SECTION GS1010
GENERAL CADD PRACTICES & METHODS SUPPLEMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings, general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, and other related sections apply to work in this section.

1.2 SUMMARY

A. This section includes the following:

1. File naming principles
2. AIA/NIBS National CADD Standard Layering System
3. Use guidelines

1.3 SECTION INTENT

A. Texas Tech University is pursuing a program of automated construction related documents and Facilities Management. In general terms, this section describes the requirements for CADD related drawings, the required accompanying documentation, and the form and format of the electronic database.

B. This supplement is provided to answer most questions concerning the “CS0100 – General CADD Practices & Methods” standard and content of the AIA/NIBS National CADD Standard. This supplement is also intended to serve as a digest of CAD Layering Guidelines: Computer-Aided Design Management Techniques for Architecture, Engineering and Facilities Management Second Edition (Schley, Michael et. al., ed., American Institute of Architects Press, Washington D.C., 1999) and its standard applications by and for Texas Tech University and its agents.

PART 2 – FILE NAMING PRINCIPLES

2.1 NAMING OF HOST AND REF FILES

A. Because the use of “x-refs” is common, it is necessary to present file naming principles for both “host” drawing files (host files) and “reference” drawing files (ref files), “host” drawing files being the drawing files which contain the “x-refs.”

1. Definitions:

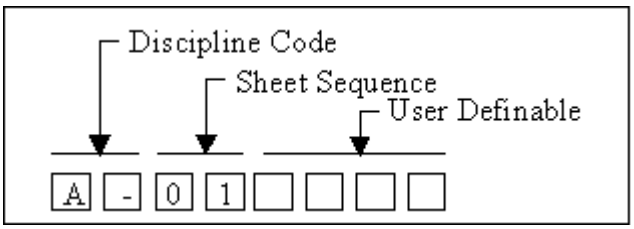
a. Host file: the file in which an "x-ref" is placed. *Ex.* a title block file

i. The host file can be likened to “paper” space in an AutoCAD drawing.

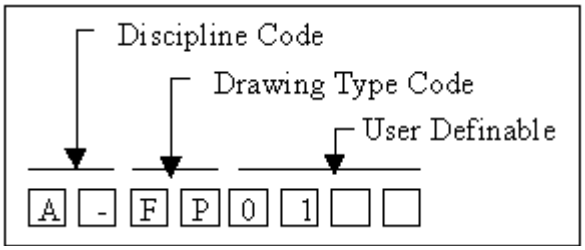
b. Ref file: the file that is referenced inside a host file. *Ex.* the floor plan that is placed in the title block.

i. The ref file can be likened to “model” space in an AutoCAD drawing.

2. Host files shall be named in an eight-character system, with the first two characters denoting the discipline code; the second & third characters denoting the sheet sequence identifier; sheet sequence identifier should be designated sequentially starting at “01” and continuing through “99;” and the last four characters being user definable. For example, A-01.dwg for architectural sheet 01.



3. Ref files shall be named in a similar eight-character system, with the first two characters denoting discipline; the third & fourth characters denoting drawing type code; the last four characters are user definable. For example, A-FP01.dwg for architectural, floor plan, first floor.



2.2 CODES

A. Discipline Codes:

A	Architectural
C	Civil
E	Electrical
F	Fire Protection
G	General
H	Hazardous Material
I	Interiors
L	Landscape
M	Mechanical
P	Plumbing
Q	Equipment
R	Resource
S	Structural
T	Telecommunications
X	Other Disciplines
Z	Contractor/shop drawings

B. Drawing type codes:

1. All disciplines:

FP	Floor Plan
SP	Site Plan
DP	Demolition Plan
QP	Equipment Plan
XP	Existing Plan
EL	Elevation
SC	Section
DT	Detail
SH	Schedules
3D	Isometric/3D
DG	Diagrams

2. Discipline-specific:

Architectural	
A-CP	Ceiling Plan
A-EP	Enlarged Plan
A-NP	Finish Plan
A-RP	Furniture Plan
Civil	
C-EP	Environmental
C-GP	Grading
C-RP	Roads/Topographic
C-SV	Survey
C-UT	Utility
Electrical	
E-CP	Communication
E-GP	Grounding
E-LP	Lighting
E-PP	Power
Fire Protection	
*-VP	Evacuation Plan
F-KP	Sprinkler Plan
Interiors	
I-CP	Ceiling Plan
I-EP	Enlarged Plan
I-NP	Finish Plan
I-RP	Furniture Plan
Mechanical	
M-CP	Control Plan

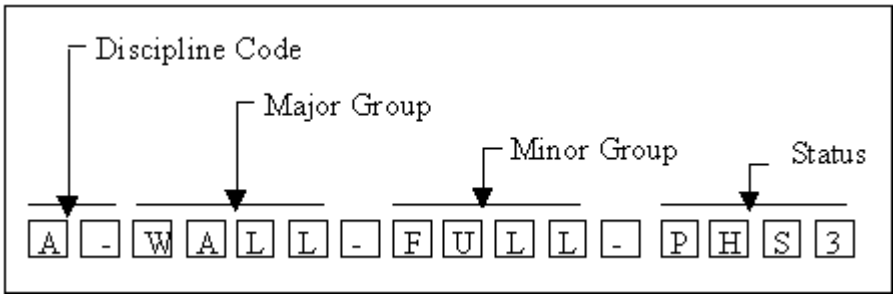
M-HP	HVAC Ductwork Plans
M-PP	Piping Plans
Plumbing	
P-PP	Plumbing Plan
Structural	
S-FP	Framing Plan
S-NP	Foundation Plan
Telecommunications	
T-DP	Data
T-TT	Telephone

PART 3 – AIA/NIBS National CADD Standards Layering System

3.1 LAYER NAME FORMAT

A. The AIA/NIBS National CADD Standard layer names are organized as a hierarchy. This arrangement allows expansion and addition of user-defined extensions to the layer list. Layer names are alphanumeric and use abbreviations that are easy to remember. This system is modular and may be added to or cut short to suit your particular needs.

B. Layers shall be named in a fourteen-character system with the first two characters denoting discipline code; the next four characters denoting the major group followed by a hyphen; the following four characters denoting the minor group followed by a hyphen; the final four characters denoting status.



1. Discipline Code

    a. The discipline code is a two-character field with the second character either a hyphen or a user-defined modifier. The defined discipline codes are the same for both layers and file names.

2. Major Group

    a. The major group designation identifies the building system. Although the major groups are grouped logically with specific codes, it is possible to combine major group codes with any of the discipline codes. For example, a drawing might contain the following layers:

A-WALL	Walls

A-DOOR	Doors
A-LITE	Lighting fixtures
A-FIXT	Plumbing Fixtures

3. Minor Group

    a. This is an optional, four-character field for further differentiation of major groups. For example, A-WALL-PART indicates architectural, new, wall, partial height. The following common modifiers are defined for use in the minor field group:

IDEN	Identification
PATT	Pattern

4. Status Field

    a. The status field is a four-character field designator that differentiates new construction from remodeling and existing to remain. It is only needed when phases of work must be differentiated. Defined values for this field are as follows:

NEWW	New work
EXST	Existing to remain
DEMO	Existing to be demolished
FUTR	Future work
TEMP	Temporary Work
MOVE	Items to be moved
RELO	Relocated Items
NICN	Not in contract
PHS1-9	Phase numbers

5. Annotation

    a. Annotation comprises text, dimensions, sheet borders, detail references, and other elements on CADD drawings that don't represent physical aspects of a building. Annotation is designated as follows:

*-ANNO-DIMS	Dimensions
*-ANNO-KEYS	Keynotes
*-ANNO-LEGN	Legends and symbols
*-ANNO-NOTE	Notes
*-ANNO-NPLT	Construction lines, non-plotting information
*-ANNO-REDL	Redline
*-ANNO-REVS	Revisions
*-ANNO-SYMB	Symbols

*-ANNO-TEXT	Text
*-ANNO-TTLB	Borders and title blocks

6. User-Definable Fields

    a. The minor group field can be defined by the user to meet their specific needs. This should only be done if a defined layer does not apply.

3.2 MASTER LAYER LIST

The master layer list identifies all the defined layers in the *CAD Layer Guidelines*. Users are free to add their own layers, but should identify them as “user-defined.” The use of asterisk (*) indicates a placeholder for the discipline code, major group or minor group. The defined layers are as follows:

LAYER NAME	DESCRIPTION
Annotation Layers	
*-ANNO-TEXT	Text
*-ANNO-REDL	Redline
*-ANNO-SYMB	Symbols
*-ANNO-LEGN	Legends and Schedules
*-ANNO-DIMS	Dimensions
*-ANNO-TTLB	Borders and Title blocks
*-ANNO-NOTE	Notes
*-ANNO-NPLT	Construction lines, non-plotting information
*-ANNO-KEYN	Key notes
*-ANNO-REVS	Revisions
Common Modifiers	
*-****-PATT	Cross-hatching, poche
*-****-IDEN	Identification tags
*-****-ELEV	Elevations
X-RDME	Read-me layer, not to be plotted
Status Field Modifiers	
*-****-NEWW	New work
*-****-EXST	Existing to remain
*-****-DEMO	Demolition
*-****-FUTR	Future work
*-****-TEMP	Temporary work
*-****-MOVE	Items to be removed
*-****-RELO	Relocated items
*-****-NICN	Not in contract
*-****-PHS1-9	Phase numbers (1-9)
Architectural Layers	

A-WALL-FULL	Full-height walls, stairs and shaft walls, walls to structure
A-WALL-PRHT	Partial-height walls
A-WALL-MOVE	Movable partitions
A-WALL-HEAD	Door and window headers
A-WALL-JAMB	Door and window jambs
A-WALL-PATT	Wall insulation, hatching and fill
A-WALL-ELEV	Wall surfaces-elevation
A-WALL-FIRE	Fire wall patterning
A-DOOR	Doors
A-DOOR-FULL	Full-height doors: swing and leaf
A-DOOR-PRHT	Partial-height doors: swing and leaf
A-DOOR-IDEN	Door number, hardware group, etc.
A-DOOR-ELEV	Doors-elevation
A-GLAZ	Windows, window walls, curtain walls, glazed partitions
A-GLAZ-FULL	Full-height glazed walls and partitions
A-GLAZ-PRHT	Partial-height glazed walls and partitions
A-GLAZ-SILL	Windowsills
A-GLAZ-IDEN	Window number
A-GLAZ-ELEV	Glazing and mullions-elevation
A-FLOR	Floor information
A-FLOR-OTLN	Floor or building outline
A-FLOR-LEVL	Level changes, ramps, pits depressions
A-FLOR-STRS	Stair treads, escalators, ladders
A-FLOR-RISR	Stair risers
A-FLOR-HRAL	Stair and balcony handrails, guard rails
A-FLOR-EVTR	Elevator cars and equipment
A-FLOR-TPTN	Toilet partitions
A-FLOR-SPCL	Architectural specialties (accessories, display cases)
A-FLOR-WDWK	Architectural Woodwork (cabinets and counters)
A-FLOR-CASE	Casework (manufactured cabinets)
A-FLOR-OVHD	Overhead items (skylights, etc.-usually dashed lines)
A-FLOR-RAIS	Raised floors
A-FLOR-IDEN	Room numbers, names, targets, etc.
A-FLOR-PATT	Paving, tile, carpet patterns
A-FLOR-PFIX	Plumbing fixtures
A-FLOR-FIXT	Miscellaneous fixtures

A-FLOR-SIGN	Signage
A-EQPM	Equipment
A-EQPM-FIXD	Fixed equipment
A-EQPM-MOVE	Movable equipment
A-EQPM-NICN	Equipment not in contract
A-EQPM-ACCS	Equipment access
A-EQPM-IDEN	Equipment identification numbers
A-EQPM-ELEV	Equipment surfaces-elevation
A-EQPM-CLNG	Ceiling-mounted or suspended equipment
A-FURN	Furniture
A-FURN-FREE	Free-standing furniture
A-FURN-CHAR	Chairs and other seating
A-FURN-FILE	File cabinets
A-FURN-PNLS	Furniture system panels
A-FURN-WKSF	Furniture system work surface components
A-FURN-STOR	Furniture system storage components
A-FURN-POWR	Furniture system power designations
A-FURN-IDEN	Furniture numbers
A-FURN-PLNT	Plants
A-FURN-PATT	Finish patterns
A-FURN-ELEV	Furniture-elevations
A-CLNG	Ceiling information
A-CLNG-GRID	Ceiling grid
A-CLNG-OPEN	Ceiling/roof penetrations
A-CLNG-TEES	Main tees
A-CLNG-SUSP	Suspended elements
A-CLNG-PATT	Ceiling patterns
A-CLNG-ACCS	Ceiling access
A-LITE	Light Fixtures
A-COLS	Columns
A-HVAC-SDFF	Supply diffusers
A-HVAC-RDFF	Return air diffusers
A-GRID	Planning or column grid

A-ROOF	Roof
A-ROOF-OTLN	Roof outline
A-ROOF-LEVL	Level changes
A-ROOF-STRS	Stair treads, ladders
A-ROOF-RISR	Stair risers
A-ROOF-HRAL	Stair handrails, nosing and guard rails
A-ROOF-PATT	Roof surface patterns, hatching
A-ROOF-ELEV	Roof surfaces-elevations
A-AREA	Area calculations boundary lines
A-AREA-PATT	Area cross hatching
A-AREA-IDEN	Room numbers, tenant identifications, area calculations
A-AREA-OCCP	Occupant/employee names
A-ELEV	Interior and exterior elevations
A-ELEV-OTLN	Building outlines
A-ELEV-FNSH	Finishes, woodwork, trim
A-ELEV-CASE	Wall-mounted casework
A-ELEV-FIXT	Miscellaneous fixtures
A-ELEV-PFIX	Plumbing fixtures-elevations
A-ELEV-SIGN	Signage-elevations
A-ELEV-PATT	Texture and hatch patterns
A-ELEV-IDEN	Component identification numbers
A-SECT	Sections
A-SECT-MCUT	Material cut by section
A-SECT-MBND	Material beyond cut section
A-SECT-PATT	Texture and hatch patterns
A-SECT-IDEN	Component identification numbers
A-DETL	Details
A-DETL-MCUT	Material cut by section
A-DETL-MBND	Material beyond cut section
A-DETL-PATT	Texture and hatch patterns
A-DETL-IDEN	Component identification numbers
Civil Layers	
C-PROP	Property lines, survey benchmarks
C-PROP-ESMT	Easements, right-of-way, setback lines
C-PROP-BRNG	Bearings and distance labels
C-PROP-CONS	Construction controls

C-TOPO	Proposed contour lines and elevations
C-TOPO-SPOT	Spot elevations
C-TOPO-BORE	Test borings
C-TOPO-RTWL	Retaining wall
C-BLDG	Proposed building footprints
C-PKNG	Parking lots
C-PKNG-STRP	Parking lot striping, handicapped symbols
C-PKNG-CARS	Graphic illustration of cars
C-PKNG-ISLD	Parking islands
C-PKNG-DRAN	Parking lot drainage slope indications
C-ROAD	Roadways
C-ROAD-CNTR	Centerlines
C-ROAD-CURB	Curbs
C-STRM	Storm drainage catch basins, manholes
C-STRM-UNDR	Storm drainage pipe-underground
C-COMM	Site communication/telephone poles, boxes, towers
C-COMM-UNDR	Underground communication lines
C-WATR	Domestic water-manholes, pumping stations, storage tanks
C-WATR-UNDR	Domestic water-underground lines
C-FIRE	Fire protection-hydrants, connections
C-FIRE-UNDR	Fire protection-underground lines
C-NGAS	Natural gas-manholes, meters, storage tanks
C-NGAS-UNDR	Natural gas-underground lines
C-SSWR	Sanitary sewer-manholes, pumping stations
C-SSWR-UNDR	Sanitary sewer-underground lines
Electrical Layers	
E-LITE	Lighting
E-LITE-SPCL	Special lighting
E-LITE-EMER	Emergency lighting
E-LITE-EXIT	Exit lighting
E-LITE-CLNG	Ceiling-mounted lighting

E-LITE-WALL	Wall-mounted lighting
E-LITE-FLOR	Floor-mounted lighting
E-LITE-OTLN	Lighting outline for background (optional)
E-LITE-NUMB	Lighting circuit numbers
E-LITE-ROOF	Roof lighting
E-LITE-SITE	Site lighting
E-LITE-SWCH	Lighting-switches
E-LITE-CIRC	Lighting-circuits
E-LITE-IDEN	Luminarie identification and text
E-LITE-JBOX	Junction box

E-POWR	Power
E-POWR-WALL	Power wall outlets and receptacles
E-POWR-CLNG	Power-ceiling receptacles and devices
E-POWR-PANL	Power Panel
E-POWR-EQPM	Power equipment
E-POWR-SWBD	Power switchboards
E-POWR-CIRC	Power circuits
E-POWR-URAC	Under-floor raceways
E-POWR-UCPT	Under-carpet wiring
E-POWR-CABL	Cable trays
E-POWR-FEED	Feeders
E-POWR-BUSW	Busways
E-POWR-NUMB	Power circuit numbers
E-POWR-IDEN	Power identification
E-POWR-SITE	Site power
E-POWR-ROOF	Roof power
E-POWR-OTLN	Power outline for backgrounds
E-POWR-JBOX	Junction box

E-CTRL	Electric control systems
E-CTRL-DEVC	Control system devices
E-CTRL-WIRE	Control system wiring

E-GRND	Ground system
E-GRND-CIRC	Ground system circuits
E-GRND-REFR	Reference ground system
E-GRND-EQUI	Equipotential ground system
E-GRND-DIAG	Ground system diagram

E-AUXL	Auxiliary systems

E-LTNG	Lightning protection system
E-FIRE	Fire alarm, fire extinguishers
E-COMM	Telephone, communication outlets
E-DATA	Data outlets
E-SOUN	Sound/PA system
E-TVAN	TV antenna system
E-CCTV	Closed-circuit TV
E-NURS	Nurse call system
E-SERT	Security
E-PGNG	Paging system
E-DICT	Central dictation system
E-BELL	Bell system
E-CLOK	Clock system
E-ALRM	Miscellaneous alarm system
E-INTC	Intercom system
E-LEGN	Legend of symbols
E-1LIN	One-line diagrams
E-RISR	Riser diagrams
E-SITE	Site electrical substations, poles
E-SITE-LITE	Site lighting
E-SITE-UNDR	Underground electrical lines
E-SITE-POLE	Electric poles
E-SITE-OVHD	Overhead lines
Fire Protection Layers	
F-CO2S	CO_2 system
F-CO2S-PIPE	CO_2 sprinkler piping
F-CO2S-EQPM	CO_2 equipment
F-HALN	Halon
F-HALN-EQPM	Halon equipment
F-HALN-PIPE	Halon piping
F-IGAS	Inert gas
F-IGAS-EQPM	Inert gas equipment
F-IGAS-PIPE	Inert gas piping
F-SPRN	Fire protection sprinkler system
F-SPRN-CLHD	Sprinkler head-ceiling
F-SPRN-OTHR	Sprinkler head-other

F-SPRN-PIPE	Sprinkler piping
F-SPRN-STAN	Sprinkler system standpipe
F-STAN	Fire protection standpipe system
F-PROT	Fire protection systems
F-PROT-EQPM	Fire protection system equipment
F-PROT-ALRM	Fire alarm
F-PROT-SMOK	Smoke detectors/heat sensors
General Layers	
G-PLAN	Floor plan-key plan
G-SITE	Site plan-key plan
G-ACCS	Access plan
G-FIRE	Fire protection plan
G-EVAC	Evacuation plan
G-CODE	Code compliance plan
Hazardous Layers	
H-PLAN	Floor plan
H-SITE	Site plan
Interior Layers	
Same as architectural layers with one exception, the discipline code is I. For example, I-WALL-FULL is for full-height walls, stairs, shaft walls and walls to structure just as with A-WALL-FULL.	
Landscape Layers	
L-PLNT	Plant and landscape materials
L-PLNT-TREE	Trees
L-PLNT-GRND	Ground cover and vines
L-PLNT-BEDS	Rock, bark and other landscape bedding
L-PLNT-TURF	Lawn areas
L-PLNT-PLAN	Planting plants
L-IRRG	Irrigation system
L-IRRG-SPKL	Irrigation sprinklers
L-IRRG-PIPE	Irrigation piping
L-IRRG-EQPM	Irrigation equipment
L-IRRG-COVR	Irrigation coverage
L-WALK	Walks and steps
L-WALK-PATT	Walks and steps-cross-hatch patterns
L-SITE	Site improvements
L-SITE-FENC	Fencing

L-SITE-WALL	Walls
L-SITE-STEP	Steps
L-SITE-DECK	Decks
L-SITE-BRDG	Bridges
L-SITE-POOL	Pools and spas
L-SITE-SPRT	Sports fields
L-SITE-PLAY	Play structures
L-SITE-FURN	Site furnishings
Mechanical Layers	
M-BRIN	Brine systems
M-BRIN-EQPM	Brine system equipment
M-BRIN-PIPE	Brine system piping
M-CHIM	Prefabricated chimneys
M-CMPA	Compressed air systems
M-CMPA-CEQP	Compressed air equipment
M-CMPA-CPIP	Compressed air piping
M-CMPA-PEQP	Process air equipment
M-CMPA-PPIP	Process air piping
M-CONT	Controls and instrumentation
M-CONT-THER	Thermostats
M-CONT-WIRE	Low voltage wiring
M-DUST	Dust and fume collection system
M-DUST-EQPM	Dust and fume collection equipment
M-DUST-DUCT	Dust and fume collection ductwork
M-ELHT-EQPM	Electric heat equipment
M-ENER	Energy management system
M-ENER-EQPM	Energy management equipment
M-ENER-WIRE	Energy management wiring
M-RCOV	Energy recovery
M-RCOV-EQPM	Energy recovery equipment
M-RCOV-PIPE	Energy recovery piping
M-FUME-EXHS	Fume hood exhaust system
M-FUME-EQPM	Fume hoods

M-EXHS	Exhaust system
M-EXHS-EQPM	Exhaust system equipment
M-EXHS-DUCT	Exhaust system ductwork
M-EXHS-RFEQ	Rooftop exhaust system equipment
M-FUEL	Fuel system piping
M-FUEL-GPRP	Fuel gas process piping
M-FUEL-GGEP	Fuel gas general piping
M-FUEL OPRP	Fuel oil process piping
M-FUEL-OGEP	Fuel oil general piping
M-HVAC	HVAC system
M-HVAC-CDFF	HVAC ceiling diffusers
M-HVAC-ODFF	HVAC other diffusers
M-HVAC-DUCT	HVAC ductwork
M-HVAC-EQPM	HVAC equipment
M-HVAC-SDFF	Supply diffusers
M-HVAC-RDFF	Return air diffusers
M-HOTW	Hot water heating system
M-HOTW-EQPM	Hot water equipment
M-HOTW-PIPE	Hot water piping
M-CWTR	Chilled water system
M-CWTR-EQPM	Chilled water equipment
M-CWTR-PIPE	Chilled water piping
M-MACH	Machine shop equipment
M-MDGS	Medical gas systems
M-MDGS-EQPM	Medical gas equipment
M-MDGS-PIPE	Medical gas piping
M-LGAS	Laboratory gas systems
M-LGAS-EQPM	Laboratory gas equipment
M-LGAS-PIPE	Laboratory gas piping
M-NGAS	Natural gas systems
M-NGAS-EQPM	Natural gas equipment
M-NGAS-PIPE	Natural gas piping

M-PROC	Process systems
M-PROC-EQPM	Process equipment
M-PROC-PIPE	Process piping
M-REFG	Refrigeration systems
M-REFG-EQPM	Refrigeration equipment
M-REFG-PIPE	Refrigeration pipe
M-SPCL	Special systems
M-SPCL-EQPM	Special gas equipment
M-SPCL-PIPE	Special gas pipe
M-STEM	Steam systems
M-STEM-CONP	Steam condensate piping
M-STEM-EQPM	Steam systems equipment
M-STEM-LPIP	Low pressure steam piping
M-STEM-HPIP	High pressure steam piping
M-STEM-MPIP	Medium pressure steam piping
M-TEST	Test Equipment
Plumbing Layers	
P-ACID	Acid, alkaline, oil waste systems
P-ACID-PIPE	Acid, alkaline, oil waste piping
P-DOMW	Domestic hot and cold water systems
P-DOMW-EQPM	Domestic hot and cold water equipment
P-DOMW-HPIP	Domestic hot water piping
P-DOMW-CPIP	Domestic cold water piping
P-DOMW-RISR	Domestic hot and cold water risers
P-SANR	Sanitary drainage
P-SANR-PIPE	Sanitary piping
P-SANR-FIXT	Plumbing fixtures
P-SANR-FLDR	Floor drains
P-SANR-RISR	Sanitary risers
P-SANR-EQPM	Sanitary equipment
P-STRM	Storm drainage system
P-STRM-PIPE	Storm drain piping
P-STRM-RISR	Storm drain risers
P-STRM-F|RFDR	Roof drains

P-EQPM	Plumbing miscellaneous equipment
P-FIXT	Plumbing fixtures
Equipment Layers	
Q-OTLN	Equipment outlines
Q-POWR	Power information
Q-PIPE	Pining information
Structural Layers	
S-GRID	Column grid
S-GRID-EXTR	Exterior column grid
S-GRID-INTR	Interior column grid
S-GRID-DIMS	Column grid dimensions
S-GRID-IDEN	Column grid tags
S-FNDN	Foundation
S-FNDN-PILE	Piles, drilled piers
S-FNDN-RBAR	Foundation reinforcing
S-SLAB	Slab
S-SLAB-EDGE	Edge of slab
S-SLAB-RBAR	Slab reinforcing
S-SLAB-JOIN	Slab control joints
S-ABLT	Anchor bolts
S-COLS	Columns
S-WALL	Structural bearing or shear walls
S-METL	Miscellaneous metal
S-BEAM	Beams
S-JOIS	Joists
S-DECK	Structural floor deck
Telecommunications Layers	
T-CABL	Cable plan
T-EQPM	Equipment plan
T-JACK	Data/Telephone jacks
T-DIAG	Diagram

PART 4 – GENERAL USE GUIDELINES

4.1 HOST AND REF FILES

A. Using a conventional database analogy, ref files contain the building data (floor plan, fixture placement etc.) and host files are reports generated from the building data containing legends, schedules and appropriate text. Just like creating multiple reports from the same database, multiple sheets can be created from one ref file, with each sheet containing a different graphic representation of the same

building data. For example, a set of presentation drawings and a set of construction documents can be set up simultaneously from the same building data (ref file) by using different sheet borders, scales, views and layer visibility.

B. Ref files contain basic building geometry: walls, doors, columns and MEP information. Host files contain information such as title blocks and project notes.

C. Annotation can be placed in either ref files or host files. Types of annotation that apply to the project generally (such as dimensions, notes and targets) are easier to coordinate and revise when they are included in the ref file. More specific types of annotation (such as drawing titles, legends and sheet-specific notes) are generally more convenient to include in the host file.

4.2 GUIDELINES TO ENSURE RELIABLE PLOTTING

A. When these guidelines are followed, consistent plots result regardless of the entity plotting, be it Texas Tech from archive or the A/E for construction documents, etc.

1. Each sheet should represent one, and only one, plotted drawing.
2. A sheet should always be plotted at full scale (1=1).
3. The origin of the sheet should be located at the lower left, outside corner of the sheet border, not the title block border.
4. The sheet border should always be attached as a reference file at 0,0.
5. A sheet should not contain any information placed outside the title block border.
6. The layers required for correct plotting of a sheet, and only those layers, should be visible when a sheet is saved.

END OF SECTION GS1010