 1'-0"



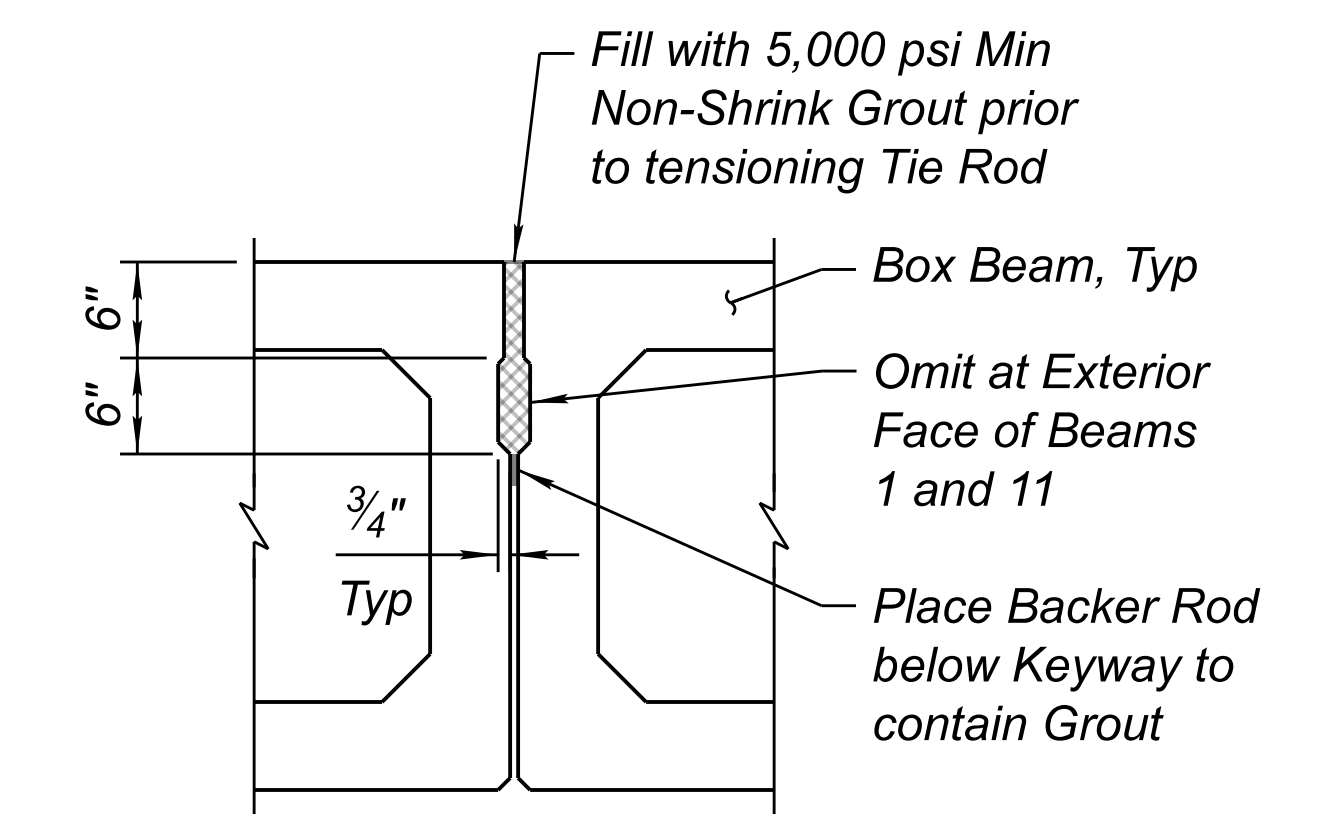
BEAM END BLOCK - TRANSVERSE SECTION (3)
Scale: 1 1/2" = 1'-0"



ANCHORAGE RECESS DETAIL (4)
Scale: 3/4" = 1'-0"



ANCHORAGE RECESS SECTION (5)
Scale: 3/4" = 1'-0"

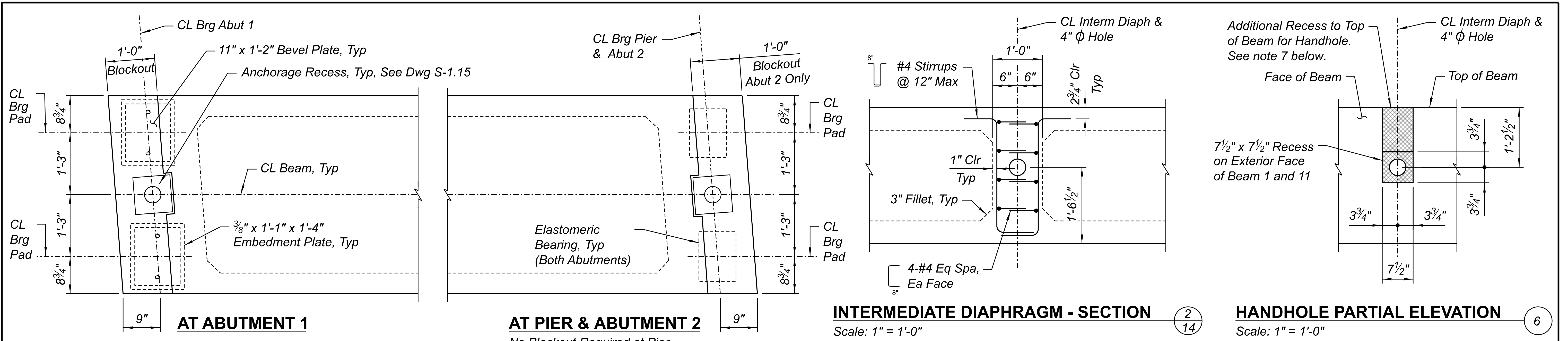


SHEAR KEY DETAIL (6)
Scale: 1" = 1'-0"

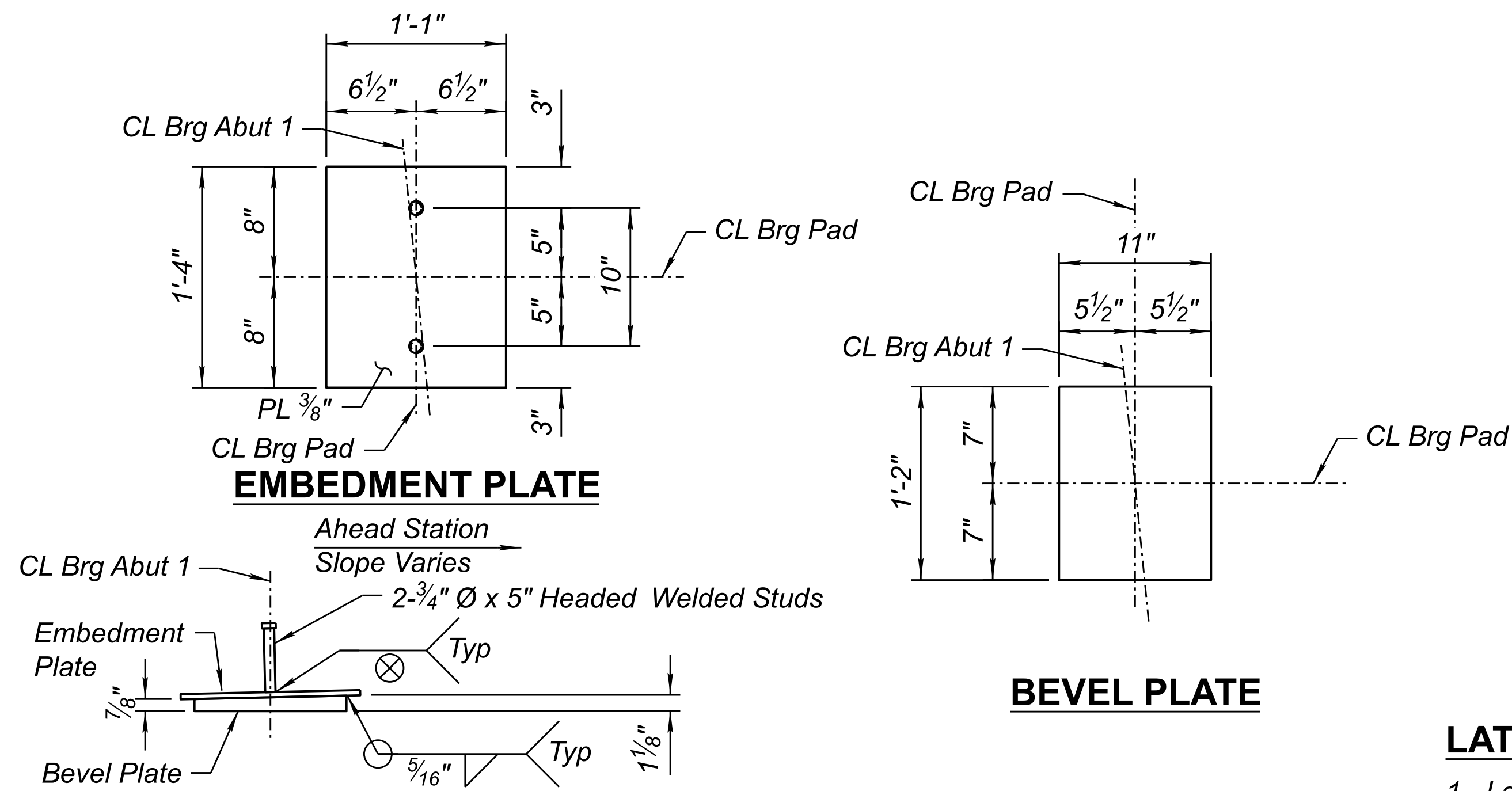
SHEAR KEY NOTES:

1. Shear keys between box beams shall be grouted a minimum of 24 hours prior to tensioning tie rods. If the contractor provides a mechanism to maintain gap for shear keys, shear keys can be grouted after tensioning tie rods.
2. No separate measurement or payment shall be made for non-shrink grout. This shall be considered included in the pay item Precast, P/S Member (Box Beam Type BII-48).
3. Non-shrink grout shall reach 3500 psi in 24 hours and shall reach a minimum strength of 5000 psi prior to tensioning of tie rods.

	DESIGN	TVW	DATE	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION BRIDGE GROUP	ROUTE	I-17	F.H.W.A. Arizona Division STATE ARIZ.	PROJECT NO.	017 CN 337	FEDERAL ID NO.	017-B(237)T	SHEET NO.	93	TOTAL SHEETS	123	RECORD DRAWING
	DRAWN	RID	DATE	10/23		MILEPOST	337.39		LOCATION	I-17 AIRPORT RD TI UP				DWG NO.	S - 1.15		
	CHECKED	DL/GSL	DATE	10/23	HDR HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL (602) 522-7700	STRUCTURE NO.	20256	TRACS NO.	F0362 01C								
BOX BEAM DETAILS - 2																	

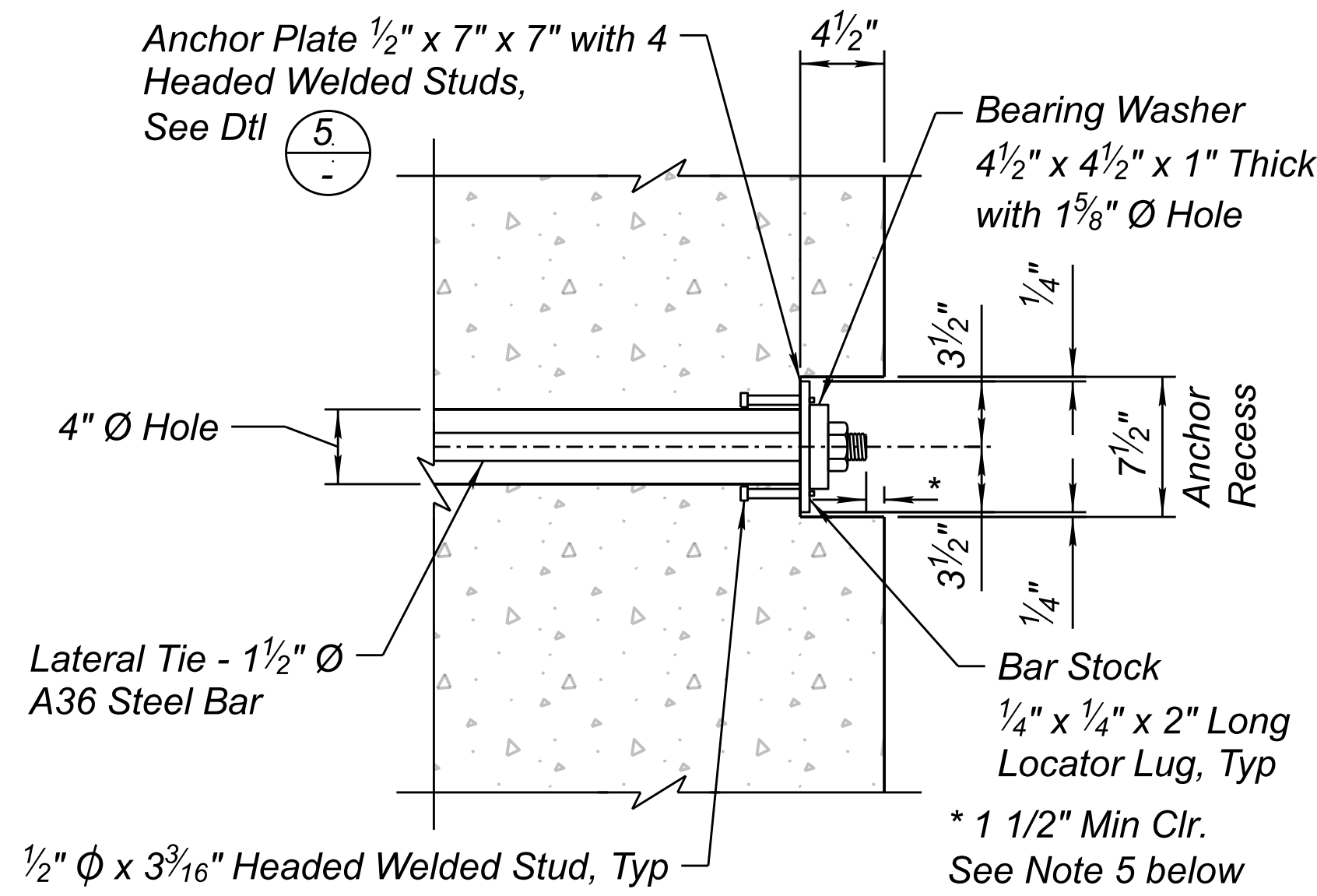


BEAM END - PARTIAL PLAN DETAIL
 Scale: 1" = 1'-0" (1)



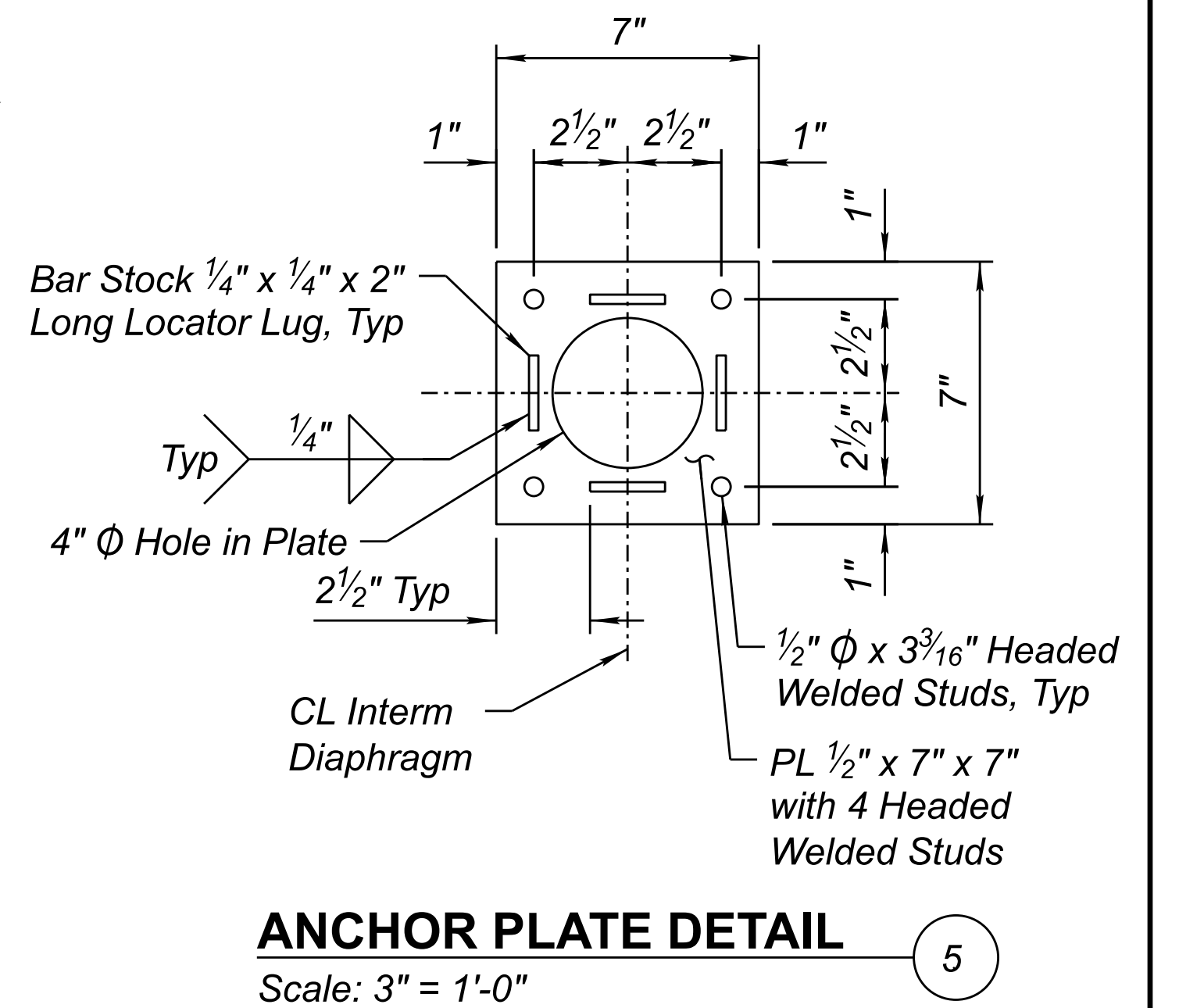
EMBEDMENT PLATE & BEVEL PLATE NOTES:

- All plates shall conform to ASTM A36.
- Steel stud connectors shall conform to ASTM Grades C-1015, C-1018 or C-1020 cold rolled steel. Solid or granular flux-filled studs shall be used. The studs shall be automatically end welded to the steel plates with complete fusion.
- Studs and plates shall be galvanized after fabrication in accordance with ASTM A123.
- Embedment and bevel plates shall be considered included in the pay item Precast, P/S Member (Type BII-48).



LATERAL TIE AND HANDHOLE NOTES:

- Lateral ties shall be provided through intermediate diaphragms. Each tie shall consist of a 1/2" diameter steel bar with a nut and bearing washer at each end.
- Tie rods, anchor plates, and bearing washers shall conform to ASTM A36 and shall be galvanized in accordance with ASTM A123. Heavy hex nuts and couplers shall conform to ASTM A563, DH and shall be galvanized in accordance with ASTM A153. Threads shall be UNC (coarse).
- All tie rods per beam shall be initially snug tightened prior to tensioning. Final tensioning shall be accomplished by applying 2 3/8 turns of the nut, from the snug tight position to achieve 30 kips of force. The fabricator shall confirm the number of turns required to achieve this force.
- Tie rods shall be continuous with threaded couplers used as necessary to make tie rods continuous. Threaded couplers shall develop 125% of the yield strength of the tie rod. Submit coupler for review and approval.
- Excess tie rod, if any, shall be cut off to allow proper drypacking of anchor recess.
- Anchor recesses (finished flush with surface) and tie rod handholes shall be drypacked after tensioning tie rods. Drypack material shall be non-shrink, prepackaged grout (5,000 psi min).
- Additional recess for handhole shall be located on beams where access is necessary to install threaded coupler on transverse tie rod. Contractor to identify threaded coupler locations and submit to engineer for review as part of shop drawing submittal prior to casting.
- Tie rod, anchor system, tensioning, and grout shall be considered included in the pay item Precast, P/S Member (Box Beam Type BII-48).



	DESIGN	TVW	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION BRIDGE GROUP	ROUTE	I-17	F.H.W.A. Arizona Division STATE: ARIZ.	PROJECT NO.	017 CN 337	FEDERAL ID NO.	017-B(237)T	SHEET NO.	94	TOTAL SHEETS	123	RECORD DRAWING
	DRAWN	RID	10/23		MILEPOST	337.39		LOCATION	I-17 AIRPORT RD TI UP				DWG NO.	S - 1.16		
	CHECKED	DL/GSL	10/23		STRUCTURE NO.	20256	TRACS NO.	F0362 01C				OF				
HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL (602) 522-7700																

*** Penetrating sealer shall be placed on the top & front face of barrier located on the bridge deck and approach slabs. See Special Provisions.

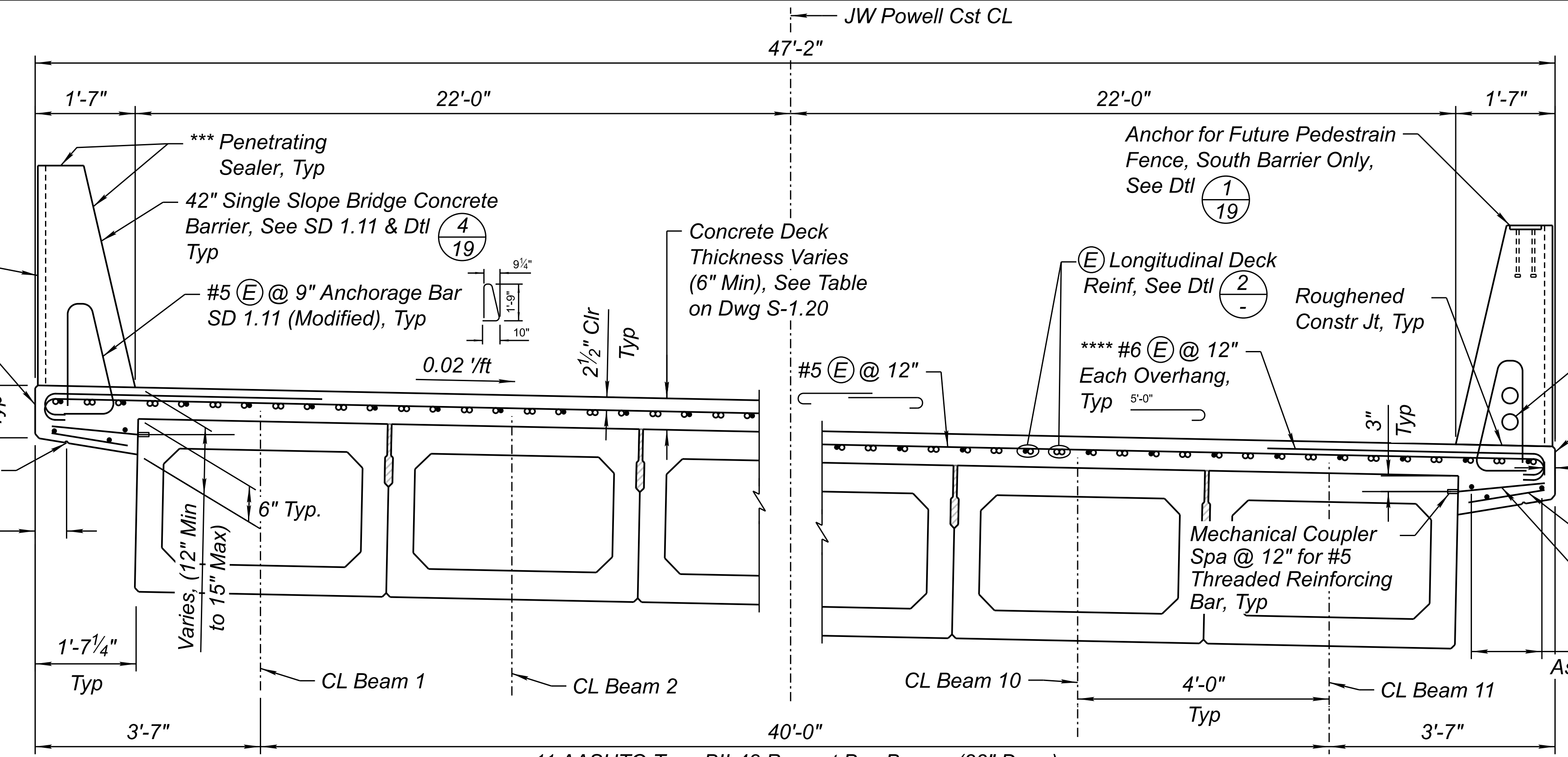
**** Place halfway between #5 bars

Rustication, See Architectural Sheets

Edge of Deck

3/4" Drip Groove, Typ

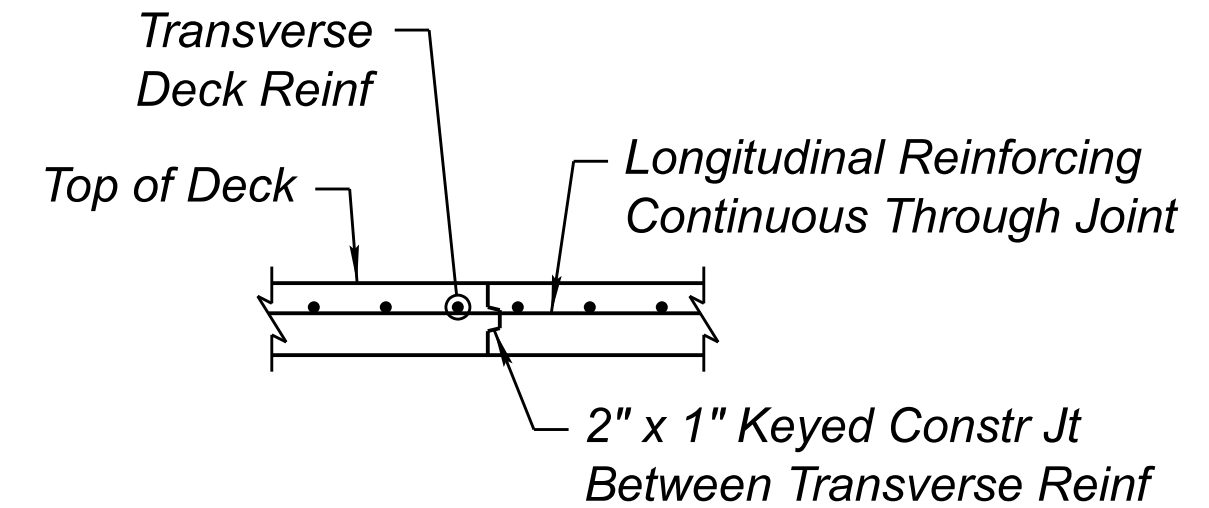
NOTE:
Longitudinal bars shown are located in the negative moment region near the pier.



MECHANICAL COUPLER NOTES:

1. Mechanical Couplers shall conform to the requirements for mechanical connections in Section 605-3.02 of the ADOT Standard Specifications and shall develop 125% of the yield strength of the reinforcing bar.
2. Mechanical Couplers shall be placed normal to the exterior face of Beam 1 and Beam 11.
3. No separate measurement or payment shall be made for mechanical couplers. This shall be considered included in the pay item Precast, P/S Member (Box Beam Type BII-48).

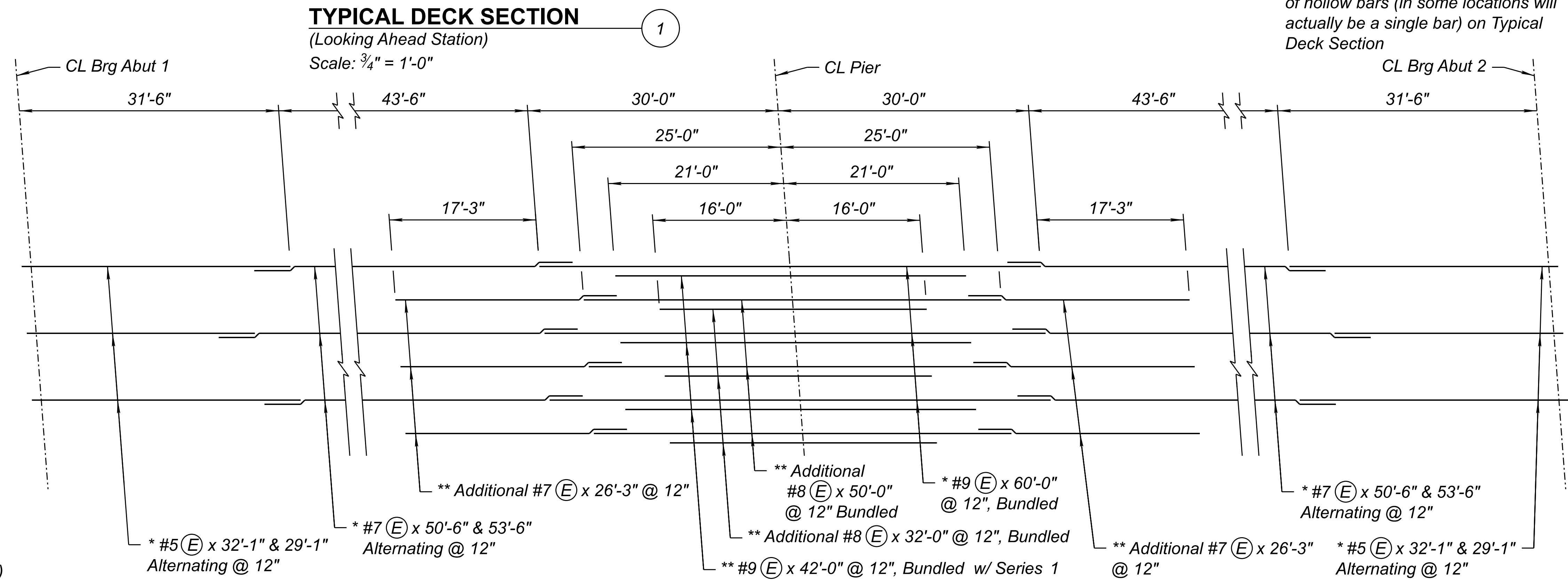
- * Series 1 - Continuous full length of bridge @ 12" spacing; represented by paired solid bar and hollow bar on Typical Deck Section
- ** Series 2 - Additional bars alternating @ 12" with Series 1; represented by pairs of hollow bars (in some locations will actually be a single bar) on Typical Deck Section



TRANSVERSE CONSTR JT DETAIL (3)
No Scale

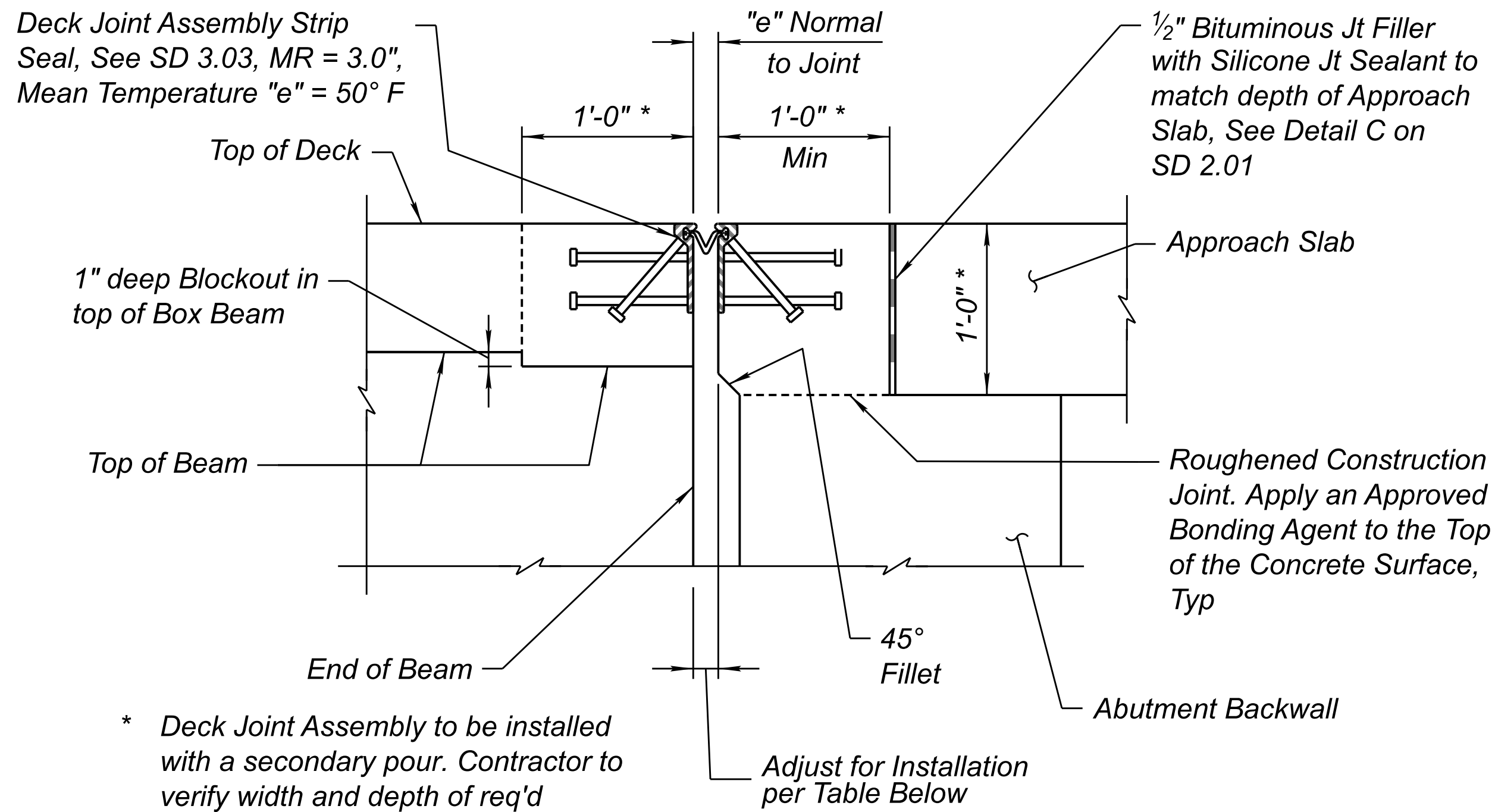
REINFORCING NOTES:

1. (E) Denotes epoxy coated bars.
2. Longitudinal deck reinforcing shall be placed parallel to Constr CL.
3. Transverse deck reinforcing shall be placed parallel to abutment and pier centerlines with the spacing measured along Constr CL.
4. Bars shall not be spliced within the required lap length of adjacent bars.
5. Contractor to submit shop drawings showing lap splice locations to the Engineer for approval prior to fabrication.
6. Minimum lap length of bars shall be:
 #5 to #7 bars..... 3'-0"
 #7 to #9 bars..... 4'-0"
 #7 to #8 bars..... 4'-0"
 #5 to #5 bars..... 3'-0" (Barrier & Transverse Bars Only)
7. No splices allowed for longitudinal deck bars within 21'-0" either side of CL Pier.



TYPICAL DECK LONGITUDINAL REINFORCING PLAN (2)
No Scale

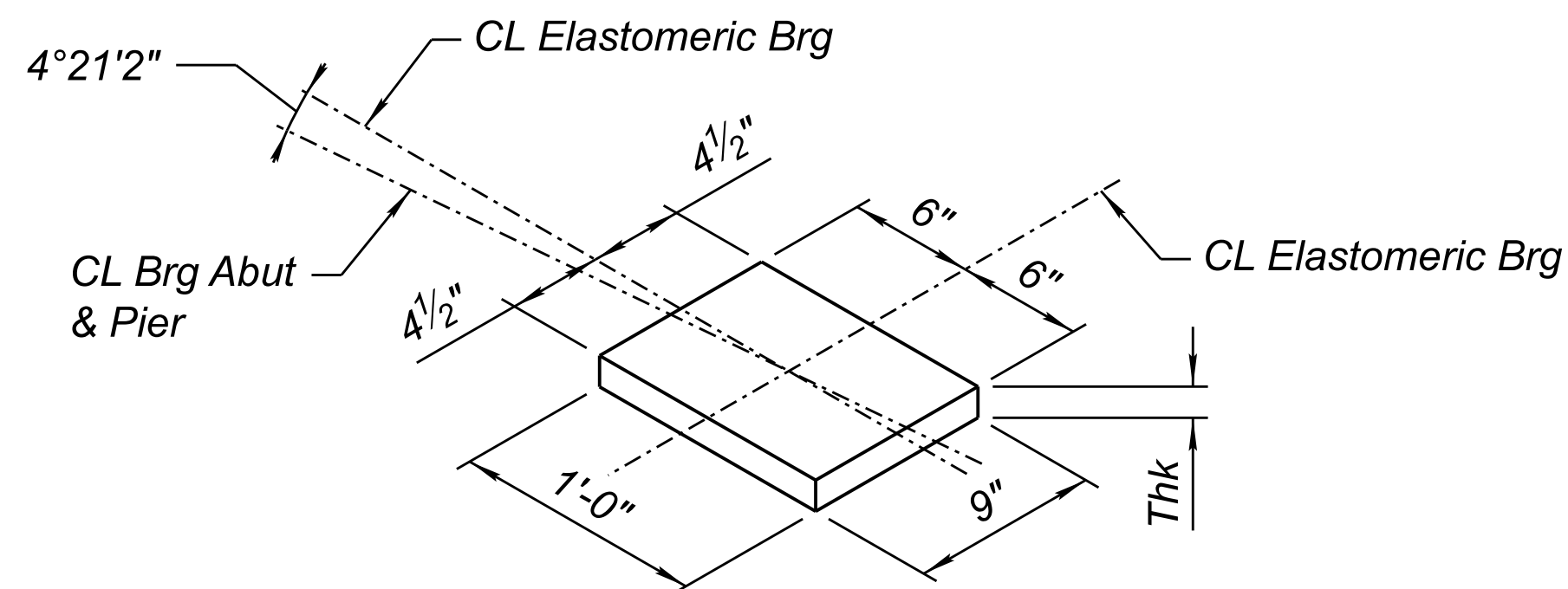
	DESIGN	DL	DATE	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION BRIDGE GROUP	ROUTE	I-17	F.H.W.A. Arizona Division STATE ARIZ.	PROJECT NO.	017 CN 337	FEDERAL ID NO.	017-B(237)T	SHEET NO.	95	TOTAL SHEETS	123	RECORD DRAWING
	DRAWN	RID	DATE	10/23		MILEPOST	337.39		LOCATION	I-17 AIRPORT RD TI UP				DWG NO.	S - 1.17		
	CHECKED	TWV	DATE	10/23		STRUCTURE NO.	20256		TRACS NO.	F0362 01C				OF			
HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL (602) 522-7700																	



* Deck Joint Assembly to be installed with a secondary pour. Contractor to verify width and depth of req'd blockout. Concrete shall be Silica Fume Concrete, $f_c = 4500$ psi.

Temp (F°)	90	80	70	60	50	40	30	20	10	0
"e" (in)	1.500	1.625	1.750	1.875	2.000	2.125	2.250	2.375	2.500	2.625

DECK JOINT ASSEMBLY DETAIL (1/8)
Scale: $1\frac{1}{2}" = 1'-0"$



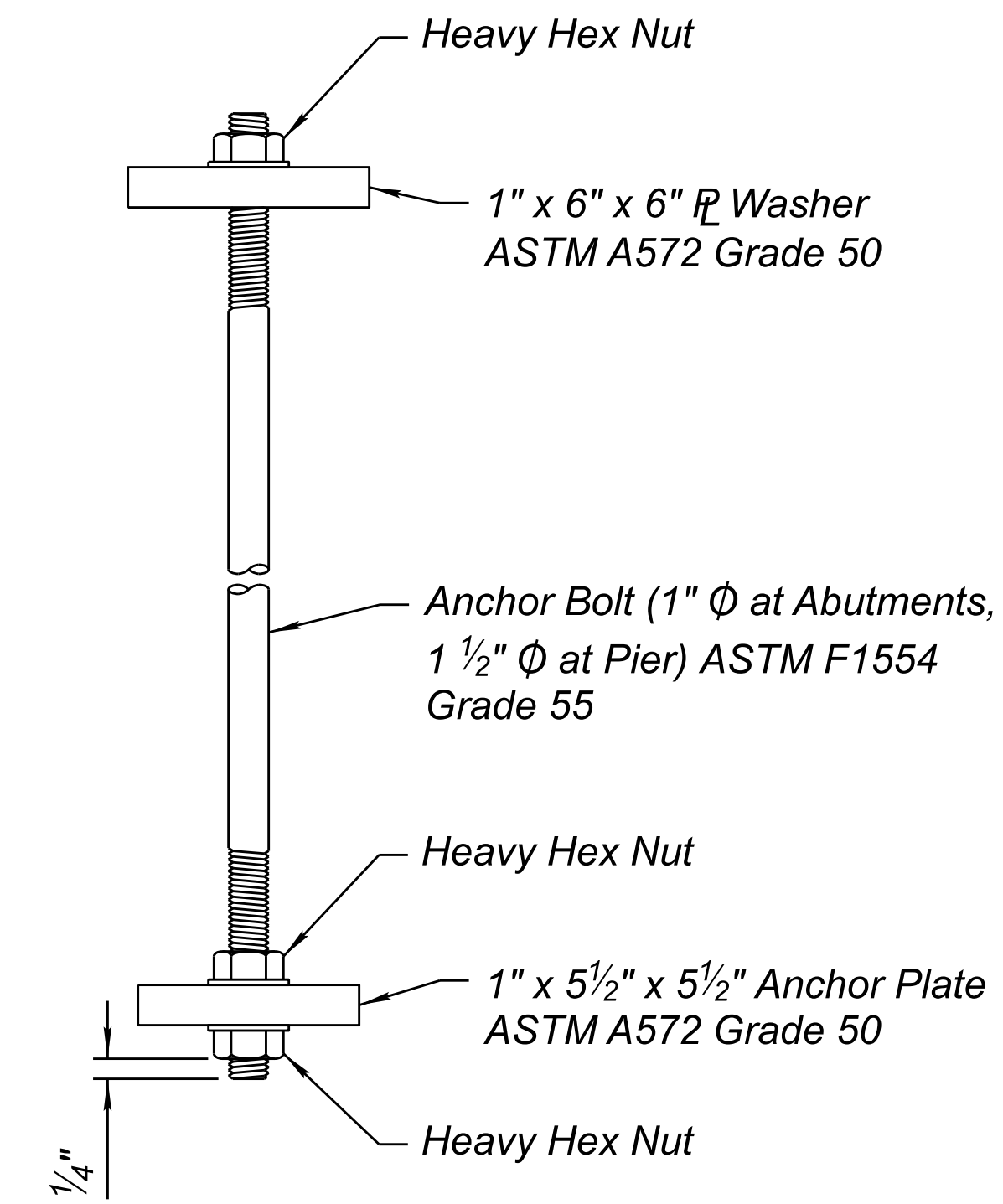
Location	Thk (in)
Abutments	3"
Pier	1"

- BEARING NOTES:**
- Design Method A
 - Low Temperature Zone C
 - Elastomer Grade 3
 - Shear Modulus $G=130$ psi @ $73^\circ F$ (Durometer Hardness 55)
 - Bearing Pads shall be steel laminated neoprene pads.
 - Design Load: 158 kips (Pier)
148 kips (Abutments)
 - The cost of bearing pads shall be considered included in the pay item Precast, P/S Member (Box Beam Type BII 48).
 - See Specifications for additional information.

ELASTOMERIC BEARING PAD DETAIL (2)
Scale: $1\frac{1}{2}" = 1'-0"$

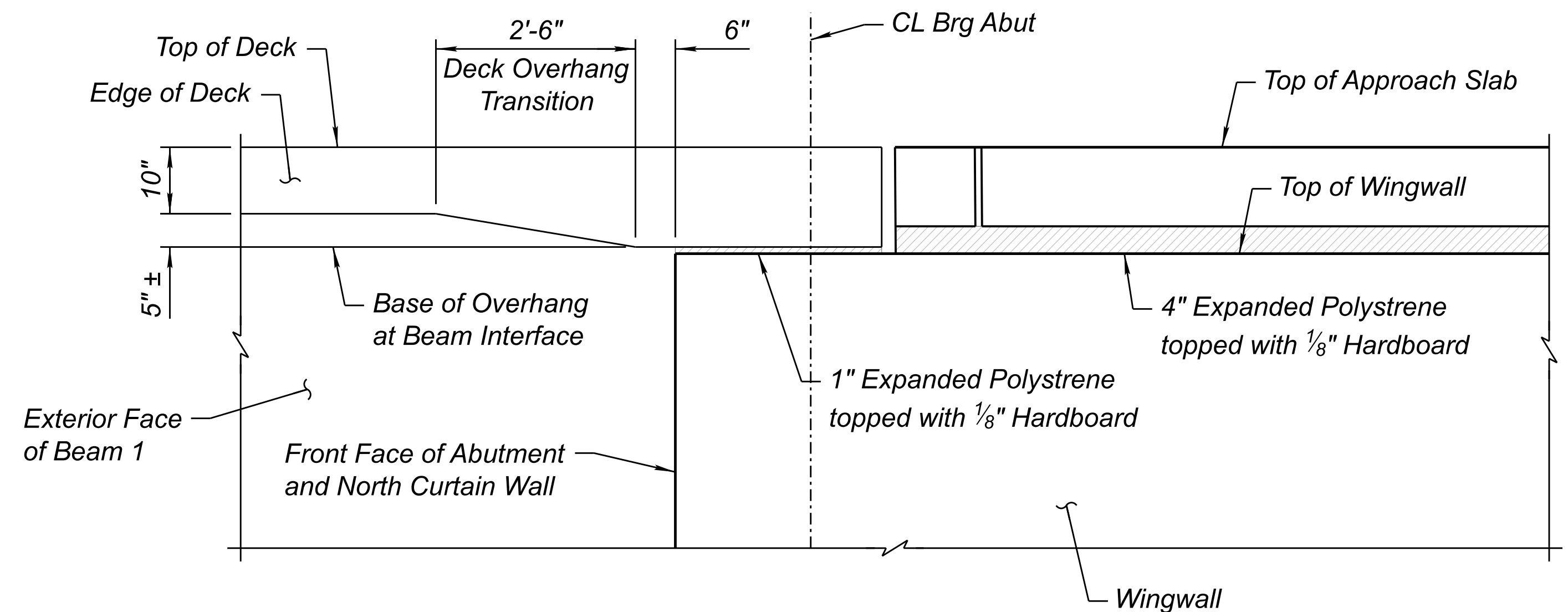
DECK JOINT NOTES:

- Contractor to provide elastomeric strip seal deck joint assemblies with a 3.0" movement rating.
- Contractor shall submit complete shop drawings for Engineers approval prior to fabrication and installation.
- The contractor shall take due care in the placement of the concrete under the steel joint elements to ensure that proper consolidation is achieved. After placement, the Engineer shall inspect the joint for voids by sounding the steel with a hammer. All voids shall be repaired by the contractor by epoxy injection. The repair plan shall be approved by the Engineer prior to commencing work. Repairs shall be at no cost to the Department.
- Steel components including rail/extrusions shall be non-weathering steel that is hot dipped galvanized. See Specifications and SD 3.03 for additional requirements.
- Abutment backfill shall be placed before joint installation.



ANCHOR BOLT NOTE:
No separate measurement or payment shall be made for the anchor bolt assembly. Payment for the anchor bolt, plates, nuts, washers, hot poured sealant & non-shrink grout shall be considered included in the pay item Precast, P/S Member (Box Beam Type BII 48). Plate washers shall be galvanized in accordance to ASTM A123 and remaining components shall be galvanized in accordance to ASTM A153.

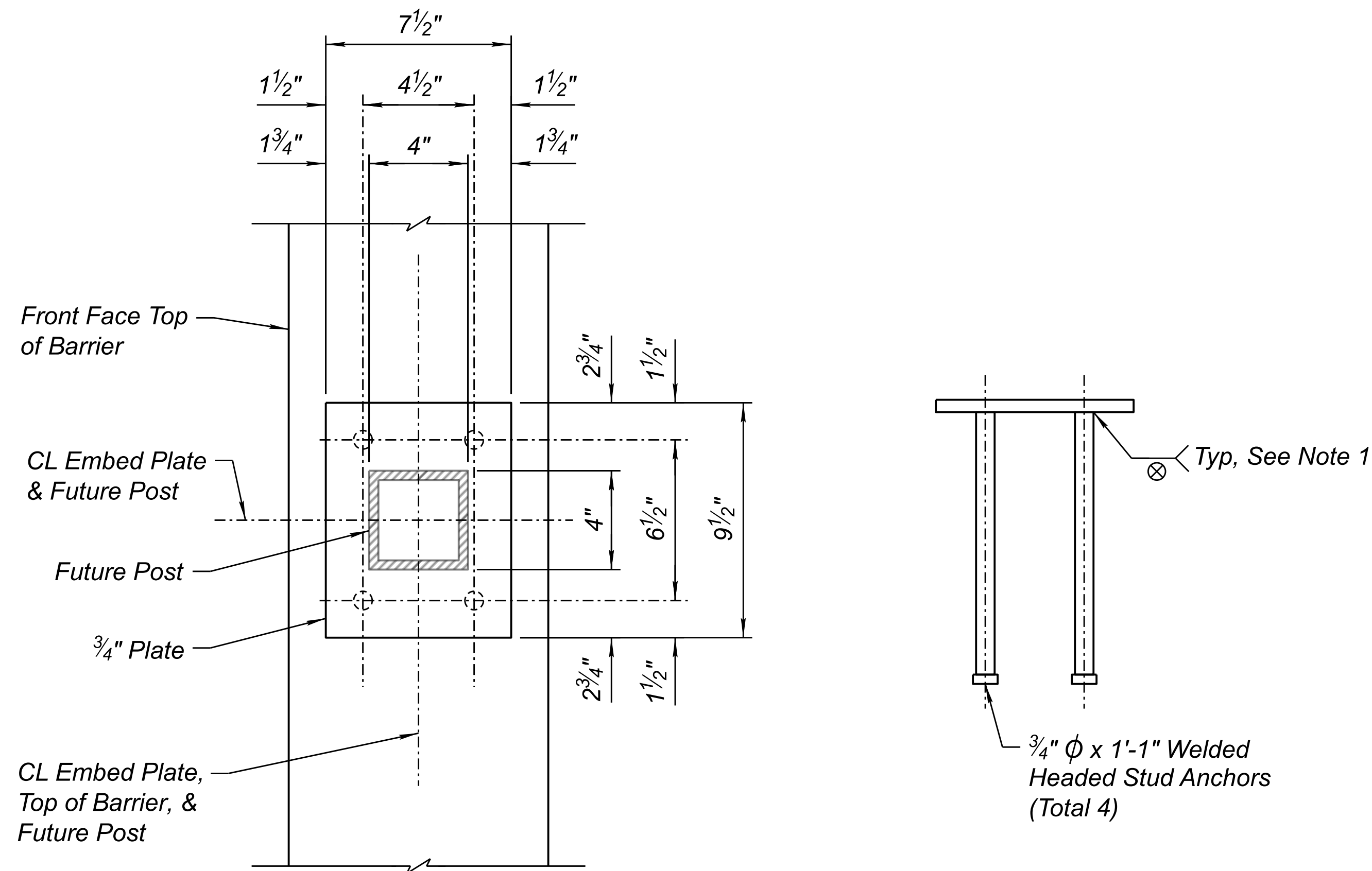
ANCHOR BOLT DETAIL (3/8, 3/11, 3/12, 3/13)
Not to Scale



NOTE:
Barrier not shown for clarity. Detail only applicable at north edge of deck.

ELEVATION - DECK OVERHANG TRANSITION DETAIL (4/13)
(Abut 1 Shown, Abut 2 Similar & Opp Hand)
Scale: $\frac{3}{4}" = 1'-0"$

	DESIGN	DL	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION BRIDGE GROUP	ROUTE	I-17	F.H.W.A. Arizona Division STATE: ARIZ.	PROJECT NO.	017 CN 337	FEDERAL ID NO.	017-B(237)T	SHEET NO.	96	TOTAL SHEETS	123	RECORD DRAWING
	DRAWN	RID	10/23		MILEPOST	337.39		LOCATION	I-17 AIRPORT RD TI UP				DWG NO.	S - 1.18		
	CHECKED	TVW	10/23	MISCELLANEOUS DETAILS - 1	STRUCTURE NO.	20256	TRACS NO.	F0362 01C				OF				
	HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL (602) 522-7700															

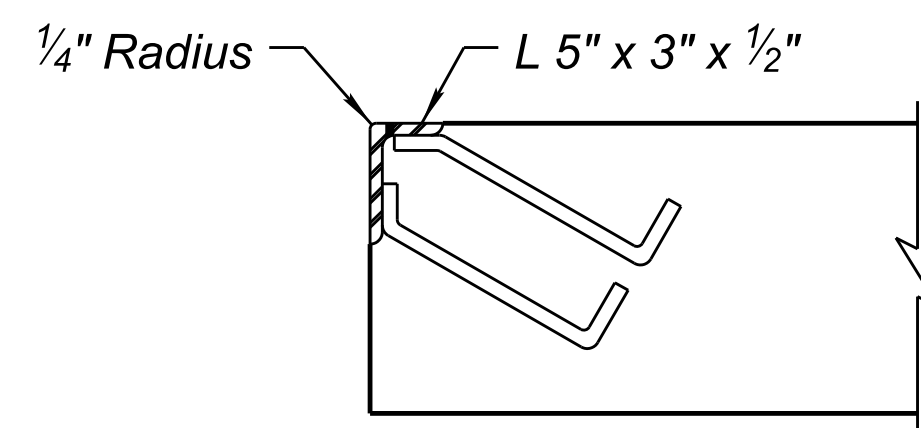


NOTES:

1. Steel stud connectors shall conform to ASTM Grades C-1015, C-1018 or C-1020 cold rolled steel. Solid or granular flux-filled studs shall be used. The studs shall be automatically end welded to the steel plates with complete fusion.
2. Plate shall conform to ASTM A36. Studs and plates shall be galvanized after fabrication in accordance with ASTM A123.
3. Embed plates shall be spaced to match the spacing shown in the Architectural Treatment Drawings but shall not exceed the spacing limitations shown in ADOT Std. SD 1.12 and SD 1.13. Shop drawings shall be provided showing the embed plate layout to the Engineer for review and approval prior to fabrication.

FENCE EMBED PLATE DETAIL

Scale: 3" = 1'-0"

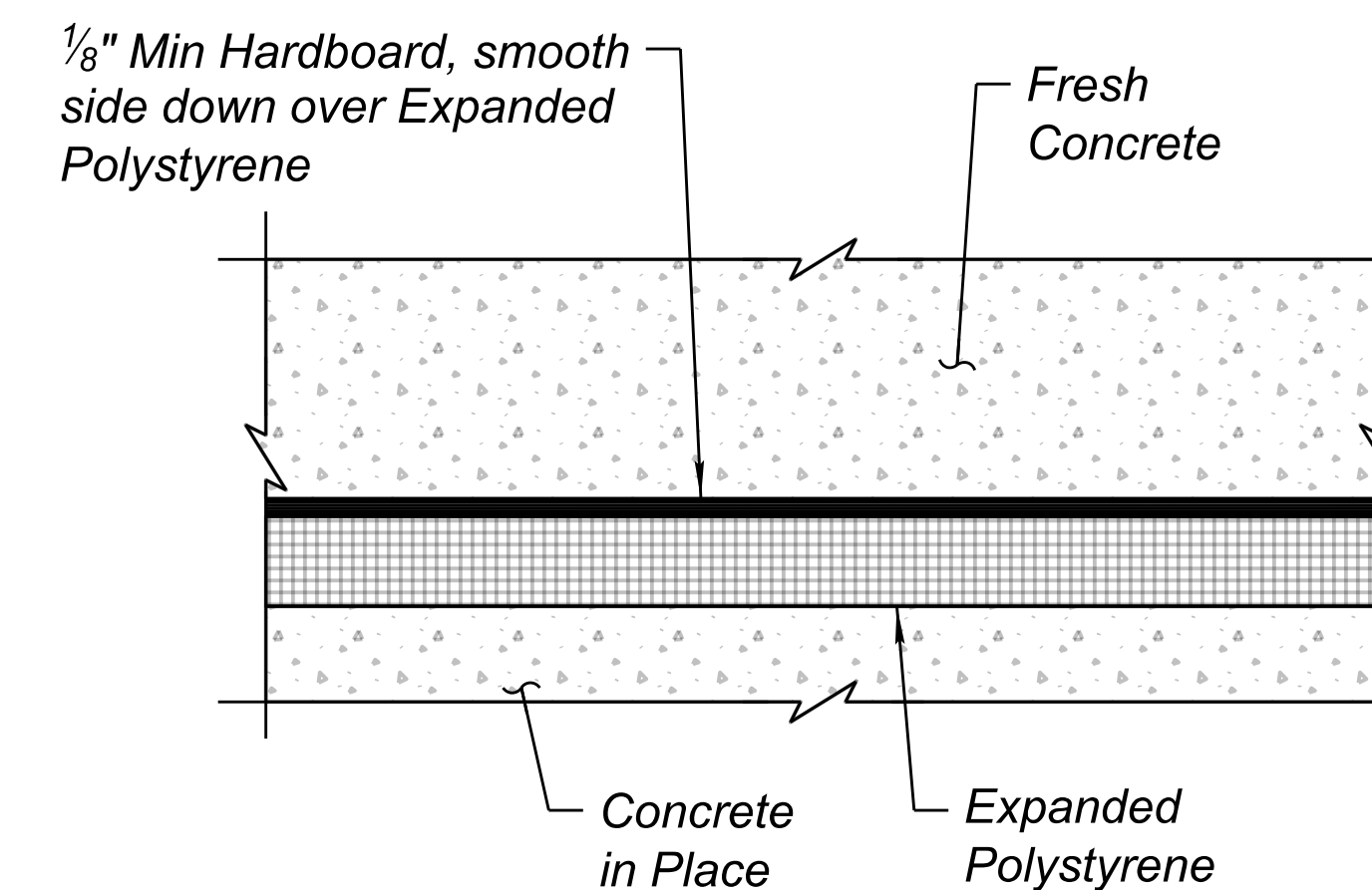


NOTE:

1. See SD 2.01 Detail A for Guard Angle details.

APPROACH SLAB GUARD ANGLE DETAIL

No Scale



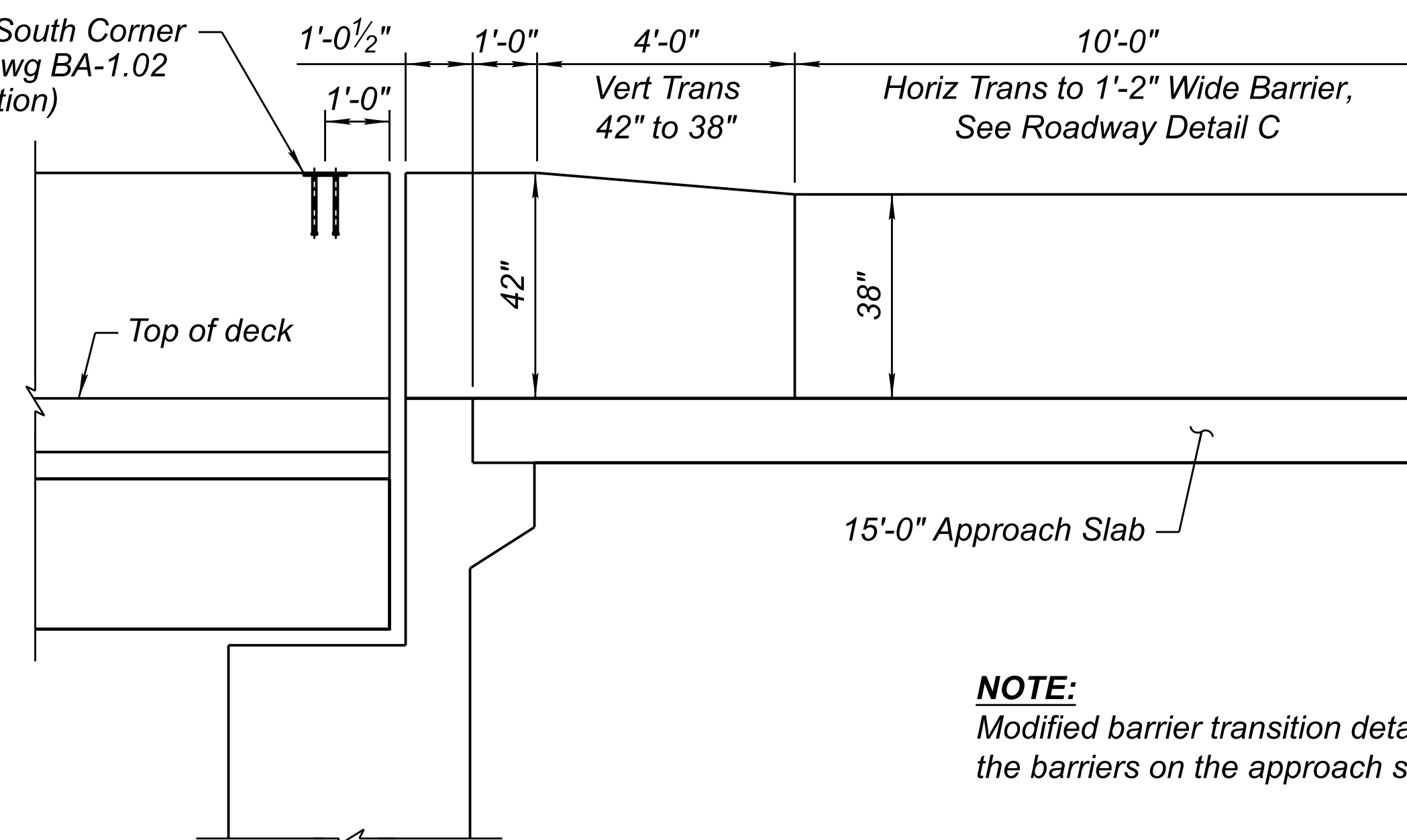
NOTES:

1. Hardboard to be used on any polystyrene face against which concrete is to be placed.
2. Petroleum products not allowed for removal of polystyrene.

POLYSTYRENE PROTECTION DETAIL

No Scale

Fence Embed Plate, South Corner of Abutment 1 (See Dwg BA-1.02 for Additional Information)

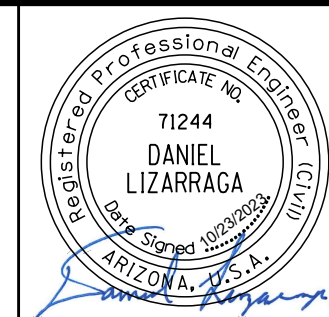


NOTE:

Modified barrier transition detail only applies to the barriers on the approach slab at abutment 1.

MODIFIED BARRIER TRANSITION DETAIL

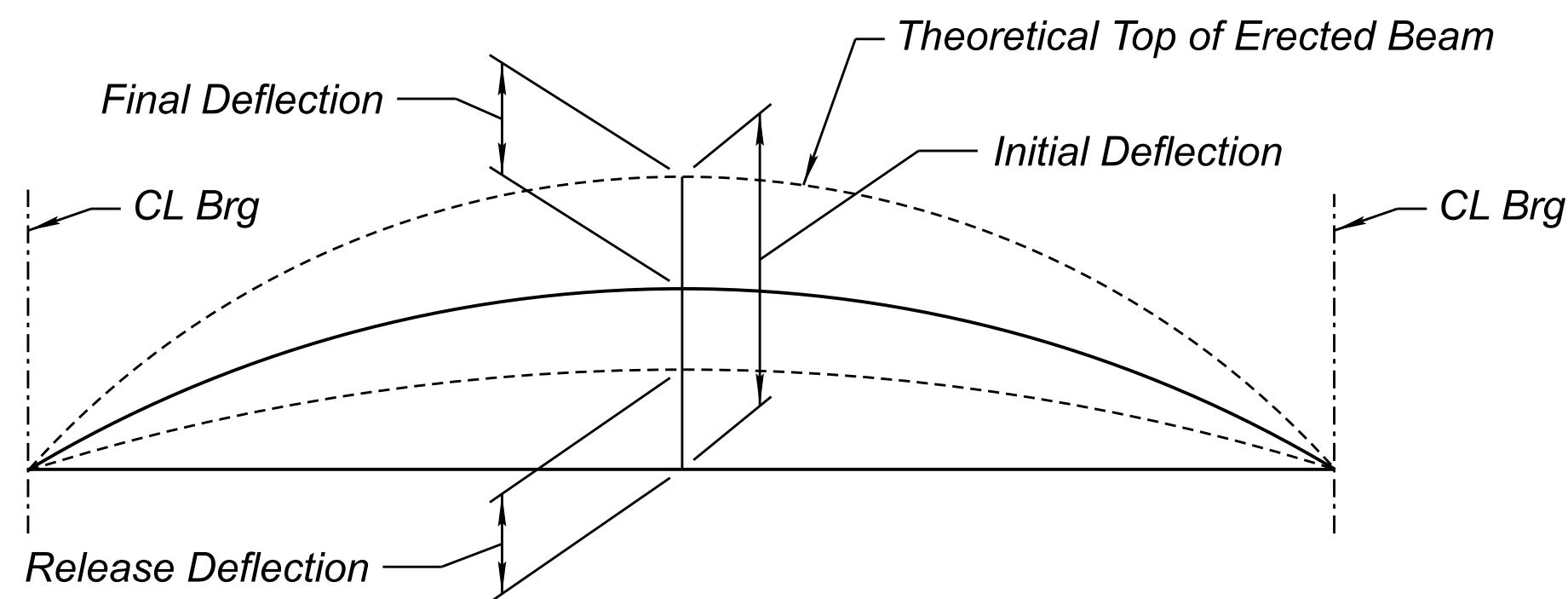
Scale: 1/2" = 1'-0"



DESIGN	NAME	DATE
GSL		10/23
RID		10/23
DL		10/23

HDR, INC.
20 E. THOMAS ROAD
SUITE 2500
PHOENIX, AZ 85012
TEL (602) 522-7700

ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION BRIDGE GROUP	ROUTE I-17	F.H.W.A. Arizona Division	STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 97	TOTAL SHEETS 123	RECORD DRAWING
MISCELLANEOUS DETAILS - 2	MILEPOST 337.39	LOCATION I-17 AIRPORT RD TI UP			DWG NO. S - 1.19			
	STRUCTURE NO. 20256	TRACS NO. F0362 01C			OF			



CAMBER DIAGRAM

No Scale

1

SCREED NOTES:

1. Screed elevations are provided at tenth points along the span (CL Bearing Abutment to CL Pier or CL Pier to CL Bearing Abutment).
2. Screed elevations, which are taken at the top of the deck slab, include an allowance for the final deflection due to the dead load of the concrete deck slab and barriers, and the effect of long term creep & loss of prestress.
3. The contractor shall provide the as-built beam bearing seat elevations at the abutments and pier to the Engineer for verification prior to erecting beams.
4. The contractor shall provide the as-built top of erected beam elevation at tenth points and CL bearings of the beams to the Engineer for verification of the screed grade elevations prior to setting the deck overhang formwork.
5. Screed elevations shall be used in setting screeds. Adjustments to the screed elevations, if necessary, will be determined by the Engineer after reviewing the top of erected beam elevations. (DO NOT USE FINISHED GRADE ELEVATION FOR SETTING SCREEDS).

DEFLECTION (Ft)									
Span 1									
	0.1 pt	0.2 pt	0.3 pt	0.4 pt	0.5 pt	0.6 pt	0.7 pt	0.8 pt	0.9 pt
Release (Up)	0.09	0.16	0.21	0.24	0.25	0.24	0.21	0.16	0.09
Initial (Up)	0.17	0.28	0.36	0.41	0.43	0.41	0.36	0.28	0.17
Final (Down)	0.05	0.09	0.13	0.15	0.15	0.15	0.13	0.09	0.05

DEFLECTION (Ft)									
Span 2									
	0.1 pt	0.2 pt	0.3 pt	0.4 pt	0.5 pt	0.6 pt	0.7 pt	0.8 pt	0.9 pt
Release (Up)	0.09	0.15	0.20	0.23	0.23	0.23	0.20	0.15	0.09
Initial (Up)	0.16	0.27	0.35	0.39	0.41	0.39	0.35	0.27	0.16
Final (Down)	0.05	0.10	0.14	0.17	0.18	0.17	0.14	0.10	0.05

ESTIMATED DECK THICKNESS (Inch)		
LOCATION		All Beams
Span 1	CL Brg Abut 1	9
	Midspan	6
	CL Brg Pier	7 3/4
Span 2	CL Brg Pier	8 1/8
	Midspan	8 3/4
	CL Brg Abut 2	9

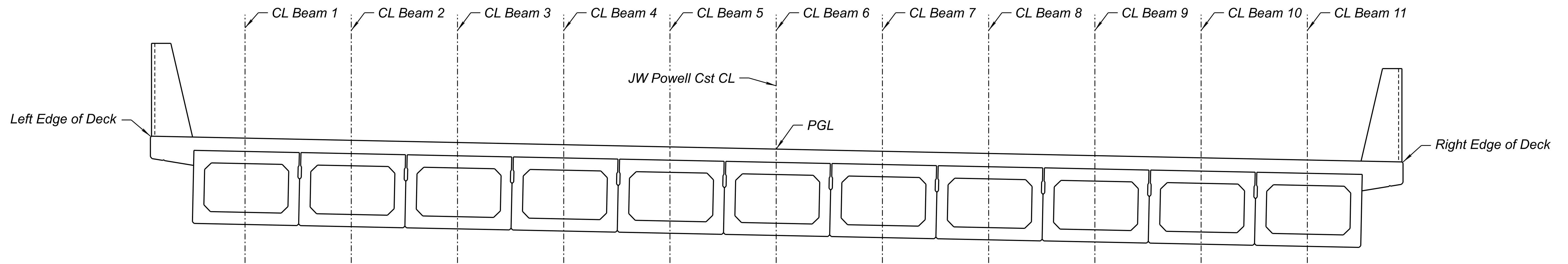
DEFLECTION NOTES:

1. Release deflection equals the deflection that the prestressed beam undergoes at the time of strand release. The release deflection includes the dead load of the beam and the release prestressing force (including the effects of elastic shortening).
2. Initial deflection equals the deflection that the prestressed beam undergoes at the time of erection prior to diaphragm and deck pours. The initial deflection equals the upward deflection resulting from initial prestressing, less the downward deflection due to the dead load of the beam, and with adjustments for the effects of creep and loss of prestress at the time of erection (assumed to be 60 days from casting).
3. Final deflection equals the deflection due to the dead load of the deck slab and barriers, and the effects of long term creep on the composite continuous beams. The effect of future wearing surface is not included.

NOTE:

Estimated deck thicknesses are based on estimated beam deflections and are equal to the screed elevation minus the top of Erected Beam Elevation.

	DESIGN	DL	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION BRIDGE GROUP	ROUTE	I-17	F.H.W.A. Arizona Division STATE ARIZ.	PROJECT NO.	017 CN 337	FEDERAL ID NO.	017-B(237)T	SHEET NO.	98	TOTAL SHEETS	123	RECORD DRAWING
	DRAWN	RID	10/23		MILEPOST	337.39		LOCATION	I-17 AIRPORT RD TI UP				DWG NO. S - 120			
	CHECKED	TVW	10/23		STRUCTURE NO.	20256		TRACS NO.	F0362 01C				OF			
	HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL: (602) 522-7700				CAMBER DETAILS											



DECK SECTION

Scale: 1/2" = 1'-0"

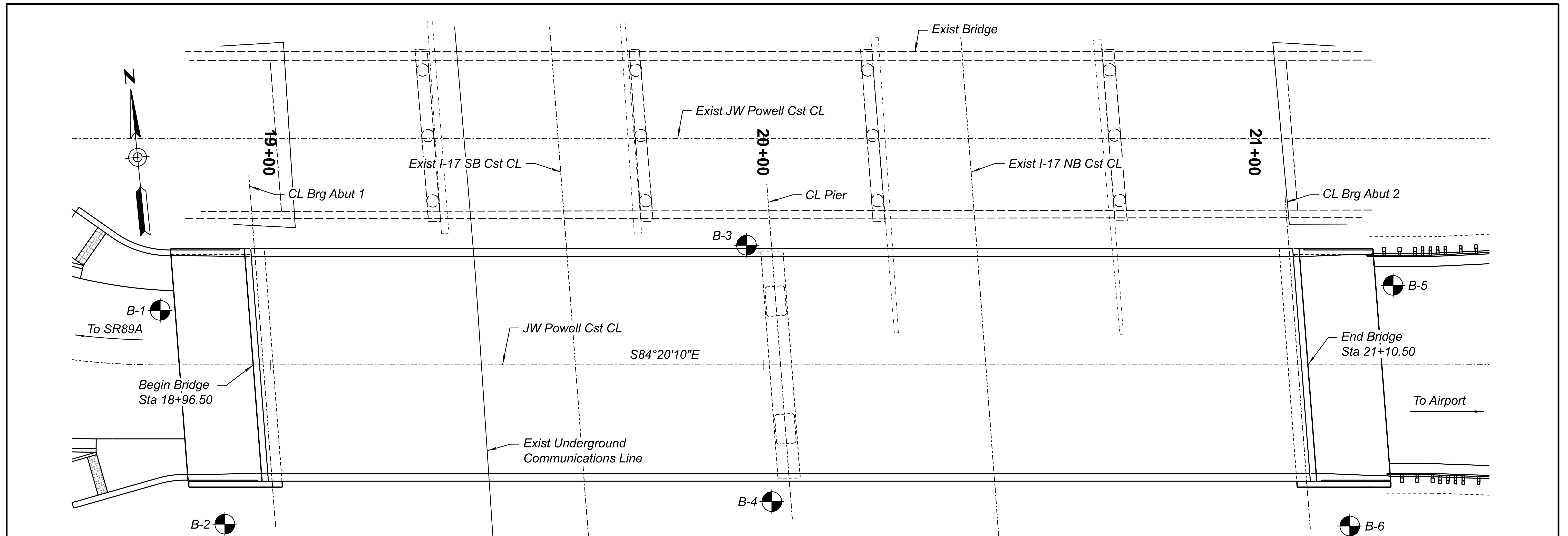
1

BRIDGE SCREED ELEVATIONS

Location	CL Brg Abut 1	0.1 pt	0.2 pt	0.3 pt	0.4 pt	0.5 pt	0.6 pt	0.7 pt	0.8 pt	0.9 pt	CL Pier	0.1 pt	0.2 pt	0.3 pt	0.4 pt	0.5 pt	0.6 pt	0.7 pt	0.8 pt	0.9 pt	CL Brg Abut 2
Lt Edge	7012.71	7012.96	7013.22	7013.46	7013.69	7013.91	7014.11	7014.30	7014.45	7014.57	7014.67	7014.84	7014.99	7015.11	7015.20	7015.24	7015.24	7015.20	7015.13	7015.02	7014.90
Beam 1	7012.64	7012.90	7013.15	7013.39	7013.63	7013.84	7014.05	7014.23	7014.38	7014.51	7014.60	7014.77	7014.92	7015.04	7015.12	7015.17	7015.17	7015.13	7015.06	7014.95	7014.82
Beam 2	7012.57	7012.82	7013.08	7013.32	7013.55	7013.77	7013.97	7014.16	7014.31	7014.43	7014.53	7014.70	7014.85	7014.96	7015.05	7015.09	7015.09	7015.05	7014.98	7014.87	7014.74
Beam 3	7012.49	7012.75	7013.00	7013.25	7013.48	7013.69	7013.90	7014.08	7014.23	7014.35	7014.45	7014.62	7014.77	7014.89	7014.97	7015.01	7015.01	7014.97	7014.89	7014.79	7014.66
Beam 4	7012.42	7012.67	7012.93	7013.17	7013.40	7013.62	7013.82	7014.01	7014.16	7014.28	7014.37	7014.54	7014.69	7014.81	7014.89	7014.93	7014.93	7014.89	7014.81	7014.71	7014.58
Beam 5	7012.34	7012.60	7012.85	7013.10	7013.33	7013.55	7013.75	7013.93	7014.08	7014.20	7014.30	7014.47	7014.61	7014.73	7014.81	7014.85	7014.85	7014.81	7014.73	7014.62	7014.49
Beam 6 / Cst CL	7012.27	7012.53	7012.78	7013.03	7013.26	7013.47	7013.68	7013.86	7014.01	7014.13	7014.22	7014.39	7014.54	7014.65	7014.73	7014.77	7014.77	7014.73	7014.65	7014.54	7014.41
Beam 7	7012.20	7012.45	7012.71	7012.95	7013.18	7013.40	7013.60	7013.79	7013.93	7014.05	7014.15	7014.31	7014.46	7014.57	7014.65	7014.69	7014.69	7014.65	7014.57	7014.46	7014.33
Beam 8	7012.12	7012.38	7012.63	7012.88	7013.11	7013.32	7013.53	7013.71	7013.86	7013.98	7014.07	7014.24	7014.38	7014.50	7014.57	7014.61	7014.61	7014.57	7014.49	7014.38	7014.25
Beam 9	7012.05	7012.30	7012.56	7012.80	7013.03	7013.25	7013.45	7013.64	7013.78	7013.90	7013.99	7014.16	7014.30	7014.42	7014.49	7014.53	7014.53	7014.49	7014.41	7014.30	7014.16
Beam 10	7011.97	7012.23	7012.48	7012.73	7012.96	7013.18	7013.38	7013.56	7013.71	7013.83	7013.92	7014.08	7014.23	7014.34	7014.42	7014.45	7014.45	7014.40	7014.32	7014.21	7014.08
Beam 11	7011.90	7012.16	7012.41	7012.66	7012.89	7013.10	7013.31	7013.49	7013.63	7013.75	7013.84	7014.01	7014.15	7014.26	7014.34	7014.37	7014.37	7014.32	7014.24	7014.13	7014.00
Rt Edge	7011.83	7012.09	7012.34	7012.59	7012.82	7013.04	7013.24	7013.42	7013.57	7013.68	7013.77	7013.94	7014.08	7014.19	7014.27	7014.30	7014.30	7014.25	7014.17	7014.06	7013.92

	DESIGN	DL	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION BRIDGE GROUP	ROUTE	I-17	F.H.W.A. Arizona Division STATE ARIZ.	PROJECT NO.	017 CN 337	FEDERAL ID NO.	017-B(237)T	SHEET NO.	99	TOTAL SHEETS	123	RECORD DRAWING
	DRAWN	RID	10/23		MILEPOST	337.39		LOCATION	I-17 AIRPORT RD TI UP				DWG NO.	S - 1.21		
	CHECKED	TVW	10/23		STRUCTURE NO.	20256		TRACS NO.	F0362 01C	OF						

HDR, INC.
 20 E. THOMAS ROAD
 SUITE 2500
 PHOENIX, AZ 85012
 TEL: (602) 522-7700



JW POWELL BLVD BRIDGE BORING LOCATION PLAN

Scale: 1" = 10'-0"



GENERAL NOTES:

1. General soil and rock descriptions and indicated strata boundaries on the boring logs are based on engineering interpretations of available subsurface information and may not reflect actual variation in subsurface conditions between individual borings and samples. The locations of contacts between strata shown on the boring logs are in general approximate, and changes between material types may be gradual rather than abrupt. Classification of soil materials was performed in general accordance with ASTM D2488 and is based on field observation unless accompanied by laboratory mechanical analysis. Rock classification is based on ASTM C294. Terminology, abbreviations and symbols used to describe the encountered soil and rock units and rock cores indicated on the boring logs are defined on these sheets.
2. Groundwater depths, if recorded during the field investigation, are shown on the boring logs.
3. Sound engineering judgement was exercised in preparing the subsurface information presented on these sheets. The subsurface information was prepared and is intended for design and estimate purposes. Its presentation on the plans or elsewhere is for the purpose of providing intended users with access to the same information as the State and its designers. This subsurface information is presented in good faith and is not intended as a substitute for personal investigation, independent interpretations, or judgement of the contractor.

4. Drilled shaft excavations may encounter caving sands and gravels with cobbles and boulders and existing man-made fill materials above bedrock at the abutments and piers. The drilled shaft contractor should be prepared to deal with such excavation conditions.
5. Rock core drilling encountered subsurface conditions which varied by depth and boring location. The drilled shaft contractor should anticipate variable rock competence and rock strength conditions in drilled shaft excavations.
6. Penetration resistance measurements recorded on the boring logs are the number of blows of a 140-pound automatic hammer falling 30 inches required to drive the 2-inch O.D. Standard Penetration Test split-spoon sampler performed in general accordance with ASTM D1586.
7. For further information regarding the geotechnical investigation, refer to the Geotechnical Foundation Report for I-17 Airport Road TI UP, ADOT Project No. No. 017 CN 337 F0362 01C, Federal Aid No. 017-B(237)T, Flagstaff, Arizona, dated September 8, 2023, prepared by HDR, Inc.

LEGEND:

B-1 Test Boring Location and Identifier

	DESIGN	TERRACON	10/23		ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION BRIDGE GROUP		ROUTE	I-17	F.H.W.A. Arizona Division STATE ARIZ.	PROJECT NO.	017 CN 337	FEDERAL ID NO.	017-B(237)T	SHEET NO.	100	TOTAL SHEETS	123	RECORD DRAWING	
	DRAWN	RID	10/23		HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL: (602) 522-7700	BORING LOCATION PLAN & NOTES		MILEPOST		337.39	LOCATION	I-17 AIRPORT RD TI UP			DWG NO.	SF - 1.01			
	CHECKED	SC	10/23		STRUCTURE NO.	20256	TRACS NO.	F0362 01C											

GENERAL NOTES

DESCRIPTION OF SYMBOLS AND ABBREVIATIONS

SAMPLING				WATER LEVEL		Water Initially Encountered	FIELD TESTS	(HP)	Hand Penetrometer
						Water Level After a Specified Period of Time		(T)	Torvane
						Water Level After a Specified Period of Time		(b/f)	Standard Penetration Test (blows per foot)

Water levels indicated on the soil boring logs are the levels measured in the borehole at the times indicated. Groundwater level variations will occur over time. In low permeability soils, accurate determination of groundwater levels is not possible with short term water level observations.

DESCRIPTIVE SOIL CLASSIFICATION

Soil classification is based on the Unified Soil Classification System. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; their principal descriptors are: boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are principally described as clays if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their in-place relative density and fine-grained soils on the basis of their consistency.

LOCATION AND ELEVATION NOTES

Unless otherwise noted, Latitude and Longitude are approximately determined using a hand-held GPS device. The accuracy of such devices is variable. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

RELATIVE DENSITY OF COARSE-GRAINED SOILS <small>(More than 50% retained on No. 200 sieve.) Density determined by Standard Penetration Resistance Includes gravels, sands and silts.</small>			CONSISTENCY OF FINE-GRAINED SOILS <small>(50% or more passing the No. 200 sieve.) Consistency determined by laboratory shear strength testing, field visual-manual procedures or standard penetration resistance</small>				
STRENGTH TERMS	Descriptive Term (Density)	Standard Penetration or N-Value Blows/Ft.	Ring Sampler Blows/Ft.	Descriptive Term (Consistency)	Unconfined Compressive Strength, Qu, psf	Standard Penetration or N-Value Blows/Ft.	Ring Sampler Blows/Ft.
		Very Loose	0 - 3	0 - 6	Very Soft	less than 500	0 - 1
	Loose	4 - 9	7 - 18	Soft	500 to 1,000	2 - 4	3 - 4
	Medium Dense	10 - 29	19 - 58	Medium-Stiff	1,000 to 2,000	4 - 8	5 - 9
	Dense	30 - 50	59 - 98	Stiff	2,000 to 4,000	8 - 15	10 - 18
	Very Dense	> 50	≥ 99	Very Stiff	4,000 to 8,000	15 - 30	19 - 42
				Hard	> 8,000	> 30	> 42

RELATIVE PROPORTIONS OF SAND AND GRAVEL

Descriptive Term(s) of other constituents	Percent of Dry Weight
Trace	< 15
With	15 - 29
Modifier	> 30

RELATIVE PROPORTIONS OF FINES

Descriptive Term(s) of other constituents	Percent of Dry Weight
Trace	< 5
With	5 - 12
Modifier	> 12

GRAIN SIZE TERMINOLOGY

Major Component of Sample	Particle Size
Boulders	Over 12 in. (300 mm)
Cobbles	12 in. to 3 in. (300mm to 75mm)
Gravel	3 in. to #4 sieve (75mm to 4.75 mm)
Sand	#4 to #200 sieve (4.75mm to 0.075mm)
Silt or Clay	Passing #200 sieve (0.075mm)

PLASTICITY DESCRIPTION

Term	Plasticity Index
Non-plastic	0
Low	1 - 10
Medium	11 - 30
High	> 30

Terracon

Exhibit: A-6

UNIFIED SOIL CLASSIFICATION SYSTEM

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests ^A			Soil Classification			
			Group Symbol	Group Name ^B		
Coarse Grained Soils: More than 50% retained on No. 200 sieve	Gravels: More than 50% of coarse fraction retained on No. 4 sieve	Clean Gravels: Less than 5% fines ^C	$Cu \geq 4$ and $1 \leq Cc \leq 3$ ^E	GW	Well-graded gravel ^F	
		Gravels with Fines: More than 12% fines ^C	$Cu < 4$ and/or $1 > Cc > 3$ ^E	GP	Poorly graded gravel ^F	
	Sands: 50% or more of coarse fraction passes No. 4 sieve	Clean Sands: Less than 5% fines ^D	$Cu \geq 6$ and $1 \leq Cc \leq 3$ ^E	GM	Silty gravel ^{F,G,H}	
		Sands with Fines: More than 12% fines ^D	Fines classify as CL or CH	GC	Clayey gravel ^{F,G,H}	
Fine-Grained Soils: 50% or more passes the No. 200 sieve	Silts and Clays: Liquid limit less than 50	Inorganic:	$PI > 7$ and plots on or above "A" line ^J	CL	Lean clay ^{K,L,M}	
			$PI < 4$ or plots below "A" line ^J	ML	Silt ^{K,L,M}	
	Organic:	Liquid limit - oven dried	< 0.75	OL	Organic clay ^{K,L,M,N}	
		Liquid limit - not dried		OH	Organic silt ^{K,L,M,O}	
	Silts and Clays: Liquid limit 50 or more	Inorganic:	PI plots on or above "A" line	CH	Fat clay ^{K,L,M}	
			PI plots below "A" line	MH	Elastic Silt ^{K,L,M}	
	Organic:	Liquid limit - oven dried	< 0.75	OH	Organic clay ^{K,L,M,P}	
		Liquid limit - not dried		PT	Organic silt ^{K,L,M,Q}	
	Highly organic soils:	Primarily organic matter, dark in color, and organic odor			PT	Peat

^A Based on the material passing the 3-inch (75-mm) sieve

^B If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

^C Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

^D Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay

$$^E Cu = D_{60}/D_{10} \quad Cc = \frac{(D_{30})^2}{D_{10} \times D_{60}}$$

^F If soil contains ≥ 15% sand, add "with sand" to group name.

^G If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

^H If fines are organic, add "with organic fines" to group name.

^I If soil contains ≥ 15% gravel, add "with gravel" to group name.

^J If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

^K If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

^L If soil contains ≥ 30% plus No. 200 predominantly sand, add "sandy" to group name.

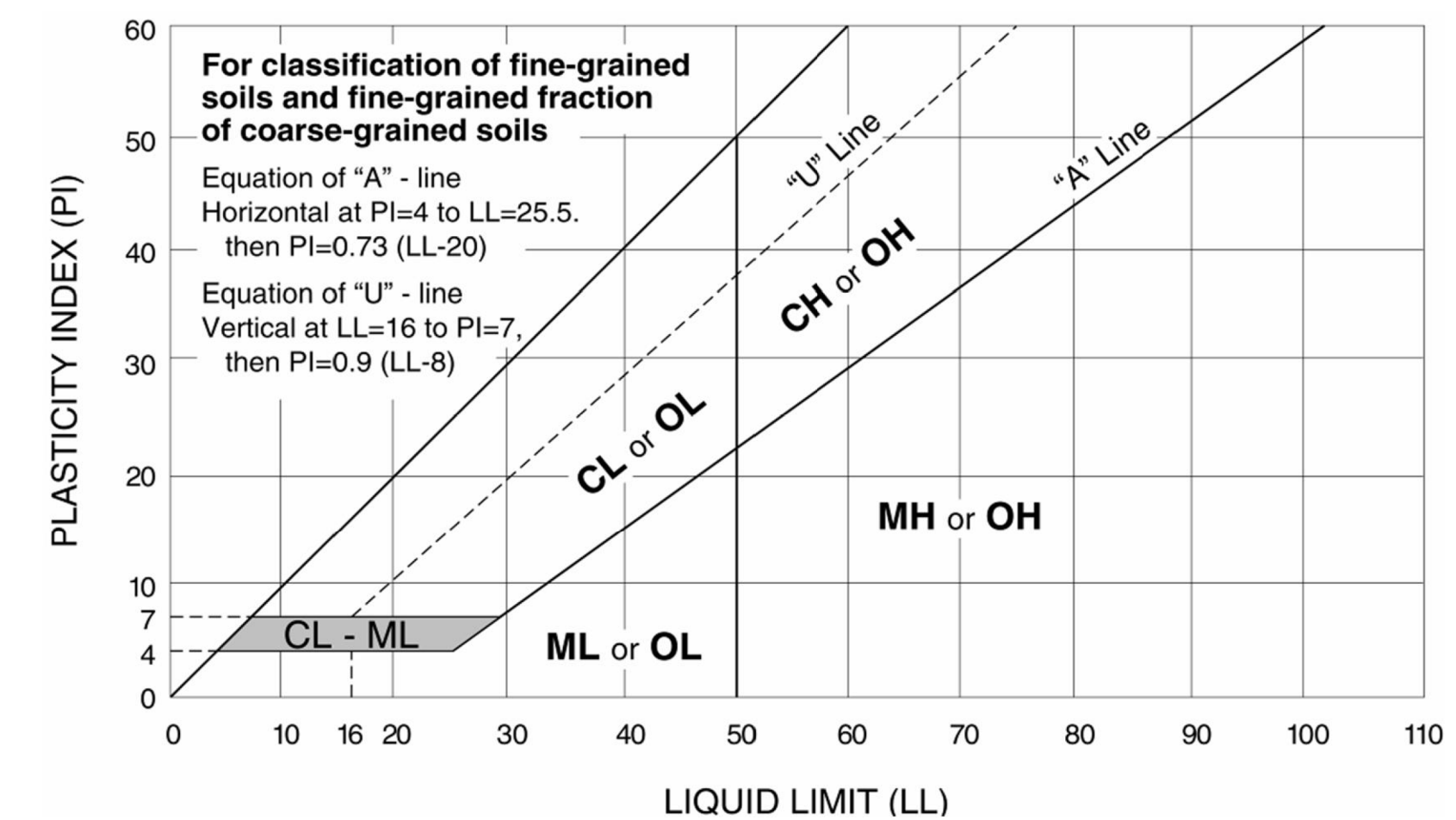
^M If soil contains ≥ 30% plus No. 200, predominantly gravel, add "gravelly" to group name.

^N $PI \geq 4$ and plots on or above "A" line.

^O $PI < 4$ or plots below "A" line.

^P PI plots on or above "A" line.

^Q PI plots below "A" line.



Terracon

Exhibit: A-7

	NAME TERRACON	DATE 10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION BRIDGE GROUP	ROUTE I-17	F.H.W.A. Arizona Division STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 101	TOTAL SHEETS 123	RECORD DRAWING
	DRAWN RID	10/23		MILEPOST 337.39		LOCATION I-17 AIRPORT RD TI UP	DWG NO. SF - 1.02			
	CHECKED SC	10/23		STRUCTURE NO. 20256		TRACS NO. F0362 01C	OF			

HDR

HDR, INC.
20 E. THOMAS ROAD
SUITE 2500
PHOENIX, AZ 85012
TEL (602) 522-7700

ROCK CLASSIFICATION
(Based on ASTM C-294)

Sedimentary Rocks

Sedimentary rocks are stratified materials laid down by water or wind. The sediments may be composed of particles of pre-existing rocks derived by mechanical weathering, evaporation or by chemical or organic origin. The sediments are usually indurated by cementation or compaction.

- Chert:** Very fine-grained siliceous rock composed of micro-crystalline or crypto-crystalline quartz, chalcedony or opal. Chert is various colored, porous to dense, hard and has a conchoidal to splintery fracture.
- Claystone:** Fine-grained rock composed of or derived by erosion of silts and clays or any rock containing clay. Soft massive; gray, black, brown, reddish or green and may contain carbonate minerals.
- Conglomerate:** Rock consisting of a considerable amount of rounded gravel, sand and cobbles with or without interstitial or cementing material. The cementing or interstitial material may be quartz, opal, calcite, dolomite, clay, iron oxides or other materials.
- Dolomite:** A fine-grained carbonate rock consisting of the mineral dolomite [CaMg (CO₃)₂]. May contain noncarbonate impurities such as quartz, chert, clay minerals, organic matter, gypsum and sulfides. Reacts with hydrochloric acid (HCL).
- Limestone:** A fine-grained carbonate rock consisting of the mineral calcite (CaCO₃). May contain noncarbonate impurities such as quartz, chert, clay minerals, organic matter, gypsum and sulfides. Reacts with hydrochloric acid (HCL).
- Sandstone:** Rock consisting of particles of sand with or without interstitial and cementing materials. The cementing or interstitial material may be quartz, opal, calcite, dolomite, clay, iron oxides or other material.
- Shale:** Fine-grained rock composed of, or derived by erosion of silts and clays or any rock containing clay. Shale is hard, platy, or fissile may be gray, black, reddish or green and may contain some carbonate minerals (calcareous shale).
- Siltstone:** Fine grained rock composed of, or derived by erosion of silts or rock containing silt. Siltstones consist predominantly of silt sized particles (0.0625 to 0.002 mm in diameter) and are intermediate rocks between claystones and sandstones, may be gray, black, brown, reddish or green and may contain carbonate minerals.



Exhibit: A-8

DESCRIPTION OF ROCK PROPERTIES

WEATHERING	
Term	Description
Unweathered	No visible sign of rock material weathering, perhaps slight discoloration on major discontinuity surfaces.
Slightly weathered	Discoloration indicates weathering of rock material and discontinuity surfaces. All the rock material may be discolored by weathering and may be somewhat weaker externally than in its fresh condition.
Moderately weathered	Less than half of the rock material is decomposed and/or disintegrated to a soil. Fresh or discolored rock is present either as a continuous framework or as corestones.
Highly weathered	More than half of the rock material is decomposed and/or disintegrated to a soil. Fresh or discolored rock is present either as a discontinuous framework or as corestones.
Completely weathered	All rock material is decomposed and/or disintegrated to soil. The original mass structure is still largely intact.
Residual soil	All rock material is converted to soil. The mass structure and material fabric are destroyed. There is a large change in volume, but the soil has not been significantly transported.

STRENGTH OR HARDNESS		
Description	Field Identification	Uniaxial Compressive Strength, PSI (MPa)
Extremely weak	Indented by thumbnail	40-150 (0.3-1)
Very weak	Crumbles under firm blows with point of geological hammer, can be peeled by a pocket knife	150-700 (1-5)
Weak rock	Can be peeled by a pocket knife with difficulty, shallow indentations made by firm blow with point of geological hammer	700-4,000 (5-30)
Medium strong	Cannot be scraped or peeled with a pocket knife, specimen can be fractured with single firm blow of geological hammer	4,000-7,000 (30-50)
Strong rock	Specimen requires more than one blow of geological hammer to fracture it	7,000-15,000 (50-100)
Very strong	Specimen requires many blows of geological hammer to fracture it	15,000-36,000 (100-250)
Extremely strong	Specimen can only be chipped with geological hammer	>36,000 (>250)

DISCONTINUITY DESCRIPTION			
Fracture Spacing (Joints, Faults, Other Fractures)		Bedding Spacing (May Include Foliation or Banding)	
Description	Spacing	Description	Spacing
Extremely close	< ¼ in (<19 mm)	Laminated	< ½ in (<12 mm)
Very close	¾ in – 2-1/2 in (19 - 60 mm)	Very thin	½ in – 2 in (12 – 50 mm)
Close	2-1/2 in – 8 in (60 – 200 mm)	Thin	2 in – 1 ft (50 – 300 mm)
Moderate	8 in – 2 ft (200 – 600 mm)	Medium	1 ft – 3 ft (300 – 900 mm)
Wide	2 ft – 6 ft (600 mm – 2.0 m)	Thick	3 ft – 10 ft (900 mm – 3 m)
Very Wide	6 ft – 20 ft (2.0 – 6 m)	Massive	> 10 ft (3 m)

Discontinuity Orientation (Angle): Measure the angle of discontinuity relative to a plane perpendicular to the longitudinal axis of the core. (For most cases, the core axis is vertical; therefore, the plane perpendicular to the core axis is horizontal.) For example, a horizontal bedding plane would have a 0 degree angle.

ROCK QUALITY DESIGNATION (RQD*)	
Description	RQD Value (%)
Very Poor	0 - 25
Poor	25 - 50
Fair	50 - 75
Good	75 - 90
Excellent	90 - 100

*The combined length of all sound and intact core segments equal to or greater than 4 inches in length, expressed as a percentage of the total core run length.

Reference: U.S. Department of Transportation, Federal Highway Administration, Publication No FHWA-NHI-10-034, December 2009
Technical Manual for Design and Construction of Road Tunnels – Civil Elements



Exhibit: A-9

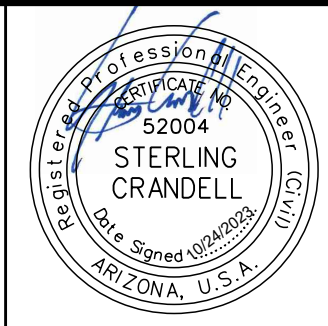
	DESIGN	NAME	DATE	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION BRIDGE GROUP	ROUTE	F.H.W.A. Arizona Division STATE ARIZ.	PROJECT NO.	FEDERAL ID NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
	DRAWN	TERRACON	10/23		I-17		017 CN 337	017-B(237)T	102	123	
	CHECKED	RID	10/23		MILEPOST						
		SC	10/23	FOUNDATION DATA EXPLANATIONS - 2	337.39	LOCATION I-17 AIRPORT RD TI UP			DWG NO. SF - 1.03 _____ OF _____		
		SC	10/23		STRUCTURE NO.		20256	TRACS NO.		F0362 01C	
HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL (602) 522-7700											

BORING LOG NO. B-1													Page 1 of 2		
PROJECT: I-17 Airport Rd TI UP Bridge Replacement						CLIENT: HDR Engineering, Inc. Phoenix, Arizona									
SITE: I-17 & Airport Road Flagstaff, Arizona															
GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 35.1397° Longitude: -111.6851° Northing: 1506868.32874 Easting: 769557.85964 Approximate Surface Elev.: 7009.5 (Ft.) +/-	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	RECOVERY (%)	ROD (%)	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES	
								TEST TYPE	COMPRESSIVE STRENGTH (psi)	STRAIN (%)					
	CLAYEY SAND WITH GRAVEL (SC) fine to coarse sand, fine gravel, subangular, low to medium plasticity, brown to tan, damp, loose very dense, dolomite residual soil material DOLOMITE tan, fine-grained, extremely fractured, very close fracture spacing, completely weathered, very weak rock, small HCl reaction switched to HQ3 coring methods at 10 feet 5YR 8/4 moderate orangish pink, fine to medium-grained, slightly fractured, moderate spacing, massive bedding, moderately weathered, strong rock, common rough, planar, open joint surfaces from 10 to 48.5 feet highly fractured, very close fracture spacing, intensely fractured, common horizontal fractures from 12 to 22 feet slightly weathered highly weathered, at 21 feet slightly rough, planar, tight joint surface at 20 degrees slightly weathered, intensely fractured to gravel from 22 to 23 feet, highly fractured, close spacing from 23 to 27 feet 10YR 8/2 very pale orange	9-5-4 N=9													
		5-50/2"													
		50/4"													
		50/2"													
			83	58	UC	5347	0.7	3.1	135						
	98	48													
	100	72	UC	2021	0.7	5.5	127								
	100	70	UC	4813	0.6	4.2	132								
Stratification lines are approximate. In-situ, the transition may be gradual.													Hammer Type: Automatic		
Advancement Method: 6" O.D. TUBEX and HQ3 Rock Coring			See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (if any).			Notes:									
Abandonment Method: Boring backfilled with auger cuttings upon completion.			Elevations were provided by others.												
WATER LEVEL OBSERVATIONS Groundwater not encountered			 4685 S Ash Ave, Ste H-4 Tempe, AZ			Boring Started: 10-20-2022			Boring Completed: 10-20-2022						
						Drill Rig: CME-75			Driller: GSI						
			Project No.: 65215237			Exhibit A-10									

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL: 65215237 I-17 AIRPORT RD TI UP BRIDGE REPLACEMENT. GDT: 1/16/23

BORING LOG NO. B-1													Page 2 of 2	
PROJECT: I-17 Airport Rd TI UP Bridge Replacement						CLIENT: HDR Engineering, Inc. Phoenix, Arizona								
SITE: I-17 & Airport Road Flagstaff, Arizona														
GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 35.1397° Longitude: -111.6851° Northing: 1506868.32874 Easting: 769557.85964 Approximate Surface Elev.: 7009.5 (Ft.) +/-	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	RECOVERY (%)	ROD (%)	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
								TEST TYPE	COMPRESSIVE STRENGTH (psi)	STRAIN (%)				
	common calcite voids up to 0.5 inches from 27 to 29.6 feet common horizontal fractures, moderate spacing, rough, planar, open to tight joint surfaces from 27.3 to 30.6 feet common horizontal fractures from 32.3 to 35 feet vertical fracture occurring from 35.2 to 35.9 feet highly weathered, common slightly rough, planar, tight joint surfaces, interlayered with calcite crystals from 39.5 to 40.2 feet slightly weathered sound, strong rock, no fractures noted from 42 to 47 feet highly fractured, common horizontal fractures from 48 to 49.9 feet 50.0 chemically brecciated dolomite, 1-YR 6/2 pale yellowish brown, 1-YR 6/6 dark yellowish brown, 10YR 8/2 very pale orange, soft sediment deformation, common calcite voids at 48.9 rough, planar, open joint face at 45 degrees Boring Terminated at 50 Feet	30												
			93	82	UC	3753	0.8	3.9	130					
			100	75	UC	3168	0.5	6.2	133					
			100	83										
			100	100										
	100	78												
Stratification lines are approximate. In-situ, the transition may be gradual.													Hammer Type: Automatic	
Advancement Method: 6" O.D. TUBEX and HQ3 Rock Coring			See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (if any).			Notes:								
Abandonment Method: Boring backfilled with auger cuttings upon completion.			Elevations were provided by others.											
WATER LEVEL OBSERVATIONS Groundwater not encountered			 4685 S Ash Ave, Ste H-4 Tempe, AZ			Boring Started: 10-20-2022			Boring Completed: 10-20-2022					
						Drill Rig: CME-75			Driller: GSI					
			Project No.: 65215237			Exhibit A-11								


THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL: 65215237 I-17 AIRPORT RD TI UP BRIDGE REPLACEMENT. GDT: 1/16/23



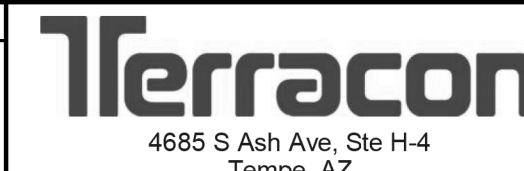
DESIGN	TERRACON	10/23
DRAWN	RID	10/23
CHECKED	SC	10/23

HDR, INC.
20 E. THOMAS ROAD
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PHOENIX, AZ 85012
TEL: (602) 522-7700

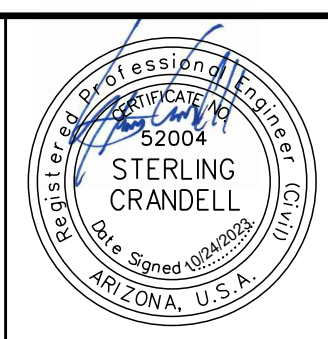
ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION BRIDGE GROUP		ROUTE I-17	F.H.W.A. Arizona Division	STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 103	TOTAL SHEETS 123	RECORD DRAWING
FOUNDATION DATA B-1		MILEPOST 337.39	LOCATION I-17 AIRPORT RD TI UP		TRACS NO. F0362 01C		DWG NO. SF - 1.04 OF		
		STRUCTURE NO. 20256							

BORING LOG NO. B-3												Page 1 of 2		
PROJECT: I-17 Airport Rd TI UP Bridge Replacement						CLIENT: HDR Engineering, Inc. Phoenix, Arizona								
SITE: I-17 & Airport Road Flagstaff, Arizona														
GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 35.1397° Longitude: -111.6847° Northing: 1506869.72584 Easting: 769677.61227 Approximate Surface Elev.: 6990.0 (Ft.) +/-	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	RECOVERY (%)	ROD (%)	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
								TEST TYPE	COMPRESSIVE STRENGTH (psi)	STRAIN (%)				
		2.0												
	SILTY SAND WITH GRAVEL (SM) , fine to coarse grained, subangular, nonplastic, dark brown, damp				50/5"									
	DOLOMITE , tan, highly to completely weathered, weak to very weak				50/4"									
	switched to HQ3 coring methods at 4 feet, 10YR 8/2 very pale orange, moderately weathered, strong rock, massive bedding, highly fractured	5				71	0							
	intensely fractured to gravel from 4.4 to 4.6 feet													
	highly fractured, very close spacing, slightly rough, planar, tight to open joint surfaces at 5 feet rough, undulating, open joint surface at 60 degrees calcite voids, intensely fractured, extremely close spacing, common slightly rough to rough, planar, open joint surfaces, 10 mm to 50 mm aperture	10				62	25							
	weak rock, common horizontal fractures, planar, open joints from 6.5 to 10.1 feet, calcite voids from 6.7 to 9.7 feet													
	strong rock slightly weathered, highly fractured, very close fracture spacing from 11 to 12 feet, moderately fractured, close spacing from 12 to 16 feet, common rough, planar, open joints at 88 to 90 degrees with occasional soft clay infill	15				100	92	UC	2832	0.6	7.9	125		
	occasional calcite voids from 14 to 16 feet													
	5B 7/1 light bluish gray, crystalline rock, intensely fractured, common horizontal fractures, rough, planar, open joints with soft clay infill from 19 to 19.4 feet	20				98	88	UC	10744	0.7	5.6	138		
	10YR 8/2 very pale orange moderately weathered, common calcite voids from 21 to 26 feet													
	intensely fractured, very close spacing, common slightly rough	25				100	82	UC	5906	0.5	10.2	123		
Stratification lines are approximate. In-situ, the transition may be gradual.												Hammer Type: Automatic		
Advancement Method: 6" O.D. TUBEX and HQ3 Rock Coring			See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (if any).			Notes:								
Abandonment Method: Boring backfilled with auger cuttings upon completion.			Elevations were provided by others.											
WATER LEVEL OBSERVATIONS Groundwater not encountered						Boring Started: 10-25-2022		Boring Completed: 10-27-2022						
						Drill Rig: CME-75		Driller: GSI						
						Project No.: 65215237		Exhibit A-14						

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO. WELL: 65215237 I-17 AIRPORT RD TI UP BRIDGE REPLACEMENT. TERRACON DATATEMPLATE.GDT: 1/16/23

BORING LOG NO. B-3												Page 2 of 2		
PROJECT: I-17 Airport Rd TI UP Bridge Replacement						CLIENT: HDR Engineering, Inc. Phoenix, Arizona								
SITE: I-17 & Airport Road Flagstaff, Arizona														
GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 35.1397° Longitude: -111.6847° Northing: 1506869.72584 Easting: 769677.61227 Approximate Surface Elev.: 6990.0 (Ft.) +/-	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	RECOVERY (%)	ROD (%)	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
								TEST TYPE	COMPRESSIVE STRENGTH (psi)	STRAIN (%)				
						87	43	UC	3162	0.9	5.9	138		
	to rough, planar joint surfaces at roughly 40 to 60 degrees, open 5 mm from 21.4 to 22.4 feet					100	67	UC	3027	0.7	5.5	139		
	highly fractured, common rough, planar, open joint surfaces, 5 to 10 mm aperture from 22.8 to 24.9 feet	30												
	voids up to 2 inches in size from 24.9 to 26 feet													
	chemically brecciated dolomite, 5Y 5/2 light olive gray, 10Y 6/6 dark yellowish orange, 10YR 8/2 very pale orange, slightly weathered, soft sediment deformation, thick bedding from 26 to 30 feet, intensely fractured, common rough, planar, open joint surfaces, 10 to 25 mm aperture, intensely fractured to gravel from 27 to 27.2 feet	35				97	73	UC	4781	1	4.8	131		
	sound rock from 28.5 to 29 feet													
	highly fractured, very close spacing, from 29 to 30 feet, common slightly rough to rough, planar, open joint surfaces at 80 to 90 degrees, 5 to 10 mm aperture	40				100	100							
	10YR 8/4 moderate orange pink, fine to medium grained crystal clast up to 0.5 inches, moderately fractured from 31 to 33 feet, intensely fractured to small gravels from 33 to 33.2 feet, highly fractured from 33.2 to 36 feet, common rough to slightly rough, planar, open joint surfaces, 13 mm aperture													
	10YR 8/2 very pale orange, common horizontal fractures, slightly rough, planar, open to tight from 37.6 to 40.4 feet	45				98	70							
	common horizontal fractures, rough, planar, open joint surfaces from 41.3 to 45 feet													
	Boring Terminated at 50 Feet	50				98	83							
Stratification lines are approximate. In-situ, the transition may be gradual.												Hammer Type: Automatic		
Advancement Method: 6" O.D. TUBEX and HQ3 Rock Coring			See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (if any).			Notes:								
Abandonment Method: Boring backfilled with auger cuttings upon completion.			Elevations were provided by others.											
WATER LEVEL OBSERVATIONS Groundwater not encountered						Boring Started: 10-25-2022		Boring Completed: 10-27-2022						
						Drill Rig: CME-75		Driller: GSI						
						Project No.: 65215237		Exhibit A-15						

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO. WELL: 65215237 I-17 AIRPORT RD TI UP BRIDGE REPLACEMENT. TERRACON DATATEMPLATE.GDT: 1/16/23



NAME	DATE
DESIGN TERRACON	10/23
DRAWN RID	10/23
CHECKED SC	10/23

HDR, INC.
20 E. THOMAS ROAD
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PHOENIX, AZ 85012
TEL: (602) 522-7700

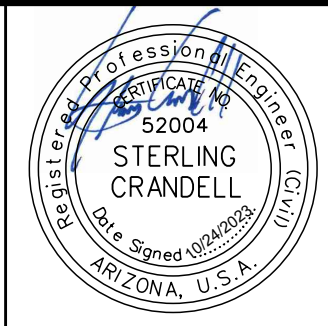
ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION BRIDGE GROUP		ROUTE I-17	F.H.W.A. Arizona Division	STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 105	TOTAL SHEETS 123	RECORD DRAWING	
FOUNDATION DATA B-3		MILEPOST 337.39	LOCATION I-17 AIRPORT RD TI UP			DWG NO. SF - 1.06		OF		
		STRUCTURE NO. 20256	TRACS NO. F0362 01C							

BORING LOG NO. B-4												Page 1 of 2	
PROJECT: I-17 Airport Rd TI UP Bridge Replacement						CLIENT: HDR Engineering, Inc. Phoenix, Arizona							
SITE: I-17 & Airport Road Flagstaff, Arizona													
GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 35.1395° Longitude: -111.6847° Northing: 1506817.44954 Easting: 769678.74151 Approximate Surface Elev.: 6989.9 (Ft.) +/-	DEPTH (FL.)	WATER LEVEL OBSERVATIONS	FIELD TEST RESULTS	RECOVERY (%)	ROD (%)	STRENGTH TEST			WATER CONTENT (%)	ATTERBERG LIMITS	PERCENT FINES	
							TEST TYPE	COMPRESSIVE STRENGTH (psf)	STRAIN (%)				DRY UNIT WEIGHT (pcf)
		1.0											
	SILTY SAND WITH GRAVEL (SM) , fine to medium grained, nonplastic, dark brown, damp, possible dolomite residual soil material												
	DOLOMITE , tan, highly to completely weathered, weak rock												
	switched to HQ3 coring methods at 4 feet, 10YR 8/2 very pale orange, moderately weathered, strong rock, fine to medium grained, massive bedding, intensely fractured, extremely close spacing	5		50/1"	83	42	UC	5993	1	9.3	124		
	common horizontal fractures, rough, planar, open joint surfaces from 4.4 to 5.5 feet, fractured to gravel from 5 to 6 feet porous crystal voids from 6 to 8.5 feet							6440	0.7	8.2	124		
	intensely fractured, extremely close spacing from 8.5 to 12.3 feet, highly fractured, very close spacing from 12.3 to 13.6 feet, common rough, open planar, open joint surfaces	10						5354	0.7	9.9	120		
	intensely fractured, common rough, planar, open joint surfaces at 0 to 20 degrees, 5 to 13 mm aperture	15						9940	1	4.6	139		
	from 18.3 to 19.1 feet highly weathered crystalline rock, intensely fractured												
	slightly weathered	20						11003	0.7	6.4	135		
	occasional voids, interlayered with chemically brecciated dolomite, highly fractured, common rough, planar, open joint surfaces at 85 to 90 degrees, 5 to 13 mm aperture	25						5504	0.8	7.0	132		
	chemically brecciated dolomite,												
Stratification lines are approximate. In-situ, the transition may be gradual.												Hammer Type: Automatic	
Advancement Method: 6" O.D. TUBEX and HQ3 Rock Coring				See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (if any).				Notes: Note: Two unconfined compression tests were performed in the 6- to 11-foot run.					
Abandonment Method: Boring backfilled with auger cuttings upon completion.				Elevations were provided by others.									
WATER LEVEL OBSERVATIONS Groundwater not encountered				Terracon 4685 S Ash Ave, Ste H-4 Tempe, AZ				Boring Started: 10-26-2022		Boring Completed: 10-27-2022			
								Drill Rig: CME-75		Driller: GSI			
				Project No.: 65215237		Exhibit A-16							

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 65215237 I-17 AIRPORT RD TI UP BRIDGE REPLACEMENT. TERRACON DATATEMPLATE.GDT 1/19/23

BORING LOG NO. B-4												Page 2 of 2	
PROJECT: I-17 Airport Rd TI UP Bridge Replacement						CLIENT: HDR Engineering, Inc. Phoenix, Arizona							
SITE: I-17 & Airport Road Flagstaff, Arizona													
GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 35.1395° Longitude: -111.6847° Northing: 1506817.44954 Easting: 769678.74151 Approximate Surface Elev.: 6989.9 (Ft.) +/-	DEPTH (FL.)	WATER LEVEL OBSERVATIONS	FIELD TEST RESULTS	RECOVERY (%)	ROD (%)	STRENGTH TEST			WATER CONTENT (%)	ATTERBERG LIMITS	PERCENT FINES	
							TEST TYPE	COMPRESSIVE STRENGTH (psf)	STRAIN (%)				DRY UNIT WEIGHT (pcf)
					94	44	UC	5128	0.8	5.5	133		
	5Y 5/2 light olive gray, 10YR 6/6 dark yellowish orange, 10YR 8/2 very pale orange, soft sediment deformation from 26 to 30 feet, highly fractured from common rough, planar, open joint faces	30			100	25	UC	8161	1	7.7	127		
	DOLOMITE , tan, highly to completely weathered, weak rock (continued)												
	intensely fractured, extremely close spacing, rough, open, planar joint surfaces at 85 to 90 degrees from 29 to 31 feet from 31 to 36 feet interlayered with chemically brecciated dolomite and soft sediment deformation, highly to intensely fractured, very close to close spacing, rough, planar, open, 5 to 15 mm aperture	35			97	78	UC	6806	0.7	8.9	127		
	moderately fractured, moderate spacing												
	interlayered with chemically brecciated dolomite and soft sediment deformation from 40 to 41 feet	40											
	slightly fractured, wide spacing, occasional calcite voids from 41 to 46 feet				100	100							
	interlayered with chemically brecciated dolomite from 44.6 to 46 feet	45											
	intensely fractured, extremely close spacing, rough, planar, open joint surfaces, 5 to 13 mm aperture from 48 to 50 feet	50			100	52	UC	6989	0.9	8.7	124		
	5R 6/6 light red Boring Terminated at 50 Feet												
Stratification lines are approximate. In-situ, the transition may be gradual.												Hammer Type: Automatic	
Advancement Method: 6" O.D. TUBEX and HQ3 Rock Coring				See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (if any).				Notes:					
Abandonment Method: Boring backfilled with auger cuttings upon completion.				Elevations were provided by others.									
WATER LEVEL OBSERVATIONS Groundwater not encountered				Terracon 4685 S Ash Ave, Ste H-4 Tempe, AZ				Boring Started: 10-26-2022		Boring Completed: 10-27-2022			
								Drill Rig: CME-75		Driller: GSI			
				Project No.: 65215237		Exhibit A-17							

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 65215237 I-17 AIRPORT RD TI UP BRIDGE REPLACEMENT. TERRACON DATATEMPLATE.GDT 1/19/23



DESIGN	NAME	DATE
DRAWN	TERRACON	10/23
CHECKED	RID	10/23
	SC	10/23

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ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION BRIDGE GROUP		ROUTE I-17	F.H.W.A. Arizona Division	STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 106	TOTAL SHEETS 123	RECORD DRAWING
FOUNDATION DATA B-4		MILEPOST 337.39	LOCATION I-17 AIRPORT RD TI UP						
		STRUCTURE NO. 20256	TRACS NO. F0362 01C		DWG NO. SF - 1.07 OF				

BORING LOG NO. B-5												Page 1 of 2	
PROJECT: I-17 Airport Rd TI UP Bridge Replacement						CLIENT: HDR Engineering, Inc. Phoenix, Arizona							
SITE: I-17 & Airport Road Flagstaff, Arizona													
GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 35.1396° Longitude: -111.6843° Northing: 1506848.66956 Easting: 769807.39964 Approximate Surface Elev.: 7010.0 (Ft.) +/-	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	RECOVERY (%)	ROD (%)	STRENGTH TEST			ATTERBERG LIMITS LL-PL-PI	PERCENT FINES	
								TEST TYPE	COMPRESSIVE STRENGTH (psf)	STRAIN (%)			WATER CONTENT (%)
	1.0	CLAYEY SAND WITH GRAVEL (SC) fine to coarse grained, low plasticity, dark brown, damp											
	4.0	SILTY SAND WITH GRAVEL (SM), tan, dolomite residual soil material			23-21-50/5"								
		DOLOMITE very dense, tan, highly to completely weathered, weak rock			50/4"								
					50/5"								
		no sample recovery, switched to HQ3 coring methods at 10 feet 5YR 8/4 moderate orange pink, moderately weathered, medium strong, fine grained, massive bedding, slightly fractured, wide spacing at 10.6 rough, planar open joint surface at 90 degrees, 13 to 25 mm aperture 10YR 8/2 very pale orange, slightly weathered moderately weathered, intensely fractured, extremely close spacing, rough, planar, open joint surfaces highly weathered, coarse grained crystal clasts up to 0.25 inches from 14 to 16 feet strong rock, interlayered with porous rock, common voids up to 0.25 inches from 16 to 18.8 feet intensely fractured, extremely close spacing from 17.6 to 22.4 feet increase in porosity slightly weathered, slightly fractured, common voids up to 1 inch in size intensely fractured to gravel from 24.8 to 24.9 highly fractured, very close to			50/1"	92	58						
					100	39	UC	4051	0.5	11.5	121		
					100	25							
					100	80	UC	7291	1	7.1	124		

Stratification lines are approximate. In-situ, the transition may be gradual. Hammer Type: Automatic

Advancement Method: 6" O.D. TUBEX and HQ3 Rock Coring	See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (if any).	Notes:
Abandonment Method: Boring backfilled with auger cuttings upon completion.	Elevations were provided by others.	
WATER LEVEL OBSERVATIONS Groundwater not encountered		Boring Started: 10-18-2022 Boring Completed: 10-18-2022 Drill Rig: CME-75 Driller: GSI Project No.: 65215237 Exhibit A-18

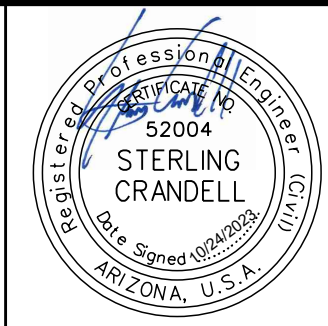
BORING LOG NO. B-5												Page 2 of 2	
PROJECT: I-17 Airport Rd TI UP Bridge Replacement						CLIENT: HDR Engineering, Inc. Phoenix, Arizona							
SITE: I-17 & Airport Road Flagstaff, Arizona													
GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 35.1396° Longitude: -111.6843° Northing: 1506848.66956 Easting: 769807.39964 Approximate Surface Elev.: 7010.0 (Ft.) +/-	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	RECOVERY (%)	ROD (%)	STRENGTH TEST			ATTERBERG LIMITS LL-PL-PI	PERCENT FINES	
								TEST TYPE	COMPRESSIVE STRENGTH (psf)	STRAIN (%)			WATER CONTENT (%)
					close spacing, typically slightly rough, planar, open, joint surfaces, calcite voids up to 0.25 inches from 26 to 46 feet decrease in porosity, voids, and crystal clasts	100	82						
					highly weathered slightly weathered	92	60	UC	7955	0.7	6.9	134	
					highly weathered, increase in crystal clasts from 38.8 to 43.7 feet slightly weathered	100	70	UC	4221	0.5	7.9	124	
					at 43.8 feet slightly rough, planar, tight joint surface at 45 degrees	95	75						
					chemically brecciated dolomite, 10YR 6/2 pale yellowish orange, 10YR 6/6 dark yellowish orange, 10YR 8/2 very pale orange, soft sediment deformation, thick bedding, highly to moderately fractured, very close to close spacing, common rough to slightly rough, planar, open joint surfaces from 46 to 50 feet Boring Terminated at 50 Feet	100	100	UC	3584	0.7	3.3	137	

Stratification lines are approximate. In-situ, the transition may be gradual. Hammer Type: Automatic

Advancement Method: 6" O.D. TUBEX and HQ3 Rock Coring	See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (if any).	Notes:
Abandonment Method: Boring backfilled with auger cuttings upon completion.	Elevations were provided by others.	
WATER LEVEL OBSERVATIONS Groundwater not encountered		Boring Started: 10-18-2022 Boring Completed: 10-18-2022 Drill Rig: CME-75 Driller: GSI Project No.: 65215237 Exhibit A-19

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL: 65215237 I-17 AIRPORT RD TI UP BRIDGE REPLACEMENT. TERRACON DATATEMPLATE.GDT: 1/16/23

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL: 65215237 I-17 AIRPORT RD TI UP BRIDGE REPLACEMENT. TERRACON DATATEMPLATE.GDT: 1/16/23



DESIGN	TERRACON	10/23
DRAWN	RID	10/23
CHECKED	SC	10/23

HDR, INC.
20 E. THOMAS ROAD
SUITE 2500
PHOENIX, AZ 85012
TEL: (602) 522-7700

ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION BRIDGE GROUP		ROUTE I-17	F.H.W.A. Arizona Division	STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 107	TOTAL SHEETS 123	RECORD DRAWING
FOUNDATION DATA B-5		MILEPOST 337.39	LOCATION I-17 AIRPORT RD TI UP		TRACS NO. F0362 01C		DWG NO. SF - 1.08 OF		
		STRUCTURE NO. 20256							

BORING LOG NO. B-6													Page 1 of 2	
PROJECT: I-17 Airport Rd TI UP Bridge Replacement						CLIENT: HDR Engineering, Inc. Phoenix, Arizona								
SITE: I-17 & Airport Road Flagstaff, Arizona														
GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 35.1395° Longitude: -111.6844° Northing: 1506800.53846 Easting: 769793.90927 Approximate Surface Elev.: 7014.0 (Ft.) +/-	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	RECOVERY (%)	ROD (%)	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
								TEST TYPE	COMPRESSIVE STRENGTH (psi)	STRAIN (%)				
<p>CLAYEY SAND, fine to coarse grained, low plasticity, brown, damp</p> <p>DOLOMITE, tan, completely weathered, very weak rock</p> <p>weak rock</p> <p>no sample recovery</p> <p>no sample recovery, switched to HQ3 coring methods at 9 feet 5YR 8/4 moderate orange pink, slightly weathered, strong rock, fine to medium grained, thick bedding, highly to moderately fractured, very close to close spacing, slightly rough, planar, open at 80 to 90 degree from 9 to 16 feet</p> <p>10YR 8/2 very pale orange, highly to intensely fractured, very close spacing, slightly rough to rough, planar, open joint surfaces, 2 to 5 mm aperture, with clay infill from 16 to 19.2 feet moderately weathered slightly weathered</p> <p>moderately fractured, close spacing from 21 to 24.6</p> <p>highly weathered, intensely fractured to gravels from 24.6 to 24.8 feet slightly weathered, highly</p>	7013+/-	1.0			40-50/1"									
	50/2"													
	50/1"													
	50/0"	92	79	UC	3218	0.7	6.4	125						
		100	98	UC	5437	0.7	9.3	117						
	100	80	UC	4045	0.7	10.7	110							
	100	97												

Stratification lines are approximate. In-situ, the transition may be gradual. Hammer Type: Automatic

Advancement Method: 6" O.D. TUBEX and HQ3 Rock Coring	See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (if any).	Notes:
Abandonment Method: Boring backfilled with auger cuttings upon completion.	Elevations were provided by others.	
WATER LEVEL OBSERVATIONS Groundwater not encountered	Terracon 4685 S Ash Ave, Ste H-4 Tempe, AZ	Boring Started: 10-19-2022 Drill Rig: CME-75 Project No.: 65215237
		Boring Completed: 10-19-2022 Driller: GSI Exhibit A-20

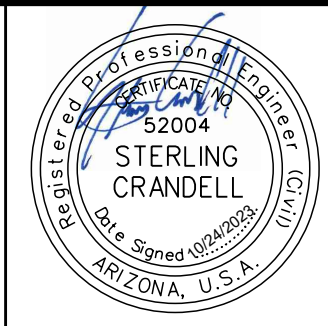
THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL: 65215237 I-17 AIRPORT RD TI UP BRIDGE REPLACEMENT. DATE: 11/16/23

BORING LOG NO. B-6													Page 2 of 2	
PROJECT: I-17 Airport Rd TI UP Bridge Replacement						CLIENT: HDR Engineering, Inc. Phoenix, Arizona								
SITE: I-17 & Airport Road Flagstaff, Arizona														
GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 35.1395° Longitude: -111.6844° Northing: 1506800.53846 Easting: 769793.90927 Approximate Surface Elev.: 7014.0 (Ft.) +/-	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	RECOVERY (%)	ROD (%)	STRENGTH TEST			WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
								TEST TYPE	COMPRESSIVE STRENGTH (psi)	STRAIN (%)				
<p>fractured, very close spacing, slightly rough to rough, planar, open joint surfaces at 85 to 90 degrees, 2 to 5 mm aperture from 24.8 to 31 feet common crystal voids, porous rock from 26 to 34 feet</p> <p>highly to intensely fractured, rough, planar, open, occasional gravel infill from 31 to 36 feet</p> <p>at 36.6 joint set: rough, planar, open, 10 to 25 mm aperture, spaced 2 inches decrease in porosity, occasional crystal voids, sound rock from 37.1 to 41 feet</p> <p>intensely fractured, extremely close spacing, highly weathered, increase in crystal clasts and voids from 42.3 to 42.9 slightly weathered, sound rock from 42.8 to 50 feet</p>	6964+/-	30				98	88							
	35	100	83	UC	5391	0.7	10.0	115						
	40	100	92											
	45	95	85											
	50	100	100											
50.0 Boring Terminated at 50 Feet														

Stratification lines are approximate. In-situ, the transition may be gradual. Hammer Type: Automatic

Advancement Method: 6" O.D. TUBEX and HQ3 Rock Coring	See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (if any).	Notes:
Abandonment Method: Boring backfilled with auger cuttings upon completion.	Elevations were provided by others.	
WATER LEVEL OBSERVATIONS Groundwater not encountered	Terracon 4685 S Ash Ave, Ste H-4 Tempe, AZ	Boring Started: 10-19-2022 Drill Rig: CME-75 Project No.: 65215237
		Boring Completed: 10-19-2022 Driller: GSI Exhibit A-21

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL: 65215237 I-17 AIRPORT RD TI UP BRIDGE REPLACEMENT. DATE: 11/16/23



DESIGN	TERRACON	10/23
DRAWN	RID	10/23
CHECKED	SC	10/23

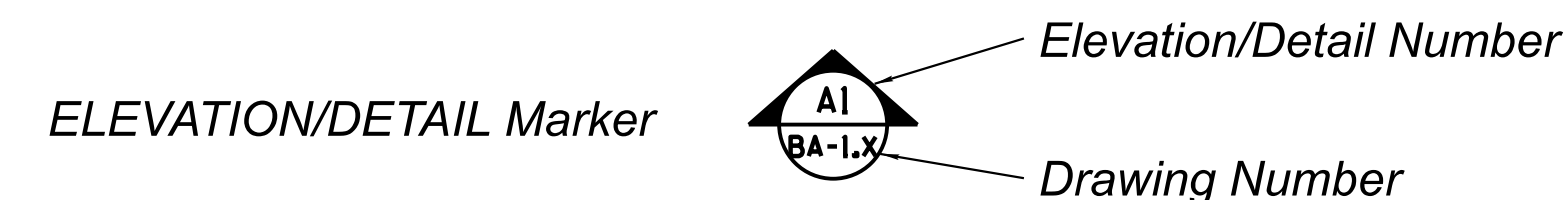
HDR, INC.
20 E. THOMAS ROAD
SUITE 2500
PHOENIX, AZ 85012
TEL: (602) 522-7700

ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION BRIDGE GROUP	ROUTE I-17	F.H.W.A. Arizona Division	STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 108	TOTAL SHEETS 123	RECORD DRAWING
FOUNDATION DATA B-6	MILEPOST 337.39	LOCATION I-17 AIRPORT RD TI UP			DWG NO. SF - 1.09		OF	
	STRUCTURE NO. 20256	TRACS NO. F0362 01C						

GENERAL RUSTICATION NOTES:

1. Dimensions shall not be scaled from drawings.
2. No separate measurement or payment will be made for wall and abutment rustication, the cost being considered as included in contract items.
3. No separate measurement or payment will be made for barrier and pier rustication, the cost being considered as included in contract items.
4. This series of drawings covers only graphics and/or surface treatment that are to be placed on surfaces of herein mentioned components. For specific layout and construction details of walls, abutments, etc, refer to Structural and/or Civil Plans and Details contained within this document.
5. Concrete barriers and piers receiving rustication shall be fixed form.
6. The contractor shall determine the number and size of formliners.
7. The method of securing the formliners to supporting formwork and the use of formliner releasing agents shall comply with the Manufacturer's recommendations.
8. All joint material, fasteners, care and cleaning of liners shall comply with the Manufacturer's instructions.
9. Formwork shall be fabricated to support the formliners and related accessories with minimum deflection.
10. The method of sealing form joints shall prevent the loss of water during the placement of wet concrete.
11. Concrete shall be placed and consolidated per ADOT standards.
12. Concrete shall be placed and consolidated such as to minimize air and water pockets per ADOT standards.
13. Forms and liners shall be removed such as to minimize damage to surfaces and textural impressions.
14. The Engineer shall be notified when surface defect occurs.
15. Adjustments to rustication details will require the Engineer's approval.
16. The contractor shall submit shop drawings of all graphics for the Engineer's approval.
17. All wall and abutment surfaces shall receive rustication unless noted otherwise.
18. All surfaces are to receive paint as noted.
19. The paint colors to be used are as shown on drawings.
20. Rustication shall extend a minimum of 2'-0" below finish grade.
21. The contractor shall submit full size concrete mock-ups of all icons and patterns to the Aesthetics Designer, through the Engineer, for review and approval prior to construction.
22. Refer to elevation sheets for rustication textures and graphics for bridge, barrier, and walls. See Structural and/or Civil Plans and Details for all construction.
23. Details are not drawn to scale unless noted.
24. Any grid lines provided on details or elevations are provided for contractors use when spacing wall graphics and for proportional layout purposes.
25. Contractor shall submit shop drawings and texture samples to the Engineer for the ADOT representatives review and approval prior to construction of any bridge or wall rustication.
26. Relief depths and or heights shown on the details have been referenced from a finish elevation of zero ("0").
27. Contractor shall use standard rustication details to ease transitions between texture and paint colors if needed to create architectural relief shown on plans and details.
28. Where graphics occur on any curved surface contractor shall ensure a smooth transition between rustication graphics.
29. The intent for the color scheme on this new bridge is to match the existing bridge at I-40 & 4th St. The contractor is to provide 'Paint Draw Downs' prior to any mock-ups for ADOT & the City of Flagstaff officials to review and approve.
30. Frazee paint reference numbers and colors shown on the project plans are for paint color reference and control sample only. Contractor may use other paint manufacturers as listed on this sheet as long as the paint used can demonstrate equivalent color effects with the approval of the Engineer and the Aesthetics Designer.
31. The entire bridge structure is to be painted the base color (Frazee No. CL 1587N - War Eagle) unless noted otherwise on the aesthetic plans. The bridge deck, top of bridge barrier, and traffic side of bridge barrier are not to be painted.

LEGEND:



INDEX OF SHEETS



- BA-1.01 General Wall Rustication Notes
- BA-1.02 General Plan and Elevation
- BA-1.03 Bridge Barrier and Pier Rustication Details
- BA-1.04 Bridge Wingwall Enlargements
- BA-1.05 Standard Rustication Details

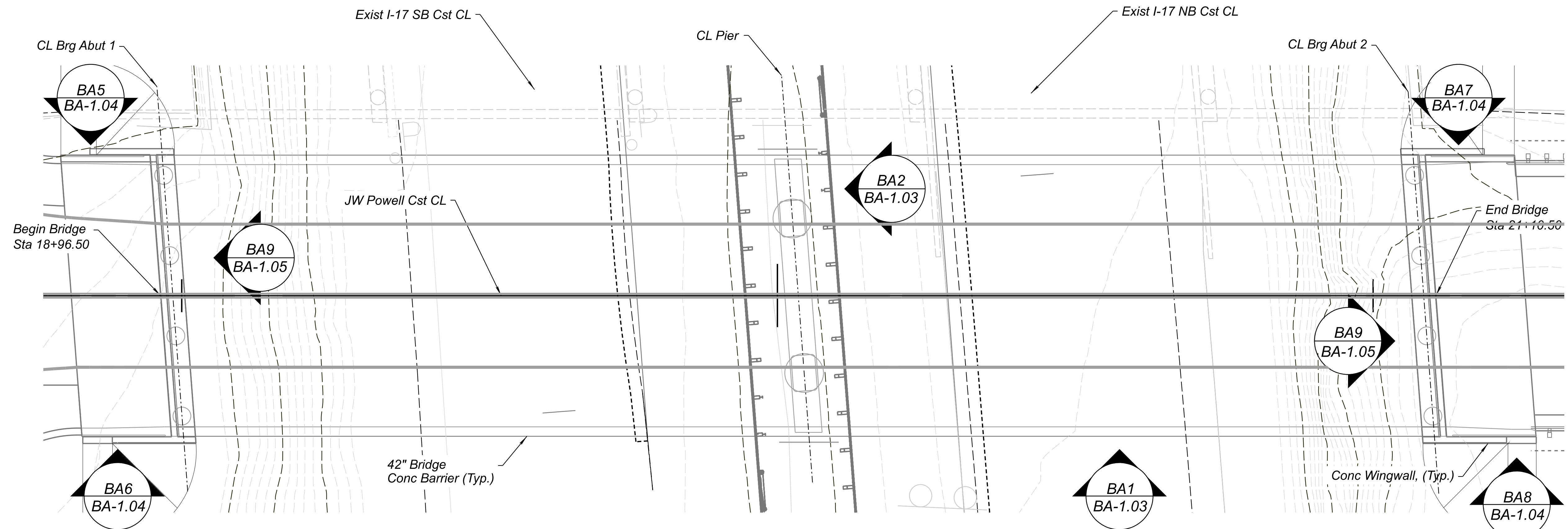
PAINT MANUFACTURERS

- Sherwin Williams - www.sherwin-williams.com
- Pittsburgh Paints - www.ppgpaints.com
- Dunn Edwards - www.dunnedwards.com

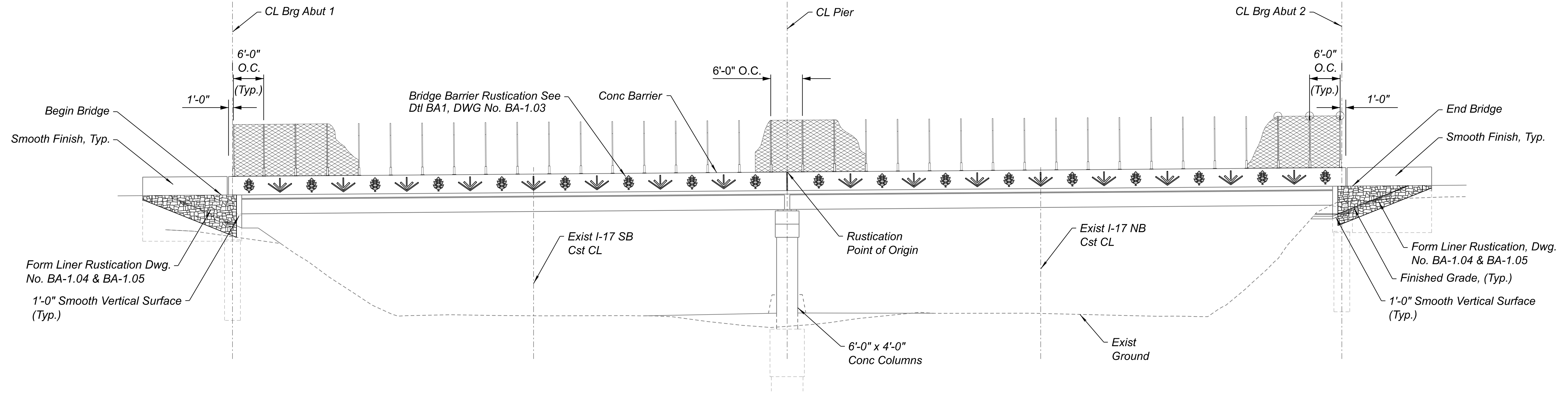
FORMLINER MANUFACTURERS

- Fitzgerald Formliers - www.formliners.com
- Spec. Formliner, Inc. - www.specformliners.com
- Custom Rock Liner - www.customrock.com

	<table border="1"> <tr><th>NAME</th><th>DATE</th></tr> <tr><td>DESIGN E. NICHOLS</td><td>10/23</td></tr> <tr><td>DRAWN E. NICHOLS</td><td>10/23</td></tr> <tr><td>CHECKED J. BENTZ</td><td>10/23</td></tr> </table>	NAME	DATE	DESIGN E. NICHOLS	10/23	DRAWN E. NICHOLS	10/23	CHECKED J. BENTZ	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADSIDE DEVELOPMENT SECTION	ROUTE I-17	F.H.W.A. Arizona Division	STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 109	TOTAL SHEETS 123	RECORD DRAWING
	NAME	DATE																
DESIGN E. NICHOLS	10/23																	
DRAWN E. NICHOLS	10/23																	
CHECKED J. BENTZ	10/23																	
	GENERAL WALL RUSTICATION NOTES	MILEPOST 337.39	LOCATION I-17 AIRPORT RD TI UP	TRACS NO. F0362 01C	DWG NO. BA-1.01 ____ OF ____													

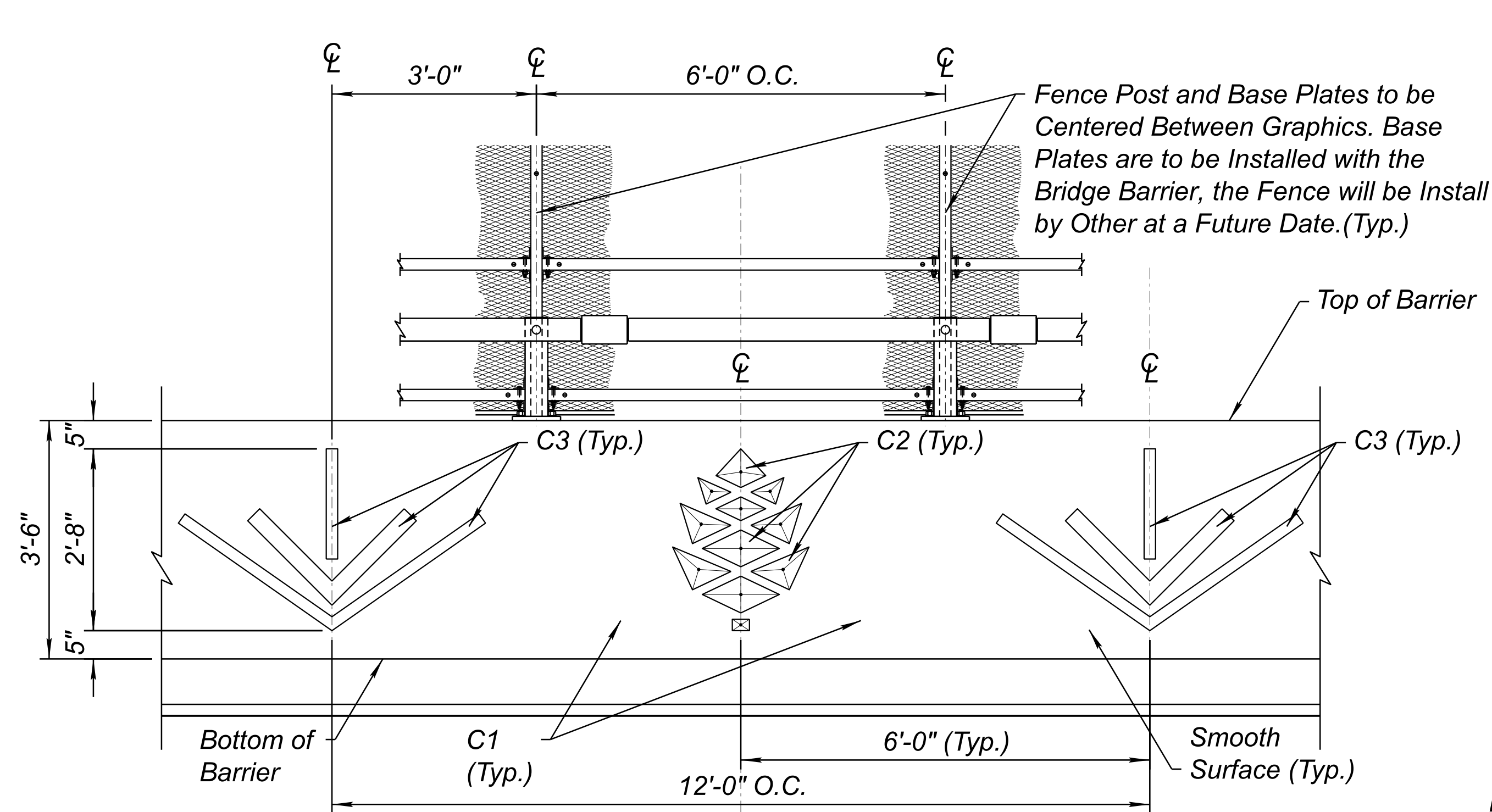


Plan View
NTS

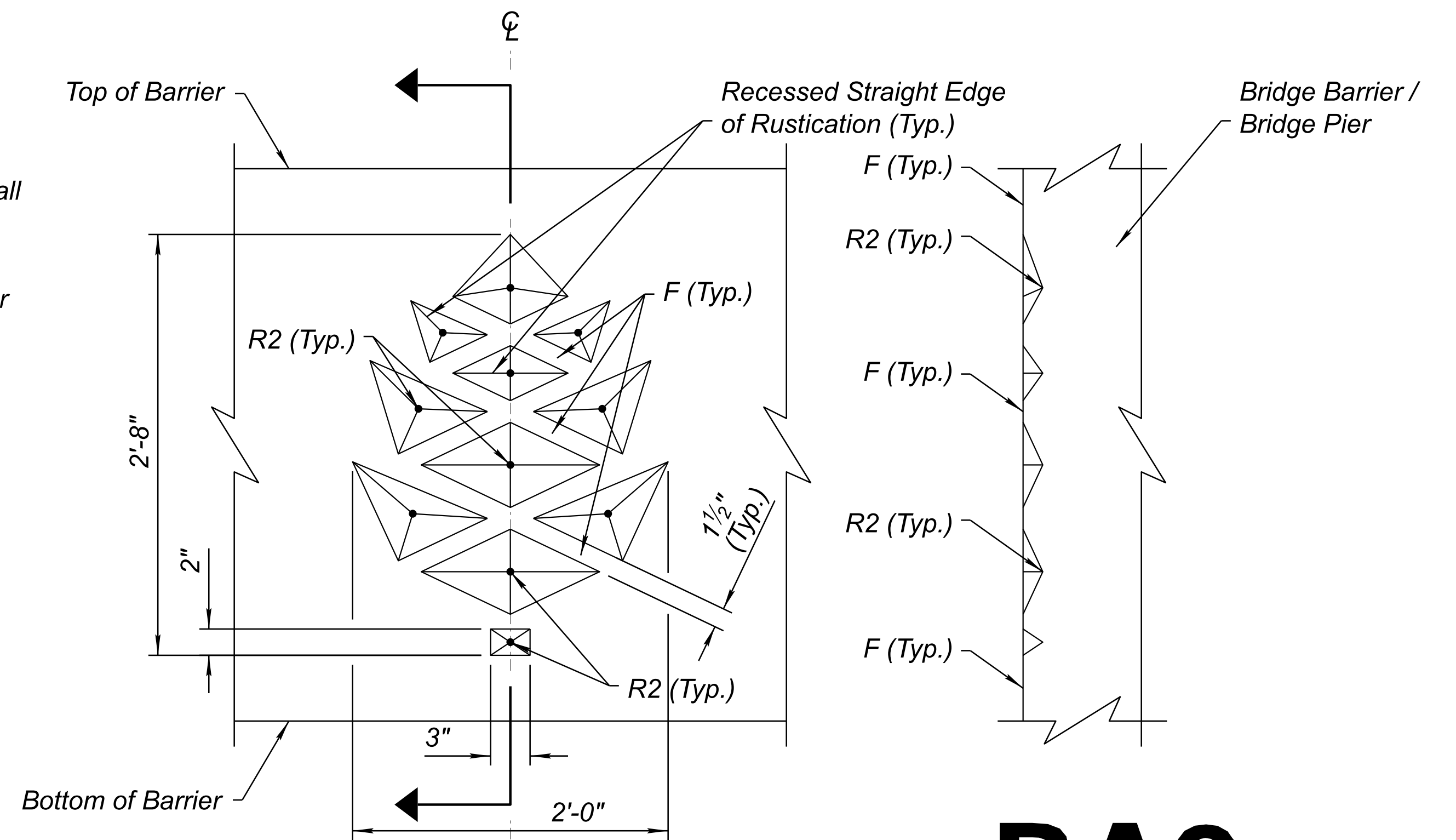


Elevation
NTS

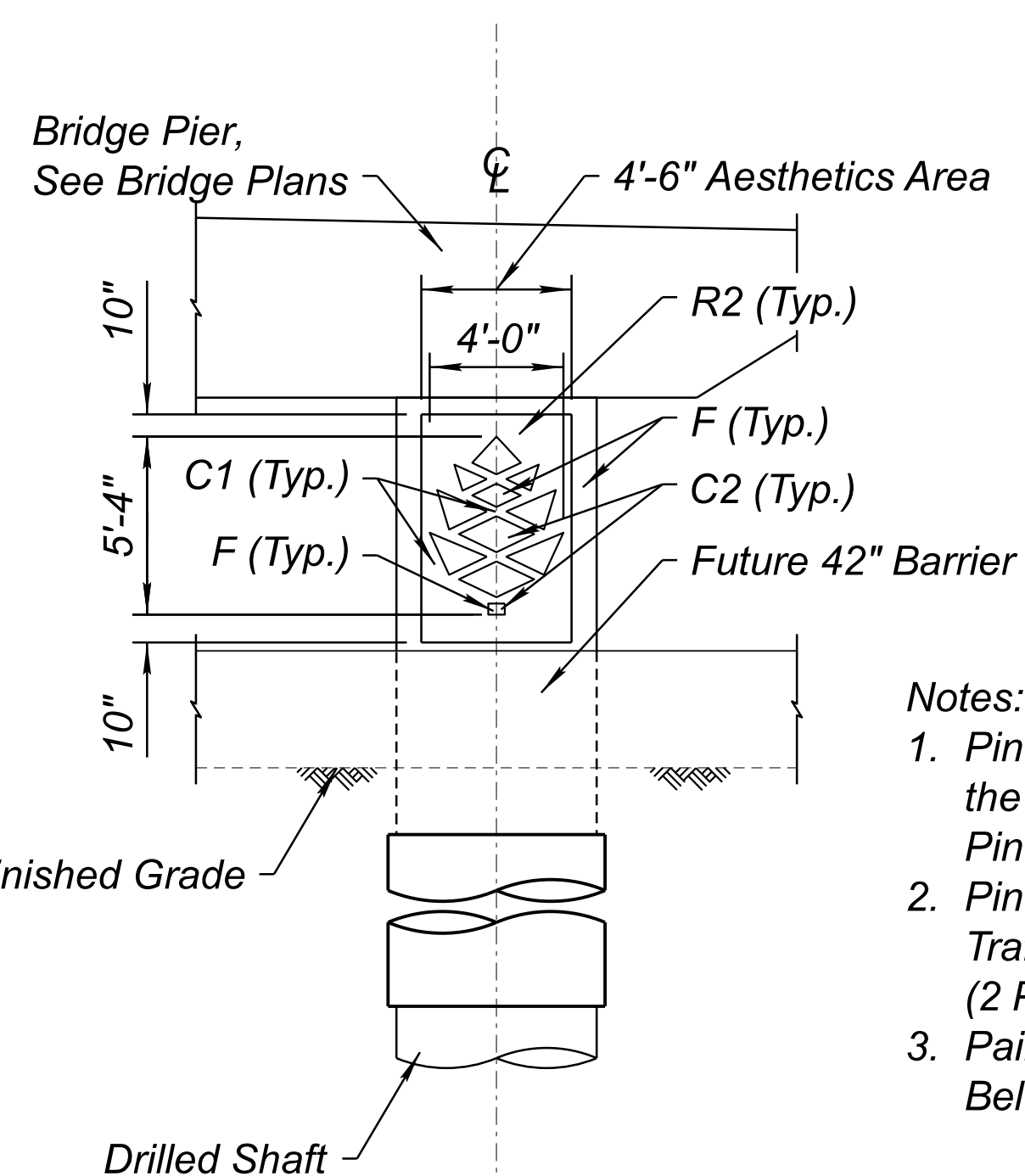
	<table border="1"> <tr><th>NAME</th><th>DATE</th></tr> <tr><td>DESIGN E. NICHOLS</td><td>10/23</td></tr> <tr><td>DRAWN E. NICHOLS</td><td>10/23</td></tr> <tr><td>CHECKED J. BENTZ</td><td>10/23</td></tr> </table>	NAME	DATE	DESIGN E. NICHOLS	10/23	DRAWN E. NICHOLS	10/23	CHECKED J. BENTZ	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADSIDE DEVELOPMENT SECTION	ROUTE I-17 MILEPOST 337.39 STRUCTURE NO.	F.H.W.A. Arizona Division STATE ARIZ. PROJECT NO. 017 CN 337 FEDERAL ID NO. 017-B(237)T LOCATION I-17 AIRPORT RD TI UP TRACS NO. F0362 01C	SHEET NO. 110 TOTAL SHEETS 123 RECORD DRAWING	DWG NO. BA-1.02 OF
	NAME	DATE												
	DESIGN E. NICHOLS	10/23												
DRAWN E. NICHOLS	10/23													
CHECKED J. BENTZ	10/23													
		GENERAL PLAN AND ELEVATION												
<small>45439 AARON A. ALLAN</small>		<small>4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221</small>												



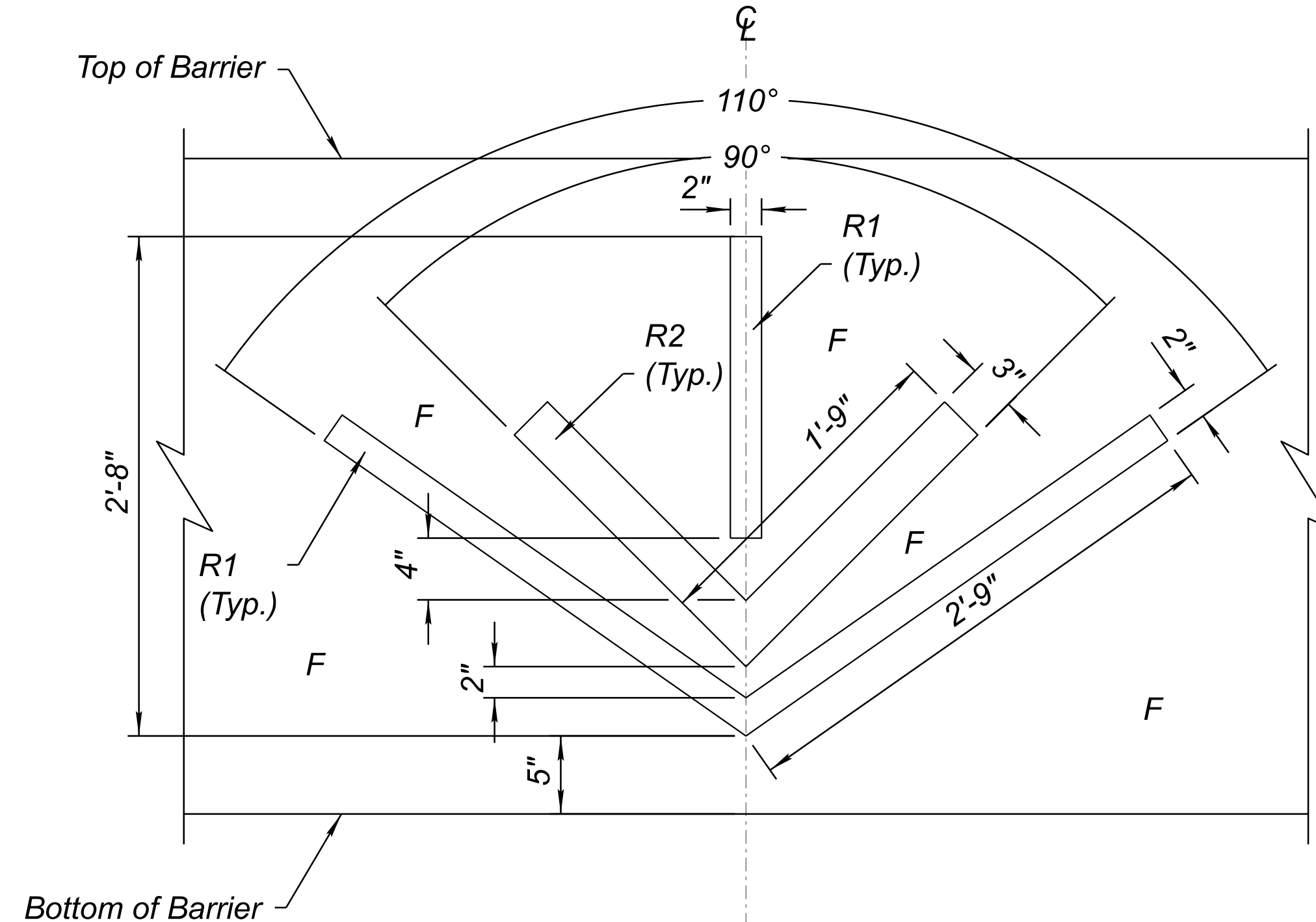
DETAIL BA1 NTS
BRIDGE BARRIER DETAIL



DETAIL BA3 NTS
PINE CONE ENLARGEMENT



DETAIL BA2 NTS
BRIDGE PIER DETAIL



DETAIL BA4 NTS
PINE NEEDLE ENLARGEMENT

AESTHETICS DEPTH LEGEND:

- F = Flush
- R1 = Recessed 1"
- R2 = Recessed 1 1/2"

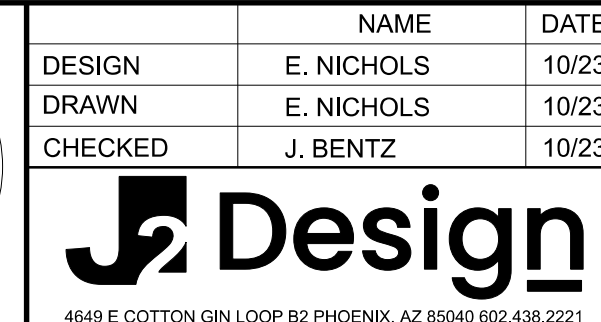
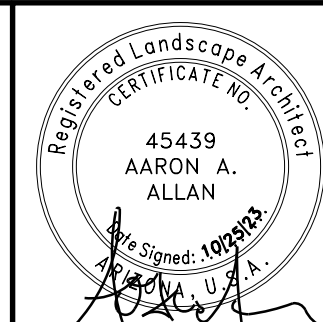
COLOR LEGEND:

- C1 = Bridge Barrier and Pier - Frazee No. CL 1587N (War Eagle)
- C2 = Pine Cone - Federal Chip No. 30318 (ADOT Tan)
- C3 = Pine Needle - Frazee No. CL 5615N (Juniper)

* Frazee Paint colors provided for reference only.

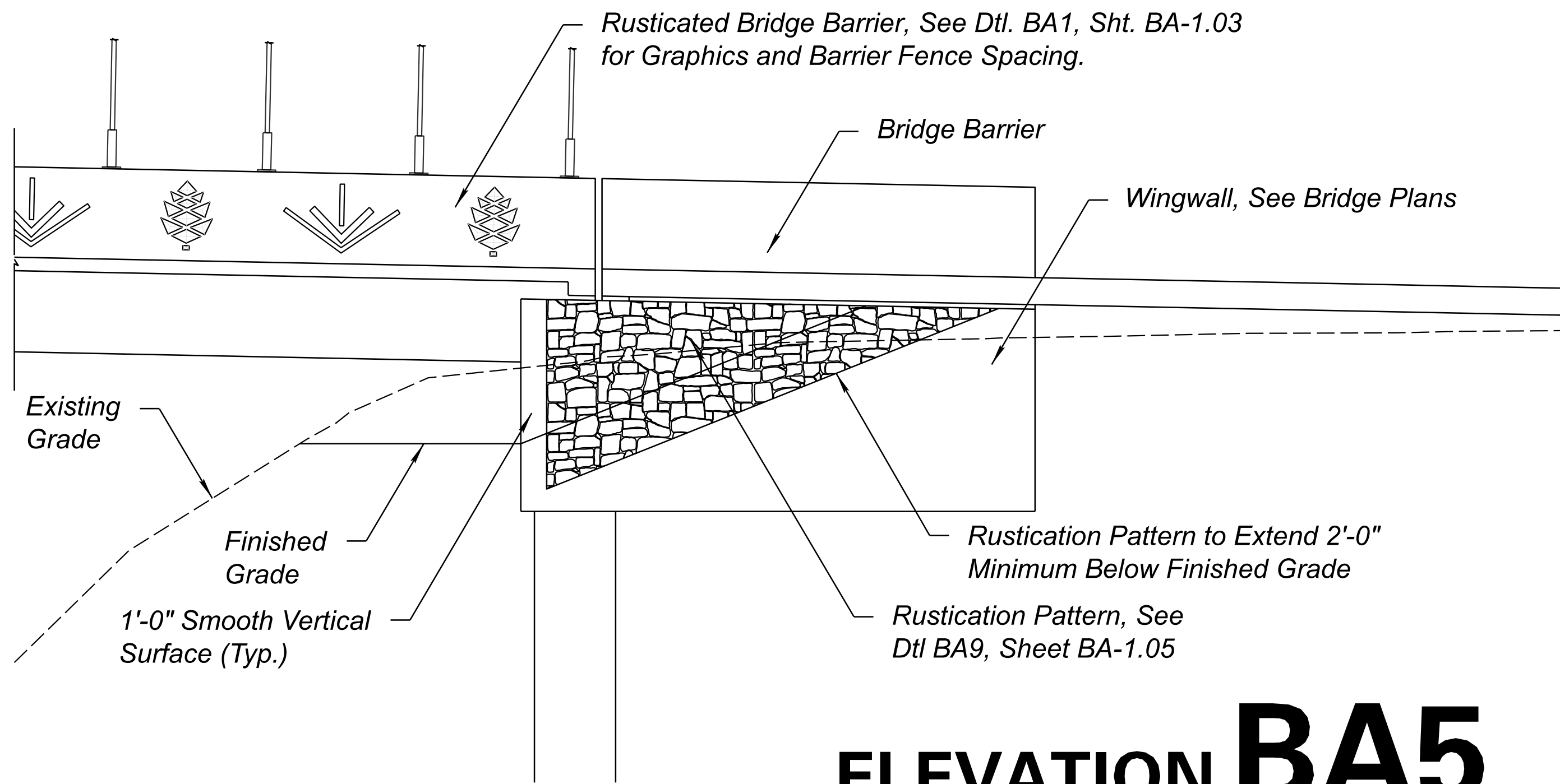
Notes:

1. Pinecone Graphic on Pier is Twice the Size of the Bridge Barrier Pinecone Graphic.
2. Pinecone Graphic to be Located on Traffic Side of both Columns (2 Pinecones per Column).
3. Paint is to Extend a Minimum of 2'-0" Below Finished Grade.

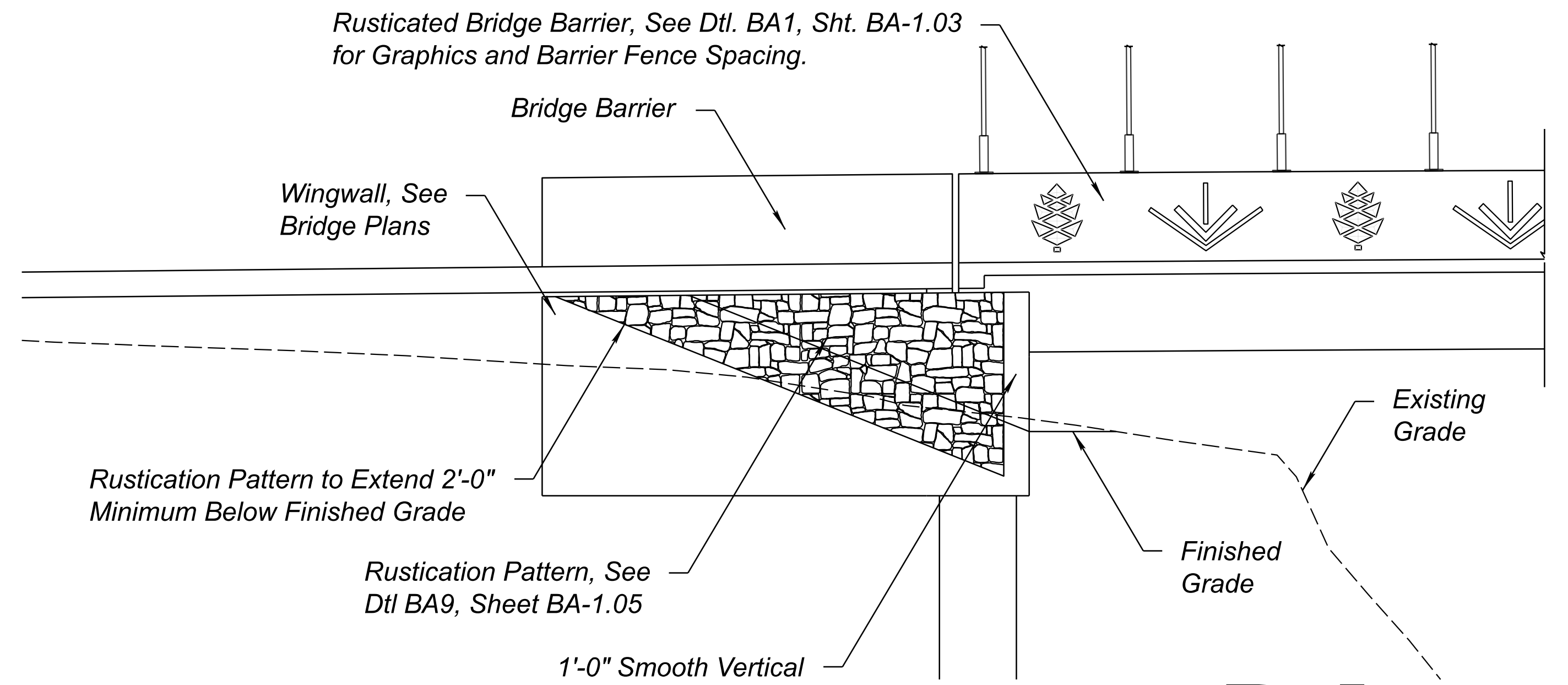


ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
ROADSIDE DEVELOPMENT SECTION
BRIDGE BARRIER AND PIER RUSTICATION DETAILS

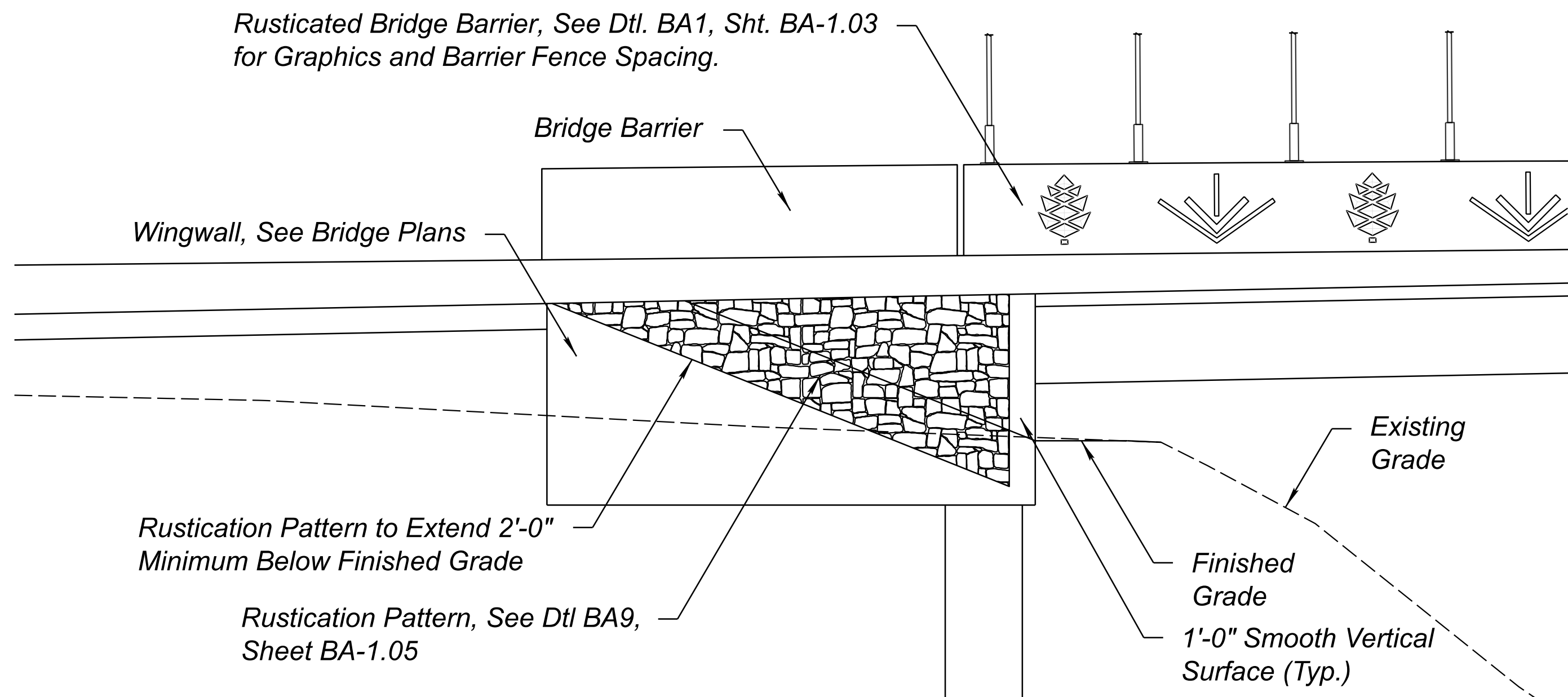
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MILEPOST 337.39	LOCATION I-17 AIRPORT RD TI UP						DWG NO. BA-1.03
STRUCTURE NO.	TRACS NO. F0362 01C						OF



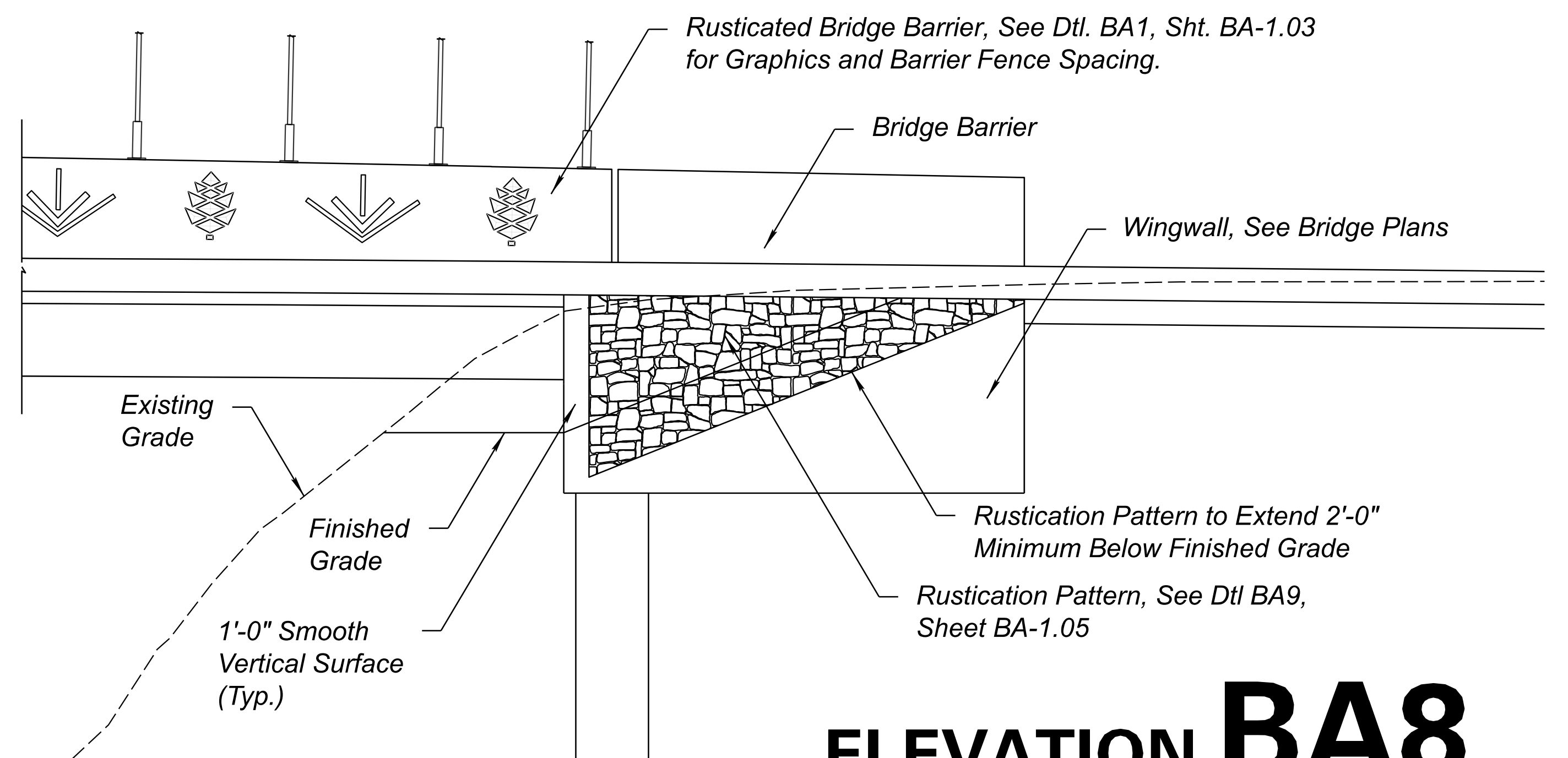
ELEVATION BA5 NTS
WINGWALL & ABUTMENT 1
(FACING SOUTH)



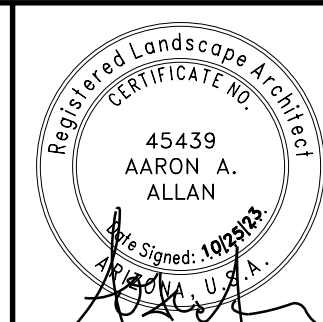
ELEVATION BA7 NTS
WINGWALL & ABUTMENT 2
(FACING SOUTH)



ELEVATION BA6 NTS
WINGWALL & ABUTMENT 1
(FACING NORTH)



ELEVATION BA8 NTS
WINGWALL & ABUTMENT 2
(FACING NORTH)



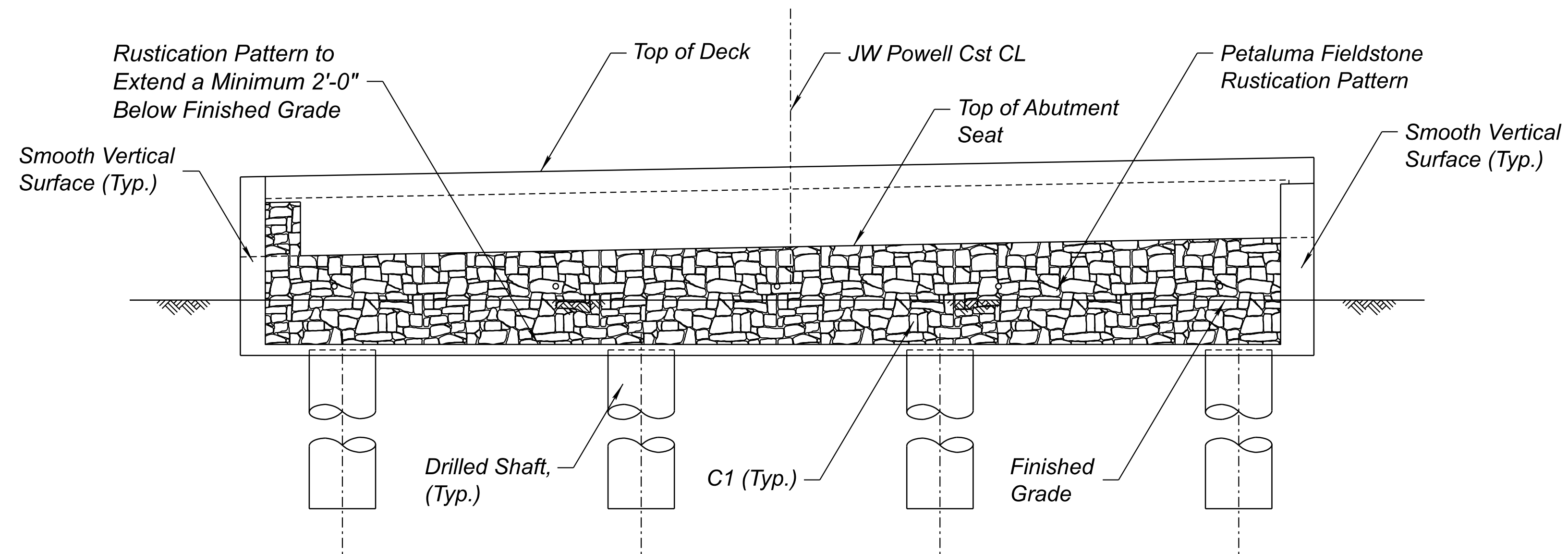
	NAME	DATE
DESIGN	E. NICHOLS	10/23
DRAWN	E. NICHOLS	10/23
CHECKED	J. BENTZ	10/23

Design
4649 E COTTON GIN LOOP #2 PHOENIX, AZ 85040 602.438.2221

ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
ROADSIDE DEVELOPMENT SECTION

BRIDGE WINGWALL ENLARGEMENTS

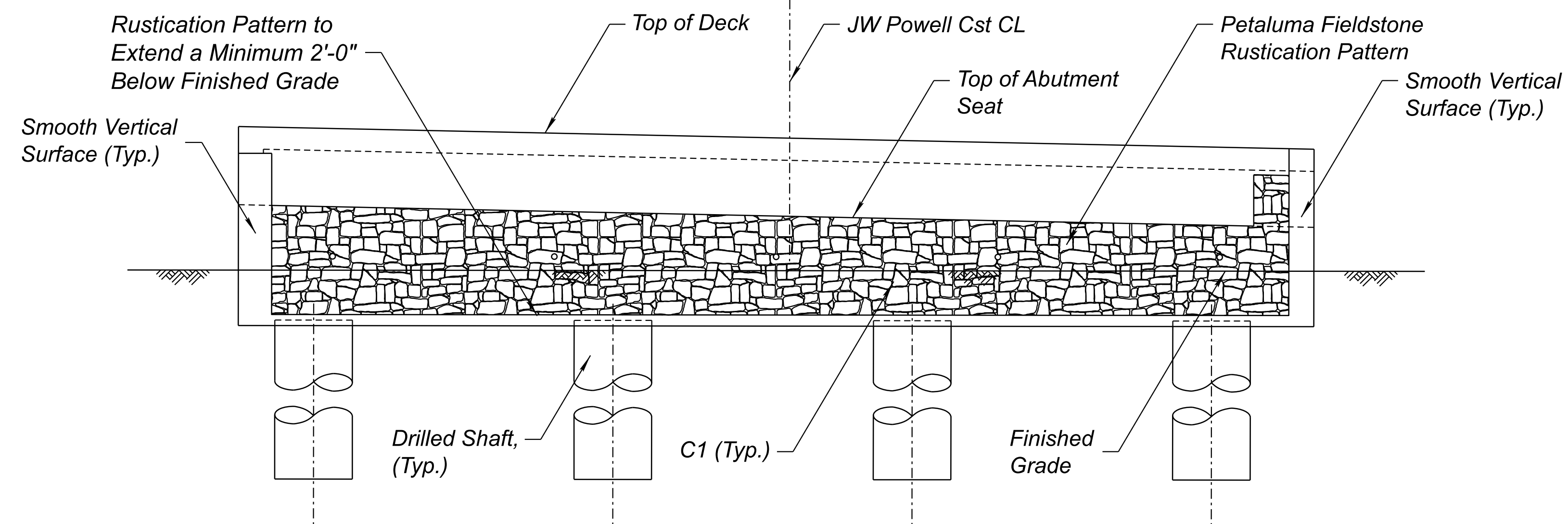
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MILEPOST 337.39	LOCATION I-17 AIRPORT RD TI UP						DWG NO. BA-1.04
STRUCTURE NO.	TRACS NO. F0362 01C						OF



ABUTMENT 1 ELEVATION

COLOR LEGEND:
 C1 = Stone Work - Frazee No. CL 1587N (War Eagle)

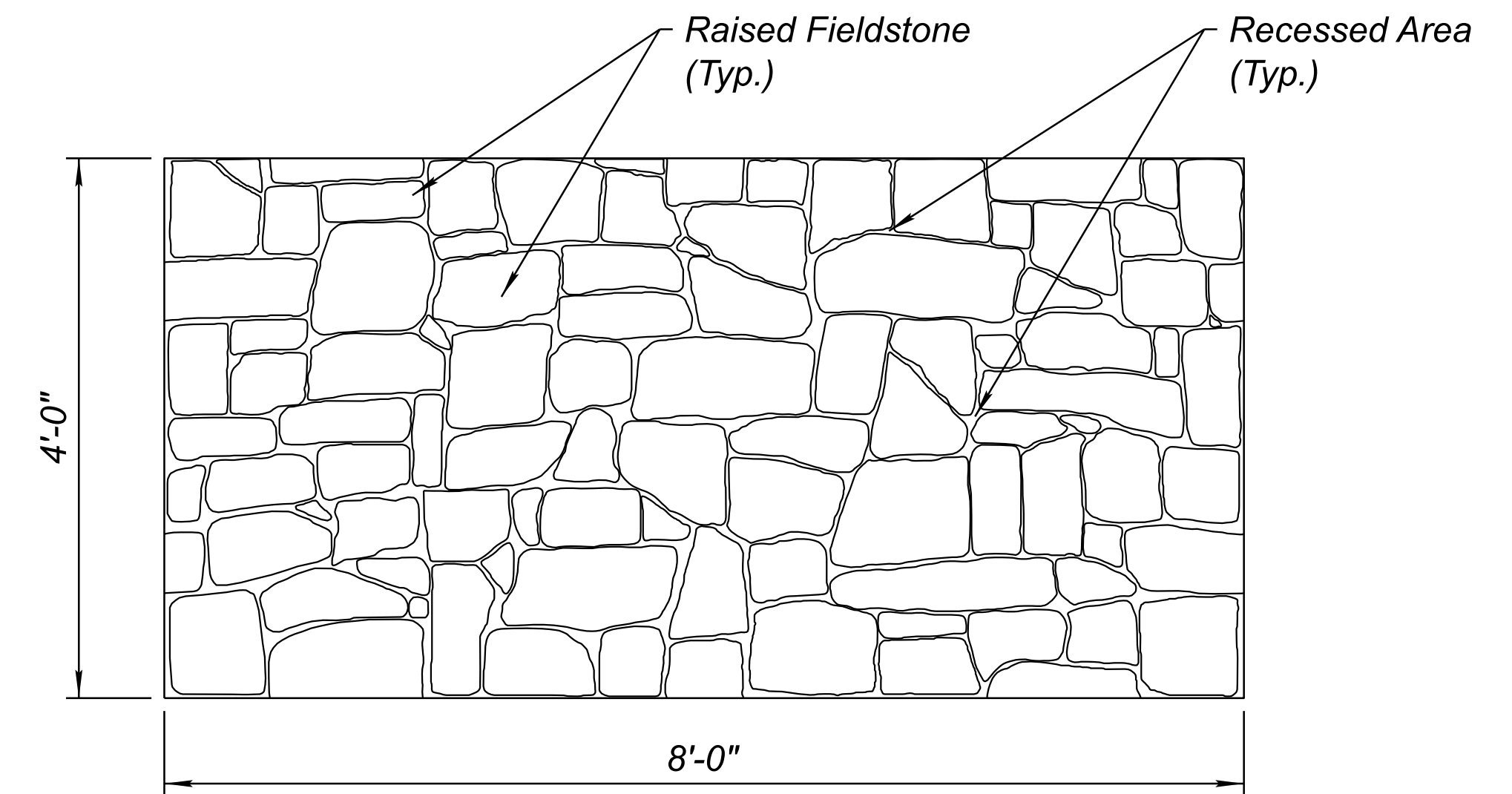
* Frazee Paint colors provided for reference only.



ABUTMENT 2 ELEVATION

COLOR LEGEND:
 C1 = Stone Work - Frazee No. CL 1587N (War Eagle)

* Frazee Paint colors provided for reference only.



FORM LINER ENLARGEMENT/DETAIL

FORMLINER LEGEND:
 Manufacturer:
 Fitzgerald Formliners
 www.formliners.com
 Phone: (714) 547-6710

Liner Type / Formliner Number / Formliner Name:
 Gray Lastic
 Pattern 17915
 Petaluma Fieldstone

- Notes:**
1. Rustication for bridge wingwalls and abutments is intended to reflect a fieldstone texture. Mockups of the texture shall be provided and approved prior to any concrete pours. The contractor shall provide a fully complete series of mock-up panels (10'-0" x 10'-0") that consist of fully patched and painted panels that are representative of how the final architectural treatment of the bridge barrier, abutments, piers and wingwall aesthetics will appear.
 2. The manufacturer and formliner above are provided to indicate overall aesthetic intent. The contractor is to provide a formliner submittal prior to any mock-ups for ADOT & the City of Flagstaff officials to review and approve.
 3. See drawing BA-1.01 for list of additional formliner manufacturers.

ELEVATION BA9 NTS

FORM LINER RUSTICATION DETAIL

	DESIGN E. NICHOLS 10/23 DRAWN E. NICHOLS 10/23 CHECKED J. BENTZ 10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADSIDE DEVELOPMENT SECTION	ROUTE I-17 MILEPOST 337.39 STRUCTURE NO.	F.H.W.A. Arizona Division STATE ARIZ. PROJECT NO. 017 CN 337 FEDERAL ID NO. 017-B(237)T SHEET NO. 113 TOTAL SHEETS 123	RECORD DRAWING
		STANDARD RUSTICATION DETAILS	LOCATION I-17 AIRPORT RD TI UP TRACS NO. F0362 01C	DWG NO. BA-1.05 OF	

CONTROL MEASURE INDEX SHEET (CMIS)

TO BE COMPLETED FOR PROJECTS WITH ONE (1) ACRE OR MORE OF SOIL/GROUND DISTURBANCE OUTSIDE OF JURISDICTIONAL WATERS OF THE U.S. (≥1 ACRE*)

* For projects that meet the definition of maintenance under AZPDES CGP, the permit threshold is five (≥ 5) acres. Consult with ADOT EP Water Resources Management to define Jurisdictional Waters of the U. S.

I. PROJECT DESCRIPTION

A. Owner Name and Address:

Arizona Department of Transportation
205 South 17th Avenue
Phoenix, Arizona 85007-3213

B. Project TRACS Number: F0362 01C

C. Project Name/Location (be consistent with the plan set cover sheet): The Airport Road TI is Located on the South Side of the City of Flagstaff.

City: Flagstaff County: Coconino

Beginning Latitude (NAD 83): 35° 08' 20"

Beginning Longitude (NAD 83): 111° 41' 05"

Ending Latitude (NAD 83): 35° 08' 27"

Ending Longitude (NAD 83): 111° 41' 05"

To obtain the project latitude/longitude data, refer to the Flash Earth web link below (Bing Maps with labels):

<http://www.flashearth.com/>

D. Project Description: Airport Road is being realigned to the south, and a new bridge is being built to replace the existing bridge. There will also be control measures used to prevent erosion and seeding will be used to stabilized disturbed materials.

II. HYDROLOGIC INFORMATION

A. Percentage of the site that is impervious before and after construction:

Percentage before Construction: 37%

Percentage after Construction: 39%

B. Receiving Water(s), refer to the plan set cover sheet and the NHD Plus HR Availability Map Web Link below:

<https://usgs.maps.arcgis.com/apps/MapTools/index.html?appid=41a5c2ca49bd4a83b239450e61022d53>

(If unnamed, state as unnamed)

Lower Colorado River

III. SOIL STABILIZATION MEASURES

All disturbed soil, which will not be paved, riprapped or otherwise covered to prevent erosion, will be revegetated and/or landscaped in accordance with the project plans and specifications.

IV. MEASURES TO CONTROL STORMWATER AND AIR QUALITY

A. Temporary Stormwater and Air Quality Control Measures (CMs) / Best Management Practices (BMPs)



- Temporary Diversion Dikes
- Temporary Rock Check Dams
- Stabilized Construction Entrance/Exit Gravel Pad
- Soil Stabilizer for Wind Erosion and Dust Control
- Rock Inlet/Outlet Protection
- Sediment Control Berms
- Silt Fences
- Wattles (Excelsior/Straw/Compost)
- Excelsior Logs / Sediment Logs
- Erosion Control Mattings
- Seeding (Class II with final mulch cover)
- Gravelbag
- Catch Basin Temporary Fabric Filter
- Designated Washout Areas
- Protected Chemical and Material Storage Area
- Equipment Maintenance Procedures
- Others Describe: Curb Inlet Protection

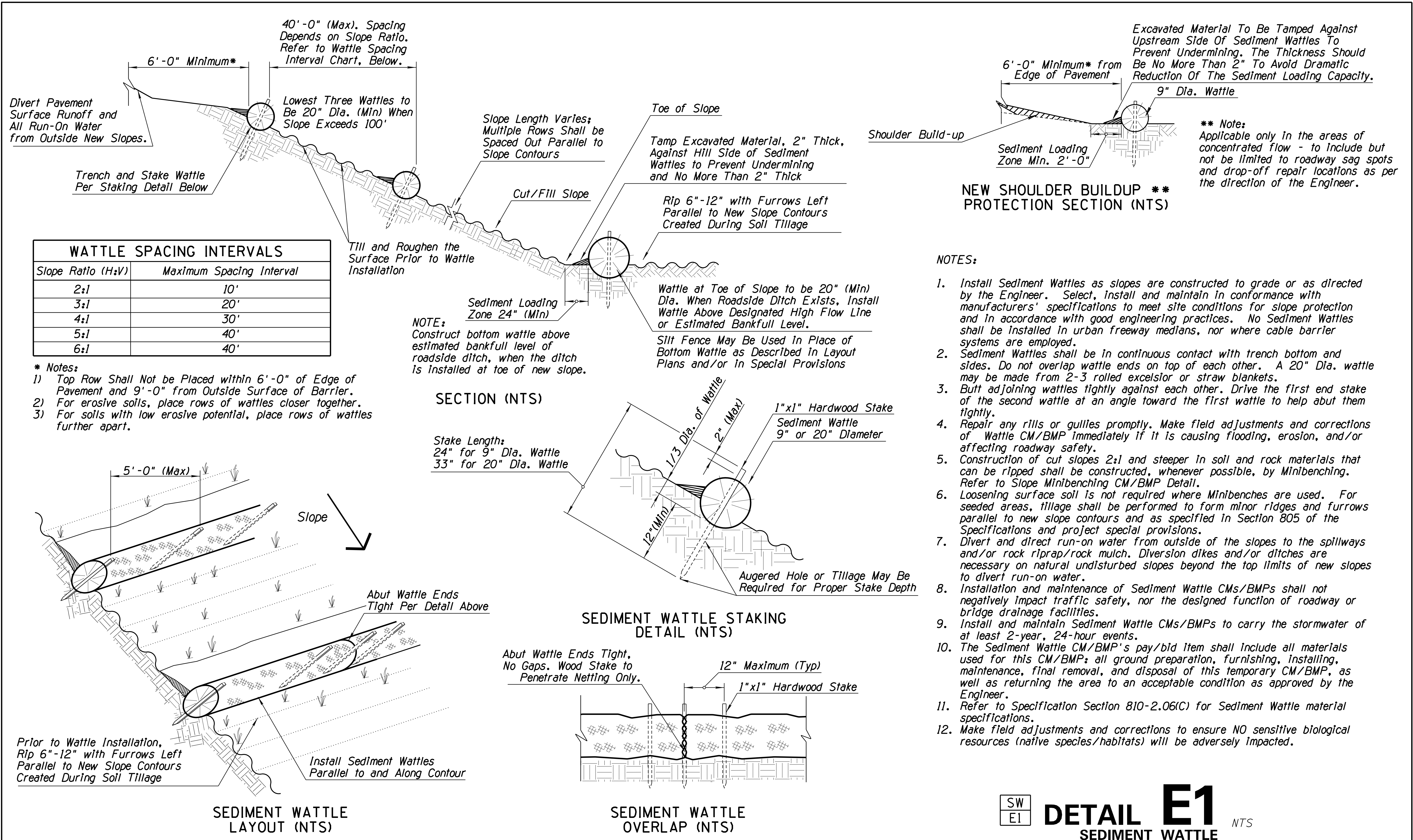
B. Permanent and Post-construction Stormwater and Air Quality Control Measures (CMs) / Best Management Practices (BMPs):

- Crown Ditch/Dike
- Rock Protection
- Rock Riprap Channel Lining
- Sediment Basin
- Embankment Curb
- Spillways
- Downdrains
- Minibenching
- Solid Waste Management
- **Rock-filled Stormwater Infiltration CM/BMP as Infiltration Basin and/or Trench
- **Filtration Structures
- **Infiltration Basin and/or Trench
- **Retention and/or Detention Basins
- **Bioretention
- **Manufactured Treatment Devices
- Seeding established as a perennial vegetative cover with a density of 70% of the native background vegetative cover.
- Others Describe: Rock Mulch Forest Pavement (Forest Pavement is a Combination of Rock Mulch and Seeding.)

** Track and report to ADOT EP Water Resources Management:

ADOTWater@azdot.gov

	<table border="1" style="font-size: 8px;"> <tr><th>DESIGN</th><th>NAME</th><th>DATE</th></tr> <tr><td>E. NICHOLS</td><td>E. NICHOLS</td><td>10/23</td></tr> <tr><td>E. NICHOLS</td><td>E. NICHOLS</td><td>10/23</td></tr> <tr><td>J. BENTZ</td><td>J. BENTZ</td><td>10/23</td></tr> </table>	DESIGN	NAME	DATE	E. NICHOLS	E. NICHOLS	10/23	E. NICHOLS	E. NICHOLS	10/23	J. BENTZ	J. BENTZ	10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADSIDE DEVELOPMENT SECTION	ROUTE I-17	F.H.W.A. Arizona Division	STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 114	TOTAL SHEETS 123	RECORD DRAWING
	DESIGN	NAME	DATE																			
E. NICHOLS	E. NICHOLS	10/23																				
E. NICHOLS	E. NICHOLS	10/23																				
J. BENTZ	J. BENTZ	10/23																				
	CONTROL MEASURE INDEX SHEET	MILEPOST 337.39	LOCATION I-17 AIRPORT RD TI UP	TRACS NO. F0362 01C		DWG NO. EC-1.01		OF														

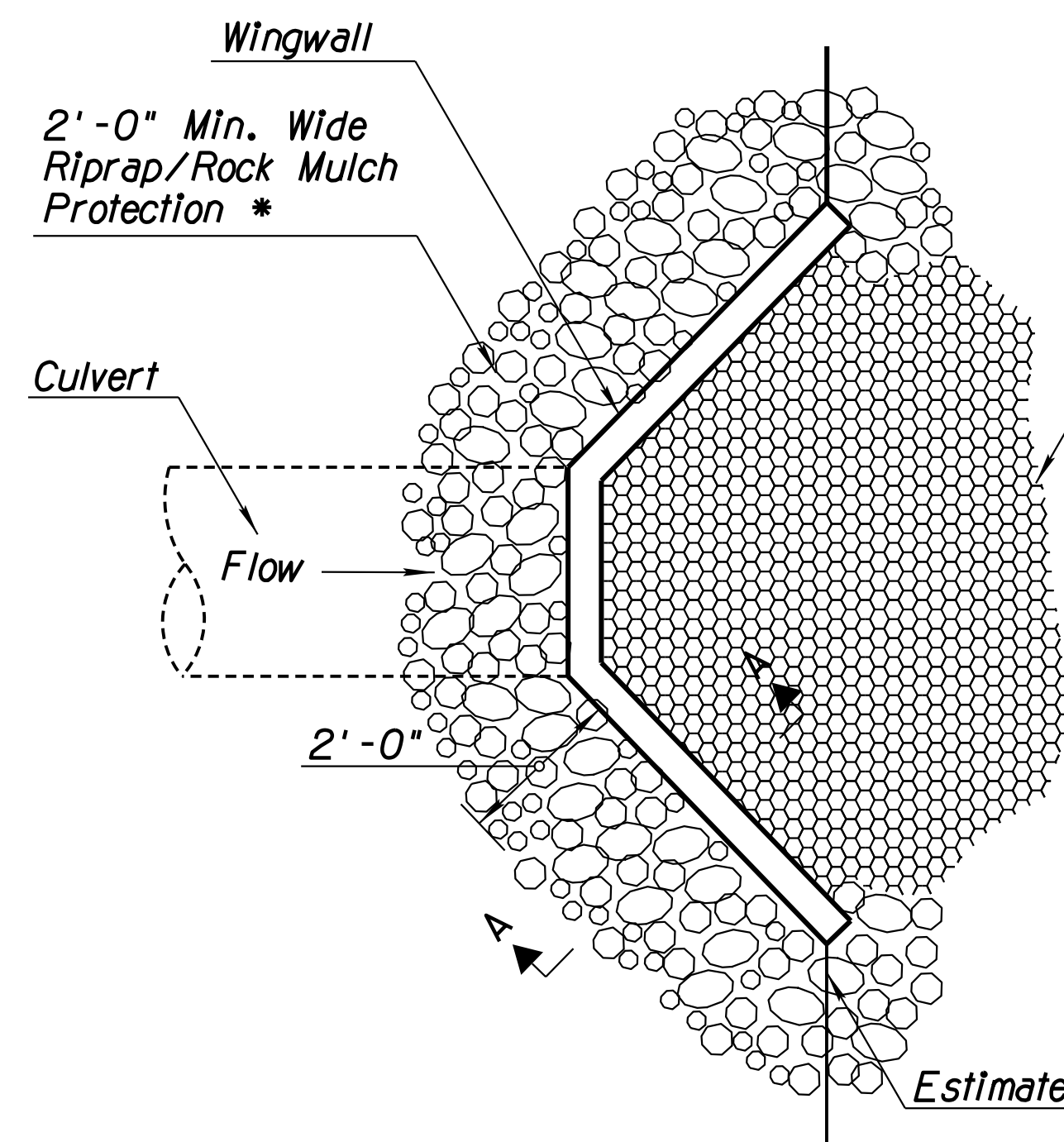


SW
E1

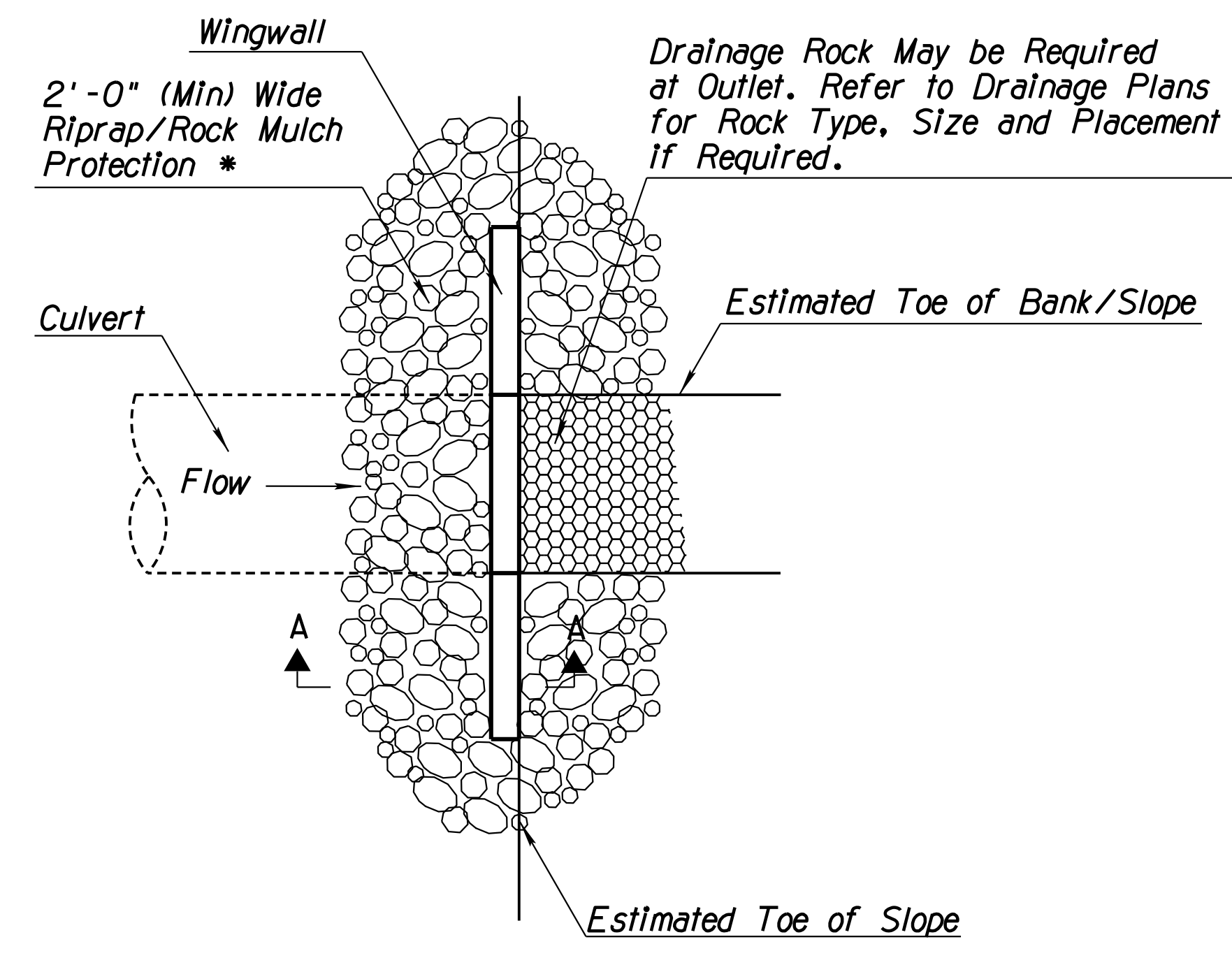
DETAIL E1

NTS
SEDIMENT WATTLE

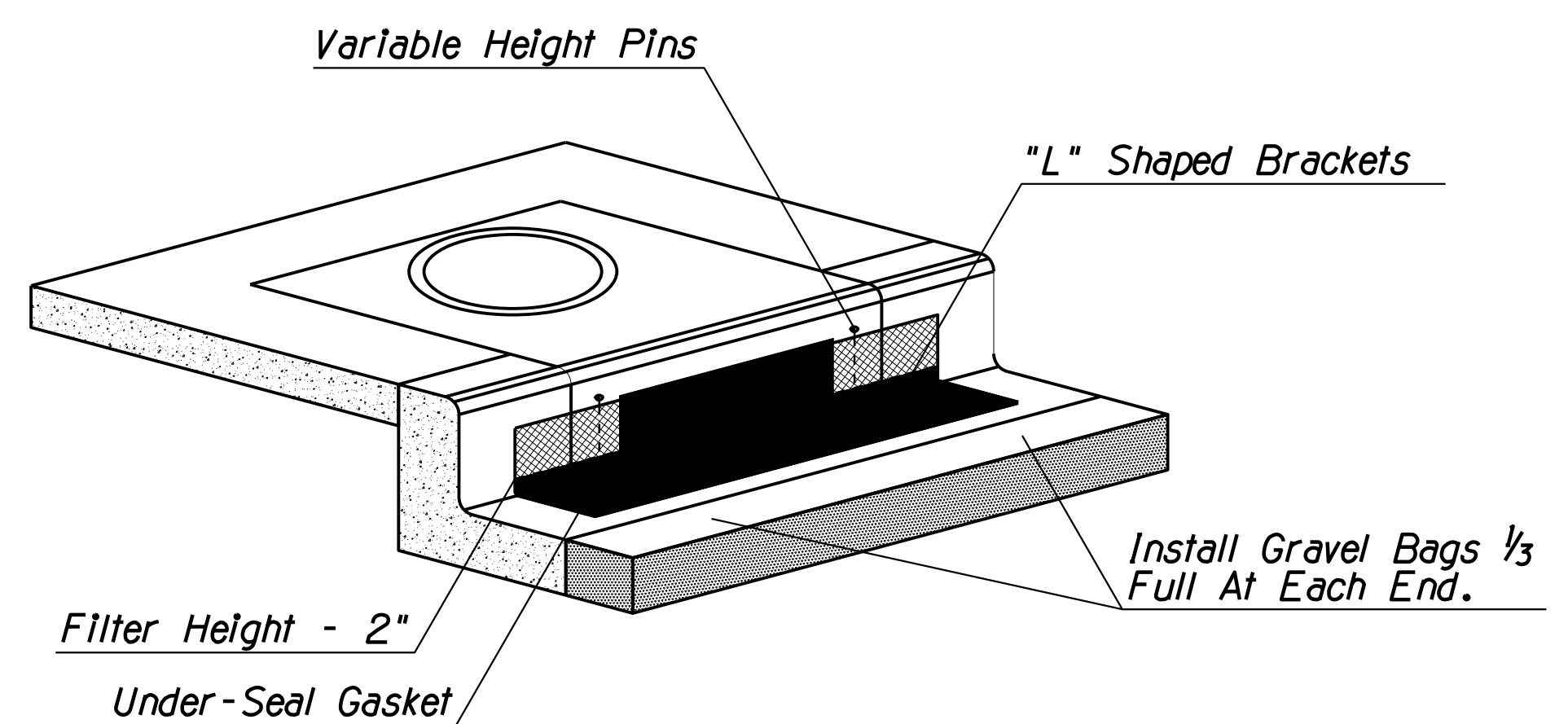
	NAME: E. NICHOLS DATE: 10/23 DESIGN: E. NICHOLS DRAWN: E. NICHOLS CHECKED: J. BENTZ DATE: 10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADSIDE DEVELOPMENT SECTION	ROUTE: I-17 MILEPOST: 337.39 STRUCTURE NO.:	F.H.W.A. Arizona Division STATE: ARIZ. PROJECT NO.: 017 CN 337 FEDERAL ID NO.: 017-B(237)T SHEET NO.: 116 TOTAL SHEETS: 123	RECORD DRAWING
		EROSION CONTROL DETAIL SHEET DETAIL E1	LOCATION: I-17 AIRPORT RD TI UP TRACS NO.: F0362 01C	DWG NO.: EC-2.01 OF	



ANGLED HEADWALL
PLAN VIEW (NTS)

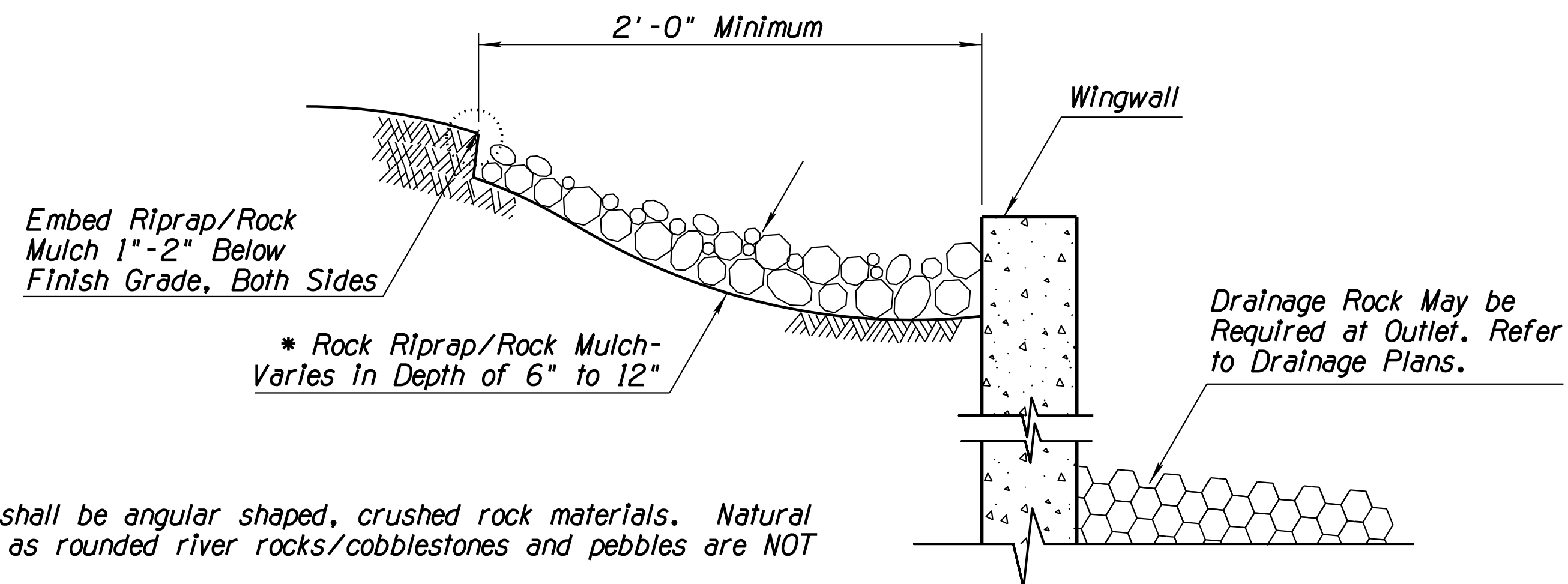


FLUSH HEADWALL
PLAN VIEW (NTS)



- Construction Details**
- * Minimum 2 Integrated "L" Brackets
 - * Minimum 2 Variable-Height Pins For Curb
 - * Filter Height = 2 Inches
 - * Uv Resistant Hdpe Outer Jacket
 - * Under-Seal Gasket To Prevent Underflow
 - * CIP Height = 8 Inches (Min)
 - * CIP Length = 6.25 Feet

Inlet Size	# of CIG Segments
5'	1
10'	2
15'	3
20'	4
25'	5
30'	6



WINGWALL
SECTION A-A (NTS)

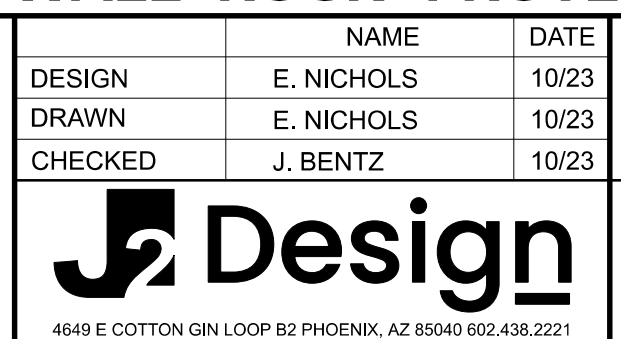
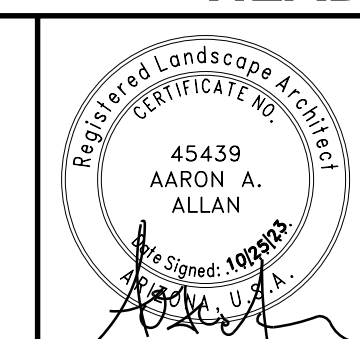
* Rock protection shall be installed behind applicable box culvert headwall/wingwall where called out in the plans and approved by the Engineer.

- NOTES:**
1. Rock Riprap/Rock Much shall be angular shaped, crushed rock materials. Natural river-run materials such as rounded river rocks/cobblestones and pebbles are NOT acceptable.
 2. Rock Riprap/Rock Mulch within the traffic Clear Zone shall conform to the requirements of Section 810-2.03 Sieve Size Gradation A and/or Gradation C, and Section 913 of the Specifications.
 3. Embed rock within traffic recovery area/clear zone into the finished grade so that any portion of the rock above the grade will be less than 4" in height.
 4. The installation and maintenance of Rock Protection CMs/BMPs shall not negatively impact traffic safety, nor the designed function of roadway or bridge drainage facilities. Rock Protection CMs/BMPs shall be installed and maintained to carry the stormwater of at least 2-year, 24-hour events.
 5. Make field adjustments and corrections of Rock Protection CM/BMP immediately if it is causing flooding, erosion, and/or affecting roadway safety.
 6. The Rock Protection CM/BMP's pay/bid item shall include all materials used for this CM/BMP: all ground preparation, furnishing, installing, maintaining as well as returning the area to an acceptable condition as approved by the Engineer.
 7. Make field adjustments and corrections to ensure NO sensitive biological resources (native species/habitats) will be adversely impacted.

- Installation Details**
- * **Placement:** Place CIP Tightly Against Drain Opening With Metal Variable Height Pins At Top.
 - * **Change Height For High Openings:** Extend Variable Height Pins Upward If Necessary.
 - * **Interconnecting For Long Curb Openings:** Overlap Segments So The Bottom Gasket Provides A Continuous Seal (One Side Has A Cut-Out). Each 6.25" Segment Fits A 5 Foot Opening Or Smaller. Use 2 Segments For 8 To 10 Feet. Use 3 Segments For 15 Feet, Etc.
 - * **Anchoring:** Install Gravel Bags At Each End And At Overlaps. Use 1/3 Full Gravel Bags For Low Profile And Best Traffic Avoidance. Use Clean Gravel At Drain Inlets - Not Sand. Select Bags With Long Term Uv Exposure And Toughness For Resistance To Traffic. Where Not Possible To Install Gravel Bags Due To Traffic Proximity, It Is Acceptable To Anchor With Concrete Anchors, Or Masonary Nails - One At Each End. Anchor Curb Inlet Guard So That Water Cannot Flow Behind It. Use 1" Washers.

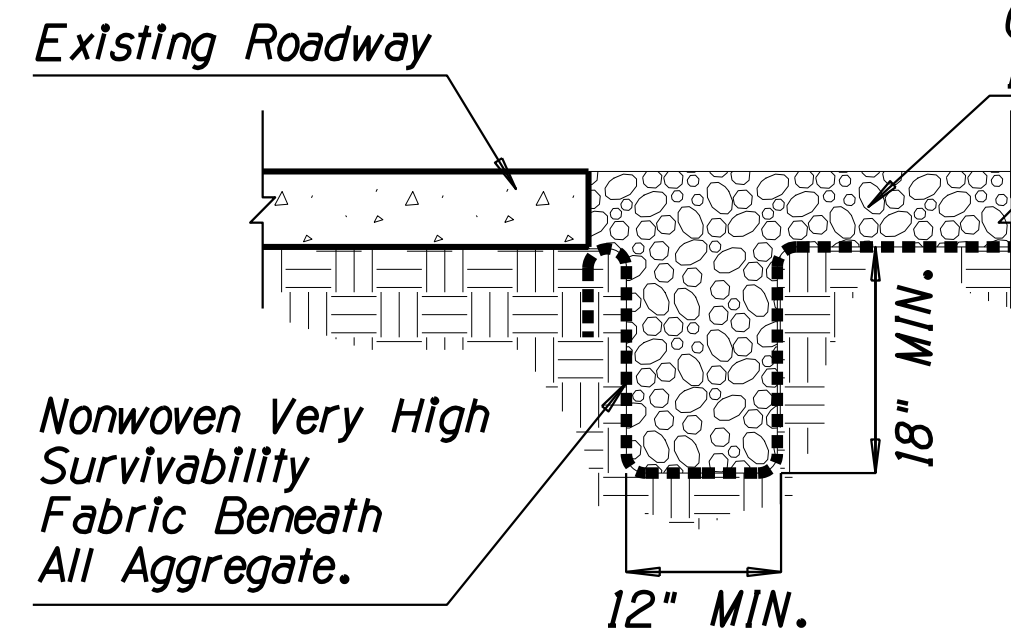
HP
E2 **DETAIL E2** NTS
HEADWALL ROCK PROTECTION

IP
E3 **DETAIL E3** NTS
CURB INLET PROTECTION



ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
ROADSIDE DEVELOPMENT SECTION
EROSION CONTROL DETAIL SHEET
DETAILS E2 & E3

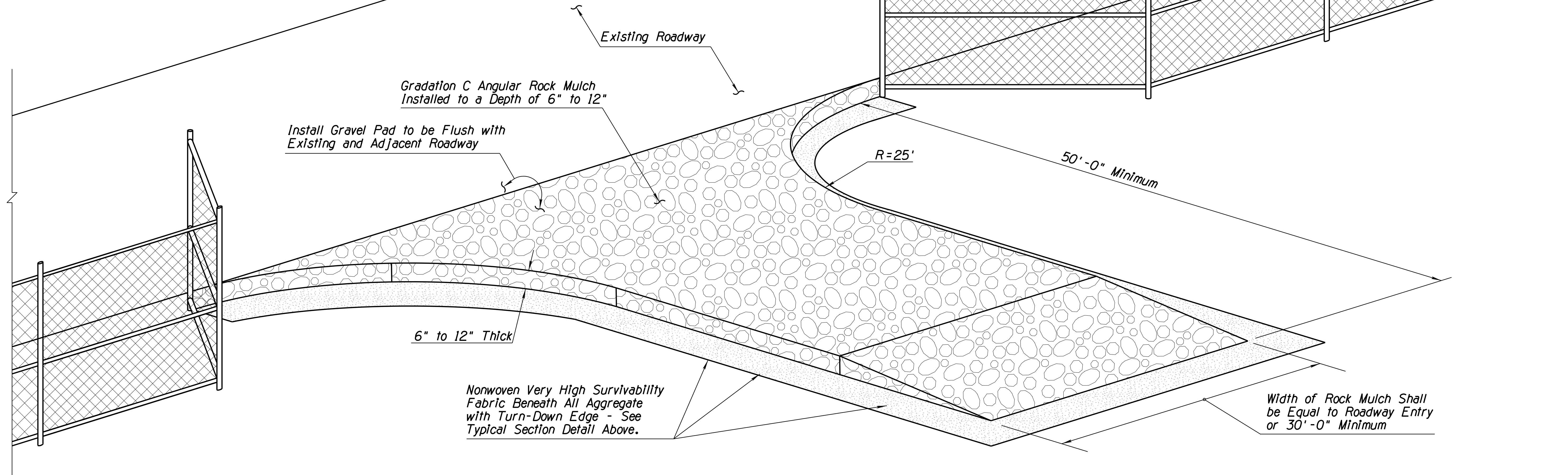
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MILEPOST 337.39	LOCATION I-17 AIRPORT RD TI UP			DWG NO. EC-2.02			
STRUCTURE NO.	TRACS NO. F0362 01C			OF			



EDGE TREATMENT TRENCHING
TYPICAL SECTION (NTS)

NOTES II:

1. Install nonwoven fabric when water is applied for construction vehicle/equipment cleaning on Gravel Pad.
2. Edge treatment trenching and nonwoven fabric shall not be required if NO wash water is used for vehicle/equipment cleaning.
3. The depth of Gravel Pad varies from 6" to 12" based on the necessities of construction vehicle/equipment as per the approval of the Engineer.



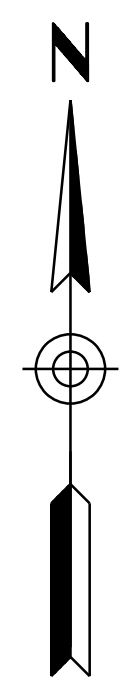
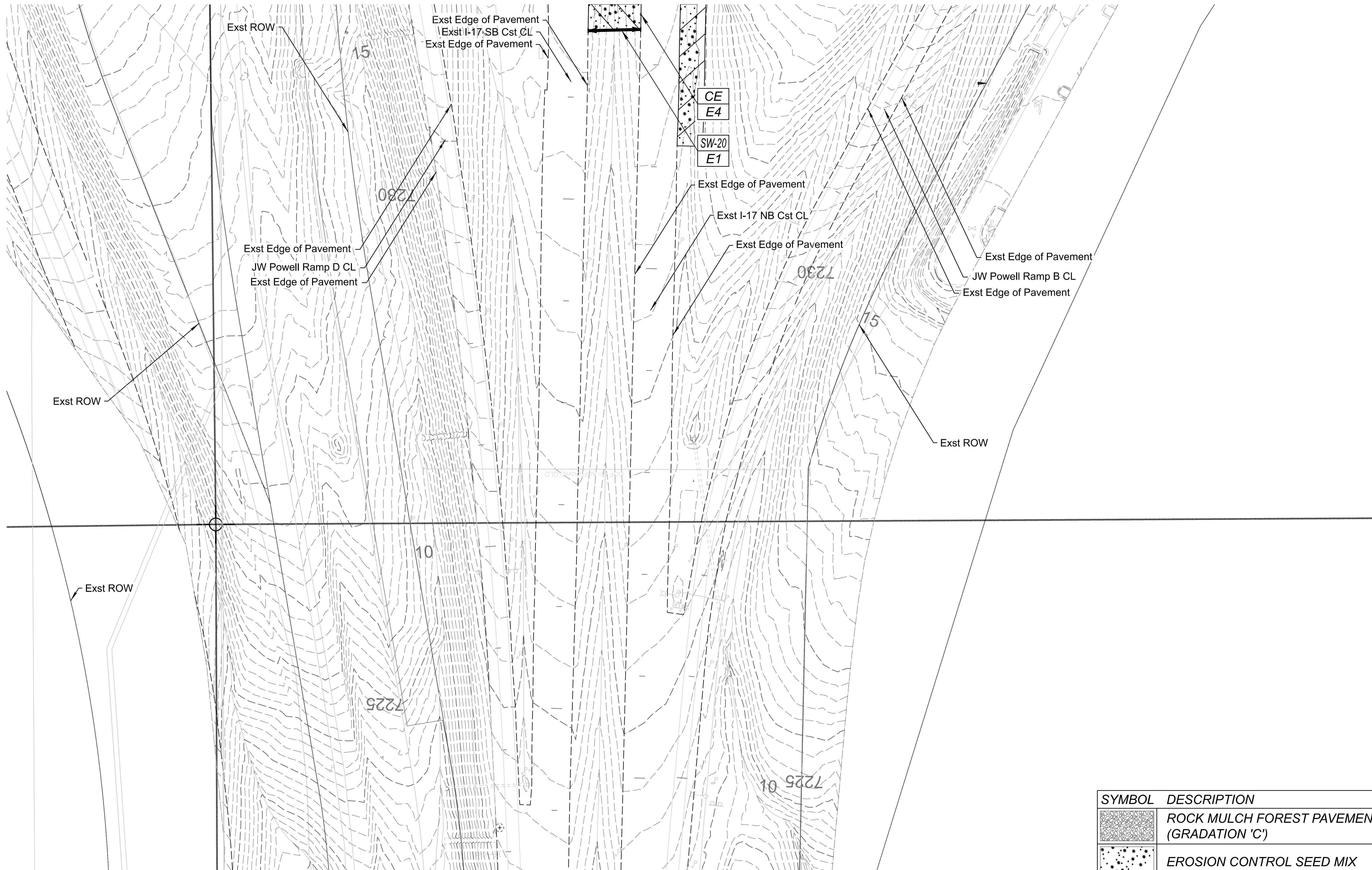
BIRD'S EYE VIEW (NTS)

NOTES I:

1. Install Stabilized Construction Entrance/Exit Gravel Pad CM/BMP for traffic entering or exiting a construction site where sedimentation, clay, silt or other pollutants can be tracked onto public roads and/or adjacent water bodies, as approved by the Engineer. It may also be applied for construction entrance/exit wind erosion/dust control, as approved by the Engineer.
2. Locate new Construction Entrance(s)/Exit(s) at appropriate project entrance/exit points as determined in field with the approval of the Engineer. Relocate Stabilized Construction Entrance/Exit Gravel Pad CM/BMP as needed as project progresses. Replace Rock Mulch materials in drive paths when dirt or mud accumulates.
3. Nonwoven Very High Survivability Fabric shall conform to the standards of Sub-section 1014-4.04 of the Specifications.
4. Rock Mulch materials shall be fractured/crushed rocks in angular shape and as defined in the Sub-section 810-2.03 of the Specifications. Natural river-run materials, especially rounded natural river rocks are not acceptable.
5. Make field adjustments and corrections of Construction Entrance/Exit Gravel Pad CM/BMP immediately if it is causing flooding and/or affecting roadway safety.
6. When paid separately, the Stabilized Construction Entrance/Exit Gravel Pad CM/BMP's pay/bid item shall include all materials used for this CM/BMP; all ground preparation, furnishing, installing, final removal, and disposal of this temporary CM/BMP, as well as returning the area to an acceptable condition as approved by the Engineer.
7. * Fence/barricade pay/bid item shall not be included as a component of the Stabilized Construction Entrance/Exit Gravel Pad CM/BMP pay/bid item.
8. Make field adjustments and corrections to ensure NO sensitive biological resources (native species/habitats) will be adversely impacted.

CE
E4 **DETAIL E4** NTS
STABILIZED CONSTRUCTION
ENTRANCE /EXIT GRAVEL PAD

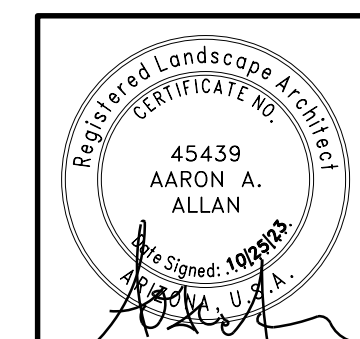
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	DESIGN	E. NICHOLS	10/23																									
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CHECKED	J. BENTZ	10/23																										
NAME	E. NICHOLS	10/23																										
DATE	E. NICHOLS	10/23																										
DATE	J. BENTZ	10/23																										
	EROSION CONTROL DETAIL SHEET DETAIL E4			LOCATION I-17 AIRPORT RD TI UP	TRACS NO. F0362 01C	DWG NO. EC-2.03 OF																						



SYMBOL	DESCRIPTION	PER SHT. QTY.
	ROCK MULCH FOREST PAVEMENT (GRADATION 'C')	-- CY
	EROSION CONTROL SEED MIX	0.2 AC

- Erosion Control Method**
- SW = Sediment Wattle - 20"
 - HP = Headwall Protection
 - IP = Curb Inlet Protection
 - CE = Construction Entrance
- Detail Reference Number**
- HP
 - E2

- Notes:**
- Contractor shall locate construction entrance at locations as needed to access project and keep pavement clean.
 - Contractor shall stabilize disturbed areas if not landscaped within 14 consecutive days.



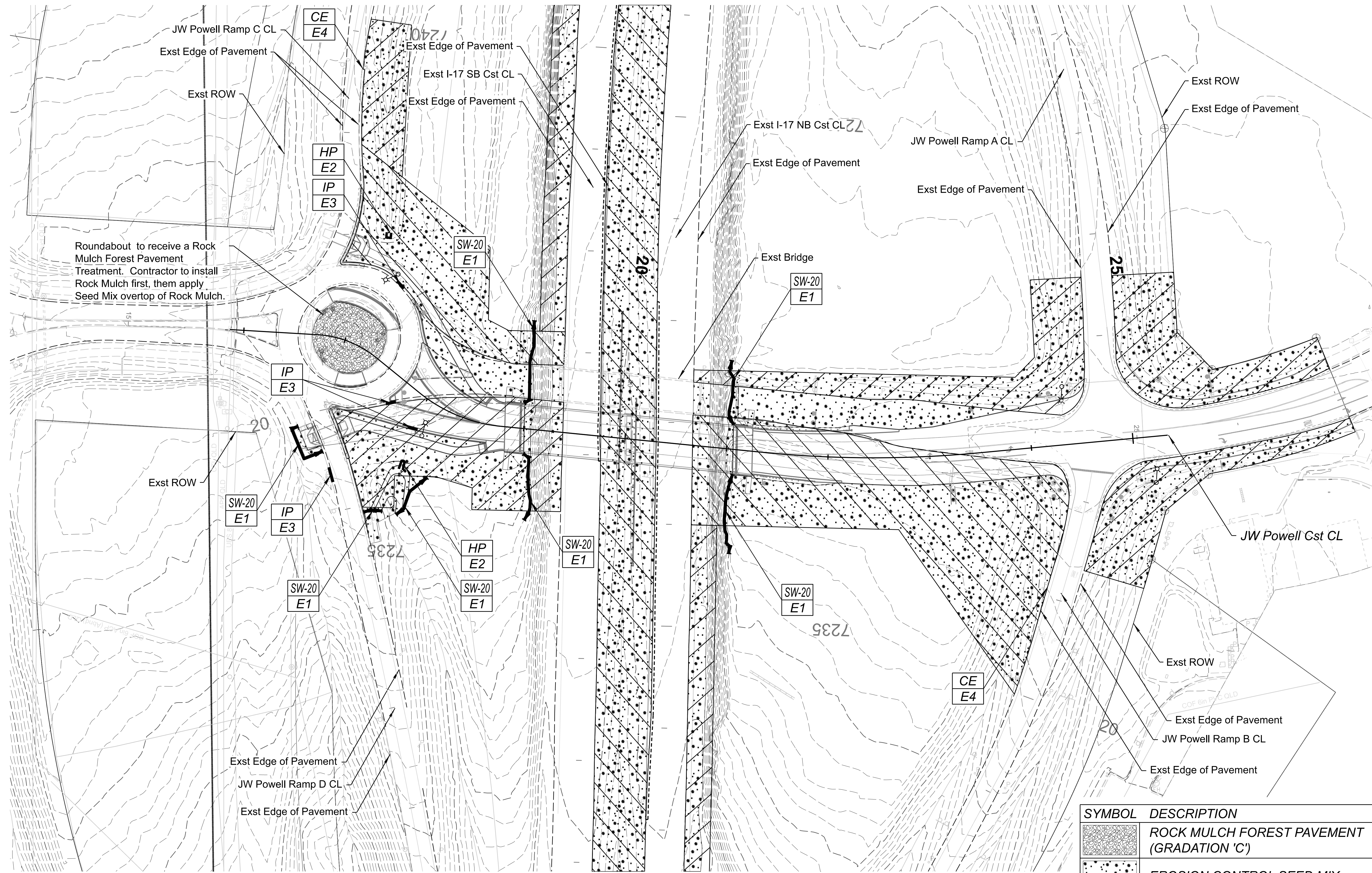
	NAME	DATE
DESIGN	E. NICHOLS	10/23
DRAWN	E. NICHOLS	10/23
CHECKED	J. BENTZ	10/23

Design
4649 E COTTON GIN LOOP #2 PHOENIX, AZ 85040 602.438.2221

ARIZONA DEPARTMENT OF TRANSPORTATION
INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
ROADSIDE DEVELOPMENT SECTION

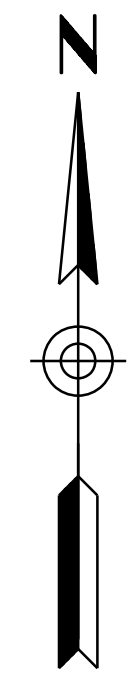
EROSION CONTROL PLANS

ROUTE I-17	F.H.W.A. Arizona Division	STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 119	TOTAL SHEETS 123	RECORD DRAWING
MILEPOST 337.39	LOCATION I-17 AIRPORT RD TI UP					DWG NO. EC-3.01	
STRUCTURE NO.	TRACS NO. F0362 01C					OF	



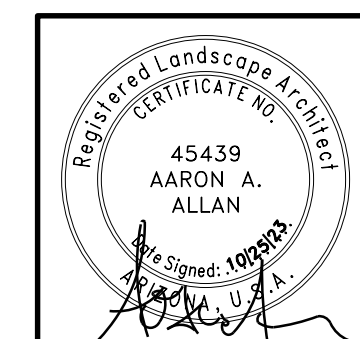
Roundabout to receive a Rock Mulch Forest Pavement Treatment. Contractor to install Rock Mulch first, then apply Seed Mix overtop of Rock Mulch.

SYMBOL	DESCRIPTION	PER SHT. QTY.
	ROCK MULCH FOREST PAVEMENT (GRADATION 'C')	150 CY
	EROSION CONTROL SEED MIX	4.1 AC



Erosion Control Method
 SW = Sediment Wattle - 20"
 HP = Headwall Protection
 IP = Curb Inlet Protection
 CE = Construction Entrance
Detail Reference Number

Notes:
 1. Contractor shall locate construction entrance at locations as needed to access project and keep pavement clean.
 2. Contractor shall stabilize disturbed areas if not landscaped within 14 consecutive days.

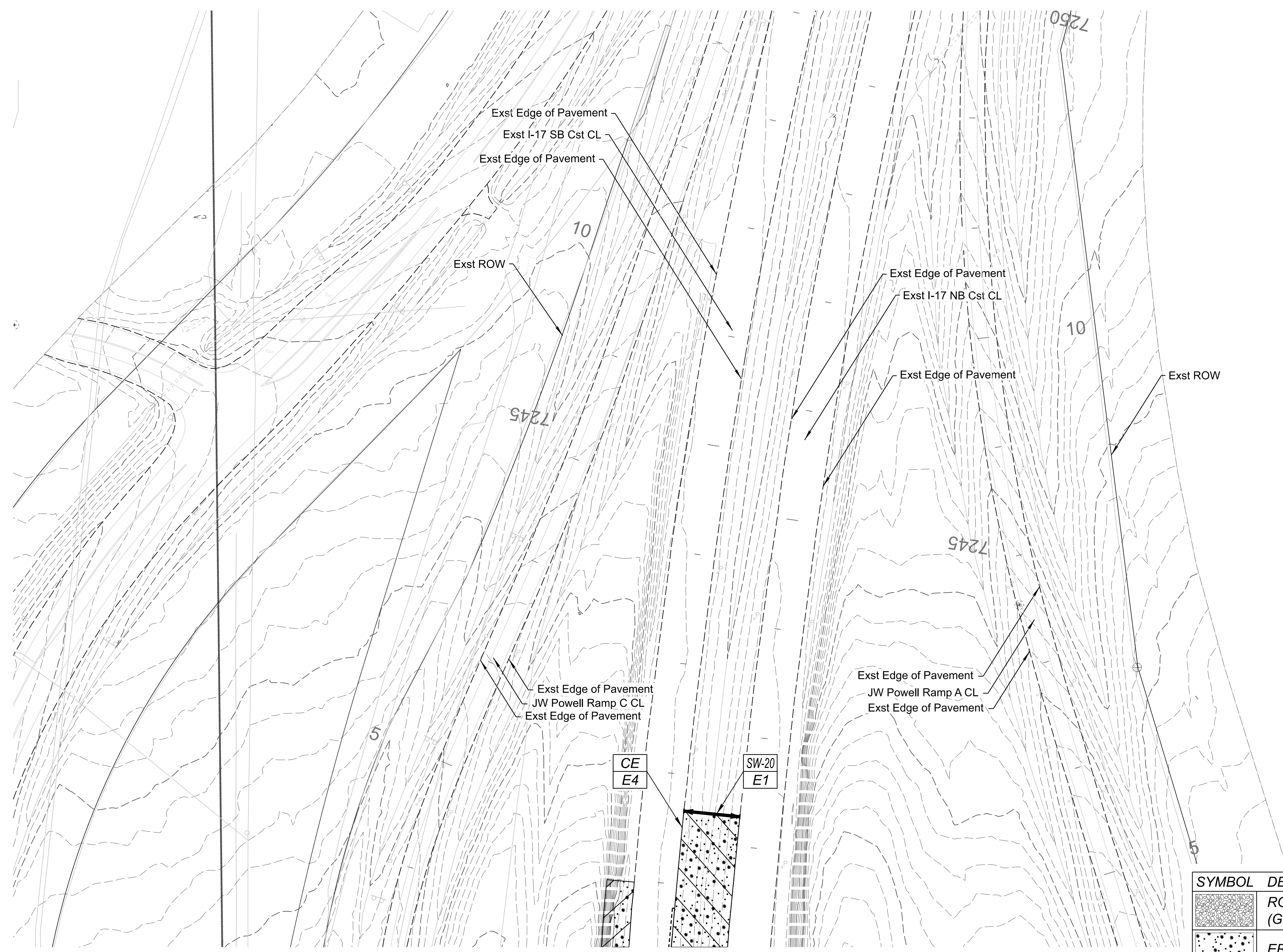
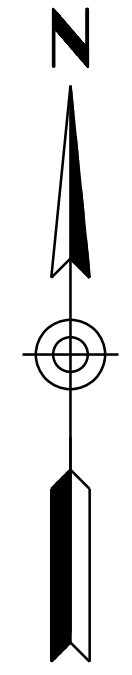


	NAME	DATE
DESIGN	E. NICHOLS	10/23
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CHECKED	J. BENTZ	10/23

Design
 4649 E COTTON GIN LOOP #2 PHOENIX, AZ 85040 602.438.2221

ARIZONA DEPARTMENT OF TRANSPORTATION
 INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
ROADSIDE DEVELOPMENT SECTION
 EROSION CONTROL PLANS

ROUTE I-17	F.H.W.A. Arizona Division	STATE ARIZ.	PROJECT NO. 017 CN 337	FEDERAL ID NO. 017-B(237)T	SHEET NO. 120	TOTAL SHEETS 123	RECORD DRAWING
MILEPOST 337.39	LOCATION I-17 AIRPORT RD TI UP				DWG NO. EC-3.02		
STRUCTURE NO.	TRACS NO. F0362 01C		OF				



SYMBOL	DESCRIPTION	PER SHT. QTY.
	ROCK MULCH FOREST PAVEMENT (GRADATION 'C')	-- CY
	EROSION CONTROL SEED MIX	0.2 AC

Erosion Control Method

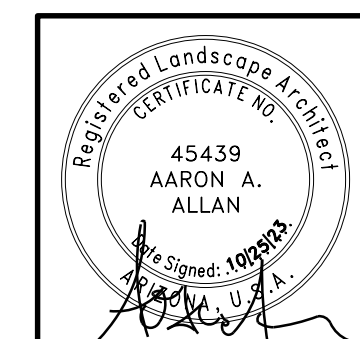
SW = Sediment Wattle - 20"
 HP = Headwall Protection
 IP = Curb Inlet Protection
 CE = Construction Entrance

Detail Reference Number

HP
E2

Notes:

- Contractor shall locate construction entrance at locations as needed to access project and keep pavement clean.
- Contractor shall stabilize disturbed areas if not landscaped within 14 consecutive days.



	NAME	DATE
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DRAWN	E. NICHOLS	10/23
CHECKED	J. BENTZ	10/23

Design
 4649 E COTTON GIN LOOP B2 PHOENIX, AZ 85040 602.438.2221

ARIZONA DEPARTMENT OF TRANSPORTATION
 INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION
ROADSIDE DEVELOPMENT SECTION

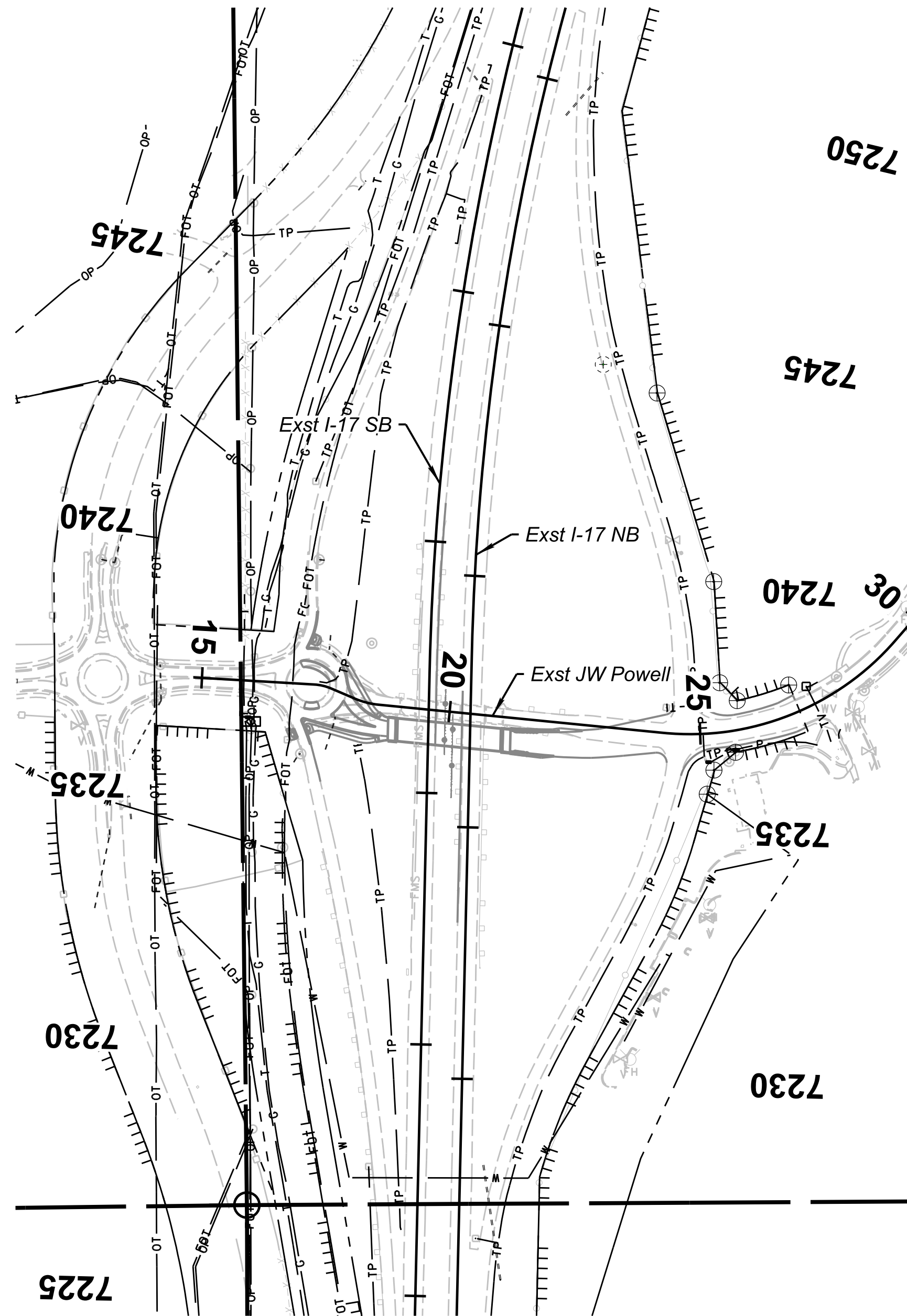
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 STRUCTURE NO.

EROSION CONTROL PLANS

ROUTE	STATE	PROJECT NO.	FEDERAL ID NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
I-17	ARIZ.	017 CN 337	017-B(237)T	121	123	
LOCATION I-17 AIRPORT RD TI UP						DWG NO. EC-3.03
TRACS NO. F0362 01C						OF

UTILITY GENERAL NOTES

- Utility information based on Utility Mapping Plan Prepared by Horrocks in January 2023, as well as utility mapping, record drawings, and ADOT permits.
- All utilities are Quality Level D unless otherwise shown.



UTILITY LINESTYLE LEGEND

Existing Utilities	
	FMS
	Gas
	Irrigation (Dirt Lined Ditch)
	Power (Buried)
	Power (Overhead)
	Power (Traffic)
	Sanitary Sewer
	Storm Drain
	Telephone (Buried)
	Telephone (Overhead)
	Telephone Fiber Optic (Buried)
	Television (Buried)
	Television Fiber Optic (Buried)
	Water

New Utilities	
	FMS
	Gas
	Irrigation (Dirt Lined Ditch)
	Power (Buried)
	Power (Overhead)
	Power (Traffic)
	Sanitary Sewer
	Storm Drain
	Telephone (Buried)
	Telephone (Overhead)
	Telephone Fiber Optic (Buried)
	Television (Buried)
	Television Fiber Optic (Buried)
	Water

SEE DRAINAGE PLANS

SURVEY DATA

The following parameters were set for the basis of this survey:

System: Arizona State Plane
 Zone: Central Zone 0202 I-17 MP 337.3 to 338.3
 Datum: Horizontal NAD83/92 (HARN) International Foot, Vertical NAVD 88

EPOCH: 1992.00
 Ellipsoid - YES WGS84 GEOID 09
 G.A.F.: 1.000438

Basis of Elevation:
 Benchmark is ADOT Control Point "Flagstaff ncmm rm 3" having an elevation of 7111.31'.

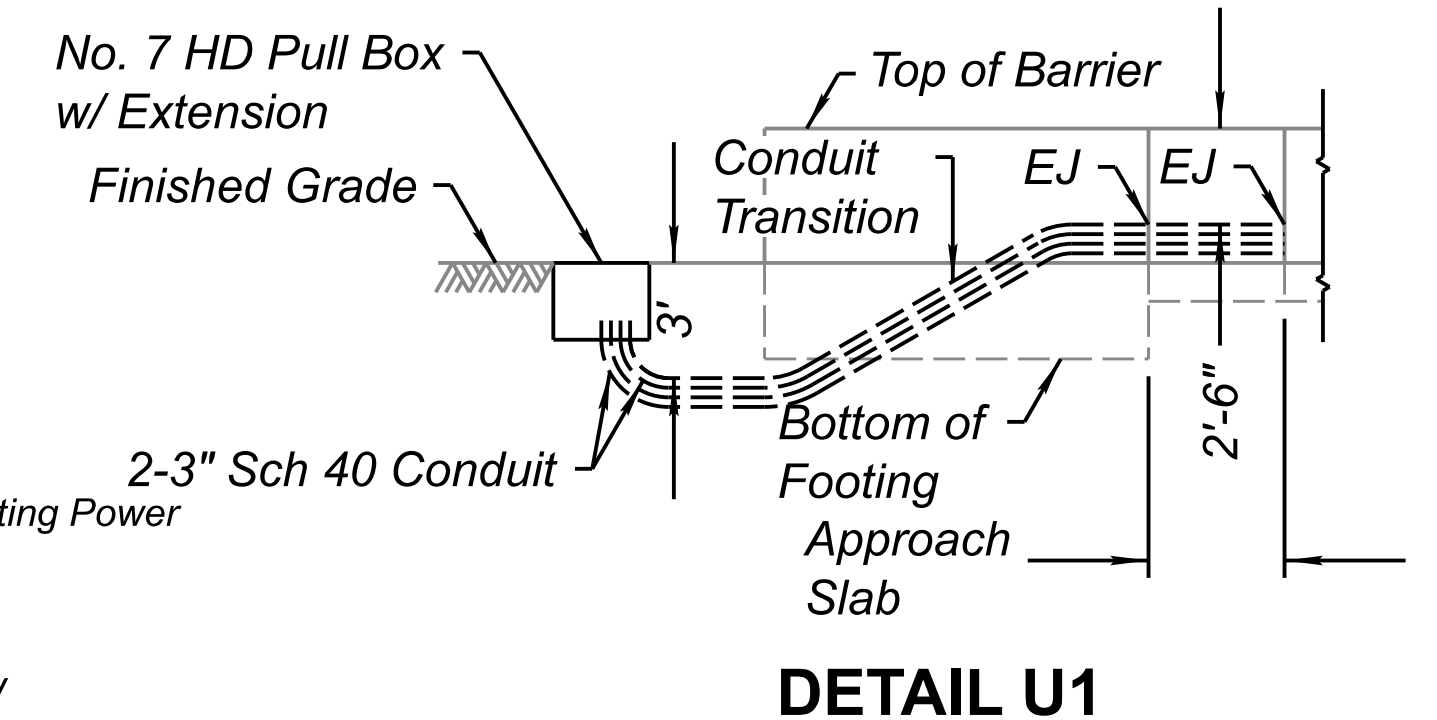
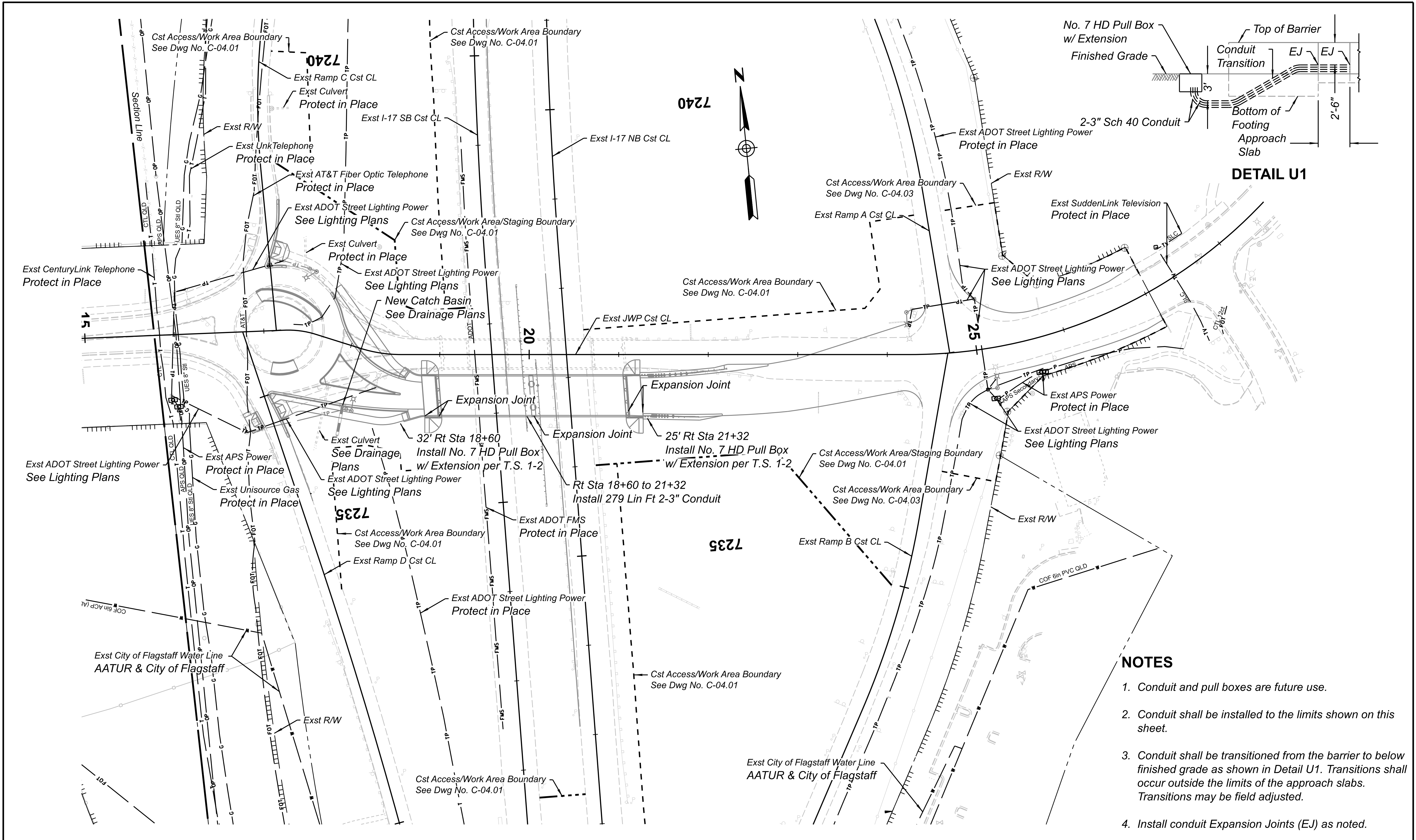
INDEX OF SHEETS

Dwg. No.	Description
U-01.01	Utility Key Map, Legend and General Notes
U-02.01	Utility Plan

ABBREVIATIONS

AATUR	Abandoned According to Utility Records
AT&T	American Telephone & Telegraph
APS	Arizona Public Service
CTL	Century Link
COF	City of Flagstaff
FIO	For Information Only
QL	Quality Level
SLC	Suddenlink Communications
UES	Unisource Energy Services
UNK	Unknown

		DESIGN: J.NOYES 10/23 DRAWN: J.NOYES 10/23 CHECKED: L.BUSENBARK 10/23	ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SECTION	ROUTE: I-17 MILEPOST: 337.39 STRUCTURE NO.:	F.H.W.A. Arizona Division STATE: ARIZ. PROJECT NO.: 017 CN 337 FEDERAL ID NO.: 017-B(237)T SHEET NO.: 122 TOTAL SHEETS: 123	RECORD DRAWING
		HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL: (602) 522-7700		LOCATION: I-17 AIRPORT RD TI UP TRACS NO.: F0362 01C	DWG NO.: U-01.01 OF	



- NOTES**
1. Conduit and pull boxes are future use.
 2. Conduit shall be installed to the limits shown on this sheet.
 3. Conduit shall be transitioned from the barrier to below finished grade as shown in Detail U1. Transitions shall occur outside the limits of the approach slabs. Transitions may be field adjusted.
 4. Install conduit Expansion Joints (EJ) as noted.

<p>! CAUTION ! OVERHEAD POWER LINE PROTECT IN PLACE</p>	<p>! CAUTION ! HIGH PRESSURE GAS PROTECT IN PLACE</p>			<table border="1"> <tr><th>NAME</th><th>DATE</th></tr> <tr><td>J. NOYES</td><td>10/23</td></tr> <tr><td>J. NOYES</td><td>10/23</td></tr> <tr><td>L. BUSENBARK</td><td>10/23</td></tr> </table>	NAME	DATE	J. NOYES	10/23	J. NOYES	10/23	L. BUSENBARK	10/23	<p>ARIZONA DEPARTMENT OF TRANSPORTATION INFRASTRUCTURE DELIVERY AND OPERATIONS DIVISION ROADWAY DESIGN SECTION</p>	<table border="1"> <tr><th>ROUTE</th><td>I-17</td></tr> <tr><th>MILEPOST</th><td>337.39</td></tr> <tr><th>STRUCTURE NO.</th><td></td></tr> </table>	ROUTE	I-17	MILEPOST	337.39	STRUCTURE NO.		<table border="1"> <tr><th>STATE</th><td>ARIZ.</td></tr> <tr><th>PROJECT NO.</th><td>017 CN 337</td></tr> <tr><th>FEDERAL ID NO.</th><td>017-B(237)T</td></tr> </table>	STATE	ARIZ.	PROJECT NO.	017 CN 337	FEDERAL ID NO.	017-B(237)T	<table border="1"> <tr><th>SHEET NO.</th><td>123</td></tr> <tr><th>TOTAL SHEETS</th><td>123</td></tr> </table>	SHEET NO.	123	TOTAL SHEETS	123	<table border="1"> <tr><th>RECORD DRAWING</th><td></td></tr> </table>	RECORD DRAWING	
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<p>HDR HDR, INC. 20 E. THOMAS ROAD SUITE 2500 PHOENIX, AZ 85012 TEL (602) 522-7700</p>				<p>UTILITY PLAN</p>	<table border="1"> <tr><th>LOCATION</th><td>I-17 AIRPORT RD TI UP</td></tr> <tr><th>TRACS NO.</th><td>F0362 01C</td></tr> </table>	LOCATION	I-17 AIRPORT RD TI UP	TRACS NO.	F0362 01C	<table border="1"> <tr><th>DWG NO.</th><td>U-02.01</td></tr> <tr><th>OF</th><td></td></tr> </table>			DWG NO.	U-02.01	OF																				
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