

# E-Plans



## Specifications for Electronic Plans Submittal



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Kansas Department of Transportation Bureau of Local Projects

# Specifications for Electronic Plans Submittal

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## Terms

*KDOT* = Kansas Department of Transportation

*BLP* = Bureau of Local Projects

*PDF* = Portable Document Format

*Project Manager* = Member of BLP responsible for set-up and initiation of Shared Review

Specifications for Electronic Plans to KDOT Bureau of Local Projects
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The Bureau of Local Projects is providing the following file specifications for electronic plans, submitted by consultants or local agencies to KDOT BLP, for letting by KDOT. Submit all electronic plans in Portable Document Format (PDF). Submit PDF files that are Version 1.4 or higher. This file version can be produced using many software packages. Produce PDF files conforming to the following requirements:

PLAN COMPOSITION:

- a. Create the PDF file with a resolution of exactly 600 dpi (dots per inch).
- b. Create PDF files in black and white to allow a plan sheet to be more easily understood. Submit grayscale PDF files when gray shading is necessary for clarity of intent. Do not submit full-color PDF files.
- c. When using a raster image inside a PDF file, follow the same color requirements noted above. Use JPEG compression for raster images.
- d. If the plan set contains less than 50 cross-section sheets, submit the entire plan set as a single multi-page PDF file. If the plan set contains 50 cross-section sheets or more, submit two PDF files, one containing only the cross sections, and one containing all other plan sheets.
- e. Create each page in the PDF file for printing on 22" x 36" paper using landscape orientation unless otherwise requested by KDOT BLP personnel.
- f. Follow the **E-Plans PDF Plan Set and Sheet Name Convention**.

**The E-Plans File Naming Convention must be used.**

OTHER PLAN REQUIREMENTS:

For submittal of Preliminary (PS&E) plans or of final plans for letting, wherever a signature for local authorization or a professional engineer or architect's certification appears in the plans, visually indicate they have been signed by one of the following methods:

- a) printing a hard copy of the plan sheet, signing the certification block, or apply required seal and signature by hand, and scanning the plan sheet into PDF file format; or
- b) pursuant to the Kansas State Board of Technical Professionals requirements located at <http://www.ksbtp.ks.gov/statutes-rules/seal-sig-faq> , a computer generated seal and digital signature (or digital signature for local authorization) may be utilized. The party applying the computer generated seal and/or digital signatures are responsible for ensuring that all legal requirements have been met. Or
- c) placing a scanned imaged of a hand written signature onto the designer's certification block before creating the PDF file from the CADD drawing; or
- d) placing text or an image in the signature area of the certification block using one of Adobe Acrobat's electronic signature features; or
- e) any other method producing a clear visual indication the plans have been signed.

Do not lock, or make un-editable, the PDF file.

BLP will not accept intermittent sheets for insertion in the set of plans. All corrections must be addressed and new sheets will be accepted at the next applicable stage of plan development (i.e. Office Check, 2<sup>nd</sup> Office Check, Final Check, Revised Plans, etc.).

E-Plans PDF Directory Name Convention
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Project documents stored in active or archived PDF files should be readily retrievable without recourse to file names which require extra documentation or indexed for the PDF project documents. The following directory and file naming conventions will satisfy the retrieval concerns while meeting the requirements of the department host-based filing system.

The requirements for the directory names shall apply to folders being delivered to the KDOT BLP from outside organizations, such as consultants, who utilize CADD to develop projects, and are required to satisfy only the specifications for file names within the design project.

Project directory names are comprised of two components: 1) project title and 2) plans stage. The project title shall be defined as the title of the project including the County number (carried to three places to accommodate all 105 counties), project Jurisdiction, project number, and phase. The plans stage shall be Field Check, Office Check, Final Check, Preliminary Plans, or final plans for letting. If additional Field Checks, Office Checks, or Final Checks are required, a “2” or “3” shall follow the plans stage abbreviation. An underscore “\_” shall be used to delineate the fields of the project directory name. **Figure 1** shows the abbreviation for plans stages.

<b>FIGURE 1:</b>
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Field Check=FLD	Office Check=OFF	Final Check=FIN	Preliminary Plans=PSE	Final Plans for Letting=LET
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**EXAMPLE:**

The project directory for a project titled 12 C-4128-01, at Office Check stage shall be named as follows...

**012 C-4128-01\_OFF**

The project directory for a project a titled 4 KA-0485-02, at Preliminary Plans stage shall be named as follows...

**004 KA-0485-02\_PSE**

**Note:** When plans are submitted consisting of multiple Volumes, follow the preceding naming convention and add a “V1”, “V2”, etc. to the end of the file name separated by an underscore “\_”.

**EXAMPLE:**

**023 N-0891-01\_OFF\_V1**

## E-Plans PDF Plan Set and Sheet Name Convention

Project documents stored in active or archived PDF files should be readily retrievable without recourse to file names which require extra documentation or indexed for the PDF project documents. The following file naming conventions will satisfy the retrieval concerns while meeting the requirements of the department host-based filing system.

The requirements for the directory names shall apply to files being delivered to the KDOT BLP from outside organizations, such as consultants, who utilize CADD to develop projects, and are required to satisfy only the specifications for file names within the design project.

### **Plan Set Name Convention:** (for plan submittals)

File Naming Convention: (Route #)-(County #) (Project Jurisdiction)(Project #)(Project Stage)-(Plans Stage)(Submittal #)-(Plan Set Type)(Plan Set #)

Route #: Optional for BLP projects.

Plans Stage: 3 digit alpha

- Plans for Railroad (PLANS4RR): RRD
- Plans to Construction and Materials (PLNMR): MAR
- Plans to Environmental: ENV
- Field Check Plans (FLDPL): FLD
- Office Check: OFF
- Final Check (local projects only): FIN
- Preliminary Plans to Construction and Materials (Estimating) (BGPSE): PSE
- Final Plans to Construction and Materials: LET
- Revised Plans After Construction Letting: REV

Submittal #: For plan sets submitted for review prior to a given plan stage, the submittal number begins with 1p and increments accordingly. For plan stage submittals, the submittal number begins with 1 and increments accordingly.

Plan Set Type: 1 digit alpha

- PDF plan set containing Plan Sheets: P
- PDF plan set containing Cross Section Sheets: X

Plan Set #: Begins with 1 and increments accordingly for all types of pdf plan sets.

Example: For project 99-56 KA-0858-01,

- the **first pre-field check plan set** submitted for review would be named **099-056 KA085801-FLD1p-P1**
- the **first field check plan set** submitted would be named **099-056 KA085801-FLD1-P1** and
- the **first cross-section set** would be named **099-056 KA085801-FLD1-X1**.

**Individual Sheet/Bookmark Name Convention:** (for individual .pdf files and bookmarks within a .pdf plan set)

PDF Sheet Naming Convention: (Sheet #)(Project Jurisdiction)(Project #)(Project Stage)(File Designation)-(File #)-(Plans Stage)(Submittal #)

NOTE: PDF plans to be submitted as PDF plan sets (see plan set name convention). Only use PDF sheet naming convention for PDF plan sheet bookmarks within a plan set or for plan sheets submitted individually.

Sheet #: sheet number in plan set, use zeros as place holders (for example, plan sets with less than 99 pages, first sheet number is 01, for plan sets with greater than 99 pages and less than 999 pages, first sheet number is 001)

Plans Stage: 3 digit alpha (see Plan Name Convention)

File Designation: 3 digit alpha, first letter designates work group (see list below), second and third letters designates file type (see file designations list).

Road – R  
 Bridge – B  
 Permanent Signing – P  
 Traffic Control – C  
 Lighting – L  
 Traffic Signals – T  
 Pavement Marking – M  
 Intelligent Transportation Systems (ITS) – I  
 Right-of-Way – W  
 Landscape – E  
 Materials & Research Geology – G  
 Survey – S

NOTE: The file designation for standard sheets, except bridge, will include the 3 digit standard sheet number after the alpha characters.

The file designation for bridge sheets will include the 4 digit (last 4 digits of the NBI serial number for structures not on the State System) structure serial number (bridge, wall, etc) after the alpha characters. For twin structures that share detail sheets, the file designation will include the first structure serial number, an “&” sign, then the second structure serial number. Local Projects will use the last 4 digits of the bridge serial number for the numeric portion of the bridge file designation.

File #: The file number begins with 01 and increments accordingly.

Example PDF File Naming Convention: For project 99-56 KA-0858-01 the first road plan sheet at field check stage would be named **04KA085801RPL-01-FLD1.pdf** or the bookmark within a plan set would be named **04KA085801RPL-01-FLD1**. The first bridge sheet would be named **15KA085801BBR0051-01-FLD1.pdf** or the bookmark within a plan set would be named **15KA085801BBR0051-01-FLD1**.

Example DGN File Naming Convention: For project 99-56 KA-0858-01,

- the **first road plan sheet** would be named **KA085801RPLI-01.dgn**,
- the **permanent signing standard sheet** would be named **KA085801PSS400-01.dgn**,
- the **first bridge sheet** would be named **KA085801BBR0051-01.dgn** and
- the **first “twin” bridge standard sheet** would be named **KA085801BSS0052&0053-01.dgn**.

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**File Designations:**

<b>ROAD</b>	<b>R</b>
<b>Working Files</b>	
Base File (Master File)	RBS
Hardshell Profile	RHS
Terrashare with referenced QUAD Map	RQM
GEOPAK Master File (Patterns, Shapes)	RWF
Cross Sections (Vertical Stacked)	RVS
<b>Sheet Files</b>	
Title Sheet	RTI
Index of Sheets (for multiple volumes)	RIS
General Note Sheet	RGN
Typical Sections	RTS
Superelevation Diagrams	RSE
Intersection and Interchange Details	RID
Geometric (Alignment) Details	RGD
Misc. Details	RMI
Mitigation Details	RMG
Pavement Details	RPV
Includes: Approach Slab Details and Joint Details	
Plan Details	RPD
Plan/Profile Sheets	RPP
Plan Sheets	RPL
Profile Sheets	RPR
Detour Details	RDT
Road Design Standards	RSS
Includes modified standards	
Drainage Details	RDD
Includes: Inlet Details, Manhole Details, Sewer Details, Erosion Pipe, Riprap, Ditch Lining, Underdrains and Outlet Scour Protection	
Guardrail	RGR
Safety Barrier	RSB
Retaining & MSE Walls	RRW
Pipe Culver Summary	RPS
Drainage Data Sheet	RDS
RCB (Culverts)	RCB



Wingwalls	RWG
Fencing Details	RFC
Project Quantity Sheets	RPQ
Surfacing Quantities	RSQ
Const. Sequence Sheets (Phasing)	RCS
Drainage Maps	RDM
General Geologic Section	RGG
Earthwork Computation Sheets	REC
Cross Sections Sheets	RXS

<b>BRIDGE</b>	<b>B</b>
Bridge Sheets	BBR
Bridge Standards	BSS
Asbuilt Plans	BAB
Emergency Project	BEP
Repair Project	BRP
Set-Aside Project	BSP

<b>PERMANENT SIGNING</b>	<b>P</b>
Plan Sheet Installations	PPL
Plan Sheet Removals	PRM
Quantity Sheets	PQT
Sign Layouts	PSL
Special Details	PSD
Permanent Signing Standards	PSS

<b>TRAFFIC CONTROL</b>	<b>C</b>
Plans or Details	CPL
Detour Plans	CDT
Sign Layouts	CSL
Traffic Control Standards	CSS

<b>LIGHTING</b>	<b>L</b>
Plans or Details	LPL
Title Sheet	LTI
Lighting Standards	LSS

<b>TRAFFIC SIGNALS</b>	<b>T</b>
Plans or Details	TPL
Title Sheet	TTI
Signal Standards	TSS

<b>PAVEMENT MARKING</b>	<b>M</b>
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Plans or Details	MPL
Pavement Marking Standards	MSS
<b>INTELLIGENT TRANSPORTATION SYSTEMS (ITS)</b>	<b>I</b>
Plans or Details	IPL
<b>RIGHT-OF-WAY</b>	<b>W</b>
Property Ownership (Strip Map) & Plats	WRW
<b>ENVIRONMENTAL (landscaping unit)</b>	<b>E</b>
Permanent Seeding	EPS
Wetland Mitigation Detail	EWM
Temp. Seeding and Erosion Control	EWP
Erosion Control Standards	EEC
Includes: Erosion Control Standard (LA852-EC), Erosion Control Class 1 (LA855) and Erosion Control Class II (LA856)	
Landscape Sheets	ELA
Includes: Roadside Improvement Planting Detail	
<b>MATERIALS AND RESEARCH GEOLOGY</b>	<b>G</b>
Bridge Foundation	GBR
Rock Column	GRC
Under Drain	GUD
Typical Section	GTS
<b>SURVEYS</b>	<b>S</b>
3D DTM with Contours	STM
2D Topography	STP
2D Contour	SCT
3D Valley Section	SVS
Channel Section	SCS
with Alignment, Streambed and Cross Sections Plotted	
Plat	SPT
with Section Line, Symbols, Bearings and Distances	

Electronic Directory Name Convention

Project related electronic documents stored in active or archived project folders should be readily retrievable without recourse to file names which require extra documentation or indexed for the electronic documents. The following directory and file naming conventions will satisfy the retrieval concerns while meeting the requirements of the department host-based filing system.

The requirements for the directory names shall apply to folders being delivered to the KDOT BLP from outside organizations, such as consultants, who utilize electronically delivered documents to develop projects, and are required to satisfy only the specifications for file names within the design project.

Project directory names containing electronic documents are comprised of two components: 1) project title and 2) plans stage. The project title shall be defined as the title of the project including the County number (carried to three places to accommodate all 105 counties), type of project, project number, and phase. The plans stage shall be Field Check, Office Check, Final Check, Preliminary or Letting Plans. If additional Field Checks, Office Checks, or Final Checks are required, a “2” or “3” shall follow the plans stage abbreviation. An underscore “\_” shall be used to delineate the fields of the project directory name. **Figure 1** shows the abbreviation for plans stages.

**FIGURE 1:**

Field Check=FLD    Office Check=OFF    Final Check=FIN    Preliminary Plans=PSE    Final Plans for Letting=LET

**EXAMPLE:**

The project directory for a project titled 12 C-4128-01, at Office Check stage shall be named as follows...

**012 C-4128-01\_OFF**

The project directory for a project titled 4 KA-0485-02, at Preliminary Plans stage shall be named as follows...

**004 KA-0485-02\_PSE**

Electronic Document Name Convention
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Project related electronic document file names are comprised of three components: 1) abbreviated project title; 2) plans stage, and 3) document name abbreviation. The abbreviated project title shall be defined as the title of the project including ONLY the type of project and project number. The plans stage shall be Field Check, Office Check, Final Check, or Preliminary Plans. **Figure 1** on the previous sheet shows the abbreviation for plans stages. If additional Field Checks, Office Checks, or Final Checks are required, a “2” or “3” shall follow the plans stage abbreviation. The four character document name abbreviation shall be a three letter abbreviation denoting what type of document it is and what number it is in sequence or its form number (for example 1302, 90P2, 1304, or 1306). **Figure 2** on the next sheet shows the three and four letter abbreviation standards. **Figure 3** on the next sheet shows the form number abbreviations. An underscore “\_” shall be used to delineate the fields of the sheet name.

**EXAMPLE:**

The cost estimate for a project titled 12 U-4128-01, at second Final Check stage shall be named as follows...

**U4128 \_FIN2\_EST1**

The second submitted project schedule for a project titled 4 N-1882-02, at Field Check stage shall be named as follows...

**N1882 \_FLD\_PRO2**

The four permits needed for a project titled 89 C-2459-02, at Preliminary Plans stage shall be named as follows...

**C2459\_PSE\_KDHE, C2459\_PSE\_COE, C2459\_PSE\_KDWP, and C2459\_PSE\_DWR**

The 1304 form for a project titled 103 KA-4477-01, at Office Check stage shall be named as follows...

**KA4477 \_OFF\_1304**

The Status of Utilities Report form for a project titled 88 C-5497-01, at Final Check stage shall be named as follows...

**C5497 \_FIN\_SOUR**

**FIGURE 2:**

Geology Report	GEO	Agreement-City/State	ACT	Project Checklist	CKL
Hydraulic Assessment	HAC	Agreement-County/State	ACO	Code of Conduct	COC
Cost Estimate	EST	Bridge/Structure	BRS	Engineer's Fees	ENF
Letter of Transmittal	LOT	Consultant Agreement	CAG	Construction Costs	CON
Special Provisions	SPR	Meeting Documentation	MTG	Construction Letting	LTG
Revised Sheet	RSH	Plan Review	PRV	Right of Way/Utility	RWU
Field Check Report	FDR	Payment Voucher	PMT	Permitting	PER
Environment Clearance	ENV	Project Funding	PFD	Letting Schedule	LSC
Design Summary	DES	Project Schedule	SCH	Notice to Proceed	NTP
Obligation Authority	OBA	National Bridge Inventory	NBI	Corps of Engineers	COE
Dept. of Water Res.	DWR	Ks. Dept. of Wildlife, Parks, and Tourism			KDWP&T
Ks. Dept. Health& Env.		KDHE			

**FIGURE 3:**

Form 883	0883				
Form 1302	1302	Form 1304	1304	Form 1306	1306
Form 1307	1307	Form 1309	1309	Form PA	00PA
Shop drawings	SHOP				

E-Plan Transmittal Requirements and Procedures
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At each stage of plan production there are required documents to be submitted for review to KDOT BLP as shown below:

- f) Field Check
  - i) Letter of Transmittal
  - ii) Field check plans
  - iii) Detailed estimate
  - iv) Hydraulic Assessment Checklist (HAC)
- g) Office Check
  - i) Letter of Transmittal
  - ii) Office check plans
  - iii) Detailed estimate
  - iv) Hydraulic Assessment Checklist (HAC) (if revised from Field Check)
  - v) Geotechnical report (for bridge projects or if geology present on Road projects)
  - vi) Form 1307 (Status of Permits)
  - vii) Any permits that have been obtained at this time
- h) Final Check
  - i) Letter of Transmittal
  - ii) Final check plans
  - iii) Detailed estimate
  - iv) Hydraulic Assessment Checklist (HAC) (if revised from Office Check)
  - v) Form 1307 (Status of Permits)
  - vi) Any permits that have been obtained at this time but not previously transmitted to KDOT-BLP
- i) Plans, Specifications, and Estimate Plans (PS&E)
  - i) Letter of Transmittal
  - ii) PS&E plans (with LPA signature and PE Stamp and Seal)
  - iii) Detailed estimate
  - iv) Form 1304 (Status of Utilities)
  - v) Form 1306 (Right of Way Clearance)
  - vi) Form 1307 (Status of Permits)
  - vii) Any permits that have not been previously transmitted to KDOT-BLP
- j) Final Plans to Construction and Maintenance (Letting)
  - i) Letter of Transmittal
  - ii) Letting plans

All items as noted above will be combined into a single “zip” file and encrypted with a password. The “zip” file will be placed in the “incoming” folder on the KDOT-FTP site located at <https://secftp.ksdot.org/login> and an email notification containing the file name and the password will be sent to [Lpeplans@ksdot.org](mailto:Lpeplans@ksdot.org). Instructions for using the KDOT-FTP site are located at [http://www.ksdot.org/Assets/wwwksdotorg/bureaus/burLocalProj/BLPDocuments/KDOT\\_FTP\\_Instructions.pdf](http://www.ksdot.org/Assets/wwwksdotorg/bureaus/burLocalProj/BLPDocuments/KDOT_FTP_Instructions.pdf).