

## 16.14 MINIMUM REQUIREMENTS FOR DIGITAL SUBMITTAL

Digital files submitted shall be based on accurate coordinate geometry calculations and registered to the California State Plane Coordinate System (Zone 3) in units of feet for horizontal control, NAD83, and NAVD29 in units of feet for vertical control or other ties as authorized by USD. The digital file submitted shall be in dwg or dxf format and shall be in one (1) drawing file containing all layers, illustrating all improvements within the project area, including all existing and proposed offsite improvements, tract boundaries, street centerlines, outfall sewers, etc. Descriptive information (i.e. text) may be included in the same layer and the feature, or added as a separate layer. Submitted digital files shall be in accordance with the Guidelines for Digital Submittal, or as otherwise approved by USD.

All maps and associated plans, except those for private sewers or laterals, shall be submitted in digital format. Digital submittals shall be submitted with each plan check submittal and shall conform to the following:

### A. FILE FORMAT

1. AutoCAD (DWG) or
2. Digital exchange Format (DXF)

### B. MEDIA

1. Compact Disk (CD) or
2. FTP site

### C. MISCELLANEOUS

1. Each submittal shall be labeled with the project name and/or map number (tract, parcel map, etc.), project number, company name, address and contact phone number.
2. All drawing files shall have a North orientation of vertical (i.e. toward the top of the page).
3. All externally referenced files used shall be "bound" into the drawing file and submitted as one file. Submittal shall not contain externally referenced drawings.
4. Compressed files are acceptable only when using the Winzip utility or if the appropriate software to uncompress the data is provided by the person or firm submitting the file.

### D. LAYERING

1. Layers shall contain, but not be limited to, the layers in the table named AutoCAD Layering Conventions. This table is for reference only and is not to be considered as a complete list of available layer names.
2. Layer colors, line types and line weights shall be left to the discretion of the engineer.

**AutoCAD Layering Conventions  
For Submission of Developer Projects**

<b>Layer Group</b>	<b>Layer Name</b>	<b>Layer Type</b>	<b>Description</b>
Misc	BORDER		Contains features such as north arrow, vicinity map, location map, title of plans, signature blocks, standard title block, scale bar, legend, page borders, etc.
Misc	DETAILS		Standard construction details of jurisdictional agencies.
Misc	TXT	Text	Layer containing general and construction notes, sheet index, special condition notes, bench mark description, etc.
Civil	BLDG	Polygon	Building foot prints
Civil	BLDG -SETBAK	Line	Building setback line
Civil	BM or BMK	Point	Benchmark
Civil	BNDRY	Polygon	Closed polygon of Tract or Parcel Map boundary
Civil	CL	Line	Centerline - public streets
Civil	CLPVT	Line	Centerline - private streets
Civil	CONTOURS	Polyline	Finished contour lines (grading plans) with elevation attribute (Z value)
Civil	ELEV or EL	Point	Finished spot elevations (grading plans) with elevation attribute (Z value)
Civil	EP	Line	Edge of pavement (I.e. lip of gutter or edge of pavement in the case of no curb and gutter construction)
Civil	ESMT*	Line or Polygon	Easements not related to utilities, such as emergency vehicle access, pedestrian walkways, landscape maintenance, etc.
Civil	FOC	Line	Face of curb line
Civil	LOT	Text	Text indicating lot number
Civil	LP or LIP	Line	Lip of gutter
Civil	MON	Point	Survey monuments
Civil	MONL	Line	Monument line
Civil	PARCEL	Polygon	Closed polygons of each parcel or lot
Civil	ROW	Line	Public rights-of-way
Civil	ROWPVT	Line	Private rights-of-way

Layer Group	Layer Name	Layer Type	Description
Civil	SL	Point	Street light poles
Civil	SLCNDT	Line	Street lighting electrical conduit including pull boxes, service meters, etc.
Civil	STRIPE	Line	Street striping and pavement markings
Civil	STSIGN	Point	Street/traffic signs
Civil	SW	Line/Polygon	Sidewalks including handicapped ramps, driveways, back of walk and meandering walks
Civil	TOPO		All existing topological features (maybe submitted as a separate drawing file)
Civil	TS	Point	Traffic signal fixtures/poles
Civil	TSCNDT	Line	Traffic signal conduit including loop detectors, pull boxes, control cabinets etc.
Landscaping	LSIRR	Line	Public landscape irrigation (I.e. landscape maintenance districts) including service line from public main, water meters, valves, backflow and pressure regulating devices, control valves, etc.
Landscaping	LSTREES	Block insert	Street tree plantings that will be maintained by jurisdictional agency
Landscaping	LSPLANT	Block insert	Bushes, shrubs, groundcover and all other organic landscape material
Landscaping	LID	Polygon	Landscape Improvement Dist.
Landscaping	LLD	Polygon	Landscape/Lighting Dist.
Landscaping	LSMOW	Line or Polygon	Concrete mow strips
Misc	?TXT	Text	Layers containing text associated with various other layers where "?" denotes name of layer (e.g. sanitary sewer text would be named SSTEXT).
Misc	?TIC	Point	Tics at all beginning and ending curves for all utilities, easement boundaries, street centerlines (public and private), tract or parcel boundary, lot boundaries, etc. where "?" denotes name of feature or utility (e.g. CLTIC, SEE NOTE 1).
Sewer	SS	Line	Sanitary Sewer mains
Sewer	SSLAT	Line	Sanitary Sewer service laterals
Sewer	SSMH	Point	Sanitary Sewer manholes
Sewer	SSESMT	Polygon	Sanitary Sewer easements
Stormdrain	SDCI	Block insert	Storm drain curb inlets

Layer Group	Layer Name	Layer Type	Description
Stormdrain	SDESMT	Polygon	Storm drain easements
Stormdrain	SDDI	Block insert	Storm drain drainage inlet
Stormdrain	SDMH	Block insert	Storm drain manhole
Stormdrain	SD	Line	Storm drain
Stormdrain	SDVLT	Block insert	Storm drain vault
Stormdrain	SDFILT	Point	Storm drain filtering device
Stormdrain	SDMH	Point	Storm drain manholes and/or junction boxes
Utility	ELEC	Line	Electric utility line including power poles, underground conduit, pull boxes, vaults, manholes, ducts banks, etc.
Utility	ESMT?	Polygon	Easements where "?" denotes jurisdiction or purpose (PG&E, PUE, EVAE, etc.). Each utility shall have a separate layer (i.e. ESMTPG&E, ESMT PUE, etc.)
Utility	GAS	Line	Gas utility lines including service lines, valves, etc.
Utility	TELECOM	Line	All telecommunications utilities including (but not limited to) MCI, PacBell, Sprint, GTE, etc. showing location of underground lines, manholes, pull boxes, junction boxes, utility poles, duct banks, etc. Line type shall include name of utility.
Utility	CATV	Line	Television, cable TV showing location of underground lines, manholes, pull boxes, duct banks, utility poles, etc.
Utility	<i>UTILITY</i>	Line	Conduit layout of all utilities not specifically designated in this schema. <b>Each utility may have a separate layer named for the utility and shall show all appurtenant facilities</b>
Water	W	Line	Water mains
Water	WESMT	Polygon	Waterline easements
Water	WFH	Point	Fire Hydrants
Water	WFHV	Point	Fire Hydrant valves
Water	WSVC	Line	Water service lines
Water	WM	Point	Water meters
Water	WV	Point	Water valves

Note: The above layer naming conventions are meant only as a guide. It is not necessary to match exactly the naming conventions in this list. Layers that use numbers as names should be renamed using the above naming conventions or standard engineering practices .