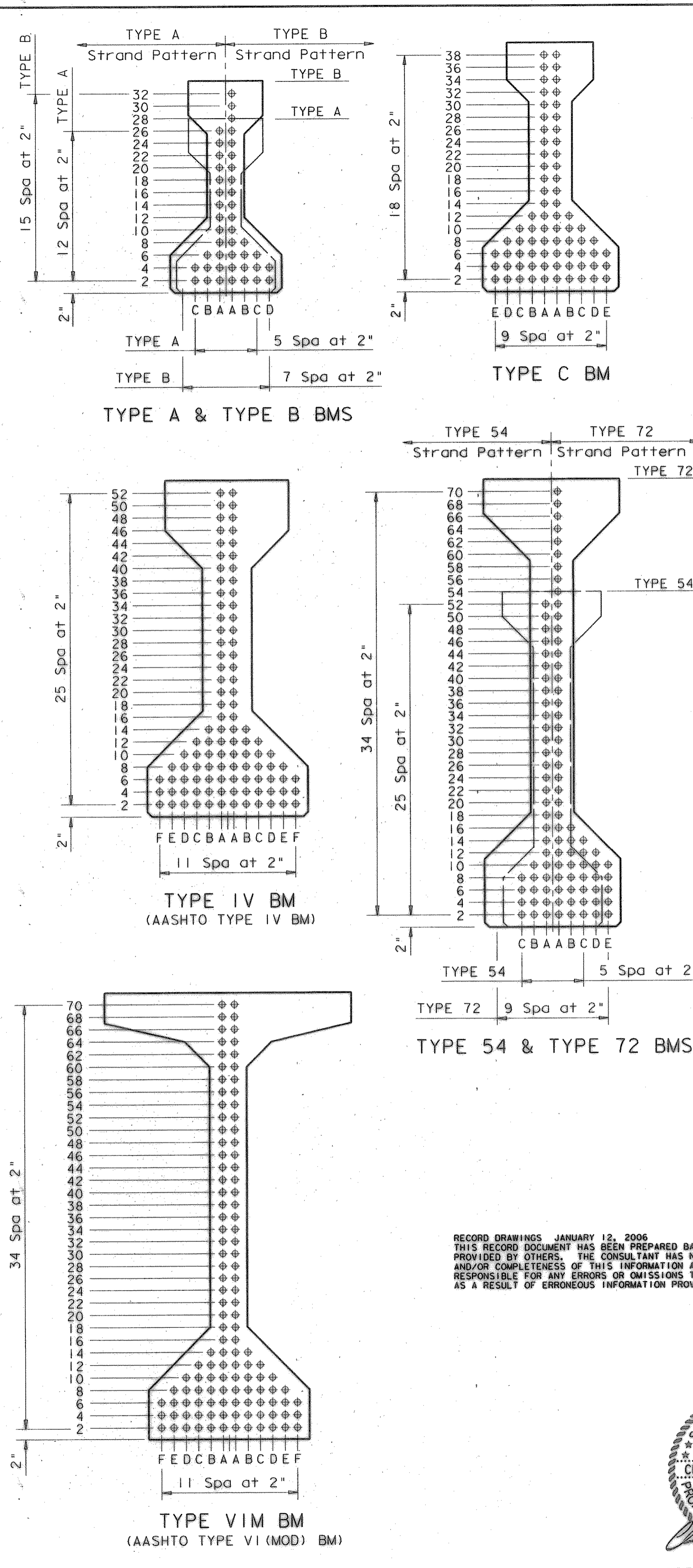


DISCLAIMER: The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

LEVELS DISPLAYED	ACC:
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	

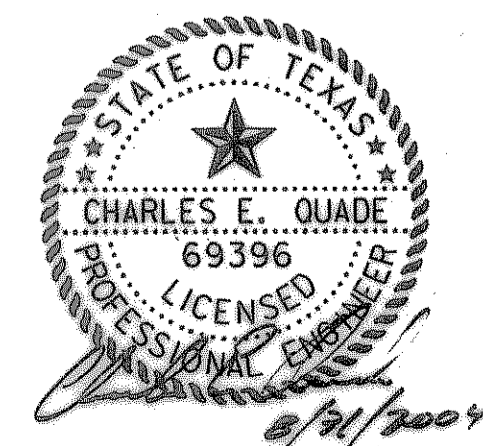
STRUCTURE	DESIGNED BEAMS (DEPRESSED STRANDS)										OPTIONAL DESIGN					
	SPAN NO.	BEAM NO.	BEAM TYPE	NON-STD STRAND PATTERN	PRESTRESSING STRANDS				CONCRETE		DESIGN LOAD COMP STRESS (TOP ϵ)	DESIGN LOAD TENSILE STRESS (BOTT ϵ)	REQUIRED MINIMUM ULTIMATE MOMENT CAPACITY (ft-kips)			
					TOTAL		DEPRESSED		RELEASE STRGTH (psi)	MINIMUM 28 DAY COMP STRGTH (psi)						
					NO.	SIZE (in)	STRGTH (ksi)	"e" (in)						"e" END (in)	NO.	TO (in)
North Lakeshore Drive	1	ALL	IV		62	1/2	270k	18.24	9.65	14	52.0	6331	7933	4258	-4677	7706
	2-4	ALL	IV		70	1/2	270k	17.04	7.89	20	52.0	6570	8888	4545	-4967	8132



NON-STANDARD STRAND PATTERNS	
PATTERN	STRAND ARRANGEMENT AT ϵ OF BEAM

GENERAL NOTES:
 Designed in accordance with current AASHTO Standard Specifications.
 All concrete shall be Class H. All reinforcing bars shall be Grade 60.
 When shown on this sheet, the Fabricator has the option of furnishing either the designed depressed strand beam or an approved optional design. All optional design submittals and shop drawings shall be signed, sealed and dated by a registered Professional Engineer.
 Optional designs for beams 120 feet or longer shall have a calculated residual camber equal to or greater than that of the designed beam.
 Prestress losses for the designed beams have been calculated for a relative humidity of 65 percent. Optional designs shall likewise conform.
 Certain beams with depressed strands are subject to cracking in the end of the beam. When such cracks occur, all subsequent beams of the same type and strand pattern shall have strands debonded in the following manner:
 1. Alternate rows of depressed strands shall be debonded for two feet from each end of the beam.
 2. One half of the straight strands, as nearly as possible, shall be debonded for four feet from each end of the beam.
 3. The debonding pattern shall be symmetrical about the vertical axis of the beam for both depressed and straight strands.
 4. Strands shall be debonded so that the centers of gravity of the depressed strands and the straight strands will remain within one inch of their original location.
 5. Strands shall be encased in plastic tubing along entire debonded length, and ends of tubing shall be sealed with waterproof tape. Split plastic tubing may be used provided the seam of the tubing is sufficiently sealed with waterproof tape to prohibit grout infiltration. Wrapping of strands with tape to provide debonding will not be permitted.
 6. Revised shop drawings will not be required.
 For depressed strand designed beams, strands shall be located as low as possible on the 2" grid system unless a Non-Standard Strand Pattern is indicated. Fill row "2", then row "4", then row "6", etc., beginning each row in the "A" position and working outward until the required number of strands is reached. All strands in the "A" position shall be depressed, maintaining the 2" spacing so that, at the beam ends, the upper two strands are in the position shown in the table.
 Strands for the designed beam shall be 1/2" 270 ksi low relaxation strands pretensioned to 31.0 k each.
 Type 54 Beams shall not be used for new structures, but may be used to widen existing bridges built with Type 54 Beams.

RECORD DRAWINGS JANUARY 12, 2006
 THIS RECORD DOCUMENT HAS BEEN PREPARED BASED ON INFORMATION PROVIDED BY OTHERS. THE CONSULTANT HAS NOT VERIFIED THE ACCURACY AND/OR COMPLETENESS OF THIS INFORMATION AND SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS THAT MAY BE INCORPORATED AS A RESULT OF ERRONEOUS INFORMATION PROVIDED BY OTHERS.



HS20 LOADING

Texas Department of Transportation
Bridge Division

**PRESTRESSED
 CONCRETE I-BEAMS
 (NON-STANDARD SPANS)**

IBNS

FILE: lbsnstde.dgn	DN: TxDOT	CK: FxTxDOT	DM: TxDOT	CK: TxDOT
© TxDOT June 2004	DISTRICT	FEDERAL AID PROJECT	SHEET	
REVISIONS			B-20	
	COUNTY	CONTROL SECT	JOB	HIGHWAY