

16.12 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), NAD83. The digital file submitted shall be in AutoCAD “.dwg” or “.dxf” (digital exchange format) format and shall be in one (1) drawing file containing all layers, illustrating all existing and proposed improvements within the project area including all existing and proposed offsite improvements, tract boundary, street centerlines, outfall sewers, etc. Descriptive information (i.e. text) may be included in the appropriate layer, or added as a separate layer. Submitted digital files shall be in accordance with these minimum requirements, or as otherwise approved by USD.

All maps, sanitary sewer easements (except those for private sewer or laterals), annexation maps and associated plans and drawings shall be submitted in digital format. Digital submittals shall be submitted with each plan check submittal and any plan or drawing required by the District and shall conform to the following:

File Format:

- AutoCAD (DWG) *or*
- Digital Exchange Format (DXF)

Media:

- Compact Disk (CD) *or*
- 3½" high density diskette (PC format), *or*
- via FTP site

Miscellaneous:

- Each submittal shall be labeled with the project name and/or map number (tract, parcel map, annexation number, etc.), project number, company name, address and phone number.
- All drawings shall use the California State Plane Coordinate System – Zone 3 in units of feet. The horizontal datum shall be the North American Datum of 1983 (NAD83) in units of feet and the vertical datum shall be the North American Vertical Datum of 1988 (NAVD88) in units of feet, or other ties as authorized by USD.
- All drawing files shall have a North orientation of vertical (i.e. toward the top of the page).
- All externally referenced drawings used in the drawing shall be bound to the “base” drawing and submitted as one (1) drawing file.
- All files shall be uncompressed. Compressed files are acceptable only when using the WinZip utility or if the appropriate software to uncompress the data is provided.

Layering:

- Layers shall contain, but not be limited to, the layers shown in Exhibit A.
- Layer colors, line types and line weights shall be left to the discretion of the engineer.

AutoCAD Layering Conventions For Submission of Developer Projects

Digital files submitted shall be based on accurate coordinate geometry calculations and the NAD83 State Plane Coordinate System (Zone III) and NAVD88. USD prefers that the digital file being submitted combines all elements of individual improvement plan sheets for the proposed subdivision along with the elements of the Parcel or Tract Map into a **single** CAD formatted drawing. This drawing shall contain (but not be limited to) the following layers.

Layer Group	Layer Name	Layer Type	Description
Default	0		AutoCAD default layer
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.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.
Landbase	BLDG	Polygon	Building foot prints
Landbase	BLDG -SETBAK	Line	Building setback line
Landbase	BM	Point	Benchmark
Landbase	BNDRY	Polygon	Closed polygon of Tract or Parcel Map boundry
Landbase	CL	Line	Centerline - public streets
Landbase	CLPVT	Line	Centerline - private streets
Landbase	CONTOURS	Polyline	Finished contour lines (grading plans) with elevation attribute (Z value)
Landbase	ELEV	Point	Finished spot elevations (grading plans) with elevation attribute (Z value)
Landbase	EP	Line	Edge of pavement (I.e. lip of gutter or edge of pavement in the case of no curb and gutter construction)
Landbase	ESMT*	Line or Polygon	Easements not related to utilities, such as emergency vehicle access, pedestrian walkways, landscape maintenance, etc.
Landbase	FOC	Line	Face of curblines
Landbase	LOT	Text	Text indicating lot number
Landbase	LP	Line	Lip of gutter
Landbase	MON	Point	Survey monuments
Landbase	MONL	Line	Monument line
Landbase	PARCEL	Polygon	Closed polygons of each parcel or lot
Landbase	ROW	Line	Public rights-of-way
Landbase	ROWPVT	Line	Private rights-of-way
Landbase	SL	Point	Street light poles
Landbase	SLCNDT	Line	Street lighting electrical conduit including pull boxes, service meters, etc.
Landbase	STRIPE	Line	Street striping and pavement markings
Landbase	STSIGN	Point	Street/traffic signs
Landbase	SW	Line/Polygon	Sidewalks including handicapped ramps, driveways, back of walk and meandering walks
Landbase	TOPO		All existing topological features (maybe submitted as a separate drawing file)
Landbase	TS	Point	Traffic signal fixtures/poles
Landbase	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 STEXT).
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
Stormdrain	SDESMT	Polygon	Storm drain easements
Stormdrain	SDCMP	Line	Storm drain corrugated metal pipe
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, duct 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, ESMTPE, 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, pullboxes, 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, pullboxes, duct banks, utility poles, etc.
Utility	UTILITY	Line	Conduit layout of all utilities not specifically designated in this schema. Each utility shall have a separate layer named for the utility and shall show all appurtenant facilities
Water	W	Line	Water mains
Water	WARV	Point	Air release valve
Water	WBV	Point	Butterfly valve
Water	WBO	Point	Blow off valve
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: NAMES FOR LAYERS CONTAINING EXISTING FEATURES SHALL BE PREFIXED WITH "EX". FOR EXAMPLE, THE LAYER CONTAINING EXISTING SEWER MAINS SHALL BE NAMED EX-SS.

NOTE: NAMES FOR LAYERS CONTAINING EASEMENTS SHALL BE PREFIXED WITH "ESMT". FOR EXAMPLE, THE LAYER CONTAINING EMERGENCY VEHICLE ACCESS EASEMENTS SHALL BE NAMED ESMT-EVAE.

NOTE: NAMES FOR LAYERS CONTAINING TEMPORARY IMPROVEMENTS OR STRUCTURES SHALL BE PREFIXED WITH "TEMP-" AS DICTATED BY THE TYPE OF IMPROVEMENT OR STRUCTURE. FOR EXAMPLE A LAYER FOR FUTURE CURB WOULD BE LABELED "TEMP-FOC".

NOTES:

- Centerline intersection tics not required on sanitary sewer mains.
- Names for layers containing existing features shall be prefixed with "EX". For example, the layer containing existing sewer mains shall be named EXSS.
- Names for layers containing easements other than water, sewer and storm drain shall be prefixed with "ESMT". For example, the layer containing Emergency Vehicle Access Easements shall be named "ESMTEVAC".
- Name for layers containing temporary improvements or structures shall be prefixed with "TEMP" according to the type of improvement or structure. For example, the layer containing future curb would be named "TEMPFOC".

Any repeatable feature such as sewer manholes, storm drain manholes, streetlight poles, trees, bushes, etc. may be designated with an appropriate symbol or AutoCAD block.