

Missouri Department of Transportation

Bridge GeoPak® (MicroStation®) CADD Standards

Updated November 2021

General Information

11/15/2021

Small Text (Text Ht: 1/8". Line wt: 2) (Includes dimension text) Small Text Bold (Text Ht: 1/8". Line wt: 4) Medium Text (Text Ht: 3/16". Line Wt: 5) Large Text (Text Ht: 1/4". Line Wt: 7)

See EPG 751.5.1.1 for more information.

Link:



Contents:

Cells: Bridge_Details.cel (23 sheets) Bridge_Notes.cel (3 sheets)















CELLS: Bridge_Details.cel	11/12/2021	Sheet 8 of 23
Front Sheet Text Title block text - Front sheet		
(Showh at U.& Scale)		
(*) * SPANS	SEC/SUR * TWP *	▶ RCE ₩
		*
		BR 1 *
		*
	8. M.	
	BRIDGE: ROUTE * OVER *	
Designed Defined Checked Note: This growing is not to scole. Follow dimensions. Sneet No. 1 of	ROUTE # FROM # TO # ABOUT # MILES # OF # STATION	
GDR BOS4 Bottom of Slab Elevations - Quarter Points	s - Girder	
Theoretical Bottom of Slab Elevations at Centerline (Prior to forming for slab) (Estimated at 90	e of Girder	
Girder Span (1-2) ('- "€Brg €Brg.) Span (2-3) ('- "€Brg €Brg.) Span Number Number €Brg. .25 .50 .75 €Brg. €Brg. .25 .50 .75 €Brg. €Brg. .50 .75 €Brg. .25 .50 .75 €Brg. .50 .75 €Brg. .50 .75 €Brg. .50 .75 €Brg. .25 .50 .75 €Brg. .50 .75 €Brg. .25 .50 .75 €Brg. .50 .75 €Brg. .25 .50 .75 €Brg. .75 €Brg. .75	(3-4) ('- " & Brg & Brg.) g25 .50 .75 & Brg.	
J		
Elevations are based on a constant slab thickness of 8 1/2" and include allowance for theoreti- weight of slab (including precast panel) and barrier.	cal dead load deflections due to	
GDR BOS10 Bottom of Slab Elevations - Tenth Points -	- Girder	
Theoretical Bottom of Slab Elevations at Centerline of Girder	-	
(Prior to forming for slab) (Estimated at 90 days) Girder		
Number © Brg. .10 .20 .30 .40 .50 .60 .70 .80 .90 © Br 1	<u>`9</u> ,	
5 GirderSpan (2-3) (⁶ - [∞] € Brg € Brg.) Number € Brg. 10 .20 .30 .40 .50 .60 .70 .80 .90 € Br		
4		
Girder Span (3-4) ('- " € Brg € Brg.) Number € Brg. 10 .20 .30 .40 .50 .60 .70 .80 .90 € Br	·g.	
Elevations are based on a constant stab thickness of 8 1/2" and include allowance for theoret dead load deflections due to weight of stab (including precast panel) and barrier.	1001	
CDR BOSD Bottom of Slab Elevations diagram - Girder		
Theoretical Bottom of Slab Elevation at		
to forming for slab) Deflections due to weight of slab		
Finished Bottom of Slab Elevations		
€ Bearing⇒		
TYPICAL SLAB ELEVATIONS DIAGRAM		































CELLS: Bridge Notes.cel	11/15/2021	Sheet 1 of 3
(Shown at full scale unless otherwise noted.) (In alphabetical order by cell name) A2.0 Diaphragm End Detail for prestressed box beams		
MoDDT Construction personnel will indicate		
Precast Concrete Box used		
L Cast-in-Place Concrete Box used		
MoDOT Construction personnel will indicate		
The precest panels for this structure:		
B3.1 Estimated Quantities table		
Estimated Quantities		
Item Substr. Superstr. Total Class 1 Excavation cu. yard X X X Ctaret and Compared to the second		
Class B Concrete cu, yard Type D Barrier linear foot		
Reinforcing Steel (Bridges) pound		
B3.11 Estimated Quantities table with Final Quantitie	s (for culverts)	
Estimated Quantities Final Class 4 Excavation cu. yard		
*(Class B-1 Concrete (Culverts-Bridge) cu. yard Reinforcing Steel (Culverts-Bridge) pound		
B3.21 Estimated Quantities for Slab on (Superst	ructure)	
Estimated Quantities for		
X Item Total Class B-2 Concrete cu. vord X		
Reinforcing Steel (Epoxy Coated) pound X The table of Estimated Quantities for represents the quantities used by the State in preparing the cost estimate for		
concrete slabs. The area of the concrete slab will be measured to the nearest square yard longitudinally from end of slab to end of slab and transversely from out to out of bridge slab (or with the		
prestressed panels, stay-in-place corrupated steel forms, conventional forms, all concrete and epoxy coated reinforcing steel will be considered completely covered by the contract unit price for the		
slab. Variations may be encountered in the estimated quantities but the variations cannot be used for an adjustment in the contract unit price.		
Method of forming the slab shall be as shown on the plans and in accordance with Sec 103. All hardware for forming the slab to be left in place as a permanent part of the structure shall be conted in accordance with ASTM A123 or ASTM Be33 with a thickness		
class SC 4 and a finish type 1. 1) or 111.		
B3.50 Optional Asphaltic Concrete Wearing Surface		
Optional Asphaltic Concrete Wearing Surface		
Type of Wearing Surface Mix Used with Asphait Binder Type () SPI25BSM Mix with PG 76-22		
SP1258LP Mix with PG 76-22 SP1258SM Mix with PG 70-22 SP125PL Mix with PG 70-22		
MoDDT construction personnel shall complete column labeled "Mix Used (v)".		
The contractor shall select one of the optional asphaltic concrete wearing surfaces listed in the table. The mixture		
shall be in accordance with Sec 403 and produced in accordance with Sec 404. The area of the asphaltic concrete wearing		
surface will be measured and computed to the nearest square yard. This area will be measured transversely from out to out of		
end of slab to end of slab. Payment for Optional Asphaltic Concrete		
wearing surface will be considered completely covered by the contract unit price per square yard.		

CELLS: Bridg	je_Notes.cel	11/15/2021	Sheet 2 of 3
B3.60 Op	tional Ultrathin Bonded Asphalt Wearing Su	urface	
Optional Ultrathin B Asphalt Wearing Sur Type of Wearing surface Type A Type C MoDOT construction personnel wil complete column labeled "Mix Use The contractor shall select one optional ultrathin bonded asphal surfaces listed in the table.	onded face <u>used (v)</u>		
Pile Encasement Used (/) Pipe Pile Spacer Pile Jacket			
2.1 Fo Shown at 0.5 scale)	undation Date - LRFD and LFD $LRFD$	LF	 D
E2.1 LRFD and LFD	Foundation Data () New Number New Number Type Destign bars 1 2 3 4 5 Image: State of the state	Foundation Do	ID ID<
2elf Guidance (do not show on pians): Io creats Foundation Data table for pian setai use the LAFD or LFD side of the setai use the LAFD or LFD side of the self drawing. 3) Show only required CE(IP/DECIP/MP pile data of selfis project. 3) Show maximum of total scour depths estimated for multiple return periods in an uid be given on the Design Layout. Show the controlling return period bents, add a new line.	Model State State <th< td=""><td>Clippe and size Clippe Unit per the first sector to set the sector set of the se</td><td></td></th<>	Clippe and size Clippe Unit per the first sector to set the sector set of the se	
Dissistance factor for pile driving verification method. legicac all "#" in the table with specific istor or if not applicable them show a dash. f bile point reinforcement is required it specific bent them show a AlL' in the curdation bate them show a AlL' in the curdation bate them show a dash. In the joins, report the following terinition(s) just below the foundation ato table for required CIP Pile. With the datable table them shows the Bith terms table them foundation	End Standburg Registering of (16x) 0	By Ling 10, 10, 20, 20, 20, 20, 10, 10, 10, 10, 10, 10, 10, 10, 10, 1	
f estimated maximum sour depth elevation 1:s shown for CE(P) piles or ECIP piles, then piace EFG 751:50 E2.22 ote under the Foundation Data table. 1) Use either "D1", "DF", "MEAP" or "SLT" a show definitions below table that are equired. 	Faundation Interview I I I I I I I I I I I I I I I I I I I	see "Jean's so in for an end see "Jean's account an area of the sec of the se	
Judi Long Beering Piles Spread Foorings Rock Socket ents. then replace corresponding pile at with a dash. f spread footings or rack sockets are or used, remove from table corresponding ows. f detached wing walls are used. modify the the accordance with EPG 751.50 E2:1. f bearing piles (HP piles) and friation ties (CEC)P and/or OEC(P) are required or specific pider then modify. PG 751.50 E2:1.	Uninka Mantai Luti Concerta ta Sattaroa - <u>Najing Conce</u> ta (Sattaroa) — Uninka Mantai Satra (Sattaroa - <u>Najing Conce</u> ta) — Uninka Mantai Lici Conceta — Uning Mantai Lici Conceta – Uning Mantai Lici Conceta – <u>Najing Conceta</u> — Uning Mantai Conceta – <u>Najing Conceta</u> – <u></u>	(a) For LFD, place note E2.26 (EPG 751-50 VERIFICATION ILFD TABLE DF 0F 0T 2.27 WEAP 2.77 0T 2.20) below the Foundation Data table 5.5.6.2A) 5.5.5.5 5.5
3.2 No	tice and Disclaimer Regarding Boring Log (Data	
Notice and Disclaimer Regarding B The locations of all subsurface bi snown on the plan sheet(s) for th all locations indicated, as well. the department for the design of No and may be included in the They will also be available from request. No greater significance i boring data depicted on the plan subsurface data available from th The Commission does not represent data accurately depicts the condi constructing this project. A cont	pring Log Data orings for this structure are is structure. The boring data for so any other boring logs or other so any other boring logs or other the project, are shown on Sheet(s) Electronic Bridge Deliverables. The Project Contact upon written or weight should be given to the sheets than is given to the a district or elsewhere. or warrant that any such boring tions to be encountered in "actor assumes all risks it may so time or schedule of performance		
on the boring data depicted here (district. or on any other documen) which the contractor may obtain fr	or those available from the tation not expressly warranted. rom the Commission.		
Substructure Quanti-	ty Table for Bent No.		
Item Class 1 Excavation Structural Steel Pile (in.) Class B Concrete (Substructure) Reinforcing Steel (Bridges)	Quantity cu.yard x linear foot x cu.yard x pound x		
These quantities are included in	the Estimated Quantities table on		

113.41 19.29 19.12.12 Indicates matchine Hinter Autries. 11.13 2010011 Concrete Medring Surface/Very Early Strength Concrete Medring Surface 11.13 2010011 Concrete Medring Surface/Very Early Strength Concrete Medring Surface 11.14 2010011 Concrete Medring Surface/Very Early Strength Concrete Medring Surface 11.15 11.16 11.16 11.17 11.17 2010011 Concrete Medring Surface/Very Early Strength Concrete Medring Surface 11.16 11.17 11.17 2010011 Concrete Medring Surface/Very Early Strength 11.18 11.17 11.19 11.17 11.10 11.17 11.11 11.17 11.17 11.17 11.18 11.17 11.19 11.17 11.10 11.17 11.11 11.17 11.12 11.17 11.13 11.17 11.14 11.17 11.15 11.16 11.16 11.17 11.17 11.17 11.18 11.17 11.19 11.17 11.10 11.17 11.11 11.17 11.12 11.17 11.13 11.17 11.14 11.17 11.15<	CELLS: Bridge_Notes.	cel	11/15/2021	Sheet 3 of 3
Ar bitlands datum finis ander T.1 Defining Constate Recript Surface Transmission Trans	H3.4; H3.9; H3.18 Indicates mad	chine finish sur	ace	
1.1.3 Optional Concrete Waring Surface/Very Early Strength Concrete Waring Surface 1.1.3 Optional Concrete Waring Surface/Very Early Strength Concrete Waring Surface 1.1.3 Optional Concrete Waring Surface/Very Early Strength Concrete Waring Surface 1.1.5 Optional Concrete Waring Surface/Very Early Strength Concrete Waring Surface 1.1.5 Optional Concrete Waring Surface/Very Early Strength Concrete Waring Surface 1.1.5 Optional Concrete Waring Surface/Very Early Strength Concrete Waring Surface 1.1.5 Optional Very Early Strength Concrete Waring Surface 1.1.5 Optional Very Early Strength Concrete Waring Surface/Very Early Surface 1.1.5 Optional Very Early Strength Concrete Waring Surface/Very Early Strength Concrete Waring Surface/Very Early Strength Concrete Waring Surface/Very Early Strength Concrete Waring Surface 1.1.5 Optional Polymer Waring Strength Concrete Waring Surface 1.1.6 Optional Polymer Waring Strength Concrete Waring Strength Concret	∽ Indicates machine finish surface.			
	11.13 Optional Concrete Wearing	Surface/Very Ea	rly Strength Concrete Wearing	Surface
Head Together Together with Four Level and the set of the	Optional Concrete Wearing Surface Type of Concrete Wearing Surface Latex Modified Concrete Wearing Surface Silico Fume Concrete Wearing Surface Silico Fume Concrete Wearing Surface MoDDT construction personnel will complete column labeled "Type Used (\scimes)". The contractor shall select one of the alternate concrete wearing surface method of measurement and basis of payment shall be in accordance with Sec 500 Deficinal Very Early Strength Concrete Wearing Surface Optional Very Early Strength Concrete Wearing Surface Latex Modified Very Early Strength Concrete Wearing Surface CSA Cement Very Carly Strength Concrete Wearing Surface	toling Guidance boot Show on plans) a appropriate table d modify options as actified on the dge Memorandum.		
United in the second s	MoDDT construction personnel will complete column labeled "Type Used ()".<br The contractor shall select one of the optional very early strength concrete wearing surfaces listed in the table. The optional very early strength concrete wearing surface method of measurement and basis of payment shall be in accordance with Sec 505.			
Initial operation of Polymer Polymer and polymer an	11.14 Optional Polymer Wearing	Surface		
J1.16 MSE Woll System Data Table Image: the system of th	Uptional Polymer Wearing Surface Type of Polymer Wearing Surface Epox Polymer Wearing Surface MAA Polymer Slurry Wearing Surface MODDI construction personnel will complete column labeled "Type Used ()". The contractor shall select one of the optional polymer concrete wearing surfaces listed in the table. The optional polymer concrete wearing surface method of measurement and basis of payment shall be in accordance with Sec 623.			
MSE Wall Systems Data Table Proprietary Wall Systems Geoprid Wanufacturer System Vis Wall System System Vis Wall System Data Dape is to be completed by Woll construction personnel to report and the moundacturer of the proprietary will system or the manufacturers of the construction personnel will system or the manufacturers of the construction personnel will indicate the bridge approach slab used for this structuret Md0T Construction personnel will indicate the bridge approach slab Wanufacturer Structuret Concrete Bridge Approach Slab	J1.16 MSE Wall System Data Tabl	e		
K1.19 Indicate type of bridge appoach slab used	MSE Wall Systems Data Tat Proprietary Wall Systems Combination Wal Manufacturer System Facing Unit Manufacturer Unit Manufacturer Unit Manufacturer Manufacturer Manufacturer MSE Wall Systems Data Table is to be completed by MoDDT to record the manufacturer of the proprietary wall system of the combination wall system that was used for constru	D C I Systems Geogrid Manufacturer Construction personnel m or the manufacturers cting the MSE wall.		
MoDOT Construction personel will indicate the bridge approach Slab Concrete Bridge Approach Slab	K1.19 Indicate type of bridge a	ppoach slab used		
	MoDDT Construction personnel will indicate the bridge approach slab used for this structure: Concrete Bridge Approach Slab Asphalt Bridge Approach Slab			