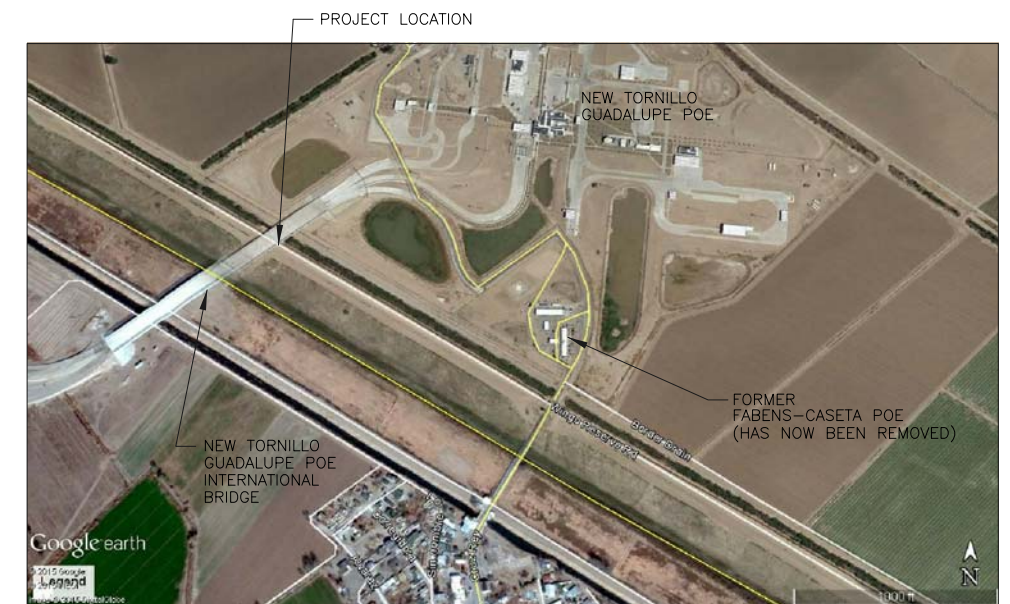
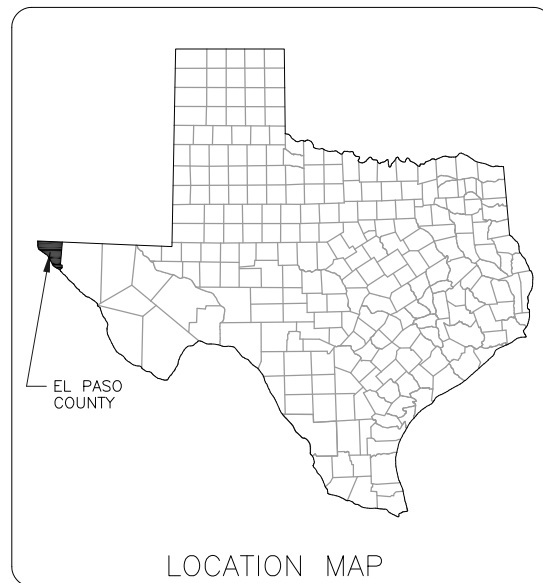


INDEX OF SHEETS

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PLANS FOR THE BEARING SEATS REPLACEMENT ON BENT No. 11

TORNILLO-GUADALUPE INTERNATIONAL BRIDGE



Sidney A. Mielke



SEA STRUCTURAL ENGINEERING
ASSOCIATES, INC.
CONSULTING ENGINEERS
TBPE FIRM REGISTRATION # F-199

TBPE FIRM REG. NO. F-199

03/18/2020

I PROJECT GENERAL NOTES:

1. CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE PROJECT, PROJECT SITE AND ACCESS TO THE SITE.
 - A. ALL INFORMATION SHOWN ON THESE PLANS RELATING TO EXISTING BRIDGE CONFIGURATION, DIMENSIONS AND MEMBER SIZES IS FOR GENERAL INFORMATION ONLY.
 - B. CONTRACTOR SHALL VERIFY ALL EXISTING BRIDGE INFORMATION THAT MAY AFFECT HIS COSTS PRIOR TO SUBMITTING HIS BID.
 - C. THE CONTRACTOR IS CAUTIONED THAT THE PROJECT SITE IS ADJACENT TO THE RIO GRANDE RIVER FLOOD PLAIN.
 - D. CONTRACTOR SHALL TAKE ADEQUATE MEASURES SO THAT NO DEBRIS WILL BE ALLOWED TO FALL INTO CHANNEL OF THE RIVER.
 - E. ALL DEBRIS OR MATERIAL REMOVED FROM THE BRIDGE MUST BE COMPLETELY REMOVED FROM THE SITE AND FLOOD PLAIN, AT LEAST WEEKLY OR WHEN REQUESTED BY USIBWC. NO DEBRIS OR MATERIALS ARE TO BE STORED IN THE FLOODPLAIN. NO DEBRIS OR MATERIAL TO BE DEPOSITED/DISPOSED OF IN THE RIVER.
2. THE PROJECT SITE IS WITHIN THE JURISDICTION OF THE INTERNATIONAL BOUNDARY AND WATER COMMISSION (IBWC), THE U.S. COAST GUARD, THE U.S. BORDER PATROL AND OTHER FEDERAL AGENCIES; THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THEIR REQUIREMENTS AND COMPLY WITH THEM. SOME OF THEIR REQUIREMENTS INCLUDE:
 - A. ALL CONTRACTOR'S EMPLOYEES ARE SUBJECT TO A BACKGROUND SCREENING BY U.S. BORDER PATROL. EMPLOYEES NOT PASSING THE BACKGROUND SCREENING WILL NOT BE ALLOWED TO WORK ON THIS PROJECT SITE.
 - B. ACCESS TO THE PROJECT SITE IS ONLY THROUGH EXISTING GATES IN THE BORDER FENCE. DIRECT ACCESS IS AVAILABLE AT THE WINGO RESERVE GATE, WHICH IS APPROXIMATELY 2.0 MILES UP STREAM. DIRECT ACCESS AT THE FABENS GATE IS NOT AVAILABLE ON A PUBLIC THOROUGH FARE. CONTRACTOR MAY OBTAIN PERMISSION FROM ADJACENT LAND OWNER TO ACCESS FABENS GATE FROM COUNTY ROAD. ACCESS THROUGH FABENS PORT OF ENTRY (POE) GATE IS NOT PERMITTED.
 - C. CONTRACTOR SHALL BE REQUIRED TO COORDINATE ACCESS TO THE PROJECT SITE ON A DAILY BASIS WITH THE U.S. BORDER PATROL AT THE CLINT STATION. IN AND OUT TRAFFIC WILL ONLY BE ALLOWED WITH PRIOR COORDINATION AND APPROVAL OF U.S. BORDER PATROL.
3. BURNING AT THE PROJECT SITE FOR DISPOSAL OF REFUSE AND DEBRIS WILL NOT BE PERMITTED.
4. THE USE OF EXPLOSIVES WILL NOT BE PERMITTED.
5. CONTRACTOR IS REQUIRED TO REVEGETATE ALL AREAS WITHIN THE CONSTRUCTION LIMITS DISTURBED BY CONSTRUCTION OPERATIONS.
6. CONTRACTOR IS REQUIRED TO REMOVE AND REPLACE ANY LEVEE ROAD BASE MATERIAL THAT IS DAMAGED BY BEARING SEAT REPAIR OPERATION.

ROADWAY BASE SHALL BE AGGREGATE ROAD SURFACING MATERIAL MEETING THE SPECIFICATIONS AND AS SHOWN BELOW:

PROPERTY	TEST METHOD	AGGREGATE SURFACING
MASTER GRADATION SIEVE SIZE % PASSING		
1 1/2 IN.		0-10
3/8 IN.		50-85
NO 4	ASTM D422	35-65
NO 40		15-30
LIQUID LIMIT, % MAX	ASTM D4318	40
PLASTICITY INDEX, MAX	ASTM D4318	12
PLASTICITY INDEX, MIN		4
SPECIFIC GRAVITY, MIN	ASTM C127/C128	2.40
LA ABRASION, MAX LOSS	ASTM C131	20%

7. CONTRACTOR IS REQUIRED TO PROVIDE AND MAINTAIN TRAFFIC CONTROL DEVICES TO ALLOW BORDER PATROL AND IBWC VEHICLES TO PASS THROUGH THE WORK ZONE.
8. CONTRACTOR IS REQUIRED TO REMOVE AND REPLACE ANY CONCRETE RIPRAP THAT IS DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITIES.

II GENERAL REQUIREMENTS

THE GENERAL STRUCTURAL NOTES ARE INTENDED TO AUGMENT THE DRAWINGS AND SPECIFICATIONS, SHOULD CONFLICTS EXIST BETWEEN THE DRAWINGS AND THE STRUCTURAL NOTES. THE MORE STRINGENT PROVISION SHALL GOVERN.

FOLLOW ALL APPLICABLE SAFETY CODES AND REGULATIONS DURING ALL PHASES OF CONSTRUCTION. AT ALL TIMES, THE SAFETY AND HEALTH OF ALL WORKERS AND ANY OTHER PEOPLE AT THE JOB SITE SHALL BE OF THE UPMOST CONCERN. THE RULES AND REGULATIONS OF OSHA SHALL BE IMPLEMENTED.

ALL CONDITIONS AND DIMENSIONS PERTAINING TO EXISTING UTILITIES AND CONSTRUCTION AT THE SITE SHALL BE VERIFIED BY THE CONTRACTOR BEFORE PROCEEDING WITH THE WORK. THIS ASSESSMENT SHALL BE CONDUCTED SUFFICIENTLY IN ADVANCE OF ANY PHASE OF CONSTRUCTION, TO THE MAXIMUM EXTENT POSSIBLE TO AVOID DELAYS IN THE WORK.

IN GENERAL, ALL SECTIONS AND DETAILS SHOWN ON THE PLANS ARE INTENDED TO APPLY TO SIMILAR CONDITIONS, UNLESS SPECIFICALLY NOTED.

STRUCTURAL STEEL

UNLESS NOTED OTHERWISE, ALL STEEL W-SHAPES SHALL CONFORM TO ASTM A36 (IF AVAILABLE), A572 OR A992, GRADE 50. STEEL PIPE SHALL CONFORM TO ASTM SPECIFICATION ASTM A 53, GRADE B, FY 35 KSI, STEEL TUBE SHALL CONFORM TO ASTM SPECIFICATION A 500, GRADE B FY 46 KSI STEEL CHANNELS, ANGLES, S-SHAPES, BARS, AND PLATES SHALL CONFORM TO ASTM A36, GRADE 36.

GALVANIZING

STRUCTURAL STEEL SHALL BE HOT DIP GALVANIZED G140 PER ASTM A123.

WELDING



ALL FIELD WELDS SHALL BE RE-TOUCHED WITH COLD GALVANIZING "THREE COAT SYSTEM", OF CARBOLINE PRODUCTS CONSISTING:

PRIMER: CARBOZINC 859
INTERMEDIATE: CARBOTHANE 133

CONTRACTOR WILL STRICTLY ADHERE TO ALL MANUFACTURER'S RECOMMENDATIONS FOR SURFACE PREPARATION AND APPLICATION PROCEDURES. ALL WELDING SHALL CONFORM TO AMERICAN WELDING SOCIETY CODE. ELECTRODES SHALL CONFORM TO AWS E70XX.

STRUCTURAL OBSERVATION AND SPECIAL INSPECTION

NO STRUCTURAL OBSERVATIONS BY THE ENGINEER OF RECORD NOR SPECIAL INSPECTION ARE REQUIRED FOR THIS PROJECT. HOWEVER, ENGINEER OF RECORD MAY COORDINATE A SITE VISIT WITH CONTRACTOR, AT ENGINEERS DISCRETION.

	THE COUNTY OF EL PASO
	STRUCTURAL ENGINEERING ASSOCIATES, INC. CONSULTING ENGINEERS TBPE FIRM REG. NO. F-199
TORNILLO-GUADALUPE INTERNATIONAL BRIDGE BEARING SEAT REPLACEMENT	
GENERAL NOTES	
DWN. AMH	DESIGN SAM
DWN. CK. GJS	DESIGN CK. GJS
DATE 08/02/19	DRAWING FILE 19-136C
S-2	

Sidney A. Mielke

STATE OF TEXAS

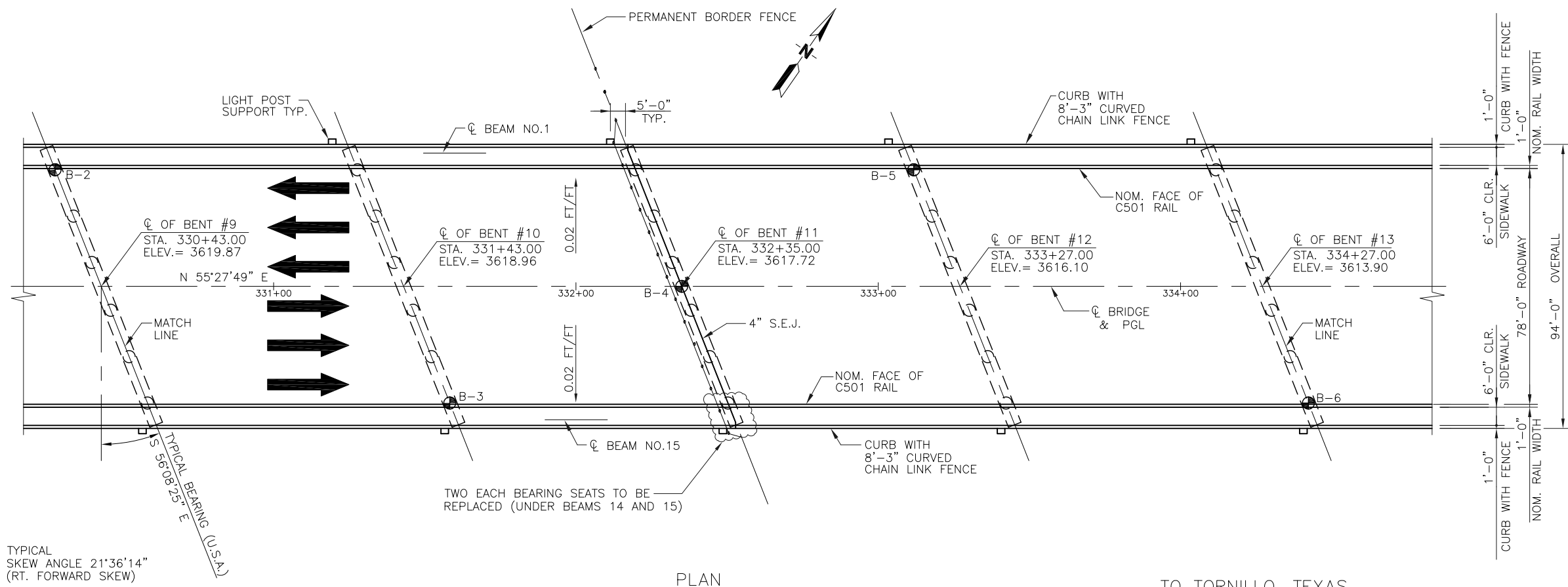
SIDNEY A. MIELKE

60799

REGISTERED PROFESSIONAL ENGINEER

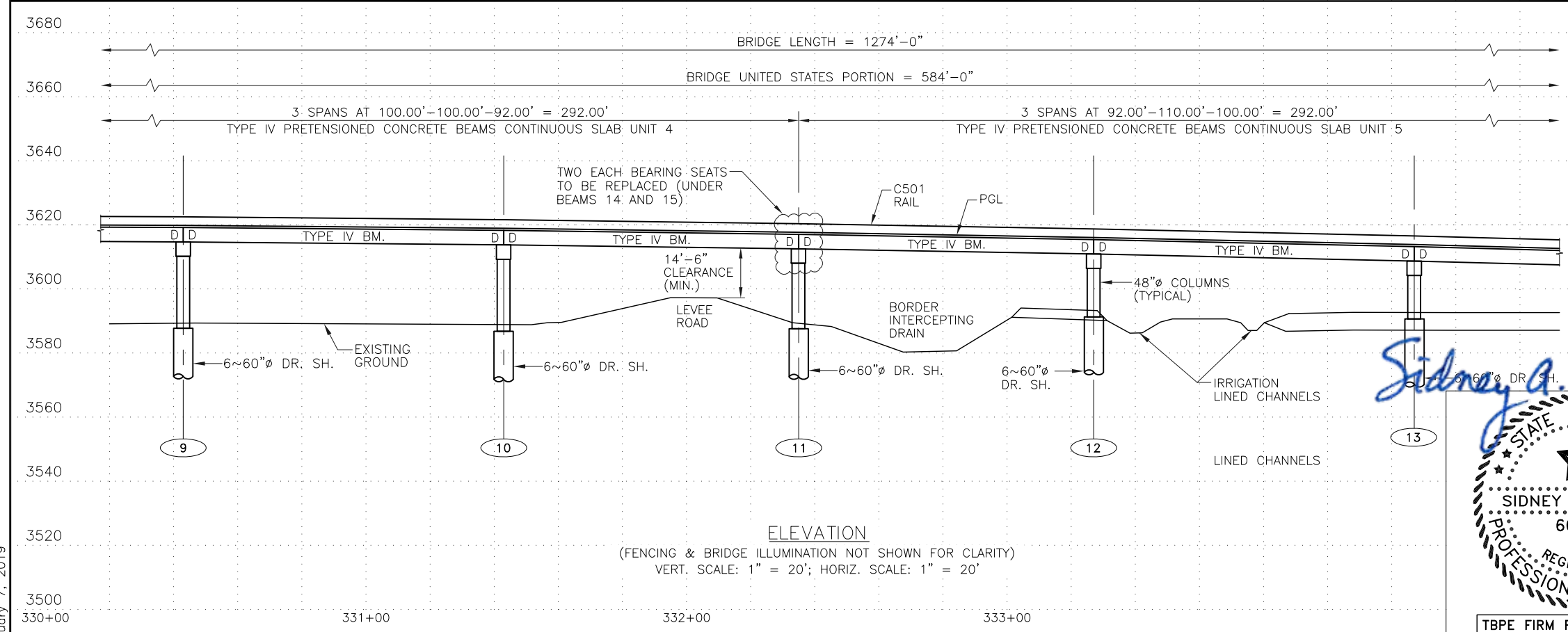
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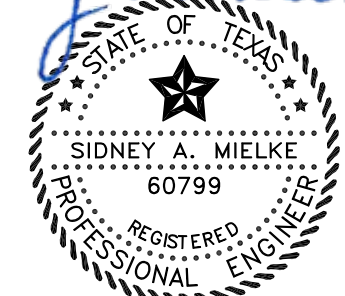


PLAN
SCALE: 1" = 20'



TO TORNILLO, TEXAS
UNITED STATES OF AMERICA



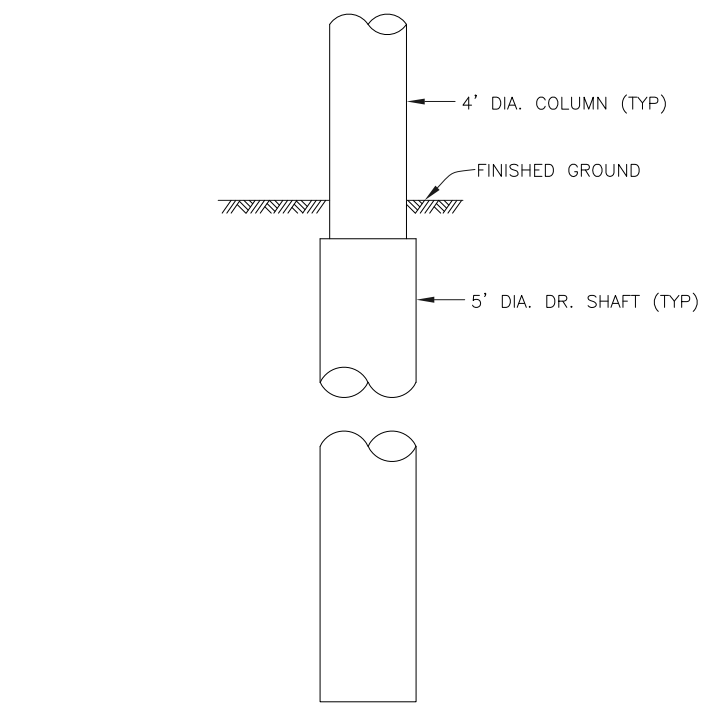
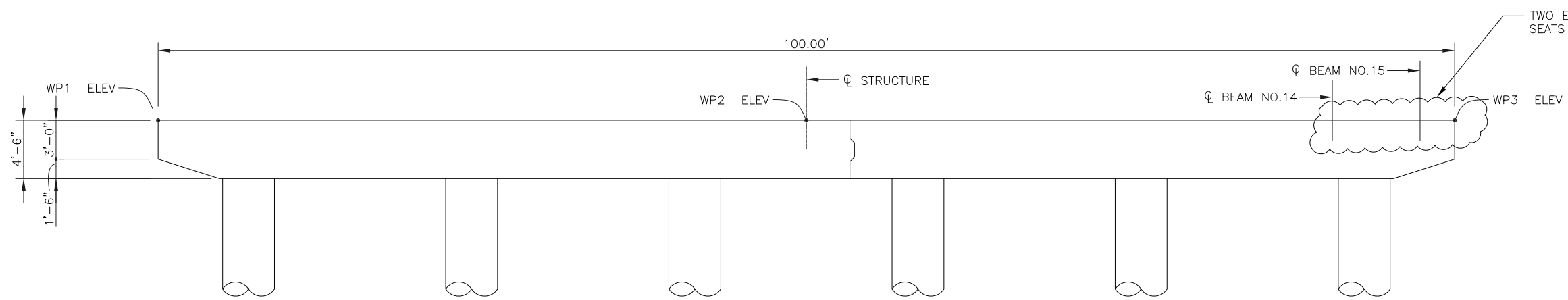
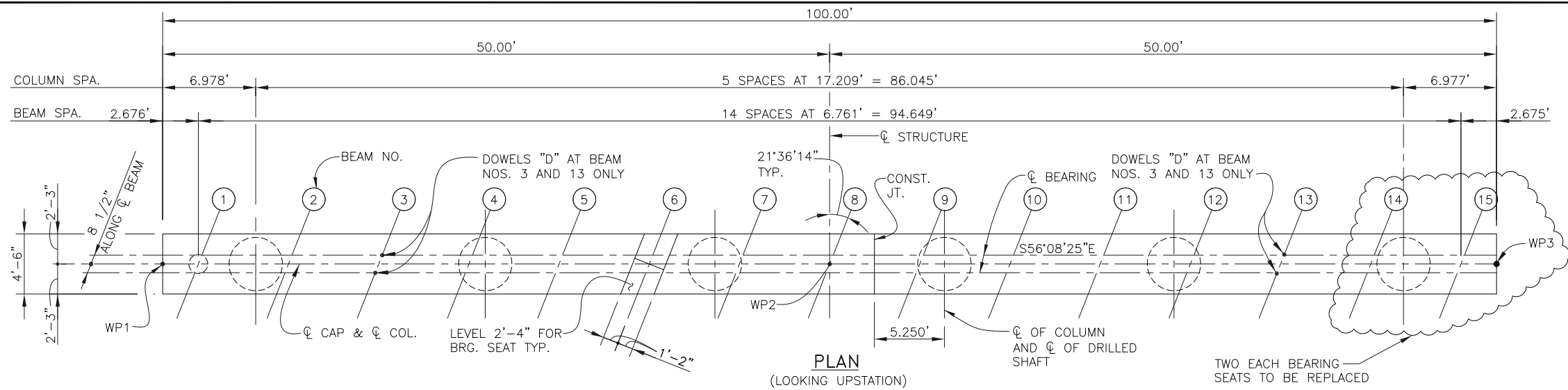
Sidney A. Mielke



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 <p>THE COUNTY OF EL PASO</p>			
 <p>STRUCTURAL ENGINEERING ASSOCIATES, INC. CONSULTING ENGINEERS TBPE FIRM REG. NO. F-199</p>			
<p>TORNILLO-GUADALUPE INTERNATIONAL BRIDGE BEARING SEAT REPLACEMENT</p>			
<p>EXISTING BENT #11 PLAN AND ELEVATION</p>			
DWN.	DESIGN	DATE	SHEET NO.
AMH	SAM	08/02/19	S-3
DWN. CK.	DESIGN CK.	DRAWING FILE	
GJS	GJS	19-136C	

February 7, 2019

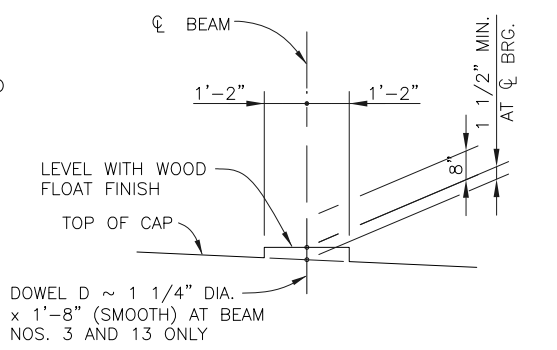


ELEVATION

ALTERNATE DR. SHAFT STEEL EXTENSION
SPLICING BENTS #11, #12 & #13 ONLY

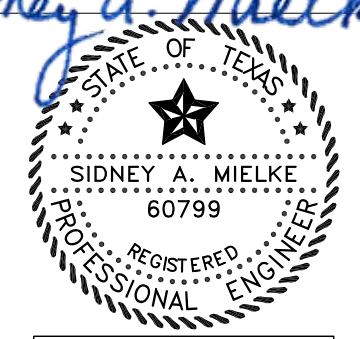
- GENERAL NOTES:
- DESIGN: HS 25 LOADING IN ACCORDANCE WITH A.A.S.H.T.O. 1996 STANDARD AND INTERIM SPECIFICATIONS, OR SPECIAL TRUCK LOAD SHOWN ON THESE PLANS, WHICHEVER CONTROLS.
 - BENT CONCRETE SHALL BE CLASS "C" WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3600 P.S.I.
 - ALL REINFORCING STEEL SHALL BE A.S.T.M. A-615 GRADE 60.
 - CHAMFER ALL EXPOSED EDGES 3/4" UNLESS OTHERWISE NOTED.
 - CALCULATED FOUNDATION LOAD = 400 TONS/SHAFT.

WP ELEVATION			
BENT	WP1	WP2	WP3
11	3611.393'	3612.044'	3610.821'



ORIGINAL BEARING SEAT DETAILS
(BEARING SURFACE SHALL BE CLEAN AND FREE OF ALL LOOSE MATERIAL BEFORE PLACING BEARING PAD.)

Sidney A. Mielke



TBPE FIRM REG. NO. F-199
03/18/2020

		THE COUNTY OF EL PASO	
		STRUCTURAL ENGINEERING ASSOCIATES, INC. CONSULTING ENGINEERS TBPE FIRM REG. NO. F-199	
TORNILLO-GUADALUPE INTERNATIONAL BRIDGE BEARING SEAT REPLACEMENT			
EXISTING BENT #11 PLAN AND ELEVATIONS			
DWN.	DESIGN	DATE	SHEET NO.
AMH	SAM	08/02/19	S-4
DWN. CK.	DESIGN CK.	DRAWING FILE	
GJS	GJS	19-136C	

GENERAL REPAIR NOTES:

- THE BRIDGE SUPERSTRUCTURE (BEAMS, SLAB & RAILS) SHALL BE RAISED AND POSITIVELY SUPPORTED TO REMOVE THE DEAD LOAD AND LIVE LOAD FROM OVER BENT CAP #11, IN ORDER TO PERFORM ALL BEARING SEAT REPLACEMENT ACTIVITIES. A POSITIVE METHOD FOR SUPPORT SHOULD BE UTILIZED SO AS NOT TO RELY UPON HYDRAULIC PRESSURE WITHIN THE JACKS. UPSTATION ENDS OF BEAMS IN SPAN #10 AND DOWNSTATION ENDS OF BEAMS IN SPAN #11 SHALL BE RAISED IN A MANNER AND SEQUENCE SO AS NOT TO CRACK THE EXISTING BRIDGE SLAB. THE APPROXIMATE MAXIMUM AMOUNTS NECESSARY TO RAISE INDIVIDUAL BEAMS VARIES AND IS AS NOTED IN THE TABLE BELOW:

TABLE OF APPROX. MAX. LIFT

BEAM NO.	LIFT AMOUNT (IN)
9	0"
10	1/2"
11	1 1/2"
12	2 1/2"
13	3 1/2"
14	4 1/2"
15	4 1/2"

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREPARATION AND SUBMITTAL OF DETAILED PLANS, WHICH FULLY DESCRIBE FALSEWORK, JACKING FRAMES, JACKS, SHIMS, AND OTHER MISCELLANEOUS MATERIALS THAT ARE TO BE UTILIZED FOR THE RAISING AND HOLDING OF THE BRIDGE SUPERSTRUCTURE. THE COMPLETE SEQUENCE OF ACTIVITIES/PROCEDURES TO BE UTILIZED FOR RAISING SUPERSTRUCTURE SHALL BE DESCRIBED IN DETAIL ON THE PLANS SUBMITTED. ALL SUCH PLANS INDICATING EQUIPMENT, MATERIALS, MEANS, METHODS AND ACTIVITIES/PROCEDURES SHALL BE PREPARED UNDER THE RESPONSIBLE CHARGE OF A PROFESSIONAL ENGINEER, LICENSED IN THE STATE OF TEXAS, AND SHALL BEAR HIS/HER SIGNATURE AND PROFESSIONAL SEAL. THE CONTRACTOR WILL NOT BE ALLOWED TO COMMENCE BRIDGE RAISING ACTIVITIES UNTIL SUCH PLANS HAVE BEEN REVIEWED BY THE ENGINEER AND RETURNED TO THE CONTRACTOR.
- THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE FACT THAT THE BRIDGE PROFILE GRADE LINE IS ON A VERTICAL GRADIENT, AND THAT APPROPRIATE STEPS SHALL BE NOTED ON THE RAISING PLANS, AND UNDERTAKEN BY THE CONTRACTOR TO PREVENT LONGITUDINAL OR TRANSVERSE MOVEMENT/SLIDING OF THE BRIDGE SUPERSTRUCTURE.
- THE CONTRACTOR WILL BE REQUIRED TO PERFORM THE ACTUAL RAISING AND POSITIVELY SUPPORTING THE BRIDGE SUPERSTRUCTURE DURING NON-PEAK BRIDGE TRAFFIC HOURS, AS NEGOTIATED AND COORDINATED WITH EL PASO COUNTY AND THE U.S. CUSTOMS AND BORDER PROTECTION AT THE FABENS PORT OF ENTRY. TRAFFIC IN THE NORTHBOUND (INTO THE U.S.) DIRECTION CAN BE TEMPORARILY STOPPED FOR BRIEF PERIODS OF TIME. THE LENGTH OF TIME FOR THESE NORTHBOUND TRAFFIC STOPPAGES SHALL ALSO BE COORDINATED WITH EL PASO COUNTY AND THE U.S. CUSTOMS AND BORDER PROTECTION.
- ANY TRAFFIC CONTROL EQUIPMENT, BARRICADES, MATERIAL AND PERSONNEL REQUIRED TO PERFORM NORTHBOUND TRAFFIC STOPPAGES SHALL BE FURNISHED, PLACED, MONITORED, AND REMOVED BY THE CONTRACTOR. THE COST TO PROVIDE SAID TRAFFIC SAID TRAFFIC CONTROL SHALL BE INCLUDED WITHIN THE LUMP SUM BID FOR THE PROJECT.
- AS AN ALTERNATIVE TO THE TEMPORARY STOPPAGE OF NORTHBOUND TRAFFIC, THE CONTRACTOR MAY ELECT TO DETOUR ONE LANE OF NORTHBOUND TRAFFIC ONTO THE SOUTHBOUND LANES OF THE BRIDGE. THE ELECTION TO UTILIZE THIS DETOUR ALTERNATIVE SHALL ALSO BE COORDINATED AND AGREED TO BY EL PASO COUNTY AND U.S. CUSTOMS AND BORDER PROTECTION. THE COST TO PROVIDE THIS ALTERNATIVE TRAFFIC CONTROL SHALL BE INCLUDED WITHIN THE LUMP SUM BID FOR THE PROJECT.

APPLICABLE DESIGN/CONSTRUCTION CRITERIA/REQUIREMENTS

- TxDOT - STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS AND BRIDGES - 2014
- TxDOT - CONCRETE REPAIR MANUAL - 2017
- LOADING
 - DEAD LOAD: SELF WEIGHT OF BRIDGE MEMBERS PLUS APPLICABLE LOAD FACTOR
 - SUPERIMPOSED DEAD LOAD: N/A
 - LIVE LOAD: AASHTO HS25 OR MEXICO T3-S2-R4 PLUS APPLICABLE LIVE LOAD FACTOR
 - WIND LOADS: BASIC WIND SPEED = 115 MPH PLUS APPLICABLE LOAD FACTOR
 - SNOW LOADS: N/A
 - SEISMIC DESIGN CRITERIA: N/A

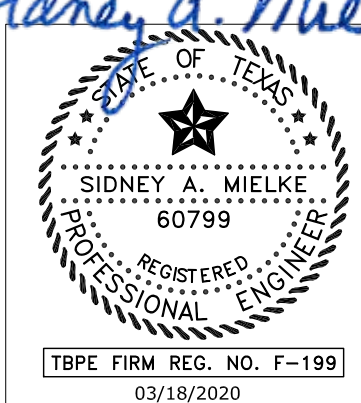
- MAXIMUM COMPRESSIVE STRESS ON EXISTING CONCRETE MEMBERS = 2700 PSI DUE TO JACKING/LIFTING/HOLDING EQUIPMENT
- MAXIMUM BEARING CAPACITY ON EXISTING SOILS = APPROPRIATE VALUES FOR SOIL TYPE IN THE IMMEDIATE AREA OF THE BRIDGE



RECOMMENDED BEARING SEAT REPLACEMENT PROCEDURES

- REMOVE THE BETWEEN THE BEAMS BORDER FENCE PANELS (BTBFP) FROM BEAM 8 THROUGH THE EXTERIOR PANEL OUTSIDE OF BEAM 15. NOTE THAT THESE (BTBFP) PANELS ARE WELDED TO THE TOP TUBE OF THE MAIN BORDER FENCE SECTION. CARE SHOULD BE TAKEN WHEN REMOVING THE WELD MATERIAL NOT TO SIGNIFICANTLY DAMAGE THE TOP TUBE OF THE MAIN BORDER FENCE SECTION OR THE BOTTOM TUBE OF THE BTBFP. STORE BTBFP FOR FUTURE RE-INSTALLATION. ANY SUCH PANELS THAT ARE LOST OR STOLEN SHALL BE REPLACED BY THE CONTRACTOR, AT NO ADDITIONAL EXPENSE TO EL PASO COUNTY.
- DE-ENERGIZE THE UNDER BRIDGE (UB) LIGHTING CIRCUIT AND REMOVE ANY (UB) LIGHTING FIXTURES, CONDUITS AND CONDUCTORS NECESSARY TO ALLOW FOR BRIDGE SUPERSTRUCTURE LIFTING EQUIPMENT. STORE (UB) LIGHTING FIXTURES, CONDUITS AND CONDUCTORS FOR RE-INSTALLATION. ANY FIXTURES, CONDUITS, OR CONDUCTORS DAMAGED, LOST OR STOLEN SHALL BE REPLACED BY THE CONTRACTOR, AT NO ADDITIONAL EXPENSE TO EL PASO COUNTY.
- INSTALL BRIDGE LIFTING FALSEWORK, FRAMING AND EQUIPMENT PER THE SUBMITTED AND REVIEWED DETAILED PLANS PREPARED BY CONTRACTOR'S STRUCTURAL ENGINEER.
- LIFT BRIDGE SUPERSTRUCTURE AS NOTED IN TABLE TO APPROXIMATE MAXIMUM LIFT AMOUNTS, OR AS SUBMITTED AND APPROVED BY THE ENGINEER OF RECORD. ALL BEAM ENDS SHOULD BE LIFTED IN A SEQUENCE AND AMOUNT TO PREVENT CRACKING TO THE BRIDGE SLAB.
- ENGAGE HOLDING/LOCKING EQUIPMENT PER THE SUBMITTED AND REVIEWED DETAILED PLANS.
- REMOVE, CLEAN, AND STORE EXISTING ELASTOMERIC BEARING PADS UNDER BEAMS NO. 14 AND 15 FOR BOTH SPANS OF BEAMS LOCATED ABOVE BENT NO. 11. EXISTING ELASTOMERIC BEARING PADS ARE TO BE RE-USED AND RE-INSTALLED ONCE BEARING SEATS HAVE BEEN REPAIRED. CARE SHOULD BE TAKEN TO NOTE THE ACTUAL ORIENTATION/PLACEMENT OF THE EXISTING PADS SO THAT THEY WILL BE REPLACED IN THE SAME ORIENTATION AS ORIGINALLY INTENDED. (SEE PLAN SHEETS THAT INCLUDE ORIGINAL BEARING PAD DETAIL SHEETS).
- REMOVE ALL EXISTING DAMAGED/CRUSHED BEARING SEAT BUILD-UP MATERIAL FROM ON TOP OF THE BENT CAP. CHIP OR GRIND ANY PORTIONS OF EXISTING BEARING SEAT BUILD-UP MATERIAL THAT CANNOT BE EASILY REMOVED, DOWN TO THE ORIGINAL TOP OF BENT CAP SURFACE. CONFIRM THAT THE TOP OF THE BENT CAP SURFACE IS CLEARED OF PREVIOUS CEMENTITIOUS MATERIAL FOR APPROXIMATELY 1 FOOT BEYOND THE PERIMETER OF THE STEEL BEARING SEAT REPLACEMENT PLATE. THOROUGHLY CLEAN THE TOP SURFACE OF THE BENT CAP USING CLEAN DRY AIR OR VACUUM.
- APPLY A THIN LAYER OF EPOXY BONDING AGENT (TXDOT TYPE VIII EPOXY) TO THE TOP SURFACE OF THE BENT CAP UNDER THE AREA TO BE COVERED BY THE LOWER BSR-1 STEEL BEARING SEAT REPLACEMENT PLATE, TO CREATE A SMOOTH SURFACE PLACE THE BSR-1 PLATE UNDER THE BEAM. CARE SHOULD BE TAKEN TO CONFIRM THAT THE PLATE IS PLACED IN CORRECT ALIGNMENT BASED ON THE SLOPE OF THE BENT CAP, SO THAT THE TOP OF THE STEEL PLATE IS LEVEL, AND LOCATED APPROPRIATELY/UNDER THE END OF THE BEAM.
- THOROUGHLY CLEAN THE TOP SURFACE OF THE LOWER BSR-1 PLATE AND INSTALL THE UPPER BSR-2 PLATE ON TOP OF BSR-1. CLEAN THE TOP SURFACE OF BSR-2, AND RE-INSTALL THE ELASTOMERIC BEARING PAD. CARE SHOULD BE TAKEN TO ENSURE THAT THE BEARING PAD IS RE-INSTALLED IN THE CORRECT ALIGNMENT AND LOCATION UNDER THE BEAM ABOVE. WELD BSR-2 TO BSR-1 AS INDICATED ON PLAN SHEET S-6.
- LOWER THE EXISTING BEAMS BACK DOWN UNTIL FULL WEIGHT OF THE BRIDGE IS BACK ON THE ELASTOMERIC PADS.
- DRILL HOLES INTO BENT CAP FOR BSR-1 PLATE ANCHOR BOLTS AND INSTALL ANCHOR BOLTS AS NOTED IN PLAN SHEET DETAILS. ANCHOR BOLTS SHALL BE INSTALLED UTILIZING TxDOT TYPE III (CLASS C OR D) EPOXY. INSTALL WASHERS AND NUTS, AND TACK WELD NUTS AS INDICATED ON PLAN SHEET S-6.
- REMOVE BRIDGE LIFTING FALSEWORK, FRAMING AND EQUIPMENT. REPAIR ANY DAMAGED BRIDGE CONCRETE DUE TO JACKING OPERATIONS.

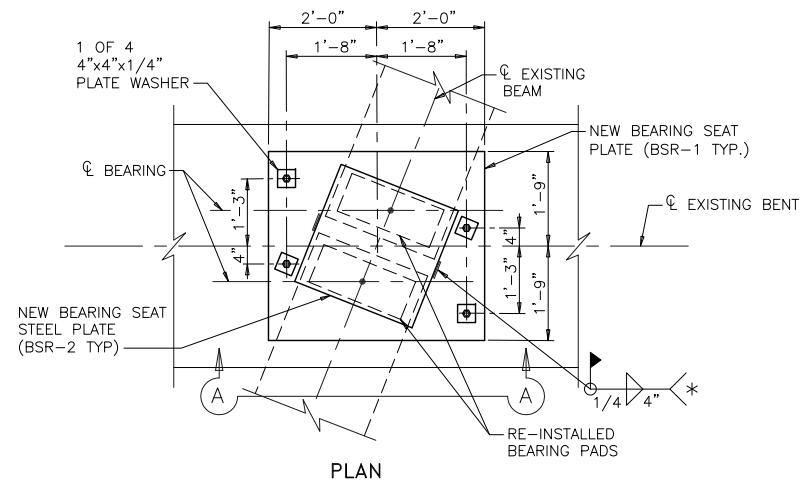
- REPLACE (UB) LIGHTING FIXTURES AND ASSOCIATED CONDUIT AND CONDUCTORS, RE-CONNECT TO POWER CIRCUIT, AND TEST LIGHTING FOR A MINIMUM OF 24 CONTINUOUS HOURS.
- RE-INSTALL BTBFP PER THE ORIGINAL INSTALLATION LOCATION AND WELDING DETAILS. REPAIR ANY DAMAGE TO MAIN BORDER FENCE COMPONENTS.

Sidney A. Mielke

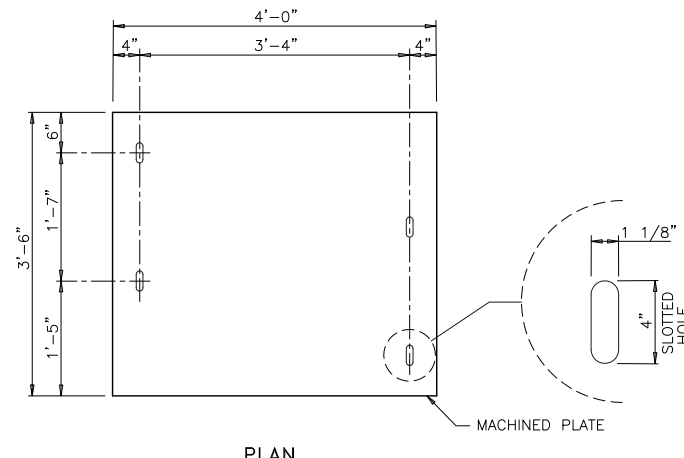


 <p>THE COUNTY OF EL PASO</p>			
 <p>STRUCTURAL ENGINEERING ASSOCIATES, INC. CONSULTING ENGINEERS TBPE FIRM REG. NO. F-199</p>			
<p>TORNILLO-GUADALUPE INTERNATIONAL BRIDGE BEARING SEAT REPLACEMENT</p>			
<p>BEARING SEAT REPAIR NOTES, CRITERIA & PROCEDURE</p>			
DWN. AMH	DESIGN SAM	DATE 08/02/19	SHEET NO. S-5
DWN. CK. GJS	DESIGN CK. GJS	DRAWING FILE 19-136C	

February 7, 2019



DETAIL A



PLAN



ELEVATION

PLATE BSR-1
(2 REQUIRED)
(GALVANIZED)

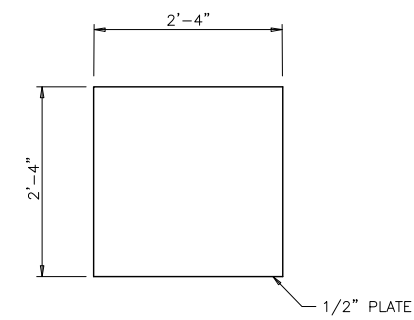
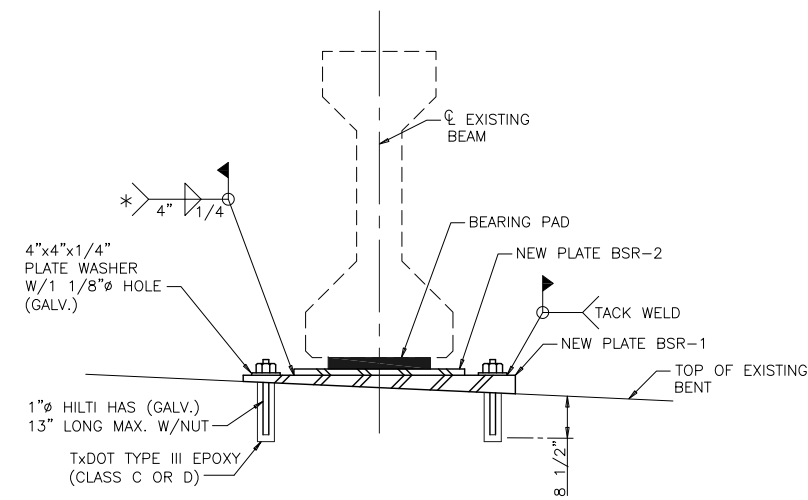
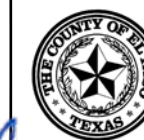


PLATE BSR-2
(2 REQUIRED)
(GALVANIZED)



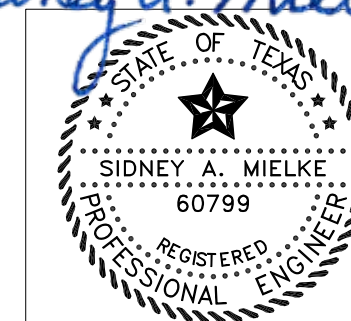
SECTION A-A

* SEE WELDING NOTE ON SHEET S-2 FOR REPAIR TO GALVANIZING



THE COUNTY OF EL PASO

Sidney A. Mielke



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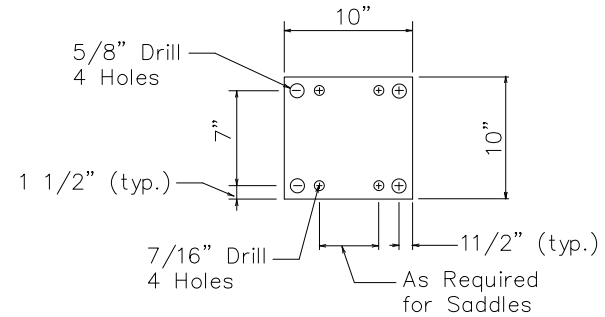
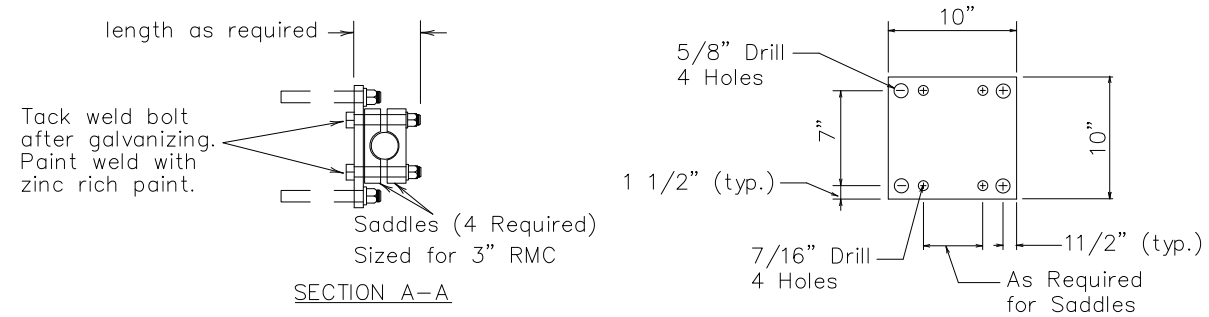


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CONSULTING ENGINEERS
TBPE FIRM REG. NO. F-199

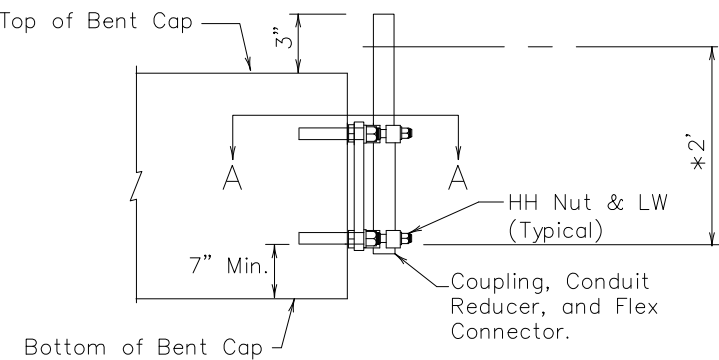
TORNILLO-GUADALUPE INTERNATIONAL BRIDGE
BEARING SEAT REPLACEMENT

BEARING SEAT REPLACEMENT DETAILS

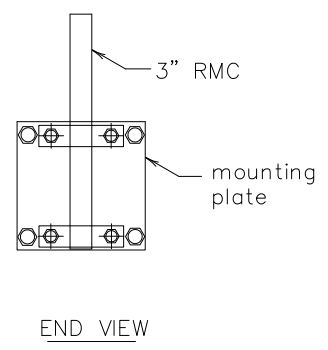
DWN.	DESIGN	DATE	SHEET NO.
AMH	SAM	08/02/19	S-6
DWN. CK. GJS	DESIGN CK. GJS	DRAWING FILE 19-136C	



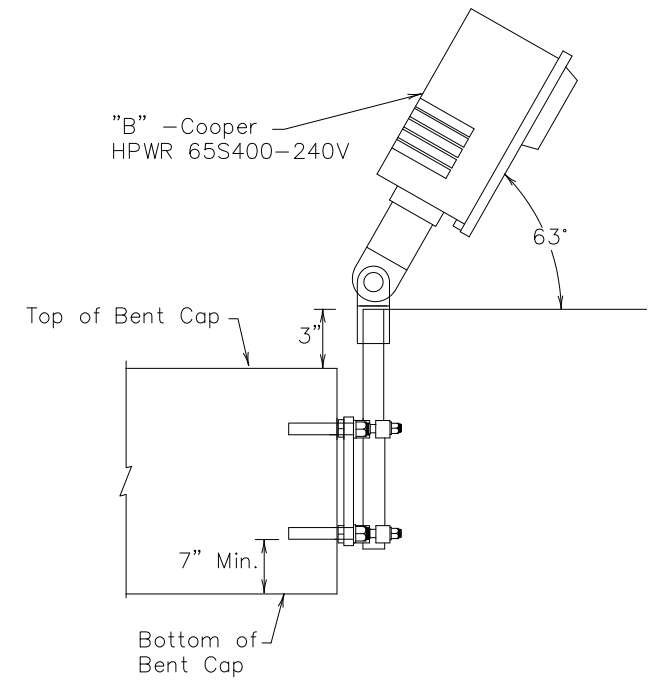
MOUNTING PLATE
Make from 3/8 inch Plate Galv. after fabrication



PROFILE VIEW

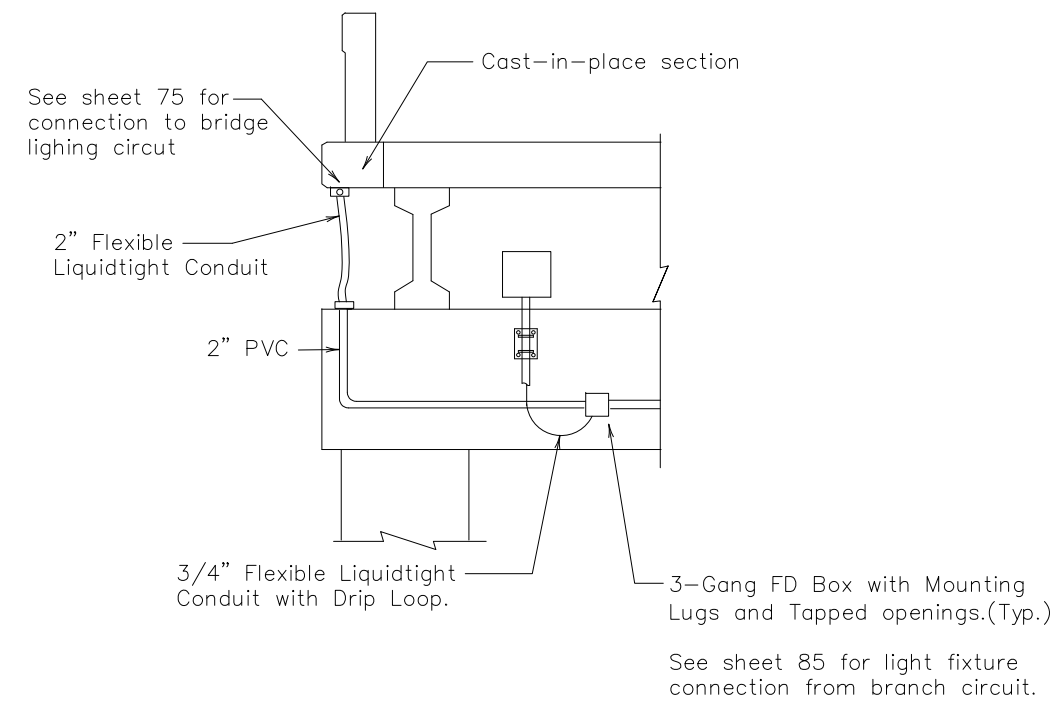


END VIEW



AIMING ANGLE AND UNDERBRIDGE
FIXTURE SPECIFICATION

UNDERPASS LIGHTING TENON



* Or as Required (See Note A. 4)

NOTES:

- A. ALL LUMINAIRES
- Luminaire locations, conduit and conductor sizes and routing are typical and diagrammatic only. See project layout sheets for specific details.
 - All conductors and conduit will be paid for under the items "Conduit" and "Electrical Conductor", unless otherwise shown on the plans. See lighting layout sheets.
 - A ground rod shall be installed and attached to the equipment grounding conductor in all ground boxes containing conduit that extends above ground. All RMC in these boxes shall have grounding bushings and shall be properly bonded.
 - Adjust conduit in saddles to place fixture height and orientation as required. See fixture orientation detail and layout sheet. Where practical place luminaires so that bottom of luminaire is above bottom of beam, maximum of 75 mm. (See detail.)
 - All bolts, nuts and washers shall be galvanized, ASTM A-153.
 - Fabrication of brackets and support arms will not be paid for directly but shall be subsidiary to Item 610, "Roadway Illumination Assemblies."
 - A Heavy Duty, 480 volt or 600 volt, 30 amp fused disconnect switch in NEMA 3R enclosure shall be installed in circuits to switch underpass luminaires. Switch shall be mounted three meter (minimum) above grade on columns or bent caps as approved by the Engineer. Contractor shall modify switch to allow padlocking in the "ON" and in the "OFF" positions. 20 amp fuses shall be installed.

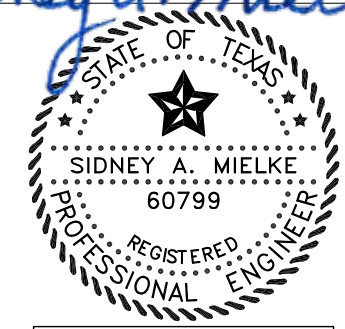
B. TYPE 1

- Type 1 arm shaft shall be 3 inch rigid metal conduit.
- Anchor bolts for Type 1 luminaire shall be 3/8 inch bolt or stud expansion anchors with minimum pull out of 3000 lb each, with 4 inch minimum embedment, and lock washers.
- Attach conduit to plate with 4 saddles, four 3/8 inch (min.) bolts, HHN & LW.

NOTE:

Conduit on Columns, Caps, and Slab is shown surface mounted. For all new columns and caps, Contractor shall embed conduit in concrete. Embedded conduit shall be PVC. Metal junction boxes and conduit shall be grounded.

Sidney A. Mielke



TBPE FIRM REG. NO. F-199
03/18/2020



**THE COUNTY
OF
EL PASO**

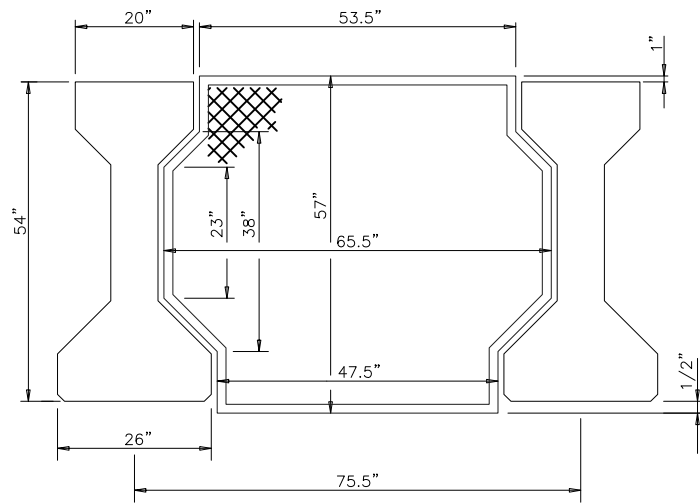


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CONSULTING ENGINEERS
TBPE FIRM REG. NO. F-199

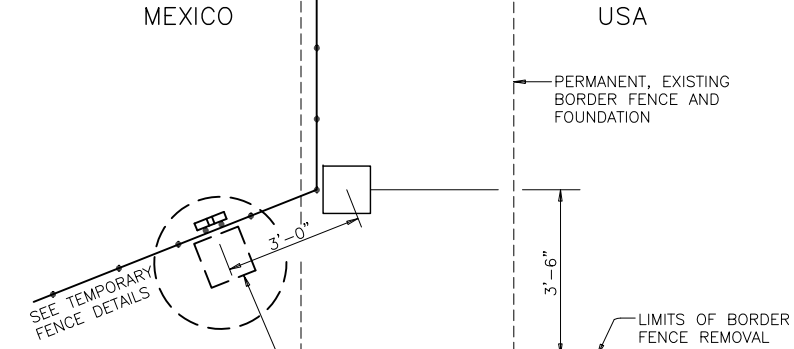
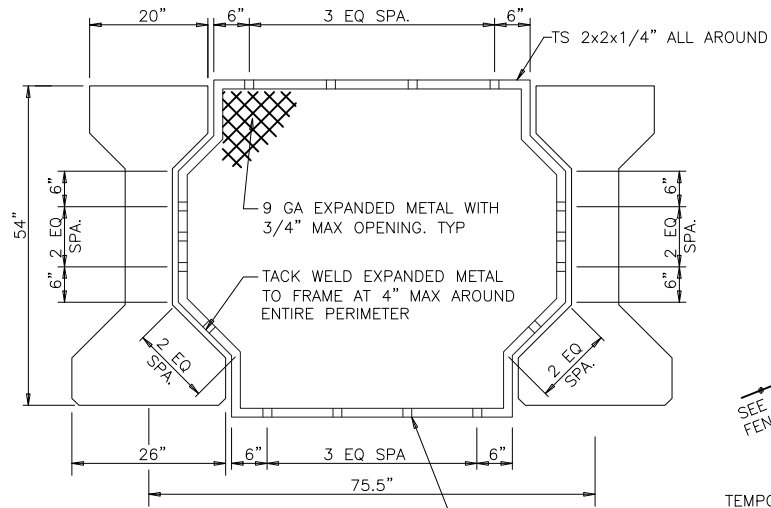
TORNILLO-GUADALUPE
INTERNATIONAL BRIDGE
BEARING SEAT REPLACEMENT

EXISTING UNDER BRIDGE (UB)
LIGHTING DETAILS

DWN.	DESIGN	DATE	SHEET NO.
AMH	SAM	08/02/19	S-7
DWN. CK.	DESIGN CK.	DRAWING FILE	
GJS	GJS	19-136C	

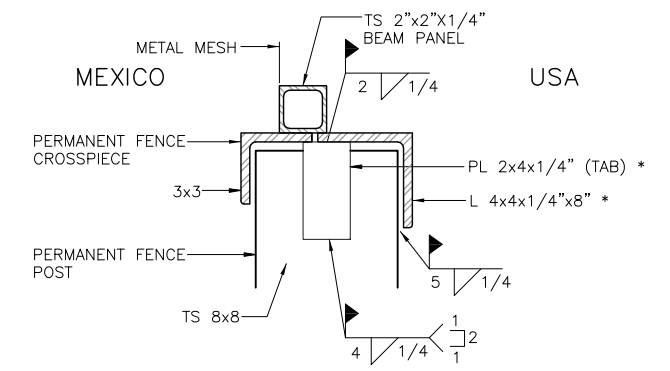


**BETWEEN THE BEAMS
BORDER FENCE PANEL**
(BTBFP)

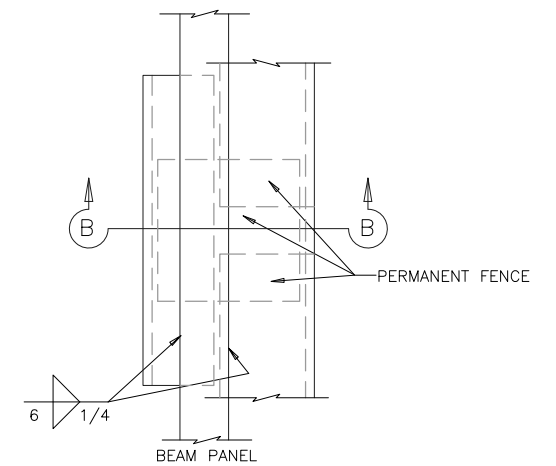


TEMP TO PERMANENT FENCE

- REMOVE BORDER FENCE AND FOUNDATION TO LIMITS SHOWN, 3'-6" FROM PERMANENT UPRIGHT TO REMAIN
- BEND BACK EXTERIOR MESH LAYERS
- ATTACH TO TEMPORARY UPRIGHT TACKWELD EXISTING MESH TO UPRIGHT
- TRIM MESH SO THAT CONNECTIONS FOR THE NEXT PANEL CAN BE MADE

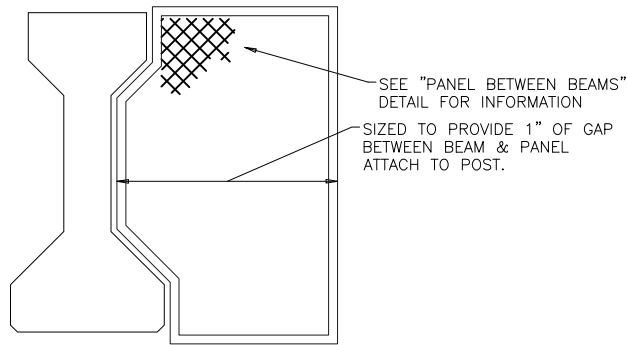


SECTION B-B

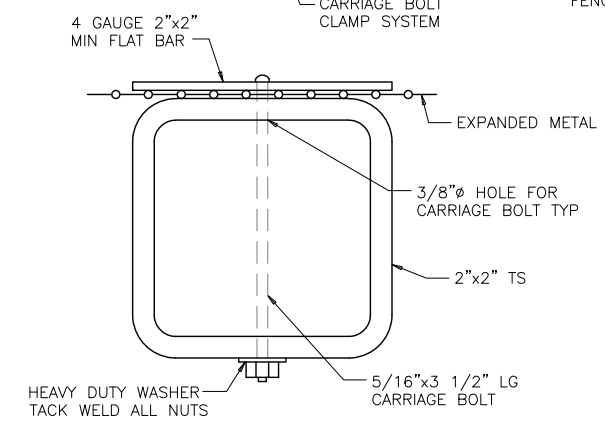


PERMANENT FENCE TO PANEL CONNECTION

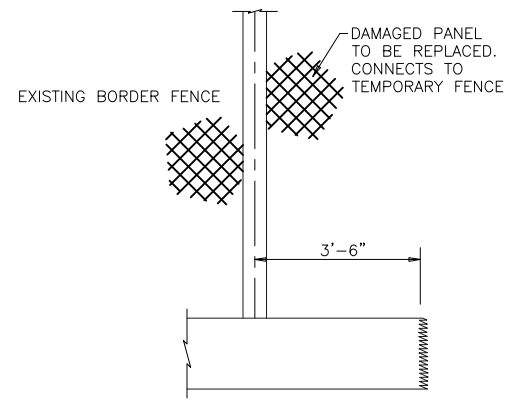
POSTS MUST BE CENTERED BETWEEN BEAM LOCATIONS
* IN ADDITION TO PERMANENT FENCE FOR ATTACHING BEAM PANEL.



PANEL AT OUTSIDE BEAM

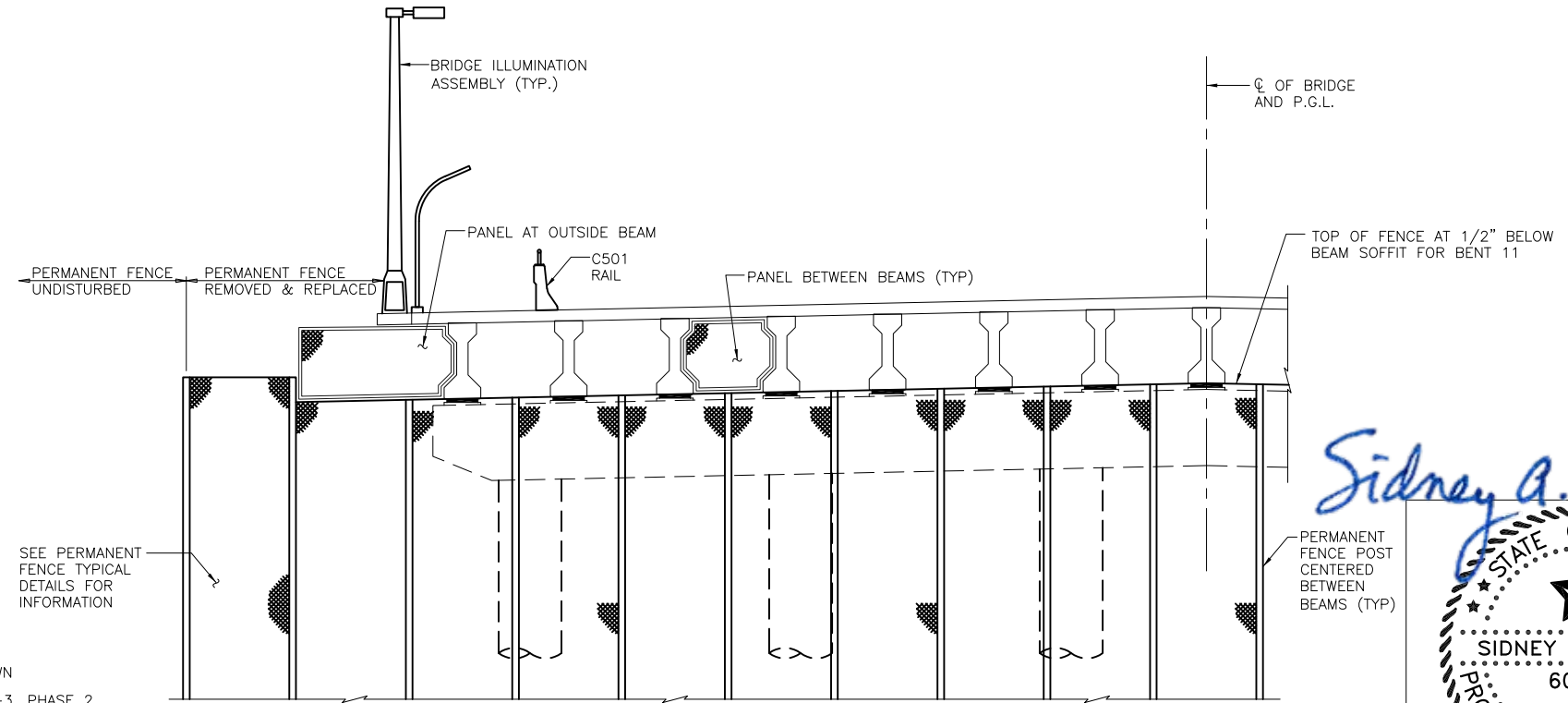


CARRIAGE BOLT CLAMP SYSTEM

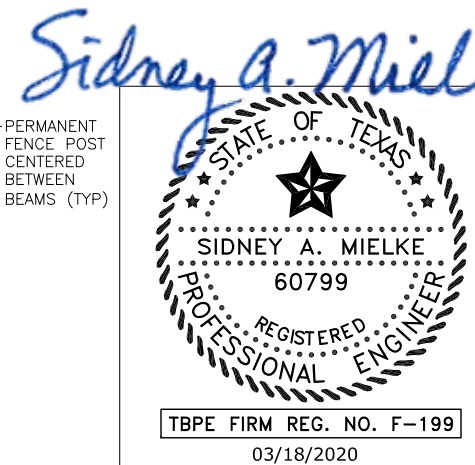


BORDER FENCE REPLACEMENT

- EXPOSE ENTIRE FACE OF FOUNDATION
- CLEAN SURFACE OF ALL LOOSE MATERIAL
- APPLY BONDING AGENT
- INSTALL NEW FOUNDATION ALONG ALIGNMENT SHOWN
- SEE TYPICAL FENCE DETAILS OF 255 PROJECT, K-3, PHASE 2 SB1 NO. 2017-1, FOR PERMANENT FENCE & FOUNDATIONS
- REINSTALLED PERMANENT FENCE POSTS MUST BE PLACED BETWEEN BEAMS
- REMOVE DAMAGED PANEL ATTACHED TO TEMP FENCE REPLACE TO MATCH EXISTING, UNDAMAGED FENCE



**SECTION A-A (PERMANENT FENCE)
HALF ELEVATION**
(FROM SHEET 121)



THE COUNTY OF EL PASO

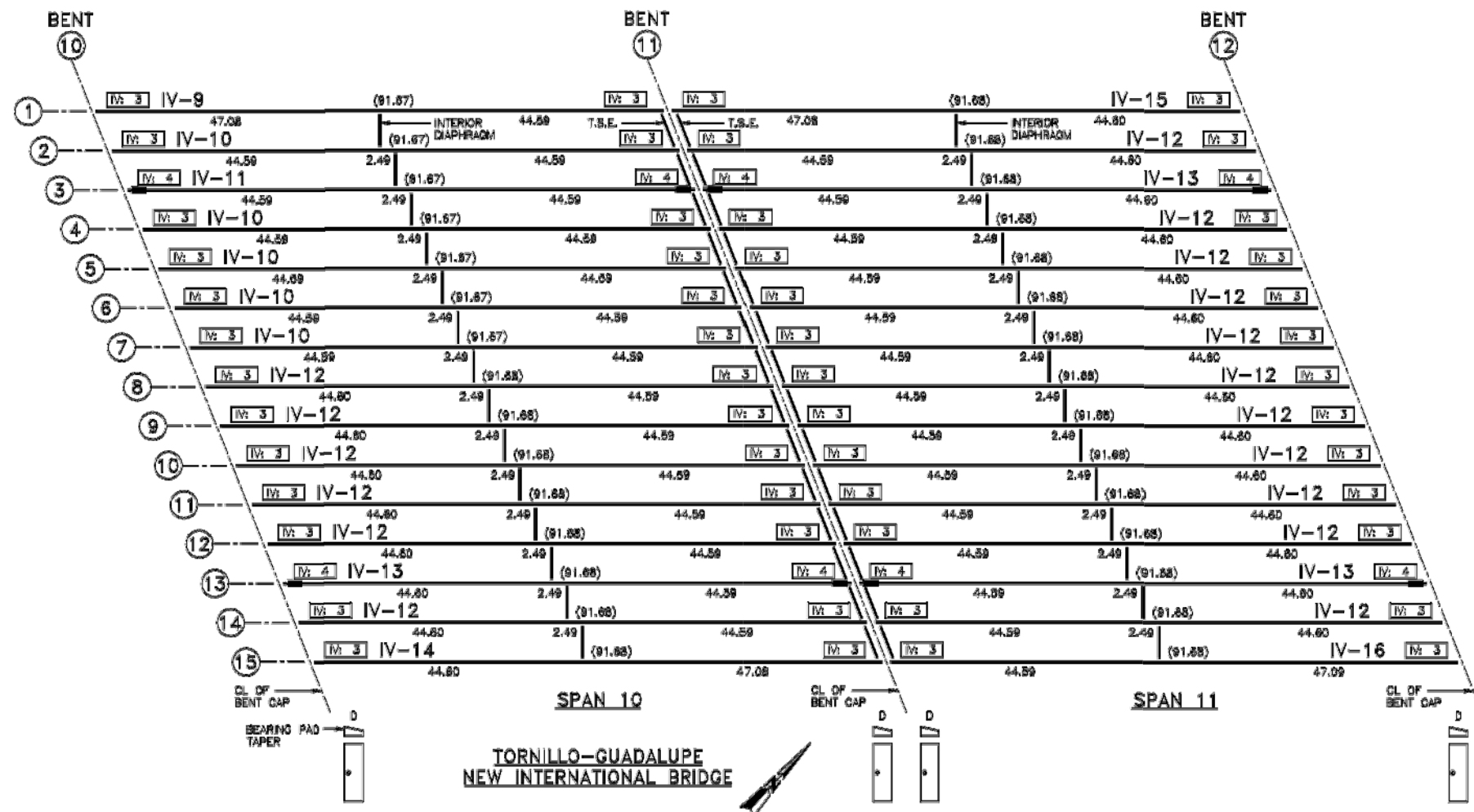
STRUCTURAL ENGINEERING ASSOCIATES, INC.
CONSULTING ENGINEERS
TBPE FIRM REG. NO. F-199

TORNILLO-GUADALUPE INTERNATIONAL BRIDGE BEARING SEAT REPLACEMENT

EXISTING BORDER FENCE DETAILS

DWN. AMH	DESIGN SAM	DATE 08/02/19	SHEET NO. S-8
DWN. CK. GJS	DESIGN CK. GJS	DRAWING FILE 19-136C	

February 7, 2019



LIFTING LOOPS:

- 1) UTILIZE INTERIOR LIFTING LOOPS TO ERECT GIRDERS (SEE FABRICATION SHEETS).
- 2) THE LIFTING LOOPS SHOWN ARE INTENDED FOR A VERTICAL LIFT (STRAIGHT UP). IF THE ERECTION CONTRACTOR IS PLANNING TO HAVE ANY HORIZONTAL FORCE OTHER THAN A VERTICAL FORCE ON THE LIFTING LOOPS, THE ERECTION CONTRACTOR SHOULD HAVE A STRUCTURAL ENGINEER RE-DESIGN THE LIFTING LOOPS FOR THE PROPOSED LIFTING SCHEME PRIOR TO FABRICATION.

NOTES:

- 1) (DESIGN LENGTH) L.F. SHOWN IN PARENTHESES.
- 2) BEARING PAD MARK IS SHOWN THUS [IV XX].
- 3) ■ - DENOTES SLOTTED DOWEL HOLE REQUIRED.
- 4) T.S.E. = THICKENED SLAB END

NO EXCEPTIONS TAKEN MAKE CORRECTIONS NOTED
 REJECTED RE-USE AND RESUBMIT

REVIEW IS ONLY FOR CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COORDINATION WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. ANY ACTION SHOWN IS SUBJECT TO THE REQUIREMENTS OF THE RULES AND REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS WHICH SHALL BE OBTAINED AND CORRELATED AT THE JOB SITE. FABRICATION PROGRESS AND FEEDBACK OF CONSTRUCTION COORDINATION OF HIS WORK WITH THAT OF ALL OTHER TRADES AND THE SATISFACTORY PERFORMANCE OF HIS WORK.

STRUCTURAL ENGINEERING ASSOCIATES, INC.
 DATE: Jun 08 2012 BY: M.C. & D.M.P.

Bexar Concrete Works I, Ltd.
FOR APPROVAL
 MAY 31 2012

ERECTION SHEET					SUBMITTAL	
FABRICATOR/PREPARED BY					1 OF 1	
BEXAR CONCRETE WORKS I, LTD.					SHEET #	
CONTRACTOR					4191	
DAN WILLIAMS COMPANY						
THE COUNTY OF EL PASO TEXAS						
TORNILLO - GUADALUPE						
NEW INTERNATIONAL BRIDGE						
DRAWN	CHECKED	DATE	INS	SHEET		
AMU	MLR	05-31-12		E-2		



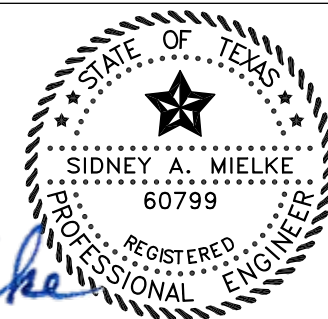
THE COUNTY OF EL PASO

SEA STRUCTURAL ENGINEERING ASSOCIATES, INC.
 CONSULTING ENGINEERS
 TBPE FIRM REG. NO. F-199

TORNILLO-GUADALUPE INTERNATIONAL BRIDGE BEARING SEAT REPLACEMENT

EXISTING BEAM ERECTION SHEET

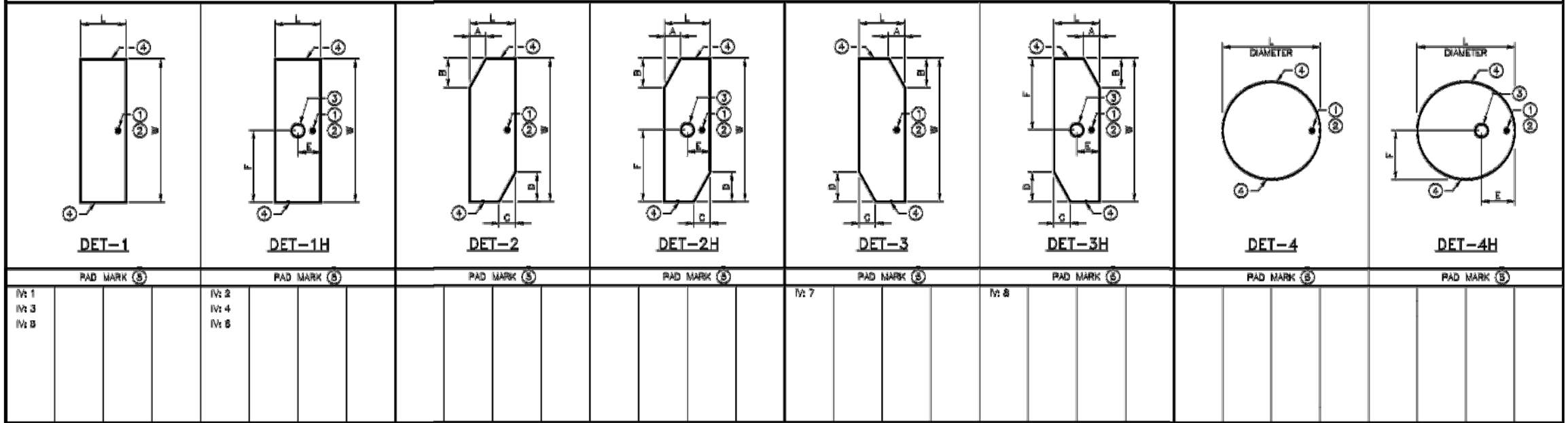
DWN.	DESIGN	DATE	SHEET NO.
AMH	SAM	08/02/19	S-9
DWN. CK.	DESIGN CK.	DRAWING FILE	
GJS	GJS	19-136C	



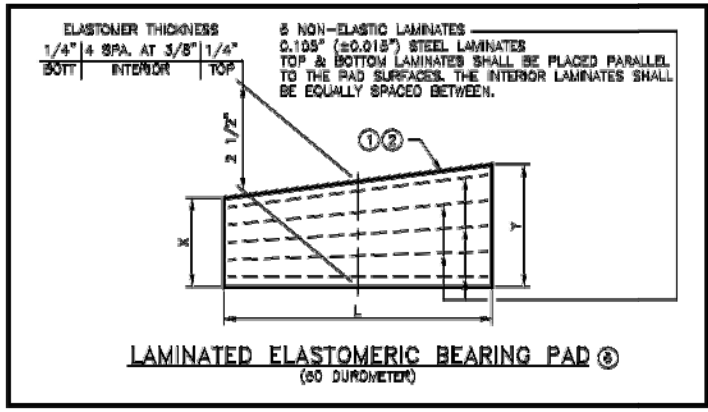
Sidney A. Mielke

TBPE FIRM REG. NO. F-199
 03/18/2020

ELASTOMERIC BEARING PAD DETAILS



- ① BEARING TYPE AND ERECTION MARK SHALL BE LOCATED ON HIGH SLOPE SIDE OF PAD (PER TxDOT SPECIFICATION).
- ② ● DENOTES BEARING PAD ERECTION MARK, ERECTION MARK SHALL BE LOCATED ON HIGH SLOPE SIDE OF PAD.
- ③ PROVIDE 2" DIAMETER HOLE.
- ④ LOCATION OF PERMANENT PAD MARK AS PER TxDOT SPECIFICATION (ITEM 434.3A.1).
- ⑤ SEE ELASTOMERIC BEARING PAD TABLE SHEET 2 OF 2 FOR DIMENSIONS AND PAD TAPER (1/8" INCREMENTS).
- ⑥ THE USE OF POLYISOPRENE (NATURAL RUBBER), FOR THE MANUFACTURE OF BEARING PADS, IS NOT PERMITTED.



Bexar Concrete Works I, Ltd.
FOR APPROVAL
 MAY 31 2012

NO EXCEPTIONS WHEN HAVE CORRECTIONS NOTED
 PREPARED REVIEW AND PRELIMINARY
 REVIEW IS ONLY FOR CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. ANY ACTION SHOWN IS SUBJECT TO THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS WHICH SHALL BE CORRELATED AND CORRECTED AT THE JOB SITE. INVESTIGATION, ENGINEERING AND TECHNIQUES OF CONSTRUCTION COORDINATION OF HIS WORK WITH THAT OF ALL OTHER TRADES AND THE SATISFACTORY PERFORMANCE OF HIS WORK.
 STRUCTURAL ENGINEERING ASSOCIATES, INC.
 DATE: JUN 08 2012 BY: H.C. & D.M.P.

BEARING PAD SHEET		SUBMITTAL	
FABRICATOR/PREPARED BY BEXAR CONCRETE WORKS I, LTD.		1 OF 1	
CONTRACTOR DAN WILLIAMS COMPANY THE COUNTY OF EL PASO TEXAS		SCN # 4191	
TORNILLO - GUADALUPE NEW INTERNATIONAL BRIDGE		SHEET 1 OF 2 BP-1	
DRAWN AMU	CHECKED MJR	DATE 05-31-12	INS JNS



THE COUNTY OF EL PASO

SEA STRUCTURAL ENGINEERING ASSOCIATES, INC.
 CONSULTING ENGINEERS
 TBPE FIRM REG. NO. F-199

TORNILLO-GUADALUPE INTERNATIONAL BRIDGE
 BEARING SEAT REPLACEMENT

EXISTING BEARING PAD DETAILS #1

DWN. AMH	DESIGN SAM	DATE 08/02/19	SHEET NO. S-10
DWN. CK. GJS	DESIGN CK. GJS	DRAWING FILE 19-136C	

STATE OF TEXAS
 SIDNEY A. MIELKE
 60799
 REGISTERED PROFESSIONAL ENGINEER
 TBPE FIRM REG. NO. F-199
 03/18/2020

Sidney A. Mielke

ELASTOMERIC BEARING PAD TABLE

MARK	DETAIL	BEARING TYPE	DIAMETER	PAD TAPER (INCH)	THICKNESS (INCH)		PAD SIZE (INCH)		CLIP DIMENSION (INCH)				LOG OF DOWEL HOLE (INCH)		QTY	TOTAL	MARK
					X - LOW LEFT	Y - HIGH RIGHT	L LENGTH	W WIDTH	A	B	C	D	E	F			
					IV: 1	DET- 1	IV- 7-0	50	0	2 1/2	2 1/2	9	22	-			
IV: 2	DET- 1 H	IV- 7-0	50	0	2 1/2	2 1/2	9	22	-	-	-	-	4 1/2	11	4	4	IV: 2
IV: 3	DET- 1	IV- 7-1	50	1/8	2 7/16	2 9/16	9	22	-	-	-	-	-	-	78	78	IV: 3
IV: 4	DET- 1 H	IV- 7-1	50	1/8	2 7/16	2 9/16	9	22	-	-	-	-	4 1/2	11	12	12	IV: 4
IV: 5	DET- 1	IV- 7-2	50	1/4	2 3/8	2 5/8	9	22	-	-	-	-	-	-	39	39	IV: 5
IV: 6	DET- 1 H	IV- 7-2	50	1/4	2 3/8	2 5/8	9	22	-	-	-	-	4 1/2	11	6	6	IV: 6
IV: 7	DET- 3	IV- 2-2	50	1/4	2 3/8	2 5/8	9	22	2 1/2	4 1/2	2 1/2	4 1/2	-	-	13	13	IV: 7
IV: 8	DET- 3 H	IV- 2-2	50	1/4	2 3/8	2 5/8	9	22	2 1/2	4 1/2	2 1/2	4 1/2	2 1/2	11	3	3	IV: 8
														780	780		

TORNILLO-GUADALUPE
NEW INTERNATIONAL BRIDGE

Boxer Concrete Works I, Ltd.
FOR APPROVAL
MAY 31 2012

<input checked="" type="checkbox"/> NO EXCEPTIONS TAKEN <input type="checkbox"/> MAKE CONNECTIONS NOTED <input type="checkbox"/> REJECTED <input type="checkbox"/> REVISE AND RESUBMIT <small>REVISION IS ONLY FOR CONFORMANCE WITH THE DESIGN SCOPE OF THE PROJECT AND GENERAL CONDITIONS WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. ANY ACTION SHOWN IS SUBJECT TO THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS WHICH SHALL BE COMPARED AND CORRECTED AT THE JOB SITE. FABRICATION PROCEDURES AND TECHNIQUES OF CONSTRUCTION COORDINATION OF HIS WORK WITH THAT OF ALL OTHER TRADES AND THE SATISFACTORY PERFORMANCE OF HIS WORK.</small> STRUCTURAL ENGINEERING ASSOCIATES, INC. DATE: Jun 08, 2012 by: M.C. S.D.M.P.	BEARING PAD SHEET		SUBMITTAL	
	FABRICATOR/PREPARED BY		1 OF 1	
	BEXAR CONCRETE WORKS I, LTD.		4191	
	CONTRACTOR			
DAN WILLIAMS COMPANY				
THE COUNTY OF EL PASO TEXAS				
TORNILLO - GUADALUPE				
NEW INTERNATIONAL BRIDGE				
DRAWN	CHECKED	DATE	INS	SHEET 2 OF 2
AMU	MJR	05-31-12		BP-2



THE COUNTY OF EL PASO

SEA STRUCTURAL ENGINEERING ASSOCIATES, INC.
CONSULTING ENGINEERS
TBPE FIRM REG. NO. F-199

TORNILLO-GUADALUPE INTERNATIONAL BRIDGE
BEARING SEAT REPLACEMENT

EXISTING BEARING PAD DETAILS #2

DWN.	DESIGN	DATE	SHEET NO.
AMH	SAM	08/02/19	S-11
DWN. CK.	DESIGN CK.	DRAWING FILE	
GJS	GJS	19-136C	

SIDNEY A. MIELKE
 60799
 REGISTERED PROFESSIONAL ENGINEER
 TBPE FIRM REG. NO. F-199
 03/18/2020

Sidney A. Mielke

February 7, 2019