

AIA CAD Layer Guidelines

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Key: = Section contains a downloadable Microsoft Excel document

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0.0 Introduction

0.1 OVERVIEW

Virtually all vector-based CAD systems support the concept of layers. This function allows building design information to be organized in a systematic fashion, facilitates the visual display of the information on a computer screen, and allows the information to be efficiently converted to the conventional print media of drawings. Efficient use of layers can reduce document preparation time and improve document coordination. Organizing data by layers allows a single CAD file to contain a wealth of information about a building or facility. By turning selected layers on or off, data can be created, reviewed and edited according to a hierarchy that simulates the physical organization of building systems, the relative position of building elements, or the sequence of construction.

0.2 A BRIEF HISTORY OF CAD LAYER GUIDELINES (CLG)

The American Institute of Architects (AIA) published the first edition of *CAD Layer Guidelines* in 1990. The early success of the first edition and rapidly evolving technology resulted in the second edition being published in 1997. The most significant change between the first and second editions was the elimination of the "short" layer name

format and the adoption of the long layer name format as a single standard. The second edition also included additional layer field codes for remodeling projects, added new discipline designations for interiors, telecommunications, and other disciplines, and improved the method of organizing drawing annotation.

In July 1997, the AIA agreed to incorporate *CAD Layer Guidelines* into the emerging *United States National CAD Standard*® (NCS), a project of the National Institute of Building Sciences (NIBS). The AIA and NIBS were joined in that effort by the Construction Specifications Institute (CSI) and what is now known as the CADD/GIS Technology Center of the U.S. Army Corps of Engineers. CSI and CADD/GIS Technology Center agreed to incorporate their own publications, the *Uniform Drawing System* and the *Plotting Guidelines*, respectively, into the NCS. These four constituent publishers, as they came to be known, were joined by a number of building design and construction industry organizations in developing and publishing the NCS.

In March 1999, the U.S. National CAD Standard Project Committee (NCS Project Committee) formally accepted *CAD Layer Guidelines, Second Edition* (with minor amendments) as a constituent document of the NCS Version 1.0, published in July 1999. The NCS Project Committee immediately set to work on publication of Version 2.0, which was published in 2002.

Considerable confusion resulted from the lack of "alignment" between the "Second Edition" of *CAD Layer Guidelines* and "Version 1.0" of the NCS. Because *CAD Layer Guidelines, Second Edition* was published before, and later incorporated into, the NCS Version 1.0, this could not be avoided. With publication of the NCS Version 2.0, this problem was corrected by giving the constituent document an entirely new name. For the first time, "AIA" became part of the title of the publication, and the numbered "editions" were abandoned. As a result, this publication became known as *AIA CAD Layer Guidelines: U.S. National CAD Standard - Version 2.0.* Subsequent editions of the NCS adopted the same nomenclature.

1.0 Layer Name Format

1.1 HIERARCHY OF DATA FIELDS

The layer name format is organized as a hierarchy. This arrangement allows users to select from a number of options for naming layers according to the level of detailed information desired. Layer names consist of distinct data fields separated from one another by dashes. A detailed list of abbreviations, or field codes, is prescribed to define the content of layers. Most field codes are mnemonic English abbreviations of construction terminology that are easy to remember.

There are four defined layer name data fields: **Discipline Designator**, **Major Group**, two **Minor Groups**, and **Status**. The Discipline Designator and Major Group fields are mandatory. The Minor Group and Status fields are optional. Each data field is separated from adjacent fields by a dash ("-") for clarity.

The complete NCS layer name format, showing the Discipline Designator, the Major Group, two Minor Groups, and the Status fields.



1.2 BEFORE YOU BEGIN

The NCS allows you to select from a number of format options for creating layer names. It is recommended that you select the options that you wish to use for layer names on a given project, and then apply the resulting format consistently for all layer names on that project.

NOTE: For conceptual conformance to ISO 13567, Organization and Naming of Layers for CAD, the layer name format and length must be the same for all layers on a given project. See <u>CLG Appendix C - Complying with NCS and ISO 13567, CLG section 6.0</u> for information about ISO conformance. Δ

1.3 DISCIPLINE DESIGNATOR, LEVEL 1

The Discipline Designator denotes the category of subject matter contained on the specified layer. The Discipline Designator is a two-character field. The first character is the discipline character, and the second character is an optional modifier. The Discipline Designator is described in greater detail in UDS Section 1.3. For a complete list of Discipline Designators see CLG Section 4.1 and UDS Appendix A - Discipline Designators, UDS Section 1.6.

LEVEL 1 DISCIPLINE DESIGNATORS Architectural Α В Geotechnical С Civil D Process Ε Electrical F Fire Protection G General Hazardous Materials Н 1 Interiors L Landscape Mechanical M 0 Operations Р Plumbing Q Equipment R Resource S Structural Т Telecommunications ٧ Survey / Mapping W Distributed Energy Χ Other Disciplines Ζ Contractor / Shop Drawings A typical layer name showing the required data fields only.

Note that only the mandatory discipline character is shown, creating a Level 1 Discipline Designator.



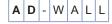
1.4 DISCIPLINE DESIGNATOR, LEVEL 2

The optional second character is used to further define the discipline character. As an example, the Level 2 Discipline Designators for Architectural are shown:

Designator	Description	
A	Architectural	
AD	Architectural Demolition	
AE	Architectural Elements	
AF	Architectural Finishes	
AG	Architectural Graphics	
Al	Architectural Interiors	
AS	Architectural Site	
AJ	User Defined	
AK	User Defined	
	· · · · · · · · · · · · · · · · · · ·	

A typical layer name showing the required data fields only.

Note that the mandatory Level 1 discipline character is supplemented by the optional discipline modifier to create a Level 2 Discipline Designator.



For a complete list of Discipline Designators see <u>CLG Appendix A - List of Discipline Designators</u>, <u>Major and Minor Groups</u>, <u>and Status Fields</u>, <u>CLG section 4.1</u> and <u>UDS Appendix A - Discipline Designators</u>, <u>UDS section 1.6</u>.

1.5 MAJOR GROUP

The major group is a four-character field that identifies a major building system. The prescribed Major Group field codes (four-character abbreviations) shown on the Layer List are logically grouped with specific discipline designators. However, any Major Group may be combined with any prescribed Discipline Designator, provided that the definition of the Major Group remains unchanged.

A typical layer name showing the required data fields only. The mandatory Major Group field is highlighted:



Therefore, any reasonable combination of the prescribed Discipline Designators and Major Groups is permitted.

NOTE: The NCS recognizes that there will be instances where user-defined Major Group field codes will be required. The NCS set of Major Group field codes is not intended to be all inclusive. There will be instances when project specific Major Groups will need to be created. In these cases Major Group field codes are allowed, however, they must contain four alphabetic and/or numeric characters and/or "~", and must be fully documented on the NCS Compliance Disclosure Statement for the project or identified as project specific in the standard supplement in which they are used.

NOTE: For conceptual conformance to ISO 13567, Organization and Naming of Layers for CAD, the use of the Major Group "ANNO" is not permitted. See <u>CLG Appendix C - Complying with NCS and ISO 13567, CLG section 6.0</u> for information about ISO conformance. Δ

1.6 MINOR GROUP

This is an optional, four-character field to further define the Major Groups. For example, *A-WALL-FULL* denotes *Architectural, Wall, Full-height.* A second minor group may be used for still further delineation of the data contained on a layer. For example, *A-WALL-FULL TEXT* indicates *Architectural, Wall, Full-height, Text.*

The prescribed Minor Group field codes (four-character abbreviations) shown on the Layer List are logically grouped with specific Major Groups. However, any Minor Group may be used to modify any Major Group, provided that the definition of the Minor Group remains unchanged. Therefore, any reasonable combination of the prescribed Major and Minor Groups is permitted.

A typical layer name showing one optional Minor Group field:



A typical layer name showing two optional Minor Group fields:



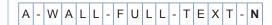
NOTE: User-defined Minor Group field codes are permitted. They must contain four alphabetic and/or numeric characters and/or "~", and must be fully documented on the NCS Compliance Disclosure Statement for the project on which they are used.

NOTE: For conceptual conformance to ISO 13567, Organization and Naming of Layers for CAD, the use of certain Minor Group field codes is restricted. See <u>CLG Appendix C - Complying with NCS and ISO 13567, CLG section 6.0</u> for information about ISO conformance. Δ

1.7 STATUS (PHASE)

The status field is an optional single-character field that distinguishes the data contained on the layer according to the status of the work or the construction phase. The prescribed field codes for this field are as follows:

A typical layer name showing the location of the optional Status field:



STATUS FIELD COD	DES

Α	Abandoned
D	Existing to demolish
E	Existing to remain
F	Future work
M	Items to be moved
N	New work
Т	Temporary work
X	Not in contract
1-9	Phase numbers

NOTE: For conceptual conformance to ISO 13567, Organization and Naming of Layers for CAD, this field may be used to denote either "Status" OR "Phase," but not BOTH. See <u>CLG Appendix C - Complying with NCS and ISO</u> 13567, CLG section 6.0 for information about ISO conformance. Δ

2.0 Drawing View Layer List

2.1 DRAWING VIEW FIELD CODES

The Drawing View field codes are specialized codes for layers that are organized primarily by drawing type, rather than by major building system. The field codes DETL, ELEV, and SECT may also be used as Minor Group field codes to modify a major building system.

For data sets that are organized by drawing type, an optional alphanumeric Minor Group field code, ANNN, is prescribed to further distinguish drawings within a single CAD file. This Minor Group may be used ONLY to modify the prescribed Drawing View Major Groups; it may not be used to modify any other Major Group. The format of ANNN is also prescribed. It must consist of a single alphabetic character followed by a three-digit number between 001 and 999. The definition of ANNN is not prescribed; it must be defined by the user. The definition must be documented on the NCS Compliance Disclosure Statement for the project on which it is used.

The Minor Group field codes IDEN, MBND, MCUT, OTLN, and PATT may be used to modify any Major or Minor Group in the Layer List. The definitions of these prescribed field codes cannot be changed. See <u>CLG Sections 1.5</u> and <u>1.6</u> for rules and options governing the use of field codes.

2.2 DRAWING VIEW LAYER NAMES

Layer Name	Description
□□-DETL	Detail
□□-ELEV	Elevation
□□-SECT	Section
ANNN	Drawing View Major Group: optional number (A = letter, NNN = number between 001 and 999)
==-annn-iden	Drawing View Major Group: optional number: identification tags
oo-ooo- ANNN -MBND	Drawing View Major Group: optional number: material beyond cut
oo-ooo-ANNN-MCUT	Drawing View Major Group: optional number: material cut by the view
oo-ooo-ANNN-OTLN	Drawing View Major Group: optional number: outline
oo-ooo-ANNN-PATT	Drawing View Major Group: optional number: textures and hatch patterns

3.0 Annotation Layer List

3.1 ANNOTATION FIELD CODES

Annotation consists of text, dimensions, notes, sheet borders, detail references and other elements on CAD drawings that do not represent physical aspects of a building. Use of the Major Group ANNO allows all annotation to be placed in a defined group of layers.

The Layer Names shown below provide examples for the use of Minor Group field codes for annotation. **These**Minor Groups may be used to modify any Major or Minor Group in the Layer List. See <u>CLG Sections 1.5</u> and <u>1.6</u> for complete rules and options governing the use of Major and Minor Group field codes.

3.2 ANNOTATION LAYER NAMES

Layer Name	Description
□□-ANNO	Annotation
00-000-BRNG	Bearings and distance labels (survey coordinates)
00-000-DIMS	Dimensions
00-000-IDEN	Identification tags
00-000-KEYN	Keynotes
00-000-LABL	Labels
00-000-LEGN	Legends, symbol keys
00-000-LOGO	Company logo
00-000-MARK	Markers, break marks, leaders
oo-ooo-MATC	Match lines
00-000-NOTE	Notes
00-000-NPLT	Non-plotting graphic information
00-000-PROS	Date/Time/File name stamp
00-000-RDME	Read-me layer (not plotted)
00-000-REDL	Redlines
00-000-REFR	Reference, external files
00-000-REVC	Revision clouds
00-000-REVS	Revision indicators and text
00-000-SCHD	Schedules
00-000-STMP	Professional stamps
00-000-SYMB	Reference symbols
00-000-TABL	Data tables
00-000-TEXT	Text
00-0000-TITL	Drawing or detail titles
00-0000-TTLB	Border and title block

4.0 Appendix A - List of Discipline Designators, Major and Minor Groups, and Status Fields

The CLG states that "any Major Group may be combined with any prescribed Discipline Designator, provided that the definition of the Major Group remains unchanged" and "any Minor Group may be used to modify any Major Group, provided that the definition of the Minor Group remains unchanged." Therefore the following alphabetical list of all Discipline Designators, Major and Minor Groups, and Status Fields regardless of discipline has been compiled for easy reference.

• 4.1 Discipline Designators

• 4.3 Minor Groups

• 4.2 Major Groups

• 4.4 Status Fields

4.1 DISCIPLINE DESIGNATORS

DOWNLOAD SPREADSHEET

Designator	Description
A	Architectural
AD	Architectural Demolition
AE	Architectural Elements
AF	Architectural Finishes
AG	Architectural Graphics
Al	Architectural Interiors
AJ	User Defined
AK	User Defined
AS	Architectural Site
В	Geotechnical
BJ	User Defined
BK	User Defined
С	Civil
CD	Civil Demolition
CG	Civil Grading
CI	Civil Improvements
CJ	User Defined
CK	User Defined
CN	Civil Nodes
СР	Civil Paving
CS	Civil Site
СТ	Civil Transportation
CU	Civil Utilities
D	Process
DA	Process Airs
DC	Process Chemicals
DD	Process Demolition
DE	Process Electrical
DG	Process Gases
DI	Process Instrumentation

DJ	User Defined
DK	User Defined
DL	Process Liquids
DM	Process HPM Gases
DO	Process Oils
DP	Process Piping
DQ	Process Equipment
DR	Process Drains and Reclaims
DS	Process Site
DV	Process Vacuum
DW	Process Waters
DX	Process Exhaust
DY	Process Slurry
E	Electrical
ED	Electrical Demolition
El	Electrical Instrumentation
EJ	User Defined
EK	User Defined
EL	Electrical Lighting
EP	Electrical Power
ES	Electrical Site
ET	Electrical Telecommunications
EY	Electrical Auxiliary Systems
F	Fire Protection
FA	Fire Detection and Alarm
FJ	User Defined
FK	User Defined
FX	Fire Suppression
G	General
GC	General Contractual
GI	General Informational
GJ	User Defined
GK	User Defined
GR	General Resource
Н	Hazardous Materials
НА	Hazardous Materials Asbestos
HC	Hazardous Materials Chemicals
HJ	User Defined
HK	User Defined
HL	Hazardous Materials Lead

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QC Equipment Dry Cleaning QD Equipment Detention QE Equipment Educational QF Equipment Food service QH Equipment Hospital QJ User Defined QK User Defined QL Equipment Laboratory QM Equipment Laboratory QM Equipment Maintenance QP Equipment Parking Lot QR Equipment Retail QS Equipment Stee QT Equipment Theatrical QV Equipment Video / Photographic QY Equipment Security R Resource RA Resource RA Resource RA Resource Civil RE Resource Electrical RK User Defined RK User Defined RK User Defined RR Resource Real Estate RS Resource Structural SB Structural Substructure SB Stru	QB	Equipment Bank
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TM Telecommunications Monitoring	TJ	User Defined
	TK	User Defined
TN Telecommunications Data Networks	TM	Telecommunications Monitoring
	TN	Telecommunications Data Networks

тт	Telecommunications Telephone
TY	Telecommunications Security
V	Survey / Mapping
VA	Survey / Mapping Aerial
VC	Survey / Mapping Computated Points
VF	Survey / Mapping Field
VI	Survey / Mapping Digital
VJ	User Defined
VK	User Defined
VN	Survey / Mapping Node Points
VS	Survey / Mapping Staked Points
VU	Survey / Mapping Combined Utilities
W	Distributed Energy
WC	Distributed Energy Civil
WD	Distributed Energy Demolition
WI	Distributed Energy Interconnection
WJ	User Defined
WK	User Defined
WP	Distributed Energy Power
WS	Distributed Energy Structural
WT	Distributed Energy Telecommunications
WY	Distributed Energy Auxiliary Systems
X	Other Disciplines
XJ	User Defined
XK	User Defined
Z	Contractor/Shop Drawings
ZJ	User Defined
ZK	User Defined

4.2 MAJOR GROUPS

Major Group Layer Name	Description
ACCS	Access
ACID	Acid waste systems
AERI	Aerial Survey
AFFF	Aqueous film-forming foam system
AFLD	Airfields
AIR~	Air
ALGN	Alignment
ALRM	Alarm system

ADEA	
AREA	Area
AUXL	Auxiliary systems
BARR	Barrier
BCST	Broadcast related system (radio or TV)
BEAM	Beams
BELL	Bell system
BLDG	Buildings and primary structures
BLIN	Baseline
BNDY	Political boundaries
BORE	Borings
BRCG	Bracing
BRDG	Bridge
BRIN	Brine systems
BRKL	Break / fault lines
BRLN	Building restriction line
BZNA	Buffer zone area
CABL	Cable systems
CATH	Cathodic Protection System
CATV	Cable television system
CCTV	Closed-circuit television system
CEME	Cemetery
CHAN	Navigable channels
CHEM	Chemical
CHIM	Chimneys and stacks
CLNG	Ceiling
CLOK	Clock system
CMPA	Compressed / processed air systems
CMPR	Computer
CNDW	Condenser water systems
CO2S	CO2 system
CODE	Code compliance plan
COLS	Columns
COMM	Communications
CONT	Controls and instrumentation
CONV	Conveying systems
CRPT	Carpet / carpet tiles
CSWK	Casework
CTRL	Control points
CWTR	Chilled water systems

DECK Detail DETL Detail DFLD Drain fields DIAG Diagrams DICT Dictation system DOWW Domestic water systems DOOR DOOR DOOR DOORS DRAN Drains DRIV Driveways DTCH Ditches or washes DUAL Dual temperature systems DUST Dust and furne collection systems ELEC Electrical system, telecom plan ELEV Elevation ELHT Electric heat EMCS Energy monitoring control system ENER Energy management systems EQPM Equipment EROS Erosion and sediment control ESMT Easements EVAC Evacuation plan EXHS Exhaust system FENC Fences FIRE Fire protection FLHA Flood hazard area FLOR Floor FNDN Foundation FNSH Finishes FRAM Braced frame or moment frame FSTN Fasteners and connections FUEL Fuel systems FUEL Gate GLAZ Glazing GLYC Glycol systems GRID Grids GRLN Grade line	DATA	Data / LAN system
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FUEL Fuel systems FUME Fume hood FURN Furnishings GAS~ Gas GATE Gate GLAZ Glazing GLYC Glycol systems GRID Grids	FRAM	Braced frame or moment frame
FUME Fume hood FURN Furnishings GAS~ Gas GATE Gate GLAZ Glazing GLYC Glycol systems GRID Grids	FSTN	Fasteners and connections
FURN Furnishings GAS~ Gas GATE Gate GLAZ Glazing GLYC Glycol systems GRID Grids	FUEL	Fuel systems
GAS~ Gas GATE Gate GLAZ Glazing GLYC Glycol systems GRID Grids	FUME	Fume hood
GATE Gate GLAZ Glazing GLYC Glycol systems GRID Grids	FURN	Furnishings
GLAZ Glazing GLYC Glycol systems GRID Grids	GAS~	Gas
GLYC Glycol systems GRID Grids	GATE	Gate
GRID Grids	GLAZ	Glazing
	GLYC	Glycol systems
GRLN Grade line	GRID	Grids
	GRLN	Grade line

GRND	Ground system
HALN	Halon
HWTR	Hot water heating system
HVAC	HVAC systems
HYDR	Hydraulic structure
IGAS	Inert gas
INGR	Ingrants
INST	Instrumentation system
INTC	Intercom / PA systems
IRRG	Irrigation
JNTS	Joints
JOIS	Joists
LAND	Land
LEGN	Legend, symbols keys
LEVE	Levee
LGAS	Laboratory gas systems
LIQD	Liquid
LITE	Lighting
LNTL	Lintels
LOCN	Limits of construction
LTNG	Lightning protection system
MACH	Machine shop
MAJQ	Major equipment
MDGS	Medical gas systems
MILL	Millwork
MINQ	Minor equipment
MKUP	Make-up air systems
MNTG	Mounting system
MPIP	Miscellaneous piping systems
NGAS	Natural gas systems
NODE	Node
NURS	Nurse call system
OBST	Obstructions
OIL~	Oil
OTGR	Outgrants
PADS	Pads
PERC	Perc testing
PGNG	Paging system
PHON	Telephone system
PIPE	Piping

PLAT Platform PLNT Plant and landscape material POND Ponds POWR Power PRKG Parking lots PROC Process systems PROJ Projector system PROP Property PROT Fire protection system PYMD Photovoltaic modules PVMT Pavement RAIL Railroad RAIR Relief air systems RCOV Energy recovery systems RIGG Rigging / automation systems RIVR River ROAD Roadways ROOF ROOF RUNW Runway PUND Plant and landscape material Ponds Ponds Property Propert	
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ROAD Roadways ROOF Roof RRAP Riprap RUNW Runway	
ROOF Roof RRAP Riprap RUNW Runway	
RRAP Riprap RUNW Runway	
RUNW Runway	
RWAY Right-of-way	
SECT Section	
SERT Security system	
SGHT Sight distance	
SIGN Sign	
SITE Site features	
SLAB Slab	
SLUR Slurry	
SMOK Smoke extraction systems	
SOIL Soils	
SOUN Sound system	
SPCL Special systems	
SPFX Entertainment special effects system	
SPKL Sprinkler	
SSWR Sanitary sewer	
STEM Steam system	
STIF Stiffener	

STRM	Storm sewer
STRS	Stairs
SURV	Survey
SWLK	Sidewalks
TEST	Test equipment
TILE	Tile
TINN	Triangulated irregular network
ТОРО	Topographic feature
TRAL	Trails or paths
TRAN	Transmission system
TRUS	Trusses
TVAN	Television antenna system
TVVS	Television and video system
UNID	Unidentified site objects
UTIL	Utilities
VACU	Vacuum
VIDO	Entertainment projection systems
WALL	Walls
WATR	Water supply
WETL	Wetlands
WIND	Wind powered
WWAY	Waterway

4.3 MINOR GROUPS

Minor Group Layer Name	Description
025Y	25-year mark
04FT	Four feet high
050Y	50-year mark
06FT	Six feet high
100Y	100-year mark
200Y	200-year mark
AA~~	Agitation air-system
ABLT	Anchor bolts
ABOV	Above
ABUT	Abutment
ACCS	Access
ACFU	Fused ac
ACTL	Aerial horizontal and vertical control points
ACNF	Unfused ac

AGGR	Exposed aggregate
AIR~	Air
ALOC	Allocation
ALRM	Alarm
ALUM	Aluminum
AMEX	Ammonia exhaust-system
AMW~	Ammonia waste-system
ANNN	Optional number (A = letter, NNN = number between 001 and 999)
ANNO	Annotation
ANOD	Sacrificial anode
AR~~	Argon-system
ARB~	Argon bulk-system
ARC~	Regenerative caustic-system
AREX	Arsenic exhaust-system
ASPH	Asphalt
BA~~	Breathable air-system
BACK	Back
BAFL	Baffle block and splash pad
BARR	Barrier
BASN	Stilling and settling basin
BBAC	Battery backup
BEDS	Perennial and annual beds
BENT	Top of bent
BFW~	Boiler feed water-system
BKRS	Breakers
BLBD	Boiler blow down piping
BLDG	Building points
BLIN	Baseline
BMRK	Benchmarks
BNDY	Boundary
BOLD	Bold lines
BORO	Borough
BOT1	Bottom group 1
ВОТ2	Bottom group 2
ВОТВ	Bottom of bank
вотм	Bottom
BOXD	Mixing box, dual duct
BOXS	Mixing box, single duct
BRCK	Brick
BRDG	Bridge

BRKL BRNG	Break lines
BRNG	
	Bearings and distance labels
BROW	Brush row points
BRSH	Brush points
BUOY	Buoy
BUSH	Bushes and shrubs
BUSS	Bus duct
BUSW	Busways
BUT~	Butane-system
BWTR	Breakwater
C~~~	Caustic-system
CA~~	Compressed air-system
CABL	Cable
CAIR	Compressed air
CARS	Cars and other vehicles
CATV	Cable television
CAVI	Cavity
CBOX	Combiner box
CD~~	Condensate drain-system
CDA~	Clean dry air-system
CDFF	Ceiling diffusers
CHIM	Chimney
CIPR	Culvert inlet protection
CIRC	Circuits
CITY	City
CLAS	Classifications
CLDA	Cold air
CLG~	Chlorine gas-system
CLHD	Ceiling heads
CLNG	Ceiling
CLV~	Chlorine vacuum-system
CLW~	Concentrated lead waste-system
CMTL	Corrugated metal
CMUW	Concrete masonry unit
CMW~	Concentrated metals waste-system
CNDS	Condensate piping
CNDT	Diversionary/bypass conduit/culvert
CNMB	Circuit numbers
CNTE	Construction entrance

CNTJ	Construction joint
CNTR	Center
CNTY	County
COAX	Coax cable
COFF	Coffer dam
CONC	Concrete
CONI	Coniferous trees
CONS	Conservation
CORP	Corporation
COVR	Coverage
CPIP	Cold water piping
CRIT	Critical
CRKT	Crickets
CSTG	Construction/Grading
CSWK	Casework
CTLA	Controlled access
CTLJ	Control joint
CTNR	Container or planter
CUPW	Copper plating waste-system
CURB	Curb
CURR	Impress current
CURT	Curtain
CURV	Curve
CURW	Copper rinse waste-system
CUSW	Copper slurry waste-system
CV~~	Chemical vacuum-system
DACL	De-Authorized channel limits, anchorages, etc.
DAM~	Dam
DASP	Description attributes for survey points
DATA	Data
DCFU	Fused dc
DCNF	Unfused dc
DDIV	Drainage divides
DECK	Deck
DEPR	Depression
DEV~	Developer-system
DEVC	Devices
DFEE	Disposed fee
DIAG	Diagrams
DIMS	Dimensions

DIRC DI reclaim-system DIS- De-lonized water supply-system DISC Discharge DIWP DI polishing loop-system DLPH Dolphin DLW- Dilute waste-system DMPR Fire, smoke, volume damper DOCK Decks, docks, floats, piers DOOR Equipment doors DRAN Drainage slope indications DRIP Drip irrigation tubing DRIV Driveway points DRNS Drains DSCO Disconnect switches DTCH Ditches or washes DUCT Ductwork DVDR Thin dividers EASP Elevation attributes for survey points EDGE Edge EDGR Planting bed edger EFAN Equipment with electric fans EG~ Ethylene glycol-system ELEC Electrical ELEV Elevation EMER Emergency ENGR Equipment with piping, ductwork and electricity EPIP Equipment EQUI Equipment EASH Easement EV~ Equipment ESMT Easement EV~ Equipment vacuum-system	DIR~	De-lonized water return-system
DISC Discharge DIWP DI polishing loop-system DLPH Dolphin DLW~ Dilute waste-system DMPR Fire, smoke, volume damper DOCK Decks, docks, floats, piers DOOR Equipment doors DRAN Drainage slope indications DRIP Drip irrigation tubing DRIV Driveway points DRNS Drains DSCO Disconnect switches DTCH Ditches or washes DUCT Ductwork DVDK Diversion dike DVDR Thin dividers EASP Elevation attributes for survey points EDGE Edge EDGR Planting bed edger EFAN Equipment with electric fans EG~ Ethylene glycol-system ELEC Electrical ELEV Elevation EMER Emergency ENCL Equipment with piping, ductwork and electricity EPIP Equipment EQPM Equipment EQPM Equipment EQUI Equipment EASH Easement EV~~ Equipment vacuum-system	DIRC	DI reclaim-system
DIWP DI polishing loop-system DLPH Dolphin DLW~ Dilute waste-system DMPR Fire, smoke, volume damper DOCK Decks, docks, floats, piers DOOR Equipment doors DRAN Drainage slope indications DRIP Drip irrigation tubing DRIV Driveway points DRNS Drains DSCO Disconnect switches DTCH Ditches or washes DUCT Ductwork DVDK Diversion dike DVDR Thin dividers EASP Elevation attributes for survey points EDGE Edge EDGR Planting bed edger EFAN Equipment with electric fans EG~ Ethylene glycol-system ELEC Electrical ELEV Elevation EMER Emergency ENCL Equipment enclosures ENGR Engineering Information EPDU Equipment with piping, ductwork and electricity EQPM Equipment EQUI Equipment EASH Easement EV~~ Equipment vacuum-system	DIS~	De-lonized water supply-system
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DOOR Equipment doors DRAN Drainage slope indications DRIP Drip irrigation tubing DRIV Driveway points DRNS Drains DSCO Disconnect switches DTCH Ditches or washes DUCT Ductwork DVDK Diversion dike DVDR Thin dividers EASP Elevation attributes for survey points EDGE Edge EDGR Planting bed edger EFAN Equipment with electric fans EG~ Ethylene glycol-system ELEC Electrical ELEV Elevation EMER Emergency ENCL Equipment with piping, ductwork and electricity EPIP Equipment EQUI Equipment ESMT Easement EV~ Equipment eaclosures Equipment eaclosures EASP Equipment with piping and electricity EASP Equipment eaclosures EQUI Equipment EASP Equipment eaclosures EQUI Equipment EASP Equipment EASP Edevation EASP Edevation EASP Edevation EASP Edupment with piping and electricity EQUI Equipment EASP Equipment EASP Equipment EASP Edupment Edupment EASP Edupment EASP Edupment EASP Edupment EASP Edupment Edupment EASP Edupment Edupment EASP Edupment EASP Edupment EASP Edupment EASP Edupment EASP Edupment EASP Edup	DMPR	Fire, smoke, volume damper
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EGW~ Ethylene glycol waste-system ELEC Electrical ELEV Elevation EMER Emergency ENCL Equipment enclosures ENGR Engineering Information EPDU Equipment with piping, ductwork and electricity EPIP Equipment with piping and electricity EQPM Equipment EQUI Equipment ERTH Earth ESMT Easement EV~~ Equipment vacuum-system	EFAN	Equipment with electric fans
ELEC Electrical ELEV Elevation EMER Emergency ENCL Equipment enclosures ENGR Engineering Information EPDU Equipment with piping, ductwork and electricity EPIP Equipment EQPM Equipment EQUI Equipment ERTH Earth ESMT Easement EV~~ Equipment vacuum-system	EG~~	Ethylene glycol-system
ELEV Elevation EMER Emergency ENCL Equipment enclosures ENGR Engineering Information EPDU Equipment with piping, ductwork and electricity EPIP Equipment with piping and electricity EQPM Equipment EQUI Equipotential ERTH Earth ESMT Easement EV~~ Equipment vacuum-system	EGW~	Ethylene glycol waste-system
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ENCL Equipment enclosures ENGR Engineering Information EPDU Equipment with piping, ductwork and electricity EPIP Equipment with piping and electricity EQPM Equipment EQUI Equipotential ERTH Earth ESMT Easement EV~~ Equipment vacuum-system	ELEV	Elevation
ENGR Engineering Information EPDU Equipment with piping, ductwork and electricity EPIP Equipment with piping and electricity EQPM Equipment EQUI Equipotential ERTH Earth ESMT Easement EV~~ Equipment vacuum-system	EMER	Emergency
EPDU Equipment with piping, ductwork and electricity EPIP Equipment with piping and electricity EQPM Equipment EQUI Equipotential ERTH Earth ESMT Easement EV~~ Equipment vacuum-system	ENCL	Equipment enclosures
EPIP Equipment with piping and electricity EQPM Equipment EQUI Equipotential ERTH Earth ESMT Easement EV~~ Equipment vacuum-system	ENGR	Engineering Information
EQPM Equipment EQUI Equipotential ERTH Earth ESMT Easement EV~~ Equipment vacuum-system	EPDU	Equipment with piping, ductwork and electricity
EQUI Equipotential ERTH Earth ESMT Easement EV~~ Equipment vacuum-system	EPIP	Equipment with piping and electricity
ERTH Earth ESMT Easement EV~~ Equipment vacuum-system	EQPM	Equipment
ESMT Easement EV~~ Equipment vacuum-system	EQUI	Equipotential
EV~~ Equipment vacuum-system	ERTH	Earth
10.16 - 10.10 - 10.10	ESMT	Easement
	EV~~	Equipment vacuum-system
EVGR Evergreen trees-broadleaf	EVGR	Evergreen trees-broadleaf
EVTR Elevator cars and equipment	EVTR	Elevator cars and equipment
EWAT Edge of water	EWAT	Edge of water

EXIT Exit Exp Expansion joint EXTI Extinguishers EXTR Exterior FACE Face FALT Fault/break lines FDPL Flood plain FDTA Field data FEE- Fee FEED Feeders FENC Fences FEND Fender Filbr Filbr Exit Cover material FILL Fill and cover material FIRE Fire protection FISH Fish ladder/passage FIXD Fixed FIXT Fixtures FLUW Flow FLUW Flow FLUW Flow FLUW Flow FLUW Flow FLOR Ficer FLOR Force main FLYS Fiy station FNSH Finishes FORC Force main FREE Freestanding FTTO Foodings FTUR Flow FILL Fill-height FURN Furnishings FW Fire water-system GAGE Gauge GCVR Ground cover	EXHS	Exhaust air
EXTI Extinguishers EXTR Exterior FACE Face FALT Fault/break lines FDPL Flood plain FDTA Field data FEE~ Fee FEED Feeders FENC Fences FEND Fender Filbr optics cable FILL Fill and cover material FINE Fine lines FIRE Fire protection FISH Fish ladder/passage FIXD Fixd FIXT Fixtures FLUW Floor FLUW Floor FLUW Floor FLUW Floor FLUW Floor FLOR Foor Fire lane FLOR Foor Fire lane FLOR Foor Fire lane FLOR Foor Fire lane FLOR Foor Foor Fire lane FLOR Foor Foor Fire lane FLOR Foor Foor Fire lane FLOR Floor FLOR Floor FLOR Floor FLOR Floor FLOR Floor FLOR Foor Foor Fire lane FLOR Foor Foor Fire lane FLOR Foor Foor Fire lane FLOR Foor Foor Foor Foor Foor Foor Foor Foo	EXIT	Exit
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FACE Face FALT Fault/break lines FDPL Flood plain FDTA Field data FEE Fee FEED Feeders FENC Fences FEND Fender FIBR Fiber optics cable FILE File abinets FILL Fill and cover material FIRE Fire protection FISH Fish ladder/passage FIXD Fixed FIXT Fixtures FLDR Floor drains FLLW Flow FLNE Fire lane FLOR Floor FLOR Floor FLOR Floor FLOR Floor FLOR Flore	EXTI	Extinguishers
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FLNE Fire lane FLOR Floor FLOW Flowline FLPL Flagpole FLUM Flume FLYS Fly station FNSH Finishes FORC Force main FREE Freestanding FRMG Framing FTNG Footings FTPT Area footprints FULL Full-height FURN Furnishings FW~~ Fire water-system GAGE Gauge	FLDR	Floor drains
FLOR Floor FLOW Flowline FLPL Flagpole FLUM Flume FLYS Fly station FNSH Finishes FORC Force main FREE Freestanding FRMG Framing FTNG Footings FTPT Area footprints FULL Full-height FURN Furnishings FW~~ Fire water-system GAGE Gauge	FLLW	Flow
FLOW Flowline FLPL Flagpole FLUM Flume FLYS Fly station FNSH Finishes FORC Force main FREE Freestanding FRMG Framing FTNG Footings FTPT Area footprints FULL Full-height FURN Furnishings FW~~ Fire water-system GAGE Gauge	FLNE	Fire lane
FLPL Flagpole FLUM Flume FLYS Fly station FNSH Finishes FORC Force main FREE Freestanding FRMG Framing FTNG Footings FTPT Area footprints FULL Full-height FURN Furnishings FW~~ Fire water-system GAGE Gauge	FLOR	Floor
FLUM Flume FLYS Fly station FNSH Finishes FORC Force main FREE Freestanding FRMG Framing FTNG Footings FTPT Area footprints FULL Full-height FURN Furnishings FW~~ Fire water-system GAGE Gauge	FLOW	Flowline
FLYS Fly station FNSH Finishes FORC Force main FREE Freestanding FRMG Framing FTNG Footings FTPT Area footprints FULL Full-height FURN Furnishings FW~~ Fire water-system GAGE Gauge	FLPL	Flagpole
FNSH Finishes FORC Force main FREE Freestanding FRMG Framing FTNG Footings FTPT Area footprints FULL Full-height FURN Furnishings FW~~ Fire water-system GAGE Gauge	FLUM	Flume
FORC Force main FREE Freestanding FRMG Framing FTNG Footings FTPT Area footprints FULL Full-height FURN Furnishings FW~~ Fire water-system GAGE Gauge	FLYS	Fly station
FREE Freestanding FRMG Framing FTNG Footings FTPT Area footprints FULL Full-height FURN Furnishings FW~~ Fire water-system GAGE Gauge	FNSH	Finishes
FRMG Framing FTNG Footings FTPT Area footprints FULL Full-height FURN Furnishings FW~~ Fire water-system GAGE Gauge	FORC	Force main
FTNG Footings FTPT Area footprints FULL Full-height FURN Furnishings FW~~ Fire water-system GAGE Gauge	FREE	Freestanding
FTPT Area footprints FULL Full-height FURN Furnishings FW~~ Fire water-system GAGE Gauge	FRMG	Framing
FULL Full-height FURN Furnishings FW~~ Fire water-system GAGE Gauge	FTNG	Footings
FURN Furnishings FW~~ Fire water-system GAGE Gauge	FTPT	Area footprints
FW~~ Fire water-system GAGE Gauge	FULL	Full-height
GAGE Gauge	FURN	Furnishings
	FW~~	Fire water-system
GCVR Ground cover	GAGE	Gauge
	GCVR	Ground cover

GGEP Gas general piping GLAZ Glazing GNDW Ground water GPRP Gas process piping GRAL Guard rail GRBM Grade beams GRID Grid GRIL Grilles GRND Ground GRTG Grating GRVL Gravel H2~~ Hydrogen-system	
GNDW Ground water GPRP Gas process piping GRAL Guard rail GRBM Grade beams GRID Grid GRIL Grilles GRND Ground GRTG Grating GRVL Gravel H2~~ Hydrogen-system	
GPRP Gas process piping GRAL Guard rail GRBM Grade beams GRID Grid GRIL Grilles GRND Ground GRTG Grating GRVL Gravel H2~~ Hydrogen-system	
GRAL Guard rail GRBM Grade beams GRID Grid GRIL Grilles GRND Ground GRTG Grating GRVL Gravel H2~~ Hydrogen-system	
GRBM Grade beams GRID Grid GRIL Grilles GRND Ground GRTG Grating GRVL Gravel H2~~ Hydrogen-system	
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GRIL Grilles GRND Ground GRTG Grating GRVL Gravel H2~~ Hydrogen-system	
GRND Ground GRTG Grating GRVL Gravel H2~~ Hydrogen-system	
GRTG Grating GRVL Gravel H2~~ Hydrogen-system	
GRVL Gravel H2~~ Hydrogen-system	
H2~~ Hydrogen-system	
11000 Huden en e	
H2O2 Hydrogen peroxide-system	
HCDA High pressure clean dry air-system	
HCL~ Hydrochloric acid-system	
HDIR Hot DI return-system	
HDIS Hot DI supply-system	
HDLN Hidden line	
HDRC Hot DI reclaim-system	
HE~~ Helium-system	
HEAD Door and window headers	
HF~~ Hydrofluoric acid-system	
HFW~ Hydrofluoric waste-system	
HIDD Objects or lines hidden from view	
HOLE Holes	
HORZ Horizontal	
HOSE Hoses	
HOTA Hot air	
HPDR High pH DI return-system	
HPDS High pH DI supply-system	
HPIP Hot water/high-pressure piping	
HPN2 High purity nitrogen-system	
HPO2 High purity oxygen-system	
HRAL Handrails/guard rails	
HRDW Hardware	
HSSS Hollow structural steel	
HTCH Hatch	
HTEX Heat exhaust-system	
HV~~ House vacuum-system	

HVA~	Arsenic house vacuum-system
HVAC	HVAC systems
HVPT	Horizontal/vertical
HWAL	Headwall
HYDT	Hydrants and connections
IA~~	Instrument air-system
ICW~	Industrial city water-system
IDEN	Identification tags
INEG	Ingress/egress
INPR	Inlet protection
INST	Instrumentation
INTK	Intake
INTR	Interior
IPA~	Isopropyl alcohol-system
IW~~	Industrial waste-system
JACK	Jacks
JAMB	Door and window jambs
JBOX	Junction box
JNTC	Control joint
JNTE	Expansion joint
KEYN	Keynotes
LABL	Labels
LADD	Ladders and ladder assemblies
LATL	Lateral line
LCHE	Leak check helium-system
LDTA	Laboratory data
LEAS	Lease
LEGN	Legend, symbol keys
LEVL	Level changes
LFEE	Disposed less than fee
LICN	License
LIMI	Limit of earthwork
LINE	Lines
LINK	Chain link
LMTA	Limited access
LO~~	Lube oil-system
LOGO	Company logo
LONG	Longitudinal
LOWR	Lower
LPG~	Liquid petroleum gas-system

LQPG Liquid petroleum gas LSCP Landscape LTRL Lateral pipe MAIN Mainline MAJR Major MARK Markers, break marks, leaders MATC Match lines MBND Material beyond cut MCUT Material cut by the view MEDM Medium lines MESH Mesh or wire MHOL Manhole MIINR Minor MISC Miscellaneous MKUP Make-up water MLCH Mulches-organic and inorganic MNTG Mooring MOVE Movable MPIP Medium-pressure piping MRKG Pavement markings MRKR Marker MSNW Masonry MULT Multi-conductor cable MVV- Metals waste-system N2 Nitrogen-system NAOR Navigation aids NATL National NEEE Non-fee NGAS Natural gas ine NITG Nitrogen NOVE Notes NOVE Notes NOVE Notes NOVE Notes NOVE Notes NITOG Moving system NAULT Multi-conductor cable MVV- Metals waste-system NAOR Notes NATL National NEEE Non-fee NGAS Natural gas ine NITG Nitrogen NOVE Notes NOVE Non-overflow structure NOVE Notes NOVE Non-overflow structure NOVE Notes NOVE Non-overflow structure NOVE Non-overflow structure NOVE Non-plotting graphic information	LPIP	Low-pressure piping
LTRL Lateral pipe MAIN Mainline MAJR Major MARK Markers, break marks, leaders MATC Match lines MBND Material beyond cut MCUT Material cut by the view MEDM Medium lines MESH Mesh or wire METL Metal MHOL Manhole MINR Minor MISC Miscellaneous MKUP Make-up water MLCH Mulches-organic and inorganic MNTG Mooring MOOR Mooring MOOR Mooring MRKG Pavement markings MRKR Marker MSNW Masonry MULT Multi-conductor cable MVNG Moving/Suspended MW~~ Metals waste-system N2~ Nitrogen-system NATL National NFEE Non-fee NGAS Natural gas-system NGAS Natural gas line NITG Nitrogen NOTE Notes	LQPG	Liquid petroleum gas
MAIN Mainline MAJR Major MARK Markers, break marks, leaders MATC Match lines MBND Material beyond cut MCUT Material cut by the view MEDM Medium lines MESH Mesh or wire METL Metal MHOL Manhole MINR Minor MISC Miscellaneous MKUP Make-up water MLCH Mulches-organic and inorganic MNTG Mounting system MOOR Mooring MOVE Movable MIPIP Medium-pressure piping MRKG Pavement markings MRKR Marker MSNW Masonry MULT Multi-conductor cable MIVA Metals waste-system NVA- Metals waste-system NVA- Nitrogen-system NAID Navigation aids NATL National NFEE Non-fee NGAS Natural gas-system NITG Nitrous oxide	LSCP	Landscape
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MHOL Manhole MINR Minor MISC Miscellaneous MKUP Make-up water MLCH Mulches-organic and inorganic MNTG Mounting system MOOR Mooring MOVE Movable MPIP Medium-pressure piping MRKG Pavement markings MRKR Marker MSNW Masonry MULT Multi-conductor cable MVNG Moving/Suspended MW~~ Metals waste-system N2~~ Nitrogen-system N2O~ Nitrous oxide-system NAID Navigation aids NATL National NFEE Non-fee NG~~ Natural gas-system NITG Nitrogen NOTE Notes NOVR Non-overflow structure NOXG Nitrous oxide Nitrous oxide Nitrous oxide	MESH	Mesh or wire
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MKUP Make-up water MLCH Mulches-organic and inorganic MNTG Mounting system MOOR Mooring MOVE Movable MPIP Medium-pressure piping MRKG Pavement markings MRKR Marker MSNW Masonry MULT Multi-conductor cable MVNG Moving/Suspended MW~~ Metals waste-system N2~~ Nitrogen-system N2O~ Nitrous oxide-system NAID Navigation aids NATL National NFEE Non-fee NG~~ Natural gas-system NITG Nitrogen NOTE Notes NOVR Non-overflow structure NOXG Nitrous oxide NITOS Oxide NITOS Oxide NITOS Oxide NOTE Notes NOXG Nitrous oxide	MINR	Minor
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N2O~ Nitrous oxide-system NAID Navigation aids NATL National NFEE Non-fee NG~~ Natural gas-system NGAS Natural gas line NITG Nitrogen NOTE Notes NOVR Non-overflow structure NOXG Nitrous oxide	MW~~	Metals waste-system
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NFEE Non-fee NG~~ Natural gas-system NGAS Natural gas line NITG Nitrogen NOTE Notes NOVR Non-overflow structure NOXG Nitrous oxide	NAID	Navigation aids
NG~~ Natural gas-system NGAS Natural gas line NITG Nitrogen NOTE Notes NOVR Non-overflow structure NOXG Nitrous oxide	NATL	National
NGAS Natural gas line NITG Nitrogen NOTE Notes NOVR Non-overflow structure NOXG Nitrous oxide	NFEE	Non-fee
NITG Nitrogen NOTE Notes NOVR Non-overflow structure NOXG Nitrous oxide	NG~~	Natural gas-system
NOTE Notes NOVR Non-overflow structure NOXG Nitrous oxide	NGAS	Natural gas line
NOVR Non-overflow structure NOXG Nitrous oxide	NITG	Nitrogen
NOXG Nitrous oxide	NOTE	Notes
	NOVR	Non-overflow structure
NPLT Non-plotting graphic information	NOXG	Nitrous oxide
	NPLT	Non-plotting graphic information

NPW~	Non-potable water-system
NPWR	Non-potable water reuse-system
NSBR	Noise barrier
O2~~	Oxygen-system
OA~~	Outside air-system
OBJT	Objects
OCCP	Occupant or employee names
ODFF	Other diffusers
OFA~	Oil-free air-system
OFST	Offset zones
OGEP	Oil general piping
OIW~	Organic industrial waste-system
OLW~	Organic liquid waste-system
OPNG	Openings
OPNX	Opening indication
OPRP	Oil process piping
OSW~	Organic solvent waste-system
OTHD	Other heads
OTLN	Outline
OVHD	Overhead
OXYG	Pure O2
PA~~	Plant air-system
PADM	Pad-mounted
PADS	Pads
PALM	Palm trees
PANL	Panels
PASP	Point number attributes for survey points
PATT	Texture or hatch patterns
PAVR	Unit pavers
PCAP	Pile caps
PCST	Pre-cast concrete
PCWR	Cooling water return-system
PCWS	Cooling water supply-system
PENE	Penetrations
PENS	Penstock
PEQP	Process equipment
PERI	Perimeter
PERM	Permanent
PHON	Telephone line
PHOS	Phosphoric acid-system

PIER Drilled piers PILE Piles PIPE Piping PLAY Play structures PLNT Plants PLYW Plywood PMIT Permit PNHS Penthouse PNLS System panels PNPT Panel points POCC Point of common coupling POI- Poles POLE Poles POLM Pole-mounted POND Retention pond POOL Pools and spas POST Posts PPIP Process piping PRCH Porch PRCL Parcels PAY Pliping Piping Piping Polics Polics Porch PRCL Parcels Partial-height	
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PPIP Process piping PRCH Porch PRCL Parcels	
PRCH Porch PRCL Parcels	
PRCL Parcels	
PRHT Partial-height	
PRIM Primary	
PRKG Parking	
PRO~ Propane-system	
PROF Profile	
PROS Date/time/file name stamp	
PROV Province	
PRPT Parapet	
PRVC Privacy	
PSW~ Photo solvent waste-system	
PV~~ Vacuum-system	
PVMT Pavement	
PW~~ Potable water-system	
QTRS Quarter section	
RAIS Raised	
RAMP Accessible ramp	
RATE Ratings	
RBAR Reinforcing bar	
RCON Reinforced concrete	

RDFF	Return air diffusers
RDGE	Roof ridges
RDME	Read-me layer (not plotted)
REDL	Redlines
REFR	Reference, external files
RER~	Solvent-system
RETN	Return
REVC	Revision clouds
REVS	Revision indicators and text
RFDR	Roof drains
RFEQ	Rooftop equipment
RISR	Risers
RO~~	Reverse osmosis water-system
ROAD	Roadway
ROCK	Large rocks and rock outcroppings
ROOF	Roof
ROR~	Reverse osmosis reject water-system
RPIP	Recirculation piping
RRAP	Riprap
RSCH	Sketch line round or oval duct
RSRV	Reservation
RTWL	Retaining wall
RWAY	Right-of-way
SAIR	Scavenge air
SATD	Satillite dishes
SAUD	Audio signal
SBCK	Setback lines
SBST	Substations
SCEX	Scrubber exhaust-system
SCHD	Schedules
SCOM	Communications signal
SCTL	Control signal
SDAT	Data signal
SDD~	Scrubber duct drains-system
SDFF	Supply diffusers
SDGA	Digital audio signal
SDGV	Digital video signal
SEAT	Seating
SECD	Secondary
SECT	Section

SEED	Seeding areas
SG~~	Specialty gas-system
SGHT	Sight distance
SHAD	Shadow area
SHEA	Structural bearing or shear walls
SHLF	Wall-mounted shelving
SIGN	Signage
SILL	Window sills
SILT	Silt fence
SIZE	Ductwork size
SKCH	Sketch
SKLT	Skylight
SLR~	Slurry return-system
SLS~	Slurry supply-system
SLVE	Pipe sleeve
SLW~	Slurry waste-system
SMIC	Microphone signal
SMOK	Smoke detector/heat sensors
SOUN	Soundings
SPCL	Special/specialties
SPKL	Sprinklers
SPLY	Supply
SPOT	Spot elevations
SPRT	Sports fields
SPWR	Power signal
SRFI	RF signal
SRGB	RGB and component video signal
SSCH	Sketch line rectangular duct
SSLT	Super silt fence
SSWR	Sanitary sewer
SSYN	Sync signal
STAN	Stationing
STAT	State
STBY	Standby
STEL	Steel
STEP	Steps
STMP	Professional stamp
STOR	Storage
STRC	Structures
STRM	Storm Sewer

STRS Stair treads SUBA Cabinet sub-assemblies, drawer boxes SUBD Subdivision (interior) lines SUBS Sub-surface areas SULF Sulfuric acid-system SULR Sulfuric acid reclaim-system SUPT Support SURF Surface areas SUSP Suspended elements SVEX Solvent exhaust-system SVID Video signal SW~~ Solvent waste-system SWAY Spillway SWBD Switchboards SWCH Switches SWF~ Solvent waste flammable-system SWLK Sidewalks SWMT Storm water management SWNF Solvent waste non-flammable-system SXTS Sixteenth section SYMB Reference symbols	STRP	Striping
SUBD Subdivision (interior) lines SUBS Sub-surface areas SULF Sulfuric acid-system SULR Sulfuric acid reclaim-system SUPT Support SURF Surface areas SUSP Suspended elements SVEX Solvent exhaust-system SVID Video signal SW~~ Solvent waste-system SWAY Spillway SWBD Switchboards SWCH Switches SWF~ Solvent waste flammable-system SWLK Sidewalks SWMT Storm water management SWNF Solvent waste non-flammable-system SXTS Sixteenth section	STRS	Stair treads
SUBS Sub-surface areas SULF Sulfuric acid-system SULR Sulfuric acid reclaim-system SUPT Support SURF Surface areas SUSP Suspended elements SVEX Solvent exhaust-system SVID Video signal SW~~ Solvent waste-system SWAY Spillway SWBD Switchboards SWCH Switches SWF~ Solvent waste flammable-system SWLK Sidewalks SWMT Storm water management SWNF Solvent waste non-flammable-system SXTS Sixteenth section	SUBA	Cabinet sub-assemblies, drawer boxes
SULF Sulfuric acid-system SULR Sulfuric acid reclaim-system SUPT Support SURF Surface areas SUSP Suspended elements SVEX Solvent exhaust-system SVID Video signal SW~~ Solvent waste-system SWAY Spillway SWBD Switchboards SWCH Switches SWF~ Solvent waste flammable-system SWLK Sidewalks SWMT Storm water management SWNF Solvent waste non-flammable-system SXTS Sixteenth section	SUBD	Subdivision (interior) lines
SULR Sulfuric acid reclaim-system SUPT Support SURF Surface areas SUSP Suspended elements SVEX Solvent exhaust-system SVID Video signal SW~~ Solvent waste-system SWAY Spillway SWBD Switchboards SWCH Switches SWF~ Solvent waste flammable-system SWLK Sidewalks SWMT Storm water management SWNF Solvent waste non-flammable-system SXTS Sixteenth section	SUBS	Sub-surface areas
SUPT Support SURF Surface areas SUSP Suspended elements SVEX Solvent exhaust-system SVID Video signal SW~~ Solvent waste-system SWAY Spillway SWBD Switchboards SWCH Switches SWF~ Solvent waste flammable-system SWLK Sidewalks SWMT Storm water management SWNF Solvent waste non-flammable-system SXTS Sixteenth section	SULF	Sulfuric acid-system
SURF Surface areas SUSP Suspended elements SVEX Solvent exhaust-system SVID Video signal SW~~ Solvent waste-system SWAY Spillway SWBD Switchboards SWCH Switches SWF~ Solvent waste flammable-system SWLK Sidewalks SWMT Storm water management SWNF Solvent waste non-flammable-system SXTS Sixteenth section	SULR	Sulfuric acid reclaim-system
SUSP Suspended elements SVEX Solvent exhaust-system SVID Video signal SW~~ Solvent waste-system SWAY Spillway SWBD Switchboards SWCH Switches SWF~ Solvent waste flammable-system SWLK Sidewalks SWMT Storm water management SWNF Solvent waste non-flammable-system SXTS Sixteenth section	SUPT	Support
SVEX Solvent exhaust-system SVID Video signal SW~~ Solvent waste-system SWAY Spillway SWBD Switchboards SWCH Switches SWF~ Solvent waste flammable-system SWLK Sidewalks SWMT Storm water management SWNF Solvent waste non-flammable-system SXTS Sixteenth section	SURF	Surface areas
SVID Video signal SW~~ Solvent waste-system SWAY Spillway SWBD Switchboards SWCH Switches SWF~ Solvent waste flammable-system SWLK Sidewalks SWMT Storm water management SWNF Solvent waste non-flammable-system SXTS Sixteenth section	SUSP	Suspended elements
SW~~ Solvent waste-system SWAY Spillway SWBD Switchboards SWCH Switches SWF~ Solvent waste flammable-system SWLK Sidewalks SWMT Storm water management SWNF Solvent waste non-flammable-system SXTS Sixteenth section	SVEX	Solvent exhaust-system
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SWBD Switchboards SWCH Switches SWF~ Solvent waste flammable-system SWLK Sidewalks SWMT Storm water management SWNF Solvent waste non-flammable-system SXTS Sixteenth section	SW~~	Solvent waste-system
SWCH Switches SWF~ Solvent waste flammable-system SWLK Sidewalks SWMT Storm water management SWNF Solvent waste non-flammable-system SXTS Sixteenth section	SWAY	Spillway
SWF~ Solvent waste flammable-system SWLK Sidewalks SWMT Storm water management SWNF Solvent waste non-flammable-system SXTS Sixteenth section	SWBD	Switchboards
SWLK Sidewalks SWMT Storm water management SWNF Solvent waste non-flammable-system SXTS Sixteenth section	SWCH	Switches
SWMT Storm water management SWNF Solvent waste non-flammable-system SXTS Sixteenth section	SWF~	Solvent waste flammable-system
SWNF Solvent waste non-flammable-system SXTS Sixteenth section	SWLK	Sidewalks
SXTS Sixteenth section	SWMT	Storm water management
	SWNF	Solvent waste non-flammable-system
SYMB Reference symbols	SXTS	Sixteenth section
	SYMB	Reference symbols
TABL Data tables	TABL	Data tables
TAKE Taking lines	TAKE	Taking lines
TANK Storage tanks	TANK	Storage tanks
TDIR Tempered DI return-system	TDIR	Tempered DI return-system
TDIS Tempered DI supply-system	TDIS	Tempered DI supply-system
TEES Main tees	TEES	Main tees
TEMP Temporary	TEMP	Temporary
TEST Test stations	TEST	Test stations
TEXT Text	TEXT	Text
THER Thermostats	THER	Thermostats
TICK Tick marks	TICK	Tick marks
TITL Drawing or detail titles	TITL	Drawing or detail titles
TMAH TMAH-system	TMAH	TMAH-system
TOP~ Top	TOP~	Тор
TOP1 Top group 1	TOP1	Top group 1
TOP2 Top group 2	TOP2	Top group 2
TOPB Top of bank	ТОРВ	Top of bank
TOWR Towers	TOWR	Towers

TPIT	Test pits
TPTN	Toilet partitions
TRAC	Tract lines
TRAK	Track
TRAL	Trail or path
TRAV	Transverse
TRAY	Cabletray and wireways
TREE	Trees
TROW	Tree row
TSHP	Town or township
TTLB	Border and titleblock
TURF	Lawn areas
TW~~	Tempered water-system
UCPT	Under-carpet wiring
UCTR	Under counter
UN2~	Utility nitrogen-system
UGND	Underground
UPPR	Upper
UPRW	Ultra-pure recycle water-system
UPS~	Uninterruptible power supply
UPVD	Unpaved surface
UPW~	Ultra-pure water-system
URAC	Under-floor raceways
UTIL	Utility lines
V~~~	Vent-system
VACU	Vacuum
VALV	Valves
VEGE	Trees, shrubs, and other vegetation
VENR	Veneer
VENT	Vents
VERT	Vertical
VIEW	Triangulation view
VINE	Vines
VN2~	Venturi nitrogen-system
VOID	Void regions
W2XS	Dimension lumber
WALL	Wall
WAR~	Weld argon-system
WATR	Water supply
WDWK	Architectural woodwork

WEIR	Pool weir
WELL	Well
WHIT	White paint
WIRE	Wiring
WKSF	Worksurface
WOOD	Wood
XFMR	Transformers
XTRU	Extrusion
YELO	Yellow paint
ZONE	Zoning

4.4 STATUS FIELDS

Codes	Description
A	Abandoned
D	Existing to demolish
Е	Existing to remain
F	Future work
M	Items to be moved
N	New work
Т	Temporary work
X	Not in contract
1	Phase number 1
2	Phase number 2
3	Phase number 3
4	Phase number 4
5	Phase number 5
6	Phase number 6
7	Phase number 7
8	Phase number 8
9	Phase number 9

5.0 Appendix B - Common Layer Lists by Discipline

The following lists of layers present the most commonly used layers for each discipline. The definitive list of Discipline Designators, Major and Minor Groups, and Status Fields is in <u>CLG Appendix A - List of Discipline</u> <u>Designators, Major and Minor Groups, and Status Fields, CLG section 4.0</u>.

- 5.1 Architectural Layer List
- 5.2 Civil Layer List
- 5.3 Contractor/Shop Drawing Layer List
- 5.4 Electrical Layer List

- 5.12 Landscape Layer List
- 5.13 Mechanical Layer List
- 5.14 Operations Layer List
- 5.15 Plumbing Layer List

- 5.5 Distributed Energy Layer List
- 5.6 Equipment Layer List
- 5.7 Fire Protection Layer List
- <u>5.8 General Layer List</u>
- <u>5.9 Geotechnical Layer List</u>
- 5.10 Hazardous Materials Layer List
- 5.11 Interiors Layer List

- <u>5.16 Process Layer List</u>
- 5.17 Resource Layer List
- 5.18 Structural Layer List
- 5.19 Survey/Mapping Layer List
- 5.20 Telecommunications Layer List
- 5.21 Other Disciplines Layer List

5.1 ARCHITECTURAL LAYER LIST

Architectural Field Codes

The Layer Names shown below provide examples for the use of Major and Minor Group field codes for this discipline. See <u>CLG Sections 1.5</u> and <u>1.6</u> for complete rules and options governing the use of Major and Minor Group field codes.

Architectural Discipline Designators

Designator	Description
A	Architectural
AD	Architectural Demolition
AE	Architectural Elements
AF	Architectural Finishes
AG	Architectural Graphics
Al	Architectural Interiors
AS	Architectural Site
AJ	User Defined
AK	User Defined

Architectural Layer List

Layer Name	Description
A□-AREA	Area
A□-AREA-OCCP	Area: occupant or employee names
A□-BARR	Barrier
A□-BARR-AIR~	Barrier: air
A□-CLNG	Ceiling
A□-CLNG-ACCS	Ceiling: access
A□-CLNG-GRID	Ceiling: grid
A□-CLNG-OPNG	Ceiling: openings
A□-CLNG-SUSP	Ceiling: suspended elements
A□-CLNG-TEES	Ceiling: main tees

A□-COLS	Columns
A□-CONV	Conveying systems
A□-DOOR	Doors
A□-DOOR-FULL	Doors: full-height (swing and leaf)
A□-DOOR-PRHT	Doors: partial-height (swing and leaf)
A□-EQPM	Equipment
A□-EQPM-ACCS	Equipment: access
A□-EQPM-FIXD	Equipment: fixed
A□-EQPM-OVHD	Equipment: overhead
A□-FLOR	Floor
A□-FLOR-CSWK	Floor: casework
A□-FLOR-EVTR	Floor: elevator cars and equipment
A□-FLOR-FIXT	Floor: fixtures (plumbing)
A□-FLOR-HRAL	Floor: handrails/guard rails
A□-FLOR-LEVL	Floor: level changes (ramps, pits, depressions)
A□-FLOR-OTLN	Floor: outline
A□-FLOR-OVHD	Floor: overhead
A□-FLOR-RAIS	Floor: raised
A□-FLOR-RISR	Floor: risers
A□-FLOR-SIGN	Floor: signage
A□-FLOR-SPCL	Floor: specialties (toilet room accessories, display cases)
A□-FLOR-STRS	Floor: stair treads (escalators, ladders)
A□-FLOR-TPTN	Floor: toilet partitions
A□-FLOR-WDWK	Floor: architectural woodwork
A□-FURN	Furnishings
A□-FURN-FILE	Furnishings: file cabinets
A□-FURN-FIXD	Furnishings: fixed
A□-FURN-FREE	Furnishings: freestanding
A□-FURN-PLNT	Furnishings: plants
A□-FURN-PNLS	Furnishings: system panels
A□-FURN-SEAT	Furnishings: seating
A□-FURN-STOR	Furnishings: storage (component system)
A□-FURN-WKSF	Furnishings: work surface (component system)
A□-GLAZ	Glazing
A□-GLAZ-FULL	Glazing: full-height
A□-GLAZ-PRHT	Glazing: partial-height
A□-GLAZ-SILL	Glazing: window sills
A□-HVAC	HVAC systems
A□-HVAC-RDFF	HVAC systems: return air diffusers
A□-HVAC-SDFF	HVAC systems: supply diffusers

A□-LITE	Lighting
A□-ROOF	Roof
A□-ROOF-HRAL	Roof: handrails/guard rails
A□-ROOF-LEVL	Roof: level changes
A□-ROOF-OTLN	Roof: outline
A□-ROOF-RISR	Roof: risers
A□-ROOF-STRS	Roof: stair treads (ladders)
A□-WALL	Walls
A□-WALL-CAVI	Walls: cavity
A□-WALL-CNTR	Walls: center
A□-WALL-CURT	Walls: curtain
A□-WALL-FIRE	Walls: fire protection
A□-WALL-FULL	Walls: full-height
A□-WALL-FULL-EXTR	Walls: full-height: exterior
A□-WALL-FULL-INTR	Walls: full-height: interior
A□-WALL-HEAD	Walls: door and window headers
A□-WALL-JAMB	Walls: door and window jambs
A□-WALL-MESH	Walls: mesh or wire
A□-WALL-MOVE	Walls: moveable
A□-WALL-PATT	Walls: texture and hatch patterns
A□-WALL-PRHT	Walls: partial-height

5.2 CIVIL LAYER LIST

Civil Field Codes

The Layer Names shown below provide examples for the use of Major and Minor Group field codes for this discipline. See <u>CLG Sections 1.5</u> and <u>1.6</u> for complete rules and options governing the use of Major and Minor Group field codes.

The Civil Discipline is defined as a project or a portion of a project that is usually contained within a single property boundary.

Civil Discipline Designators

Designator	Description
С	Civil
CD	Civil Demolition
CG	Civil Grading
CI	Civil Improvements
CN	Civil Nodes
СР	Civil Paving
CS	Civil Site

СТ	Civil Transportation
CU	Civil Utilities
CJ	User Defined
CK	User Defined

Civil Layer List

Layer Name	Description
C□-AFLD	Airfields
C□-AFLD-ASPH	Airfields: asphalt
C□-AFLD-CNTR	Airfields: center
C□-AFLD-CONC	Airfields: concrete
C□-AFLD-FLNE	Airfields: fire lane
C□-AFLD-FLNE-MRKG	Airfields: fire lane: pavement markings
C□-AFLD-FLNE-SIGN	Airfields: fire lane: signage
C□-AFLD-GRVL	Airfields: gravel
C□-AFLD-MRKG	Airfields: pavement markings
C□-AFLD-SIGN	Airfields: signage
C□-AFLD-STAN	Airfields: stationing
C□-AFLD-WHIT	Airfields: white paint
C□-AFLD-WHIT-TICK	Airfields: white paint: tick marks
C□-AFLD-YELO	Airfields: yellow paint
C□-AFLD-YELO-TICK	Airfields: yellow paint: tick marks
C□-BLDG	Buildings and primary structures
C□-BLDG-DECK	Buildings and primary structures: deck (attached, no roof overhead)
C□-BLDG-OTLN	Buildings and primary structures: outline
C□-BLDG-OVHD	Buildings and primary structures: overhead
C _□ -BLDG-PRCH	Buildings and primary structures: porch (attached, roof overhead)
C□-BLIN	Baseline
C□-BLIN-STAN	Baseline: stationing
C□-BORE	Borings
C _□ -BRDG	Bridge
C _□ -BRDG-CNTJ	Bridge: construction joint
C _□ -BRDG-CNTR	Bridge: center
C□-BRDG-DECK	Bridge: deck
C□-BRDG-EXPJ	Bridge: expansion joint
C _□ -BRDG-FALT	Bridge: fault/break line
C□-BRDG-HIDD	Bridge: objects or lines hidden from view

C□-BRDG-OBJT	Bridge: objects	
C□-BRDG-OBJT-PRIM	Bridge: objects: primary	
C□-BRDG-OBJT-SECD	Bridge: objects: secondary	
C□-BRDG-RBAR	Bridge: reinforcing bar	
C□-CATV	Cable television system	
C□-CATV-OVHD	Cable television system: overhead	
C□-CATV-POLE	Cable television system: pole	
C□-CATV-UGND	Cable television system: underground	
C□-CEME	Cemetery	
C□-CHAN	Navigable channels	
C□-CHAN-BWTR	Navigable channels: breakwater	
C□-CHAN-CNTR	Navigable channels: center	
C□-CHAN-DACL	Navigable channels: de-authorized channel limits, anchorages, etc.	
C□-CHAN-DOCK	Navigable channels: decks, docks, floats, piers	
C□-CHAN-NAID	Navigable channels: navigation aids	
C□-COMM	Communications	
C□-COMM-OVHD	Communications: overhead	
C□-COMM-POLE	Communications: pole	
C□- COMM-UGND	Communications: underground	
C□-CTRL	Control points	
C□-CTR L-BMRK	Control points: benchmarks	
C□-CTRL-FLYS	Control points: fly station	
C□-CTRL-GRID	Control points: grid	
C□-CTRL-HORZ	Control points: horizontal	
C□-CTRL-HVPT	Control points: horizontal/vertical	
C□-CTRL-PNPT	Control points: panel points	
C□-CTRL-TRAV	Control points: transverse	
C□-CTRL-VERT	Control points: vertical	
C□-DFLD	Drain fields	
C□-DFLD-OTLN	Drain fields: outline	
C□-DFLD-PROF	Drain fields: profile	
C□-DRIV	Driveways	
C□-DRIV-ASPH	Driveways: asphalt	
C□-DRIV-CNTR	Driveways: center	
C□-DRIV-CONC	Driveways: concrete	
C□-DRIV-CURB	Driveways: curb	
C□-DRIV-CURB-BACK	Driveways: curb: back	
C□-DRIV-CURB-FACE	Driveways: curb: face	
C□-DRIV-FLNE	Driveways: fire lane	
C□-DRIV-FLNE-MRKG	Driveways: fire lane: pavement markings	

C□-DRIV-FLNE-SIGN	Driveways: fire lane: signage	
C ₋ DRIV-GRVL	Driveways: gravel	
C□-DRIV-MRKG	Driveways: pavement markings	
C ₋ -DRIV-SIGN		
C⊓-DRI V-UPVD	Driveways: signage Driveways: unpaved surface	
C_DRIV-WHIT	Driveways: white paint	
CDRIV-WHIT-TICK	Driveways: white paint: tick marks	
C ₋ -DRIV-YELO	Driveways: yellow paint	
C ₋ -DRIV-YELO-TICK	Driveways: yellow paint: tick marks	
C ₀ -DTCH	Ditches or washes	
C ₋ DTCH-BOTM	Ditches or washes: bottom	
C□-DTCH-CNTR	Ditches or washes: center	
C ₋ DTCH-EWAT	Ditches or washes: edge of water	
C□-DTCH-TOP~	Ditches or washes: top	
C ₋ -EROS	Erosion and sediment control	
C□-EROS-CIPR	Erosion and sediment control: culvert inlet protection	
C□-EROS-CNTE	Erosion and sediment control: construction entrance	
C□-EROS-DDIV	Erosion and sediment control: drainage divides	
C□-EROS-DVDK	Erosion and sediment control: diversion dike	
C□-EROS-INPR	Erosion and sediment control: inlet protection	
C□-EROS-SILT	Erosion and sediment control: silt fence	
C□-EROS-SSLT	Erosion and sediment control: super silt fence	
C□-ESMT	Easements	
C□-ESMT-ACCS	Easements: access (pedestrian only; private access)	
C□-ESMT-CATV	Easements: utility - cable television system	
C□-ESMT-CONS	Easements: conservation	
C□-ESMT-CSTG	Easements: construction/grading	
C□-ESMT-ELEC	Easements: electrical	
C□-ESMT-FDPL	Easements: flood plain	
C□-ESMT-INEG	Easements: ingress/egress (vehicles; private access)	
C□-ESMT-LSCP	Easements: landscape	
C□-ESMT-NGAS	Easements: natural gas line	
C□-ESMT-PHON	Easements: telephone line	
C□-ESMT-ROAD	Easements: roadway	
C□-ESMT-ROAD-PERM	Easements: roadway: permanent	
C□-ESMT-ROAD-TEMP	Easements: roadway: temporary	
C□-ESMT-RWAY	Easements: right-of-way (public access)	
C□-ESMT-SGHT	Easements: sight distance	
C□-ESMT-SSWR	Easements: sanitary sewer	
C□-ESMT-STRM	Easements: storm sewer	

C□-ESMT-SWMT	Easements: storm water management	
C□-ESMT-TRAL	Easements: trail or path (public access)	
C□-ESMT-UTIL	Easements: utility lines	
C□-ESMT-WATR	Easements: water supply	
C□-FENC	Fences	
C□-FENC-GRAL	Fences: guard rail	
C□-FENC-POST	Fences: posts	
C -FENC-STEL	Fences: steel (barbed wire and/or chain link)	
C□-FENC-WOOD	Fences: wood	
C□-FIRE	Fire protection	
C□-FIRE-HYDT	Fire protection: hydrants and connections	
C□-FIRE-PIPE	Fire protection: piping	
C□-FIRE-UGND	Fire protection: underground	
C□-FLHA	Flood hazard area	
C□-FLHA-025Y	Flood hazard area: 25 year mark	
C□-FLHA-050Y	Flood hazard area: 50 year mark	
C□-FLHA-100Y	Flood hazard area: 100 year mark	
C□-FLHA-200Y	Flood hazard area: 200 year mark	
C□-FUEL	Fuel systems	
C□-FUEL-EQPM	Fuel systems: equipment (pumps, motors)	
C□-FUEL-INST	Fuel systems: instrumentation (meters, valves, etc.)	
C□-FUEL-MHOL	Fuel systems: manhole	
C ₋ -FUEL-PIPE	Fuel systems: piping	
C□-FUEL-TANK	Fuel systems: storage tanks	
C□-FUEL-UGND	Fuel systems: underground	
C□-HYDR	Hydraulic structure	
C□-HYDR-BAFL	Hydraulic structure: baffle block and splash pad	
C□-HYDR-BASN	Hydraulic structure: stilling and settling basins	
C□-HYDR-CNDT	Hydraulic structure: diversion/bypass conduits/culvers	
C□-HYDR-COFF	Hydraulic structure: coffer dam	
C□-HYDR-DAM~	Hydraulic structure: dam	
C□-HYDR-FISH	Hydraulic structure: fish ladder/passage	
C□-HYDR-FLUM	Hydraulic structure: flume	
C□-HYDR-INTK	Hydraulic structure: intake	
C□-HYDR-NOVR	Hydraulic structure: non-overflow structure	
C□-HYDR-PENS	Hydraulic structure: penstock	
C□-LOCN	Limits of construction	
C□-NGAS	Natural gas systems	
C□-NGAS-EQPM	Natural gas systems: equipment (pumps, motors)	

C- NCAC MUOL	Natural gas systems, manhala	
C-NGAS-MHOL	Natural gas systems: manhole	
CNGAS-PIPE	Natural gas systems: piping	
CNGAS-TANK	Natural gas systems: storage tanks	
C ₋ NGAS-UGND	Natural gas systems: underground	
C ₋ -PERC	Perc testing	
C _D -PERC-HOLE	Perc testing: holes	
C ₋ POND	Ponds	
C ₋ POND-EDGE	Ponds: edge	
C ₋ POND-SWAY	Ponds: spillway	
C□-POND-TOPB	Ponds: top of bank	
C ₋ POWR	Power	
C□-POWR-FENC	Power: fences	
C□-POWR-INST	Power: instrumentation (meters, transformers)	
C□-POWR-MHOL	Power: manhole	
C□-POWR-OVHD	Power: overhead	
C□-POWR-POLE	Power: pole	
C□-POWR-STRC	Power: structures	
C□-POWR-UGND	Power: underground	
C□-PRKG	Parking lots	
C□-PRKG-ASPH	Parking lots: asphalt	
C□-PRKG-CARS	Parking lots: cars and other vehicles	
C□-PRKG-CONC	Parking lots: concrete	
C□-PRKG-CURB	Parking lots: curb	
C□-PRKG-CURB-BACK	Parking lots: curb: back	
C□-PRKG-CURB-FACE	Parking lots: curb: face	
C□-PRKG-DRAN	Parking lots: drainage slope indications	
C□-PRKG-FIXT	Parking lots: fixtures (wheel stops, parking meters, etc.)	
C□-PRKG-FLNE	Parking lots: fire lane	
C□-PRKG-FLNE-MRKG	Parking lots: fire lane: pavement markings	
C□-PRKG-FLNE-SIGN	Parking lots: fire lane: signage	
C□-PRKG-GRVL	Parking lots: gravel	
C□-PRKG-MRKG	Parking lots: pavement markings	
C□-PRKG-SIGN	Parking lots: signage	
C□-PRKG-STRP	Parking lots: striping	
C□-PRKG-UPVD	Parking lots: unpaved surface	
C _□ -PRKG-WHIT	Parking lots: white paint	
C□-PRKG-WHIT-TICK	Parking lots: white paint: tick marks	
C□-PRKG-YELO	Parking lots: yellow paint	
C□-PRKG-YELO-TICK	Parking lots: yellow paint: tick marks	
C□-PROP	Property	

C□-PROP-LINE	Property: lines
C□-PROP-SBCK	Property: setback lines
C□-PVMT	Pavement
C□-PVMT-ASPH	Pavement: asphalt
C□-PVMT-CONC	Pavement: concrete
C□-PVMT-GRVL	Pavement: gravel
C□-RAIL	Railroad
C□-RAIL-CNTR	Railroad: center
C□-RAIL-EQPM	Railroad: equipment (gates, signals, etc.)
C□-RAIL-TRAK	Railroad: track
C□-RIVR	River
C□-RIVR-BOTM	River: bottom
C□-RIVR-CNTR	River: center
C□-RIVR-EDGE	River: edge
C _□ -RIVR-TOPB	River: top of bank
C□-ROAD	Roadways
C□-ROAD-ASPH	Roadways: asphalt
C□-ROAD-CNTR	Roadways: center
C□-ROAD-CONC	Roadways: concrete
C□-ROAD-CURB	Roadways: curb
C□-ROAD-CURB-BACK	Roadways: curb: back
C□-ROAD-CURB-FACE	Roadways: curb: face
C□-ROAD-FLNE	Roadways: fire lane
C□-ROAD-FLNE-MRKG	Roadways: fire lane: pavement markings
C□-ROAD-FLNE-SIGN	Roadways: fire lane: signage
C□-ROAD-GRVL	Roadways: gravel
C□-ROAD-MRKG	Roadways: pavement markings
C□-ROAD-PROF	Roadways: profile
C□-ROAD-SIGN	Roadways: signage
C□-ROAD-STAN	Roadways: stationing
C□-ROAD-UPVD	Roadways: unpaved surface
C□-ROAD-WHIT	Roadways: white paint
C□-ROAD-WHIT-TICK	Roadways: white paint: tick marks
C□-ROAD-YELO	Roadways: yellow paint
C□-ROAD-YELO-TICK	Roadways: yellow paint: tick marks
C _□ -RRAP	Riprap
C _□ -SGHT	Sight distance
C _□ -SGHT-PROF	Sight distance: profile
C□-SOIL	Soils
C□-SSWR	Sanitary sewer

C□-SSWR-DIAG	Sanitary sewer: diagrams	
C□-SSWR-FORC	Sanitary sewer: force main	
C _□ -SSWR-LATL	Sanitary sewer: lateral line	
C□-SSWR-MHOI	Sanitary sewer: manhole	
C _D -SSWR-PIPE	Sanitary sewer: maintoic	
C _D -SSWR-PIPE-RCON	Sanitary sewer: piping Sanitary sewer: piping: reinforced concrete	
C□-SSWR-PIPE-STEL	Sanitary sewer: piping: remitored concrete	
C ₋ -SSWR-PROF	Sanitary sewer: profile	
C□-SSWR-FROF		
	Sanitary sewer: stationing	
CSSWR-STRC	Sanitary sewer: structures	
C□-SSWR-UGND	Sanitary sewer: underground	
CSTEM	Steam system	
CSTEM-INST	Steam system: instrumentation (meters, valves, etc.)	
C ₋ STEM-MHOL	Steam system: manhole	
C ₋ STEM-PIPE	Steam system: piping	
C□-STEM-STRC	Steam system: structures	
C□-STEM-UGND	Steam system: underground	
C□-STRM	Storm sewer	
C□-STRM-CNTR	Storm sewer: center	
C□-STRM-DIAG	Storm sewer: diagrams	
C□-STRM-HWAL	Storm sewer: headwall	
C□-STRM-MHOL	Storm sewer: manhole	
C□-STRM-PIPE	Storm sewer: piping	
C□-STRM-PIPE-CMTL	Storm sewer: piping: corrugated metal	
C□-STRM-PIPE-RCON	Storm sewer: piping: reinforced concrete	
C□-STRM-PROF	Storm sewer: profile	
C□-STRM-STAN	Storm sewer: stationing	
C□-STRM-STRC	Storm sewer: structures	
C□-STRM-UGND	Storm sewer: underground	
C□-SWLK	Sidewalks	
C□-SWLK-ASPH	Sidewalks: asphalt	
C□-SWLK-CONC	Sidewalks: concrete	
C□-TINN	Triangulated irregular network	
C□-TINN-BNDY	Triangulated irregular network: boundary	
C□-TINN-FALT	Triangulated irregular network: fault/break lines	
C□-TINN-VIEW	Triangulated irregular network: triangulation view	
C□-TINN-VOID	Triangulated irregular network: void regions	
Сп-ТОРО	Topographic feature	
C□-TOPO-DEPR	Topographic feature: depression	
C□-TOPO-MAJR	Topographic feature: major (contours)	

C□-TOPO-MINR	Topographic feature: minor (contours)
C□-TOPO-SPOT	Topographic feature: spot elevations
C□-TOPO-TPIT	Topographic feature: test pits
C _□ -TRAL	Trails or paths
C□-TRAL-ASPH	Trails or paths: asphalt
C□-TRAL-CONC	Trails or paths: concrete
C□-TRAL-GRVL	Trails or paths: gravel
C□-TRAL-MRKG	Trails or paths: pavement markings
C□-TRAL-SIGN	Trails or paths: signage
C□-TRAL-UPVD	Trails or paths: unpaved surface
C _□ -WALL	Walls
C _□ -WALL-CTLJ	Walls: control joint
C□-WALL-NSBR	Walls: noise barrier
C _□ -WALL-RTWL	Walls: retaining wall
C□-WALL-SHEA	Walls: structural bearing or shear walls
C _□ -WATR	Water supply
C□-WATR-DIAG	Water supply: diagrams
C□-WATR-INST	Water supply: instrumentation (meters, valves, etc.)
C□-WATR-PIPE	Water supply: piping
C _□ -WATR-PROF	Water supply: profile
C□-WATR-STAN	Water supply: stationing
C□-WATR-STRC	Water supply: structures
C□-WATR-UGND	Water supply: underground
C□-WATR-WELL	Water supply: well
C _□ -WETL	Wetlands
C□-WWAY	Waterway
C□-WWAY-DLPH	Waterway: dolphin
C□-WWAY-FEND	Waterway: fender
C□-WWAY-MOOR	Waterway: mooring

5.3 CONTRACTOR/SHOP DRAWING LAYER LIST

Contractor/Shop Drawing Field Codes

The Layer Names shown below provide examples for the use of Major and Minor Group field codes for this discipline. See <u>CLG Sections 1.5</u> and <u>1.6</u> for complete rules and options governing the use of Major and Minor Group field codes.

Contractor/Shop Drawing Discipline Designators

Designator	Description
Z	Contractor/Shop Drawings

ZJ	User Defined
ZK	User Defined

Contractor/Shop Drawing Layer List

Layer Name	Description	
No layer names have	peen prescribed for this discipline.	

5.4 ELECTRICAL LAYER LIST

Electrical Field Codes

The Layer Names shown below provide examples for the use of Major and Minor Group field codes for this discipline. See $\underline{CLG\ Sections\ 1.5}$ and $\underline{1.6}$ for complete rules and options governing the use of Major and Minor Group field codes.

Description
Electrical Demolition
Electrical Instrumentation
Electrical Lighting
Electrical Power
Electrical Site
Electrical Telecommunications
Electrical Auxiliary Systems
User Defined
User Defined

Electrical Layer List

Layer Name	Description
E□-ALRM	Alarm system
E□-AREA	Area
E□-AREA-OFST	Area: offset zones
En-AREA-SHAD	Area: shade zones
E□-AUXL	Auxiliary systems
En-BELL	Bell system
E□-CABL	Cable systems
E□-CABL-COAX	Cable systems: coax cable
E□-CABL-FIBR	Cable systems: fiber optics cable
E□-CABL-MULT	Cable systems: multi-conductor cable

Ea-CATH Cathodic protection system: sacrificial anode Ea-CATH-ANOD Cathodic protection system: sacrificial anode Ea-CATH-CURR Cathodic protection system: impress current Ea-CATH-TEST Cathodic protection system: test stations Ea-CCTV Closed-circuit television system Cathodic protection system: Cathodic protection system Ea-CLOK Clock system: circuits Ea-CLOK-CIRC Clock system: circuits Ea-CLOK-CLNG Clock system: circuit number Cathoric Clock system: circuit number Cathoric Clock system: equipment Cathoric Clock system: equipment Cathoric Clock system: wall Cathoric Clock system: wall Cathoric Communications: circuits Cathoric Communications: circuit number Cathoric Controls and instrumentation Cathoric Controls and instrumentation: devices Cathoric Controls Controls and instrumentation: devices Cathoric Controls Contro	E□-CABL-TRAY	Cable systems: cabletray and wireways
En-CATH-CURR Cathodic protection system: impress current En-CATH-TEST Cathodic protection system: test stations En-CCTV Closed-circuit television system En-CLOK En-CLOK Clock system Circuits En-CLOK-CIRC Clock system: circuits En-CLOK-CNMB Clock system: circuit number En-CLOK-EAPM Clock system: equipment En-CLOK-FLOR Clock system: wall En-CLOK-GROM Communications: circuits En-COMM Communications: circuits En-COMM-CIRC Communications: circuit number En-COMM-CIRC Communications: circuits En-COMM-CIRC Communications: circuit number En-COMM-CNMB Communications: circuit number En-COMM-CNMB Communications: circuit number En-COMM-COMM Communications: wall En-COMM-COMM Communications: wall En-CONT Controls and instrumentation: devices En-CONT Controls and instrumentation: wiring En-CONT-WIRE Controls and instrumentation: wiring En-DATA Data/LAN system En-DATA-CIRC Data/LAN system: circuits En-DATA-CIRC Data/LAN system: circuit number En-DATA-CIRC Data/LAN syst	E ₋ CATH	Cathodic protection system
Ec-CATH-TEST Cathodic protection system: test stations Ec-CCTV Closed-circuit television system Ec-CLOK Clock System Circuits Ec-CLOK-CLNG Clock system: circuits Ec-CLOK-CLNG Clock system: circuit number Ec-CLOK-CNMB Clock system: circuit number Ec-CLOK-CNMB Clock system: circuit number Ec-CLOK-EQPM Clock system: equipment Ec-CLOK-EQPM Clock system: floor Ec-CLOK-MALL Clock system: stations Ec-COMM Communications Ec-COMM-CIRC Communications: circuits Ec-COMM-CIRC Communications: circuit number Ec-COMM-CNMB Communications: circuit number Ec-COMM-COMM-EQPM Communications: equipment Ec-COMM-COMM-EQPM Communications: wall Ec-CONT Controls and instrumentation Ec-CONT Controls and instrumentation: devices Ec-CONT-WIRE Controls and instrumentation: wiring Ec-DATA-CIRC Data/LAN system Ec-DATA-CIRC Data/LAN system: circuit number Ec-DATA-CING Data/LAN system: circuit numb	E ₋ -CATH-ANOD	Cathodic protection system: sacrificial anode
Ec-CCTV Closed-circuit television system Ec-CLOK Clock system Ec-CLOK-CIRC Clock system: circuits Ec-CLOK-CLNG Clock system: circuits Ec-CLOK-CNMB Clock system: circuit number Ec-CLOK-ECPM Clock system: equipment Ec-CLOK-ECPM Clock system: floor Ec-CLOK-MALL Clock system: mall Ec-COMM Communications Ec-COMM-CIRC Communications: circuits Ec-COMM-CIRC Communications: circuit number Ec-COMM-CNMB Communications: circuit number Ec-COMM-CNMB Communications: equipment Ec-COMM-CNMB Communications: equipment Ec-COMM-CNMB Communications: wall Ec-COMM-CONT Controls and instrumentation Ec-CONT DEVC Controls and instrumentation: devices Ec-CONT-WIRE Controls and instrumentation: wiring Ec-DATA Data/LAN system Ec-DATA-CIRC Data/LAN system: circuits Ec-DATA-CIRC Data/LAN system: circuit number Ec-DATA-CING Data/LAN system: circuit number Ec-DATA-CING Data/LAN system: circuit number Ec-DATA-CING Data/LAN system: equipment Ec-DATA-FLOR Data/LAN system: equipment Ec-DATA-FLOR Data/LAN system: equipment Ec-DATA-GIRC Data/LAN system: equipment Ec-DATA-GIRC Data/LAN system: equipment Ec-DATA-GIRC Data/LAN system: equipment Ec-DATA-FLOR Data/LAN system: equipment Ec-DATA-GIRC Data/LAN system: equipment Ec-DIAG-BIRS Diagrams: bus duct Ec-DIAG-BIRS Diagrams: bus duct Ec-DIAG-BIRS Diagrams: feeders Ec-DIAG-FEED Diagrams: feeders Ec-DIAG-FEED Diagrams: ground Ec-DIAG-SWCH Diagrams: witches Ec-DIAG-SWCH Diagrams: transformers	E□-CATH-CURR	Cathodic protection system: impress current
En-CLOK Clock system En-CLOK-CIRC Clock system: circuits En-CLOK-CLNG Clock system: circuit number En-CLOK-CNMB Clock system: circuit number En-CLOK-EQPM Clock system: equipment En-CLOK-FLOR Clock system: equipment En-CLOK-HOR Clock system: wall En-COMM Communications En-COMM-CIRC Communications: circuits En-COMM-CNMB Communications: circuit number En-COMM-CNMB Communications: circuit number En-COMM-CNMB Communications: equipment En-COMM-CNMB Communications: equipment En-COMM-CNMB Communications: wall En-CONT Controls and instrumentation En-CONT DEVC Controls and instrumentation: devices En-CONT-WIRE Controls and instrumentation: wiring En-DATA Data/LAN system En-DATA-CIRC Data/LAN system: circuits En-DATA-CLNG Data/LAN system: circuit number En-DATA-CNMB Data/LAN system: circuit number En-DATA-CNMB Data/LAN system: circuit number En-DATA-EQPM Data/LAN system: equipment En-DATA-EQPM Data/LAN system: floor En-DATA-FLOR Data/LAN system: wall En-DATA-FLOR Data/LAN system: wall En-DATA-FLOR Data/LAN system: stoor En-DATA-FLOR Data/LAN system: stoor En-DATA-FLOR Data/LAN system: stoor En-DATA-EQPM Data/LAN system: stoor En-DATA-FLOR Data/LAN system: stoor En-DATA-FLOR Data/LAN system: stoor En-DATA-GRAS Diagrams: bus duct En-DIAG-BKRS Diagrams: bus duct En-DIAG-BKRS Diagrams: equipment En-DIAG-BCD Diagrams: equipment En-DIAG-EQPM Diagrams: equipment En-DIAG-EQPM Diagrams: equipment En-DIAG-EQPM Diagrams: switches En-DIAG-SWCH Diagrams: switches En-DIAG-SWCH Diagrams: switches En-DIAG-SWCH Diagrams: transformers	En-CATH-TEST	Cathodic protection system: test stations
Ec-CLOK-CIRC Clock system: circuits Ec-CLOK-CLNG Clock system: circuit number Ec-CLOK-CNMB Clock system: equipment Ec-CLOK-EQPM Clock system: equipment Ec-CLOK-FLOR Clock system: equipment Ec-CLOK-FLOR Clock system: wall Ec-COMM Communications Ec-COMM Communications: circuits Ec-COMM-CIRC Communications: circuit number Ec-COMM-CNMB Communications: circuit number Ec-COMM-CNMB Communications: equipment Ec-COMM-CNMB Communications: equipment Ec-COMM-CNMB Communications: wall Ec-CONT Controls and instrumentation Ec-CONT Controls and instrumentation: devices Ec-CONT-WIRE Controls and instrumentation: wiring Ec-CONT-WIRE Controls and instrumentation: wiring Ec-DATA Data/LAN system Ec-DATA-CIRC Data/LAN system: circuits Ec-DATA-CLNG Data/LAN system: circuit number Ec-DATA-CNMB Data/LAN system: circuit number Ec-DATA-CNMB Data/LAN system: equipment Ec-DATA-EQPM Data/LAN system: floor Ec-DATA-FLOR Data/LAN system: floor Ec-DATA-FLOR Data/LAN system: wall Ec-DIAG-BKRS Diagrams Ec-DIAG-BUSS Diagrams: breakers Ec-DIAG-BUSS Diagrams: breakers Ec-DIAG-BUSS Diagrams: equipment Ec-DIAG-EQPM Diagrams: switches Ec-DIAG-SWCH Diagrams: switches Ec-DIAG-SWCH Diagrams: transformers	E ₋ -CCTV	Closed-circuit television system
EG-CLOK-CLNG Clock system: ceilling EG-CLOK-CNMB Clock system: circuit number EG-CLOK-EQPM Clock system: equipment EG-CLOK-FLOR Clock system: floor EG-CLOK-WALL Clock system: wall EG-COMM COMMUNICATIONS EG-COMM COMMUNICATIONS EG-COMM-CLNG Communications: circuits EG-COMM-CLNG Communications: circuit number EG-COMM-CNMB Communications: circuit number EG-COMM-CNMB Communications: equipment EG-COMM-COMM COMMUNICATIONS: equipment EG-COMM-COMM COMMUNICATIONS: equipment EG-COMM-WALL COMMUNICATIONS: equipment EG-CONT Controls and instrumentation EG-CONT Controls and instrumentation: devices EG-CONT-WIRE Controls and instrumentation: wiring EG-DATA Data/LAN system EG-DATA-CIRC Data/LAN system: circuits EG-DATA-CLNG Data/LAN system: circuit number EG-DATA-CNMB Data/LAN system: circuit number EG-DATA-CNMB Data/LAN system: equipment EG-DATA-COMM Data/LAN system: equipment E	E□-CLOK	Clock system
EG-CLOK-CNMB Clock system: circuit number EG-CLOK-EQPM Clock system: equipment EG-CLOK-FLOR Clock system: mail EG-CLOK-WALL Clock system: wall EG-COMM COmmunications EG-COMM-CIRC Communications: circuits EG-COMM-CING Communications: circuits EG-COMM-CING Communications: circuit number EG-COMM-CNMB Communications: circuit number EG-COMM-CNMB Communications: equipment EG-COMM-COMME COMMUNICATIONS: wall EG-CONT CONTO CONTROL and instrumentation EG-CONT DEVC Controls and instrumentation: devices EG-CONT-WIRE Controls and instrumentation: wiring EG-DATA Data/LAN system EG-DATA-CIRC Data/LAN system: circuits EG-DATA-CIRC Data/LAN system: circuit number EG-DATA-CNMB Data/LAN system: circuit number EG-DATA-CNMB Data/LAN system: equipment EG-DATA-EQPM Data/LAN system: wall EG-DATA-FLOR Data/LAN system: wall EG-DATA-WALL Data/LAN system: wall EG-DIAG-BKRS Diagrams EG-DIAG-BKRS Diagrams: breakers EG-DIAG-BUSS Diagrams: preakers EG-DIAG-ECPM Diagrams: equipment EG-DIAG-ECPM Diagrams: equipment EG-DIAG-ECPM Diagrams: equipment EG-DIAG-ECPM Diagrams: equipment EG-DIAG-FEED Diagrams: floor EG-DIAG-GRND Diagrams: ground EG-DIAG-SWCH Diagrams: witches EG-DIAG-SWCH Diagrams: transformers	E□-CLOK-CIRC	Clock system: circuits
Eb-CLOK-EQPM Clock system: equipment Eb-CLOK-FLOR Clock system: floor Eb-CLOK-WALL Clock system: wall Eb-COMM Communications Eb-COMM-CIRC Communications: circuits Eb-COMM-CING Communications: circuit number Eb-COMM-CIMB Communications: circuit number Eb-COMM-COMM-COMM Communications: circuit number Eb-COMM-COMM-COMM Communications: equipment Eb-COMM-COMM-COMM-COMM-COMM-COMM-COMM-COM	E□-CLOK-CLNG	Clock system: ceiling
ED-CLOK-FLOR Clock system: floor ED-CLOK-WALL Clock system: wall ED-COMM COMMUNICATIONS ED-COMM-CIRC COMMUNICATIONS ED-COMM-CING COMMUNICATIONS ED-CONT CONTOIS and instrumentation ED-CONT CONTOIS and instrumentation: devices ED-CONT-WIRE CONTOIS and instrumentation: wiring ED-DATA DATA/LAN system ED-DATA DATA/LAN system ED-DATA-CING DATA/LAN system: circuits ED-DATA-CING DATA/LAN system: circuit number ED-DATA-CING DATA/LAN system: circuit number ED-DATA-CING DATA/LAN system: equipment ED-DATA-FLOR DATA/LAN system: wall ED-DATA-FLOR DATA/LAN system: wall ED-DATA-WALL DATA/LAN system: wall ED-DATA-WALL DATA/LAN system: wall ED-DIAG-BKRS Diagrams ED-DIAG-BKRS Diagrams ED-DIAG-BNS Diagrams: bus duct ED-DIAG-BNS Diagrams: bus duct ED-DIAG-ENCL Diagrams: equipment ED-DIAG-ENCL Diagrams: equipment ED-DIAG-FEED Diagrams: ground ED-DIAG-FEED Diagrams: ground ED-DIAG-SWCH Diagrams: switches ED-DIAG-SWCH Diagrams: transformers	E□-CLOK-CNMB	Clock system: circuit number
Eb-CLOK-WALL Clock system: wall Eb-COMM Communications: circuits Eb-COMM-CLNG Communications: circuit number Eb-COMM-CNMB Communications: circuit number Eb-COMM-CPMM Communications: equipment Eb-COMM-CPMM Communications: equipment Eb-COMM-CPMM Communications: wall Eb-CONT Controls and instrumentation Eb-CONT Controls and instrumentation: wiring Eb-CONT-WIRE Controls and instrumentation: wiring Eb-DATA Data/LAN system Eb-DATA Data/LAN system: circuits Eb-DATA-CNG Data/LAN system: ceiling Eb-DATA-CNG Data/LAN system: circuit number Eb-DATA-CNMB Data/LAN system: circuit number Eb-DATA-CNMB Data/LAN system: dircuit number Eb-DATA-COMMB Data/LAN system: equipment Eb-DATA-COMMB Data/LAN system: door Eb-DATA-COMMB Data/LAN system: wall Eb-DATA-COMMB Data/LAN system: door Eb-DATA-COMMB	E ₋ -CLOK-EQPM	Clock system: equipment
ED-COMM COMMUNICATIONS ED-COMM-CIRC COMMUNICATIONS: circuits ED-COMM-CING COMMUNICATIONS: circuit number ED-COMM-CING COMMUNICATIONS: wall ED-CONT CONTROL CONTROL CONTROL CONTROL CONTROL ED-CONT WIRE CONTOL CONTROL CONTROL CONTROL ED-CONT-WIRE CONTOL CONTROL ED-DATA DATA/LAN system ED-DATA DATA/LAN system: circuits ED-DATA-CING DATA/LAN system: circuit number ED-DATA-FLOR DATA/LAN system: dior ED-DATA-FLOR DATA/LAN system: wall ED-DATA-WALL DATA/LAN system: wall ED-DIAG-BKRS Diagrams: bus duct ED-DIAG-BKRS Diagrams: bus duct ED-DIAG-BUSS Diagrams: equipment enclosures ED-DIAG-EQPM Diagrams: equipment ED-DIAG-EQPM Diagrams: equipment ED-DIAG-EQPM Diagrams: feeders ED-DIAG-FEED Diagrams: floor ED-DIAG-GRND Diagrams: switches ED-DIAG-SWCH Diagrams: switches ED-DIAG-SYFMR Diagrams: transformers	E□-CLOK-FLOR	Clock system: floor
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ED-FIRE-CNMB Fire protection: circuit number ED-FIRE-EQPM Fire protection: equipment ED-FIRE-EQPM Fire protection: equipment ED-FIRE-WALL Fire protection: wall ED-GRND Ground system ED-GRND-CIRC Ground system: circuits ED-GRND-CLNG Ground system: circuit number ED-GRND-CNMB Ground system: circuit number ED-GRND-DIAG Ground system: equipment ED-GRND-DIAG Ground system: equipment ED-GRND-EQUI Ground system: equipment ED-GRND-EQUI Ground system: equipotential ED-GRND-EQUI Ground system: wall ED-INST Instrumentation system ED-INST Instrumentation system: circuits ED-INST-CIRC Instrumentation system: circuits ED-INST-CLNG Instrumentation system: circuit number ED-INST-CNMB Instrumentation system: equipment ED-INST-EQPM Instrumentation system: equipment ED-INST-WALL Instrumentation system: wall ED-INST-WALL Instrumentation system: equipment ED-INST-CNMB Lighting: circuits: emergency ED-LITE-CIRC-CRIT Lighting: circuits: emergency ED-LITE-CLNG-EXIT Lighting: ceiling: emergency ED-LITE-CNMB-CRIT Lighting: circuit number: emergency ED-LITE-CNMB-CRIT Lighting: circuit number: emergency ED-LITE-CNMB-EMER Lighting: circuit number: emergency	E□-FIRE-CIRC	Fire protection: circuits
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ED-LITE-CIRC-CRIT Lighting: circuits: critical ED-LITE-CIRC-EMER Lighting: circuits: emergency ED-LITE-CLNG Lighting: ceiling ED-LITE-CLNG-CRIT Lighting: ceiling: critical ED-LITE-CLNG-EMER Lighting: ceiling: emergency ED-LITE-CLNG-EXIT Lighting: ceiling: exit ED-LITE-CNMB Lighting: circuit number ED-LITE-CNMB-CRIT Lighting: circuit number: critical ED-LITE-CNMB-EMER Lighting: circuit number: emergency ED-LITE-CNMB-EMER Lighting: circuit number: emergency	Eo-LITE	Lighting
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ED-LITE-CLNG-EMER Lighting: ceiling: emergency ED-LITE-CLNG-EXIT Lighting: ceiling: exit ED-LITE-CNMB Lighting: circuit number ED-LITE-CNMB-CRIT Lighting: circuit number: critical ED-LITE-CNMB-EMER Lighting: circuit number: emergency ED-LITE-EMER Lighting: emergency	E□-LITE-CLNG	Lighting: ceiling
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E _□ -LITE-EMER Lighting: emergency	En-LITE-CNMB-CRIT	Lighting: circuit number: critical
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E□-LITE-EQPM Lighting: equipment	E ₀ -LITE-EMER	Lighting: emergency
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ED-LITE-FLOR Lighting: floor ED-LITE-JBOX Lighting: junction box ED-LITE-OTLN Lighting: outline ED-LITE-ROOF Lighting: roof ED-LITE-SPCL Lighting: special ED-LITE-SWCH Lighting: switches ED-LITE-SWCH-CRIT Lighting: switches: critical ED-LITE-SWCH-EMER Lighting: switches: emergency ED-LITE-WALL Lighting: wall ED-LITE-WALL Lighting: wall: critical ED-LITE-WALL-CRIT Lighting: wall: emergency ED-LITE-WALL-EMER Lighting: wall: emergency ED-LITE-WALL-EMER Lighting: wall: exit ED-LITE-WALL-EXIT Lighting: wall: exit ED-LITE-WALL-EXIT Lighting protection system ED-LTNG-CIRC Lightning protection system: circuits ED-LTNG-CLNG Lightning protection system: circuit number ED-LTNG-CNMB Lightning protection system: circuit number ED-LTNG-EQPM Lightning protection system: equipment ED-LTNG-WALL Lightning protection system: wall
Eo-LITE-JBOX Lighting: junction box Eo-LITE-OTLN Lighting: outline Eo-LITE-ROOF Lighting: roof Eo-LITE-SPCL Lighting: special Eo-LITE-SWCH Lighting: switches Eo-LITE-SWCH-CRIT Lighting: switches: critical Eo-LITE-SWCH-EMER Lighting: switches: emergency Eo-LITE-WALL Lighting: wall Eo-LITE-WALL-CRIT Lighting: wall: critical Eo-LITE-WALL-EMER Lighting: wall: emergency Eo-LITE-WALL-EXIT Lighting: wall: exit Eo-LITE-WALL-EXIT Lighting protection system Eo-LTNG Lightning protection system: circuits Eo-LTNG-CING Lightning protection system: ceiling Eo-LTNG-CNMB Lightning protection system: equipment Eo-LTNG-EQPM Lightning protection system: equipment Eo-LTNG-WALL Lightning protection system: equipment
ED-LITE-OTLN Lighting: outline ED-LITE-ROOF Lighting: special ED-LITE-SPCL Lighting: switches ED-LITE-SWCH Lighting: switches: critical ED-LITE-SWCH-CRIT Lighting: switches: emergency ED-LITE-WALL Lighting: switches: emergency ED-LITE-WALL Lighting: wall ED-LITE-WALL-CRIT Lighting: wall: critical ED-LITE-WALL-EMER Lighting: wall: emergency ED-LITE-WALL-EMER Lighting: wall: exit ED-LITE-WALL-EXIT Lighting: wall: exit ED-LTNG Lightning protection system ED-LTNG-CIRC Lightning protection system: circuits ED-LTNG-CLNG Lightning protection system: ceiling ED-LTNG-CNMB Lightning protection system: circuit number ED-LTNG-CAMB Lightning protection system: equipment ED-LTNG-WALL Lightning protection system: equipment
ED-LITE-ROOF Lighting: roof ED-LITE-SPCL Lighting: switches ED-LITE-SWCH Lighting: switches: critical Lighting: switches: emergency Lighting: switches: emergency Lighting: wall Lighting: wall Lighting: wall: critical ED-LITE-WALL Lighting: wall: emergency Lighting: wall: emergency ED-LITE-WALL-EMER Lighting: wall: emergency ED-LITE-WALL-EMER Lighting: wall: exit ED-LITE-WALL-EXIT Lighting: wall: exit ED-LTNG Lightning protection system ED-LTNG-CIRC Lightning protection system: circuits ED-LTNG-CNMB Lightning protection system: circuit number ED-LTNG-CNMB Lightning protection system: equipment ED-LTNG-WALL Lightning protection system: equipment ED-LTNG-WALL Lightning protection system: wall
ED-LITE-SPCL Lighting: special ED-LITE-SWCH Lighting: switches: ED-LITE-SWCH-CRIT Lighting: switches: critical ED-LITE-SWCH-EMER Lighting: switches: emergency ED-LITE-WALL Lighting: wall ED-LITE-WALL-CRIT Lighting: wall: critical ED-LITE-WALL-EMER Lighting: wall: emergency ED-LITE-WALL-EMER Lighting: wall: exit ED-LITE-WALL-EXIT Lighting: wall: exit ED-LITE-WALL-EXIT Lighting protection system ED-LITE-URG-CIRC Lightning protection system: circuits ED-LITE-URG-CING Lightning protection system: circuit number ED-LITE-URG-CING Lightning protection system: circuit number ED-LITE-URG-CING Lightning protection system: circuit number ED-LITE-URG-CING Lightning protection system: equipment ED-LITE-URG-URG-URG-URG-URG-URG-URG-URG-URG-URG
ED-LITE-SWCH Lighting: switches ED-LITE-SWCH-CRIT Lighting: switches: critical ED-LITE-SWCH-EMER Lighting: switches: emergency ED-LITE-WALL Lighting: wall ED-LITE-WALL-CRIT Lighting: wall: critical ED-LITE-WALL-EMER Lighting: wall: emergency ED-LITE-WALL-EXIT Lighting: wall: exit ED-LITE-WALL-EXIT Lighting: wall: exit ED-LTNG Lightning protection system ED-LTNG-CIRC Lightning protection system: circuits ED-LTNG-CLNG Lightning protection system: ceiling ED-LTNG-CNMB Lightning protection system: circuit number ED-LTNG-EQPM Lightning protection system: equipment ED-LTNG-WALL Lightning protection system: wall
ED-LITE-SWCH-CRIT Lighting: switches: critical ED-LITE-SWCH-EMER Lighting: switches: emergency ED-LITE-WALL Lighting: wall ED-LITE-WALL-CRIT Lighting: wall: critical ED-LITE-WALL-EMER Lighting: wall: emergency ED-LITE-WALL-EXIT Lighting: wall: exit ED-LITE-WALL-EXIT Lighting: wall: exit ED-LTNG Lightning protection system ED-LTNG-CIRC Lightning protection system: circuits ED-LTNG-CLNG Lightning protection system: ceiling ED-LTNG-CNMB Lightning protection system: circuit number ED-LTNG-EQPM Lightning protection system: equipment ED-LTNG-WALL Lightning protection system: wall
ED-LITE-SWCH-EMER Lighting: switches: emergency Lighting: wall ED-LITE-WALL Lighting: wall: critical ED-LITE-WALL-EMER Lighting: wall: emergency ED-LITE-WALL-EXIT Lighting: wall: exit ED-LITE-WALL-EXIT Lighting: wall: emergency Lighting: wall: emergenc
ED-LITE-WALL Lighting: wall: critical ED-LITE-WALL-CRIT Lighting: wall: critical ED-LITE-WALL-EMER Lighting: wall: emergency ED-LITE-WALL-EXIT Lighting: wall: exit ED-LTNG Lightning protection system ED-LTNG-CIRC Lightning protection system: circuits ED-LTNG-CLNG Lightning protection system: ceiling ED-LTNG-CNMB Lightning protection system: circuit number ED-LTNG-EQPM Lightning protection system: equipment ED-LTNG-WALL Lightning protection system: wall
ED-LITE-WALL-CRIT Lighting: wall: critical ED-LITE-WALL-EMER Lighting: wall: emergency ED-LITE-WALL-EXIT Lighting: wall: exit ED-LTNG Lightning protection system ED-LTNG-CIRC Lightning protection system: circuits ED-LTNG-CLNG Lightning protection system: ceiling ED-LTNG-CNMB Lightning protection system: circuit number ED-LTNG-EQPM Lightning protection system: equipment ED-LTNG-WALL Lightning protection system: wall
ED-LITE-WALL-EMER Lighting: wall: emergency ED-LITE-WALL-EXIT Lighting: wall: exit ED-LTNG Lightning protection system ED-LTNG-CIRC Lightning protection system: circuits ED-LTNG-CLNG Lightning protection system: ceiling ED-LTNG-CNMB Lightning protection system: circuit number ED-LTNG-EQPM Lightning protection system: equipment ED-LTNG-WALL Lightning protection system: wall
E□-LITE-WALL-EXIT Lighting: wall: exit E□-LTNG Lightning protection system E□-LTNG-CIRC Lightning protection system: circuits E□-LTNG-CLNG Lightning protection system: ceiling E□-LTNG-CNMB Lightning protection system: circuit number E□-LTNG-EQPM Lightning protection system: equipment E□-LTNG-WALL Lightning protection system: wall
ED-LTNG Lightning protection system ED-LTNG-CIRC Lightning protection system: circuits ED-LTNG-CLNG Lightning protection system: ceiling ED-LTNG-CNMB Lightning protection system: circuit number ED-LTNG-EQPM Lightning protection system: equipment ED-LTNG-WALL Lightning protection system: wall
ED-LTNG-CIRC Lightning protection system: circuits ED-LTNG-CLNG Lightning protection system: ceiling ED-LTNG-CNMB Lightning protection system: circuit number ED-LTNG-EQPM Lightning protection system: equipment ED-LTNG-WALL Lightning protection system: wall
E□-LTNG-CLNG Lightning protection system: ceiling E□-LTNG-CNMB Lightning protection system: circuit number E□-LTNG-EQPM Lightning protection system: equipment E□-LTNG-WALL Lightning protection system: wall
E Lightning protection system: circuit number Lightning protection system: equipment Lightning protection system: wall
E Lightning protection system: equipment Lightning protection system: wall
E _□ -LTNG-WALL Lightning protection system: wall
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E□-MNTG Mounting system
E□-NURS Nurse call system
E□-NURS-CIRC Nurse call system: circuits
E□-NURS-CLNG Nurse call system: ceiling
E□-NURS-CNMB Nurse call system: circuit number
E□-NURS-EQPM Nurse call system: equipment
E□-NURS-FLOR Nurse call system: floor
E -NURS-WALL Nurse call system: wall
E _□ -OBST Obstructions
E□-PGNG Paging system
E _{-POWR} Power
E□-POWR-BUSW Power: busways
E _□ -POWR-CABL Power: cable systems
E□-POWR-CBOX Power: combiner box
E□-POWR-CBOX-FTPT Power: combiner box: area footprints
En-POWR-CIRC Power: circuits
E□-POWR-CIRC-CRIT Power: circuits: critical
En-POWR-CLNG Power: ceiling

En-POWR-CLNG-CRIT	Power: ceiling: critical
En-POWR-CNDT	Power: conduit
E□-POWR-CNMB	Power: circuit number
E□-POWR-CNMB-CRIT	Power: circuit number: critical
E□-POWR-DEVC	Power: devices
E□-POWR-DSCO	Power: disconnect switches
En-POWR-DSCO-ACFU	Power: disconnect switches: fused ac
En-POWR-DSCO-ACNF	Power: disconnect switches: unfused ac
E□-POWR-DSCO-DCFU	Power: disconnect switches: fused dc
En-POWR-DSCO-DCNF	Power: disconnect switches: unfused dc
E□-POWR-EQPM	Power: equipment
E□-POWR-EQPM-CRIT	Power: equipment: critical
E□-POWR-EXTR	Power: exterior
En-POWR-FEED	Power: feeders
E□-POWR-FLOR	Power: floor
E□-POWR-FLOR-CRIT	Power: floor: critical
E□-POWR-JBOX	Power: junction box
En-POWR-PANL	Power: panels
En-POWR-POCC	Power: point of common coupling
E□-POWR-POI~	Power: point of interconnection
En-POWR-ROOF	Power: roof
E□-POWR-SWBD	Power: switchboards
En-POWR-UCPT	Power: under-carpet wiring
En-POWR-URAC	Power: underfloor raceways
En-POWR-WALL	Power: wall
En-POWR-WALL-CRIT	Power: wall: critical
E□-POWR-XFMR-PADM	Power: transformers: pad-mounted
E□-POWR-XFMR-POLM	Power: transformers: pole-mounted
E ₋ -PVMD	Photovoltaic modules
En-SITE	Site features
E□-SITE-OVHD	Site features: overhead
E ₋ -SITE-POLE	Site features: pole
E□-SITE-UGND	Site features: underground
E ₋ SOUN	Sound system
E _D -UTIL	Utilities

5.5 DISTRIBUTED ENERGY LAYER LIST

Distributed Energy Field Codes

The Layer Names shown below provide examples for the use of Major and Minor Group field codes for this discipline. See <u>CLG Sections 1.5</u> and <u>1.6</u> for complete rules and options governing the use of Major and Minor Group field codes.

Distributed Energy Discipline Designators

Designator	Description
W	Distributed Energy
WC	Distributed Energy Civil
WD	Distributed Energy Demolition
WI	Distributed Energy Interconnection
WP	Distributed Energy Power
WS	Distributed Energy Structural
WT	Distributed Energy Telecommunications
WY	Distributed Energy Auxiliary Systems
WJ	User Defined
WK	User Defined

Distributed Energy Layer List

Layer Name	Description	
No layer names have been p	escribed for this discipline.	

5.6 EQUIPMENT LAYER LIST

Equipment Field Codes

The Layer Names shown below provide examples for the use of Major and Minor Group field codes for this discipline. See <u>CLG Sections 1.5</u> and <u>1.6</u> for complete rules and options governing the use of Major and Minor Group field codes.

Equipment Discipline Designators

-	
Designator	Description
Q	Equipment
QA	Equipment Athletic
QB	Equipment Bank
QC	Equipment Dry Cleaning
QD	Equipment Detention
QE	Equipment Educational
QF	Equipment Food Service
QH	Equipment Hospital

QL	Equipment Laboratory
QM	Equipment Maintenance
QP	Equipment Parking Lot
QR	Equipment Retail
QS	Equipment Site
QT	Equipment Theatrical
QV	Equipment Video/Photographic
QY	Equipment Security
QJ	User Defined
QK	User Defined

Equipment Layer List

Layer Name	Description
	<u> </u>
Q□-CMPR	Computer
Q□-CSWK	Casework
Q ₋ -CSWK-DVDR	Casework: thin dividers
Q ₋ -CSWK-EDGE	Casework: edge
Q ₋ -CSWK-ELEV	Casework: elevation
Q□-CSWK-FIXT	Casework: fixtures (plumbing/service)
Q□-CSWK-FRMG	Casework: structural framing
Q□-CSWK-FULL	Casework: full-height (cabinets/lockers)
Q□-CSWK-GLAZ	Casework: glazing
Q□-CSWK-GRND	Casework: ground
Q□-CSWK-HRDW	Casework: hardware
Q□-CSWK-LOWR	Casework: lower (cabinets)
Q□-CSWK-PATT	Casework: texture and hatch patterns
Q□-CSWK-SHLF	Casework: wall mounted shelving
Q□-CSWK-SUBA	Casework: cabinet sub-assemblies, drawer boxes
Q□-CSWK-UCTR	Casework: undercounter (cabinets-for layout)
Q□-CSWK-UPPR	Casework: upper (cabinets)
Q□-CSWK-WKSF	Casework: work surface
Q□-ELEV	Elevation
Q□-ELEV-EQPM	Elevation: equipment
Q□-ELEV-FIXT	Elevation: fixtures (plumbing/service)
Q□-ELEV-GLAZ	Elevation: glazing
Q□-ELEV-HRDW	Elevation: hardware
Q□-ELEV-OVHD	Elevation: overhead
Q□-ELEV-PATT	Elevation: texture and hatch patterns
Q□-ELEV-STRC	Elevation: structures (support components)

Q□-EXHS	Exhaust system
Q□-MAJQ	Major equipment
Q□-MAJQ-ACCS	Major equipment: access
Q□-MAJQ-ENGR	Major equipment: engineering information
Q□-MAJQ-FIXD	Major equipment: fixed
Q□-MAJQ-MOVE	Major equipment: movable
Q□-MAJQ-MVNG	Major equipment: moving or suspended
Q□-MAJQ-OVHD	Major equipment: overhead
Q□-MAJQ-PATT	Major equipment: texture and hatch patterns
Q□-MAJQ-UCTR	Major equipment: undercounter
Q□-MINQ	Minor equipment
Q□-POWR	Power
Q□-SPCL	Special
Q□-SPCL-ACCS	Special: access
Q□-SPCL-ENGR	Special: engineering information
Q□-SPCL-FIXD	Special: fixed
Q□-SPCL-MOVE	Special: movable
Q□-SPCL-MVNG	Special: moving or suspended
Q□-SPCL-OVHD	Special: overhead
Q□-SPCL-PATT	Special: texture and hatch patterns
Q□-SPCL-UCTR	Special: undercounter

5.7 FIRE PROTECTION LAYER LIST

Fire Protection Field Codes

The Layer Names shown below provide examples for the use of Major and Minor Group field codes for this discipline. See <u>CLG Sections 1.5</u> and <u>1.6</u> for complete rules and options governing the use of Major and Minor Group field codes.

Fire Protection Discipline Designators

Designator	Description
F	Fire Protection
FA	Fire Detection and Alarm
FX	Fire Suppression
FJ	User Defined
FK	User Defined

Fire Protection Layer List

Layer Name	Description

F ₋ AFFF	Aqueous film-forming foam system
F ₋ -AFFF-EQPM	Aqueous film-forming foam system: equipment
F ₋ AFFF-PIPE	Aqueous film-forming foam system: piping
F ₋ CO2S	CO2 system
F□-CO2S-EQPM	CO2 system: equipment
F ₋ CO2S-PIPE	CO2 system: piping
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 _□ -PROT	Fire protection system
F ₋ -PROT-ALRM	Fire protection system: alarm
F□-PROT-EQPM	Fire protection system: equipment
F ₋ -PROT-EXTI	Fire protection system: extinguishers
F ₋ -PROT-HOSE	Fire protection system: hoses
F ₋ -PROT-HYDT	Fire protection: hydrants and connections
F _□ -PROT-RATE	Fire protection system: ratings
F ₋ -PROT-RATE-DOOR	Fire protection system: ratings: doors
F ₋ -PROT-RATE-WALL	Fire protection system: ratings: wall
F□-PROT-SMOK	Fire protection system: smoke detector/heat sensors
F ₋ SPKL	Sprinkler
F ₋ -SPKL-C LHD	Sprinkler: ceiling heads
F□-SPKL-E QPM	Sprinkler: equipment
F□-SPKL-O THD	Sprinkler: other heads
F□-SPKL-PI PE	Sprinkler: piping
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5.8 GENERAL LAYER LIST

General Field Codes

The Layer Names shown below provide examples for the use of Major and Minor Group field codes for this discipline. See <u>CLG Sections 1.5</u> and <u>1.6</u> for complete rules and options governing the use of Major and Minor Group field codes.

General Discipline Designators

Designator	Description	
G	General	
GC	General Contractual	

GI	General Informational
GR	General Resource
GJ	User Defined
GK	User Defined

General Layer List

Layer Name	Description
G□-ACCS	Access
G□-CODE	Code compliance plan
G□-EVAC	Evacuation plan
G□-FIRE	Fire protection plan
G□-PLAN	Key plan (floor plan)
G ₋ SITE	Key plan (site features)

5.9 GEOTECHNICAL LAYER LIST

Geotechnical Field Codes

The Layer Names shown below provide examples for the use of Major and Minor Group field codes for this discipline. See <u>CLG Sections 1.5</u> and <u>1.6</u> for complete rules and options governing the use of Major and Minor Group field codes.

Geotechnical Discipline Designators

Designator	Description
В	Geotechnical
BJ	User Defined
BK	User Defined

Geotechnical Layer List

Layer Name	Description
B□-BORE	Borings
B□-BORE-FDTA	Borings: field data
B□-BORE-HOLE	Borings: holes (perc)
B□-BORE-LDTA	Borings: laboratory data
B□-DETL-ANNN	Detail: optional number (A = letter, NNN = number between 001 and 999)
B□-DETL-ANNN-CONC	Detail: optional number: concrete
B□-DETL-ANNN-ERTH	Detail: optional number: earth

B□-DETL-ANNN-FDTA	Detail: optional number: field data
B□-DETL-ANNN-FILL	Detail: optional number: fill and cover material
B□-DETL-ANNN-GENF	Detail: optional number: general features
B□-DETL-ANNN-GNDW	Detail: optional number: ground water
Bn-DETL-ANNN-LDTA	Detail: optional number: laboratory data
B□-DETL-ANNN-PVMT	Detail: optional number: pavement
B□-DETL-ANNN-SPCL	Detail: optional number: special
B□-DETL-ANNN-STRM	Detail: optional number: storm sewer
B□-DETL-ANNN-SUBS	Detail: optional number: sub-surface areas
B□-DETL-ANNN-SURF	Detail: optional number: surface areas

5.10 HAZARDOUS MATERIALS LAYER LIST

Hazardous Materials Field Codes

The Layer Names shown below provide examples for the use of Major and Minor Group field codes for this discipline. See <u>CLG Sections 1.5</u> and <u>1.6</u> for complete rules and options governing the use of Major and Minor Group field codes.

Hazardous Materials Discipline Designators

Hazardous Materials
Hazardous Materials
Hazardous Materials Asbestos
Hazardous Materials Chemicals
Hazardous Materials Lead
Hazardous Materials PCB
Hazardous Materials Refrigerants
User Defined
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Hazardous Materials Layer List

Layer Name	Description	
H□-PLAN	Key plan (floor plan)	
H□-SITE	Key plan (site features)	

5.11 INTERIORS LAYER LIST

Interiors Field Codes

The Layer Names shown below provide examples for the use of Major and Minor Group field codes for this discipline. See <u>CLG Sections 1.5</u> and <u>1.6</u> for complete rules and options governing the use of Major and Minor Group field codes.

Interiors Discipline Designators

Designator	Description	
I	Interior	
ID	Interior Demolition	
IF	Interior Furnishings	
IG	Interior Graphics	
IN	Interior Design	
IJ	User Defined	
IK	User Defined	

Interiors Layer List

	Area
	Area
I□-AREA-OCCP A	Area: occupant or employee names
I□-CLNG	Ceiling
I□-CLNG-ACCS	Ceiling: access
I□-CLNG-OPNG C	Ceiling: openings
I□-CLNG-SUSP C	Ceiling: suspended elements
In-CLNG-TEES C	Ceiling: main tees
In-COLS	Columns
I□-CRPT C	Carpet/carpet tile
I□-CSWK C	Casework
I□-DOOR □	Doors
I□-DOOR-FULL □	Doors: full-height
I□-DOOR-PRHT □	Doors: partial-height
I□-EQPM E	Equipment
I□-EQPM-ACCS E	Equipment: access
I□-EQPM-FIXD E	Equipment: fixed
I□-EQPM-OVHD E	Equipment: overhead
I□-EQPM-STOR E	Equipment: storage
I□-FLOR F	Floor
I□-FLOR-EVTR F	Floor: elevator cars and equipment
I□-FLOR-FIXT F	Floor: fixtures (plumbing)
I□-FLOR-HRAL F	Floor: handrails/guard rails

I□-FLOR-LEVL	Floor: level changes (ramps, pits, depressions)
I□-FLOR-OTLN	Floor: outline
I□-FLOR-OVHD	Floor: overhead
I□-FLOR-RAIS	Floor: raised
I□-FLOR-RISR	Floor: risers
I□-FLOR-SIGN	Floor: signage
In-FLOR-SPCL	Floor: architectural specialties (toilet room accessories, display cases)
I□-FLOR-STRS	Floor: stair treads (escalators, ladders)
I□-FLOR-TPTN	Floor: toilet partitions
I□-FLOR-WDWK	Floor: architectural woodwork
I□-FNSH	Finishes
I□-FURN	Furnishings
I□-FURN-FILE	Furnishings: file cabinets
I□-FURN-FREE	Furnishings: freestanding
I□-FURN-PLNT	Furnishings: plants
I□-FURN-PNLS	Furnishings: system panels
I□-FURN-SEAT	Furnishings: seating
I□-FURN-STOR	Furnishings: storage (component system)
I□-FURN-WKSF	Furnishings: work surface (component system)
I□-GLAZ	Glazing
In-GLAZ-FULL	Glazing: full-height
In-GLAZ-PRHT	Glazing: partial-height
In-GLAZ-SILL	Glazing: window sills
I□-HVAC	HVAC systems
I□-HVAC-RDFF	HVAC systems: return air diffusers
I□-HVAC-SDFF	HVAC systems: supply diffusers
In-MILL	Millwork
In-PRTN	Partitions
In-PRTN-FIRE	Partitions: fire protection
In-PRTN-FULL	Partitions: full-height
In-PRTN-HEAD	Partitions: door and window headers
I□-PRTN-JAMB	Partitions: door and window jambs
I□-PRTN-MOVE	Partitions: moveable
I□-PRTN-PRHT	Partitions: partial-height
Io-TILE	Tile

5.12 LANDSCAPE LAYER LIST

Landscape Field Codes

The Layer Names shown below provide examples for the use of Major and Minor Group field codes for this discipline. See <u>CLG Sections 1.5</u> and <u>1.6</u> for complete rules and options governing the use of Major and Minor Group field codes.

Landscape Discipline Designators

Designator	Description
L	Landscape
LD	Landscape Demolition
LG	Landscape Grading
LI	Landscape Irrigation
LL	Landscape Lighting
LP	Landscape Planting
LR	Landscape Relocation
LS	Landscape Site
LJ	User Defined
LK	User Defined

Landscape Layer List

Layer Name	Description
Ln-FENC	Fences
L□-FENC-LINK	Fences: chain link
L□-FENC-LINK-04FT	Fences: chain link: four feet high
L□-FENC-LINK-06FT	Fences chain link: six feet high
L□-FENC-PRVC	Fences: privacy
L□-FENC-WOOD	Fences: wood
L□-IRRG	Irrigation
L□-IRRG-COVR	Irrigation: coverage
L□-IRRG-DRIP	Irrigation: drip irrigation tubing
L□-IRRG-EQPM	Irrigation: equipment (pumps, valves, and controllers)
L□-IRRG-LTRL	Irrigation: lateral pipe
L□-IRRG-MAIN	Irrigation: mainline
L□-IRRG-PIPE	Irrigation: piping
L□-IRRG-SLVE	Irrigation: pipe sleeve
L□-IRRG-SPKL	Irrigation: sprinklers (rotors, heads)
L□-IRRG-VALV	Irrigation: valves
L□-PLNT	Plant and landscape material
L□-PLNT-BEDS	Plant and landscape material: perennial and annual beds
L□-PLNT-BUSH	Plant and landscape material: bushes and shrubs

L□-PLNT-CONI	Plant and landscape material: coniferous trees
L□-PLNT-CTNR	Plant and landscape material: container or planter
L□-PLNT-EDGR	Plant and landscape material: planting bed edger
L□-PLNT-EVGR	Plant and landscape material: evergreen trees - broadleaf
L□-PLNT-GCVR	Plant and landscape material: ground cover
L□-PLNT-MLCH	Plant and landscape material: mulches - organic and inorganic
L ₋ PLNT-PALM	Plant and landscape material: palm trees
L ₋ -PLNT-PLNT	Plant and landscape material: plants
Ln-PLNT-SEED	Plant and landscape material: seeding areas
L□-PLNT-SHAD	Plant and landscape material: shadow area
L ₋ -PLNT-TREE	Plant and landscape material: trees
L ₋ -PLNT-TURF	Plant and landscape material: lawn areas
L ₋ -PLNT-VINE	Plant and landscape material: vines
L□-PVMT	Pavement
L□-PVMT-ASPH	Pavement: asphalt
L□-PVMT-BRCK	Pavement: brick
L□-PVMT-CONC	Pavement: concrete
L□-PVMT-CONC-AGGR	Pavement: concrete: exposed aggregate
L□-PVMT-GRVL	Pavement: gravel
L _□ -PVMT-JNTC	Pavement: control joint
L _D -PVMT-JNTE	Pavement: expansion joint (for concrete only)
L ₋ -PVMT-PAVR	Pavement: unit pavers
L□-PVMT-RAMP	Pavement: accessible ramp
L _D -PVMT-STRS	Pavement: stair treads
L _D -SITE	Site features
L□-SITE-BRDG	Site features: bridge (pedestrian)
L□-SITE-CURB	Site features: curb
L□-SITE-CURB-BACK	Site features: curb: back
L□-SITE-CURB-FACE	Site features: curb: face
Ln-SITE-DECK	Site features: deck (wood, typ.)
L ₋ -SITE-FURN	Site features: furnishings
L ₋ -SITE-PLAY	Site features: play structures
L□-SITE-PLAY-EQPM	Site features: play structures: equipment
L ₋ -SITE-PLAY-ZONE	Site features: play structures: zoning
L ₋ -SITE-POOL	Site features: pools and spas
L□-SITE-POOL-BACK	Site features: pools and spas: back of pool wall
L ₋ -SITE-POOL-FACE	Site features: pools and spas: face of pool wall
L ₋ -SITE-PRKG	Site features: parking
L ₋ -SITE-PRKG-STRP	Site features : parking: striping
L□-SITE-ROAD	Site features: edge of roadway line

L□-SITE-ROCK	Site features: large rocks and rock outcroppings
L□-SITE-RRAP	Site features: riprap
L□-SITE-RTWL	Site features: retaining wall
L□-SITE-SPRT	Site features: sports fields
L□-SITE-SPRT-EQPM	Site features: sports fields: equipment
Lo-SITE-SPRT-PERI	Site features: sports fields: perimeter
Lo-SITE-STEP	Site features: steps
L□-SITE-SWLK	Site features: sidewalks and steps
L□-SITE-TRAL	Site features: trail or path
Ln-SITE-TRAL-ASPH	Site features: trail or path: asphalt
L□-SITE-TRAL-CONC	Site features: trail or path: concrete
L□-SITE-TRAL-GRVL	Site features: trail or path: gravel
Ln-SITE-WALL	Site features: walls
L ₋ -SITE-WEIR	Site features: pool weir
L _□ -TOPO	Topographic feature
L□-TOPO-LIMI	Topographic feature: limit of earthwork
L ₋ -TOPO-SPOT	Topographic feature: spot elevations

5.13 MECHANICAL LAYER LIST

Mechanical Field Codes

The Layer Names shown below provide examples for the use of Major and Minor Group field codes for this discipline. See <u>CLG Sections 1.5</u> and <u>1.6</u> for complete rules and options governing the use of Major and Minor Group field codes.

Mechanical Discipline Designators

Designator	Description
M	Mechanical
MD	Mechanical Demolition
MH	Mechanical HVAC
MI	Mechanical Instrumentation
MP	Mechanical Piping
MS	Mechanical Site
MJ	User Defined
MK	User Defined

Mechanical Layer List

Layer Name	Description

M□-BRIN	Brine systems
M□-BRIN-EQPM	Brine systems: equipment
M□-BRIN-PIPE	Brine systems: piping
M□-CHIM	Chimneys and stacks
M□-CMPA	Compressed/processed air systems
M□-CMPA-EQPM	Compressed/processed air systems: equipment
M□-CMPA-PEQP	Compressed/processed air systems: process equipment
M□-CMPA-PIPE	Compressed/processed air systems: piping
M□-CMPA-PPIP	Compressed/processed air systems: process piping
M□-CNDW	Condenser water systems
M□-CNDW-EQPM	Condenser water systems: equipment
M□-CNDW-PIPE	Condenser water systems: piping
M□-CNDW-RETN	Condenser water systems: return
M□-CNDW-RETN-PIPE	Condenser water systems: return: piping
M□-CNDW-RETN-SKCH	Condenser water systems: return: sketch
M□-CNDW-SPLY	Condenser water systems: supply
M□-CNDW-SPLY-PIPE	Condenser water systems: supply: piping
M□-CNDW-SPLY-SKCH	Condenser water systems: supply: sketch
M□-CONT	Controls and instrumentation
M□-CONT-THER	Controls and instrumentation: thermostats
M□-CONT-WIRE	Controls and instrumentation: wiring (low voltage)
M□-CWTR	Chilled water systems
M□-CWTR-CNDS	Chilled water systems: condensate piping
M□-CWTR-EQPM	Chilled water systems: equipment
M□-CWTR-PIPE	Chilled water systems: piping
M□-CWTR-RETN	Chilled water systems: return
M□-CWTR-RETN-PIPE	Chilled water systems: return: piping
M□-CWTR-RETN-SKCH	Chilled water systems: return: sketch
M□-CWTR-SPLY	Chilled water systems: supply
M□-CWTR-SPLY-PIPE	Chilled water systems: supply: piping
M□-CWTR-SPLY-SKCH	Chilled water systems: supply: sketch
M□-DOMW	Domestic water systems
M□-DOMW-MKUP	Domestic water systems: make-up water
M□-DUAL	Dual temperature systems
M□-DUAL-RETN	Dual temperature systems: return
M _□ -DUAL-RETN-PIPE	Dual temperature systems: return: piping
M□-DUAL-RETN-SKCH	Dual temperature systems: return: sketch
M□-DUAL-SPLY	Dual temperature systems: supply
M□-DUAL-SPLY-PIPE	Dual temperature systems: supply: piping
Mn-DUAL-SPLY-SKCH	Dual temperature systems: supply: sketch

M□-DUST	Dust and fume collection systems
M□-DUST-DUCT	Dust and fume collection systems: ductwork
M _□ -DUST-DUCT-CNTR	Dust and fume collection systems: ductwork: center
M□-DUST-EQPM	Dust and fume collection systems: equipment
M _□ -ELHT	Electric heat
M□-ELHT-EQPM	Electric heat: equipment
M□-ENER	Energy management systems
M□-ENER-EQPM	Energy management systems: equipment
M□-ENER-WIRE	Energy management systems: wiring
M□-EXHS	Exhaust system
M□-EXHS-CDFF	Exhaust system: ceiling diffusers
M□-EXHS-DUCT	Exhaust system: ductwork
M□-EXHS-DUCT-CNTR	Exhaust system: ductwork: center
M□-EXHS-EQPM	Exhaust system: equipment
M□-EXHS-RFEQ	Exhaust system: rooftop equipment
M□-FLOR	Floor
M _□ -FLOR-PENE	Floor: penetrations
M _□ -FUEL	Fuel systems
M□-FUEL-EQPM	Fuel systems: equipment
M□-FUEL-GGEP	Fuel systems: gas general piping
M _□ -FUEL-GGEP-HPIP	Fuel systems: gas general piping: high pressure piping
M _□ -FUEL-GGEP-LPIP	Fuel systems: gas general piping: low-pressure piping
M□-FUEL-GGEP-LQPG	Fuel systems: gas general piping: liquid petroleum gas
Mn-FUEL-GGEP-MPIP	Fuel systems: gas general piping: medium-pressure piping
M□-FUEL-GPRP	Fuel systems: gas process piping
M _□ -FUEL-OPRP	Fuel systems: oil process piping
M _□ -FUEL-OGEP	Fuel systems: oil general piping
Mn-FUEL-OGEP-DISC	Fuel systems: oil general piping: discharge
Mn-FUEL-OGEP-FLLW	Fuel systems: oil general piping: flow
M□-FUEL-OGEP-GAGE	Fuel systems: oil general piping: gauge
M□-FUEL-OGEP-RETN	Fuel systems: oil general piping: return
M□-FUEL-OGEP-SPLY	Fuel systems: oil general piping: supply
M□-FUEL-OGEP-VENT	Fuel systems: oil general piping: vents
M□-FUME	Fume hood
M□-FUME-DUCT	Fume hood: ductwork
M□-FUME-EQPM	Fume hood: equipment
M□-GLYC	Glycol systems
M□-GLYC-RETN	Glycol systems: return
M□-GLYC-RETN-PIPE	Glycol systems: return: piping
M□-GLYC-RETN-SKCH	Glycol systems: return: sketch

Mc-GLYC-SPLY-PIPE Glycol systems: supply: piping Mc-GLYC-SPLY-SKCH Glycol systems: supply: sketch Mc-HVAC HVAC systems Mc-HVAC-BOXD HVAC systems: mixing box, dual duct Mc-HVAC-BOXS HVAC systems: mixing box, single duct Mc-HVAC-CDFF HVAC systems: ceiling diffusers Mc-HVAC-CLDA HVAC systems: coid air: ductwork Mc-HVAC-CLDA-DUCT HVAC systems: coid air: equipment Mc-HVAC-CLDA-EQPM HVAC systems: coid air: equipment Mc-HVAC-CLDA-EQPM HVAC systems: coid air: sketch line round or oval duct Mc-HVAC-CLDA-SECT HVAC systems: coid air: sketch line rectangular duct Mc-HVAC-CLDA-SIZE HVAC systems: coid air: sketch line rectangular duct Mc-HVAC-CLDA-SIZE HVAC systems: coid air: sketch line rectangular duct Mc-HVAC-CLDA-SIZE HVAC systems: coid air: sketch line rectangular duct Mc-HVAC-DA-SIZE HVAC systems: coid air: sketch line rectangular duct Mc-HVAC-DA-SIZE HVAC systems: coid air: sketch line rectangular duct Mc-HVAC-DA-SIZE HVAC systems: equipment doors Mc-HVAC-DOOR HVAC systems: equipment doors Mc-HVAC-EPIP HVAC systems: equipment with piping, ductwork and electricity Mc-HVAC-EPIP HVAC systems: equipment with piping and electricity Mc-HVAC-EPIP HVAC systems: exhaust air Mc-HVAC-EXHS-DUCT HVAC systems: exhaust air Mc-HVAC-EXHS-DUCT HVAC systems: exhaust air: ductwork Mc-HVAC-EXHS-GRIL HVAC systems: exhaust air: sketch line round or oval duct Mc-HVAC-EXHS-SECH HVAC systems: exhaust air: sketch line round or oval duct Mc-HVAC-EXHS-SECH HVAC systems: exhaust air: sketch line round or oval duct Mc-HVAC-HOTA-BCH HVAC systems: exhaust air: sketch line round or oval duct Mc-HVAC-HOTA-SECT HVAC systems: hot air: sketch line round or oval duct Mc-HVAC-HOTA-SECT HVAC systems: hot air: sketch line round or oval duct Mc-HVAC-HOTA-SECT HVAC systems: hot air: sketch line round or oval duct Mc-HVAC-HOTA-SECT HVAC systems: hot air: sketch line rectangular duct Mc-HVAC-HOTA-SECT HVAC systems: hot air: sketch line rectangular duct Mc-HVAC-HOTA-SECT HVAC systems: hot air: sketch line rectangular duct Mc-HVAC-HOTA-SECT HVAC systems: hot air: s	M□-GLYC-SPLY	Glycol systems: supply
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M□-HVAC-CLDA-EQPM M□-HVAC-CLDA-RSCH M□-HVAC-CLDA-RSCH M□-HVAC-CLDA-SECT M□-HVAC-CLDA-SECT M□-HVAC-CLDA-SECT M□-HVAC-CLDA-SIZE M□-HVAC-CLDA-SIZE M□-HVAC-CLDA-SIZE M□-HVAC-CLDA-SSCH M□-HVAC-DA-SSCH M□-HVAC-DA-SSCH M□-HVAC-DOOR M□-HVAC-DOOR M□-HVAC-DOOR M□-HVAC-EFAN M□-HVAC-EFAN M□-HVAC-EFAN M□-HVAC-EFAN M□-HVAC-EPID M□-HVAC-EPID M□-HVAC-EPIP M□-HVAC-EPIP M□-HVAC-EQPM M□-HVAC-Systems: equipment with piping, ductwork and electricity M□-HVAC-EXHS M□-HVAC-Systems: exhaust air: M□-HVAC-EXHS-DUCT M□-HVAC systems: exhaust air: ductwork M□-HVAC-EXHS-EQPM M□-HVAC-Systems: exhaust air: grilles M□-HVAC-EXHS-RSCH M□-HVAC-Systems: exhaust air: sketch line round or oval duct M□-HVAC-EXHS-SECT M□-HVAC-Systems: exhaust air: ductwork size M□-HVAC-EXHS-SSCH M□-HVAC-Systems: exhaust air: ductwork size M□-HVAC-EXHS-SSCH M□-HVAC-Systems: exhaust air: ductwork size M□-HVAC-HOTA-DUCT M□-HVAC-BYS-SSCH M□-HVAC-HOTA-DUCT M□-HVAC-HOTA-BUCH M□-HVAC-HOTA-RSCH M□-HVAC-HOTA-SSCH M□-HVAC-HOTA-SSCH M□-HVAC-HOTA-SSCH M□-HVAC-HOTA-SSCH M□-HVAC-HOTA-SSCH M□-HVAC-Systems: hot air: ductwork size M□-HVAC-HOTA-SSCH M□-HVAC-Systems: hot air: ductwork size M□-HVAC-HOTA-SSCH M□-HVAC-Systems: hot air: ductwork M□-HVAC-HOTA-SSCH M□-HVAC-Systems: hot air: ductwork size M□-HVAC-HOTA-SSCH M□-HVAC-HOTA-SSCH M□-HVAC-Systems: hot air: ductwork size M□-HVAC-HOTA-SSCH M□-HVAC-HOTA-SSCH M□-HVAC-Systems: hot air: ductwork size M□-HVAC-HOTA-SSCH M□-HVAC-Systems: hot air: ductwork size M□-HVAC-HOTA-SSCH M□-HVAC-HOTA-SSCH M□-HVAC-Systems: hot air: ductwork size M□-HVAC-HOTA-SSCH M□-HVAC-Systems: hot air: ductwork size M□-HVAC-HOTA-SSCH M□-HVAC-Systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SSCH HVAC systems: hot air: ductwork size M□-HVAC-HOTA-SSCH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SSCH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SSCH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SSCH HVAC systems: return ai	M□-HVAC-CLDA	HVAC systems: cold air
M□-HVAC-CLDA-RSCH M□-HVAC-CLDA-SECT HVAC systems: cold air: sketch line round or oval duct M□-HVAC-CLDA-SIZE HVAC systems: cold air: sketch line rectangular duct M□-HVAC-CLDA-SIZE HVAC systems: cold air: ductwork size M□-HVAC-DA-SSCH HVAC systems: fire, smoke, volume damper HVAC-DMPR HVAC-DMPR HVAC systems: equipment doors M□-HVAC-EFAN HVAC systems: equipment with electric fans M□-HVAC-EFAN HVAC systems: equipment with piping, ductwork and electricity M□-HVAC-EPIP HVAC systems: equipment with piping and electricity M□-HVAC-EPIP HVAC systems: exhaust air M□-HVAC-EXHS HVAC systems: exhaust air: ductwork M□-HVAC-EXHS-DUCT HVAC systems: exhaust air: ductwork M□-HVAC-EXHS-QPM HVAC systems: exhaust air: equipment M□-HVAC-EXHS-GRIL HVAC systems: exhaust air: grilles M□-HVAC-EXHS-SECT HVAC systems: exhaust air: sketch line round or oval duct M□-HVAC-EXHS-SECT HVAC systems: exhaust air: sketch line round or oval duct M□-HVAC-EXHS-SIZE HVAC systems: exhaust air: sketch line rectangular duct M□-HVAC-HOTA-DUCT HVAC systems: exhaust air: sketch line rectangular duct M□-HVAC-HOTA-DUCT HVAC systems: hot air: M□-HVAC-HOTA-PSCH HVAC systems: hot air: ductwork M□-HVAC-HOTA-SECT HVAC systems: hot air: ductwork M□-HVAC-HOTA-SECT HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-SECT HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SECT HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SECT HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SECT HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SECT HVAC systems: hot air: ductwork size M□-HVAC-HOTA-SECH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SECH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SECH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SECH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SECH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SECH HVAC systems: return air diffusers M□-HVAC-RETN HVAC system	M□-HVAC-CLDA-DUCT	HVAC systems: cold air: ductwork
M□-HVAC-CLDA-SECT HVAC systems: cold air: section M□-HVAC-CLDA-SIZE HVAC systems: cold air: ductwork size M□-HVAC-DMPR HVAC systems: fire, smoke, volume damper M□-HVAC-DMPR HVAC systems: equipment doors M□-HVAC-DOOR HVAC systems: equipment with electric fans M□-HVAC-EFAN HVAC systems: equipment with piping, ductwork and electricity M□-HVAC-EPID HVAC systems: equipment with piping and electricity M□-HVAC-EPIP HVAC systems: equipment M□-HVAC-EXHS HVAC systems: exhaust air: ductwork M□-HVAC-EXHS-DUCT HVAC systems: exhaust air: ductwork M□-HVAC-EXHS-EQPM HVAC systems: exhaust air: equipment M□-HVAC-EXHS-EQPM HVAC systems: exhaust air: spilles M□-HVAC-EXHS-GRIL HVAC systems: exhaust air: section M□-HVAC-EXHS-SSCH HVAC systems: exhaust air: section M□-HVAC-EXHS-SSCH HVAC systems: exhaust air: section M□-HVAC-EXHS-SSCH HVAC systems: exhaust air: sketch line rectangular duct M□-HVAC-HOTA-DUCT HVAC systems: exhaust air: sketch line rectangular duct M□-HVAC-HOTA-DUCT HVAC systems: hot air: ductwork M□-HVAC-HOTA-FOUCT HVAC systems: hot air: ductwork M□-HVAC-HOTA-SECT HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SECT HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SECT HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SECT HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SECT HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SECT HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SECT HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SECT HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SECT HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SECT HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SECT HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SECT HVAC systems: return air diffusers M□-HVAC-RETN HVAC systems: return	M□-HVAC-CLDA-EQPM	HVAC systems: cold air: equipment
M□-HVAC-CLDA-SIZE HVAC systems: cold air: ductwork size M□-HVAC-CLDA-SSCH HVAC systems: cold air: sketch line rectangular duct M□-HVAC-DMPR HVAC systems: fire, smoke, volume damper M□-HVAC-DOOR HVAC systems: equipment doors M□-HVAC-EFAN HVAC systems: equipment with electric fans M□-HVAC-EPDU HVAC systems: equipment with piping, ductwork and electricity M□-HVAC-EPIP HVAC systems: equipment with piping and electricity M□-HVAC-EQPM HVAC systems: exhaust air M□-HVAC-EXHS HVAC systems: exhaust air: ductwork M□-HVAC-EXHS-DUCT HVAC systems: exhaust air: equipment M□-HVAC-EXHS-GRIL HVAC systems: exhaust air: sketch line round or oval duct M□-HVAC-EXHS-SCH HVAC systems: exhaust air: sketch line round or oval duct M□-HVAC-EXHS-SIZE HVAC systems: exhaust air: ductwork size M□-HVAC-EXHS-SSCH HVAC systems: exhaust air: sketch line rectangular duct M□-HVAC-EXHS-SSCH HVAC systems: hot air M□-HVAC-HOTA-DUCT HVAC systems: hot air: ductwork M□-HVAC-HOTA-DUCT HVAC systems: hot air: ductwork M□-HVAC-HOTA-SCH HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-SCH HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-SCH HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-SCH HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-SCH HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-SCH HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-SCH HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-SCH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SCH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SCH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SCH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SCH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SCH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SCH HVAC systems: return air diffusers M□-HVAC-RETN HVAC systems: return	M□-HVAC-CLDA-RSCH	HVAC systems: cold air: sketch line round or oval duct
M□-HVAC-CLDA-SSCH HVAC systems: cold air: sketch line rectangular duct M□-HVAC-DMPR HVAC systems: fire, smoke, volume damper M□-HVAC-DOOR HVAC systems: equipment doors M□-HVAC-EFAN HVAC systems: equipment with electric fans M□-HVAC-EPDU HVAC systems: equipment with piping, ductwork and electricity M□-HVAC-EPIP HVAC systems: equipment with piping and electricity M□-HVAC-EQPM HVAC systems: equipment M□-HVAC-EXHS HVAC systems: exhaust air: ductwork M□-HVAC-EXHS-DUCT HVAC systems: exhaust air: equipment M□-HVAC-EXHS-QPM HVAC systems: exhaust air: grilles M□-HVAC-EXHS-GRIL HVAC systems: exhaust air: sketch line round or oval duct M□-HVAC-EXHS-RSCH HVAC systems: exhaust air: sketch line round or oval duct M□-HVAC-EXHS-SECT HVAC systems: exhaust air: sketch line rectangular duct M□-HVAC-EXHS-SSCH HVAC systems: exhaust air: sketch line rectangular duct M□-HVAC-HOTA-BUCT HVAC systems: hot air M□-HVAC-HOTA-DUCT HVAC systems: hot air: equipment M□-HVAC-HOTA-BUCT HVAC systems: hot air: equipment M□-HVAC-HOTA-SECT HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-SECT HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-SECT HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-SECT HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-SECT HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SECT HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SECT HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SECH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SECH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SECH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SECH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SECH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SECH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SECH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-PIPE HVAC systems:	M□-HVAC-CLDA-SECT	HVAC systems: cold air: section
M□-HVAC-DMPR HVAC systems: fire, smoke, volume damper M□-HVAC-DOOR HVAC systems: equipment doors M□-HVAC-EFAN HVAC systems: equipment with electric fans M□-HVAC-EPDU HVAC systems: equipment with piping, ductwork and electricity M□-HVAC-EPIP HVAC systems: equipment with piping and electricity M□-HVAC-EQPM HVAC systems: exhaust air M□-HVAC-EXHS HVAC systems: exhaust air: ductwork M□-HVAC-EXHS-DUCT HVAC systems: exhaust air: ductwork M□-HVAC-EXHS-BOPM HVAC systems: exhaust air: equipment M□-HVAC-EXHS-GRIL HVAC systems: exhaust air: sketch line round or oval duct M□-HVAC-EXHS-RSCH HVAC systems: exhaust air: sketch line round or oval duct M□-HVAC-EXHS-SIZE HVAC systems: exhaust air: sketch line rectangular duct M□-HVAC-HOTA HVAC systems: hot air M□-HVAC-HOTA HVAC systems: hot air: ductwork M□-HVAC-HOTA-SECH HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-SECT HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-SECH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SSCH HVAC systems: other diffusers M□-HVAC-DF	M□-HVAC-CLDA-SIZE	HVAC systems: cold air: ductwork size
Mo-HVAC-DOOR HVAC systems: equipment with electric fans Mo-HVAC-EFAN HVAC systems: equipment with piping, ductwork and electricity Mo-HVAC-EPDU HVAC systems: equipment with piping and electricity Mo-HVAC-EPIP HVAC systems: equipment with piping and electricity Mo-HVAC-EQPM HVAC systems: equipment Mo-HVAC-EXHS HVAC systems: exhaust air Mo-HVAC-EXHS-DUCT HVAC systems: exhaust air: ductwork Mo-HVAC-EXHS-EQPM HVAC systems: exhaust air: equipment Mo-HVAC-EXHS-EQPM HVAC systems: exhaust air: grilles Mo-HVAC-EXHS-RSCH HVAC systems: exhaust air: sketch line round or oval duct Mo-HVAC-EXHS-SECT HVAC systems: exhaust air: sketch line round or oval duct Mo-HVAC-EXHS-SSCH HVAC systems: exhaust air: sketch line rectangular duct Mo-HVAC-HOTA HVAC systems: hot air Mo-HVAC-HOTA HVAC systems: hot air: equipment Mo-HVAC-HOTA-RSCH HVAC systems: hot air: sketch line round or oval duct Mo-HVAC-HOTA-SSCH HVAC systems: hot air: sketch line rectangular duct Mo-HVAC-DFF HVAC systems: other diffusers Mo-HVAC-PIPE HVAC systems: return air diffusers Mo-HVAC-RETN	M□-HVAC-CLDA-SSCH	HVAC systems: cold air: sketch line rectangular duct
M□-HVAC-EFAN M□-HVAC-EPDU HVAC systems: equipment with piping, ductwork and electricity M□-HVAC-EPIP HVAC systems: equipment with piping and electricity M□-HVAC-EQPM HVAC systems: equipment M□-HVAC-EXHS HVAC systems: exhaust air M□-HVAC-EXHS HVAC systems: exhaust air: ductwork M□-HVAC-EXHS-DUCT HVAC systems: exhaust air: equipment M□-HVAC-EXHS-GRIL HVAC systems: exhaust air: grilles M□-HVAC-EXHS-RSCH HVAC systems: exhaust air: sketch line round or oval duct M□-HVAC-EXHS-SECT HVAC systems: exhaust air: sketch line rectangular duct M□-HVAC-EXHS-SIZE HVAC systems: exhaust air: sketch line rectangular duct M□-HVAC-HOTA HVAC systems: hot air: ductwork M□-HVAC-HOTA-DUCT HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-EQPM HVAC systems: hot air: ductwork M□-HVAC-HOTA-SECT HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-SECT HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-SECT HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-SECT HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-SECT HVAC systems: hot air: ductwork size M□-HVAC-HOTA-SSCH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SSCH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-ODFF HVAC systems: other diffusers M□-HVAC-PIPE HVAC systems: return air diffusers M□-HVAC-RETN HVAC systems: return	M□-HVAC-DMPR	HVAC systems: fire, smoke, volume damper
M□-HVAC-EPIDU HVAC systems: equipment with piping, ductwork and electricity M□-HVAC-EPIP HVAC systems: equipment with piping and electricity M□-HVAC-EQPM HVAC systems: equipment M□-HVAC-EXHS HVAC systems: exhaust air M□-HVAC-EXHS-DUCT HVAC systems: exhaust air: ductwork M□-HVAC-EXHS-GRIL HVAC systems: exhaust air: equipment M□-HVAC-EXHS-GRIL HVAC systems: exhaust air: grilles M□-HVAC-EXHS-RSCH HVAC systems: exhaust air: section M□-HVAC-EXHS-SECT HVAC systems: exhaust air: section M□-HVAC-EXHS-SIZE HVAC systems: exhaust air: sketch line round or oval duct M□-HVAC-EXHS-SSCH HVAC systems: exhaust air: sketch line rectangular duct M□-HVAC-HOTA HVAC systems: hot air M□-HVAC-HOTA-DUCT HVAC systems: hot air: ductwork M□-HVAC-HOTA-EQPM HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-SECT HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-SIZE HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-SIZE HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-SIZE HVAC systems: hot air: ductwork size M□-HVAC-HOTA-SIZE HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SIZE HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SIZE HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SIZE HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SIZE HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SIZE HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SIZE HVAC systems: return air diffusers M□-HVAC-PIPE HVAC systems: return air diffusers M□-HVAC-RETN HVAC systems: return	M□-HVAC-DOOR	HVAC systems: equipment doors
M□-HVAC-EPIP HVAC systems: equipment with piping and electricity M□-HVAC-EQPM HVAC systems: equipment M□-HVAC-EXHS HVAC systems: exhaust air M□-HVAC-EXHS-DUCT HVAC systems: exhaust air: ductwork M□-HVAC-EXHS-DUCT HVAC systems: exhaust air: ductwork M□-HVAC-EXHS-EQPM HVAC systems: exhaust air: equipment M□-HVAC-EXHS-GRIL HVAC systems: exhaust air: sketch line round or oval duct M□-HVAC-EXHS-RSCH HVAC systems: exhaust air: sketch line round or oval duct M□-HVAC-EXHS-SIZE HVAC systems: exhaust air: sketch line rectangular duct M□-HVAC-EXHS-SSCH HVAC systems: hot air M□-HVAC-HOTA HVAC systems: hot air: ductwork M□-HVAC-HOTA-DUCT HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-SSCH HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-SIZE HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SSCH HVAC systems: other diffusers M□-HVAC-PIPE HVAC systems: return air diffusers M□-HVAC-PIPE HVAC systems: return	M□-HVAC-EFAN	HVAC systems: equipment with electric fans
M□-HVAC-EQPM HVAC systems: equipment M□-HVAC-EXHS HVAC systems: exhaust air M□-HVAC-EXHS-DUCT HVAC systems: exhaust air: ductwork M□-HVAC-EXHS-EQPM HVAC systems: exhaust air: equipment M□-HVAC-EXHS-GRIL HVAC systems: exhaust air: sketch line round or oval duct M□-HVAC-EXHS-RSCH HVAC systems: exhaust air: sketch line round or oval duct M□-HVAC-EXHS-SECT HVAC systems: exhaust air: scction M□-HVAC-EXHS-SIZE HVAC systems: exhaust air: sketch line rectangular duct M□-HVAC-EXHS-SSCH HVAC systems: exhaust air: sketch line rectangular duct M□-HVAC-HOTA HVAC systems: hot air M□-HVAC-HOTA-DUCT HVAC systems: hot air: ductwork M□-HVAC-HOTA-EQPM HVAC systems: hot air: equipment M□-HVAC-HOTA-RSCH HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-SECT HVAC systems: hot air: scction M□-HVAC-HOTA-SIZE HVAC systems: hot air: ductwork size M□-HVAC-HOTA-SIZE HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SIZE HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SIZE HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SIZE HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SIZE HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SIZE HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SIZE HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SIZE HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SIZE HVAC systems: return air diffusers M□-HVAC-RETN HVAC systems: return	M□-HVAC-EPDU	HVAC systems: equipment with piping, ductwork and electricity
M□-HVAC-EXHS HVAC systems: exhaust air: ductwork M□-HVAC-EXHS-DUCT HVAC systems: exhaust air: ductwork M□-HVAC-EXHS-EQPM HVAC systems: exhaust air: equipment M□-HVAC-EXHS-GRIL HVAC systems: exhaust air: grilles M□-HVAC-EXHS-RSCH HVAC systems: exhaust air: sketch line round or oval duct M□-HVAC-EXHS-SECT HVAC systems: exhaust air: section M□-HVAC-EXHS-SIZE HVAC systems: exhaust air: ductwork size M□-HVAC-EXHS-SSCH HVAC systems: exhaust air: sketch line rectangular duct M□-HVAC-HOTA HVAC systems: hot air M□-HVAC-HOTA-DUCT HVAC systems: hot air: ductwork M□-HVAC-HOTA-EQPM HVAC systems: hot air: equipment M□-HVAC-HOTA-SCH HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-SECT HVAC systems: hot air: section M□-HVAC-HOTA-SIZE HVAC systems: hot air: ductwork size M□-HVAC-HOTA-SIZE HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SSCH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SIZE HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SSCH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SSCH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SSCH HVAC systems: piping M□-HVAC-PIPE HVAC systems: return air diffusers M□-HVAC-RETN HVAC systems: return	M□-HVAC-EPIP	HVAC systems: equipment with piping and electricity
M□-HVAC-EXHS-DUCT HVAC systems: exhaust air: ductwork M□-HVAC-EXHS-EQPM HVAC systems: exhaust air: equipment M□-HVAC-EXHS-GRIL HVAC systems: exhaust air: grilles M□-HVAC-EXHS-RSCH HVAC systems: exhaust air: sketch line round or oval duct M□-HVAC-EXHS-SECT HVAC systems: exhaust air: section M□-HVAC-EXHS-SIZE HVAC systems: exhaust air: ductwork size M□-HVAC-EXHS-SSCH HVAC systems: exhaust air: sketch line rectangular duct M□-HVAC-HOTA HVAC systems: hot air M□-HVAC-HOTA-DUCT HVAC systems: hot air: ductwork M□-HVAC-HOTA-EQPM HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-SECT HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-SECT HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SIZE HVAC systems: hot air: ductwork size M□-HVAC-HOTA-SSCH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SSCH HVAC systems: other diffusers M□-HVAC-PIPE HVAC systems: return air diffusers M□-HVAC-RDFF HVAC systems: return air diffusers M□-HVAC-RETN HVAC systems: return	M□-HVAC-EQPM	HVAC systems: equipment
M□-HVAC-EXHS-EQPM HVAC systems: exhaust air: equipment M□-HVAC-EXHS-GRIL HVAC systems: exhaust air: grilles M□-HVAC-EXHS-RSCH HVAC systems: exhaust air: sketch line round or oval duct M□-HVAC-EXHS-SECT HVAC systems: exhaust air: sketch line round or oval duct M□-HVAC-EXHS-SIZE HVAC systems: exhaust air: ductwork size M□-HVAC-EXHS-SSCH HVAC systems: exhaust air: sketch line rectangular duct M□-HVAC-HOTA HVAC systems: hot air M□-HVAC-HOTA-DUCT HVAC systems: hot air: ductwork M□-HVAC-HOTA-EQPM HVAC systems: hot air: equipment M□-HVAC-HOTA-RSCH HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-SECT HVAC systems: hot air: section M□-HVAC-HOTA-SIZE HVAC systems: hot air: ductwork size M□-HVAC-HOTA-SSCH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SSCH HVAC systems: other diffusers M□-HVAC-ODFF HVAC systems: other diffusers M□-HVAC-RDFF HVAC systems: return air diffusers M□-HVAC-RDFF HVAC systems: return air diffusers	M□-HVAC-EXHS	HVAC systems: exhaust air
M□-HVAC-EXHS-GRIL HVAC systems: exhaust air: grilles M□-HVAC-EXHS-RSCH HVAC systems: exhaust air: sketch line round or oval duct M□-HVAC-EXHS-SECT HVAC systems: exhaust air: sketch line round or oval duct M□-HVAC-EXHS-SIZE HVAC systems: exhaust air: ductwork size M□-HVAC-EXHS-SSCH HVAC systems: exhaust air: sketch line rectangular duct M□-HVAC-HOTA HVAC systems: hot air M□-HVAC-HOTA-DUCT HVAC systems: hot air: ductwork M□-HVAC-HOTA-EQPM HVAC systems: hot air: equipment M□-HVAC-HOTA-RSCH HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-SECT HVAC systems: hot air: ductwork size M□-HVAC-HOTA-SIZE HVAC systems: hot air: ductwork size M□-HVAC-HOTA-SSCH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-ODFF HVAC systems: other diffusers M□-HVAC-PIPE HVAC systems: piping M□-HVAC-RETN HVAC systems: return	M□-HVAC-EXHS-DUCT	HVAC systems: exhaust air: ductwork
M□-HVAC-EXHS-RSCH HVAC systems: exhaust air: sketch line round or oval duct M□-HVAC-EXHS-SECT HVAC systems: exhaust air: section M□-HVAC-EXHS-SIZE HVAC systems: exhaust air: ductwork size M□-HVAC-EXHS-SSCH HVAC systems: exhaust air: sketch line rectangular duct M□-HVAC-HOTA HVAC systems: hot air M□-HVAC-HOTA-DUCT HVAC systems: hot air: ductwork M□-HVAC-HOTA-EQPM HVAC systems: hot air: equipment M□-HVAC-HOTA-RSCH HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-SECT HVAC systems: hot air: section M□-HVAC-HOTA-SIZE HVAC systems: hot air: ductwork size M□-HVAC-HOTA-SSCH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SSCH HVAC systems: other diffusers M□-HVAC-PIPE HVAC systems: piping M□-HVAC-RDFF HVAC systems: return air diffusers M□-HVAC-RETN HVAC systems: return	M□-HVAC-EXHS-EQPM	HVAC systems: exhaust air: equipment
M□-HVAC-EXHS-SECT HVAC systems: exhaust air: section M□-HVAC-EXHS-SIZE HVAC systems: exhaust air: ductwork size M□-HVAC-EXHS-SSCH HVAC systems: exhaust air: sketch line rectangular duct M□-HVAC-HOTA HVAC systems: hot air M□-HVAC-HOTA-DUCT HVAC systems: hot air: ductwork M□-HVAC-HOTA-EQPM HVAC systems: hot air: equipment M□-HVAC-HOTA-RSCH HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-SECT HVAC systems: hot air: ductwork size M□-HVAC-HOTA-SIZE HVAC systems: hot air: sketch line rectangular duct M□-HVAC-HOTA-SSCH HVAC systems: other diffusers M□-HVAC-ODFF HVAC systems: piping M□-HVAC-RDFF HVAC systems: return air diffusers M□-HVAC-RETN HVAC systems: return	M□-HVAC-EXHS-GRIL	HVAC systems: exhaust air: grilles
M□-HVAC-EXHS-SIZE M□-HVAC-EXHS-SSCH HVAC systems: exhaust air: sketch line rectangular duct M□-HVAC-HOTA HVAC systems: hot air M□-HVAC-HOTA-DUCT HVAC systems: hot air: ductwork M□-HVAC-HOTA-EQPM HVAC systems: hot air: equipment M□-HVAC-HOTA-RSCH HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-SECT HVAC systems: hot air: section M□-HVAC-HOTA-SIZE HVAC systems: hot air: ductwork size M□-HVAC-HOTA-SSCH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-ODFF HVAC systems: other diffusers M□-HVAC-PIPE HVAC systems: piping M□-HVAC-RDFF HVAC systems: return air diffusers M□-HVAC-RETN HVAC systems: return	M□-HVAC-EXHS-RSCH	HVAC systems: exhaust air: sketch line round or oval duct
M□-HVAC-EXHS-SSCH HVAC systems: exhaust air: sketch line rectangular duct M□-HVAC-HOTA HVAC systems: hot air: M□-HVAC-HOTA-DUCT HVAC systems: hot air: ductwork M□-HVAC-HOTA-EQPM HVAC systems: hot air: equipment M□-HVAC-HOTA-RSCH HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-SECT HVAC systems: hot air: section M□-HVAC-HOTA-SIZE HVAC systems: hot air: ductwork size M□-HVAC-HOTA-SSCH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-ODFF HVAC systems: other diffusers M□-HVAC-PIPE HVAC systems: piping M□-HVAC-RDFF HVAC systems: return air diffusers M□-HVAC-RETN HVAC systems: return	M□-HVAC-EXHS-SECT	HVAC systems: exhaust air: section
M□-HVAC-HOTA HVAC systems: hot air M□-HVAC-HOTA-DUCT HVAC systems: hot air: ductwork M□-HVAC-HOTA-EQPM HVAC systems: hot air: equipment M□-HVAC-HOTA-RSCH HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-SECT HVAC systems: hot air: section M□-HVAC-HOTA-SIZE HVAC systems: hot air: ductwork size M□-HVAC-HOTA-SSCH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-ODFF HVAC systems: other diffusers M□-HVAC-PIPE HVAC systems: piping M□-HVAC-RDFF HVAC systems: return air diffusers M□-HVAC-RETN HVAC systems: return	M□-HVAC-EXHS-SIZE	HVAC systems: exhaust air: ductwork size
M□-HVAC-HOTA-DUCT HVAC systems: hot air: ductwork M□-HVAC-HOTA-EQPM HVAC systems: hot air: equipment M□-HVAC-HOTA-RSCH HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-SECT HVAC systems: hot air: section M□-HVAC-HOTA-SIZE HVAC systems: hot air: ductwork size M□-HVAC-HOTA-SSCH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-ODFF HVAC systems: other diffusers M□-HVAC-PIPE HVAC systems: piping M□-HVAC-RDFF HVAC systems: return air diffusers M□-HVAC-RETN HVAC systems: return	M□-HVAC-EXHS-SSCH	HVAC systems: exhaust air: sketch line rectangular duct
M□-HVAC-HOTA-EQPM HVAC systems: hot air: equipment M□-HVAC-HOTA-RSCH HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-SECT HVAC systems: hot air: section M□-HVAC-HOTA-SIZE HVAC systems: hot air: ductwork size M□-HVAC-HOTA-SSCH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-ODFF HVAC systems: other diffusers M□-HVAC-PIPE HVAC systems: piping M□-HVAC-RDFF HVAC systems: return air diffusers M□-HVAC-RETN HVAC systems: return	M□-HVAC-HOTA	HVAC systems: hot air
M□-HVAC-HOTA-RSCH HVAC systems: hot air: sketch line round or oval duct M□-HVAC-HOTA-SECT HVAC systems: hot air: section M□-HVAC-HOTA-SIZE HVAC systems: hot air: ductwork size M□-HVAC-HOTA-SSCH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-ODFF HVAC systems: other diffusers M□-HVAC-PIPE HVAC systems: piping M□-HVAC-RDFF HVAC systems: return air diffusers M□-HVAC-RETN HVAC systems: return	M□-HVAC-HOTA-DUCT	HVAC systems: hot air: ductwork
M□-HVAC-HOTA-SECT HVAC systems: hot air: section M□-HVAC-HOTA-SIZE HVAC systems: hot air: ductwork size M□-HVAC-HOTA-SSCH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-ODFF HVAC systems: other diffusers M□-HVAC-PIPE HVAC systems: piping M□-HVAC-RDFF HVAC systems: return air diffusers M□-HVAC-RETN HVAC systems: return	M□-HVAC-HOTA-EQPM	HVAC systems: hot air: equipment
M□-HVAC-HOTA-SIZE HVAC systems: hot air: ductwork size M□-HVAC-HOTA-SSCH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-ODFF HVAC systems: other diffusers M□-HVAC-PIPE HVAC systems: piping M□-HVAC-RDFF HVAC systems: return air diffusers M□-HVAC-RETN HVAC systems: return	M□-HVAC-HOTA-RSCH	HVAC systems: hot air: sketch line round or oval duct
M□-HVAC-HOTA-SSCH HVAC systems: hot air: sketch line rectangular duct M□-HVAC-ODFF HVAC systems: other diffusers M□-HVAC-PIPE HVAC systems: piping M□-HVAC-RDFF HVAC systems: return air diffusers M□-HVAC-RETN HVAC systems: return	M□-HVAC-HOTA-SECT	HVAC systems: hot air: section
M□-HVAC-ODFF HVAC systems: other diffusers M□-HVAC-PIPE HVAC systems: piping M□-HVAC-RDFF HVAC systems: return air diffusers M□-HVAC-RETN HVAC systems: return	M□-HVAC-HOTA-SIZE	HVAC systems: hot air: ductwork size
M□-HVAC-PIPE HVAC systems: piping M□-HVAC-RDFF HVAC systems: return air diffusers M□-HVAC-RETN HVAC systems: return	M□-HVAC-HOTA-SSCH	HVAC systems: hot air: sketch line rectangular duct
M□-HVAC-RDFF HVAC systems: return air diffusers M□-HVAC-RETN HVAC systems: return	M□-HVAC-ODFF	HVAC systems: other diffusers
M□-HVAC-RETN HVAC systems: return	M□-HVAC-PIPE	HVAC systems: piping
	M□-HVAC-RDFF	HVAC systems: return air diffusers
M□-HVAC-RETN-CNTR HVAC systems: return: center	M□-HVAC-RETN	HVAC systems: return
	M□-HVAC-RETN-CNTR	HVAC systems: return: center

M□-HVAC-RETN-EQPM	HVAC systems: return: equipment
M□-HVAC-RETN-RSCH	HVAC systems: return: sketch line round or oval duct
M□-HVAC-RETN-SECT	HVAC systems: return: section
M□-HVAC-RETN-SIZE	HVAC systems: return: ductwork size
M□-HVAC-RETN-SSCH	HVAC systems: return: sketch line rectangular duct
M□-HVAC-SDFF	HVAC systems: supply diffusers
M□-HVAC-SPLY	HVAC systems: supply
M□-HVAC-SPLY-CNTR	HVAC systems: supply: center
M□-HVAC-SPLY-EQPM	HVAC systems: supply: equipment
M□-HVAC-SPLY-RSCH	HVAC systems: supply: sketch line round or oval duct
M□-HVAC-SPLY-SECT	HVAC systems: supply: section
M□-HVAC-SPLY-SIZE	HVAC systems: supply: ductwork size
M□-HVAC-SPLY-SSCH	HVAC systems: supply: sketch line rectangular duct
M□-HWTR	Hot water heating system
M□-HWTR-EQPM	Hot water heating system: equipment
M□-HWTR-PIPE	Hot water heating system: piping
M□-HWTR-RETN	Hot water heating system: return
M□-HWTR-RETN-PIPE	Hot water heating system: return: piping
M□-HWTR-RETN: SKCH	Hot water heating system: return: sketch
M□-HWTR-SPLY	Hot water heating system: supply
M□-HWTR-SPLY-PIPE	Hot water heating system: supply: piping
M□-HWTR-SPLY-SKCH	Hot water heating system: supply: sketch
M□-LGAS	Laboratory gas systems
M□-LGAS-EQPM	Laboratory gas systems: equipment
M□-LGAS-PIPE	Laboratory gas systems: piping
M□-MACH	Machine shop
M□-MDGS	Medical gas systems
M□-MDGS-CAIR	Medical gas systems: compressed air
M□-MDGS-EQPM	Medical gas systems: equipment
M□-MDGS-NITG	Medical gas systems: nitrogen
M□-MDGS-NOXG	Medical gas systems: nitrous oxide
M□-MDGS-OXYG	Medical gas systems: pure O2
M□-MDGS-PIPE	Medical gas systems: piping
M□-MDGS-SAIR	Medical gas systems: scavenge air
M□-MDGS-VACU	Medical gas systems: vacuum
M□-MKUP	Make-up air systems
M□-MKUP-CDFF	Make-up air systems: ceiling diffusers
M□-MKUP-DUCT	Make-up air systems: ductwork
M□-MKUP-EQPM	Make-up air systems: equipment
M□-MPIP	Miscellaneous piping systems

M□-MPIP-PIPE	Miscellaneous piping systems: piping
M□-NGAS	Natural gas systems
M□-NGAS-EQPM	Natural gas systems: equipment
M□-NGAS-PIPE	Natural gas systems: piping
M□-PROC	Process systems
M□-PROC-EQPM	Process systems: equipment
M□-PROC-PIPE	Process systems: piping
M□-RAIR	Relief air systems
M□-RCOV	Energy recovery systems
M□-RCOV-EQPM	Energy recovery systems: equipment
M□-RCOV-PIPE	Energy recovery systems: piping
M□-REFG	Refrigeration systems
M□-REFG-DISC	Refrigeration systems: discharge
M□-REFG-EQPM	Refrigeration systems: equipment
M□-REFG-PIPE	Refrigeration systems: piping
M□-REFG-RETN	Refrigeration systems: return
M□-REFG-SPLY	Refrigeration systems: supply
M□-ROOF	Roof
M□-ROOF-PENE	Roof: penetrations
M□-SMOK	Smoke extraction systems
M□-SMOK-CDFF	Smoke extraction systems: ceiling diffusers
M□-SMOK-DUCT	Smoke extraction systems: ductwork
M□-SMOK-EQPM	Smoke extraction systems: equipment
M□-SPCL	Special systems
M□-SPCL-EQPM	Special systems: equipment
M□-SPCL-PIPE	Special systems: piping
M□-STEM	Steam system
M□-STEM-BLBD	Steam system: boiler blow down piping
M□-STEM-BLBD-PIPE	Steam system: boiler blow down piping: piping
M□-STEM-CNDS	Steam system: condensate piping
M□-STEM-CNDS-SKCH	Steam system: condensate piping: sketch
M□-STEM-EQPM	Steam system: equipment
M□-STEM-HPIP	Steam system: high-pressure piping
M□-STEM-HPIP-SKCH	Steam system: high-pressure piping: sketch
M□-STEM-LPIP	Steam system: low-pressure piping
M□-STEM-LPIP-SKCH	Steam system: low-pressure piping: sketch
M□-STEM-MPIP	Steam system: medium-pressure piping
M□-STEM-MPIP-SKCH	Steam system: medium-pressure piping: sketch
M□-TEST	Test equipment
M□-WALL	Wall

M_□-WALL-PENE Wall: penetrations

5.14 OPERATIONS LAYER LIST

Operations Field Codes

The Layer Names shown below provide examples for the use of Major and Minor Group field codes for this discipline. See <u>CLG Sections 1.5</u> and <u>1.6</u> for complete rules and options governing the use of Major and Minor Group field codes.

Operations Discipline Designators

Designator	Description
0	Operations
OJ	User Defined
ОК	User Defined

Operations Layer List

Layer Name	Description	
No layer names have	been prescribed for this discipline.	

5.15 PLUMBING LAYER LIST

Plumbing Field Codes

The Layer Names shown below provide examples for the use of Major and Minor Group field codes for this discipline. See <u>CLG Sections 1.5</u> and <u>1.6</u> for complete rules and options governing the use of Major and Minor Group field codes.

Plumbing Discipline Designators

Designator	Description
Р	Plumbing
PD	Plumbing Demolition
PL	Plumbing
PP	Plumbing Piping
PQ	Plumbing Equipment
PS	Plumbing Site
PJ	User Defined
PK	User Defined

Plumbing Layer List

Layer Name	Description
D- 40ID	Asid waste eveters
P _□ -ACID	Acid waste systems
P _□ -ACID-EQPM	Acid waste systems: equipment
P ₋ ACID-PIPE	Acid waste systems: piping
P ₋ ACID-VENT	Acid waste systems: vents
P _□ -DOMW	Domestic water systems
P ₋ DOMW-CPIP	Domestic water systems: cold water piping
P ₋ -DOMW-EQPM	Domestic water systems: equipment
P ₋ DOMW-HPIP	Domestic water systems: hot water piping
P□-DOMW-RISR	Domestic water systems: risers
P ₋ -DOMW-RPIP	Domestic water systems: recirculation piping
P□-FLOR	Floor
P ₋ -FLOR-PENE	Floor: penetrations
P□-MDGS	Medical gas systems
P□-MDGS-CAIR	Medical gas systems: compressed air
P□-MDGS-EQPM	Medical gas systems: equipment
P _□ -MDGS-NITG	Medical gas systems: nitrogen
P□-MDGS-NOXG	Medical gas systems: nitrous oxide
P□-MDGS-OXYG	Medical gas systems: pure O2
P□-MDGS-PIPE	Medical gas systems: piping
P□-MDGS-SAIR	Medical gas systems: scavenge air
P□-MDGS-VACU	Medical gas systems: vacuum
P _□ -ROOF	Roof
P ₋ ROOF-PENE	Roof: penetrations
P□-SSWR	Sanitary sewer
P□-SSWR-EQPM	Sanitary sewer: equipment
P□-SSWR-FIXT	Sanitary sewer: fixtures
P□-SSWR-FLDR	Sanitary sewer: floor drains
P□-SSWR-PIPE	Sanitary sewer: piping
P□-SSWR-RISR	Sanitary sewer: risers
P□-SSWR-VENT	Sanitary sewer: vents
P□-STRM	Storm sewer
P□-STRM-PIPE	Storm sewer: piping
P□-STRM-RFDR	Storm sewer: roof drains
P□-STRM-RISR	Storm sewer: risers
P _□ -WALL	Wall
P ₋ -WALL-PENE	Wall: penetrations

5.16 PROCESS LAYER LIST

Process Field Codes

The Layer Names shown below provide examples for the use of Major and Minor Group field codes for this discipline. See <u>CLG Sections 1.5</u> and <u>1.6</u> for complete rules and options governing the use of Major and Minor Group field codes.

Process Discipline Designators

Designator	Description
D	Process
DA	Process Airs
DC	Process Chemicals
DD	Process Demolition
DE	Process Electrical
DG	Process Gases
DI	Process Instrumentation
DL	Process Liquids
DM	Process HPM Gases
DO	Process Oils
DP	Process Piping
DQ	Process Equipment
DR	Process Drains and Reclaims
DS	Process Site
DV	Process Vacuum
DW	Process Waters
DX	Process Exhaust
DY	Process Slurry
DJ	User Defined
DK	User Defined

Process Layer List

Description
Air: agitation air - system
Air: breathable air - system
Air: compressed air - system
Air: clean dry air - system
Air: high pressure clean dry air - system
Air: instrument air - system

DrAIROFA- DrAIRPA Air: oil free air - system DrAIRPA Air: plant air - system DrAIRPA Air: plant air - system DrAIRPA Air: vent - system DrCHEM-ARC- Chemical: caustic - system DrCHEM-DEV- Chemical: developer - system DrCHEM-BE DrCHEM-BE Chemical: hydrogen peroxide - system DrCHEM-H2O2 Chemical: hydrogen peroxide - system DrCHEM-H2O2 Chemical: hydrochloric acid - system DrCHEM-H2O2 Chemical: hydrofluoric acid - system DrCHEM-H2O2 Chemical: hydrofluoric acid - system DrCHEM-HPA- Chemical: sopropyl alcohol - system DrCHEM-PHOS Chemical: solvent - system DrCHEM-PHOS Chemical: solvent - system DrCHEM-RER- Chemical: solvent - system DrCHEM-BULF Chemical: solvent - system DrCHEM-TIMAH Chemical: trah - system DrDETL-BOLD Dr	D□-AIR~-OA~~	Air: outside air - system
DD-AIR~-PA~~ Air: plant air - system DD-AIR~-V~~~ Air: vent - system DD-CHEM-ARC~ Chemical: regenerative caustic - system DD-CHEM-DEV~ Chemical: developer - system DD-CHEM-BCA~ Chemical: ethylene glycol - system DD-CHEM-BCA~ Chemical: hydrogen peroxide - system DD-CHEM-HZO2 Chemical: hydrogen peroxide - system DD-CHEM-HZO2 Chemical: hydrofloric acid - system DD-CHEM-HFA~ Chemical: stopropyl alcohol - system DD-CHEM-HPA~ Chemical: stopropyl alcohol - system DD-CHEM-PHOS Chemical: solvent - system DD-CHEM-BCA~ Chemical: solvent - system DD-CHEM-BCA~ Chemical: suffuric acid - system DD-CHEM-BCA~ Chemical: suffuric acid - system DD-CHEM-TMAH Chemical: suffuric acid - system DD-CHEM-TMAH Chemical: suffuric acid - system DD-DETL-BOLD DD-DRAN-AMW~ Drains: ammonia waste - system DD-DRAN-CD~~ DD-DRAN-CD~~ Drains: concentrated lead waste - system DD-DRAN-CUW Drains: cooper plating waste - system DD-DRAN-CUW Drains: copper plating waste - system DD-DRAN-CUW Drains: copper slurry waste - system DD-DRAN-CUW Drains: copper slurry waste - system DD-DRAN-CUW Drains: dilute waste - system DD-DRAN-DRAN-BOW~ Drains: dilute waste - system DD-DRAN-BOW~ DD-DRAN-BOW~ Drains: organic industrial waste - system DD-DRAN-BOW~ Drains: organic industrial waste - system DD-DRAN-DWA Drains: o	D□-AIR~-OFA~	<u> </u>
Dg-AIR~-V~~~ Air: vent - system Dg-CHEM-ARC~ Chemical: regenerative caustic - system Dg-CHEM-DEV~ Chemical: developer - system Dg-CHEM-BG-~ Chemical: developer - system Dg-CHEM-BG-~ Chemical: hydrogen peroxide - system Dg-CHEM-HZO2 Chemical: hydrogen peroxide - system Dg-CHEM-HZO2 Chemical: hydrofloric acid - system Dg-CHEM-HCL~ Chemical: hydrofloric acid - system Dg-CHEM-HPA~ Chemical: hydrofloric acid - system Dg-CHEM-PHOS Chemical: hydrofloric acid - system Dg-CHEM-PHOS Chemical: solvent - system Dg-CHEM-BRAP Dg-CHEM-BRAP Chemical: solvent - system Dg-CHEM-BRAP Dg-CHEM-BULF Chemical: sulfuric acid - system Dg-CHEM-BULF Chemical: sulfuric acid - system Dg-CHEM-BOLD Dg-CHEM-BOLD Dg-CHEM-BOLD Dg-CHEM-BOLD Dg-CHEM-BOLD Dg-CHEM-BOLD Dg-CHEM-BOLD Dg-DETL-BOLD Dg-DETL-BOLD Dg-DETL-BOLD Dg-DETL-BOLD Dg-DETL-BOLD Dg-DRAN-CD-~ Dg-DRAN-CD-~ Dg-Drans: ammonia waste - system Dg-DRAN-CD-~ Dg-DRAN-CD-~ Dg-DRAN-CUPW Dgains: concentrated netals waste - system Dg-DRAN-CUPW Dgains: copper plating waste - system Dg-DRAN-CUPW Dgains: copper plating waste - system Dg-DRAN-CUPW Dgains: copper slurry waste - system Dg-DRAN-CUPW Dgains: copper slurry waste - system Dg-DRAN-CUPW Dgains: copper slurry waste - system Dg-DRAN-DUW- Dgains: drivlene glycol waste - system Dg-DRAN-DW- Dgains: drivlene glycol waste - system Dg-DRAN-DW- Dgains: metals waste - system Dg-DRAN-HW- Dgains: metals waste - system Dg-DRAN-HW- Dgains: metals waste - system Dg-DRAN-DWR Dgains: metals waste - system Dg-DRAN-DWR Dgains: metals waste - system Dg-DRAN-DWR Dgains: organic industrial waste - system	D□-AIR~-PA~~	
Dc-CHEM-ARC~ Chemical: regenerative caustic - system Dc-CHEM-DEV~ Chemical: developer - system Dc-CHEM-BC-~ Chemical: developer - system Dc-CHEM-BC-~ Chemical: developer - system Dc-CHEM-H2O2 Chemical: hydrogen peroxide - system Dc-CHEM-HCL~ Chemical: hydrochloric acid - system Dc-CHEM-HF-~ Chemical: hydrochloric acid - system Dc-CHEM-HF-~ Chemical: hydrochloric acid - system Dc-CHEM-HF-~ Chemical: sopropyl alcohol - system Dc-CHEM-PHOS Chemical: solvent - system Dc-CHEM-BC-Chemical: solvent - system Dc-CHEM-BC-Chemical: solvent - system Dc-CHEM-SULF Chemical: sulfuric acid - system Dc-CHEM-SULF Dc-CHEM-TMAH Chemical: solvent - system Dc-CHEM-THNAH Chemical: solvent - system Dc-DETL-BOLD Detail: fine lines Dc-DETL-BOLD Detail: fine lines Dc-DETL-HINE Dc-DETL-HINE Dc-DETL-HINE Dc-DETL-MEDM Dc-DRAN-AMW- Drains: ammonia waste - system Dc-DRAN-CD-~ Drains: condensate drain - system Dc-DRAN-CW- Drains: concentrated lead waste - system Dc-DRAN-CUPW Drains: concentrated metals waste - system Dc-DRAN-CUPW Drains: copper plating waste - system Dc-DRAN-CURW Drains: copper rinse waste - system Dc-DRAN-CURW Drains: Opper rinse waste - system Dc-DRAN-DLW- Drains: Opper rinse waste - system Dc-DRAN-DLW- Drains: dilute waste - system Dc-DRAN-DLW- Drains: dilute waste - system Dc-DRAN-HFW- Drains: industrial waste - system Dc-DRAN-HFW- Drains: metals waste - system Dc-DRAN-HFW- Drains: metals waste - system Dc-DRAN-HFW- Drains: metals waste - system Dc-DRAN-DWR Drains: organic industrial waste - system Dc-DRAN-DRAN-DWR D		<u>-</u>
D□-CHEM-C~~~ Chemical: caustic - system D□-CHEM-DEV~ Chemical: developer - system D□-CHEM-H2O2 Chemical: thylene glycol - system D□-CHEM-H2O2 Chemical: hydrogen peroxide - system D□-CHEM-HCL~ Chemical: hydrofloric acid - system D□-CHEM-HF~~ Chemical: hydrofloric acid - system D□-CHEM-HFA~ Chemical: sopropyl alcohol - system D□-CHEM-PHOS Chemical: solvent - system D□-CHEM-PHOS Chemical: solvent - system D□-CHEM-SULF Chemical: sulfuric acid - system D□-CHEM-SULF Chemical: sulfuric acid - system D□-CHEM-TMAH Chemical: sulfuric acid - system D□-DETL-BOLD Detail: bold lines D□-DETL-BINE Datail: fine lines D□-DETL-HINE Datail: fine lines D□-DEAN-AMW~ Drains: ammonia waste - system D□-DRAN-CD~~ Drains: concentrated lead waste - system D□-DRAN-CUW Drains: concentrated metals waste - system D□-DRAN-CURW D□-DRAN-CURW Drains: copper plating waste - system D□-DRAN-CURW D□-DRAN-CURW Drains: copper slurry waste - system D□-DRAN-DLW~ Drains: dilute waste - system D□-DRAN-HW~ Drains: industrial waste - system D□-DRAN-HW~ Drains: metals waste - system D□-DRAN-DWR Drains: organic industrial waste - system D□-DRAN-DWA D□-DRAN-DWA Drains: organic industrial waste - system D□-DRAN-DWA D□-DRAN-DWA Drains: organic liquid waste - system D□-DRAN-DRAN-DWA	D□-CHEM-ARC~	Chemical: regenerative caustic - system
Do-CHEM-DEV- Do-CHEM-EG~~ Chemical: ethylene glycol - system Do-CHEM-H2O2 Chemical: hydrogen peroxide - system Do-CHEM-H2O2 Chemical: hydrogen peroxide - system Do-CHEM-HCL~ Chemical: hydrofluoric acid - system Do-CHEM-HF~~ Chemical: hydrofluoric acid - system Do-CHEM-HPA~ Chemical: isopropyl alcohol - system Do-CHEM-PHOS Chemical: phosphoric acid - system Do-CHEM-PHOS Chemical: solvent - system Do-CHEM-SULF Chemical: solvent - system Do-CHEM-SULF Chemical: sulfuric acid - system Do-CHEM-TMAH Chemical: triah - system Do-DETL-BOLD Do-DETL-BOLD Dotatil: fine lines Do-DETL-HINE Do-DETL-MEDM Do-DETL-MEDM Do-DRAN-GDM Do-DRAN-CD~~ Drains: ammonia waste - system Do-DRAN-CLW~ Drains: concentrated lead waste - system Do-DRAN-CLW~ Drains: concentrated metals waste - system Do-DRAN-CUPW Drains: copper plating waste - system Do-DRAN-CUPW Drains: copper rinse waste - system Do-DRAN-CURW Drains: copper rinse waste - system Do-DRAN-CURW Drains: copper rinse waste - system Do-DRAN-CUSW Drains: copper slurry waste - system Do-DRAN-DLW~ Drains: opper slurry waste - system Do-DRAN-DLW~ Drains: dilute waste - system Do-DRAN-DLW~ Drains: hydrofluoric waste - system Do-DRAN-HFW~ Drains: industrial waste - system Do-DRAN-HFW~ Drains: metals waste - system Do-DRAN-HFW~ Drains: organic industrial waste - system Do-DRAN-DWR Drains: organic industrial waste - system Do-DRAN-DWA Drains: organic solvent waste - system Do-DRAN-DRAN-DWA Drains: organic solve	D□-CHEM-C~~~	
D□-CHEM-H2O2 Chemical: hydrogen peroxide - system D□-CHEM-HCL- Chemical: hydrogen peroxide - system D□-CHEM-HF~~ Chemical: hydrofluoric acid - system D□-CHEM-IPA~ Chemical: isopropyl alcohol - system D□-CHEM-PHOS Chemical: phosphoric acid - system D□-CHEM-RER- Chemical: solvent - system D□-CHEM-SULF Chemical: sulfuric acid - system D□-CHEM-TMAH Chemical: trash - system D□-DETL-BOLD Detail: bold lines D□-DETL-HINE Detail: fine lines D□-DETL-MEDM Detail: medium lines D□-DERAN-AMW~ Drains: ammonia waste - system D□-DRAN-CD~~ Drains: concentrated lead waste - system D□-DRAN-CLW- Drains: concentrated metals waste - system D□-DRAN-CUPW Drains: copper plating waste - system D□-DRAN-CURW Drains: copper slurry waste - system D□-DRAN-CUSW Drains: dilute waste - system D□-DRAN-DIRC Drains: dilute waste - system D□-DRAN-BCW~ Drains: dilute waste - system D□-DRAN-HFW~ Drains: hydrofluoric waste - system D□-DRAN-HFW~ Drains: non-potable water reuse - system D□-DRAN-DWR Drains: metals waste - system D□-DRAN-DWR Drains: non-potable water reuse - system D□-DRAN-DWR Drains: organic industrial waste - system D□-DRAN-DWR Drains: organic industrial waste - system D□-DRAN-DWR Drains: non-potable water reuse - system D□-DRAN-DWR Drains: organic industrial waste - system D□-DRAN-DWR Drains: organic solvent waste - system D□-DRAN-DRAN-DWR Drains: organic solvent waste - system D□-DRAN-DRAN-DWR Drains: organic solvent waste - system D□-DRAN-DRAN-DWR Drains: organic s	D□-CHEM-DEV~	Chemical: developer - system
Do-CHEM-HCL~ Chemical: hydrochloric acid - system Do-CHEM-HF~~ Chemical: hydrofluoric acid - system Do-CHEM-IPA~ Chemical: isopropyl alcohol - system Do-CHEM-PHOS Chemical: phosphoric acid - system Do-CHEM-RER~ Chemical: solvent - system Do-CHEM-SULF Chemical: sulfuric acid - system Do-CHEM-TMAH Chemical: trian - system Do-DETL-BOLD Dotall: bold lines Do-DETL-FINE Do-DETL-MEDM Do-DETL-MEDM Do-DETL-MEDM Do-DRAN-AMW~ Do-DRAN-CD~ Drains: ammonia waste - system Do-DRAN-CLW~ Drains: concentrated lead waste - system Do-DRAN-CMW~ Do-DRAN-CWW Drains: concentrated metals waste - system Do-DRAN-CUPW Drains: copper plating waste - system Do-DRAN-CURW Drains: copper rinse waste - system Do-DRAN-CURW Drains: DI reclaim - system Do-DRAN-DIRC Drains: DI reclaim - system Do-DRAN-DLW~ Drains: dilute waste - system Do-DRAN-BW~ Drains: industrial waste - system Do-DRAN-HFW~ Drains: industrial waste - system Do-DRAN-HFW~ Do-DRAN-HFW~ Drains: metals waste - system Do-DRAN-HFW~ Drains: metals waste - system Do-DRAN-DWR Drains: industrial waste - system Do-DRAN-DWR Drains: metals waste - system Do-DRAN-DWA Drains: organic industrial waste - system Do-DRAN-DWA Do-DRAN-DWA Drains: organic industrial waste - system Do-DRAN-DWA Do-DRAN-DWA Drains: organic industrial waste - system Do-DRAN-DWA Do-DRAN-DWA Do-DRAN-DWA Do-DRAN-DWA Do-DRAN-DWA Do-DRAN-DWA	D□-CHEM-EG~~	Chemical: ethylene glycol - system
Do-CHEM-HF~~ Chemical: hydrofluoric acid - system Do-CHEM-IPA~ Chemical: isopropyl alcohol - system Do-CHEM-PHOS Chemical: phosphoric acid - system Do-CHEM-RER~ Chemical: solvent - system Do-CHEM-SULF Chemical: sulfuric acid - system Do-CHEM-TMAH Chemical: tranh - system Do-DETL-BOLD Dotali: bold lines Do-DETL-FINE Do-DETL-MEDM Do-DETL-MEDM Do-DETL-MEDM Do-DRAN-AMW~ Drains: ammonia waste - system Do-DRAN-CLW~ Drains: concentrated lead waste - system Do-DRAN-CMW~ Drains: concentrated metals waste - system Do-DRAN-CUPW Drains: copper plating waste - system Do-DRAN-CUPW Drains: copper plating waste - system Do-DRAN-CUSW Drains: copper slurry waste - system Do-DRAN-DIRC Drains: DI reclaim - system Do-DRAN-DLW~ Drains: dilute waste - system Do-DRAN-BCW~ Drains: idlute waste - system Do-DRAN-BCW~ Drains: industrial waste - system Do-DRAN-HFW~ Drains: industrial waste - system Do-DRAN-HFW~ Drains: metals waste - system Do-DRAN-HFW~ Drains: metals waste - system Do-DRAN-HFW~ Drains: industrial waste - system Do-DRAN-DW~ Drains: metals waste - system Do-DRAN-DW~ Drains: organic industrial waste - system Do-DRAN-DW~ Do-DRAN-DW~ Do-D	D□-CHEM-H2O2	Chemical: hydrogen peroxide - system
Da-CHEM-IPA- Chemical: isopropyl alcohol - system Da-CHEM-PHOS Chemical: phosphoric acid - system Da-CHEM-RER- Chemical: solvent - system Da-CHEM-SULF Chemical: sulfuric acid - system Da-CHEM-TMAH Chemical: trian - system Da-DETL-BOLD Detail: bold lines Da-DETL-FINE Detail: fine lines Da-DETL-HEDM Detail: medium lines Da-DERAN-AMW- Drains: ammonia waste - system Da-DRAN-CD- Da-DRAN-CD- Drains: concentrated lead waste - system Da-DRAN-CWW Drains: concentrated metals waste - system Da-DRAN-CUPW Drains: copper plating waste - system Da-DRAN-CUPW Drains: copper rinse waste - system Da-DRAN-CUPW Drains: copper slurry waste - system Da-DRAN-DIRC Drains: DI reclaim - system Da-DRAN-DIRC Drains: dilute waste - system Da-DRAN-BEW- Da-DRAN-HEW- Drains: industrial waste - system Da-DRAN-HFW- Drains: industrial waste - system Da-DRAN-HW- Drains: metals waste - system Da-DRAN-NPWR Drains: metals waste - system Da-DRAN-OIW- Drains: organic industrial waste - system Da-DRAN-OIW- Drains: organic industrial waste - system Da-DRAN-OIW- Drains: organic injudi waste - system Da-DRAN-OIW- Drains: phosphoric acid reclaim - system Da-DRAN-PSW- Da-DRAN-PSW- Drains: phosphoric acid reclaim - system	D□-CHEM-HCL~	Chemical: hydrochloric acid - system
Do-CHEM-PHOS Chemical: phosphoric acid - system Do-CHEM-RER~ Chemical: solvent - system Do-CHEM-SULF Chemical: sulfuric acid - system Do-CHEM-TMAH Chemical: bold lines Do-DETL-BOLD Detail: bold lines Do-DETL-FINE Do-DETL-MEDM Detail: medium lines Do-DERAN-AMW- Drains: ammonia waste - system Do-DRAN-CD~ Drains: concentrated lead waste - system Do-DRAN-CLW~ Drains: concentrated metals waste - system Do-DRAN-CUPW Drains: copper plating waste - system Do-DRAN-CUPW Drains: copper plating waste - system Do-DRAN-CURW Drains: copper slurry waste - system Do-DRAN-CURW Drains: dilute waste - system Do-DRAN-DIRC Drains: dilute waste - system Do-DRAN-BGW- Drains: industrial waste - system Do-DRAN-HFW~ Drains: industrial waste - system Do-DRAN-MW~ Drains: metals waste - system Do-DRAN-MW~ Drains: metals waste - system Do-DRAN-NPWR Drains: metals waste - system Do-DRAN-NPWR Drains: organic industrial waste - system Do-DRAN-OLW~ Drains: organic solvent waste - system Do-DRAN-PSW~ Drains: photo solvent waste - system Do-DRAN-PSW~ Drains: photo solvent waste - system Do-DRAN-PSW~ Drains: scrubber duct drains - system	D□-CHEM-HF~~	Chemical: hydrofluoric acid - system
DD-CHEM-RER~ Chemical: solvent - system DD-CHEM-SULF Chemical: sulfuric acid - system DD-CHEM-SULF Chemical: trmah - system DD-DETL-BOLD Detail: bold lines DD-DETL-FINE Detail: fine lines DD-DETL-MEDM Detail: medium lines DD-DRAN-AMW- Drains: ammonia waste - system DD-DRAN-CD-~ Drains: condensate drain - system DD-DRAN-CLW- Drains: concentrated lead waste - system DD-DRAN-CUPW Drains: copper plating waste - system DD-DRAN-CUPW Drains: copper plating waste - system DD-DRAN-CURW Drains: copper slurry waste - system DD-DRAN-CUSW Drains: DI reclaim - system DD-DRAN-DLW- DD-DRAN-BCW- Drains: dilute waste - system DD-DRAN-BCW- DD-DRAN-BCW- Drains: industrial waste - system DD-DRAN-HFW- DD-DRAN-HW-~ Drains: industrial waste - system DD-DRAN-MW-~ Drains: metals waste - system DD-DRAN-NPWR Drains: organic industrial waste - system DD-DRAN-OLW- Drains: organic industrial waste - system DD-DRAN-OLW- DD-DRAN-OLW- Drains: organic solvent waste - system DD-DRAN-PWC DD-DRAN-PWC Drains: photo solvent waste - system DD-DRAN-PSW- DD-DRAN-SDD- Drains: scrubber duct drains - system	D□-CHEM-IPA~	Chemical: isopropyl alcohol - system
DD-CHEM-SULF Chemical: sulfuric acid - system DD-CHEM-TMAH Chemical: tmah - system DD-DETL-BOLD Detail: bold lines DD-DETL-FINE Detail: fine lines DD-DETL-MEDM Detail: medium lines DD-DRAN-AMW~ Drains: ammonia waste - system DD-DRAN-CD~ Drains: concentrated lead waste - system DD-DRAN-CHW~ Drains: concentrated metals waste - system DD-DRAN-CUPW Drains: copper plating waste - system DD-DRAN-CURW Drains: copper rinse waste - system DD-DRAN-CUSW Drains: copper slurry waste - system DD-DRAN-DLW~ Drains: dilute waste - system DD-DRAN-BGW~ Drains: dilute waste - system DD-DRAN-BGW~ Drains: dilute waste - system DD-DRAN-HFW~ Drains: hydrofluoric waste - system DD-DRAN-HW~ Drains: industrial waste - system DD-DRAN-MW~ Drains: metals waste - system DD-DRAN-MW~ Drains: metals waste - system DD-DRAN-NPWR Drains: non-potable water reuse - system DD-DRAN-OLW~ Drains: organic industrial waste - system DD-DRAN-OLW~ Drains: organic liquid waste - system DD-DRAN-OLW~ Drains: organic solvent waste - system DD-DRAN-DRAN-OLW~ Drains: organic solvent waste - system DD-DRAN-DRAN-DRAN-OLW~ Drains: organic solvent waste - system DD-DRAN-DRAN-DRAN-OLW~ Drains: phosphoric acid reclaim - system DD-DRAN-PSW~ Drains: phosphoric acid reclaim - system DD-DRAN-SDD~ Drains: scrubber duct drains - system	D□-CHEM-PHOS	Chemical: phosphoric acid - system
D□-CHEM-TMAH Chemical: tmah - system D□-DETL-BOLD Detail: bold lines D□-DETL-FINE Detail: fine lines D□-DETL-MEDM Detail: medium lines D□-DRAN-AMW~ Drains: ammonia waste - system D□-DRAN-CD~~ Drains: concentrated lead waste - system D□-DRAN-CHW~ Drains: concentrated metals waste - system D□-DRAN-CUPW Drains: copper plating waste - system D□-DRAN-CURW Drains: copper rinse waste - system D□-DRAN-CUSW Drains: copper slurry waste - system D□-DRAN-DIRC Drains: DI reclaim - system D□-DRAN-DIRC Drains: DI reclaim - system D□-DRAN-BGW~ Drains: ethylene glycol waste - system D□-DRAN-HFW~ Drains: hydrofluoric waste - system D□-DRAN-HFW~ Drains: industrial waste - system D□-DRAN-MW~~ Drains: metals waste - system D□-DRAN-NPWR Drains: non-potable water reuse - system D□-DRAN-OIW~ Drains: organic industrial waste - system D□-DRAN-OIW~ Drains: organic liquid waste - system D□-DRAN-OIW~ Drains: organic solvent waste - system D□-DRAN-OHW~ Drains: organic solvent waste - system D□-DRAN-PHRC Drains: phosphoric acid rectaim - system D□-DRAN-PSW~ Drains: phosphoric acid rectaim - system D□-DRAN-SDD~ Drains: photo solvent waste - system	D□-CHEM-RER~	Chemical: solvent - system
Do-DETL-BOLD Detail: bold lines Do-DETL-FINE Detail: fine lines Do-DETL-MEDM Detail: medium lines Do-DRAN-AMW~ Drains: ammonia waste - system Do-DRAN-CD~ Drains: condensate drain - system Do-DRAN-CHW~ Drains: concentrated lead waste - system Do-DRAN-CUPW Drains: copper plating waste - system Do-DRAN-CURW Drains: copper rinse waste - system Do-DRAN-CURW Drains: copper slurry waste - system Do-DRAN-DURC Drains: DI reclaim - system Do-DRAN-DLW~ Drains: dilute waste - system Do-DRAN-EGW~ Drains: ethylene glycol waste - system Do-DRAN-HFW~ Drains: industrial waste - system Do-DRAN-HFW~ Drains: metals waste - system Do-DRAN-MW~ Drains: metals waste - system Do-DRAN-NPWR Drains: non-potable water reuse - system Do-DRAN-OUW~ Drains: organic industrial waste - system Do-DRAN-OUW~ Drains: organic liquid waste - system Do-DRAN-OUW~ Drains: organic solvent waste - system Do-DRAN-PHRC Drains: phosphoric acid reclaim - system Do-DRAN-PSW~ Drains: photo solvent waste - system Do-DRAN-SDD~ Drains: scrubber duct drains - system	D□-CHEM-SULF	Chemical: sulfuric acid - system
DD-DETL-FINE Detail: fine lines DD-DETL-MEDM Detail: medium lines DD-DRAN-AMW~ Drains: ammonia waste - system DD-DRAN-CD~ Drains: condensate drain - system DD-DRAN-CUW~ Drains: concentrated lead waste - system DD-DRAN-CUPW Drains: copper plating waste - system DD-DRAN-CURW Drains: copper rinse waste - system DD-DRAN-CURW Drains: copper slurry waste - system DD-DRAN-CUSW Drains: copper slurry waste - system DD-DRAN-DURC Drains: DI reclaim - system DD-DRAN-DUW~ Drains: dilute waste - system DD-DRAN-BGW~ Drains: ethylene glycol waste - system DD-DRAN-HFW~ Drains: industrial waste - system DD-DRAN-HFW~ Drains: industrial waste - system DD-DRAN-MW~~ Drains: metals waste - system DD-DRAN-NWR Drains: non-potable water reuse - system DD-DRAN-OUW~ Drains: organic industrial waste - system DD-DRAN-OUW~ Drains: organic liquid waste - system DD-DRAN-OUW~ Drains: organic solvent waste - system DD-DRAN-OSW~ Drains: phosphoric acid reclaim - system DD-DRAN-PHRC Drains: photo solvent waste - system DD-DRAN-SDD~ Drains: scrubber duct drains - system	D□-CHEM-TMAH	Chemical: tmah - system
D□-DETL-MEDM Detail: medium lines D□-DRAN-AMW~ Drains: ammonia waste - system D□-DRAN-CLW~ Drains: concentrated lead waste - system D□-DRAN-CHW~ Drains: concentrated metals waste - system D□-DRAN-CUPW Drains: copper plating waste - system D□-DRAN-CURW Drains: copper rinse waste - system D□-DRAN-CURW Drains: copper rinse waste - system D□-DRAN-CUSW Drains: copper slurry waste - system D□-DRAN-DIRC Drains: DI reclaim - system D□-DRAN-BGW~ Drains: ethylene glycol waste - system D□-DRAN-HFW~ Drains: hydrofluoric waste - system D□-DRAN-HFW~ Drains: industrial waste - system D□-DRAN-MW~~ Drains: metals waste - system D□-DRAN-NPWR Drains: non-potable water reuse - system D□-DRAN-OIW~ Drains: organic industrial waste - system D□-DRAN-OIW~ Drains: organic liquid waste - system D□-DRAN-OLW~ Drains: organic solvent waste - system D□-DRAN-OSW~ Drains: organic solvent waste - system D□-DRAN-PHRC Drains: photo solvent waste - system D□-DRAN-PSW~ Drains: photo solvent waste - system D□-DRAN-SDD~ Drains: photo solvent waste - system	D□-DETL-BOLD	Detail: bold lines
D□-DRAN-AMW~ Drains: ammonia waste - system D□-DRAN-CD~~ Drains: condensate drain - system D□-DRAN-CLW~ Drains: concentrated lead waste - system D□-DRAN-CMW~ Drains: concentrated metals waste - system D□-DRAN-CUPW Drains: copper plating waste - system D□-DRAN-CURW Drains: copper rinse waste - system D□-DRAN-CUSW Drains: copper slurry waste - system D□-DRAN-DIRC Drains: DI reclaim - system D□-DRAN-DLW~ Drains: dilute waste - system D□-DRAN-EGW~ Drains: ethylene glycol waste - system D□-DRAN-HFW~ Drains: hydrofluoric waste - system D□-DRAN-HFW~ Drains: industrial waste - system D□-DRAN-NW~ Drains: metals waste - system D□-DRAN-NPWR Drains: organic industrial waste - system D□-DRAN-OLW~ Drains: organic liquid waste - system D□-DRAN-OLW~ Drains: organic solvent waste - system D□-DRAN-PHRC Drains: phosphoric acid reclaim - system D□-DRAN-PSW~ Drains: photo solvent waste - system D□-DRAN-SDD~ Drains: scrubber duct drains - system	D□-DETL-FINE	Detail: fine lines
D□-DRAN-CD~~ Drains: condensate drain - system D□-DRAN-CLW~ Drains: concentrated lead waste - system D□-DRAN-CUPW Drains: copper plating waste - system D□-DRAN-CURW Drains: copper plating waste - system D□-DRAN-CUSW Drains: copper rinse waste - system D□-DRAN-DIRC Drains: DI reclaim - system D□-DRAN-DLW~ Drains: dilute waste - system D□-DRAN-BGW~ Drains: ethylene glycol waste - system D□-DRAN-HFW~ Drains: industrial waste - system D□-DRAN-IW~~ Drains: metals waste - system D□-DRAN-NWW~ Drains: metals waste - system D□-DRAN-OIW~ Drains: organic industrial waste - system D□-DRAN-OIW~ Drains: organic liquid waste - system D□-DRAN-OLW~ Drains: organic liquid waste - system D□-DRAN-OSW~ Drains: organic solvent waste - system D□-DRAN-PRC Drains: photo solvent waste - system D□-DRAN-SDD~ Drains: scrubber duct drains - system	D□-DETL-MEDM	Detail: medium lines
D□-DRAN-CLW~ Drains: concentrated lead waste - system D□-DRAN-CMW~ Drains: concentrated metals waste - system D□-DRAN-CUPW Drains: copper plating waste - system D□-DRAN-CURW Drains: copper rinse waste - system D□-DRAN-CUSW Drains: copper slurry waste - system D□-DRAN-DIRC Drains: DI reclaim - system D□-DRAN-DLW~ Drains: dilute waste - system D□-DRAN-BGW~ Drains: ethylene glycol waste - system D□-DRAN-HFW~ Drains: hydrofluoric waste - system D□-DRAN-IW~~ Drains: industrial waste - system D□-DRAN-MW~~ Drains: metals waste - system D□-DRAN-NPWR Drains: non-potable water reuse - system D□-DRAN-OIW~ Drains: organic industrial waste - system D□-DRAN-OIW~ Drains: organic liquid waste - system D□-DRAN-OLW~ Drains: organic solvent waste - system D□-DRAN-OSW~ Drains: phosphoric acid reclaim - system D□-DRAN-PSW~ Drains: photo solvent waste - system D□-DRAN-SDD~ Drains: scrubber duct drains - system	D□-DRAN-AMW~	Drains: ammonia waste - system
D□-DRAN-CMW~ Drains: concentrated metals waste - system D□-DRAN-CUPW Drains: copper plating waste - system D□-DRAN-CURW Drains: copper rinse waste - system D□-DRAN-CUSW Drains: copper slurry waste - system D□-DRAN-DIRC Drains: DI reclaim - system D□-DRAN-DLW~ Drains: dilute waste - system D□-DRAN-BGW~ Drains: ethylene glycol waste - system D□-DRAN-HFW~ Drains: hydrofluoric waste - system D□-DRAN-IW~~ Drains: industrial waste - system D□-DRAN-MW~~ Drains: metals waste - system D□-DRAN-NPWR Drains: non-potable water reuse - system D□-DRAN-OIW~ Drains: organic industrial waste - system D□-DRAN-OLW~ Drains: organic liquid waste - system D□-DRAN-OSW~ Drains: organic solvent waste - system D□-DRAN-PHRC Drains: photo solvent waste - system D□-DRAN-SDD~ Drains: scrubber duct drains - system	D□-DRAN-CD~~	Drains: condensate drain - system
D□-DRAN-CUPW Drains: copper plating waste - system D□-DRAN-CURW Drains: copper rinse waste - system D□-DRAN-CUSW Drains: copper slurry waste - system D□-DRAN-DIRC Drains: DI reclaim - system D□-DRAN-DLW~ Drains: dilute waste - system D□-DRAN-EGW~ Drains: ethylene glycol waste - system D□-DRAN-HFW~ Drains: hydrofluoric waste - system D□-DRAN-IW~~ Drains: industrial waste - system D□-DRAN-MW~~ Drains: metals waste - system D□-DRAN-NPWR Drains: non-potable water reuse - system D□-DRAN-OIW~ Drains: organic industrial waste - system D□-DRAN-OLW~ Drains: organic liquid waste - system D□-DRAN-OSW~ Drains: organic solvent waste - system D□-DRAN-PHRC Drains: phosphoric acid reclaim - system D□-DRAN-PSW~ Drains: photo solvent waste - system D□-DRAN-SDD~ Drains: scrubber duct drains - system	D□-DRAN-CLW~	Drains: concentrated lead waste - system
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D□-DRAN-CUSW D□-DRAN-DIRC D□-DRAN-DLW~ D□-DRAN-BGW~ D□-DRAN-HFW~ D□-DRAN-IW~ D□-DRAN-W~ D□-DRAN-W~ D□-DRAN-W~ D□-DRAN-W~ D□-DRAN-NPWR D□-DRAN-OLW~ D□-DRAN-OLW~ D□-DRAN-OLW~ D□-DRAN-OLW~ D□-DRAN-OLW~ D□-DRAN-OLW~ D□-DRAN-OLW~ D□-DRAN-OLW~ D□-DRAN-DLW~ D□-DRAN-DLW~ D□-DRAN-DLW~ D□-DRAN-OLW~ D□-DRAN-OLW~ D□-DRAN-OLW~ D□-DRAN-OLW~ D□-DRAN-DLW~	D□-DRAN-CUPW	Drains: copper plating waste - system
DDRAN-DIRC Drains: DI reclaim - system DDRAN-DLW~ Drains: dilute waste - system DDRAN-EGW~ Drains: ethylene glycol waste - system DDRAN-HFW~ Drains: hydrofluoric waste - system DDRAN-IW~~ Drains: industrial waste - system DDRAN-MW~~ Drains: metals waste - system DDRAN-NPWR Drains: organic industrial waste - system DDRAN-OIW~ Drains: organic liquid waste - system DDRAN-OLW~ Drains: organic solvent waste - system DDRAN-PHRC Drains: phosphoric acid reclaim - system DDRAN-PSW~ Drains: photo solvent waste - system DDRAN-SDD~ Drains: scrubber duct drains - system	D□-DRAN-CURW	Drains: copper rinse waste - system
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D□-DRAN-EGW~ Drains: ethylene glycol waste - system D□-DRAN-HFW~ Drains: hydrofluoric waste - system D□-DRAN-IW~~ Drains: industrial waste - system D□-DRAN-MW~~ Drains: metals waste - system D□-DRAN-NPWR Drains: non-potable water reuse - system D□-DRAN-OIW~ Drains: organic industrial waste - system D□-DRAN-OLW~ Drains: organic liquid waste - system D□-DRAN-OSW~ Drains: organic solvent waste - system D□-DRAN-PHRC Drains: phosphoric acid reclaim - system D□-DRAN-PSW~ Drains: photo solvent waste - system D□-DRAN-SDD~ Drains: scrubber duct drains - system	D□-DRAN-DIRC	Drains: DI reclaim - system
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D□-DRAN-MW~~ Drains: metals waste - system D□-DRAN-NPWR Drains: non-potable water reuse - system D□-DRAN-OIW~ Drains: organic industrial waste - system D□-DRAN-OLW~ Drains: organic liquid waste - system D□-DRAN-OSW~ Drains: organic solvent waste - system D□-DRAN-PHRC Drains: phosphoric acid reclaim - system D□-DRAN-PSW~ Drains: photo solvent waste - system D□-DRAN-SDD~ Drains: scrubber duct drains - system	D□-DRAN-HFW~	Drains: hydrofluoric waste - system
D□-DRAN-NPWR Drains: non-potable water reuse - system D□-DRAN-OIW~ Drains: organic industrial waste - system D□-DRAN-OLW~ Drains: organic liquid waste - system D□-DRAN-OSW~ Drains: organic solvent waste - system D□-DRAN-PHRC Drains: phosphoric acid reclaim - system D□-DRAN-PSW~ Drains: photo solvent waste - system D□-DRAN-SDD~ Drains: scrubber duct drains - system	D□-DRAN-IW~~	Drains: industrial waste - system
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D□-DRAN-OLW~ Drains: organic liquid waste - system D□-DRAN-OSW~ Drains: organic solvent waste - system D□-DRAN-PHRC Drains: phosphoric acid reclaim - system D□-DRAN-PSW~ Drains: photo solvent waste - system D□-DRAN-SDD~ Drains: scrubber duct drains - system	D□-DRAN-NPWR	Drains: non-potable water reuse - system
D□-DRAN-OSW~ Drains: organic solvent waste - system D□-DRAN-PHRC Drains: phosphoric acid reclaim - system D□-DRAN-PSW~ Drains: photo solvent waste - system D□-DRAN-SDD~ Drains: scrubber duct drains - system	D□-DRAN-OIW~	Drains: organic industrial waste - system
D□-DRAN-PHRC Drains: phosphoric acid reclaim - system D□-DRAN-PSW~ Drains: photo solvent waste - system D□-DRAN-SDD~ Drains: scrubber duct drains - system	D□-DRAN-OLW~	Drains: organic liquid waste - system
D□-DRAN-PSW~ Drains: photo solvent waste - system D□-DRAN-SDD~ Drains: scrubber duct drains - system	D□-DRAN-OSW~	Drains: organic solvent waste - system
D□-DRAN-SDD~ Drains: scrubber duct drains - system	D□-DRAN-PHRC	Drains: phosphoric acid reclaim - system
	D□-DRAN-PSW~	Drains: photo solvent waste - system
D□-DRAN-SLW~ Drains: slurry waste - system	D□-DRAN-SDD~	Drains: scrubber duct drains - system
	D□-DRAN-SLW~	Drains: slurry waste - system

Di-DRAN-SULR Drains: sulfuric acid reclaim - system Di-DRAN-SW Drains: solvent waste - system Dr-DRAN-SWF Drains: solvent waste flammable - system Dr-DRAN-SWNF Drains: solvent waste non-flammable - system Dr-DRAN-SWNF Drains: solvent waste non-flammable - system Dr-DRAN-SWNF Drains: solvent waste non-flammable - system Dr-EXHS-AREX Exhaust: arsenic exhaust - system Dr-EXHS-AREX Exhaust: srenic exhaust - system Dr-EXHS-SCEX Exhaust: solvent exhaust - system Dr-EXHS-SVEX Exhaust: solvent exhaust - system Dr-GAS-ARP Gas: argon - system Dr-GAS-ARP Gas: argon - system Dr-GAS-CLG Gas: obtaine - system Dr-GAS-CLG Gas: helium - system Dr-GAS-HPN2 Gas: high purity nitrogen - system Dr-GAS-HPN2 Gas: high purity oxygen - system Dr-GAS-HPN2 Gas: high purity oxygen - system Dr-GAS-NP-C Gas: nitrous oxide - system Dr-GAS-NP-C Gas: nitrous oxide - system Dr-GAS-NP-C Gas: nitrous oxide - system Dr-GAS-NP-C Gas: oxygen - system Dr-GAS-NP-C Gas: oxygen - system Dr-GAS-NP-C Gas: oxygen - system Dr-GAS-NP-C Gas: oxyge	D□-DRAN-SULF	Drains: sulfuric acid - system
Do-DRAN-SW Drains: solvent waste - system Do-DRAN-SWF- Drains: solvent waste flammable - system Do-DRAN-SWNF Drains: solvent waste non-flammable - system Do-EXHS-AMEX Exhaust: ammonia exhaust - system Do-EXHS-AREX Exhaust: arsenic exhaust - system Do-EXHS-AREX Exhaust: arsenic exhaust - system Do-EXHS-BREX Exhaust: scrubber exhaust - system Do-EXHS-SCEX Exhaust: scrubber exhaust - system Do-EXHS-SVEX Do-EXHS-SVEX Exhaust: scrubber exhaust - system Do-EXHS-SVEX Exhaust: scrubber exhaust - system Do-EXHS-SVEX Exhaust: scrubber exhaust - system Do-GAS-ARE- Gas: argon - system Do-GAS-ARE- Gas: argon bulk - system Do-GAS-ARE- Gas: argon bulk - system Do-GAS-ARE- Gas: butane - system Do-GAS-ARE- Gas: high gas - system Do-GAS-HE Gas: high purity nitrogen - system Do-GAS-HP02 Gas: high purity oxygen - system Do-GAS-HP02 Gas: high purity oxygen - system Do-GAS-NO Gas: nitrous oxide - system Do-GAS-NO Gas: nitrous oxide - system Do-GAS-NO Gas: natural gas - system Do-GAS-NO Gas: propane - system Do-GAS-NO Gas: propane - system Do-GAS-NO Gas: utility nitrogen - system Do-GAS-NO Gas: weld argon - system Do-GAS-NO Gas: weld argon - system Do-GAS-NO Do-GAS-NO Gas: weld argon - system Do-D-IPE- Do-PIPE-ONTR Piping Do-PIPE-ONTR Piping: center Do-PIPE-ONTR Piping: equipment Do-PIPE-ONTR Piping: equipment Do-PIPE-HOLN Piping: inideal line Do-PIPE-HOLN Piping: inideal line Do-PIPE-HOLN Piping: miscellaneous Do-PIPE-HOLN Piping: indearground Do-SLUR-SLS Slurry: slurry slurry supply - system	-	· · · · · · · · · · · · · · · · · · ·
Di-DRAN-SWF~ Drains; solvent waste flammable - system Di-DRAN-SWNF Drains; solvent waste non-flammable - system Di-EXHS-AMEX Exhaust: ammonia exhaust - system Di-EXHS-AREX Exhaust: arsenic exhaust - system Di-EXHS-AREX Exhaust: scrubber exhaust - system Di-EXHS-SCEX Exhaust: scrubber exhaust - system Di-EXHS-SVEX Di-EXHS-SVEX Exhaust: solvent exhaust - system Di-GAS-ARA Gas: argon - system Di-GAS-ARA Gas: argon - system Di-GAS-ARB Gas: argon bulk - system Di-GAS-ARB Gas: butane - system Di-GAS-AB Di-GASCLG Gas: butane - system Di-GASLHZ Gas: high purity nitrogen - system Di-GASHP02 Gas: high purity oxygen - system Di-GASLCHE Gas: leak check helium - system Di-GASLCHE Gas: nitrogen - system Di-GASNZ0 Gas: nitrogen - system Di-GAS-NZ0 Gas: nitrogen - system Di-GAS-NZ0 Gas: natural gas - system Di-GAS-NZ0 Gas: natural gas - system Di-GASNZ0 Gas: oxygen - system Di-GASNZ0 Gas: oxygen - system Di-GASNZ0 Gas: utility nitrogen - system Di-GASNZ0 Gas: venturi nitrogen - system Di-GASNZ0 Gas: venturi nitrogen - system Di-GASNZ0 Gas: venturi nitrogen - system Di-GASNZ0 Gas: weld argon - system Di-GASNZ0 Di-GASNZ0 Di-GASNZ0 Di-GASNZ0 Di-GASNZ0		
Dr-DRAN-SWNF Drains: solvent waste non-flammable - system Dr-EXHS-AMEX Exhaust: ammonia exhaust - system Dr-EXHS-AREX Exhaust: arsenic exhaust - system Dr-EXHS-AREX Exhaust: arsenic exhaust - system Dr-EXHS-AREX Exhaust: scrubber exhaust - system Dr-EXHS-SVEX Exhaust: solvent exhaust - system Dr-EXHS-SVEX Exhaust: solvent exhaust - system Dr-GAS-ARE- Dr-GAS-ARE- Gas: argon - system Dr-GAS-ARE- Gas: argon bulk - system Dr-GAS-ARE- Dr-GAS-ARE- Gas: butane - system Dr-GAS-ARE- Gas: chlorine gas - system Dr-GAS-HE Gas: high purity nitrogen - system Dr-GAS-HPN2 Gas: high purity nitrogen - system Dr-GAS-HPN2 Gas: high purity oxygen - system Dr-GAS-HPN2 Gas: nitrogen - system Dr-GAS-NRC- Gas: propane - system Dr-GAS-NRC- Gas: propane - system Dr-GAS-NRC- Gas: specialty gas - system Dr-GAS-NRC- Gas: utility nitrogen - system Dr-GAS-NRC- Gas: weld argon - system Dr-GAS-NRC- Dr-HPE-		
Do-EXHS-AMEX Exhaust: ammonia exhaust - system Do-EXHS-AREX Exhaust: arsenic exhaust - system Do-EXHS-HTEX Exhaust: heat exhaust - system Do-EXHS-SCEX Exhaust: solvent exhaust - system Do-EXHS-SVEX Exhaust: solvent exhaust - system Do-EXHS-SVEX Exhaust: solvent exhaust - system Do-GAS-AR Gas: argon - system Do-GAS-ARB- Gas: argon bulk - system Do-GAS-ARB- Gas: argon bulk - system Do-GASBUT- Gas: butane - system Do-GASBUT- Gas: chlorine gas - system Do-GASHE Gas: helium - system Do-GASHPN2 Gas: high purity nitrogen - system Do-GASHPN2 Gas: high purity oxygen - system Do-GASHPN2 Gas: nitrogen - system Do-GASNPO- Gas: propane - system Do-GASNPO- Gas: propane - system Do-GASNPO- Gas: specialty gas - system Do-GASNPO- Gas: utility nitrogen - system Do-GASNPO- Gas: weld argon - system Do-GASNPO- Do-GASNPO- Gas: weld argon - system Do-GASNPO- Do-GASNPO- Do-GASNPO- Do-GASNPO- Do-HPPE Piping Do-PIPE Piping Do-PIPE-DOND Piping: equipment Do-PIPE-BOND Piping: equipment Do-PIPE-BOND Piping: equipment Do-PIPE-BOND Piping: underground Do-SLUR-SLR- Slurry: slurry slurry supply - system	D□-DRAN-SWNF	<u> </u>
Do-EXHS-AREX Exhaust: arsenic exhaust - system Do-EXHS-HTEX Exhaust: heat exhaust - system Do-EXHS-SCEX Exhaust: scrubber exhaust - system Do-EXHS-SVEX Exhaust: solvent exhaust - system Do-GAS-AR- Gas: argon - system Do-GAS-ARB- Gas: argon bulk - system Do-GAS-ARB- Gas: argon bulk - system Do-GAS-BUT- Gas: butane - system Do-GAS-HE- Gas: chlorine gas - system Do-GAS-HE- Gas: helium - system Do-GAS-HPO2 Gas: high purity nitrogen - system Do-GAS-HPO2 Gas: high purity oxygen - system Do-GAS-HPO2 Gas: high purity oxygen - system Do-GAS-LCHE Gas: leak check helium - system Do-GAS-NO- Gas: nitrogen - system Do-GAS-NO- Gas: nitrous oxide - system Do-GAS-NO- Gas: natural gas - system Do-GAS-NO- Gas: oxygen - system Do-GAS-PRO- Gas: oxygen - system Do-GAS-SG- Gas: propane - system Do-GAS-SG- Gas: specialty gas - system Do-GAS-NO- Gas: utility nitrogen - system Do-GAS-NO- Cas: weld argon - system Do-GAS-WNA- Gas: weld argon - system Do-GAS-WNA- Gas: weld argon - system Do-DI-CLO- Do-PIPE Piping Do-PIPE-CNTR Piping: center Do-PIPE-CNTR Piping: center Do-PIPE-HDLN Piping: inideen line Do-PIPE-HDLN Piping: miscellaneous Do-PIPE-HDLN Piping: iniden line Do-PIPE-UGND Piping: underground Do-SLUR-SLR- Slurry: slurry slurry return - system Do-SLUR-SLR- Slurry: slurry slurry supply - system	D□-EXHS-AMEX	<u> </u>
DD-EXHS-HTEX Exhaust: heat exhaust - system DD-EXHS-SCEX Exhaust: scrubber exhaust - system DD-GAS~-AR~~ Gas: argon - system DD-GAS~-ARB~ Gas: argon bulk - system DD-GAS~-BUT~ Gas: butane - system DD-GAS~-LCG~ Gas: chlorine gas - system DD-GAS~-HE~~ Gas: helium - system DD-GAS~-HPN2 Gas: high purity nitrogen - system DD-GAS~-HPN2 Gas: high purity oxygen - system DD-GAS~-HPO2 Gas: high purity oxygen - system DD-GAS~-LCHE Gas: leak check helium - system DD-GAS~-N2~ Gas: nitrogen - system DD-GAS~-N2~ Gas: nitrogen - system DD-GAS~-N2~ Gas: nitrous oxide - system DD-GAS~-N2~ Gas: oxygen - system DD-GAS~-O2~ Gas: oxygen - system DD-GAS~-SG~ Gas: specialty gas - system DD-GAS~-SG~ Gas: sepcialty gas - system DD-GAS~-UN2~ Gas: utility nitrogen - system DD-GAS~-UN2~ Gas: weld argon - system DD-GAS~-UN2~ Gas: weld argon - system DD-GAS~-WAR~ Gas: weld argon - system DD-GAS~-WAR~ Gas: weld argon - system DD-GAS~-WAR~ Gas: weld argon - system DD-D-IDP-DPPE DIPIPE DD-PIPE DIPIPE DD-PIPE DIPIPE-CNTR DD-PIPE DIPIPE-CNTR DD-PIPE-CNTR DD-PIPE-BINC DD-PIPE-UGND Piping: underground DD-SLUR-SLR~ Slurry: slurry slurry supply - system	D□-EXHS-AREX	
DD-EXHS-SCEX Exhaust: sorubber exhaust - system DD-EXHS-SVEX Exhaust: solvent exhaust - system DD-GASAR Gas: argon - system DD-GASARB- Gas: argon bulk - system DD-GASBUT- Gas: butane - system DD-GASCLG- Gas: chlorine gas - system DD-GASH2 Gas: hydrogen - system DD-GASHE Gas: helium - system DD-GASHPN2 Gas: high purity nitrogen - system DD-GASHPN2 DD-GASLCHE Gas: leak check helium - system DD-GASN2 Gas: nitrogen - system DD-GASN2 Gas: nitrogen - system DD-GASN2 Gas: nitrogen - system DD-GASN2 Gas: nitrous oxide - system DD-GASNG Gas: oxygen - system DD-GASND DD-GASND DD-GASND Gas: oxygen - system DD-GASND DD-GASND DD-GASND DD-GASND Gas: oxygen - system DD-GASND DD-GASND DD-GASND DDGASND Gas: oxygen - system DDGASND DDGASND DDGASND DDGASND DDGASND DDGASND DDPIPEND DDSLURSL Slurry: slurry: slurry: slurry supply - system	D□-EXHS-HTEX	
Do-EXHS-SVEX Exhaust: solvent exhaust - system Do-GASARR Gas: argon - system Do-GASARB Gas: argon bulk - system Do-GASBUT Gas: butane - system Do-GASCLG Gas: chlorine gas - system Do-GASH2 Gas: helium - system Do-GASHPN2 Gas: high purity nitrogen - system Do-GASHPN2 Gas: high purity oxygen - system Do-GASHPN2 Gas: high purity oxygen - system Do-GASLCHE Gas: leak check helium - system Do-GASN2 Gas: nitrogen - system Do-GASN2 Gas: nitrogen - system Do-GASN2 Gas: nitrous oxide - system Do-GASN2 Gas: nitrous oxide - system Do-GASNG Gas: natural gas - system Do-GASO2 Gas: oxygen - system Do-GASVR0 Gas: propane - system Do-GASSG Gas: specialty gas - system Do-GASSG Gas: venturi nitrogen - system Do-GASWAR Do-GASWAR Gas: weld argon - system Do-LIQD-LPG Liquid: liquid petroleum gas - system Do-LIQD-LPG Liquid: liquid petroleum gas - system Do-DIC-LO Oil: lube oil - system Do-PIPE Piping Do-PIPE-ONTR Piping: center Do-PIPE-ONTR Piping: center Do-PIPE-HDLN Piping: hidden line Do-PIPE-HDLN Piping: miscellaneous Do-PIPE-MISC Piping: miscellaneous Do-SLUR-SLR Slurry: slurry supply - system Do-SLUR-SLS Slurry: slurry supply - system	D□-EXHS-SCEX	· · · · · · · · · · · · · · · · · · ·
Do-GAS~AR~ Gas: argon - system Do-GAS~ARB~ Gas: argon bulk - system Do-GAS~-BUT~ Gas: butane - system Do-GAS~-BUT~ Gas: butane - system Do-GAS~-H2~ Gas: hydrogen - system Do-GAS~-HE~ Gas: high purity nitrogen - system Do-GAS~-HP02 Gas: high purity oxygen - system Do-GAS~-HP02 Gas: high purity oxygen - system Do-GAS~-LCHE Gas: leak check helium - system Do-GAS~-N2~ Gas: nitrogen - system Do-GAS~-N2~ Gas: nitrogen - system Do-GAS~-N2~ Gas: nitrous oxide - system Do-GAS~-N2~ Gas: natural gas - system Do-GAS~-N2~ Gas: oxygen - system Do-GAS~-PRO~ Gas: pospen - system Do-GAS~-PRO~ Gas: specialty gas - system Do-GAS~-VN2~ Gas: utility nitrogen - system Do-GAS~-VN2~ Gas: venturi nitrogen - system Do-GAS~-VN2~ Gas: weld argon - system Do-LIQD-LPG~ Liquid: liquid petroleum gas - system Do-DIC~-LO~ Oil: lube oil - system Do-PIPE Piping Do-PIPE-CNTR Piping: center Do-PIPE-EQPM Piping: equipment Do-PIPE-HDLN Piping: hidden line Do-PIPE-MISC Piping: miscellaneous Do-PIPE-UGND Piping: underground Do-SLUR-SLR~ Slurry: slurry supply - system Do-SLUR-SLR~ Slurry: slurry supply - system Do-SLUR-SLS~ Slurry: slurry supply - system	D□-EXHS-SVEX	· · · · · · · · · · · · · · · · · · ·
Do-GAS~-BUT~ Gas: butane - system Do-GAS~-CLG~ Gas: chlorine gas - system Do-GAS~-HE~~ Gas: hydrogen - system Do-GAS~-HE~~ Gas: high purity nitrogen - system Do-GAS~-HPN2 Gas: high purity oxygen - system Do-GAS~-HPO2 Gas: high purity oxygen - system Do-GAS~-LCHE Gas: leak check helium - system Do-GAS~-LCHE Gas: nitrous oxide - system Do-GAS~-N2~~ Gas: nitrous oxide - system Do-GAS~-N2~~ Gas: natural gas - system Do-GAS~-N2~~ Gas: oxygen - system Do-GAS~-N2~~ Gas: propane - system Do-GAS~-N2~~ Gas: specialty gas - system Do-GAS~-N2~~ Gas: willity nitrogen - system Do-GAS~-UN2~ Gas: weld argon - system Do-GAS~-VN2~ Gas: weld argon - system Do-LIQD-LPG~ Liquid: liquid petroleum gas - system Do-DIC-LO~- Oil: lube oil - system Do-PIPE Piping Do-PIPE-CNTR Piping: center Do-PIPE-CNTR Piping: center Do-PIPE-HDLN Piping: hidden line Do-PIPE-HDLN Piping: miscellaneous Do-PIPE-MISC Piping: miscellaneous Do-PIPE-MISC Piping: itexture and hatch patterns Do-PIPE-UGND Piping: underground Do-SLUR-SLR~ Slurry: slurry slurry return - system Do-SLUR-SLR~ Slurry: slurry supply - system	D□-GAS~-AR~~	<u> </u>
DD-GAS~CLG~ Gas: chlorine gas - system DD-GAS~HE~~ Gas: hydrogen - system DD-GAS~HE~~ Gas: helium - system DD-GAS~HE~~ Gas: high purity nitrogen - system DD-GAS~HPN2 Gas: high purity oxygen - system DD-GAS~LCHE Gas: leak check helium - system DD-GAS~LCHE Gas: leak check helium - system DD-GAS~N2~~ Gas: nitrous oxide - system DD-GAS~N2~~ Gas: natural gas - system DD-GAS~N2~~ Gas: oxygen - system DD-GAS~N2~~ Gas: propane - system DD-GAS~N2~~ Gas: specialty gas - system DD-GAS~VN2~~ Gas: utility nitrogen - system DD-GAS~VN2~~ Gas: weld argon - system DD-GAS~VN2~~ Gas: weld argon - system DD-LIQD-LPG~ Liquid: liquid petroleum gas - system DD-DIC-LO~~ DD-PIPE DD-PIPE Piping DD-PIPE-CNTR Piping: center DD-PIPE-HDLN Piping: equipment DD-PIPE-HDLN Piping: hidden line DD-PIPE-HDLN Piping: miscellaneous DD-PIPE-HDLN Piping: itexture and hatch patterns DD-PIPE-UGND Piping: underground DD-SLUR-SLR~ Slurry: slurry return - system DD-SLUR-SLR~ Slurry: slurry slurry supply - system	D□-GAS~-ARB~	Gas: argon bulk - system
DD-GAS~-H2~~ Gas: hydrogen - system DD-GAS~-HE~~ Gas: helium - system DD-GAS~-HPN2 Gas: high purity nitrogen - system DD-GAS~-HPO2 Gas: high purity oxygen - system DD-GAS~-LCHE Gas: leak check helium - system DD-GAS~-LCHE Gas: leak check helium - system DD-GAS~-N2~~ Gas: nitrogen - system DD-GAS~-N2~~ Gas: nitrous oxide - system DD-GAS~-N2~~ Gas: natural gas - system DD-GAS~-N2~~ Gas: oxygen - system DD-GAS~-N2~~ Gas: oxygen - system DD-GAS~-PRO~ Gas: propane - system DD-GAS~-PRO~ Gas: specialty gas - system DD-GAS~-UN2~ Gas: utility nitrogen - system DD-GAS~-UN2~ Gas: welld argon - system DD-GAS~-WAR~ Gas: weld argon - system DD-LIQD-LPG~ Liquid: liquid petroleum gas - system DD-PIPE Piping DD-PIPE Piping DD-PIPE-CNTR Piping: center DD-PIPE-CNTR Piping: center DD-PIPE-HDLN Piping: hidden line DD-PIPE-HDLN Piping: miscellaneous DD-PIPE-MISC Piping: miscellaneous DD-PIPE-PATT Piping: underground DD-PIPE-UGND Piping: underground DD-SLUR-SLR~ Slurry: slurry supply - system	D□-GAS~-BUT~	Gas: butane - system
D□-GAS~-HE~~ Gas: helium - system D□-GAS~-HPN2 Gas: high purity nitrogen - system D□-GAS~-HPO2 Gas: high purity oxygen - system D□-GAS~-LCHE Gas: leak check helium - system D□-GAS~-N2~ Gas: nitrogen - system D□-GAS~-N2~ Gas: nitrous oxide - system D□-GAS~-N2~ Gas: nitrous oxide - system D□-GAS~-N2~ Gas: natural gas - system D□-GAS~-N2~ Gas: oxygen - system D□-GAS~-PRO~ Gas: propane - system D□-GAS~-PRO~ Gas: specialty gas - system D□-GAS~-UN2~ Gas: utility nitrogen - system D□-GAS~-UN2~ Gas: venturi nitrogen - system D□-GAS~-WAR~ Gas: weld argon - system D□-LIQD-LPG~ Liquid: liquid petroleum gas - system D□-DIL~-LO~~ Oil: lube oil - system D□-PIPE Piping D□-PIPE-CNTR Piping: center D□-PIPE-CNTR Piping: equipment D□-PIPE-HDLN Piping: hidden line D□-PIPE-HDLN Piping: miscellaneous D□-PIPE-MISC Piping: miscellaneous D□-PIPE-UGND Piping: underground D□-SLUR-SLR~ Slurry: slurry return - system D□-SLUR-SLR~ Slurry: slurry supply - system	D□-GAS~-CLG~	Gas: chlorine gas - system
DD-GAS~-HPN2 Gas: high purity nitrogen - system DD-GAS~-HPO2 Gas: high purity oxygen - system DD-GAS~-LCHE Gas: leak check helium - system DD-GAS~-N2~ Gas: nitrogen - system DD-GAS~-N2~ Gas: nitrous oxide - system DD-GAS~-N2~ Gas: natural gas - system DD-GAS~-N6~ Gas: oxygen - system DD-GAS~-PRO~ Gas: propane - system DD-GAS~-PRO~ Gas: specialty gas - system DD-GAS~-SG~~ Gas: stillity nitrogen - system DD-GAS~-UN2~ Gas: utility nitrogen - system DD-GAS~-WAR~ Gas: weld argon - system DD-GAS~-WAR~ Gas: weld argon - system DD-LIQD-LPG~ Liquid: liquid petroleum gas - system DD-PIPE Piping DD-PIPE-CNTR Piping: center DD-PIPE-CNTR Piping: center DD-PIPE-HDLN Piping: equipment DD-PIPE-HDLN Piping: hidden line DD-PIPE-HDLN Piping: inscellaneous DD-PIPE-HTD Piping: texture and hatch patterns DD-PIPE-UGND Piping: underground DD-SLUR-SLR~ Slurry: slurry return - system DD-SLUR-SLR~ Slurry: slurry supply - system	D□-GAS~-H2~~	Gas: hydrogen - system
DD-GAS~-HPO2 Gas: high purity oxygen - system DD-GAS~-LCHE Gas: leak check helium - system DD-GAS~-N2~ Gas: nitrogen - system DD-GAS~-N2~ Gas: nitrous oxide - system DD-GAS~-N2~ Gas: natural gas - system DD-GAS~-N6~ Gas: propane - system DD-GAS~-PRO~ Gas: propane - system DD-GAS~-PRO~ Gas: specialty gas - system DD-GAS~-SG~~ Gas: specialty gas - system DD-GAS~-UN2~ Gas: utility nitrogen - system DD-GAS~-VN2~ Gas: venturi nitrogen - system DD-GAS~-WAR~ Gas: weld argon - system DD-LIQD-LPG~ Liquid: liquid petroleum gas - system DD-OIL~-LO~~ Oil: lube oil - system DD-PIPE Piping DD-PIPE-CNTR Piping: center DD-PIPE-CNTR Piping: equipment DD-PIPE-HDLN Piping: equipment DD-PIPE-HDLN Piping: hidden line DD-PIPE-HDLN Piping: inscellaneous DD-PIPE-HTT Piping: texture and hatch patterns DD-PIPE-UGND Piping: underground DD-SLUR-SLR~ Slurry: slurry return - system DD-SLUR-SLR~ Slurry: slurry supply - system	D□-GAS~-HE~~	Gas: helium - system
DD-GAS~-LCHE Gas: leak check helium - system DD-GAS~-N2~ Gas: nitrous oxide - system DD-GAS~-N6~ Gas: natural gas - system DD-GAS~-N6~ Gas: oxygen - system DD-GAS~-PRO~ Gas: propane - system DD-GAS~-PRO~ Gas: specialty gas - system DD-GAS~-SG~ Gas: specialty gas - system DD-GAS~-UN2~ Gas: utility nitrogen - system DD-GAS~-VN2~ Gas: venturi nitrogen - system DD-GAS~-WAR~ Gas: weld argon - system DD-LIQD-LPG~ Liquid: liquid petroleum gas - system DD-PIPE Piping DD-PIPE Piping DD-PIPE-CNTR Piping: center DD-PIPE-EQPM Piping: equipment DD-PIPE-HDLN Piping: hidden line DD-PIPE-MISC Piping: miscellaneous DD-PIPE-DATT Piping: texture and hatch patterns DD-SLUR-SLR~ Slurry: slurry return - system DD-SLUR-SLR~ Slurry: slurry return - system	D□-GAS~-HPN2	Gas: high purity nitrogen - system
D□-GAS~-N2~ Gas: nitrogen - system D□-GAS~-N2~ Gas: nitrous oxide - system D□-GAS~-N6~ Gas: natural gas - system D□-GAS~-N6~ Gas: oxygen - system D□-GAS~-PR0~ Gas: propane - system D□-GAS~-SG~~ Gas: specialty gas - system D□-GAS~-UN2~ Gas: utility nitrogen - system D□-GAS~-VN2~ Gas: venturi nitrogen - system D□-GAS~-WAR~ Gas: weld argon - system D□-LIQD-LPG~ Liquid: liquid petroleum gas - system D□-OIL~-LO~~ Oil: lube oil - system D□-PIPE Piping D□-PIPE-CNTR Piping: center D□-PIPE-BQPM Piping: equipment D□-PIPE-HDLN Piping: hidden line D□-PIPE-HDLN Piping: miscellaneous D□-PIPE-PATT Piping: texture and hatch patterns D□-PIPE-UGND Piping: underground D□-SLUR-SLR~ Slurry: slurry return - system D□-SLUR-SLS~ Slurry: slurry supply - system	D□-GAS~-HPO2	Gas: high purity oxygen - system
D□-GAS~-N2O~ Gas: nitrous oxide - system D□-GAS~-NG~~ Gas: natural gas - system D□-GAS~-O2~~ Gas: oxygen - system D□-GAS~-PRO~ Gas: propane - system D□-GAS~-SG~~ Gas: specialty gas - system D□-GAS~-UN2~ Gas: utility nitrogen - system D□-GAS~-VN2~ Gas: venturi nitrogen - system D□-GAS~-WAR~ Gas: weld argon - system D□-LIQD-LPG~ Liquid: liquid petroleum gas - system D□-OIL~-LO~~ Oil: lube oil - system D□-PIPE Piping D□-PIPE-CNTR Piping: center D□-PIPE-EQPM Piping: equipment D□-PIPE-HDLN Piping: hidden line D□-PIPE-MISC Piping: miscellaneous D□-PIPE-MISC Piping: miscellaneous D□-PIPE-UGND Piping: underground D□-SLUR-SLR~ Slurry: slurry return - system D□-SLUR-SLS~ Slurry: slurry supply - system	D□-GAS~-LCHE	Gas: leak check helium - system
D□-GAS~-NG~~ Gas: natural gas - system D□-GAS~-O2~~ Gas: oxygen - system D□-GAS~-PRO~ Gas: propane - system D□-GAS~-SG~~ Gas: specialty gas - system D□-GAS~-UN2~ Gas: utility nitrogen - system D□-GAS~-VN2~ Gas: venturi nitrogen - system D□-GAS~-WAR~ Gas: weld argon - system D□-LIQD-LPG~ Liquid: liquid petroleum gas - system D□-OIL~-LO~ Oil: lube oil - system D□-PIPE Piping D□-PIPE-CNTR Piping: center D□-PIPE-BQPM Piping: equipment D□-PIPE-HDLN Piping: hidden line D□-PIPE-MISC Piping: miscellaneous D□-PIPE-PATT Piping: texture and hatch patterns D□-PIPE-UGND Piping: underground D□-SLUR-SLR~ Slurry: slurry return - system D□-SLUR-SLS~ Slurry: slurry supply - system	D□-GAS~-N2~~	Gas: nitrogen - system
D□-GAS~-O2~~ Gas: oxygen - system D□-GAS~-PRO~ Gas: propane - system D□-GAS~-SG~~ Gas: specialty gas - system D□-GAS~-UN2~ Gas: utility nitrogen - system D□-GAS~-VN2~ Gas: venturi nitrogen - system D□-GAS~-WAR~ Gas: weld argon - system D□-LIQD-LPG~ Liquid: liquid petroleum gas - system D□-OIL~-LO~~ Oil: lube oil - system D□-PIPE Piping D□-PIPE-CNTR Piping: center D□-PIPE-EQPM Piping: equipment D□-PIPE-HDLN Piping: hidden line D□-PIPE-MISC Piping: miscellaneous D□-PIPE-PATT Piping: texture and hatch patterns D□-PIPE-UGND Piping: underground D□-SLUR-SLR~ Slurry: slurry return - system D□-SLUR-SLS~ Slurry: slurry supply - system	D□-GAS~-N2O~	Gas: nitrous oxide - system
DD-GAS~-PRO~ Gas: propane - system DD-GAS~-SG~~ Gas: specialty gas - system DD-GAS~-UN2~ Gas: utility nitrogen - system DD-GAS~-VN2~ Gas: venturi nitrogen - system DD-GAS~-WAR~ Gas: weld argon - system DD-LIQD-LPG~ Liquid: liquid petroleum gas - system DD-OIL~-LO~~ Oil: lube oil - system DD-PIPE Piping DD-PIPE-CNTR Piping: center DD-PIPE-EQPM Piping: equipment DD-PIPE-HDLN Piping: hidden line DD-PIPE-HDLN Piping: miscellaneous DD-PIPE-PATT Piping: texture and hatch patterns DD-PIPE-UGND Piping: underground DD-SLUR-SLS~ Slurry: slurry supply - system	D□-GAS~-NG~~	Gas: natural gas - system
DGAS~-SG~~ Gas: specialty gas - system DGAS~-UN2~ Gas: utility nitrogen - system DGAS~-VN2~ Gas: venturi nitrogen - system DGAS~-WAR~ Gas: weld argon - system DLIQD-LPG~ Liquid: liquid petroleum gas - system DOIL~-LO~~ Oil: lube oil - system DPIPE Piping DPIPE-CNTR Piping: center DPIPE-EQPM Piping: equipment DPIPE-HDLN Piping: miscellaneous DPIPE-MISC Piping: texture and hatch patterns DPIPE-UGND Piping: underground DSLUR-SLR~ Slurry: slurry return - system DSLUR-SLS~	D□-GAS~-O2~~	Gas: oxygen - system
DGAS~-UN2~ Gas: utility nitrogen - system DGAS~-VN2~ Gas: venturi nitrogen - system DGAS~-WAR~ Gas: weld argon - system DLIQD-LPG~ Liquid: liquid petroleum gas - system DOIL~-LO~~ Oil: lube oil - system DPIPE Piping DPIPE-CNTR Piping: center DPIPE-EQPM Piping: equipment DPIPE-HDLN Piping: hidden line DPIPE-MISC Piping: miscellaneous DPIPE-PATT Piping: texture and hatch patterns DPIPE-UGND Piping: underground DSLUR-SLR~ Slurry: slurry return - system DSLUR-SLS~ Slurry: slurry supply - system	D□-GAS~-PRO~	Gas: propane - system
Do-GAS~-VN2~ Gas: venturi nitrogen - system Do-GAS~-WAR~ Gas: weld argon - system Do-LIQD-LPG~ Liquid: liquid petroleum gas - system Do-OIL~-LO~~ Oil: lube oil - system Do-PIPE Piping Do-PIPE-CNTR Piping: center Do-PIPE-EQPM Piping: equipment Do-PIPE-HDLN Piping: hidden line Do-PIPE-MISC Piping: miscellaneous Do-PIPE-PATT Piping: texture and hatch patterns Do-PIPE-UGND Piping: underground Do-SLUR-SLR~ Slurry: slurry return - system Do-SLUR-SLS~ Slurry: slurry supply - system	D□-GAS~-SG~~	Gas: specialty gas - system
Do-GAS~-WAR~ Gas: weld argon - system Do-LIQD-LPG~ Liquid: liquid petroleum gas - system Do-OIL~-LO~~ Oil: lube oil - system Do-PIPE Piping Do-PIPE-CNTR Piping: center Do-PIPE-EQPM Piping: equipment Do-PIPE-HDLN Piping: hidden line Do-PIPE-MISC Piping: miscellaneous Do-PIPE-PATT Piping: texture and hatch patterns Do-PIPE-UGND Piping: underground Do-SLUR-SLR~ Slurry: slurry return - system Do-SLUR-SLS~ Slurry: slurry supply - system	D□-GAS~-UN2~	Gas: utility nitrogen - system
DLIQD-LPG~ Liquid: liquid petroleum gas - system DOIL~-LO~~ Oil: lube oil - system DPIPE Piping DPIPE-CNTR Piping: center DPIPE-EQPM Piping: equipment DPIPE-HDLN Piping: hidden line DPIPE-MISC Piping: miscellaneous DPIPE-PATT Piping: texture and hatch patterns DPIPE-UGND Piping: underground DSLUR-SLR~ Slurry: slurry return - system DSLUR-SLS~ Slurry: slurry supply - system	D□-GAS~-VN2~	Gas: venturi nitrogen - system
DD-OIL~-LO~~ DD-PIPE Piping DD-PIPE-CNTR Piping: center DD-PIPE-EQPM Piping: equipment DD-PIPE-HDLN Piping: hidden line DD-PIPE-MISC Piping: miscellaneous DD-PIPE-PATT Piping: texture and hatch patterns DD-PIPE-UGND Piping: underground DD-SLUR-SLR~ Slurry: slurry return - system DD-SLUR-SLS~ Slurry: slurry supply - system	D□-GAS~-WAR~	Gas: weld argon - system
D□-PIPE Piping D□-PIPE-CNTR Piping: center D□-PIPE-EQPM Piping: equipment D□-PIPE-HDLN Piping: hidden line D□-PIPE-MISC Piping: miscellaneous D□-PIPE-PATT Piping: texture and hatch patterns D□-PIPE-UGND Piping: underground D□-SLUR-SLR~ Slurry: slurry return - system D□-SLUR-SLS~ Slurry: slurry supply - system	D□-LIQD-LPG~	Liquid: liquid petroleum gas - system
D□-PIPE-CNTR Piping: center D□-PIPE-EQPM Piping: equipment D□-PIPE-HDLN Piping: hidden line D□-PIPE-MISC Piping: miscellaneous D□-PIPE-PATT Piping: texture and hatch patterns D□-PIPE-UGND Piping: underground D□-SLUR-SLR~ Slurry: slurry return - system D□-SLUR-SLS~ Slurry: slurry supply - system	D□-OIL~-LO~~	Oil: lube oil - system
D□-PIPE-EQPM Piping: equipment D□-PIPE-HDLN Piping: hidden line D□-PIPE-MISC Piping: miscellaneous D□-PIPE-PATT Piping: texture and hatch patterns D□-PIPE-UGND Piping: underground D□-SLUR-SLR~ Slurry: slurry return - system D□-SLUR-SLS~ Slurry: slurry supply - system	D _□ -PIPE	Piping
D□-PIPE-HDLN Piping: hidden line D□-PIPE-MISC Piping: miscellaneous D□-PIPE-PATT Piping: texture and hatch patterns D□-PIPE-UGND Piping: underground D□-SLUR-SLR~ Slurry: slurry return - system D□-SLUR-SLS~ Slurry: slurry supply - system	D _□ -PIPE-CNTR	Piping: center
D□-PIPE-MISC Piping: miscellaneous D□-PIPE-PATT Piping: texture and hatch patterns D□-PIPE-UGND Piping: underground D□-SLUR-SLR~ Slurry: slurry return - system D□-SLUR-SLS~ Slurry: slurry supply - system	D□-PIPE-EQPM	Piping: equipment
D□-PIPE-PATT Piping: texture and hatch patterns D□-PIPE-UGND Piping: underground D□-SLUR-SLR~ Slurry: slurry return - system D□-SLUR-SLS~ Slurry: slurry supply - system	D _□ -PIPE-HDLN	Piping: hidden line
D□-PIPE-UGND Piping: underground D□-SLUR-SLR~ Slurry: slurry return - system D□-SLUR-SLS~ Slurry: slurry supply - system	D _□ -PIPE-MISC	Piping: miscellaneous
D□-SLUR-SLR~ Slurry: slurry return - system D□-SLUR-SLS~ Slurry: slurry supply - system	D _□ -PIPE-PATT	Piping: texture and hatch patterns
D□-SLUR-SLS~ Slurry: slurry supply - system	D ₀ -PIPE-UGND	Piping: underground
	D□-SLUR-SLR~	Slurry: slurry return - system
D□-VACU-CLV~ Vacuum: chlorine vacuum - system	D□-SLUR-SLS~	Slurry: slurry supply - system
	D□-VACU-CLV~	Vacuum: chlorine vacuum - system

D□-VACU-CV~~	Vacuum: chemical vacuum - system
D□-VACU-EV~~	Vacuum: equipment vacuum - system
D□-VACU-HV~~	Vacuum: house vacuum - system
D□-VACU-HVA~	Vacuum: arsenic house vacuum - system
D□-VACU-PV~~	Vacuum: vacuum - system
D□-WATR-BFW~	Water: boiler feed water - system
D□-WATR-DIR~	Water: deionized water return - system
D□-WATR-DIS~	Water: deionized water supply - system
D□-WATR-DIWP	Water: DI polishing loop - system
D□-WATR-FW~~	Water: fire water - system
D□-WATR-HDIR	Water: hot DI return - system
D□-WATR-HDIS	Water: hot DI supply - system
D□-WATR-HDRC	Water: hot DI reclaim - system
D□-WATR-HPDR	Water: high pH DI return - system
D□-WATR-HPDS	Water: high pH DI supply - system
D□-WATR-ICW~	Water: industrial city water - system
D□-WATR-NPW~	Water: non-potable water - system
D□-WATR-PCWR	Water: cooling water return - system
D□-WATR-PCWS	Water: cooling water supply - system
D□-WATR-PW~~	Water: potable water - system
D□-WATR-RO~~	Water: reverse osmosis water - system
D□-WATR-ROR~	Water: reverse osmosis reject water - system
D□-WATR-TDIR	Water: tempered DI return - system
D□-WATR-TDIS	Water: tempered DI supply - system
D□-WATR-TW~~	Water: tempered water - system
D _□ -WATR-UPRW	Water: ultra pure recycle water - system
D□-WATR-UPW~	Water: ultra pure water - system

5.17 RESOURCE LAYER LIST

Resource Field Codes

The Layer Names shown below provide examples for the use of Major and Minor Group field codes for this discipline. See <u>CLG Sections 1.5</u> and <u>1.6</u> for complete rules and options governing the use of Major and Minor Group field codes.

Resource Discipline Designators

Designator	Description
R	Resource
RA	Resource Architectural
RC	Resource Civil

RE	Resource Electrical
RM	Resource Mechanical
RR	Resource Real Esate
RS	Resource Structural
RJ	User Defined
RK	User Defined

Resource Layer List

ayer Name	Description
R□-INGR	Ingrants
R□-INGR-ESMT	Ingrants: easement
R□-INGR-LEAS	Ingrants: lease
R□-INGR- LICN	Ingrants: license
R□-INGR-PMIT	Ingrants: permit
R□-INGR-RSRV	Ingrants: reservation
R□-LAND	Land
R□-LAND-ALOC	Land: allocation
R□-LAND-CLAS	Land: classification
R□-OTGR	Outgrants
R□-OTGR-LEAS	Outgrants: lease
R□-OTGR-LICN	Outgrants: license
R□-OTGR-PMIT	Outgrants: permit
R□-OTGR-RSRV	Outgrants: reservation
R _□ -PROP	Property
R _□ -PROP-PRCL	Property: parcels
R _□ -PROP-TAKE	Property: taking lines
R□-PROP-TAKE-ELEV	Property: taking lines: elevations
R _□ -PROP-TRAC	Property: tract lines
R□-PROP-TRAC-DFEE	Property: tract lines: disposed fee
R□-PROP-TRAC-FEE~	Property: tract lines: fee
R□-PROP-TRAC-LFEE	Property: tract lines: disposed less than fee
R ₋ -PROP-TRAC-NFEE	Property: tract lines: non-fee

5.18 STRUCTURAL LAYER LIST

Structural Field Codes

The Layer Names shown below provide examples for the use of Major and Minor Group field codes for this discipline. See <u>CLG Sections 1.5</u> and <u>1.6</u> for complete rules and options governing the use of Major and Minor Group field codes.

Structural Discipline Designators

Designator	Description
S	Structural
SB	Structural Substructure
SD	Structural Demolition
SF	Structural Framing
SS	Structural Site
SJ	User Defined
SK	User Defined

Structural Layer List

So-ALGN Alignment So-BEAM Beams So-BEAM-ALUM Beams: aluminum So-BEAM-CONC Beams: concrete So-BEAM-STEL Beams: steel So-BEAM-WOOD Beams: wood So-BRCG Bracing So-BRCG-ALUM Bracing: aluminum So-BRCG-ALUM-HORZ Bracing: aluminum: horizontal So-BRCG-ALUM-VERT Bracing: aluminum: vertical So-BRCG-METL Bracing: metal So-BRCG-STEL Bracing: steel So-BRCG-STEL Bracing: steel: horizontal So-BRCG-STEL-VERT Bracing: steel: vertical So-BRCG-WOOD Bracing: wood So-BRCG-WOOD-HORZ Bracing: wood: horizontal So-BRCG-WOOD-VERT Bracing: wood: vertical So-COLS So-COLS-ABLT Columns: anchor bolts So-COLS-CONC Columns: concrete So-COLS-STEL Columns: steel So-COLS-STEL Columns: steel So-COLS-STEL Columns: steel So-COLS-WOOD Columns: wood So-DRCC-WOOD So-DRCCK Deck	Layer Name	Description
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SD-BRCG-STEL-VERT Bracing: steel: vertical SD-BRCG-WOOD Bracing: wood SD-BRCG-WOOD-HORZ Bracing: wood: horizontal SD-BRCG-WOOD-VERT Bracing: wood: vertical SD-COLS Columns SD-COLS-ABLT Columns: anchor bolts SD-COLS-ALUM Columns: aluminum SD-COLS-CONC Columns: concrete SD-COLS-STEL Columns: steel SD-COLS-WOOD Columns: wood	S□-BRCG-STEL	Bracing: steel
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SCOLS-ALUM Columns: aluminum SCOLS-CONC Columns: concrete SCOLS-STEL Columns: steel SCOLS-WOOD Columns: wood	S□-COLS	Columns
SD-COLS-CONC Columns: concrete SD-COLS-STEL Columns: steel SD-COLS-WOOD Columns: wood	S□-COLS-ABLT	Columns: anchor bolts
S _□ -COLS-STEL Columns: steel S _□ -COLS-WOOD Columns: wood	S□-COLS-ALUM	Columns: aluminum
S _□ -COLS-WOOD Columns: wood	S□-COLS-CONC	Columns: concrete
	S□-COLS-STEL	Columns: steel
Sn-DECK Deck	S□-COLS-WOOD	Columns: wood
DOM:	S□-DECK	Deck
S _□ -DECK-FLOR Deck: floor	S□-DECK-FLOR	Deck: floor

S□-DECK-ROOF Deck: roof S□-DECK-ROOF-OPNG Deck: roof: openings S□-DETL Detail S□-DETL-HSSS Detail: hollow structural steel S□-DETL-PLYW Detail: plywood S□-DETL-W2XS Detail: dimension lumber S□-FNDN Foundation S□-FNDN-FTNG Foundation: footings S□-FNDN-GRBM Foundation: grade beams
SD-DETL Detail SD-DETL-HSSS Detail: hollow structural steel SD-DETL-PLYW Detail: plywood SD-DETL-W2XS Detail: dimension lumber SD-FNDN Foundation SD-FNDN-FTNG Foundation: footings SD-FNDN-GRBM Foundation: grade beams
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So-DETL-PLYW Detail: plywood So-DETL-W2XS Detail: dimension lumber So-FNDN Foundation So-FNDN-FTNG Foundation: footings So-FNDN-GRBM Foundation: grade beams
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S□-FNDN Foundation S□-FNDN-FTNG Foundation: footings S□-FNDN-GRBM Foundation: grade beams
S□-FNDN-FTNG Foundation: footings S□-FNDN-GRBM Foundation: grade beams
S□-FNDN-GRBM Foundation: grade beams
O ENDA DOAD
S□-FNDN-PCAP Foundation: pile caps
S□-FNDN-PIER Foundation: drilled piers
S□-FNDN-PILE Foundation: piles
S□-FNDN-RBAR Foundation: reinforcing bar
S□-FNDN-RBAR-BOT1 Foundation: reinforcing bar: bottom group 1
S□-FNDN-RBAR-BOT2 Foundation: reinforcing bar: bottom group 2
S□-FNDN-RBAR-TOP1 Foundation: reinforcing bar: top group 1
S□-FNDN-RBAR-TOP2 Foundation: reinforcing bar: top group 2
S□-FRAM Braced frame or moment frame
S□-FSTN Fasteners and connections
S□-GATE Gate
S□-GRID Grids
S□-GRID-EXTR Grids: exterior
S□-GRID-INTR Grids: interior
S□-GRLN Grade line
S□-GRLN-SURF Grade line: surface areas
S□-GRTG Grating
S□-GRTG-OVHD Grating: overhead
S□-HYDR Hydraulic structure
S□-JNTS Joints
S□-JNTS-CNTJ Joints: construction joint
S□-JNTS-CTLJ Joints: control joint
S□-JNTS-EXPJ Joints: expansion joint
S _□ -JOIS Joists
S□-JOIS-BRGX Joists: bridging
S _□ -LNTL Lintels
S□-PADS Pads
S□-PADS-EQPM Pads: equipment
S□-PLAT Platform
S□-PLAT-FRMG Platform: framing

So-SIGN Sign So-SIGN-BOUY Sign: bouy So-SIGN-FRMG Sign: framing So-SIGN-GAGE Sign: gauge (staff) So-SIGN-TEXT Sign: signage text So-Wall-TEXT Sign: signage text So-Wall-VENR Walls: steel stud So-Wall-VENR Walls: seneer So-Wall-VENR Walls: wood	S□-PLAT-GRTG	Platform: grating
So-SIGN-FRMG Sign: framing So-SIGN-GAGE Sign: gauge (staff) So-SIGN-GAGE Sign: gauge (staff) So-SIGN-TEXT Sign: signage text So-SIGN-XTRU Sign: extrusion So-SLAB Slab So-SLAB Slab So-SLAB-CONC Slab: concrete So-SLAB-CONG Slab: edge So-SLAB-OPNG Slab: openings (and depressions) So-SLAB-OPNX Slab: opening indication ("x") So-SLAB-OPNX Slab: steel So-SLAB-WOOD Slab: wood So-STIF Stiffener So-STIF Stiffener So-STIF-LONG Stiffener: longitudinal So-STIF-TRAV Stiffener: transverse So-STRS Stairs So-STRS Stairs So-STRS Stairs So-STRS Trusses So-WALL Walls So-WALL-ABOV Walls: above So-WALL-CONC Walls: concrete So-WALL-CONC Walls: masonry So-WALL-CNSNW Walls: masonry So-WALL-STEL Walls: structural bearing or shear walls So-WALL-STEL Walls: steel stud So-WALL-STEL Walls: veneer	S□-SIGN	Sign
Sci-Sign-Gage Sign: gauge (staff) Sci-Sign-Text Sign: signage text Sci-Sign-Text Sign: signage text Sci-Sign-XTRU Sign: extrusion Sci-SLAB Slab Sci-SLAB Slab Sci-SLAB-CONC Slab: concrete Sci-SLAB-EDGE Slab: edge Sci-SLAB-OPNG Slab: openings (and depressions) Sci-SLAB-OPNX Slab: opening indication ("x") Sci-SLAB-OPNX Slab: steel Sci-SLAB-WOOD Slab: wood Sci-STIF Stiffener Sci-STIF-LONG Stiffener: longitudinal Sci-STIF-TRAV Stiffener: transverse Sci-STRS Stairs Sci-STRS Stairs Sci-STRS-LADD Stairs: ladders & ladder assemblies Sci-TRUS Trusses Sci-WALL Walls Sci-WALL-ABOV Walls: concrete masonry unit Sci-WALL-CONC Walls: masonry Sci-WALL-PCST Walls: pre-cast concrete Sci-WALL-STEL Walls: steel stud Sci-WALL-STEL Walls: steel stud Sci-WALL-STEL Walls: steel stud Sci-WALL-STEL Walls: steel stud Sci-WALL-VENR Walls: veneer	S□-SIGN-BOUY	Sign: bouy
Sci-Sign-Text Sign: signage text Sci-Sign-XTRU Sign: extrusion Sci-SLAB Slab Sci-SLAB-CONC Slab: concrete Sci-SLAB-EDGE Slab: edge Sci-SLAB-OPNG Slab: openings (and depressions) Sci-SLAB-OPNX Slab: opening indication ("x") Sci-SLAB-OPNX Slab: steel Sci-SLAB-WOOD Slab: wood Sci-STIF Stiffener Sci-STIF-LONG Stiffener: longitudinal Sci-STIF-TRAV Stiffener: transverse Sci-STRS Stairs: ladders & ladder assemblies Sci-STRS Stairs: ladders & ladder assemblies Sci-TRUS Trusses Sci-WALL Walls Sci-WALL-ABOV Walls: concrete masonry unit Sci-WALL-CONC Walls: masonry Sci-WALL-PCST Walls: pre-cast concrete Sci-WALL-STEL Walls: steel stud Sci-WALL-STEL Walls: veneer	S□-SIGN-FRMG	Sign: framing
So-SIGN-XTRU Sign: extrusion So-SLAB Slab So-SLAB-CONC Slab: concrete So-SLAB-EDGE Slab: edge So-SLAB-OPNG Slab: openings (and depressions) So-SLAB-OPNX Slab: opening indication ("x") So-SLAB-STEL Slab: steel So-SLAB-WOOD Slab: wood So-STIF Stiffener So-STIF-LONG Stiffener: longitudinal So-STIF-TRAV Stiffener: transverse So-STRS Stairs So-STRS-LADD Stairs: ladders & ladder assemblies So-TRUS Trusses So-WALL Walls So-WALL Walls: above So-WALL-ABOV Walls: concrete masonry unit So-WALL-CONC Walls: concrete So-WALL-PCST Walls: pre-cast concrete So-WALL-STEL Walls: steel stud So-WALL-STEL Walls: veneer	S□-SIGN-GAGE	Sign: gauge (staff)
SD-SLAB SD-SLAB-CONC Slab: concrete SD-SLAB-EDGE Slab: edge SD-SLAB-OPNG Slab: openings (and depressions) SD-SLAB-OPNX Slab: opening indication ("x") SD-SLAB-STEL Slab: steel SD-SLAB-WOOD Slab: wood SD-STIF Stiffener SD-STIF-LONG Stiffener: longitudinal SD-STIF-TRAV Stiffener: transverse SD-STRS SLAB-WOOD Stairs: ladders & ladder assemblies SD-TRUS SD-TRUS Trusses SD-WALL Walls SD-WALL Walls: above SD-WALL-CONC Walls: concrete SD-WALL-CONC Walls: masonry SD-WALL-PCST Walls: structural bearing or shear walls SD-WALL-STEL Walls: veneer	S□-SIGN-TEXT	Sign: signage text
SD-SLAB-CONC Slab: concrete SD-SLAB-EDGE Slab: edge SD-SLAB-OPNG Slab: openings (and depressions) SD-SLAB-OPNX Slab: opening indication ("x") SD-SLAB-STEL Slab: steel SD-SLAB-WOOD Slab: wood SD-STIF Stiffener SD-STIF-LONG Stiffener: longitudinal SD-STIF-LONG Stiffener: transverse SD-STRS Stairs SD-STRS Stairs SD-STRS-LADD Stairs: ladders & ladder assemblies SD-TRUS Trusses SD-WALL Walls SD-WALL Walls SD-WALL-CMUW Walls: above SD-WALL-CONC Walls: concrete SD-WALL-MSNW Walls: masonry SD-WALL-PCST Walls: pre-cast concrete SD-WALL-SHEA Walls: structural bearing or shear walls SD-WALL-STEL Walls: veneer	S□-SIGN-XTRU	Sign: extrusion
S□-SLAB-EDGE Slab: edge S□-SLAB-OPNG Slab: openings (and depressions) S□-SLAB-OPNX Slab: opening indication ("x") S□-SLAB-STEL Slab: steel S□-SLAB-WOOD Slab: wood S□-STIF Stiffener S□-STIF-LONG Stiffener: longitudinal S□-STIF-TRAV Stiffener: transverse S□-STRS Stairs S□-STRS-LADD Stairs: ladders & ladder assemblies S□-TRUS Trusses S□-WALL Walls S□-WALL Walls S□-WALL-ABOV Walls: above S□-WALL-CMUW Walls: concrete masonry unit S□-WALL-MSNW Walls: concrete S□-WALL-MSNW Walls: masonry S□-WALL-PCST Walls: pre-cast concrete S□-WALL-SHEA Walls: structural bearing or shear walls S□-WALL-STEL Walls: veneer	S□-SLAB	Slab
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S□-SLAB-OPNX Slab: opening indication ("x") S□-SLAB-STEL Slab: steel S□-SLAB-WOOD Slab: wood S□-STIF Stiffener S□-STIF-LONG Stiffener: longitudinal S□-STIF-TRAV Stiffener: transverse S□-STRS Stairs S□-STRS-LADD Stairs: ladders & ladder assemblies S□-TRUS Trusses S□-WALL Walls S□-WALL Walls: above S□-WALL-ABOV Walls: above S□-WALL-CMUW Walls: concrete masonry unit S□-WALL-CONC Walls: masonry S□-WALL-MSNW Walls: masonry S□-WALL-PCST Walls: pre-cast concrete S□-WALL-SHEA Walls: structural bearing or shear walls S□-WALL-STEL Walls: steel stud S□-WALL-VENR Walls: veneer	S□-SLAB-EDGE	Slab: edge
S□-SLAB-STEL Slab: steel S□-SLAB-WOOD Slab: wood S□-STIF Stiffener S□-STIF-LONG Stiffener: longitudinal S□-STIF-TRAV Stiffener: transverse S□-STRS Stairs S□-STRS-LADD Stairs: ladders & ladder assemblies S□-TRUS Trusses S□-WALL Walls S□-WALL Walls Walls: above S□-WALL-CMUW Walls: concrete masonry unit S□-WALL-CONC Walls: concrete S□-WALL-MSNW Walls: masonry S□-WALL-PCST Walls: pre-cast concrete S□-WALL-SHEA Walls: structural bearing or shear walls S□-WALL-STEL Walls: steel stud S□-WALL-VENR Walls: veneer	S□-SLAB-OPNG	Slab: openings (and depressions)
SD-SLAB-WOOD SIab: wood SD-STIF Stiffener SD-STIF-LONG Stiffener: longitudinal SD-STIF-TRAV Stiffener: transverse SD-STRS STRS STRS-LADD Stairs: ladders & ladder assemblies SD-TRUS Trusses SD-WALL Walls SD-WALL SD-WALL-ABOV Walls: above SD-WALL-CMUW Walls: concrete masonry unit SD-WALL-CONC Walls: concrete SD-WALL-MSNW Walls: masonry SD-WALL-PCST Walls: pre-cast concrete SD-WALL-SHEA Walls: structural bearing or shear walls SD-WALL-STEL Walls: veneer	S□-SLAB-OPNX	Slab: opening indication ("x")
S□-STIF Stiffener S□-STIF-LONG Stiffener: longitudinal S□-STIF-TRAV Stiffener: transverse S□-STRS Stairs S□-STRS-LADD Stairs: ladders & ladder assemblies S□-TRUS Trusses S□-WALL Walls S□-WALL-ABOV Walls: above S□-WALL-CMUW Walls: concrete masonry unit S□-WALL-CONC Walls: concrete S□-WALL-MSNW Walls: masonry S□-WALL-PCST Walls: pre-cast concrete S□-WALL-SHEA Walls: structural bearing or shear walls S□-WALL-STEL Walls: veneer	S□-SLAB-STEL	Slab: steel
SD-STIF-LONG Stiffener: longitudinal SD-STIF-TRAV Stiffener: transverse SD-STRS Stairs SD-STRS-LADD Stairs: ladders & ladder assemblies SD-TRUS Trusses SD-WALL Walls SD-WALL-ABOV Walls: above SD-WALL-CMUW Walls: concrete masonry unit SD-WALL-CONC Walls: concrete SD-WALL-MSNW Walls: masonry SD-WALL-PCST Walls: pre-cast concrete SD-WALL-SHEA Walls: structural bearing or shear walls SD-WALL-STEL Walls: steel stud SD-WALL-VENR Walls: veneer	S□-SLAB-WOOD	Slab: wood
SD-STIF-TRAV Stiffener: transverse SD-STRS Stairs SD-STRS-LADD Stairs: ladders & ladder assemblies SD-TRUS Trusses SD-WALL Walls SD-WALL-ABOV Walls: above SD-WALL-CMUW Walls: concrete masonry unit SD-WALL-CONC Walls: concrete SD-WALL-MSNW Walls: masonry SD-WALL-PCST Walls: pre-cast concrete SD-WALL-SHEA Walls: structural bearing or shear walls SD-WALL-STEL Walls: steel stud SD-WALL-VENR Walls: veneer	S□-STIF	Stiffener
So-STRS Stairs So-STRS-LADD Stairs: ladders & ladder assemblies So-TRUS Trusses So-WALL Walls So-WALL-ABOV Walls: above So-WALL-CMUW Walls: concrete masonry unit So-WALL-CONC Walls: concrete So-WALL-MSNW Walls: masonry So-WALL-PCST Walls: pre-cast concrete So-WALL-SHEA Walls: structural bearing or shear walls So-WALL-STEL Walls: veneer	S□-STIF-LONG	Stiffener: longitudinal
S□-STRS-LADD Stairs: ladders & ladder assemblies S□-TRUS Trusses S□-WALL Walls S□-WALL-ABOV Walls: above S□-WALL-CMUW Walls: concrete masonry unit S□-WALL-CONC Walls: concrete S□-WALL-MSNW Walls: masonry S□-WALL-PCST Walls: pre-cast concrete S□-WALL-STEL Walls: steel stud S□-WALL-STEL Walls: veneer	S□-STIF-TRAV	Stiffener: transverse
S□-TRUS Trusses S□-WALL Walls S□-WALL-ABOV Walls: above S□-WALL-CMUW Walls: concrete masonry unit S□-WALL-CONC Walls: concrete S□-WALL-MSNW Walls: masonry S□-WALL-PCST Walls: pre-cast concrete S□-WALL-SHEA Walls: structural bearing or shear walls S□-WALL-STEL Walls: steel stud S□-WALL-VENR Walls: veneer	S□-STRS	Stairs
SD-WALL-ABOV Walls: above SD-WALL-CMUW Walls: concrete masonry unit SD-WALL-CONC Walls: concrete SD-WALL-MSNW Walls: masonry SD-WALL-PCST Walls: pre-cast concrete SD-WALL-STEL Walls: structural bearing or shear walls SD-WALL-STEL Walls: veneer	S□-STRS-LADD	Stairs: ladders & ladder assemblies
S□-WALL-ABOV Walls: above S□-WALL-CMUW Walls: concrete masonry unit S□-WALL-CONC Walls: concrete S□-WALL-MSNW Walls: masonry S□-WALL-PCST Walls: pre-cast concrete S□-WALL-SHEA Walls: structural bearing or shear walls S□-WALL-STEL Walls: steel stud S□-WALL-VENR Walls: veneer	S□-TRUS	Trusses
S□-WALL-CMUW Walls: concrete masonry unit S□-WALL-CONC Walls: concrete S□-WALL-MSNW Walls: masonry S□-WALL-PCST Walls: pre-cast concrete S□-WALL-SHEA Walls: structural bearing or shear walls S□-WALL-STEL Walls: steel stud S□-WALL-VENR Walls: veneer	S□-WALL	Walls
S□-WALL-CONC Walls: concrete S□-WALL-MSNW Walls: masonry S□-WALL-PCST Walls: pre-cast concrete S□-WALL-SHEA Walls: structural bearing or shear walls S□-WALL-STEL Walls: steel stud S□-WALL-VENR Walls: veneer	S□-WALL-ABOV	Walls: above
S□-WALL-MSNW Walls: masonry S□-WALL-PCST Walls: pre-cast concrete S□-WALL-SHEA Walls: structural bearing or shear walls S□-WALL-STEL Walls: steel stud S□-WALL-VENR Walls: veneer	S□-WALL-CMUW	Walls: concrete masonry unit
S□-WALL-PCST Walls: pre-cast concrete S□-WALL-SHEA Walls: structural bearing or shear walls S□-WALL-STEL Walls: steel stud S□-WALL-VENR Walls: veneer	S□-WALL-CONC	Walls: concrete
S□-WALL-SHEA Walls: structural bearing or shear walls S□-WALL-STEL Walls: steel stud S□-WALL-VENR Walls: veneer	S□-WALL-MSNW	Walls: masonry
S _□ -WALL-STEL Walls: steel stud S _□ -WALL-VENR Walls: veneer	S□-WALL-PCST	Walls: pre-cast concrete
S _□ -WALL-VENR Walls: veneer	S□-WALL-SHEA	Walls: structural bearing or shear walls
	S□-WALL-STEL	Walls: steel stud
S _□ -WALL-WOOD Walls: wood	S□-WALL-VENR	Walls: veneer
	S□-WALL-WOOD	Walls: wood

5.19 SURVEY/MAPPING LAYER LIST

Survey/Mapping Field Codes

The Layer Names shown below provide examples for the use of Major and Minor Group field codes for this discipline. See <u>CLG Sections 1.5</u> and <u>1.6</u> for complete rules and options governing the use of Major and Minor Group field codes.

Survey/Mapping Discipline Designators

Designator	Description

V	Survey/Mapping
VA	Survey/Mapping Aerial
VC	Survey/Mapping Computated Points
VF	Survey/Mapping Field
VI	Survey/Mapping Digital
VN	Survey/Mapping Node Points
VS	Survey/Mapping Staked Points
VU	Survey/Mapping Combined Utilities
VJ	User Defined
VK	User Defined

Survey/Mapping Layer List

Layer Name	Description
V□-BLDG	Buildings and primary structures
V□-BLDG-DECK	Buildings and primary structures: deck (attached, no roof overhead)
V□-BLDG-OTLN	Buildings and primary structures: outline
V□-BLDG-OVHD	Buildings and primary structures: overhead
V□-BLDG-PRCH	Buildings and primary structures: porch (attached, roof overhead)
V□-BNDY	Political boundaries
V□-BNDY-BORO	Political boundaries: borough
V□-BNDY-CITY	Political boundaries: city
V□-BNDY-CNTY	Political boundaries: county
V□-BNDY-CORP	Political boundaries: corporation
V□-BNDY-NATL	Political boundaries: national
V□-BNDY-PROV	Political boundaries: province
V□-BNDY-STAT	Political boundaries: state
V□-BNDY-TSHP	Political boundaries: town or township
V□-BNDY-ZONE	Political boundaries: zoning
V□-BORE	Borings
V□-BRDG	Bridge
V□-BRDG-BENT	Bridge: top of bent
V□-BRDG-CNTR	Bridge: center
V□-BRDG-CTLJ	Bridge: control joint
V□-BRDG-DECK	Bridge: deck
V□-BRDG-GRAL	Bridge: guard rail
V□-BRKL	Break/fault lines
V□-BRKL-BOTB	Break/fault lines: bottom of bank

VI-BRLN Building restriction line VI-BZNA Buffer zone area VI-CHAN Navigable channels VI-CHAN-BWTR Navigable channels: breakwater VI-CHAN-CNTR Navigable channels: de-authorized channel limits, anchorages etc. Navigable channels: decks, docks, floats, piers VI-CHAN-DOCK Navigable channels: decks, docks, floats, piers VI-CHAN-BWTA Navigable channels: decks, docks, floats, piers VI-CHAN-NAID Navigable channels: decks, docks, floats, piers VI-CHAN-NAID Navigable channels: navigation aids VI-COMM Communications VI-COMM Communications: manhole VI-COMM-OVHD Communications: overhead VI-COMM-OVHD Communications: overhead VI-COMM-OVHD Communications: underground VI-COMM-OVHD Communications: underground VI-COMM-OVHD Control points: benchmarks VI-CTRL-BMRK Control points: benchmarks VI-CTRL-BL-FLYS Control points: fly station VI-CTRL-FLYS Control points: fly station VI-CTRL-HORZ Control points: panel points VI-CTRL-HORZ Control points: horizontal VI-CTRL-PNPT Control points: panel points VI-CTRL-PNPT Control points: panel points VI-CTRL-PNPT Control points: transverse VI-CTRL-VERT Control points: vertical VI-CTRL-VERT Control po	V□-BRKL-FLOW	Break/fault lines: flowline (lowest point of ditch)
VID-BZNA Buffer zone area VID-CHAN Navigable channels VID-CHAN-BWTR Navigable channels: breakwater VID-CHAN-CNTR Navigable channels: de-authorized channel limits, anchorages etc. Navigable channels: de-authorized channel limits, anchorages etc. VID-CHAN-DOCK Navigable channels: decks, docks, floats, piers VID-CHAN-DOCK Navigable channels: decks, docks, floats, piers VID-CHAN-DOCK Navigable channels: navigation aids VID-CHAN-DOCK Navigable channels: navigation aids VID-COMM Communications VID-COMM Communications: manhole VID-COMM-OVHD Communications: overhead VID-COMM-OVHD Communications: overhead VID-COMM-OVHD Communications: underground VID-COMM-OVHD Communications: underground VID-COMM-OVHD Control points: benchmarks VID-COMM-UGND Control points: benchmarks VID-CTRL VID-CTR	V□-BRKL-TOPB	Break/fault lines: top of bank
VI_CHAN Navigable channels VI_CHAN_BWTR Navigable channels: breakwater VI_CHAN_BWTR Navigable channels: center VI_CHAN_CNTR Navigable channels: de-authorized channel limits, anchorages etc. VI_CHAN_DOCK Navigable channels: decks, docks, floats, piers VI_CHAN_NAID Navigable channels: navigation aids VI_CHAN_NAID Navigable channels: navigation aids VI_COMM Communications VI_COMM_HOL Communications: wanhole VI_COMM_OVHD Communications: overhead VI_COMM_OVHD Communications: underground VI_COMM_POLE Communications: underground VI_CTRL Control points VI_CTRL Control points VI_CTRL_FLYS Control points: fly station VI_CTRL_FLYS Control points: grid VI_CTRL_HORZ Control points: panel points VI_CTRL_HORZ Control points: horizontal VI_CTRL_PNPT Control points: horizontal VI_CTRL_PNPT Control points: ransverse VI_CTRL_TRAV Control points: vertical VI_CTRL_TRAV Control points: vertical VI_CTRL_VERT Control points: vertical VI_CTRL_VERT Driveways VI_CTRL_VERT Driveways: asphalt VI_CTRL_VERT Driveways: center VI_CTRL_VENT Driveways: center VI_CTRL_VENTR Driveways: center VI_CTRL_VENTR Driveways: center VI_CTRL_VENTR Driveways: gravel VI_CTRL_VENTR Driveways: gravel VI_CTRL_VENTR Driveways: gravel VI_CTRL_VENTR Driveways: payenent markings VI_CTRL_VENTR Driveways: unpaved surface VI_CTRL_VENTR Driveways: payenent markings VI_CTRL_VENTR Driveways: payen	V□-BRLN	Building restriction line
VC-CHAN-BWTR Navigable channels: breakwater VC-CHAN-DACL Navigable channels: de-authorized channel limits, anchorages etc. Navigable channels: decks, docks, floats, piers Navigable channels: decks, docks, floats, piers Navigable channels: navigation aids VC-CHAN-NAID Navigable channels: navigation aids VC-COMM Communications Communications: manhole VC-COMM-WOLD Communications: overhead VC-COMM-POLE Communications: pole VC-COMM-UGND Communications: underground VC-CTRL Control points: benchmarks VC-CTRL-FLYS Control points: fly station VC-CTRL-FLYS Control points: fly station VC-CTRL-HORZ Control points: horizontal VC-CTRL-HORZ Control points: horizontal VC-CTRL-PNPT Control points: horizontal/vertical VC-CTRL-PNPT Control points: transverse VC-CTRL-TRAV Control points: vertical VC-CTRL-VERT Control po	V□-BZNA	Buffer zone area
VII-CHAN-CNTR Navigable channels: center Navigable channels: de-authorized channel limits, anchorages etc. VII-CHAN-DOCK Navigable channels: decks, docks, floats, piers VII-CHAN-NAID Navigable channels: navigation aids VII-COMM Communications VII-COMM Communications: manhole VII-COMM-OVHD Communications: overhead VII-COMM-POLE Communications: underground VII-COMM-UGND Control points: benchmarks VII-CTRL Control points: fly station VII-CTRL-BMRK Control points: fly station VII-CTRL-GRID Control points: horizontal VII-CTRL-HOPZ Control points: horizontal VII-CTRL-HOPT Control points: horizontal/vertical VII-CTRL-PNPT Control points: transverse VII-CTRL-TRAV Control points: vertical VII-CTRL-VERT Driveways: asphalt VII-CTRL-VERT Driveways: center VII-CDRIV-CONC Driveways: gravel VII-CTRL-VERT Driveways: gravel VII-CTRL-VERT Driveways: pavement markings VII-CTRL-VERT Driveways: unpaved surface VII-DRIV-MRKG Driveways: unpaved surface VII-DRIV-UPVD Driveways: unpaved surface VII-DRIV-UPVD Driveways: unpaved surface VII-DRIV-UPVD Driveways: unpaved surface VII-DRIV-ORTR Driveways: unpaved surface VII-DRIV-ORTR Driveways: unpaved surface VII-DRIV-ORTR Driveways: unpaved surface VII-DRIV-ORTR Driveways: gavel VII-DRIV-ORTR Driveways: ga	V□-CHAN	Navigable channels
Navigable channels: de-authorized channel limits, anchorages etc. Navigable channels: decks, docks, floats, piers Navigable channels: navigation aids Vip-CHAN-NAID Navigable channels: navigation aids Vip-COMM Communications Vip-COMM-WHOL Communications: manhole Vip-COMM-OVHD Communications: overhead Vip-COMM-OVHD Communications: pole Vip-COMM-UGND Communications: underground Vip-CTRL Control points Vip-CTRL-BMRK Control points: benchmarks Vip-CTRL-BMRK Control points: fly station Vip-CTRL-GRID Control points: horizontal Vip-CTRL-HORZ Control points: horizontal Vip-CTRL-HOPT Control points: horizontal/vertical Vip-CTRL-PNPT Control points: ransverse Vip-CTRL-VERT Control points: vertical Vip-CTR	V□-CHAN-BWTR	Navigable channels: breakwater
etc. Vo-CHAN-DACL etc. Vo-CHAN-DOCK Navigable channels: decks, docks, floats, piers Vo-CHAN-NAID Navigable channels: navigation aids Vo-COMM Communications Vo-COMM Communications: manhole Vo-COMM-OVHD Communications: overhead Vo-COMM-OVHD Communications: overhead Vo-COMM-OVHD Communications: pole Vo-COMM-OVHD Communications: underground Vo-CTRL Control points Vo-CTRL Control points: benchmarks Vo-CTRL-FLYS Control points: fly station Vo-CTRL-GRID Control points: panel points Vo-CTRL-HORZ Control points: horizontal Vo-CTRL-HVPT Control points: horizontal/vertical Vo-CTRL-TRAV Control points: ransverse Vo-CTRL-TRAV Control points: vertical Vo-CTRL-VERT Control points: vertical Vo-DRIV Driveways Vo-DRIV Driveways Vo-DRIV-CNTR Driveways: center Vo-DRIV-CNTR Driveways: concrete Vo-DRIV-CONC Driveways: concrete Vo-DRIV-FLNE Driveways: gravel Vo-DRIV-GRVL Driveways: pavement markings Vo-DRIV-UPVD Driveways: unpaved surface Vo-DTCH-DRITM Ditches or washes: bottom Vo-DTCH-CNTR Ditches or washes: edge of water Vo-DTCH-CNTR Ditches or washes: top Vo-DTCH-CNTC Ditches or washes: top	V□-CHAN-CNTR	Navigable channels: center
VC_CHAN-NAID Navigable channels: navigation aids VC_COMM Communications VC_COMM-MHOL Communications: overhead VC_COMM-OVHD Communications: overhead VC_COMM-POLE Communications: underground VC_COMM-UGND Communications: underground VC_CTRL Control points VC_CTRL-BMRK Control points: benchmarks VC_CTRL-BMRK Control points: fly station VC_CTRL-GRID Control points: parid VC_CTRL-HORZ Control points: horizontal VC_CTRL-HORZ Control points: horizontal/vertical VC_CTRL-HVPT Control points: ransverse VC_CTRL-PNPT Control points: ransverse VC_CTRL-VC_CTRL-VC_CONTR Driveways VC_DRIV-ASPH Driveways: asphalt VC_DRIV-CNTR Driveways: center VC_DRIV-CNTR Driveways: center VC_DRIV-CNC Driveways: curb VC_DRIV-FLNE Driveways: gravel VC_DRIV-BRIV-GRVL Driveways: gravel VC_DRIV-BRIV-MRKG Driveways: unpaved surface VC_DTCH-BOTM Ditches or washes: bottom VC_DTCH-TOP- Ditches or washes: top VC_DCH-ESMT Easements	V□-CHAN-DACL	Navigable channels: de-authorized channel limits, anchorages, etc.
V□-COMM Communications V□-COMM-MHOL Communications: manhole V□-COMM-OVHD Communications: overhead V□-COMM-OVHD Communications: overhead V□-COMM-POLE Communications: underground V□-COMM-UGND Communications: underground V□-CTRL Control points V□-CTRL Control points: benchmarks V□-CTRL-BMRK Control points: fly station V□-CTRL-FLYS Control points: grid V□-CTRL-HORZ Control points: horizontal V□-CTRL-HORZ Control points: horizontal V□-CTRL-HOPT Control points: horizontal/vertical V□-CTRL-PNPT Control points: panel points V□-CTRL-TRAV Control points: transverse V□-CTRL-VERT Control points: vertical V□-DRIV Driveways: asphalt V□-DRIV Driveways: center V□-DRIV-CNTR Driveways: center V□-DRIV-CNTR Driveways: concrete V□-DRIV-CURB Driveways: gravel V□-DRIV-GRVL Driveways: gravel V□-DRIV-GRVL Driveways: pavement markings V□-DRIV-DRIV-DRI Driveways: unpaved surface V□-DRIV-DRIV-D Driveways: center V□-DRIV-DRIV-D Driveways: center V□-DRIV-DRIV-D Driveways: pavement markings V□-DRIV-DRIV-D Driveways: pavement markings V□-DRIV-DRIV-D Driveways: pavement markings V□-DRIV-DRIV-D Driveways: center Driveways: center V□-DRIV-DRIV-D Driveways: center V□-DRIV-DRIV-D D	V□-CHAN-DOCK	Navigable channels: decks, docks, floats, piers
V□-COMM-MHOL V□-COMM-OVHD Communications: overhead V□-COMM-POLE Communications: pole V□-COMM-POLE Communications: underground V□-COMM-UGND Communications: underground V□-CTRL Control points V□-CTRL-BMRK Control points: benchmarks V□-CTRL-FLYS Control points: fly station V□-CTRL-GRID Control points: grid V□-CTRL-HORZ Control points: horizontal V□-CTRL-HORZ Control points: horizontal V□-CTRL-HOPT Control points: horizontal/vertical V□-CTRL-PNPT Control points: panel points V□-CTRL-TRAV Control points: transverse V□-CTRL-VERT Control points: vertical V□-DRIV Driveways V□-DRIV Driveways: asphalt V□-DRIV-ASPH Driveways: center V□-DRIV-CONC Driveways: concrete V□-DRIV-CONC Driveways: gravel V□-DRIV-GRVL Driveways: gravel V□-DRIV-GRVL Driveways: pavement markings V□-DRIV-MRKG Driveways: pavement markings V□-DRIV-UPVD Driveways: unpaved surface V□-DTCH-BOTM Ditches or washes: bottom V□-DTCH-EWAT Ditches or washes: center V□-DTCH-EWAT Ditches or washes: edge of water V□-DTCH-EWAT Ditches or washes: top V□-DTCH-TOP- Ditches or washes: top	V□-CHAN-NAID	Navigable channels: navigation aids
V□-COMM-POLE Communications: overhead V□-COMM-POLE Communications: pole V□-COMM-UGND Communications: underground V□-CTRL Control points V□-CTRL-BMRK Control points: benchmarks V□-CTRL-FLYS Control points: fly station V□-CTRL-GRID Control points: grid V□-CTRL-HORZ Control points: horizontal V□-CTRL-HORZ Control points: horizontal V□-CTRL-HVPT Control points: horizontal/vertical V□-CTRL-PNPT Control points: panel points V□-CTRL-PNPT Control points: vertical V□-CTRL-VERT Control points: vertical V□-DRIV V□-DRIV Driveways: asphalt V□-DRIV-ASPH Driveways: asphalt V□-DRIV-CONC Driveways: center V□-DRIV-CONC Driveways: concrete V□-DRIV-CURB Driveways: gravel V□-DRIV-FLNE Driveways: gravel V□-DRIV-GRVL Driveways: pavement markings V□-DRIV-DRIV-DPVD Driveways: unpaved surface V□-DRIV-DRIV-BOTM Ditches or washes: bottom V□-DTCH-BOTM Ditches or washes: center V□-DTCH-CNTR Ditches or washes: center V□-DTCH-EWAT Ditches or washes: edge of water V□-DTCH-TOP~ Ditches or washes: top	V□-COMM	Communications
V□-COMM-POLE Communications: pole V□-COMM-UGND Communications: underground V□-CTRL Control points V□-CTRL-BMRK Control points: benchmarks V□-CTRL-FLYS Control points: fly station V□-CTRL-GRID Control points: prid V□-CTRL-HORZ Control points: horizontal V□-CTRL-HORZ Control points: horizontal/vertical V□-CTRL-HVPT Control points: panel points V□-CTRL-PNPT Control points: transverse V□-CTRL-VERT Control points: vertical V□-DRIV Driveways V□-DRIV-ASPH Driveways: asphalt V□-DRIV-CNTR Driveways: center V□-DRIV-CONC Driveways: concrete V□-DRIV-CURB Driveways: gravel V□-DRIV-GRVL Driveways: gravel V□-DRIV-DRIV-DRIV Driveways: pavement markings V□-DRIV-DRIV-DPVD Driveways: unpaved surface V□-DRIV-DRIV-DNTR Ditches or washes: bottom V□-DTCH-BOTM Ditches or washes: center V□-DTCH-CNTR Ditches or washes: edge of water V□-DTCH-TOP~ Ditches or washes: top Easements	V□-COMM-MHOL	Communications: manhole
V□-COMM-UGND Communications: underground V□-CTRL Control points V□-CTRL-BMRK Control points: benchmarks V□-CTRL-FLYS Control points: fly station V□-CTRL-GRID Control points: prid V□-CTRL-HORZ Control points: horizontal/vertical V□-CTRL-HVPT Control points: horizontal/vertical V□-CTRL-PNPT Control points: panel points V□-CTRL-PNPT Control points: transverse V□-CTRL-VERT Control points: transverse V□-CTRL-VERT Control points: vertical V□-DRIV Driveways V□-DRIV Driveways: asphalt V□-DRIV-ASPH Driveways: asphalt V□-DRIV-CNTR Driveways: center V□-DRIV-CNTR Driveways: concrete V□-DRIV-CURB Driveways: curb V□-DRIV-FLNE Driveways: gravel V□-DRIV-FLNE Driveways: gravel V□-DRIV-MRKG Driveways: pavement markings V□-DRIV-MRKG Driveways: unpaved surface V□-DTCH Ditches or washes: bottom V□-DTCH-BOTM Ditches or washes: center	V□-COMM-OVHD	Communications: overhead
V□-CTRL Control points V□-CTRL-BMRK Control points: benchmarks V□-CTRL-FLYS Control points: fly station V□-CTRL-GRID Control points: grid V□-CTRL-HORZ Control points: horizontal V□-CTRL-HVPT Control points: horizontal/vertical V□-CTRL-PNPT Control points: panel points V□-CTRL-TRAV Control points: transverse V□-CTRL-VERT Control points: vertical V□-DRIV-DRIV Driveways V□-DRIV-ASPH Driveways: asphalt V□-DRIV-CNTR Driveways: center V□-DRIV-CONC Driveways: concrete V□-DRIV-CURB Driveways: gravel V□-DRIV-GRVL Driveways: gravel V□-DRIV-GRVL Driveways: pavement markings V□-DRIV-UPVD Driveways: unpaved surface V□-DTCH Ditches or washes: bottom V□-DTCH-CNTR Ditches or washes: edge of water V□-DTCH-TOP~ Ditches or washes: top V□-DTCH-TOP~ Ditches or washes: top	V□-COMM-POLE	Communications: pole
V□-CTRL-BMRK Control points: benchmarks V□-CTRL-GRID Control points: fly station V□-CTRL-GRID Control points: grid V□-CTRL-HORZ Control points: horizontal V□-CTRL-HVPT Control points: horizontal/vertical V□-CTRL-PNPT Control points: panel points V□-CTRL-TRAV Control points: transverse V□-CTRL-VERT Control points: vertical V□-DRIV Driveways V□-DRIV Driveways: asphalt V□-DRIV-CNTR Driveways: center V□-DRIV-CNTR Driveways: concrete V□-DRIV-CURB Driveways: gravel V□-DRIV-GRVL Driveways: gravel V□-DRIV-GRVL Driveways: gravel V□-DRIV-HRKG Driveways: unpaved surface V□-DRIV-UPVD Driveways: unpaved surface V□-DTCH Ditches or washes: bottom V□-DTCH-CNTR Ditches or washes: edge of water V□-DTCH-TOP~ Ditches or washes: top V□-DTCH-TOP~ Ditches or washes: top	V□-COMM-UGND	Communications: underground
V□-CTRL-FLYS Control points: fly station V□-CTRL-GRID Control points: prid V□-CTRL-HORZ Control points: horizontal V□-CTRL-HVPT Control points: horizontal/vertical V□-CTRL-PNPT Control points: panel points V□-CTRL-TRAV Control points: transverse V□-CTRL-VERT Control points: vertical V□-DRIV Driveways V□-DRIV-ASPH Driveways: asphalt V□-DRIV-CONC Driveways: center V□-DRIV-CONC Driveways: curb V□-DRIV-CURB Driveways: curb V□-DRIV-FLNE Driveways: gravel V□-DRIV-GRVL Driveways: pavement markings V□-DRIV-UPVD Driveways: unpaved surface V□-DTCH Ditches or washes V□-DTCH-BOTM Ditches or washes: bottom V□-DTCH-EWAT Ditches or washes: edge of water V□-DTCH-TOP~ Ditches or washes: top Easements	V□-CTRL	Control points
V□-CTRL-GRID Control points: grid V□-CTRL-HORZ Control points: horizontal V□-CTRL-HVPT Control points: horizontal/vertical V□-CTRL-PNPT Control points: panel points V□-CTRL-TRAV Control points: transverse V□-CTRL-VERT Control points: vertical V□-DRIV Driveways V□-DRIV-ASPH Driveways: asphalt V□-DRIV-CNTR Driveways: center V□-DRIV-CONC Driveways: curb V□-DRIV-CURB Driveways: gravel V□-DRIV-FLNE Driveways: gravel V□-DRIV-GRVL Driveways: pavement markings V□-DRIV-UPVD Driveways: unpaved surface V□-DTCH Ditches or washes: bottom V□-DTCH-CNTR Ditches or washes: edge of water V□-DTCH-TOP~ Ditches or washes: top V□-DTCH-TOP~ Ditches or washes: top Easements	V□-CTRL-BMRK	Control points: benchmarks
V□-CTRL-HORZ Control points: horizontal V□-CTRL-HVPT Control points: horizontal/vertical V□-CTRL-PNPT Control points: panel points V□-CTRL-TRAV Control points: transverse V□-CTRL-VERT Control points: vertical V□-DRIV Driveways V□-DRIV -ASPH Driveways: asphalt V□-DRIV-CNTR Driveways: center V□-DRIV-CNTR Driveways: concrete V□-DRIV-CNRB Driveways: curb V□-DRIV-FLNE Driveways: gravel V□-DRIV-GRVL Driveways: gravel V□-DRIV-HNKG Driveways: unpaved surface V□-DRIV-UPVD Driveways: unpaved surface V□-DTCH Ditches or washes: bottom V□-DTCH-BOTM Ditches or washes: center V□-DTCH-CNTR Ditches or washes: center V□-DTCH-EWAT Ditches or washes: edge of water V□-DTCH-TOP~ Ditches or washes: top U□-ESMT Easements	V□-CTRL-FLYS	Control points: fly station
V□-CTRL-HVPT Control points: horizontal/vertical V□-CTRL-PNPT Control points: panel points V□-CTRL-TRAV Control points: transverse V□-CTRL-VERT Control points: vertical V□-DRIV Driveways V□-DRIV-ASPH Driveways: asphalt V□-DRIV-CNTR Driveways: center V□-DRIV-CONC Driveways: curb V□-DRIV-CURB Driveways: gravel V□-DRIV-FLNE Driveways: gravel V□-DRIV-GRVL Driveways: pavement markings V□-DRIV-HMRKG Driveways: unpaved surface V□-DRIV-UPVD Driveways: bottom V□-DTCH-BOTM Ditches or washes: bottom V□-DTCH-CNTR Ditches or washes: center V□-DTCH-EWAT Ditches or washes: top V□-DTCH-TOP~ Ditches or washes: top V□-DTCH-TOP~ Ditches or washes: top V□-DTCH-TOP~ Ditches or washes: top	V□-CTRL-GRID	Control points: grid
V□-CTRL-PNPT Control points: panel points V□-CTRL-TRAV Control points: transverse V□-CTRL-VERT Control points: vertical V□-DRIV Driveways V□-DRIV-ASPH Driveways: asphalt V□-DRIV-CNTR Driveways: center V□-DRIV-CONC Driveways: curb V□-DRIV-CURB Driveways: durb V□-DRIV-FLNE Driveways: gravel V□-DRIV-GRVL Driveways: gravel V□-DRIV-MRKG Driveways: pavement markings V□-DRIV-UPVD Driveways: unpaved surface V□-DTCH Ditches or washes V□-DTCH-BOTM Ditches or washes: center V□-DTCH-CNTR Ditches or washes: center V□-DTCH-EWAT Ditches or washes: top V□-DTCH-TOP~ Ditches or washes: top V□-DTCH-TOP~ Ditches or washes: top V□-DTCH-TOP~ Ditches or washes: top	V□-CTRL-HORZ	Control points: horizontal
V□-CTRL-TRAV Control points: transverse V□-CTRL-VERT Control points: vertical V□-DRIV Driveways V□-DRIV-ASPH Driveways: asphalt V□-DRIV-CNTR Driveways: center V□-DRIV-CONC Driveways: concrete V□-DRIV-CURB Driveways: curb Driveways: fire lane V□-DRIV-FLNE Driveways: gravel V□-DRIV-GRVL Driveways: gravel V□-DRIV-MRKG Driveways: pavement markings V□-DRIV-UPVD Driveways: unpaved surface V□-DTCH Ditches or washes V□-DTCH-BOTM Ditches or washes: bottom V□-DTCH-CNTR Ditches or washes: center V□-DTCH-EWAT Ditches or washes: top V□-DTCH-TOP~ Ditches or washes: top V□-DTCH-TOP~ Ditches or washes: top V□-DTCH-TOP~ Ditches or washes: top	V□-CTRL-HVPT	Control points: horizontal/vertical
V□-CTRL-VERT Control points: vertical V□-DRIV Driveways V□-DRIV-ASPH Driveways: asphalt V□-DRIV-CNTR Driveways: center V□-DRIV-CONC Driveways: concrete V□-DRIV-CURB Driveways: curb V□-DRIV-FLNE Driveways: fire lane V□-DRIV-GRVL Driveways: gravel V□-DRIV-MRKG Driveways: pavement markings V□-DRIV-UPVD Driveways: unpaved surface V□-DTCH Ditches or washes V□-DTCH-BOTM Ditches or washes: bottom V□-DTCH-EWAT Ditches or washes: edge of water V□-DTCH-TOP~ Ditches or washes: top V□-DTCH-TOP~ Ditches or washes: top V□-DTCH-TOP~ Ditches or washes: top	V□-CTRL-PNPT	Control points: panel points
V□-DRIV Driveways V□-DRIV-ASPH Driveways: asphalt V□-DRIV-CNTR Driveways: center V□-DRIV-CONC Driveways: concrete V□-DRIV-CURB Driveways: dire lane V□-DRIV-FLNE Driveways: fire lane V□-DRIV-GRVL Driveways: gravel V□-DRIV-MRKG Driveways: pavement markings V□-DRIV-UPVD Driveways: unpaved surface V□-DTCH Ditches or washes V□-DTCH-BOTM Ditches or washes: bottom V□-DTCH-CNTR Ditches or washes: center V□-DTCH-EWAT Ditches or washes: edge of water V□-DTCH-TOP~ Ditches or washes: top V□-ESMT Easements	V□-CTRL-TRAV	Control points: transverse
V□-DRIV-ASPH Driveways: asphalt V□-DRIV-CNTR Driveways: center V□-DRIV-CONC Driveways: concrete V□-DRIV-CURB Driveways: curb V□-DRIV-FLNE Driveways: fire lane V□-DRIV-GRVL Driveways: gravel V□-DRIV-MRKG Driveways: pavement markings V□-DRIV-UPVD Driveways: unpaved surface V□-DTCH Ditches or washes V□-DTCH-BOTM Ditches or washes: bottom V□-DTCH-CNTR Ditches or washes: center V□-DTCH-EWAT Ditches or washes: edge of water V□-DTCH-TOP~ Ditches or washes: top V□-ESMT Easements	V□-CTRL-VERT	Control points: vertical
V□-DRIV-CNTR Driveways: center V□-DRIV-CONC Driveways: concrete V□-DRIV-CURB Driveways: curb V□-DRIV-FLNE Driveways: fire lane V□-DRIV-GRVL Driveways: gravel V□-DRIV-MRKG Driveways: pavement markings V□-DRIV-UPVD Driveways: unpaved surface V□-DTCH Ditches or washes V□-DTCH-BOTM Ditches or washes: bottom V□-DTCH-CNTR Ditches or washes: center V□-DTCH-EWAT Ditches or washes: edge of water V□-DTCH-TOP~ Ditches or washes: top V□-ESMT Easements	V□-DRIV	Driveways
V□-DRIV-CONC Driveways: concrete V□-DRIV-CURB Driveways: curb V□-DRIV-FLNE Driveways: fire lane V□-DRIV-GRVL Driveways: gravel V□-DRIV-MRKG Driveways: pavement markings V□-DRIV-UPVD Driveways: unpaved surface V□-DTCH Ditches or washes V□-DTCH-BOTM Ditches or washes: bottom V□-DTCH-CNTR Ditches or washes: center V□-DTCH-EWAT Ditches or washes: edge of water V□-DTCH-TOP~ Ditches or washes: top V□-ESMT Easements	V□-DRIV-ASPH	Driveways: asphalt
V□-DRIV-CURB Driveways: curb V□-DRIV-FLNE Driveways: fire lane V□-DRIV-GRVL Driveways: gravel V□-DRIV-MRKG Driveways: pavement markings V□-DRIV-UPVD Driveways: unpaved surface V□-DTCH Ditches or washes V□-DTCH-BOTM Ditches or washes: bottom V□-DTCH-CNTR Ditches or washes: center V□-DTCH-EWAT Ditches or washes: edge of water V□-DTCH-TOP~ Ditches or washes: top V□-ESMT Easements	V□-DRIV-CNTR	Driveways: center
V□-DRIV-FLNE Driveways: fire lane V□-DRIV-GRVL Driveways: gravel V□-DRIV-MRKG Driveways: pavement markings V□-DRIV-UPVD Driveways: unpaved surface V□-DTCH Ditches or washes V□-DTCH-BOTM Ditches or washes: bottom V□-DTCH-CNTR Ditches or washes: center V□-DTCH-EWAT Ditches or washes: edge of water V□-DTCH-TOP~ Ditches or washes: top V□-ESMT Easements	V□-DRIV-CONC	Driveways: concrete
V□-DRIV-GRVL Driveways: gravel V□-DRIV-MRKG Driveways: pavement markings V□-DRIV-UPVD Driveways: unpaved surface V□-DTCH Ditches or washes V□-DTCH-BOTM Ditches or washes: bottom V□-DTCH-CNTR Ditches or washes: center V□-DTCH-EWAT Ditches or washes: edge of water V□-DTCH-TOP~ Ditches or washes: top V□-ESMT Easements	V□-DRIV-CURB	Driveways: curb
V□-DRIV-MRKG Driveways: pavement markings V□-DRIV-UPVD Driveways: unpaved surface V□-DTCH Ditches or washes V□-DTCH-BOTM Ditches or washes: bottom V□-DTCH-CNTR Ditches or washes: center V□-DTCH-EWAT Ditches or washes: edge of water V□-DTCH-TOP~ Ditches or washes: top V□-ESMT Easements	V□-DRIV-FLNE	Driveways: fire lane
V□-DRIV-UPVD Driveways: unpaved surface V□-DTCH Ditches or washes V□-DTCH-BOTM Ditches or washes: bottom V□-DTCH-CNTR Ditches or washes: center V□-DTCH-EWAT Ditches or washes: edge of water V□-DTCH-TOP~ Ditches or washes: top V□-ESMT Easements	V□-DRIV-GRVL	Driveways: gravel
V□-DTCH Ditches or washes V□-DTCH-BOTM Ditches or washes: bottom V□-DTCH-CNTR Ditches or washes: center V□-DTCH-EWAT Ditches or washes: edge of water V□-DTCH-TOP~ Ditches or washes: top V□-ESMT Easements	V□-DRIV-MRKG	Driveways: pavement markings
V□-DTCH-BOTM Ditches or washes: bottom V□-DTCH-CNTR Ditches or washes: center V□-DTCH-EWAT Ditches or washes: edge of water V□-DTCH-TOP~ Ditches or washes: top V□-ESMT Easements	V□-DRIV-UPVD	Driveways: unpaved surface
V□-DTCH-CNTR Ditches or washes: center V□-DTCH-EWAT Ditches or washes: edge of water V□-DTCH-TOP~ Ditches or washes: top V□-ESMT Easements	V□-DTCH	Ditches or washes
V□-DTCH-EWAT Ditches or washes: edge of water V□-DTCH-TOP~ Ditches or washes: top V□-ESMT Easements	V□-DTCH-BOTM	Ditches or washes: bottom
V□-DTCH-TOP~ Ditches or washes: top V□-ESMT Easements	V□-DTCH-CNTR	Ditches or washes: center
V□-ESMT Easements	V□-DTCH-EWAT	Ditches or washes: edge of water
	V□-DTCH-TOP~	Ditches or washes: top
V□-ESMT-ACCS Easements: access (pedestrian only; private access)	V□-ESMT	Easements
	V□-ESMT-ACCS	Easements: access (pedestrian only; private access)

V□-ESMT-CATV	Easements: cable television system
V□-ESMT-CONS	Easements: conservation
V□-ESMT-CSTG	Easements: construction/grading
V□-ESMT-ELEC	Easements: electrical
V□-ESMT-FDPL	Easements: flood plain
V□-ESMT-INEG	Easements: ingress/egress (vehicles; private access)
V□-ESMT-LSCP	Easements: landscape
V□-ESMT-NGAS	Easements: natural gas line
V□-ESMT-PHON	Easements: telephone line
V□-ESMT-ROAD	Easements: roadway
V□-ESMT-ROAD-PERM	Easements: roadway: permanent
V□-ESMT-ROAD-TEMP	Easements: roadway: temporary
V□-ESMT-RWAY	Easements: right-of-way (public access)
V□-ESMT-SGHT	Easements: sight distance
V□-ESMT-SSWR	Easements: sanitary sewer
V□-ESMT-STRM	Easements: storm sewer
V□-ESMT-SWMT	Easements: storm water management
V□-ESMT-TRAL	Easements: trail or path (public access)
V□-ESMT-UTIL	Easements: utility lines
V□-ESMT-WATR	Easements: water supply
V□-FLHA	Flood hazard area
V _□ -FUEL	Fuel systems
V□-FUEL-MHOL	Fuel systems: manhole
V□-FUEL-PIPE	Fuel systems: piping
V□-FUEL-TANK	Fuel systems: storage tanks
V□-FUEL-UGND	Fuel systems: underground
V□-NGAS	Natural gas systems
V□-NGAS-MHOL	Natural gas systems: manhole
V□-NGAS-PIPE	Natural gas systems: piping
V□-NGAS-TANK	Natural gas systems: storage tanks
V□-NGAS-UGND	Natural gas systems: underground
V□-NODE	Node
V□-NODE-ABUT	Node: abutment
V□-NODE-ACTL	Node: aerial horizontal and vertical control points
V□-NODE-BLDG	Node: building points
V□-NODE-BLIN	Node: baseline
V□-NODE-BRDG	Node: bridge survey points
V□-NODE-BRKL	Node: break lines, spot elev. points and lines for creation of break lines as top of bank
V□-NODE-BROW	Node: brush row points

V□-NODE-BRSH	Node: brush points
V _□ -NODE-CABL	Node: underground cable systems
V _□ -NODE-CABE	Node: curb
V _□ -NODE-DASP	Node: description attributes for survey points
V _□ -NODE-DECK	Node: description attributes for survey points
-	
V□-NODE-DRIV V□-NODE-EASP	Node: driveway
	Node: elevation attributes for survey points
V□-NODE-EXPJ	Node: expansion joint
V□-NODE-GRND	Node: ground
V□-NODE-MHOL	Node: manhole
V□-NODE-MRKG	Node: pavement markings (yellow/white stripes)
V□-NODE-NGAS	Node: natural gas line
V□-NODE-PASP	Node: point number attributes for survey points
V□-NODE-PIPE	Node: piping (driveway/roadway culverts)
V□-NODE-POLE	Node: pole (power, telephone, etc.)
V□-NODE-PVMT	Node: pavement
V□-NODE-SIGN	Node: signage
V□-NODE-SSWR	Node: sanitary sewer
V□-NODE-STRM	Node: storm sewer
V□-NODE-SWLK	Node: sidewalks
V□-NODE-TREE	Node: tree
V□-NODE-TROW	Node: tree row
V□-NODE-WATR	Node: water supply
V□-POWR	Power
V□-POWR-FENC	Power: fences
V□-POWR-INST	Power: instrumentation (meters, transformers)
V□-POWR-MHOL	Power: manhole
V□-POWR-OVHD	Power: overhead
V□-POWR-POLE	Power: pole
V□-POWR-STRC	Power: structures
V□-POWR-UGND	Power: underground
V□-PRKG	Parking lots
V□-PRKG-ASPH	Parking lots: asphalt
V□-PRKG-CNTR	Parking lots: center
V□-PRKG-CONC	Parking lots: concrete
V□-PRKG-CURB	Parking lots: curb
V□-PRKG-DRAN	Parking lots: drainage slope indications
V- DDKC ELNE	D 11 14 6 1
V□-PRKG-FLNE	Parking lots: fire lane
V _D -PRKG-FLNE V _D -PRKG-GRVL	Parking lots: fire lane Parking lots: gravel

V□-PRKG-STRP	Parking lots: striping	
V□-PRKG-UPVD	Parking lots: unpaved surface	
V□-PROP	Property	
V□-PROP-LINE	Property: lines	
V□-PROP-QTRS	Property: quarter section	
V□-PROP-RSRV	Property: reservation	
V□-PROP-SBCK	Property: setback lines	
V□-PROP-SECT	Property: section	
V□-PROP-SUBD	Property: subdivision (interior) lines	
V□-PROP-SXTS	Property: sixteenth section	
V□-PVMT	Pavement	
V□-PVMT-ASPH	Pavement: asphalt	
V□-PVMT-CONC	Pavement: concrete	
V□-PVMT-GRVL	Pavement: gravel	
V□-RAIL	Railroad	
V□-RAIL-CNTR	Railroad: center	
V□-RAIL-EQPM	Railroad: equipment (gates, signals, etc.)	
V□-RAIL-TRAK	Railroad: track	
V□-RIVR	River	
V□-RIVR-BOTM	River: bottom	
V□-RIVR-CNTR	River: center	
V□-RIVR-EDGE	River: edge	
V□-RIVR-TOPB	River: top of bank	
V□-ROAD	Roadways	
V□-ROAD-ASPH	Roadways: asphalt	
V□-ROAD-CNTR	Roadways: center	
V□-ROAD-CONC	Roadways: concrete	
V□-ROAD-CURB	Roadways: curb	
V□-ROAD-FLNE	Roadways: fire lane	
V□-ROAD-GRVL	Roadways: gravel	
V□-ROAD-MRKG	Roadways: pavement markings	
V□-ROAD-UPVD	Roadways: unpaved surface	
V□-RRAP	Riprap	
V□-RWAY	Right-of-way	
V□-RWAY-CNTR	Right-of-way: center	
V□-RWAY-CTLA	Right-of-way: controlled access	
V□-RWAY-LINE	Right-of-way: lines	
V□-RWAY-LMTA	Right-of-way: limited access	
V□-RWAY-MRKR	Right-of-way: marker	
V□-RWAY-STAN	Right-of-way: stationing	

V□-SITE	Site features
V□-SITE-EWAT	Site features: edge of water
V□-SITE-FENC	Site features: fences
V□-SITE-ROCK	Site features: large rocks and rock outcroppings
V□-SITE-RTWL	Site features: retaining wall
V□-SITE-SIGN	Site features: signage
V□-SITE-VEGE	Site features: trees, shrubs, and other vegetation
V□-SSWR	Sanitary sewer
V□-SSWR-MHOL	Sanitary sewer: manhole
V□-SSWR-PIPE	Sanitary sewer: piping
V□-SSWR-STRC	Sanitary sewer: structures
V□-SSWR-UGND	Sanitary sewer: underground
V□-STEM	Steam system
V□-STEM-INST	Steam system: instrumentation (meters, valves, pumps)
V□-STEM-MHOL	Steam system: manhole
V□-STEM-PIPE	Steam system: piping
V□-STEM-STRC	Steam system: structures
V□-STEM-UGND	Steam system: underground
V□-STRM	Storm sewer
V□-STRM-DTCH	Storm sewer: ditches or washes
V□-STRM-MHOL	Storm sewer: manhole
V□-STRM-PIPE	Storm sewer: piping
V□-STRM-POND	Storm sewer: retention pond
V□-STRM-STRC	Storm sewer: structures
V□-STRM-UGND	Storm sewer: underground
V□-SURV	Survey
V□-SURV-DATA	Survey: data
V□-SWLK	Sidewalks
V□-SWLK-ASPH	Sidewalks: asphalt
V□-SWLK-CONC	Sidewalks: concrete
V□-TOPO	Topographic feature
V□-TOPO-EWAT	Topographic feature: edge of water
V□-TOPO-GRID	Topographic feature: grid
V□-TOPO-MAJR	Topographic feature: major (contours)
V□-TOPO-MINR	Topographic feature: minor (contours)
V□-TOPO-SOUN	Topographic feature: soundings
V□-TOPO-SPOT	Topographic feature: spot elevations
V□-UNID	Unidentified site objects
V□-UNID-CABL	Unidentified site objects: cable systems
V□-UNID-PIPE	Unidentified site objects: piping

V□-UNID-TANK	Unidentified site objects: storage tanks
V□-UNID-UTIL	Unidentified site objects: utility lines
V□-UNID-UTIL-OVHD	Unidentified site objects: utility lines: overhead
V□-UNID-UTIL-UGND	Unidentified site objects: utility lines: underground
V□-WATR	Water supply
V□-WATR-INST	Water supply: instrumentation (meters, valves, pumps)
V□-WATR-MHOL	Water supply: manhole
V□-WATR-PIPE	Water supply: piping
V□-WATR-STRC	Water supply: structures
V□-WATR-UGND	Water supply: underground

5.20 TELECOMMUNICATIONS LAYER LIST

Telecommunications Field Codes

The Layer Names shown below provide examples for the use of Major and Minor Group field codes for this discipline. See <u>CLG Sections 1.5</u> and <u>1.6</u> for complete rules and options governing the use of Major and Minor Group field codes.

Telecommunications Discipline Designators

Designator	Description
Т	Telecommunications
TA	Audio Visual
TC	Clock and Program
TI	Intercom
TM	Monitoring
TN	Data Networks
TT	Telephone
TY	Security
TJ	User Defined
TK	User Defined

Telecommunications Layer List

ayer Name	Description					
T□-ALRM	Alarm system					
T□-BCST	Broadcast-related system (radio or TV)					
T ₀ -BELL	Bell system					
T□-CABL	Cable systems					
T□-CABL-COAX	Cable systems: coax cable					

To-CABL-MULT Cable systems: multi-conductor cable To-CABL-TRAY Cable systems: cable tray and wireways To-CATV Cable television system To-CCTV Closed-circuit television system To-CLOK Clock system: circuits To-CLOK-CIRC Clock system: circuits To-CLOK-CIRC Clock system: circuit number To-CLOK-CING Clock system: circuit number To-CLOK-CING Clock system: equipment To-CLOK-EQPM Clock system: equipment To-CLOK-EQPM Clock system: wall To-COMM-CING Clock system: wall To-COMM-CING Communications: circuits To-COMM-CING Communications: circuit number To-COMM-CING To-COMM-CING To-COMM-CING Communications: circuit number To-COMM-CING To-COMM-CING To-COMM-CING Communications: circuit number To-COMM-CING To-COMM-CING To-COMM-CING To-COMM-CING Communications: wall To-COMM-CING To-DATA Data/AN system: circuit number To-DATA To-DATA To-DATA To-DATA Data/AN system: circuits To-DATA-CING Data/LAN system: circuit number To-DATA-CING Data/LAN system: sequipment To-DATA-CING Data/LAN system: sequipment To-DATA-CING Diagrams: equipment To-DIAG-EQPM Diagrams: equipment To-DIAG-EQPM Diagrams: equipment To-DICT-CING Dictation system: circuit To-DICT-CING Dictation system: circuit number	T□-CABL-FIBR	Cable systems: fiber optics cable
TD-CATV Cable television system TD-CCTV Closed-circuit television system TD-CLOK Clock system: circuits TD-CLOK-CIRC Clock system: circuits TD-CLOK-CLNG Clock system: circuit number TD-CLOK-CNMB Clock system: equipment TD-CLOK-EAPM Clock system: equipment TD-CLOK-EAPM Clock system: equipment TD-CLOK-WALL Clock system: wall TD-COMM Communications TD-COMM-CIRC TD-DATA-CIRC TD-DICT-CIRC Dictation system: circuits TD-DICT-CIRC TD-CICT-CIRC TD-CICT	T ₋ -CABL-MULT	Cable systems: multi-conductor cable
To-CCTV Closed-circuit television system To-CLOK Clock system To-CLOK-CIRC Clock system: circuits To-CLOK-CLNG Clock system: circuit number To-CLOK-CLNG Clock system: circuit number To-CLOK-EQPM Clock system: equipment To-CLOK-EQPM Clock system: equipment To-CLOK-EQPM Clock system: equipment To-CLOK-EQPM Clock system: equipment To-COMM-CLOR Clock system: mall To-COMM Communications To-COMM-CIRC Communications: circuits To-COMM-CLNG Communications: circuit number To-COMM-CLNG Communications: circuit number To-COMM-CLOR Communications: equipment To-COMM-EQPM Communications: equipment To-COMM-EQPM Communications: wall To-CONT Controls and instrumentation To-CONT Controls and instrumentation: devices To-CONT-WIRE Controls and instrumentation: wiring To-DATA Data/LAN system To-DATA-CIRC Data/LAN system: circuits To-DATA-CIRC Data/LAN system: circuit number To-DATA-CING Data/LAN system: circuit number To-DATA-CING Data/LAN system: equipment To-DATA-CING Data/LAN system: equipment To-DATA-CING Data/LAN system: equipment To-DATA-CING Data/LAN system: glock To-DATA-CING Data/LAN system: glock To-DATA-GENCL Diagrams: equipment To-DIAG-ENCL Diagrams: equipment To-DIAG-ENCL Diagrams: equipment To-DIAG-ENCL Diagrams: equipment To-DIAG-EQPM Diagrams: ground To-DIAG-EQPM Diagrams: circuits To-DICT-CING Dictation system: circuit number To-DICT-CING Dictation system: circuit number To-DICT-CING Dictation system: circuit number	T□-CABL-TRAY	Cable systems: cable tray and wireways
TD-CLOK Clock system: circuits TD-CLOK-CIRC Clock system: circuits TD-CLOK-CLNG Clock system: circuit number TD-CLOK-CNMB Clock system: circuit number TD-CLOK-EQPM Clock system: equipment TD-COMM Communications TD-COMM-CIRC Communications: circuits TD-COMM-CIRC Communications: circuit number TD-COMM-CIRC Communications: circuit number TD-COMM-CIRC Communications: equipment TD-COMM-EQPM Communications: equipment TD-COMM-EQPM Communications: wall TD-CONT Controls and instrumentation TD-CONT Controls and instrumentation: devices TD-CONT-WIRE Controls and instrumentation: wiring TD-DATA Data/LAN system TD-DATA Data/LAN system: circuits TD-DATA-CIRC Data/LAN system: circuits TD-DATA-CIRC Data/LAN system: circuit number TD-DATA-CIRC Data/LAN system: equipment TD-DATA-GENCL Diagrams: equipment TD-DIAG-ERCL Diagrams: equipment TD-DIAG-ERCL Diagrams: equipment TD-DIAG-ERCL Diagrams: equipment TD-DIAG-ERCRD Diagrams: equipment TD-DIAG-ERCRD Diagrams: circuits TD-DIAG-ERCRD Dictation system: circuits TD-DICT-CIRC Dictation system: circuit number TD-DICT-CIRCD Dictation system: circuit number	T□-CATV	Cable television system
To-CLOK-CIRC Clock system: circuits To-CLOK-CLNG Clock system: circuit number To-CLOK-CNMB Clock system: circuit number To-CLOK-EQPM Clock system: equipment To-CLOK-FLOR Clock system: equipment To-CLOK-FLOR Clock system: wall To-COMM Communications To-COMM Communications: circuits To-COMM-CIRC Communications: circuits To-COMM-CNMB Communications: circuit number To-COMM-CNMB Communications: circuit number To-COMM-COMMB Communications: equipment To-COMM-EOPM Communications: equipment To-COMM-FLOR Communications: devices To-CONT-URE Controls and instrumentation To-CONT-DEVC Controls and instrumentation: devices To-CONT-WIRE Controls and instrumentation: wiring To-DATA Data/LAN system To-DATA-CIRC Data/LAN system: circuits To-DATA-CING Data/LAN system: circuit number To-DATA-CNMB Data/LAN system: circuit number To-DATA-COMB Data/LAN system: equipment To-DATA-FLOR Data/LAN system: equipment To-DATA-FLOR Data/LAN system: door To-DATA-FLOR Data/LAN system: door To-DATA-GOMB Diagrams equipment To-DICT-CIRC Dictation system: circuit number To-DICT-CIRC Dictation system: circuit number	T ₋ -CCTV	Closed-circuit television system
To-CLOK-CLNG Clock system: circuit number To-CLOK-CNMB Clock system: circuit number To-CLOK-EQPM Clock system: equipment To-CLOK-FLOR Clock system: door To-CLOK-WALL Clock system: wall To-COMM Communications To-COMM Communications: circuits To-COMM-CIRC Communications: circuits To-COMM-CNMB Communications: circuit number To-COMM-CNMB Communications: circuit number To-COMM-EQPM Communications: devices To-COMM-FLOR Communications: doing system: circuit number To-COMM-FLOR Communications: doing system: circuits To-CONT Controls and instrumentation To-CONT-DEVC Controls and instrumentation: devices To-CONT-WIRE Controls and instrumentation: wiring To-DATA Data/LAN system To-DATA-CIRC Data/LAN system: circuits To-DATA-CIRC Data/LAN system: circuit number To-DATA-COMB Data/LAN system: circuit number To-DATA-EQPM Data/LAN system: equipment To-DATA-FLOR Data/LAN system: floor To-DATA-FLOR Data/LAN system: mall To-DATA-FLOR Data/LAN system: wall To-DATA-FLOR Data/LAN system: sets To-DATA-WALL Data/LAN system: wall To-DATA-GROD Diagrams To-DIAG-ENCL Diagrams To-DIAG-EQPM Diagrams: equipment To-DIAG-EQPM Diagrams: equipment To-DIAG-GRND Diagrams: equipment To-DIAG-GRND Diagrams: equipment To-DICT-CIRC Dictation system: circuit number To-DICT-CIRC Dictation system: circuit number To-DICT-CIRC Dictation system: circuit number	T ₋ -CLOK	Clock system
To-CLOK-CNMB Clock system: circuit number To-CLOK-EQPM Clock system: equipment To-CLOK-FLOR Clock system: floor To-CLOK-WALL Clock system: wall To-COMM Communications To-COMM Communications: circuits To-COMM-CLNG Communications: circuit number To-COMM-CLNG Communications: circuit number To-COMM-CLNG Communications: circuit number To-COMM-CLNG Communications: circuit number To-COMM-CLNG Communications: equipment To-COMM-CLNG Communications: equipment To-COMM-EQPM Communications: equipment To-COMM-EQPM Communications: wall To-CONT Controls and instrumentation To-CONT Controls and instrumentation: devices To-CONT-DEVC Controls and instrumentation: wiring To-DATA Data/LAN system To-DATA Data/LAN system: circuits To-DATA-CIRC Data/LAN system: circuit To-DATA-CIRC Data/LAN system: circuit number To-DATA-CNMB Data/LAN system: circuit number To-DATA-CNMB Data/LAN system: equipment To-DATA-FLOR Data/LAN system: equipment To-DATA-FLOR Data/LAN system: wall To-DATA-HOR Data/LAN system: wall To-DATA-WALL Data/LAN system: wall To-DATA-WALL Data/LAN system: wall To-DIAG-EOPM Diagrams: equipment To-DIAG-EOPM Diagrams: equipment To-DIAG-EOPM Diagrams: equipment To-DIAG-EOPM Diagrams: equipment To-DIAG-EOPM Diagrams: ground To-DICT Dictation system: circuit number To-DICT-CIRC Dictation system: circuit number To-DICT-CING Dictation system: circuit number	T□-CLOK-CIRC	Clock system: circuits
To-CLOK-EQPM Clock system: equipment To-CLOK-FLOR Clock system: floor To-CLOK-WALL Clock system: wall To-COMM Communications To-COMM-CIRC Communications: circuits To-COMM-CING Communications: circuit number To-COMM-CINB Communications: circuit number To-COMM-CINB Communications: circuit number To-COMM-COMM-COMM-COMM-COMM-COMM-COMM-COM	T□-CLOK-CLNG	Clock system: ceiling
Te-CLOK-FLOR Clock system: wall Te-COMM Communications Te-COMM-CIRC Communications: circuits Te-COMM-CING Communications: circuits Te-COMM-CING Communications: circuit number Te-COMM-CING Communications: circuit number Te-COMM-CING Communications: circuit number Te-COMM-CING Communications: circuit number Te-COMM-COMM-CING Communications: circuit number Te-COMM-EQPM Communications: devices Te-COMM-FLOR Communications: wall Te-CONT Controls and instrumentation Te-CONT-DEVC Controls and instrumentation: devices Te-CONT-WIRE Controls and instrumentation: wiring Te-DATA Data/LAN system Te-DATA-CIRC Data/LAN system: circuits Te-DATA-CIRC Data/LAN system: circuit number Te-DATA-CING Data/LAN system: circuit number Te-DATA-CING Data/LAN system: equipment Te-DATA-LOR Data/LAN system: jacks Te-DATA-JACK Data/LAN system: wall Te-DATA-WALL Data/LAN system: wall Te-DIAG-ENCL Diagrams: equipment Te-DIAG-ENCL Diagrams: equipment Te-DIAG-GRND Diagrams: equipment Te-DIAG-GRND Diagrams: ground Te-DICT Dictation system: circuits Te-DICT-CING Dictation system: circuit number Te-DICT-CING Dictation system: circuit number Te-DICT-CING Dictation system: circuit number	T□-CLOK-CNMB	Clock system: circuit number
TD-CLOK-WALL TD-COMM Communications TD-COMM-CIRC Communications: circuits TD-COMM-CING Communications: circuit number TD-CONT TD-CONT TD-	T□-CLOK-EQPM	Clock system: equipment
TD-COMM CIRC Communications: circuits TD-COMM-CING Communications: circuits TD-COMM-CING Communications: circuit number TD-COMM-CING Communications: circuit number TD-COMM-CING Communications: circuit number TD-COMM-CING Communications: equipment TD-COMM-CING Communications: mail TD-COMM-FLOR Communications: wall TD-CONT Controls and instrumentation TD-CONT TD-CONT-DEVC Controls and instrumentation: wiring TD-DATA Data/LAN system TD-DATA Data/LAN system TD-DATA-CIRC Data/LAN system: circuits TD-DATA-CIRC Data/LAN system: circuit number TD-DATA-CING Data/LAN system: circuit number TD-DATA-CING Data/LAN system: equipment TD-DATA-EQPM Data/LAN system: floor TD-DATA-FLOR Data/LAN system: wall TD-DATA-JACK Data/LAN system: wall TD-DIATA-WALL Data/LAN system: wall TD-DIAG-ENCL Diagrams TD-DIAG-EQPM Diagrams: equipment enclosures TD-DIAG-EQPM Diagrams: equipment TD-DIAG-EQPM Diagrams: equipment TD-DICT-CIRC Dictation system: circuits TD-DICT-CIRC Dictation system: circuit number TD-DICT-CING Dictation system: circuit number	T□-CLOK-FLOR	Clock system: floor
TD-COMM-CIRC Communications: circuits TD-COMM-CNMB Communications: circuit number TD-COMM-CNMB Communications: circuit number TD-COMM-EQPM Communications: equipment TD-COMM-FLOR Communications: mail TD-COMM-FLOR Communications: wall TD-CONT Controls and instrumentation TD-CONT Controls and instrumentation: devices TD-CONT-DEVC Controls and instrumentation: wiring TD-DATA Data/LAN system TD-DATA Data/LAN system TD-DATA-CIRC Data/LAN system: circuits TD-DATA-CIRC Data/LAN system: circuit number TD-DATA-CNMB Data/LAN system: circuit number TD-DATA-CNMB Data/LAN system: equipment TD-DATA-EQPM Data/LAN system: floor TD-DATA-FLOR Data/LAN system: wall TD-DATA-JACK Data/LAN system: wall TD-DIATA-WALL Data/LAN system: wall TD-DIAG-ENCL Diagrams TD-DIAG-EQPM Diagrams: equipment TD-DIAG-EQPM Diagrams: equipment TD-DIAG-EQPM Diagrams: equipment TD-DIAG-EQPM Diagrams: equipment TD-DICT-CIRC Dictation system: circuits TD-DICT-CIRC Dictation system: circuit number TD-DICT-CING Dictation system: circuit number	T□-CLOK-WALL	Clock system: wall
TD-COMM-CLNG Communications: ceiling TD-COMM-CNMB Communications: circuit number TD-COMM-EQPM Communications: equipment TD-COMM-FLOR Communications: floor TD-COMM-WALL Communications: wall TD-CONT Controls and instrumentation TD-CONT-DEVC Controls and instrumentation: devices TD-CONT-WIRE Controls and instrumentation: wiring TD-DATA Data/LAN system TD-DATA Data/LAN system: circuits TD-DATA-CIRC Data/LAN system: circuits TD-DATA-CNMB Data/LAN system: circuit number TD-DATA-CNMB Data/LAN system: equipment TD-DATA-EQPM Data/LAN system: floor TD-DATA-FLOR Data/LAN system: jacks TD-DATA-WALL Data/LAN system: wall TD-DIAG Diagrams TD-DIAG Diagrams TD-DIAG-EQPM Diagrams: equipment TD-DIAG-EQPM Diagrams: ground TD-DICT-CIRC Dictation system: circuit number TD-DICT-CLNG Dictation system: circuit number	T□-COMM	Communications
TD-COMM-CNMB Communications: circuit number TD-COMM-EQPM Communications: equipment TD-COMM-FLOR Communications: floor TD-COMM-FLOR Communications: wall TD-CONT Controls and instrumentation TD-CONT-DEVC Controls and instrumentation: devices TD-CONT-WIRE Controls and instrumentation: wiring TD-DATA Data/LAN system TD-DATA Data/LAN system: circuits TD-DATA-CIRC Data/LAN system: ceiling TD-DATA-CNMB Data/LAN system: ceiling TD-DATA-CNMB Data/LAN system: equipment TD-DATA-EQPM Data/LAN system: packs TD-DATA-FLOR Data/LAN system: jacks TD-DATA-JACK Data/LAN system: wall TD-DATA-WALL Data/LAN system: wall TD-DIAG Diagrams TD-DIAG Diagrams TD-DIAG-EQPM Diagrams: equipment TD-DIAG-EQPM Diagrams: ground TD-DIAG-GRND Diagrams: ground TD-DICT-CIRC Dictation system: circuit number TD-DICT-CLNG Dictation system: circuit number TD-DICT-CLNG Dictation system: circuit number TD-DICT-CLNG Dictation system: circuit number TD-DICT-CNMB Dictation system: circuit number TD-DICT-CNMB Dictation system: circuit number	T ₋ -COMM-CIRC	Communications: circuits
TD-COMM-EQPM Communications: equipment TD-COMM-FLOR Communications: floor TD-COMM-WALL Communications: wall TD-CONT Controls and instrumentation TD-CONT-DEVC Controls and instrumentation: devices TD-CONT-WIRE Controls and instrumentation: wiring TD-DATA Data/LAN system TD-DATA Data/LAN system: circuits TD-DATA-CIRC Data/LAN system: ceiling TD-DATA-CING Data/LAN system: circuit number TD-DATA-CNMB Data/LAN system: equipment TD-DATA-FLOR Data/LAN system: floor TD-DATA-FLOR Data/LAN system: jacks TD-DATA-JACK Data/LAN system: wall TD-DATA-WALL Data/LAN system: wall TD-DIAG-ENCL Diagrams TD-DIAG-ENCL Diagrams: equipment TD-DIAG-EQPM Diagrams: equipment TD-DIAG-GRND Diagrams: ground TD-DICT Dictation system TD-DICT-CIRC Dictation system: circuits TD-DICT-CLNG Dictation system: circuit number TD-DICT-CNMB Dictation system: circuit number	T ₋ -COMM-CLNG	Communications: ceiling
T□-COMM-FLOR Communications: floor T□-COMM-WALL Controls and instrumentation T□-CONT-DEVC Controls and instrumentation: devices T□-CONT-WIRE Controls and instrumentation: wiring T□-DATA Data/LAN system T□-DATA-CIRC Data/LAN system: circuits T□-DATA-CLNG Data/LAN system: circuit number T□-DATA-CNMB Data/LAN system: equipment T□-DATA-EQPM Data/LAN system: floor T□-DATA-FLOR Data/LAN system: picks T□-DATA-JACK Data/LAN system: wall T□-DATA-WALL Data/LAN system: wall T□-DIAG Diagrams T□-DIAG-ENCL Diagrams: equipment T□-DIAG-EQPM Diagrams: equipment T□-DIAG-GRND Diagrams: ground T□-DICT Dictation system T□-DICT-CLNG Dictation system: circuit number T□-DICT-CNMB Dictation system: circuit number	T ₋ -COMM-CNMB	Communications: circuit number
T□-COMM-WALL T□-CONT Controls and instrumentation T□-CONT-DEVC Controls and instrumentation: devices T□-CONT-WIRE Controls and instrumentation: wiring T□-DATA Data/LAN system T□-DATA-CIRC Data/LAN system: circuits T□-DATA-CLNG Data/LAN system: ceiling T□-DATA-CNMB Data/LAN system: circuit number T□-DATA-COMB Data/LAN system: equipment T□-DATA-JACK Data/LAN system: jacks T□-DATA-JACK Data/LAN system: wall T□-DATA-WALL Data/LAN system: wall T□-DIAG Diagrams T□-DIAG-ENCL Diagrams: equipment T□-DIAG-ENCL Diagrams: equipment T□-DIAG-GRND Diagrams: ground T□-DICT Dictation system T□-DICT-CLNG Dictation system: circuit number T□-DICT-CNMB Dictation system: circuit number	T ₋ -COMM-EQPM	Communications: equipment
T□-CONT Controls and instrumentation T□-CONT-DEVC Controls and instrumentation: devices T□-CONT-WIRE Controls and instrumentation: wiring T□-DATA Data/LAN system T□-DATA-CIRC Data/LAN system: circuits T□-DATA-CLNG Data/LAN system: circuit number T□-DATA-CNMB Data/LAN system: equipment T□-DATA-EQPM Data/LAN system: floor T□-DATA-JACK Data/LAN system: jacks T□-DATA-WALL Data/LAN system: wall T□-DATA-WALL Data/LAN system: wall T□-DIAG Diagrams T□-DIAG-ENCL Diagrams: equipment T□-DIAG-EQPM Diagrams: ground T□-DICT Dictation system T□-DICT-CIRC Dictation system: circuits T□-DICT-CNMB Dictation system: circuit number T□-DICT-EQPM Dictation system: circuit number T□-DICT-EQPM Dictation system: circuit number	T ₋ -COMM-FLOR	Communications: floor
T□-CONT-DEVC Controls and instrumentation: devices T□-CONT-WIRE Controls and instrumentation: wiring T□-DATA Data/LAN system T□-DATA-CIRC Data/LAN system: circuits T□-DATA-CLNG Data/LAN system: circuit number T□-DATA-CNMB Data/LAN system: equipment T□-DATA-EQPM Data/LAN system: floor T□-DATA-JACK Data/LAN system: jacks T□-DATA-WALL Data/LAN system: wall T□-DIAG Diagrams T□-DIAG-ENCL Diagrams: equipment T□-DIAG-EQPM Diagrams: equipment T□-DIAG-GRND Diagrams: ground T□-DICT Dictation system T□-DICT-CIRC Dictation system: circuit number T□-DICT-CNMB Dictation system: circuit number T□-DICT-CNMB Dictation system: circuit number T□-DICT-EQPM Dictation system: circuit number T□-DICT-EQPM Dictation system: circuit number	T ₋ -COMM-WALL	Communications: wall
T□-CONT-WIRE Controls and instrumentation: wiring T□-DATA Data/LAN system T□-DATA-CIRC Data/LAN system: circuits T□-DATA-CLNG Data/LAN system: ceiling T□-DATA-CNMB Data/LAN system: circuit number T□-DATA-EQPM Data/LAN system: equipment T□-DATA-FLOR Data/LAN system: floor T□-DATA-JACK Data/LAN system: jacks T□-DATA-WALL Data/LAN system: wall T□-DIAG Diagrams T□-DIAG-ENCL Diagrams: equipment enclosures T□-DIAG-EQPM Diagrams: ground T□-DIAG-GRND Diagrams: ground T□-DICT Dictation system T□-DICT-CIRC Dictation system: circuits T□-DICT-CLNG Dictation system: circuit number T□-DICT-CNMB Dictation system: equipment	T ₋ CONT	Controls and instrumentation
To-DATA Data/LAN system To-DATA-CIRC Data/LAN system: circuits To-DATA-CLNG Data/LAN system: ceiling To-DATA-CNMB Data/LAN system: circuit number To-DATA-CNMB Data/LAN system: equipment To-DATA-EQPM Data/LAN system: floor To-DATA-FLOR Data/LAN system: jacks To-DATA-JACK Data/LAN system: wall To-DIAG Diagrams To-DIAG Diagrams To-DIAG-ENCL Diagrams: equipment To-DIAG-EQPM Diagrams: equipment To-DIAG-GRND Diagrams: ground To-DICT Dictation system To-DICT-CIRC Dictation system: circuits To-DICT-CNMB Dictation system: equipment To-DICT-CNMB Dictation system: equipment	T ₋ -CONT-DEVC	Controls and instrumentation: devices
To-DATA-CIRC Data/LAN system: circuits To-DATA-CLNG Data/LAN system: ceiling To-DATA-CNMB Data/LAN system: circuit number To-DATA-EQPM Data/LAN system: equipment To-DATA-FLOR Data/LAN system: floor To-DATA-JACK Data/LAN system: jacks To-DATA-WALL Data/LAN system: wall To-DIAG Diagrams To-DIAG-ENCL Diagrams: equipment enclosures To-DIAG-EQPM Diagrams: ground To-DICT Dictation system To-DICT-CIRC Dictation system: circuits To-DICT-CNMB Dictation system: equipment To-DICT-CNMB Dictation system: circuit number To-DICT-EQPM Dictation system: circuit number	T□-CONT-WIRE	Controls and instrumentation: wiring
T□-DATA-CLNG Data/LAN system: ceiling T□-DATA-CNMB Data/LAN system: circuit number T□-DATA-EQPM Data/LAN system: equipment T□-DATA-FLOR Data/LAN system: floor T□-DATA-JACK Data/LAN system: jacks T□-DATA-WALL Data/LAN system: wall T□-DIAG Diagrams T□-DIAG-ENCL Diagrams: equipment enclosures T□-DIAG-EQPM Diagrams: equipment T□-DIAG-GRND Diagrams: ground T□-DICT Dictation system T□-DICT-CLNG Dictation system: circuits T□-DICT-CLNG Dictation system: ceiling T□-DICT-CNMB Dictation system: circuit number T□-DICT-EQPM Dictation system: equipment	T□-DATA	Data/LAN system
To-DATA-CNMB Data/LAN system: circuit number To-DATA-EQPM Data/LAN system: equipment To-DATA-FLOR Data/LAN system: floor To-DATA-JACK Data/LAN system: jacks To-DATA-WALL Data/LAN system: wall To-DIAG Diagrams To-DIAG-ENCL Diagrams: equipment enclosures To-DIAG-EQPM Diagrams: ground To-DICT Dictation system To-DICT-CLNG Dictation system: circuits To-DICT-CLNG Dictation system: circuit number To-DICT-EQPM Dictation system: equipment	T□-DATA-CIRC	Data/LAN system: circuits
To-DATA-EQPM Data/LAN system: equipment To-DATA-FLOR Data/LAN system: floor To-DATA-JACK Data/LAN system: jacks To-DATA-WALL Data/LAN system: wall To-DIAG Diagrams To-DIAG-ENCL Diagrams: equipment enclosures To-DIAG-EQPM Diagrams: equipment To-DIAG-GRND Diagrams: ground To-DICT Dictation system To-DICT-CIRC Dictation system: circuits To-DICT-CLNG Dictation system: ceiling To-DICT-CNMB Dictation system: circuit number To-DICT-EQPM Dictation system: equipment	T□-DATA-CLNG	Data/LAN system: ceiling
To-DATA-FLOR Data/LAN system: floor To-DATA-JACK Data/LAN system: jacks To-DATA-WALL Data/LAN system: wall To-DIAG Diagrams To-DIAG-ENCL Diagrams: equipment enclosures To-DIAG-EQPM Diagrams: equipment To-DIAG-GRND Diagrams: ground To-DICT Dictation system To-DICT-CIRC Dictation system: circuits To-DICT-CLNG Dictation system: ceiling To-DICT-CNMB Dictation system: circuit number To-DICT-EQPM Dictation system: equipment	T□-DATA-CNMB	Data/LAN system: circuit number
T□-DATA-JACK Data/LAN system: jacks T□-DATA-WALL Data/LAN system: wall T□-DIAG Diagrams T□-DIAG-ENCL Diagrams: equipment enclosures T□-DIAG-EQPM Diagrams: equipment T□-DIAG-GRND Diagrams: ground T□-DICT Dictation system T□-DICT-CIRC Dictation system: circuits T□-DICT-CLNG Dictation system: ceiling T□-DICT-CNMB Dictation system: circuit number T□-DICT-EQPM Dictation system: equipment	T□-DATA-EQPM	Data/LAN system: equipment
T_D-DATA-WALL Data/LAN system: wall T_D-DIAG Diagrams T_D-DIAG-ENCL Diagrams: equipment enclosures T_D-DIAG-EQPM Diagrams: equipment T_D-DIAG-GRND Diagrams: ground T_D-DICT Dictation system T_D-DICT-CIRC Dictation system: circuits T_D-DICT-CLNG Dictation system: ceiling T_D-DICT-CNMB Dictation system: circuit number T_D-DICT-EQPM Dictation system: equipment	T□-DATA-FLOR	Data/LAN system: floor
T_D-DIAG Diagrams T_D-DIAG-ENCL Diagrams: equipment enclosures T_D-DIAG-EQPM Diagrams: equipment T_D-DIAG-GRND Diagrams: ground T_D-DICT Dictation system T_D-DICT-CIRC Dictation system: circuits T_D-DICT-CLNG Dictation system: ceiling T_D-DICT-CNMB Dictation system: circuit number T_D-DICT-EQPM Dictation system: equipment	T ₋ -DATA-JACK	Data/LAN system: jacks
TDIAG-ENCL Diagrams: equipment enclosures TDIAG-EQPM Diagrams: equipment TDIAG-GRND Diagrams: ground TDICT Dictation system TDICT-CIRC Dictation system: circuits TDICT-CLNG Dictation system: ceiling TDICT-CNMB Dictation system: circuit number TDICT-EQPM Dictation system: equipment	T□-DATA-WALL	Data/LAN system: wall
TDIAG-EQPM Diagrams: equipment TDIAG-GRND Diagrams: ground TDICT Dictation system TDICT-CIRC Dictation system: circuits TDICT-CLNG Dictation system: ceiling TDICT-CNMB Dictation system: circuit number TDICT-EQPM Dictation system: equipment	T□-DIAG	Diagrams
T□-DIAG-GRND Diagrams: ground T□-DICT Dictation system T□-DICT-CIRC Dictation system: circuits T□-DICT-CLNG Dictation system: ceiling T□-DICT-CNMB Dictation system: circuit number T□-DICT-EQPM Dictation system: equipment	T□-DIAG-ENCL	Diagrams: equipment enclosures
T□-DICT Dictation system T□-DICT-CIRC Dictation system: circuits T□-DICT-CLNG Dictation system: ceiling T□-DICT-CNMB Dictation system: circuit number T□-DICT-EQPM Dictation system: equipment	T□-DIAG-EQPM	Diagrams: equipment
T□-DICT-CIRC Dictation system: circuits T□-DICT-CLNG Dictation system: ceiling T□-DICT-CNMB Dictation system: circuit number T□-DICT-EQPM Dictation system: equipment	T□-DIAG-GRND	Diagrams: ground
T□-DICT-CLNG Dictation system: ceiling T□-DICT-CNMB Dictation system: circuit number T□-DICT-EQPM Dictation system: equipment	T□-DICT	Dictation system
T□-DICT-CNMB Dictation system: circuit number T□-DICT-EQPM Dictation system: equipment	T□-DICT-CIRC	Dictation system: circuits
T□-DICT-EQPM Dictation system: equipment	T ₋ -DICT-CLNG	Dictation system: ceiling
	T ₋ -DICT-CNMB	Dictation system: circuit number
T□-DICT-FLOR Dictation system: floor	T ₋ -DICT-EQPM	Dictation system: equipment
	T ₋ -DICT-FLOR	Dictation system: floor

To-ELEC Electrical system, telecom plan Tri-EMCS Energy monitoring control system Tri-FIRE Fire protection Tri-FIRE-CIRC Fire protection: circuits Tri-FIRE-CIRC Fire protection: circuits Tri-FIRE-CING Fire protection: circuit number Tri-FIRE-CING Fire protection: circuit number Tri-FIRE-COMB Fire protection: circuit number Tri-FIRE-COMB Fire protection: equipment Tri-FIRE-COMB Fire protection: equipment Tri-FIRE-FLOR Fire protection: wall Tri-NITC Intercom/PA systems Tri-NURS Nurse call system Tri-NURS-CIRC Nurse call system: circuits Tri-NURS-CIRC Nurse call system: circuit Tri-NURS-CING Nurse call system: circuit number Tri-NURS-COMB Nurse call system: equipment Tri-PHON	T□-DICT-WALL	Dictation system: wall
To-FIRE Fire protection: circuits To-FIRE-CLNG Fire protection: circuit number To-FIRE-CLNG Fire protection: circuit number To-FIRE-CNMB Fire protection: circuit number To-FIRE-COMB Fire protection: circuit number To-FIRE-COMB Fire protection: equipment To-FIRE-COMB Fire protection: equipment To-FIRE-COMB Fire protection: equipment To-FIRE-COMB Fire protection: wall To-FIRE-WALL Fire protection: wall To-FIRE-WALL Fire protection: wall To-INTC Intercom/PA systems To-NURS Nurse call system To-NURS-CIRC Nurse call system: circuits To-NURS-CIRC Nurse call system: circuit number To-NURS-CING Nurse call system: circuit number To-NURS-CNMB Nurse call system: equipment To-NURS-COMB Nurse call system: diror To-NURS-WALL Nurse call system: wall To-PONG Paging system To-PHON Telephone system To-PHON Telephone system To-PHON-JACK Telephone system To-SERT Security system To-SERT Security system: circuits To-SERT-CLNG Security system: circuits To-SERT-CLNG Security system: circuit number To-SERT-CLNG Security system: circuit number To-SERT-COMB Security system: circuit number To-SERT-COMB Security system: equipment To-SERT-COMB Security system: circuit number To-SERT-HOR Security system: equipment To-SERT-HOR Security system: wall To-TVAN Television antenna system: circuits To-TVAN-CIRC Television antenna system: circuits To-TVAN-CING Television antenna system: circuit number	T ₋ -ELEC	Electrical system, telecom plan
To-FIRE-CIRC Fire protection: circuits To-FIRE-CLNG Fire protection: ceiling To-FIRE-CNMB Fire protection: circuit number To-FIRE-EQPM Fire protection: dequipment To-FIRE-EQPM Fire protection: dipor To-FIRE-FLOR Fire protection: mail To-FIRE-WALL Fire protection: wall To-INTC Intercom/PA systems To-NURS Nurse call system: circuits To-NURS-CLNG Nurse call system: circuit number To-NURS-CNMB Nurse call system: circuit number To-NURS-CNMB Nurse call system: dipor To-NURS-FLOR Nurse call system: dipor To-NURS-WALL Nurse call system: wall To-PONG Paging system To-PHON To-PHON To-PHON To-PHON-JACK To-PHON-JACK To-PHON-JACK To-PROJ Projector system To-SERT Security system: circuits To-SERT-CLNG Security system: circuit number To-SERT-CLNG Security system: circuit number To-SERT-CLNG Security system: circuit number To-SERT-FLOR Security system: circuit number To-SERT-FLOR Security system: circuit number To-SERT-FLOR Security system: dipinent To-SERT-CNMB Security system: dipinent To-SERT-WALL Security system: floor To-SERT-WALL Security system: floor To-TANN To-SERT-WALL Security system: circuit number To-TO-TANN To-SERT-WALL Security system: circuit number To-TO-TANN To-SERT-CLNG To-TVAN-CLNG To-TVAN-C	T□-EMCS	Energy monitoring control system
To-FIRE-CLNG Fire protection: ceiling To-FIRE-CNMB Fire protection: circuit number To-FIRE-EQPM Fire protection: equipment To-FIRE-EQPM Fire protection: equipment To-FIRE-FLOR Fire protection: door To-FIRE-WALL Fire protection: wall To-INTC Intercom/PA systems To-NURS Nurse call system: circuits To-NURS-CLNG Nurse call system: circuit number To-NURS-CLNG Nurse call system: circuit number To-NURS-CNMB Nurse call system: circuit number To-NURS-COMB Nurse call system: equipment To-NURS-FLOR Nurse call system: sequipment To-NURS-WALL Nurse call system: wall To-PONG Paging system To-PHON Telephone system To-PHON-JACK Telephone system: jacks To-PROJ Projector system To-SERT Security system: circuits To-SERT-CLNG Security system: circuits To-SERT-CLNG Security system: circuit number To-SERT-CLNG Security system: circuit number To-SERT-EQPM Security system: dioint number To-SERT-EQPM Security system: dioint number To-SERT-HOR Security system: dioint number To-SERT-HOR Security system: floor To-SERT-WALL Security system: floor To-TO-SERT-WALL Security system: circuits To-TO-TO-TAN Transmission system (RF and microwave) To-TVAN Television antenna system: circuits To-TVAN-CLNG Television antenna system: circuit number To-TVAN-CLNG Television antenna system: circuit number To-TVAN-CNMB Television antenna system: circuit number	T□-FIRE	Fire protection
To-FIRE-CNMB Fire protection: circuit number To-FIRE-EQPM Fire protection: equipment To-FIRE-FLOR Fire protection: wall To-FIRE-FLOR Fire protection: wall To-INTC Intercom/PA systems To-NURS Nurse call system To-NURS-CIRC Nurse call system: circuits To-NURS-CNMB Nurse call system: circuit number To-NURS-CNMB Nurse call system: equipment To-NURS-CNMB Nurse call system: equipment To-NURS-FLOR Nurse call system: equipment To-NURS-FLOR Nurse call system: paice To-NURS-FLOR Nurse call system: equipment To-NURS-FLOR Nurse call system: paice To-PONG Paging system To-PHON To-PHON To-PHON To-PHON To-PHON To-PHON To-PHON To-SERT Security system To-SERT-CIRC Security system: circuits To-SERT-CNMB Security system: circuit number To-SERT-CNMB Security system: circuit number To-SERT-EQPM Security system: circuit number To-SERT-FLOR Security system: wall To-SERT-FLOR Security system: circuit number To-SERT-FLOR Security system: circuit number To-SERT-FLOR Security system: wall To-SOUN Sound system To-TVAN To-SERT To-TVAN Tolevision antenna system To-TVAN Tolevision antenna system: circuit number To-TVAN-CNMB Tolevision antenna system: circuit number To-TVAN-CNMB Tolevision antenna system: equipment To-TVAN-CNMB Tolevision antenna system: circuit number To-TVAN-CNMB Tolevision antenna system: equipment To-TVAN-CNMB Tolevision antenna system: wall To-TVAN-CNMB Tolevision antenna system: equipment To-TVAN-CNMB Tolevision antenna system: wall To-TVAN-CNMB Tolevision antenna system: equipment To-TVAN-FLOR Tolevision antenna system: wall To-TVAN-CNMB Tolevision antenna system: wall To-TVAN-CNMB Tolevision antenna system: wall To-TVAN-CNMB Tolevision antenna system: wall To-TVAN-GNALL Tolevision antenna system: wall To-TVAN-GNALL Tolevision antenna system: wall To-TVAN-GNALL Tolevision antenna system: wall	T□-FIRE-CIRC	Fire protection: circuits
To-FIRE-EQPM Fire protection: equipment To-FIRE-FLOR Fire protection: floor To-FIRE-WALL Fire protection: wall To-INTC Intercom/PA systems To-NURS Nurse call system To-NURS-CIRC Nurse call system: circuits To-NURS-CING Nurse call system: circuit number To-NURS-CING Nurse call system: equipment To-NURS-CING Nurse call system: equipment To-NURS-FLOR Nurse call system: equipment To-NURS-FLOR Nurse call system: equipment To-NURS-FLOR Nurse call system: floor To-NURS-HOR Nurse call system: floor To-NURS-HOR Nurse call system: gloor To-PHON-JACK To-PHON To-PHON To-PHON To-PHON To-PHON To-PHON To-PROJ Projector system To-SERT Security system To-SERT-CING Security system: circuits To-SERT-CNMB Security system: circuit number To-SERT-CNMB Security system: circuit number To-SERT-EQPM Security system: circuit number To-SERT-FLOR Security system: dor To-SERT-FLOR Security system: dor To-SERT-FLOR Security system: dor To-SERT-FLOR Security system: dor To-SERT-FLOR To-Security system To-TO-SERT-FLOR To-SERT-GUN To-SERT-GUN To-SERT-GUN To-SERT-GUN To-SERT-GUN To-TVAN To-SERT To-TVAN To-TVAN To-TVAN To-TVAN To-TVAN To-TVAN To-TVAN-CIRC To-TVAN-CIR	T□-FIRE-CLNG	Fire protection: ceiling
To-FIRE-FLOR Fire protection: floor To-FIRE-WALL Fire protection: wall To-NURS Intercom/PA systems To-NURS-CIRC Nurse call system: circuits To-NURS-CING Nurse call system: circuit number To-NURS-CING Nurse call system: equipment To-NURS-CING Nurse call system: equipment To-NURS-CING Nurse call system: equipment To-NURS-EQPM Nurse call system: dirout number To-NURS-FLOR Nurse call system: wall To-PGNG Paging system To-PHON Telephone system To-PHON To-PHON Telephone system To-SERT Security system: circuits To-SERT-CINC Security system: circuits To-SERT-CING Security system: circuit number To-SERT-FLOR Security system: dirout number To-SERT-GUN Security system: dirout number To-SERT-WALL Security system: wall To-SOUN Sound system To-TRAN Transmission system (RF and microwave) To-TVAN Tolevision antenna system: circuit number To-TVAN-CING Tolevision antenna system: circuit number To-TVAN-CLNG Tolevision antenna system: circuit number	T□-FIRE-CNMB	Fire protection: circuit number
TD-FIRE-WALL TD-INTC Intercom/PA systems TD-NURS Nurse call system TD-NURS-CIRC Nurse call system: circuits TD-NURS-CING Nurse call system: circuit number TD-NURS-CNMB Nurse call system: circuit number TD-NURS-CNMB Nurse call system: equipment TD-NURS-EQPM Nurse call system: dior TD-NURS-FLOR Nurse call system: dior TD-NURS-FLOR Nurse call system: wall TD-NURS-WALL Nurse call system: wall TD-PGNG Paging system TD-PHON Telephone system TD-PHON TELEPHON-JACK TELEPHON-System TD-PROJ Projector system TD-SERT Security system: circuits TD-SERT-CIRC Security system: circuits TD-SERT-CIRC Security system: circuit number TD-SERT-CING Security system: circuit number TD-SERT-CING Security system: equipment TD-SERT-FLOR Security system: equipment TD-SERT-WALL Security system: wall TD-SERT-WALL Security system: wall TD-SERT-WALL Security system: circuit number TD-SERT-WALL Security system: wall TD-SOUN TD-SERT-WANL TD-TVAN TELEVISION antenna system: circuits TD-TVAN TD-TVAN-CIRC TELEVISION antenna system: circuit number TD-TVAN-CIRC TELEVISION antenna s	T□-FIRE-EQPM	Fire protection: equipment
To-INTC Intercom/PA systems To-NURS Nurse call system To-NURS Nurse call system: circuits To-NURS-CIRC Nurse call system: circuit number To-NURS-CLNG Nurse call system: circuit number To-NURS-CNMB Nurse call system: circuit number To-NURS-EQPM Nurse call system: equipment To-NURS-FLOR Nurse call system: floor To-NURS-WALL Nurse call system: wall To-PGNG Paging system To-PHON Telephone system To-PHON_JACK Telephone system: jacks To-PROJ Projector system To-SERT Security system To-SERT-CIRC Security system: circuits To-SERT-CLNG Security system: circuit number To-SERT-CNMB Security system: circuit number To-SERT-CNMB Security system: equipment To-SERT-EQPM Security system: equipment To-SERT-WALL Security system: wall To-SOUN Sound system To-TRAN Transmission system (RF and microwave) To-TVAN-CIRC Television antenna system: circuit number To-TVAN-CNMB Television antenna system: circuit number	T□-FIRE-FLOR	Fire protection: floor
To-NURS Nurse call system To-NURS-CIRC Nurse call system: circuits To-NURS-CLNG Nurse call system: ceiling To-NURS-CNMB Nurse call system: circuit number To-NURS-CNMB Nurse call system: equipment To-NURS-EQPM Nurse call system: floor To-NURS-HOR Nurse call system: wall To-PGNG Paging system To-PHON Telephone system To-PHON-JACK Telephone system: jacks To-PROJ Projector system To-SERT Security system: circuits To-SERT-CIRC Security system: circuits To-SERT-CLNG Security system: circuit number To-SERT-CNMB Security system: circuit number To-SERT-EQPM Security system: door To-SERT-FLOR Security system: wall To-SERT-WALL Security system: wall To-SOUN Sound system To-TVAN Television antenna system To-TVAN-CIRC Television antenna system: circuit number To-TVAN-CNMB Television antenna system: circuits To-TVAN-CNMB Television antenna system: circuit number To-TVAN-CNMB Television antenna system: equipment To-TVAN-CNMB Television antenna system: equipment To-TVAN-CNMB Television antenna system: wall To-TVAN-CNMB Television antenna system: wall To-TVAN-CNMB Television antenna system: wall	T ₋ -FIRE-WALL	Fire protection: wall
To-NURS-CIRC Nurse call system: circuits To-NURS-CNMB Nurse call system: circuit number To-NURS-CNMB Nurse call system: equipment To-NURS-EQPM Nurse call system: equipment To-NURS-EQPM Nurse call system: equipment To-NURS-FLOR Nurse call system: wall To-NURS-WALL Nurse call system: wall To-PGNG Paging system To-PHON Telephone system To-PHON-JACK Telephone system: jacks To-PROJ Projector system To-SERT Security system To-SERT-CIRC Security system: circuits To-SERT-CLNG Security system: circuit number To-SERT-CNMB Security system: circuit number To-SERT-EQPM Security system: equipment To-SERT-FLOR Security system: wall To-SERT-WALL Security system: wall To-TO-SERT-WALL Security system: wall To-TVAN To-TVAN To-TVAN-CIRC To-TVAN-CLNG To-TVAN-CLNG To-TVAN-CNMB To-TVA	T ₋ INTC	Intercom/PA systems
To-NURS-CLNG Nurse call system: ceiling To-NURS-CNMB Nurse call system: equipment To-NURS-EQPM Nurse call system: equipment To-NURS-FLOR Nurse call system: equipment To-NURS-FLOR Nurse call system: wall To-PONG To-NURS-WALL Nurse call system: wall To-PONG Paging system To-PHON Telephone system To-PHON-JACK Telephone system: jacks To-PROJ Projector system To-SERT Security system To-SERT-CIRC Security system: circuits To-SERT-CLNG Security system: circuit number To-SERT-CNMB Security system: circuit number To-SERT-EQPM Security system: equipment To-SERT-FLOR Security system: wall To-SERT-WALL Security system: wall To-TO-TVAN To-TVAN To-TVAN-CLNG To-TVAN-CLNG To-TVAN-CLNG To-TVAN-CNMB To-	T□-NURS	Nurse call system
To-NURS-CNMB Nurse call system: circuit number To-NURS-EQPM Nurse call system: equipment To-NURS-FLOR Nurse call system: floor To-NURS-WALL Nurse call system: wall To-PGNG Paging system To-PHON Telephone system To-PHON-JACK Telephone system: jacks To-PROJ Projector system To-SERT Security system: circuits To-SERT-CIRC Security system: circuits To-SERT-CLNG Security system: circuit number To-SERT-CNMB Security system: equipment To-SERT-EQPM Security system: floor To-SERT-WALL Security system: wall To-SOUN Sound system To-TVAN Television antenna system: circuits To-TVAN-CNMB Television antenna system: circuit number To-TVAN-CNMB Television antenna system: floor To-TVAN-CNMB Television antenna system: floor To-TVAN-CNMB Television antenna system: floor To-TVAN-CNMB Television antenna system: mall To-TVAN-CNMB Television antenna system: floor To-TVAN-WALL Television antenna system: wall To-TVAN-WALL Television and video systems	T□-NURS-CIRC	Nurse call system: circuits
To-NURS-EQPM Nurse call system: equipment To-NURS-FLOR Nurse call system: floor To-NURS-WALL Nurse call system: wall To-PGNG Paging system To-PHON Telephone system To-PHON-JACK Telephone system: jacks To-PROJ Projector system To-SERT Security system: circuits To-SERT-CING Security system: circuit number To-SERT-CNMB Security system: equipment To-SERT-COMB Security system: equipment To-SERT-EQPM Security system: wall To-SERT-WALL Security system: wall To-SOUN Sound system To-TVAN Television antenna system: circuit number To-TVAN-CNMB Television antenna system: circuit number To-TVAN-FLOR Television antenna system: circuit number To-TVAN-FLOR Television antenna system: circuit number To-TVAN-FLOR Television antenna system: floor To-TVAN-FLOR Television antenna system: floor To-TVAN-FLOR Television antenna system: mall To-TVAN-WALL Television antenna system: wall To-TVAN-WALL Television antenna system: wall	T□-NURS-CLNG	Nurse call system: ceiling
To-NURS-FLOR Nurse call system: floor To-NURS-WALL Nurse call system: wall To-PGNG Paging system To-PHON Telephone system To-PHON-JACK Telephone system: jacks To-PROJ Projector system To-SERT Security system: circuits To-SERT-CLNG Security system: circuit number To-SERT-CNMB Security system: equipment To-SERT-EQPM Security system: dior To-SERT-FLOR Security system: wall To-SERT-WALL Security system: wall To-SOUN Sound system To-TRAN Transmission system (RF and microwave) To-TVAN-CIRC Television antenna system: circuits To-TVAN-CNMB Television antenna system: circuit number To-TVAN-CNMB Television antenna system: circuit number To-TVAN-CNMB Television antenna system: circuit number To-TVAN-EQPM Television antenna system: circuit number To-TVAN-FLOR Television antenna system: circuit number To-TVAN-FLOR Television antenna system: circuit number To-TVAN-FLOR Television antenna system: dior To-TVAN-FLOR Television antenna system: dior To-TVAN-FLOR Television antenna system: dior To-TVAN-WALL Television antenna system: wall To-TVAN-WALL Television antenna system: wall	T□-NURS-CNMB	Nurse call system: circuit number
To-NURS-WALL To-PGNG Paging system To-PHON Telephone system: jacks To-PHON-JACK Telephone system: jacks To-PROJ Projector system To-SERT Security system: circuits To-SERT-CIRC Security system: circuit number To-SERT-CNMB Security system: equipment To-SERT-EQPM Security system: dror To-SERT-FLOR Security system: wall To-SERT-WALL Security system: wall To-SOUN Sound system To-TVAN Television antenna system: circuits To-TVAN-CNMB Television antenna system: circuits To-TVAN-CNMB Television antenna system: circuit number To-TVAN-EQPM Television antenna system: circuit number To-TVAN-FLOR Television antenna system: circuit number To-TVAN-FLOR Television antenna system: circuit number To-TVAN-FLOR Television antenna system: equipment To-TVAN-FLOR Television antenna system: equipment To-TVAN-FLOR Television antenna system: system: equipment To-TVAN-WALL Television antenna system: wall	T□-NURS-EQPM	Nurse call system: equipment
TD-PGNG Paging system TD-PHON Telephone system: jacks TD-PHON-JACK Telephone system: jacks TD-PROJ Projector system TD-SERT Security system TD-SERT Security system: circuits TD-SERT-CIRC Security system: ceiling TD-SERT-CNMB Security system: circuit number TD-SERT-CNMB Security system: circuit number TD-SERT-EQPM Security system: door TD-SERT-FLOR Security system: wall TD-SERT-WALL Security system: wall TD-SOUN Sound system TD-TRAN Transmission system (RF and microwave) TD-TVAN Television antenna system: circuits TD-TVAN-CIRC Television antenna system: ceiling TD-TVAN-CLNG Television antenna system: circuit number TD-TVAN-CNMB Television antenna system: circuit number TD-TVAN-CNMB Television antenna system: equipment TD-TVAN-FLOR Television antenna system: door TD-TVAN-FLOR Television antenna system: mall TD-TVAN-FLOR Television antenna system: wall TD-TVAN-WALL Television antenna system: wall	T□-NURS-FLOR	Nurse call system: floor
TD-PHON Telephone system: jacks TD-PHON-JACK Telephone system: jacks TD-PROJ Projector system TD-SERT Security system TD-SERT Security system: circuits TD-SERT-CLNG Security system: ceilling TD-SERT-CLNG Security system: circuit number TD-SERT-CNMB Security system: circuit number TD-SERT-EQPM Security system: equipment TD-SERT-FLOR Security system: wall TD-SERT-WALL Security system: wall TD-SOUN Sound system TD-TRAN Transmission system (RF and microwave) TD-TVAN Television antenna system: circuits TD-TVAN-CIRC Television antenna system: circuit number TD-TVAN-CLNG Television antenna system: circuit number TD-TVAN-CNMB Television antenna system: circuit number TD-TVAN-EQPM Television antenna system: equipment TD-TVAN-FLOR Television antenna system: floor TD-TVAN-WALL Television antenna system: wall TD-TVAN-WALL Television and video systems	T□-NURS-WALL	Nurse call system: wall
T□-PHON-JACK Telephone system: jacks T□-PROJ Projector system T□-SERT Security system T□-SERT-CIRC Security system: circuits T□-SERT-CLNG Security system: circuit number T□-SERT-CNMB Security system: equipment T□-SERT-EQPM Security system: equipment T□-SERT-FLOR Security system: wall T□-SERT-WALL Security system: wall T□-TRAN Transmission system (RF and microwave) T□-TVAN Television antenna system T□-TVAN-CIRC Television antenna system: circuits T□-TVAN-CNMB Television antenna system: circuit number T□-TVAN-CNMB Television antenna system: circuit number T□-TVAN-COMB Television antenna system: circuit number T□-TVAN-COMB Television antenna system: circuit number T□-TVAN-COMB Television antenna system: equipment T□-TVAN-COMB Television antenna system: floor T□-TVAN-HOR Television antenna system: wall T□-TVAN-WALL Television and video systems	T□-PGNG	Paging system
TD-PROJ Projector system TD-SERT Security system: circuits TD-SERT-CIRC Security system: ceiling TD-SERT-CLNG Security system: circuit number TD-SERT-CNMB Security system: circuit number TD-SERT-EQPM Security system: equipment TD-SERT-FLOR Security system: floor TD-SERT-WALL Security system: wall TD-SOUN Sound system TD-TRAN Transmission system (RF and microwave) TD-TVAN Television antenna system: circuits TD-TVAN-CIRC Television antenna system: circuits TD-TVAN-CLNG Television antenna system: circuit number TD-TVAN-CNMB Television antenna system: equipment TD-TVAN-EQPM Television antenna system: equipment TD-TVAN-FLOR Television antenna system: floor TD-TVAN-WALL Television antenna system: wall TD-TVAN-WALL Television antenna system: wall	T□-PHON	Telephone system
T□-SERT Security system: circuits T□-SERT-CIRC Security system: circuits T□-SERT-CLNG Security system: circuit number T□-SERT-CNMB Security system: circuit number T□-SERT-EQPM Security system: equipment T□-SERT-FLOR Security system: floor T□-SERT-WALL Security system: wall T□-SOUN Sound system T□-TRAN Transmission system (RF and microwave) T□-TVAN Television antenna system T□-TVAN-CIRC Television antenna system: circuits T□-TVAN-CLNG Television antenna system: circuit number T□-TVAN-CNMB Television antenna system: circuit number T□-TVAN-EQPM Television antenna system: equipment T□-TVAN-FLOR Television antenna system: floor T□-TVAN-WALL Television antenna system: wall T□-TVAN-WALL Television and video systems	T ₋ -PHON-JACK	Telephone system: jacks
T□-SERT-CIRC Security system: circuits T□-SERT-CLNG Security system: ceiling T□-SERT-CNMB Security system: circuit number T□-SERT-EQPM Security system: equipment T□-SERT-FLOR Security system: floor T□-SERT-WALL Security system: wall T□-SOUN Sound system T□-TRAN Transmission system (RF and microwave) T□-TVAN Television antenna system T□-TVAN-CIRC Television antenna system: circuits T□-TVAN-CLNG Television antenna system: circuit number T□-TVAN-CNMB Television antenna system: equipment T□-TVAN-EQPM Television antenna system: floor T□-TVAN-WALL Television antenna system: wall T□-TVAN-WALL Television and video systems	T□-PROJ	Projector system
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T□-SERT-EQPM Security system: equipment T□-SERT-FLOR Security system: floor T□-SERT-WALL Security system: wall T□-SOUN Sound system T□-TRAN Transmission system (RF and microwave) T□-TVAN Television antenna system T□-TVAN-CIRC Television antenna system: circuits T□-TVAN-CLNG Television antenna system: circuit number T□-TVAN-CNMB Television antenna system: equipment T□-TVAN-EQPM Television antenna system: floor T□-TVAN-FLOR Television antenna system: wall T□-TVAN-WALL Television and video systems	T□-SERT-CLNG	Security system: ceiling
T□-SERT-FLOR Security system: floor T□-SERT-WALL Security system: wall T□-SOUN Sound system T□-TRAN Transmission system (RF and microwave) T□-TVAN Television antenna system T□-TVAN-CIRC Television antenna system: circuits T□-TVAN-CLNG Television antenna system: ceiling T□-TVAN-CNMB Television antenna system: circuit number T□-TVAN-EQPM Television antenna system: equipment T□-TVAN-FLOR Television antenna system: floor T□-TVAN-WALL Television antenna system: wall T□-TVVS Television and video systems	T□-SERT-CNMB	Security system: circuit number
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To-SOUN To-TRAN Transmission system (RF and microwave) To-TVAN Television antenna system To-TVAN-CIRC Television antenna system: circuits To-TVAN-CLNG Television antenna system: ceiling To-TVAN-CNMB Television antenna system: circuit number To-TVAN-EQPM Television antenna system: equipment To-TVAN-FLOR Television antenna system: floor To-TVAN-WALL Television antenna system: wall To-TVAN-WALL Television and video systems	T□-SERT-FLOR	Security system: floor
To-TRAN Transmission system (RF and microwave) To-TVAN Television antenna system To-TVAN-CIRC Television antenna system: circuits To-TVAN-CLNG Television antenna system: ceiling To-TVAN-CNMB Television antenna system: circuit number To-TVAN-EQPM Television antenna system: equipment To-TVAN-FLOR Television antenna system: floor To-TVAN-WALL Television antenna system: wall To-TVVS Television and video systems	T□-SERT-WALL	Security system: wall
To-TVAN Television antenna system To-TVAN-CIRC Television antenna system: circuits To-TVAN-CLNG Television antenna system: ceiling To-TVAN-CNMB Television antenna system: circuit number To-TVAN-EQPM Television antenna system: equipment To-TVAN-FLOR Television antenna system: floor To-TVAN-WALL Television antenna system: wall To-TVS Television and video systems	T□-SOUN	Sound system
To-TVAN-CIRC Television antenna system: circuits To-TVAN-CLNG Television antenna system: ceiling To-TVAN-CNMB Television antenna system: circuit number To-TVAN-EQPM Television antenna system: equipment To-TVAN-FLOR Television antenna system: floor To-TVAN-WALL Television antenna system: wall To-TVVS Television and video systems	T□-TRAN	Transmission system (RF and microwave)
To-TVAN-CLNG Television antenna system: ceiling To-TVAN-CNMB Television antenna system: circuit number To-TVAN-EQPM Television antenna system: equipment To-TVAN-FLOR Television antenna system: floor To-TVAN-WALL Television antenna system: wall To-TVVS Television and video systems	T ₋ -TVAN	Television antenna system
To-TVAN-CNMB Television antenna system: circuit number To-TVAN-EQPM Television antenna system: equipment To-TVAN-FLOR Television antenna system: floor To-TVAN-WALL Television antenna system: wall To-TVVS Television and video systems	T□-TVAN-CIRC	Television antenna system: circuits
T□-TVAN-EQPM Television antenna system: equipment T□-TVAN-FLOR Television antenna system: floor T□-TVAN-WALL Television antenna system: wall T□-TVVS Television and video systems	T□-TVAN-CLNG	Television antenna system: ceiling
T□-TVAN-FLOR Television antenna system: floor T□-TVAN-WALL Television antenna system: wall T□-TVVS Television and video systems	T□-TVAN-CNMB	Television antenna system: circuit number
T□-TVAN-WALL Television antenna system: wall T□-TVVS Television and video systems	T□-TVAN-EQPM	Television antenna system: equipment
T□-TVVS Television and video systems	T□-TVAN-FLOR	Television antenna system: floor
	T ₋ TVAN-WALL	Television antenna system: wall
T□-TVVS-SAUD Television and video systems: audio signal	T ₋ -TVVS	Television and video systems
	T□-TVVS-SAUD	Television and video systems: audio signal

T□-TVVS-SCOM	Television and video systems: communications slgnal
T ₋ -TVVS-SCTL	Television and video systems: control signal
T□-TVVS-SDAT	Television and video systems: data signal
T□-TVVS-SDGA	Television and video systems: digital audio signal
T□-TVVS-SDGV	Television and video systems: digital video signal
T□-TVVS-SMIC	Television and video systems: microphone signal
T□-TVVS-SPWR	Television and video systems: power signal
T□-TVVS-SRFI	Television and video systems: RF signal
T□-TVVS-SRGB	Television and video systems: RGB and component video signal
T _□ -TVVS-SSYN	Television and video systems: sync signal
T□-TVVS-SVID	Television and video systems: video signal

5.21 OTHER DISCIPLINES LAYER LIST

Other Disciplines Field Codes

The Layer Names shown below provide examples for the use of Major and Minor Group field codes for this discipline. See <u>CLG Sections 1.5</u> and <u>1.6</u> for complete rules and options governing the use of Major and Minor Group field codes.

Other Disciplines Discipline Designators

Designator	Description
X	Other Disciplines
XJ	User Defined
XK	User Defined

Other Disciplines Layer List

Layer Name	Description
X□-RIGG	Other discipline: entertainment rigging/automation systems
X□-SPFX	Other discipline: entertainment special effects system
X□-VIDO	Other discipline: entertainment projection systems

6.0 Appendix C - Complying with NCS and ISO 13567

6.1 OVERVIEW

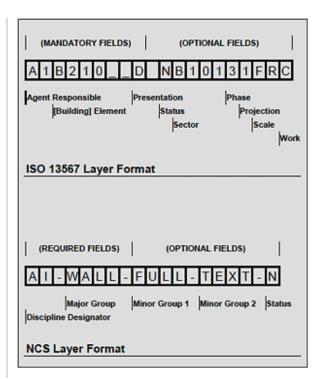
The International Standards Organization (ISO) is the only recognized international body promulgating standards in the area of electronic building design data. ISO Standard 13567, *Organization and Naming of Layers for CAD*, can be purchased at

http://www.ansi.org. The complete document is in three parts: 13567-1, 13567-2, and 13567-3.

While the United States National CAD Standard® (NCS) and ISO 13567 differ somewhat in their approach to standards for CAD layers, they are alike in several important respects. Both standards specify the names of the data fields that make up a typical layer name, define the field names, specify which fields are mandatory (required) and which fields are optional, specify the number of characters in each field, and specify the order in which the fields are to appear.

When one compares the NCS and ISO layer formats shown above, the question immediately arises whether it is possible to produce electronic building design documents that conform to both the NCS and ISO 13567. The answer is a qualified "yes."

Both standards provide several options for naming layers. The range of options allows either standard to meet the needs of diverse users and projects. By carefully choosing from among the available NCS options for naming CAD layers, and by establishing and adhering to the guidelines at the end of this Commentary, documents can be produced that are in *full conformance* with the



NCS and in *conceptual conformance* with ISO 13567 for the naming of CAD layers (an acceptable alternative to ISO *default conformance*). Adoption of the approach outlined herein could arguably reduce the effort required to produce documents in conformance with ISO 13567 by eliminating the ISO-mandated task of prescribing valid field codes for each project.

6.2 FIELD CODES

The NCS and ISO 13567 differ in one important respect. The NCS prescribes the valid alpha-numeric field codes that can appear in each data field, and the definitions of the field codes (e.g., EQPM = equipment). Users of ISO 13567 must determine, for each project, the valid field codes for that project and their definitions. ISO 13567 users are required to document this information in a metadata file known as a *layer naming system definition file* that must accompany the project data files. In its simplest form, this is nothing more than a tab-delimited text file.

There are valid reasons for both approaches. The prescriptive approach of the NCS relieves users of the task of developing and documenting field codes for every project. However, in order to accommodate all possible users, the list of prescribed NCS field codes must be comprehensive. By not prescribing field codes, ISO

TWO STANDARDS OR ONE?

- The NCS offers users an opportunity to comply with both U.S. and ISO CAD standards. By adhering to the guidelines in this commentary, summarized in ten (10) steps on the last page, the NCS becomes a "country-specific" implementation of the ISO CAD Standard.
- For design firms doing international work, using the NCS can simplify the ISO-mandated task of preparing the layer naming system definition file that must accompany the project data files on every project.

13567 allows the ISO layer format to be applied uniformly without having to define all possible field codes in advance.

6.3 FIELD CODES AND LANGUAGE

By not prescribing field codes, ISO 13567 also allows the ISO layer format to be applied uniformly without regard to language. Users may, if they wish, develop codes endowed with language-specific meaning. Citing our earlier example, English users might use the field code "EQPM" to represent the [major building] element "equipment," while users in another language group might use another field code that has similar mnemonic association to the word for "equipment" in that language.

While the field codes themselves might differ, the category of information contained in any given field is defined by the standard, facilitating translation of the actual content. In practice, ISO 13567 users tend to favor numeric codes to define the content of data fields. This eliminates any need to "translate" the field codes themselves. If, for example, the field code "720" is prescribed to mean "equipment," then only the definition, and not the code itself, would need to be translated. This eliminates the need for "translating" the actual file or layer name.

6.4 ISO 13567 CONFORMANCE

CAD data sets that adhere to ISO 13567 with respect to field names, field length, field definition and field order (as shown at right), and that are accompanied by the required *layer naming* system definition file, are defined by ISO to be in default conformance with the ISO standard.

ISO 13567 anticipates that groups of users or national standards bodies might not only wish to prescribe a list of valid field codes (as the NCS has done), but might also wish to vary from the specified ISO layer format. 13567-3 is explicitly designed "to allow national standards bodies (or projects where agreement is reached between the parties) to implement layer naming conventions which satisfy the requirements of the [ISO] standard while using alternative and more convenient layer naming structures and codes."

To permit this, ISO 13567-3 establishes rules for modifying the layer format itself. As with the field codes, users are required to fully document layer format modifications in the *layer naming system definition file*. CAD data sets that adhere to these rules are defined by ISO as being in conceptual conformance with the ISO standard, an approved alternative to default conformance.

The rules for *conceptual conformance* specify that the mandatory data fields must always be used, but the order of all fields in the layer name (both mandatory and optional), the number of optional fields used, and the number of characters in each field can vary from the default ISO layer format. Additionally, the *names* of the fields can differ from the names specified, as long as the *conceptual definition* of each field conforms to the ISO standard. All modifications to the default layer format *must be applied uniformly throughout the project*. Layer names must all be of the same length, use the same set of mandatory and optional fields in the same order, and have the same number of characters per field.

These rules allow data sets created in conceptual conformance with ISO 13567 to be mapped to the ISO 13567 *default layer format*. However, ISO does not require users to actually "map" or otherwise convert the data into the default layer format.

Default ISO Layer Format (Mandatory Fields) **A** 1 B 2 1 0 N B 1 0 1 3 1 F R C Agent Responsible A 1 B 2 1 0 N B 1 0 1 3 1 F R C [Building] Element A 1 B 2 1 0 D N B 1 0 1 3 1 F R C Presentation (Optional Fields) A 1 B 2 1 0 D N B 1 0 1 3 1 F R C Status A 1 B 2 1 0 D N B 1 0 1 3 1 F R C Sector A 1 B 2 1 0 N B 1 0 1 3 1 F R C Phase A 1 B 2 1 0 N B 1 0 1 3 1 F R C Projection A 1 B 2 1 0 D N B 1 0 1 3 1 FRC Scale A 1 B 2 1 0 D N B 1 0 1 3 1 F R C Work Package

6.5 FIELD NAMES AND DEFINITIONS

Though the specified field names in the NCS layer format differ from the specified field names in the ISO layer format, the definitions of the field names are conceptually the same (with one important exception, discussed in the next paragraph below). This allows NCS-compliant data to meet the principal ISO 13567 criterion for *conceptual conformance*. The Field Name Comparison Table at right highlights additional rules that must be followed to create data that is in conformance with both the NCS and ISO 13567.

6.6 DISCIPLINE DESIGNATOR" VS. "AGENT RESPONSIBLE"

The conceptual definitions of these corresponding field names in the NCS and ISO 13567 differ sufficiently to merit detailed discussion. The definition for **Discipline Designator** is defined in NCS as "the category of subject matter contained in the file or layer designated." In other words, if the information contained is "structural," the file or layer name will begin with the Discipline Designator "S," regardless of who created the data.

ISO 13567 defines Agent Responsible as "the construction specialist responsible for the data." Regrettably, ISO 13567 does not further define the terms "construction specialist" and "responsible for."

"Construction specialist" could be interpreted to mean "design professional," "design drafter," or even "skilled tradesperson or contractor." Though the text of ISO 13567 does not define which of these individuals is the "agent responsible," one can reasonably infer from the sample *layer naming system definition file* shown in Annex A of ISO 13567-3 that "construction specialist" is defined as the design professional.

6.7 "AGENT RESPONSIBLE" AND PROFESSIONAL LIABILITY

Identifying the design professional as the "construction specialist" still allows considerable room for interpretation of the definition for

Field Name Comparison Table									
NCS Field Name	ISO Field Name								
Discipline Designator	Agent Responsible								
Major & Minor Groups	Element								
Annotation Minor Group*	Presentation								
Status**	Status								
(none)	Sector								
Status (Phase)**	Phase								
Dwg. View Minor Group***	Projection								
(none)	Scale								
(none)	Work Package								

- * ISO compliance requires that the last NCS Minor Group field be reserved for annotation.
- ** ISO compliance requires that this field be reserved for status OR project phase, but not both; duplicate use of the field is not permitted.
- *** ISO compliance requires that Drawing View field names not appear in the same fields as Major or Minor Group fields that define major building elements. If both annotation and drawing view are to be included in any layer names, one Minor Group Field must be reserved for Annotation and the other for Drawing View.

"agent responsible." It could be interpreted to mean either "design professional who is professionally liable for the information by virtue of professional licensure and role on the project," or, alternatively, "design professional who is professionally liable for the information by virtue of having signed and sealed the document in question." An example is a lighting plan prepared under the supervision of, and signed and sealed by, the architect. Should the field code for this drawing file or layer name be "E" or "A?" If the field code is "E," is the Electrical Engineer still the designated "Agent Responsible," and therefore professionally liable for data created by others not under his/her supervision?

The burden of professional liability borne by design professionals is generally less in other countries than it is in the U.S. Perhaps for this reason, the issue of defining *agent responsible* more precisely with respect to professional liability did not arise when this field name was defined by ISO 13567.

In the U.S., however, use of the imprecise ISO definition for *agent responsible* might possibly expose design professionals to professional liability for data over which they had no oversight.

6.8 "DISCIPLINE DESIGNATOR" AND THE BUILDING LIFE CYCLE

The NCS definition for the field *Discipline Designator* was agreed-upon following considerable debate by the NCS Project Committee, and with the full understanding that it differed from the conceptual definition of the corresponding ISO 13567 field *Agent Responsible*. In addition to the liability issues cited above, it was the consensus of the Project Committee that the ability to identify the data by subject matter *throughout the life-cycle of a building facility* was ultimately more important than the identity of the person or persons who originally created the data.

6.9 "DISCIPLINE DESIGNATOR" AND ISO 13567 CONFORMANCE

The difference in the conceptual definitions of *Discipline Designator* and *Agent Responsible* would seem to be an insurmountable obstacle to creating data in conformance with both the NCS and ISO 13567. This is not necessarily true. In most cases, the content of the fields *Discipline Designator* and *Agent Responsible* are one and the same, regardless of the definition. For example, if the subject matter contained in the drawing file or layer is "mechanical systems," the mechanical engineer is likely to be the design professional under whose supervision the data was created.

Users who wish to produce data that is in conformance with the NCS and in conceptual conformance with ISO 13567 can do so by establishing a rule for their projects that data will be created only under the supervision of the design professional *typically* responsible for the subject matter. In this way, the *conceptual definition* for the data field can be BOTH "category of subject matter contained in the file or layer designated" AND "construction specialist responsible for the data." Implementation of this rule can help reduce the risk of professional liability by minimizing the likelihood of conflicts that might arise when different elements of the same building system are designed by more than one design professional.

6.10 FIELD CODE RESTRICTIONS

A key principal of the ISO 13567 layer format is that each data field can be used to define only one category of data. Duplicate use of a field is prohibited. This ensures that data sets in *conceptual conformance* can be readily mapped to the ISO default layer format. Adherence to this provision requires NCS users to restrict their use of certain NCS field codes.

The NCS allows "ANNO" to be used as a Major Group, which allows all annotation to be placed in a defined group of layers. This results in a duplicate use of the Major Group field. The corresponding field in ISO, "Element," is reserved for major building elements. Therefore, the field code "ANNO" cannot be used at all *CLG Figure 6.10-1*. However, the prescribed annotation Minor Group field codes (TEXT, DIMS, etc.) can be used to modify any preceding Major/Minor Group, provided that the field in which they appear is reserved for annotation field codes.

If Drawing View field codes are used *CLG Figure 6.10-2*, the Minor Group field in which they appear must likewise exclude any other field codes.

If the Status field is used *CLG Figure 6.10-3*, the allowable field codes must be restricted to the specified letters (to correspond to the ISO field "Status") or to the specified numbers (to correspond to the ISO field "Phase") but not both

U.S. NCS Field Code Restrictions

(for conceptual conformance to ISO 13567)

The field code "ANNO" may NOT be used, because "annotation" is not a major building "element:"

(Presentation) Annotation

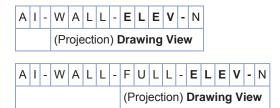
A I -	Α	N	N	O	-	Т	Ε	Χ	Т	-	N
	Major Group (Element)										

The Annotation Minor Group field codes MAY be used, provided the field is reserved for these codes. Two allowable formats are shown:

F	٩	I	-	W	Α	L	L	-	Т	Ε	X	Т	-	N		
				(Pr	es	en	tati	or	n) 🖊	۱n	not	ati	10	า		
Ξ															_	
F	4	I	-	W	Α	L	L	-	F	U	L	L	-	Т	Ε	X

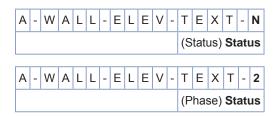
CLG Figure 6.10-1 - Annotation Field Codes

Two allowable formats for Drawing View field codes:



CLG Figure 6.10-2 - Drawing View Field Codes

Two allowable formats for Status field codes.



CLG Figure 6.10-3 - "Status" Field Codes

6.11 NCS AND ISO 13567 IMPLEMENTATION OPTIONS

The examples shown here illustrate two possible NCS layer formats that are in conceptual conformance with ISO 13567. Note that ISO 13567 does not use dashes as field delimiters. For purposes of ISO conformance, the dashes in the NCS layer format are defined as an additional character of the field preceding it.

CLG Figure 6.11-1 shows the optional two-character NCS Level 2 Discipline Designator; together with the dash that follows it, this field is defined as three (3) characters in length. A Major and one Minor Group are defined as corresponding to the ISO field [Building] "Element." The field is ten (10) characters in length. The second Minor Group is reserved for Annotation field codes, corresponds to the ISO field "Presentation," and is five (5) characters in length. The final field is Status, which corresponds to the ISO field of the same name, and is one (1) character in length.

CLG Figure 6.11-2 shows the NCS required Level 1 Discipline Designator only, and is defined as two (2) characters in length. The Major Group is defined as corresponding to the ISO field [Building] "Element," and is five (5) characters in length. The first Minor Group is reserved for Drawing View field codes, corresponds to the ISO field "Projection," and is five (5) characters in length. The second Minor Group is reserved for Annotation field codes, corresponds to the ISO field "Presentation," and is five (5) characters in length. The final field is reserved for Phase field codes, corresponds to the ISO field "Phase," and is one (1) character in length.

Note that for ISO conformance, the total length of the layer name must be the same for all layers on a given project. Layer names that do not require a certain field, such as "Annotation," must use placeholders (usually dashes or underscores) to maintain the length of the layer name and the relative position of the fields.

While the ISO 13567 rules for conceptual conformance allow the fields to appear in any order, this is not permitted by the NCS. The fields must be in the order of Discipline Designator, Major Group, Minor Group 1, Minor Group 2, Status. If a Minor Group field is used to modify the "building element" shown in the Major Group, that Minor Group must appear immediately following the Major Group.

Example NCS Layer Formats (in conceptual confomance to ISO 13567) **A** | **I** | - | W | A | L | L | - | F | U | L | L | - | T | E | X | T Level 2 Discipline Designator (Agent Responsible) WALL-FULL-TEXT AlII-Major, Minor Group (Element) FULL-TEXT-N WALLL (Presentation) Annotation A I - W A L L -FULL-T E X T - N (Status) Status CLG Figure 6.11-1 **A** | - | W | A | L | L | - | E | L | E | V - T E X T Level 1 Discipline Designator (Agent Responsible) **W A L L -** E L E V TEXT Major Group (Element) ELEV-TEXT WALL-**Drawing View** (Projection) WALL E|L|E|V|-|T|E|X|T|-(Presentation) Annotation WALL ELEV T E X T - 2 (Phase) Status

CLG Figure 6.11-2

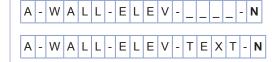
The information in this Commentary is summarized in the following steps for preparing documents with layer names in conformance with the NCS and in conceptual conformance with ISO 13567. While these guidelines are intended to aid NCS users, adherence to these rules in some form would be required by ISO 13567 whether or not the NCS layer format were used.

- 1. Require that all documents be prepared only under the supervision of the design professional typically responsible for the subject matter contained in the documents.
- 2. Do not use the field code "ANNO" in any layer name.
- 3. Determine whether the Discipline Designator will be one character (Level 1) or two characters (Level 2) in length.
- 4. Determine whether the "building element" will consist of a Major Group only, or of a Major Group and one Minor
- 5. Determine whether a Minor Group is to be reserved for Drawing View field codes, and fix its position in the sequence of fields.
- 6. Determine whether a Minor Group is to be reserved for Annotation field codes, and fix its position in the sequence of fields.
- 7. Note that only two Minor Groups are available. Of the three options described in 4, 5, and 6 above, only two can be exercised on a given project.
- 8. Determine whether to include the Status field in the layer name and whether to use the specified letters to denote "Status," or the specified numbers to denote "Phase."
- 9. For layer names in which one or more fields are not required, use placeholders (dashes or underscores) to maintain consistent layer name length and the relative positions of fields. Refer to CLG Figure 6.12-1.
- 10. Prepare a layer naming system definition file in accordance with ISO 13567-3 that defines the selected layer format for the project.

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Required Use of Placeholders

(for conceptual conformance to ISO 13567) Layers in which reserved field codes are not used must have placeholders in the reserved fields.



CLG Figure 6.12-1