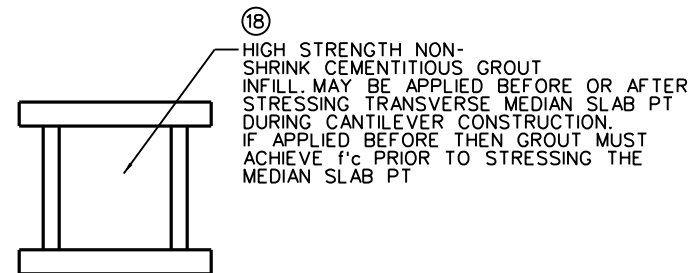
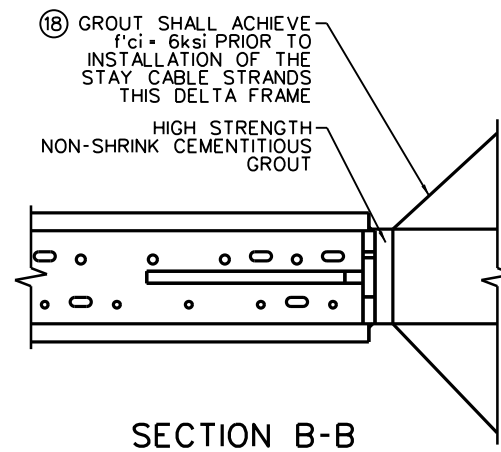
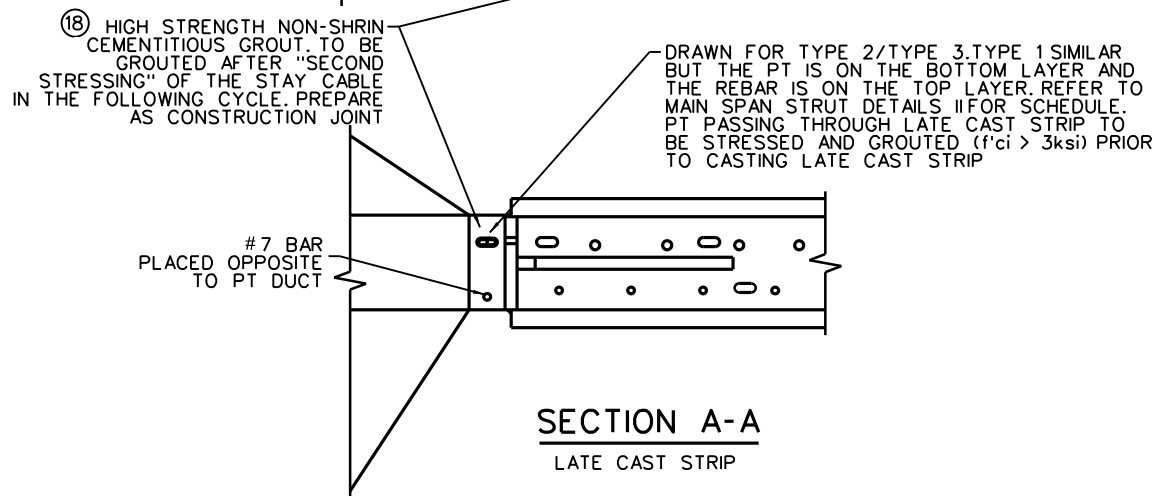


PLAN  
0 2 4  
SCALE IN FEET



SECTIONS  
0 1 2  
SCALE IN FEET

#### NOTES:

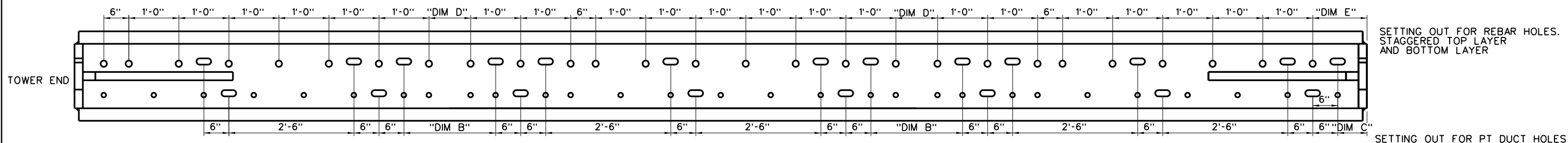
- PROVIDE STRUCTURAL STEEL IN ACCORDANCE WITH GOVERNING SPECIFICATIONS HARBOR ITEM 441 "STEEL STRUCTURES".
- PROVIDE PAINT IN ACCORDANCE WITH GOVERNING SPECIFICATIONS HARBOR ITEM 446 "FIELD CLEANING AND STEEL PAINTING".
- STEEL PLATE MATERIAL TO ASTM A709 HPS 50W.
- THE STRUT IS A MAIN COMPRESSION MEMBER.
- ALL WELDING SHALL COMPLY WITH THE PROVISIONS OF AWS D1.1 STRUCTURAL WELDING CODE.
- ALL WELDING ELECTRODES SHALL BE APPROPRIATELY MATCHED.
- ALL WELDS SHALL RECEIVE 100% VISUAL INSPECTION AFTER THE COMPLETION OF THE WELD. ALL WELDS SHALL RECEIVE 100% VISUAL INSPECTION AFTER FABRICATION OF THE ELEMENT IS COMPLETE. VISUAL INSPECTION SHALL NOT BE CONSIDERED AN NDT METHOD.
- ALL COMPLETE PENETRATION GROOVE WELDS SHALL BE EVALUATED BY AND CONFORM TO ULTRASONIC TESTING AS DESCRIBED IN AWS D1.1. ALL ULTRASONIC TESTING SHALL BE PERFORMED ON 100% OF ALL COMPLETE PENETRATION GROOVE WELDS.
- ALL FILLET WELDS SHALL BE EVALUATED BY AND CONFIRM TO MAGNETIC PARTICLE TESTING AS DESCRIBED IN AWS D1.1. 12 INCHES IN EVERY WELD SHALL BE TESTED.
- WELD DETAILS SHOWN ON THESE DRAWINGS ARE INDICATIVE ONLY. FABRICATOR TO DEVELOP DETAILS IN CONJUNCTION WITH DISTORTION CONTROL PLAN.
- DIMENSIONS SHOWN ON THE DESIGN DRAWINGS ARE AT A REFERENCE TEMPERATURE OF 70°F. THE NECESSARY DIMENSIONAL ADJUSTMENTS FOR ACTUAL TEMPERATURES AT THE TIME AND PLACE OF FABRICATION SHALL BE MADE.
- DIMENSIONS GIVEN ARE GEOMETRIC DIMENSIONS OF THE FINISHED FABRICATION. ADJUSTMENTS TO PLATE CUTTING DIMENSIONS TO COMPENSATE FOR TOLERANCES, FABRICATION EFFECTS, WELD PREPARATIONS SHALL BE MADE AS NECESSARY. FABRICATION TOLERANCES SHALL BE IN ACCORDANCE WITH AWS D1.1 AND AS SPECIFIED IN THE DESIGN DOCUMENTS.
- FABRICATED ELEMENTS THAT DO NOT CONFORM TO THE TOLERANCES SPECIFIED IN THE DESIGN DOCUMENTS SHALL BE REJECTED.
- COATING FOR AREAS INDICATED TO BE PAINTED:
  - SURFACE PREPARATION: ABRASIVE BLAST CLEAN TO SSPC SP10.
  - THERMAL SPRAYED ZINC 5 TO 6 MIL.
  - APPLY EPOXY SEALER TO THERMAL SPRAY ZINC, NOMINAL THICKNESS 1 MIL.
  - APPLY POLYURETHANE FINISH TO A DRY FILM THICKNESS OF 3 MIL. APPEARANCE OF FINISH TO BE A CLOSE MATCH TO THE SUPERSTRUCTURE. CONTRACTOR TO FORWARD COLOR SWATCH FOR APPROVAL OF ENGINEER.
- NON-PAINTED AREAS:
  - STEEL SURFACE SHALL BE FREE OF DIRT, OIL, GREASE, LOOSE RUST, MILL SCALE, AND OTHER CONTAMINANTS PRIOR TO CASTING THE MEDIAN SLAB.
- CONTRACTOR TO SUBMIT GROUTING PROCEDURE TO ENGINEER TO REVIEW PRIOR TO FABRICATION OF STRUTS.
- CEMENTITIOUS GROUT,  $f'_{ci} = 10$  ksi AT 56 DAYS.
- CONTRACTOR SHALL CONFIRM HOLE SIZES WITH REBAR AND PT SUPPLIER PRIOR TO FABRICATION.
- CONTRACTOR TO ENSURE ALL PENETRATIONS ARE SEALED PRIOR TO CASTING MEDIAN SLAB.
- SHOP DRAWINGS SHALL BE SUBMITTED IN PDF AND CAD FORMAT. 3D MODEL FILE SHALL BE SUBMITTED IF USED.
- REFER NHB281E FOR DETAILS OF REBAR AT STRUT LOCATIONS. REFER NHB223A, 229A, 229C FOR DETAILS OF TRANSVERSE P.T. THROUGH STRUT AND LATE CAST STRIP.
- THE CONTRACTOR SHALL DEVELOP PROCEDURES FOR THE CONTROL OF DISTORTION AND SHRINKAGE STRESSES WHICH, IN CONJUNCTION WITH THE OVERALL FABRICATION METHODS, WILL PRODUCE MEMBERS AND STRUCTURES THAT MEET THE DIMENSIONAL AND QUALITY REQUIREMENTS OF THE DESIGN DOCUMENTS. THIS DISTORTION CONTROL PLAN SHALL BE DEVELOPED IN ACCORDANCE WITH AWS D1.1 SECTION 5.20. THESE PROCEDURES AND ANY REVISIONS NECESSARY DURING THE COURSE OF THE WORK SHALL BE SUBMITTED TO THE DESIGNER FOR REVIEW.
- EACH STRUT SHALL BE MARKED ON THE OUTSIDE SURFACE OF THE WEBS WITH ITS POSITION, TYPE AND ORIENTATION.



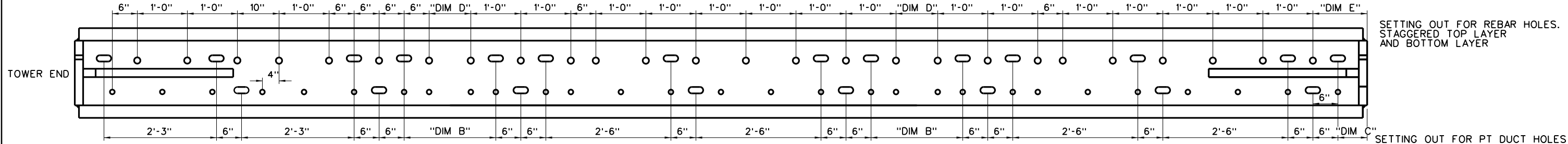
ALL ENGINEERING WORK REPRESENTED ON THIS PLAN HAS BEEN REVIEWED UNDER THE RESPONSIBLE CHARGE OF LICENSE HOLDER AND IS SIGNED/SEALED ACCORDINGLY. THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MATTHEW CARTER, P.E. 133954 ON 07/07/2021 ARUP TEXAS INC., TBPES FIRM #1990

SCALES SHOWN FOR FULL SIZE DRAWINGS (22"x34")

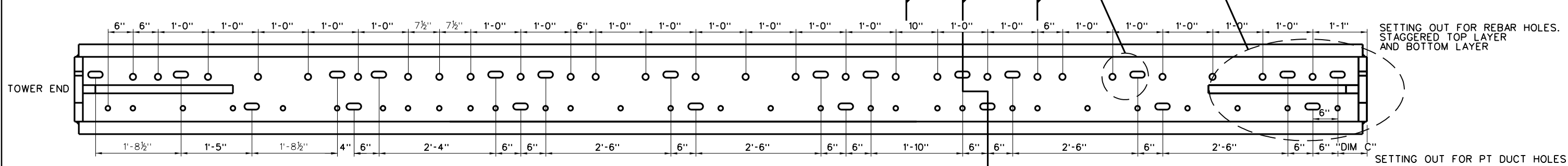
NO.	DATE	REVISION	APRV
US-181 HARBOR BRIDGE			
MAIN SPAN MEDIAN SLAB STRUT DETAILS I			
DESIGN JA	FED. RD. DIV. NO. X	FEDERAL AID PROJECT NO. (See Title Sheet)	HIGHWAY NO. US-181
GRAPHICS AH	STATE	DISTRICT	COUNTY
CHECK MC	TEXAS	CRP	NUECES
CHECK MCP	CONTROL	SECTION	JOB
	0101	06	095
			NHB 301



ELEVATION  
TYPE 1M/TYPE 1B



ELEVATION  
TYPE 2M/TYPE 2B

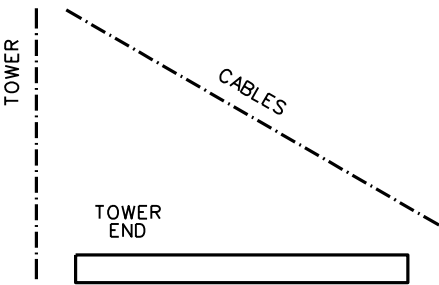


ELEVATION  
TYPE 3B



SCHEDULE

POSITION	TYPE	POSITION	TYPE	POSITION	TYPE	POSITION	TYPE
N1TB TO N1B	TYPE 4B	N1TM TO N1M	TYPE 4M	S1TM TO S1M	TYPE 4M	S1TB TO S1B	TYPE 4B
N1B TO N2B	TYPE 2B	N1M TO N2M	TYPE 2M	S1M TO S2M	TYPE 2M	S1B TO S2B	TYPE 2B
N2B TO N3B	TYPE 1B	N2M TO N3M	TYPE 1M	S2M TO S3M	TYPE 1M	S2B TO S3B	TYPE 1B
N3B TO N4B	TYPE 1B	N3M TO N4M	TYPE 1M	S3M TO S4M	TYPE 1M	S3B TO S4B	TYPE 1B
N4B TO N5B	TYPE 2B	N4M TO N5M	TYPE 2M	S4M TO S5M	TYPE 2M	S4B TO S5B	TYPE 2B
N5B TO N6B	TYPE 1B	N5M TO N6M	TYPE 1M	S5M TO S6M	TYPE 1M	S5B TO S6B	TYPE 1B
N6B TO N7B	TYPE 1B	N6M TO N7M	TYPE 1M	S6M TO S7M	TYPE 1M	S6B TO S7B	TYPE 1B
N7B TO N8B	TYPE 1B	N7M TO N8M	TYPE 1M	S7M TO S8M	TYPE 1M	S7B TO S8B	TYPE 1B
N8B TO N9B	TYPE 2B	N8M TO N9M	TYPE 2M	S8M TO S9M	TYPE 2M	S8B TO S9B	TYPE 2B
N9B TO N10B	TYPE 1B	N9M TO N10M	TYPE 1M	S9M TO S10M	TYPE 1M	S9B TO S10B	TYPE 1B
N10B TO N11B	TYPE 1B	N10M TO N11M	TYPE 1M	S10M TO S11M	TYPE 1M	S10B TO S11B	TYPE 1B
N11B TO N12B	TYPE 1B	N11M TO N12M	TYPE 2M	S11M TO S12M	TYPE 2M	S11B TO S12B	TYPE 1B
N12B TO N13B	TYPE 3B	N12M TO N13M	TYPE 1M	S12M TO S13M	TYPE 1M	S12B TO S13B	TYPE 3B
N13B TO N14B	TYPE 1B	N13M TO N14M	TYPE 1M	S13M TO S14M	TYPE 1M	S13B TO S14B	TYPE 1B
N14B TO N15B	TYPE 1B	N14M TO N15M	TYPE 1M	S14M TO S15M	TYPE 1M	S14B TO S15B	TYPE 1B
N15B TO N16B	TYPE 2B	N15M TO N16M	TYPE 2M	S15M TO S16M	TYPE 2M	S15B TO S16B	TYPE 2B
N16B TO N17B	TYPE 1B	N16M TO N17M	TYPE 1M	S16M TO S17M	TYPE 1M	S16B TO S17B	TYPE 1B
N17B TO N18B	TYPE 1B	N17M TO N18M	TYPE 1M	S17M TO S18M	TYPE 1M	S17B TO S18B	TYPE 1B
N18B TO N19B	TYPE 2B	N18M TO N19M	TYPE 2M	S18M TO S19M	TYPE 2M	S18B TO S19B	TYPE 2B



LEGEND  
STRUT ORIENTATION

	BACK SPAN	MAIN SPAN
"DIM A"	310.000"	311.500"
"DIM B"	22.000"	22.375"
"DIM C"	7.000"	7.375"
"DIM D"	10.000"	10.375"
"DIM E"	13.000"	13.375"



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ARUP TEXAS INC., TBPCLS FIRM #1990

SCALES SHOWN FOR FULL SIZE DRAWINGS (22"x34")


NO.	DATE	REVISION	APRV
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US-181 HARBOR BRIDGE

MAIN SPAN  
MEDIAN SLAB STRUT DETAILS II

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
JA	X	(See Title Sheet)		US-181
GRAPHICS	STATE	DISTRICT	COUNTY	SHEET NO.
AH	TEXAS	CRP	NUECES	NHB 302
CHECK MC	CONTROL	SECTION	JOB	
CHECK MCP	0101	06	095	

