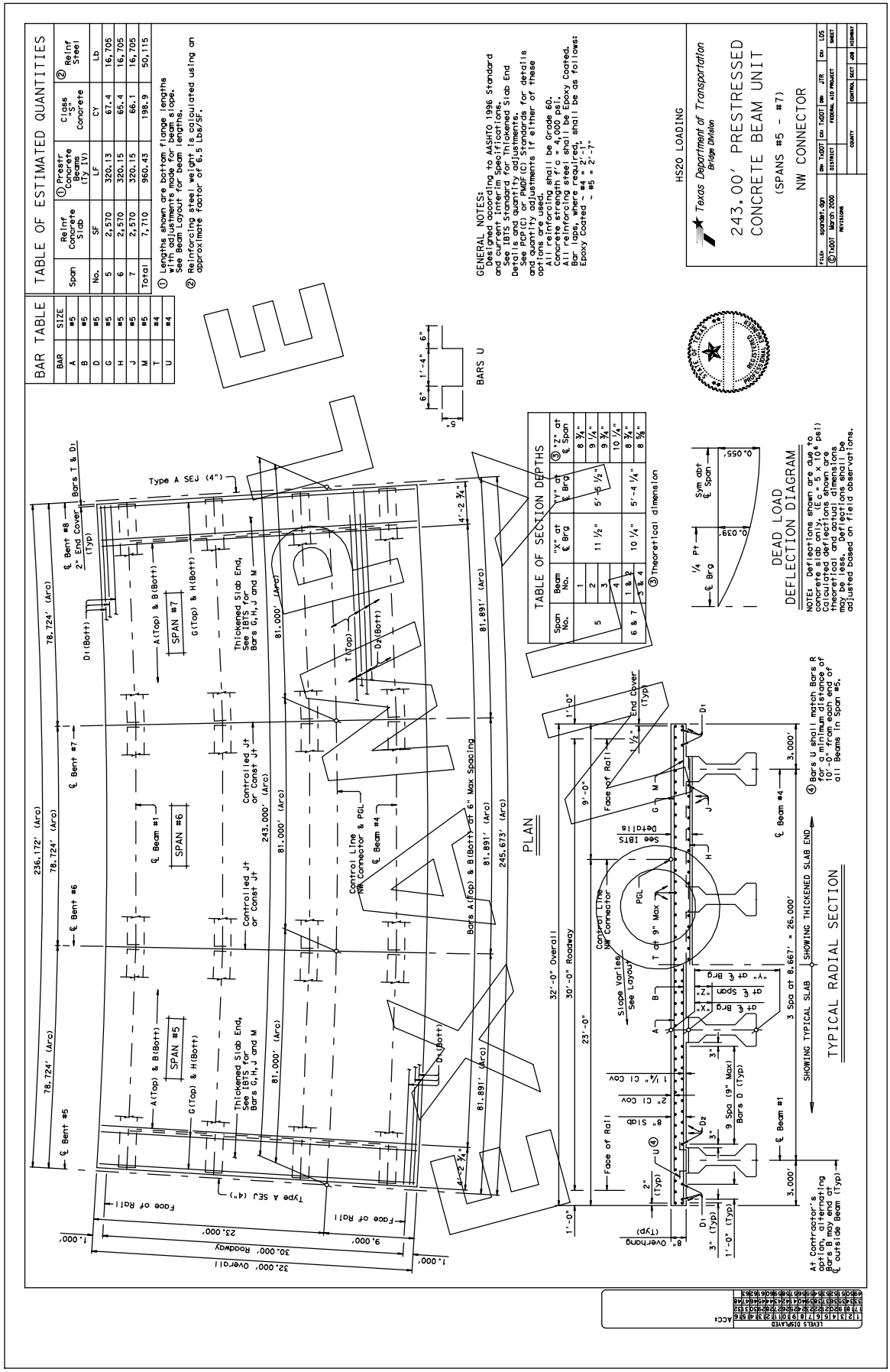
TABLE OF ESTIMATED QUANTITIES
Span | Reinf Concrete Slab | ① Prestr Concrete Beams (Ty IV) | Class "S" Concrete | ② Reinf Steel
No. | SF | LF | CY | Lb
5 | 2,570 | 320.13 | 67.4 | 16,705
6 | 2,570 | 320.15 | 65.4 | 16,705
7 | 2,570 | 320.15 | 66.1 | 16,705
Total | 7,710 | 960.43 | 198.9 | 50,115
① Lengths shown are bottom flange lengths with adjustments made for beam slopes. See Beam Layout for beam lengths.
② Reinforcing steel weight calculated using an approximate factor of 6.5 Lbs/SF.
BAR TABLE
BAR | SIZE
A | #5
B | #5
D | #5
G | #5
H | #5
J | #5
M | #5
T | #4
U | #4
GENERAL NOTES:
Design conforms according to AASHTO 1996 Standard and current Interim Specifications.
See IBTS Standard for Thickened Slab End Details and quantity adjustments.
See current TMUTCD (c) Standards for details and quantity adjustments if either of these options are used.
All reinforcing shall be Grade 60.
Concrete strength f'c = 4,000 psi.
All reinforcing steel shall be Epoxy Coated.
Bar lengths were calculated, shall be as follows:
Epoxy Coated ~ #4 = 22'-1"
~ #5 = 22'-7"
HS20 LOADING
Texas Department of Transportation
Bridge Division
243.00' PRESTRESSED CONCRETE BEAM UNIT
(SPANS #5 - #7)
NW CONNECTOR
BARS U
TABLE OF SECTION DEPTHS
Span No. | Beam No. | "X" at ℄ Brg | "Y" at ℄ Brg | ③ "Z" at ℄ Span
5 | 1 | 11 1/2" | 5'-5 1/2" | 8 3/4"
| 2 | | | 9 1/4"
| 3 | | | 9 3/4"
| 4 | | | 10 1/4"
6 & 7 | 1 & 2 | 10 1/4" | 5'-4 1/4" | 8 3/4"
| 3 & 4 | | | 8 5/8"
③ Theoretical dimension
DEAD LOAD DEFLECTION DIAGRAM
NOTE: Deflections shown are due to concrete slab only. (Ec = 5 x 10^6 psi) Calculated deflections shown are theoretical and actual dimensions may differ. Deflections shall be adjusted based on field observations.
PLAN
TYPICAL RADIAL SECTION
SHOWING TYPICAL SLAB
SHOWING THICKENED SLAB END
④ Bars U shall match Bars R for minimum distance of 10'-0" from each end of all Beams in Span #5.
At Contractor's option, alternating Bars B may end at ℄ outside Beam (Typ)
Type A SEJ (4")
Face of Rail
32'-0" Overall
30'-0" Roadway
23'-0"
Control Line NW Connector & PGL
Slope Varies See Layout
Thickened Slab End, See IBTS for Bars G, H, J and M
Controlled Jt or Const Jt
SPAN #5
SPAN #6
SPAN #7
℄ Bent #5
℄ Bent #6
℄ Bent #7
℄ Bent #8
2" End Cover (Typ)
Bars T & D1
236.172' (Arc)
78.724' (Arc)
81.000' (Arc)
243.000' (Arc)
81.891' (Arc)
245.673' (Arc)
Bars A (Top) & B (Bott) at 6" Max Spacing
℄ Beam #1
℄ Beam #4
3 Spa at 8.667' = 26.000'
9 Spa (9" Max) Bars D (Typ)
Overhang (Typ)
1'-0" (Typ)
3" (Typ)
32,000' Overall
30,000' Roadway
23,000'
9,000'
1,000'
LEVELS DISPLAYED
ACC:
FILE: 5DUMMY.DGN
©TxDOT March 2000
REVISIONS
DN: TxDOT CK: TxDOT DW: JTR CK: LDS
STATWIC
FEDERAL AID PROJECT
SHEET
COUNTY
CONTROL | SECT | JOB | HIGHWAY

Fig. 5-3