2010

# CITY OF GILLETTE CAD STANDARDS

## 2010 EDITION

*This document contains all pertinent information relating to the City of Gillette Computer-Aided Drafting Standards. The following information is described in detail: which Template to use for a project, acceptable sheet titleblocks and layouts, sheet naming standards, layer naming standards, linetypes with associated layer names and line thicknesses, "stb" and "ctb" files, the symbol library, text styles, and dimension styles. All applicable CAD Standard files available on the City of Gillette website are linked in this document. The directions for finding this document on the City of Gillette website are included herein.*

*Created By: CAD Standards Committee: Charles J. Sloan (Chairman), Doug Ninas, Steven Peterson, Levi Roberts, Clark Sanders, and Rick Calvert*
*City of Gillette Engineering Department, 201 E. 5th Street, Gillette, WY 82717*
*Date: 1/10/2010*

# ADOPTING ORDINANCE

ORDINANCE NO. 3676

AN ORDINANCE AMENDING SECTIONS 7-3 THROUGH 7-8 OF THE GILLETTE CITY CODE TO ADOPT THE 2010 CAD STANDARDS FOR ENGINEERING DRAWINGS BY THE CITY OF GILLETTE

BE IT ORDAINED BY THE GOVERNING BODY OF THE CITY OF GILLETTE, WYOMING:

SECTION ONE. Section 7-3 through 7-8 of the Gillette City Code are renumbered 7-5 A. through 7-5 F, to read as follows:

§7-5 Alleys and easements.

A. Alley and easement width. Alleys shall be a minimum of 20 feet in width. Easements for underground electrical, phone, cable TV and natural gas shall be a minimum of 10 feet in width. All other easements for utilities shall be a minimum of 20 feet in width. (Ord. 804, § 3, 11-17-75; Ord. 1903, 9-20-93; Ord. 3344, 10-4-2004)

B. Installation of utilities; Street distances. Gas lines shall be installed within 5 feet of the odd side of the alley or easement. Other utilities shall be installed within 5 feet of the even side. All installations of gas and other utilities shall be in a straight line at a consistent distance from the center-line of the street, alley or easement, said utilities shall be installed on a uniform arc at a consistent distance from the centerline of the street, alley or easement. (Ord. No. 804, § 3, 11-17-75.; Ord. 3344, 10-4-2004)

C. Grade. Grade shall be within 6 inches of final grade before installing utilities. (Ord. No. 804, § 3, 11-17-85.; Ord. 3344, 10-4-2004)

D. Penalty. Persons who make or cause to be made changes in grade after utilities are installed are required to bear the costs associated with the change in grade together with any costs of relocating the utilities. (Ord. No. 804, § 3, 11-17-75.; Ord. 3344, 10-4-2004)

E. City Property. Installation replacing or repair of pipe lines or conduits upon property including streets, alleys, or other public thoroughfares shall be done under the supervision of the City Administrator or his designee. (Ord. 419, §4.0102; Ord. 774, §§ 1, 2, 3-17-75; Ord. 2050, 6-3-96; Ord. 3344, 10-4-2004)

F. City Property, Excavations. Excavation on City property shall be of minimum necessary to complete the work. If possible, piping will be drilled under streets, alleys, and sidewalks. (Ord. 419, §4.0102; Ord. 774, §§ 1, 2, 3-17-75; Ord. 2050, 6-3-96; Ord. 3344, 10-4-2004)

SECTION TWO. Section 7-3 of the Gillette City Code is enacted as part of Article 1 of Chapter 7 to read as follows:

7-3. Adoption of City of Gillette 2010 CAD Standards.

The City of Gillette 2010 CAD Standards, prepared by the CAD Standards Committee and the Department of Engineering of the City of Gillette is hereby adopted by this reference and incorporated herein as if set out in full to regulate the submission and review of engineering plans submitted for a City of Gillette Permit to Construct or Permit to Grade within the City of Gillette starting July 1, 2010. One copy shall be available for public inspection at the office of the Department of Engineering and the office of the City Clerk during normal business hours. The Department of Engineering has provided a copy for public review and download on the City's website at http://www.ci.gillette.wy.us/index.aspx?page=387.

PASSED, APPROVED AND ADOPTED this 17th day of May 2010.

Duane Evenson, Mayor

(SEAL)

ATTEST:

Karlene Abelseth, City Clerk
Publication Date: May 26, 2010

# CITY OF GILLETTE CAD STANDARDS

**2010 Edition**

***Introduction:***

The City of Gillette CAD Standards are to be used in preparation of all drawings submitted the City Engineering Department or the City Utilities Engineering Department for review. These standards shall be followed at all times unless directed otherwise by the City Review Staff. This address: http://www.ci.gillette.wy.us/index.aspx?page=1 gives you access to the City of Gillette website. On the City Website you will find this CAD Standards packet and all of the downloadable files for your drafting software. You will be required to keep up-to-date with changes to the CAD Standards (additional layers, changes to templates, etc.) and should check the web site listed above for changes on a regular basis.

***Note:***
Items in blue are links to download files from the CAD Standards webpage on the City of Gillette website.
Items in green are important information and hints that relate how to implement these standards.

The following list will detail all the files on the CAD Standards web page located at the following web address http://www.ci.gillette.wy.us/index.aspx?page=387 → Departments → Engineering & Building → Engineering → CAD Standards and it will also describe how each file can used, and for which projects each file applies to:

***CAD Standards Packet:***

| | |
|---|---|
| CAD Standards Packet.pdf | *Complete CAD Standards packet containing information on required layer names, linetypes and colors, font style names, typical filenames, symbols for plan sheets, and a Final Submittal Checklist.* |

***File Downloads:*** → → → *All downloadable files are for AutoCAD© 2007 through the current release.*

***Plotting:***

| | |
|---|---|
| COG-11x17.ctb<br>(for City Engineering Dept.) | Plot Configuration file for City Engineering/Utilities Engineering Department standard size drawings.<br>All drawings submitted to the Engineering/Utilities Engineering Departments shall be of this size. |
| COG-11x17.stb<br>(for City Engineering Dept.) | Named Style Tables file for City Engineering/Utilities Engineering Department standard size drawings.<br>All drawings submitted to the Engineering/Utilities Engineering Departments shall be of this size. |

Note: The provided "ctb" and "stb" files may be used for plotting. The **preferred** plotting system is Named Style Tables ("stb"). Each provided layer will have an appropriate color/lineweight assigned to it. When using the provided "ctb" file (optional) or "stb" file (preferred) consider the following: Colors 1-9 will plot out in monochrome with color 1 (red) having the thinnest lineweight and color 9 (light grey) having the thickest lineweight. Colors 250-255 will plot out shaded, with lineweights and degree of shading (screening) determined by style/layer.

***Plans (AutoCAD Templates):***

| | |
|---|---|
| 11x17-ENG-Regulatory.dwg | Standard 11"x17" titleblock, text font and sizes, layers, linetypes, symbols, sheet layout, and sheet ordering for all **Private Development** (subdivisions, street extensions, utility extensions) drawings submitted to the Engineering Department. |
| 11x17-ENG-City Projects.dwg | Standard 11"x17" titleblock, text font and sizes, layers, linetypes, symbols, sheet layout, and sheet ordering for all **City Capitol Project** drawings submitted to the Utility Department and the Engineering Department. |

***Miscellaneous:***

| | |
|---|---|
| Dimensions | The acceptable standard dimension styles are included in the provided AutoCAD templates. Do not change any of the settings except for the dimension scale. **Do not** dimension in paper space. All dimensions shall be true measurements, no text-overriding of dimensions is permitted. |
| Drawing Scales | The acceptable standard drawing scales are as follows: **1"=20', 1"=30', 1"=40', 1"=50', 1"=60', and 1"=100'** (for overall maps). The vicinity map and the location maps may have an appropriate scale to show the required area. |
| Symbols | The acceptable standard symbols for existing (topographic base maps) and proposed (plan sheets) are included in the provided AutoCAD templates. |
| Linetypes & Layers | The acceptable standard linetypes and layers to be used in As-Built files are included in all of the provided AutoCAD templates. Any additional layers that are needed during the design phase shall conform to the layer naming conventions shown herein and shall have a **"-$"** at the end of each new added layer. All City-provided layer names shall remain unchanged as well. The provided AutoCAD templates will show (in the legends) exactly what each linetype is to be used for. |
| Text Styles & Size | The acceptable text styles are **COVER(L40) – COVER(L250)** for *only* the text on the Cover Sheet and within the titleblock itself, and **L50, L60, L80, L120, and L140** for *all* other text in the body of the plan sheets. The acceptable sizes for text in the body of the plan sheets range from **L50** (min) **– L140** (max). The provided AutoCAD templates will show (in the legends) exactly what each text style is to be used for. See the list of all acceptable text styles on page 5. |
| Profile Grid | An example of the acceptable grid for the profiles is included in the Engineering files above. CAD-generated profile grids are acceptable as well (with correct shading) such that the utility linework is easily distinguishable. |

***Plan Set Preparation:***

*Sheets & Sheet Sizes:*

- All drawings submitted to the Engineering Department and Utility Engineering Departments are to be set up on the 11"x17" paper size using the titleblock/sheet templates provided.
- See the Final Submittal Checklist (see pages 15-22) for the required sheets and sheet order to be included in Engineering-related submittals.

*Drawing Setup:*

- Draw all topographic & base maps in model space.
- All drawing activity shall take place in model space, with the exception of Plot elements which should leverage the provided AutoCAD layouts.
- All plan notes/leaders shall be created in model space (this is the preferred method). Miscellaneous (construction) notes can reside in either paper space or model space.
- All design work shall be incorporated into the drawing file through the use of external references (XREFs).
- All property work within the drawing file shall be done at the layer level.
- **Aerial photos are <u>not</u> to be included in As-Built drawing files, but may be used on the design and construction phase drawings.**

*Survey Data:*

The As-Built drawings completed with this Standard will be integrated into the City GIS Database. Therefore, it is imperative that coordinate systems and datum are consistent with the City data. We ask that all drawings be horizontally represented in NAD 83 State Plane Coordinates, East Zone, Survey Feet at grid. All vertical measures should use NAVD 88 and each project area should include a tie to the City of Gillette Vertical Control Network. A space has been provided on the cover sheet of the drawing templates to list the referenced Vertical Control Monument and its observed measurements.

*Units and Angles:*

In all cases, the drawing units should be set to decimal. The precision should normally be set to no greater than 0.0000, but in some Engineering cases, the precision may need to be greater. Angles should be measured in the default direction (counterclockwise) in 00°00'00" (degrees, minutes, and seconds).

*AutoCAD© Layers:*

Use the Layer Naming Format Sheets (see pages 9-12) to follow the standard layer names, colors, and linetypes. All As-Built drawing (linework, text, symbols, etc.) shall be placed on the acceptable provided standard layer names. In the situation where additional layers are needed during the design phase, the new layers shall conform to the layer naming conventions shown herein. See the following important notes:
1) Applying the acceptable layer names and linetypes to your drawing prototype will save time when setting up future projects that are to conform to this CAD Standard.
2) Leave the As-Built linework on the **proposed layers** when submitting the files to the City GIS Department.
See the following for two (2) examples of the layer naming for City-provided layers:

*THEME-FEATURE-CLASSIFICATION-OBJECT TYPE-STATUS*

**WA-SYST-ALL-P**
This City-provided layer name describes the layer that the entire proposed water system design (lines, points, symbols, etc.) would reside on.
**WW-SYST-ALL-E**
This City-provided layer name describes the layer that the entire existing wastewater (sewer) system (lines, points, symbols, etc.) would reside on.

*Linetypes:*

All acceptable linetypes are included in the files above and copied here (11x17-ENG-Regulatory.dwg, 11x17-ENG-City Projects.dwg).

See the Notes & Legends sheet (2nd Layout Tab) in each of the provided AutoCAD templates for a graphic depiction of the linetype, with corresponding text, relating what each individual linetype shall be used for. See page 13-14 for all of the acceptable linetypes.

Note: The linetype scale (LTSCALE) shall be set to 0.5 for all 11"x17" drawings.
Note: The paper space linetype scale (PSLTSCALE) shall be set to 1.0 for all 11"x17" drawings.
Note: The linetype generation scale (PLINEGEN) shall be set to 1 for all 11"x17" drawings.

*Text Styles:*

| *Style name:* | *Height Range:* | *Font/(Oblique Angle):* | *Uses:* |
|---|---|---|---|
| **COVER(L40)-(L250)** | 0.040 – 0.250 | romant.shx | Cover Sheet, Titleblock, and Scale Bar text |
| **STREET NAMES** | 0.080 | Swis721 BlkOul BT | Street Name text |
| **CONTOUR-TXT** | 0.060 | simplex.shx / (20°) | Proposed & Existing contour elevation labels |
| **L50** | 0.050 | romans.shx | Minimum text size (spot elevations) |
| **L60** | 0.060 | romans.shx | Proposed Object Labels & Dimension text |
| **L60** | 0.060 | romans.shx | Existing Object Labels & Alignment Station text |
| **L120** | 0.120 | romans.shx | Detail Subtitle and Distance/Bearing text |
| **L140** | 0.140 | romans.shx | Detail, Legend, & Table Title text |

*Hatch Patterns:*

| *Pattern name:* | *Color/Style Name:* | *Scale:* | *Uses:* |
|---|---|---|---|
| AR-CONC | **255 / Style_16** | Variable | Existing concrete surfaces |
| AR-CONC | **253 / Style_14** | Variable | Proposed concrete surfaces |
| SOLID | **255 / Style_16** | 1.000 | Existing asphalt surfaces |
| SOLID | **253 / Style_14** | 1.000 | Proposed asphalt surfaces |
| GRAVEL | **255 / Style_16** | Variable | Existing gravel surfaces and Riprap |
| GRAVEL | **253 / Style_14** | Variable | Proposed gravel surfaces and Riprap |
| EARTH | **Variable** | Variable | Existing ground or fill material (45° rotation) |

*Dimension Styles:*

Set your dimension scales to the current drawing scale. All other variables are set but may need to be adjusted in order to get an acceptable appearance (based on individual sheet scales) from the dimension labels.

*Shading:*

The general idea behind the acceptable use of shading is to properly differentiate between existing and proposed linework without using actual colors (which are not reproducible on a standard black and white copier).

All existing linework shall be shaded (colors 250, 251, 252, 253, 254, and 255) and print out monochrome (no color). All provided existing layers are assigned appropriate colors/lineweights based on the "stb" file. All existing text shall be of a lighter pen weight than the proposed text in order to make it easily differentiated.

All proposed linework shall be bold (colors 1-9) and print out monochrome (no color). All provided proposed layers are assigned appropriate colors/lineweights based on the "stb" file. All proposed text shall be of a thicker pen weight than the existing text in order to make it easily differentiated.

*Symbols:*

See pages 12-13 for examples of acceptable symbols (Existing and Proposed). Project-specific variations to symbol sizes will be considered by the plan set reviewer on a case-by-case basis.

As a general rule, if the symbol can be shown at its real-world size, that is preferable (i.e. a standard sewer manhole shall be shown as a 4' diameter circle). In the case of water valves, curb stops, etc., it is acceptable to show those symbols at an appropriate size to allow the reviewer to understand what type of appurtenance is being shown.

*Plotting (11"x17" size):*

Plot by layer lineweight and color assignment based on the provided layers and .stb files (recommended).
Or use the provided plot configuration (.ctb) files to get the proper line weights for 11"x17" plan sets (optional).

To ensure that all plan set sheets are plotted to the correct scale, follow these steps before plotting a **DWG**:

1) Choose your correct printer/plotter
2) Paper Size = 11x17 – set all printer/plotter margins to zero
3) What To Plot = Extents
4) Uncheck "Center The Plot"
5) Uncheck "Fit To Paper" – drawings should always be plotted to a 1:1 scale, never choose "Fit To Paper" or "Fit To Printer Margins".

To ensure that all plan set sheets are plotted to the correct scale, follow these steps before plotting a **DWG TO PDF**:

1) Choose your correct printer/plotter
2) Paper Size = 11x17 → a custom paper size shall be created using the following steps:
   - Go to printer properties
   - Custom paper sizes
   - Start with ANSI B (17.00 inches x 11.00 inches)
   - Leave paper size as 17.00"x11.00"
   - Change the paper margins to zero all around
   - Rename the custom size "COG_11x17"
   - Click "Finish"
3) Choose the "COG_11x17" paper size that was just created
4) What To Plot = Extents
5) Check "Center The Plot"
6) Uncheck "Fit To Paper" – drawings should always be plotted to a 1:1 scale, never choose "Fit To Paper" or "Fit To Printer Margins".
7) Save file to folder of your choice
8) Once you are in the Adobe Reader program:
   a. Choose Page Scaling = None
   b. Check "Auto-rotate and Center"
   c. Check "Choose Paper Source by PDF page size"

To ensure that all plan set sheets are plotted to the correct scale, follow these steps before plotting a **DWG TO DWF**:

1) Choose your correct printer/plotter
2) Paper Size = 11x17 → a custom paper size shall be created using the following steps:
   - Go to printer properties
   - Custom paper sizes
   - Start with ANSI B (17.00 inches x 11.00 inches)
   - Leave paper size as 17.00"x11.00"
   - Change the paper margins to zero all around
   - Rename the custom size "COG_11x17"
   - Click "Finish"
3) Choose the "COG_11x17" paper size that was just created
4) What To Plot = Extents
5) Check "Center The Plot"
6) Uncheck "Fit To Paper" – drawings should always be plotted to a 1:1 scale, never choose "Fit To Paper" or "Fit To Printer Margins".
7) Save file to folder of your choice
8) Once you are in the AutoDesk DWF Application:
   a. Paper size = 11x17
   b. Check "Choose paper source by DWF page size"
   c. Scale = 100% / Clip Pages
   d. Alignment = Center in printer margins

*Plan Set Sheet Order & Naming:*

| | |
|---|---|
| **CS-1 – CS-x** (this will typically be a single sheet) | **Cover Sheet** |
| **NL-1** – **NL-x** (this will typically be a single sheet) | **Notes & Legends** |
| **FP-1** – **FP-x** (this will typically be a single sheet) | **Final Plat** |
| **OG-1** – **OG-x** | **Overlot Grading Plan** |
| **DG-1** – **DG-x** | **Detailed Grading Plan** |
| **EC-1** – **EC-x** | **Erosion & Sediment Control Plan** |
| **FD-1** – **FD-x** | **Final Drainage Plan** |
| **OU-1** – **OU-x** | **Overall Utility Plan** |
| **EL-1** – **EL-x** | **Electrical & Dry Utility Plan** |
| **TR-1** – **TR-x** | **(Street Name) Plan & Profiles** |
| **TC-1** – **TC-x** | **Temporary Traffic Control (During Construction)** |
| **SI-1** – **SI-x** | **Signing & Striping Plan** |
| **SA-1 – SA-x** | **(Street Name) Sanitary Sewer Plan & Profiles** |
| **WA-1 – WA-x** | **(Street Name) Water Plan & Profiles** |
| **SW-1 – SW-x** | **(Street Name) Storm Sewer Plan & Profiles** |
| **DT-1a – DT-1x** | **Erosion & Sediment Control Details** |
| **DT-2a – DT-2x** | **Street Details** |
| **DT-3a – DT-3x** | **Signing & Striping Details** |
| **DT-4a – DT-4x** | **Sanitary Sewer Details** |
| **DT-5a – DT-5x** | **Water Details** |
| **DT-6a – DT-6x** | **Storm Sewer Details** |

Note: Not all sheets are applicable to every project. The Project Engineer shall determine which sheets are needed.

*File Naming Standards for Electronic Submission:*

Each sheet may be electronically submitted individually (*preferred option on smaller projects*), or the sheets can be packed together by type (i.e. the plan and profile sheets for all of the proposed streets can be submitted as one file called "**Street Plan and Profiles**", or all erosion & sediment control detail sheets can be submitted as one file called "**Erosion Control Details**"). The files are to be named exactly as shown above (i.e. two letters, hyphen, number: "**CS-1**") if being electronically submitted *individually*, or if they are to be packed *together* by type, then the file shall be named with one of the long names shown above (i.e. "**Water Plan & Profiles**" or "**Sanitary Sewer Details**").

*Submitting Record Drawing Files:*

Submit all As-Built (Record Drawing) files in AutoCAD format. The files may be submitted by hardcopy (copied onto a CD or DVD) or digitally via email. These drawings shall have all information and linework included in the drawing, no external references are to be included in these files. Saving the file into DWF format prior to submittal is a quick and easy way to get the file into an acceptable form that the City GIS Department can adequately leverage.

*Deviations:*

Project specific deviations to the drafting standards will be considered by the plan set reviewer. If the deviations are accepted, they shall be considered changes to that project **only**.

## CITY OF GILLETTE LAYER NAMING FORMAT

The COG 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 detail desired. Layer names consist of distinct data fields separated by dashes. There are five layer name data fields THEME, FEATURE, CLASSIFICATION, OBJECT TYPE, and STATUS.

*THEME-FEATURE-CLASSIFICATION-OBJECT TYPE-STATUS*

*Examples:*

**WA-PIPE-MAIN-LINE-E**

This layer name describes a line object that represents an existing water main.

**WA-EQIP-FIRE-PNTS-P**

This layer name describes a point (or block) object that represents a proposed fire hydrant.

# Level 1 – Theme Designators

The theme designation allows for efficient organization of layers into their relative systems. This layer data field will ease the migration of information into the City of Gillette data library. The theme designator is a two character field as shown below.

## Theme Designators

| | |
|---|---|
| BO | Boundary – Political and Civil divisions |
| CO | Communication – Telephone, CATV, Internet, Fiber Optic Cable |
| EL | Electrical – Utility information |
| GA | Gas – Utility information |
| HA | Hazard – Wetlands, Geology, Soils, Flood |
| IM | Image – Aerials, Photos, Sketches, Scans |
| LS | Land Survey – Control, Parcel, Subdivision |
| ST | Structure – Buildings, Retaining wall, Tanks, Towers, Fences |
| SW | Stormwater – Utility information |
| TE | Terrain – Features related to elevation |
| TR | Transportation – Roads, Pathways, Parking Lots, Sidewalks, Signs |
| VE | Vegetation – Trees, Shrubs, Plants |
| WA | Water – Utility information |
| WW | Wastewater – Utility information |

**Note:** Themes shown represent a portion of all data maintained by the City of Gillette.

## Level 2 – Feature Designators

The feature designation defines the general grouping of objects within a system. By example, the electrical system is grouped by “POLE”= pole, “GSTR”= ground structure, “SLIT”= street light, ”FDRO”= overhead feeder, and “FDRU”= underground feeder. The feature designator is a four character field as shown below.

### Feature Designators

| | | | |
|---|---|---|---|
| **AFLT** | ORTHOPHOTO | **PHTO** | PHOTOGRAPH |
| **AIRP** | AIRPORT | **PIPE** | PIPELINE |
| **AREA** | AREA | **PLOT** | PARKING LOT |
| **BLDG** | BUILDING | **PLSS** | PUBLIC LAND SURVEY |
| **CBM** | COAL BED METHANE | **POLE** | POLE |
| **CFIB** | CITY FIBER | **POND** | POND |
| **CHNL** | CHANNEL FOR STORM WATER | **PROP** | PROPERTY |
| **CITM** | CITY MAINTAINED | **RAIL** | RAILROAD CROSSING |
| **CITY** | CITY JURISDICTION | **RDCL** | ROADWAY CENTERLINE |
| **CNTR** | CONTOUR | **ROAD** | ROADWAY |
| **CNTY** | COUNTY JURISDICTION | **SCAN** | SCANNED DOCUMENTS |
| **CTRL** | CONTROL | **SHRB** | SHRUB GROUPED |
| **DFRM** | DIGITAL FLOOD INSURANCE RATE MAPS | **SIGN** | SIGN |
| **DIVD** | DIVIDER | **SLIT** | STREET LIGHT |
| **DTM3** | DIGITAL TERRAIN MODEL | **SLOP** | SLOPE |
| **EQIP** | EQUIPMENT | **SRBL** | SHRUB LOCATION |
| **FDRO** | OVERHEAD FEEDER | **TANK** | TANK |
| **FDRU** | UNDERGROUND FEEDER | **TIN** | TRIANGULATED IRREGULAR NETWORK |
| **FLOD** | FLOOD | **TOPO** | DIGITAL RASTER GRAPHIC |
| **FNCE** | FENCE | **TOWR** | TOWER |
| **GEOL** | GEOLOGICAL | **TRAF** | TRAFFIC SIGN |
| **GRID** | GRID | **TREE** | TREE |
| **GSTR** | GROUND STRUCTURE | **WALL** | WALL |
| **LIDR** | LIGHT DETECTION AND RANGING | **WARN** | WARNING LIGHT |
| **LITE** | TRAFFIC SIGNAL | **WAYF** | WAYFINDING SIGN |
| **METR** | METER | **WLND** | WETLAND |
| **PATH** | PATHWAY | | |

**Note:** The Level 2 designator list above is not exhaustive and is shown for example only. Refer to the document titled “Layer Listing.xls” located in the CAD Standards sub-section of the City of Gillette website (which can be found in both the Engineering Department and GIS Department sections). This note applies to the Level 3 designator list on the following page as well.

## Level 3 – Classification Designators

The classification designation defines the separation of specific objects within a system. By example, the aerial photography is separated by “CI07”= 2007 Flight, “CI08”= 2008 Flight, “CI09”= 2009 Flight, and ”DA06”= 2006 Ag Dept. Flight. The classification designator is a four character field as shown below.

### Classification Designators

| | | | | | |
|---|---|---|---|---|---|
| **024K** | 1:24,000 | **FALT** | FAULT LINE | **QUAD** | QUAD |
| **02DX** | 2' INDEX | **FIRE** | FIRE HYDRANT | **RECD** | RECORD DRAWING |
| **02TR** | 2' INTERMEDIATE | **FIRL** | FIRE LATERAL | **RESI** | RESIDENTIAL |
| **100K** | 1:100,000 | **GRDL** | GUARDRAIL | **RETA** | RETAINING |
| **10DX** | 10' INDEX | **GRVL** | GRAVEL | **RTIE** | REFERENCE TIES |
| **10TR** | 10' INTERMEDIATE | **HELI** | HELIPORT | **RTNT** | RETENTION |
| **250K** | 1:250,000 | **HIGH** | HIGH 8%-12% | **RVRN** | RIVERINE |
| **AGRE** | MAINTENANCE AGREEMENT | **HORZ** | HORIZONTAL | **RWAY** | RUNWAY |
| **AIRR** | AIR RELEASE VALVE | **INDU** | INDUSTRIAL | **SCHL** | SCHOOL |
| **ALLE** | ALLEY | **INDX** | INDEX | **SECT** | SECTION |
| **ASPT** | ASPHALT | **INLT** | INLET | **SILT** | SILT (FENCE) |
| **BARB** | BARBED WIRE | **JBOX** | JUNCTION BOX | **SING** | SINGLE PHASE |
| **BLDG** | BUILDING | **LATI** | LATITUDE | **SITE** | SITE |
| **BRAK** | BREAKLINES | **LIFT** | LIFT STATION | **SNOW** | SNOW (FENCE) |
| **BRDG** | BRIDGE | **LOCA** | LOCATION | **SOIL** | SOIL TYPE |
| **CABL** | POST AND CABLE | **LONG** | LONGITUDE | **SPED** | SPEED LIMIT |
| **CABN** | CABINET | **LOW1** | LOW 0%-4% | **SPOT** | SPOT ELEVATIONS |
| **CHAI** | CHAINLINK | **MAIN** | MAIN | **SQTR** | QUARTER |
| **CI07** | 2007 FLIGHT | **MANH** | MANHOLE | **SRTY** | DECORATIVE/SECURITY |
| **CI08** | 2008 FLIGHT | **MAST** | MASTER | **SRVC** | SERVICE |
| **CI09** | 2009 FLIGHT | **MDRT** | MODERATE 4%-8% | **STAT** | SUBSTATION |
| **CITM** | CITY MAINTAINED | **MEDI** | MEDIAN | **STBK** | SETBACK |
| **CLNT** | CLEANOUT | **NTNG** | NORTHING-EASTING | **STOP** | STOP |
| **CLOU** | CLOUD | **NUMB** | NUMBER | **STRC** | STRUCTURAL |
| **CLSD** | CLOSED | **OCBS** | OVER-CURRENT BAYS | **SUBD** | SUBDIVISION |
| **COMM** | COMMERCIAL | **OFAL** | OUTFALL | **SWCH** | SWITCH |
| **CONC** | CONCRETE | **OPEN** | OPEN | **SWLK** | SIDEWALK |
| **COND** | CONDUIT | **OTHR** | NOT CITY MAINTAINED | **TBC** | TOP BACK OF CURB |
| **CPTR** | STORM CEPTOR | **OULT** | OUTLET | **THRE** | THREE PHASE |
| **CRNR** | CORNER AND MONUMENT | **PARC** | PARCELS | **TOWN** | TOWNSHIP AND RANGE |
| **CTCH** | CATCHMENT | **PAVD** | PAVED | **TRNS** | TRANSFORMER |
| **CURB** | CURB STOPS | **PEDE** | PEDESTAL | **TWAY** | TAXIWAY |
| **DA06** | 2006 AG DEPT FLIGHT | **PIPE** | PIPE CORRIDOR | **VALT** | VAULT |
| **DTNT** | DETENTION | **PITS** | PIT | **VALV** | VALVE |
| **DWAT** | DEWATERING WELL | **PLAT** | PLAT DOCUMENTS | **VARI** | VARIABLE FREQUENCY |
| **DWAY** | DRIVEWAY | **PLUS** | PALUSTRINE | **VERT** | VERTICAL |
| **ELEV** | ELEVATIONS | **PRES** | PRESSURE ZONES | **WELL** | WELLS |
| **EOPV** | EDGE OF PAVEMENT | **PRIV** | PRIVATELY MAINTAINED | **XSCT** | CROSS SECTION |
| **EASE** | EASEMENT | **PRVY** | PRIVACY (FENCE) | **ZONS** | ZONES |
| **EXTR** | EXTREME >12% | **PUMP** | PUMP STATION | | |
| **FACE** | FACE | **QQTR** | QUARTER-QUARTER | | |

**Note:** The Level 3 designator list above is not exhaustive and is shown for example only. Refer to the document titled “Layer Listing.xls” located in the CAD Standards sub-section of the City of Gillette website (which can be found in both the Engineering Department and GIS Department sections).

## Level 4 – Object Type Designators

The object type designation defines representation of a feature in the drawing environment. The object type designator is a four character field as shown below.

### Object Type Designators

| | |
|---|---|
| **LINE** | LINES, POLYLINES |
| **PNTS** | POINTS, BLOCKS |
| **POLY** | POLYGONS, HATCHES, FACES |
| **TEXT** | ANNOTATIONS, DIMENSIONS |

## Level 5 – Status Designators

The status designation defines the current state and future actions of the feature shown. This layer data field will allow for the identification of system changes. The status designator is a one character field as shown below.

### Status Designators

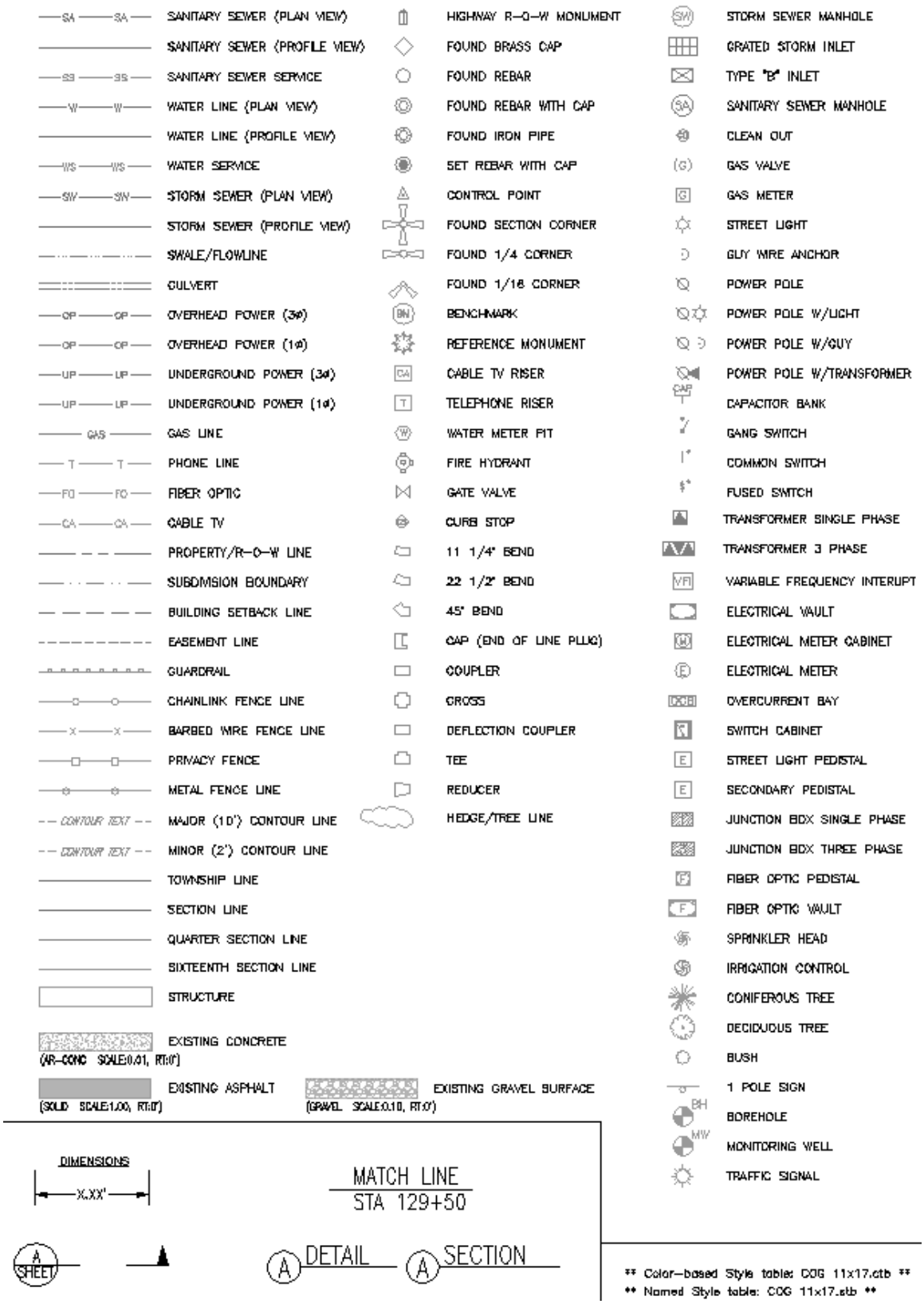
| | |
|---|---|
| P | **PROPOSED (NEW) WORK** |
| E | **EXISTING TO REMAIN** |
| D | **EXISTING TO BE DEMOLISHED** |
| F | **FUTURE WORK** |
| T | **TEMPORARY WORK** |
| M | **ITEMS TO BE MOVED** |
| X | **NOT IN CONTRACT** |

## AutoCAD Layer List

See the Layer Listing.xls document on the City of Gillette website for a complete list of acceptable layers. These layers are to be used when submitting As-Built information to the City of Gillette. This document will be dynamic in nature and will be updated on a consistent basis as the City establishes a need for new layers or has a need to modify the provided layer names/linetypes/hatch patterns. Check the website frequently to download the most current version of the document.

Additional layers may be created during the design phase of the project (creation of the AutoCAD files), but shall follow the layer naming convention described in this document.

## CITY OF GILLETTE EXISTING LINETYPES, SYMBOLS, AND HATCH PATTERNS



## CITY OF GILLETTE PROPOSED LINETYPES, SYMBOLS, AND HATCH PATTERNS

SA — SANITARY SEWER (PLAN VIEW)

SANITARY SEWER (PROFILE VIEW)

SS — SANITARY SEWER SERVICE

W — WATER LINE (PLAN VIEW)

WATER LINE (PROFILE VIEW)

WS — WS — WATER SERVICE

SW — STORM SEWER (PLAN VIEW)

STORM SEWER (PROFILE VIEW)

SWALE/FLOWLINE

CULVERT

OP — OVERHEAD POWER (3ø)

OP — OVERHEAD POWER (1ø)

UP — UNDERGROUND POWER (3ø)

UP — UNDERGROUND POWER (1ø)

GAS — GAS LINE

T — T — PHONE LINE

FO — FO — FIBER OPTIC

CA — CA — CABLE TV

PROPERTY/R-O-W LINE

SUBDIVISION BOUNDARY

BUILDING SETBACK LINE

EASEMENT LINE

GUARDRAIL

CHAINLINK FENCE LINE

X — X — BARBED WIRE FENCE LINE

PRIVACY FENCE

METAL FENCE LINE

*CONTOUR TEXT* — MAJOR (10') CONTOUR LINE

*CONTOUR TEXT* — MINOR (2') CONTOUR LINE

LIMITS OF CONSTRUCTION

SF — SF — SILT FENCE

CA — CABLE TV RISER

T — TELEPHONE RISER

W — WATER METER PIT

FIRE HYDRANT

GATE VALVE

CURB STOP

11 1/4° BEND

22 1/2° BEND

45° BEND

CAP — CAP (END OF LINE PLUG)

COUPLER

CROSS

DEFLECTION COUPLER

TEE

REDUCER

SW — STORM SEWER MANHOLE

OSP — OUTLET STRUCTURE PROTECTION

RCSC — ROUGH CUT STREET CONTROL

RRC — RIPRAP FOR CULVERT PROTECTION

SM — SEEDING AND MULCHING

SSA — STABILIZED STAGING AREA

VTC — VEHICLE TRACKING CONTROL

SCL — SEDIMENT CONTROL LOG (WATTLE)

ECB — EROSION CONTROL BLANKET

SW — STORM SEWER MANHOLE

GRATED STORM INLET

TYPE "R" INLET

SA — SANITARY SEWER MANHOLE

CO — CLEAN OUT

(G) — GAS VALVE

G — GAS METER

STREET LIGHT

GUY WIRE ANCHOR

POWER POLE

POWER POLE W/LIGHT

POWER POLE W/GUY

POWER POLE W/TRANSFORMER

CAP — CAPACITOR BANK

GANG SWITCH

COMMON SWITCH

FUSED SWITCH

TRANSFORMER SINGLE PHASE

TRANSFORMER 3 PHASE

VFI — VARIABLE FREQUENCY INTERUPT

ELECTRICAL VAULT

M — ELECTRICAL METER CABINET

E — ELECTRICAL METER

OCB — OVERCURRENT BAY

N — SWITCH CABINET

E — STREET LIGHT PEDISTAL

E — SECONDARY PEDISTAL

JUNCTION BOX SINGLE PHASE

JUNCTION BOX THREE PHASE

F — FIBER OPTIC PEDISTAL

F — FIBER OPTIC VAULT

SPRINKLER HEAD

IRRIGATION CONTROL

CONIFEROUS TREE

DECIDUOUS TREE

BUSH

1 POLE SIGN

BH — BOREHOLE

MW — MONITORING WELL

TRAFFIC SIGNAL

DETAIL, LEGEND & TABLES TEXT
(TEXT WIDTH CAN VARY FROM 0.75 TO 1.0)

DETAIL VIEW, DIST./BRG. TEXT
(TEXT WIDTH CAN VARY FROM 0.75 TO 1.0)

PROPOSED STREET NAME TEXT
(TEXT WIDTH CAN VARY FROM 0.75 TO 1.0)

EXISTING STREET NAME TEXT
(TEXT WIDTH CAN VARY FROM 0.75 TO 1.0)

PROPOSED LABEL TEXT & DIMENSION TEXT
EXISTING LABEL TEXT & ALIGNMENT STATION LABEL

*PROPOSED CONTOUR TEXT = MAJOR (10') INTERVAL*
*EXISTING CONTOUR TEXT = MAJOR (10') INTERVAL*
*PROPOSED CONTOUR TEXT = MINOR (2') INTERVAL*
*EXISTING CONTOUR TEXT = MINOR (2') INTERVAL*
MINIMUM TEXT SIZE = SPOT ELEVATION LABELS

PROPOSED STRUCTURE
(ANSI31 SCALE:0.40-(VARIABLE), RT:0')

PROPOSED CONCRETE
(AR-CONC SCALE:0.01-(VARIABLE), RT:0')

PROPOSED ASPHALT
(SOLID SCALE:1.00-(VARIABLE), RT:0')

PROPOSED GRAVEL SURFACE
(GRAVEL SCALE:0.10-(VARIABLE), RT:0')

## FINAL SUBMITTAL CHECKLIST

_____
(Name of Subdivision or Project)

**For City Use Only**

☐ Final Construction Plans

☐ Record Drawings

| Comp | N/A | | No Exceptions | Revised and | Construct as |
|---|---|---|---|---|---|
| **FORMS AND REPORTS** | | | | | |
| ___ | ___ | Application for Permit To Construct (PTC) *(can be found on the City Website)* | ____ | ___ | ___ |
| ___ | ___ | Drainage Report (Phase II) | ____ | ___ | ___ |
| ___ | ___ | Water System Design Report | ____ | ___ | ___ |
| ___ | ___ | Sanitary Sewer System Design Report | ____ | ___ | ___ |
| ___ | ___ | Geotechnical Report *(Subsurface Investigation)* | ____ | ___ | ___ |
| ___ | ___ | Traffic Impact Analysis *(only required if projected trip generation equals 150 trips/day or 100 trips/AM or PM peak hour)* | ____ | ___ | ___ |
| ___ | ___ | Construction Drawings *(must be ordered in plan set as shown below)* | ____ | ___ | ___ |
| **COVER SHEET** | | | | | |
| ___ | ___ | Vicinity Map | ___ | ___ | ___ |
| ___ | ___ | Subdivision or Development Project Name | ___ | ___ | ___ |
| ___ | ___ | Project Location | ___ | ___ | ___ |
| ___ | ___ | Complete Index of sheets | ___ | ___ | ___ |
| ___ | ___ | Certification Statement, P.E. Seal, and Signature | ___ | ___ | ___ |
| ___ | ___ | Identify benchmark used for elevation data | ___ | ___ | ___ |
| **NOTES AND LEGENDS** | | | | | |
| ___ | ___ | Standard Construction Notes | ___ | ___ | ___ |
| ___ | ___ | Linetype Legend | ___ | ___ | ___ |
| ___ | ___ | Symbol and Hatch Pattern Legend | ___ | ___ | ___ |
| **FINAL PLAT** | | | | | |
| ___ | ___ | Bearings | ____ | ___ | ___ |
| ___ | ___ | North Arrow | ____ | ___ | ___ |
| ___ | ___ | Scale Bar and Written Scale | ____ | ___ | ___ |
| ___ | ___ | Block and Lot Numbers and Dimensions | ____ | ___ | ___ |
| ___ | ___ | Street Names | ____ | ___ | ___ |
| ___ | ___ | Easements for Utilities and Drainage | ____ | ___ | ___ |
| ___ | ___ | Complete Legend *(symbols, linetypes, hatching)* | ____ | ___ | ___ |

**For City Use Only**

| Comp | N/A | | No Exceptions | Revised and | Construct as |
|---|---|---|---|---|---|
| **OVERLOT GRADING PLAN** | | | | | |
| ___ | ___ | Property Boundary Lines | ___ | ___ | ___ |
| ___ | ___ | Existing Contour Lines (dashed and shaded) | ___ | ___ | ___ |
| ___ | ___ | Proposed Contour Lines (solid w/ elevation labels) | ___ | ___ | ___ |
| ___ | ___ | Building or Housing footprint locations (shaded) | ___ | ___ | ___ |
| ___ | ___ | Proposed Streets and Lot Lines (shaded) | ___ | ___ | ___ |
| ___ | ___ | Designate Controlled Fill areas > 2’ | ___ | ___ | ___ |
| **DETAILED GRADING PLAN** | | | | | |
| ___ | ___ | Existing Contour Lines (dashed and shaded) | ___ | ___ | ___ |
| ___ | ___ | Proposed Contour Lines (solid w/ elevation labels) | ___ | ___ | ___ |
| ___ | ___ | Detailed spot elevations (TBC, PCR, FL, etc.) | ___ | ___ | ___ |
| ___ | ___ | Show inter-lot drainage flow patterns using high (HP) and low (LP) point spot elevations, contour lines, drainage swales (ditches), and flow arrows | ___ | ___ | ___ |
| ___ | ___ | Building or Housing footprint locations (shaded) | ___ | ___ | ___ |
| ___ | ___ | Proposed Streets and Lot Lines (shaded) | ___ | ___ | ___ |
| **EROSION & SEDIMENT CONTROL PLAN** | | | | | |
| ___ | ___ | Property Boundary Lines | ___ | ___ | ___ |
| ___ | ___ | Existing Contour Lines (dashed and shaded) | ___ | ___ | ___ |
| ___ | ___ | Proposed Contour Lines (solid w/ elevation labels) | ___ | ___ | ___ |
| ___ | ___ | Proposed Streets and Lot Lines (shaded) | ___ | ___ | ___ |
| ___ | ___ | Show the locations of necessary BMPs including: *(silt fence, inlet protection, outlet protection, hay bales, wattles, vehicle tracking control, etc.)* | ___ | ___ | ___ |

**For City Use Only**

| Comp | N/A | | No Exceptions | Revised and | Construct as |
|---|---|---|---|---|---|

**FINAL DRAINAGE PLAN**

DRAINAGE BASINS, CONTOURS, AND FLOW PATTERNS

| | | | | | |
|---|---|---|---|---|---|
| ___ | ___ | Existing and proposed Contour Lines | ___ | ___ | ___ |
| ___ | ___ | Existing and proposed Drainage Easements | ___ | ___ | ___ |
| ___ | ___ | Location and Elevation of all existing Floodplain | ___ | ___ | ___ |
| ___ | ___ | Existing Drainage Facility and Structure locations | ___ | ___ | ___ |
| ___ | ___ | Overall Drainage Basin and Sub-basin boundaries | ___ | ___ | ___ |
| ___ | ___ | Drainage Flow Arrows *(post-development patterns)* | ___ | ___ | ___ |
| ___ | ___ | Detention Pond locations and volume information | ___ | ___ | ___ |

STORM SEWER

| | | | | | |
|---|---|---|---|---|---|
| ___ | ___ | Proposed Storm Sewer and Open Channel Locations including: *(inlets, manholes, culverts, and other appurtenances; riprap sizing and location; profiles showing existing and proposed pipe sizes, materials, and grades; and hydraulic grade lines for minor and major storm runoff)* | ___ | ___ | ___ |
| ___ | ___ | Outlet Structure location and information | ___ | ___ | ___ |
| ___ | ___ | Proposed Outfall Points for runoff from the site *(post-development)* | ___ | ___ | ___ |
| ___ | ___ | Stormwater Quality Facility locations | ___ | ___ | ___ |

**OVERALL UTILITY PLAN**

WATER

| | | | | | |
|---|---|---|---|---|---|
| ___ | ___ | Existing and Proposed Fire Hydrant locations and spacing per latest Edition of the IFC *(Appendix C)* | ___ | ___ | ___ |
| ___ | ___ | Length, Size, and Type of proposed pipe material | ___ | ___ | ___ |
| ___ | ___ | Valve and Fitting *(tees, reducers, etc.)* locations | ___ | ___ | ___ |
| ___ | ___ | All Water Service connection locations | ___ | ___ | ___ |

**For City Use Only**

| Comp | N/A | | No Exceptions | Revised and | Construct as |
|---|---|---|---|---|---|

**OVERALL UTILITY PLAN (continued)**

SANITARY SEWER

| Comp | N/A | | No Exceptions | Revised and | Construct as |
|---|---|---|---|---|---|
| ___ | ___ | Existing and Proposed Manhole locations and spacing per latest Edition of the Wyoming D.E.Q. Rules & Regulations *(Chapter 11)* | ___ | ___ | ___ |
| ___ | ___ | Length, Size, and Type of pipe material | ___ | ___ | ___ |
| ___ | ___ | Slope of all proposed sewer lines | ___ | ___ | ___ |
| ___ | ___ | All Sanitary Sewer Service connection locations and existing invert elevations of tie-in manholes | ___ | ___ | ___ |

**ELECTRICAL & DRY UTILITY PLAN**

ELECTRICAL, CABLE TV, TELEPHONE, GAS

| Comp | N/A | | No Exceptions | Revised and | Construct as |
|---|---|---|---|---|---|
| ___ | ___ | Existing and Proposed dry utility locations | ___ | ___ | ___ |

**STREET AND ALLEYS (IF APPLICABLE) PLANS AND PROFILES**

| Comp | N/A | | No Exceptions | Revised and | Construct as |
|---|---|---|---|---|---|
| ___ | ___ | Plans and Profiles for every Street and/or Alley *(the plan and profile must be located on one sheet and the plan view shall always be located directly above the profile view)* | ___ | ___ | ___ |
| ___ | ___ | Grade labels for every Street and/or Alley | ___ | ___ | ___ |
| ___ | ___ | Arrows indicating direction of stormwater flow on plan view | ___ | ___ | ___ |
| ___ | ___ | Show linework and label Sidewalk location/width | ___ | ___ | ___ |
| ___ | ___ | Show linework for curb and gutter | ___ | ___ | ___ |
| ___ | ___ | Show and label Right-of-way (R.O.W.) and street widths *(per latest Edition of the C.O.G. Design Standards and the Subdivision Regulations),* curves, radius points, and lengths of cul-de-sacs (if applicable)(500' maximum). | ___ | ___ | ___ |
| ___ | ___ | Show Access to all lots | ___ | ___ | ___ |
| ___ | ___ | Show at least two (2) Access Points to the site | ___ | ___ | ___ |

**For City Use Only**

| Comp | N/A | | | No Exceptions | Revised and | Construct as |
|---|---|---|---|---|---|---|

**TEMPORARY (DURING CONSTRUCTION) TRAFFIC CONTROL PLAN**

| | | | | | |
|---|---|---|---|---|---|
| ___ | ___ | Show exact locations of Temporary Traffic Control Devices including: *(cones, barrels, Type III barricades, flashing warning lights, flaggers, etc.)* | ___ | ___ | ___ |
| ___ | ___ | Show arrows indicating detour traffic patterns | ___ | ___ | ___ |
| ___ | ___ | Show temporary sign details and MUTCD numbers | ___ | ___ | ___ |

**SIGNING AND STRIPING PLAN**

| | | | | | |
|---|---|---|---|---|---|
| ___ | ___ | Street Name sign locations | ___ | ___ | ___ |
| ___ | ___ | Stop Signs and other regulatory signs | ___ | ___ | ___ |
| ___ | ___ | Detailed Sign size/shape information | ___ | ___ | ___ |
| ___ | ___ | MUTCD numbers for all proposed signs | ___ | ___ | ___ |
| ___ | ___ | Street striping | ___ | ___ | ___ |

**SANITARY SEWER MAIN PLANS AND PROFILES**

| | | | | | |
|---|---|---|---|---|---|
| ___ | ___ | Manhole locations (including stationing) | ___ | ___ | ___ |
| ___ | ___ | Elevations for all inverts (IN and OUT) | ___ | ___ | ___ |
| ___ | ___ | Percent Grade (slope) for all mains | ___ | ___ | ___ |
| ___ | ___ | Exact locations of all sewer services | ___ | ___ | ___ |
| ___ | ___ | Length, Size, and Type of pipe material | ___ | ___ | ___ |

**WATER MAIN PLANS AND PROFILES**

| | | | | | |
|---|---|---|---|---|---|
| ___ | ___ | Locations of all appurtenances (tees, valves, bends, reducers , etc.) | ___ | ___ | ___ |
| ___ | ___ | Length, Size, and Type of pipe material | ___ | ___ | ___ |
| ___ | ___ | Locations of Fire Hydrants | ___ | ___ | ___ |
| ___ | ___ | Locations of Meter Pits/Curb Stops | ___ | ___ | ___ |
| ___ | ___ | Depth of Water Mains (5.0’ MIN - 6.0’ MAX) | ___ | ___ | ___ |

**STORM SEWER PLANS AND PROFILES**

| | | | | | |
|---|---|---|---|---|---|
| ___ | ___ | Locations of all appurtenances (inlets, manholes, culverts, trickle channels, swales, etc.) | ___ | ___ | ___ |
| ___ | ___ | Length, Size, and Type of pipe material | ___ | ___ | ___ |
| ___ | ___ | Include Cross-Sections of any trickle channels or swales on these sheets (for verification of capacity) | ___ | ___ | ___ |

**For City Use Only**

| Comp | N/A | | No Exceptions | Revised and | Construct as |
|---|---|---|---|---|---|

**DETAILS**

EROSION CONTROL DETAILS

| Comp | N/A | | | | |
|---|---|---|---|---|---|
| ___ | ___ | All Details relating to Erosion Control (BMPs) | ___ | ___ | ___ |

STREET DETAILS

| | | | | | |
|---|---|---|---|---|---|
| ___ | ___ | Typical Street Cross Sections including: (R.O.W. width, street TBC-TBC dimensions, etc.) | ___ | ___ | ___ |
| ___ | ___ | Thickness of Surface and Sub-Surface courses | ___ | ___ | ___ |
| __ | ___ | Thickness of Road Base and Sub-Base courses | ___ | ___ | ___ |
| ___ | ___ | Curb & Gutter and Sidewalk Details & Dimensions | ___ | ___ | ___ |
| ___ | ___ | Catch Basin design must be safe for bike traffic | ___ | ___ | ___ |

SIGNING AND STRIPING DETAILS

| | | | | | |
|---|---|---|---|---|---|
| ___ | ___ | All Details relating to Street Signing/Striping | ___ | ___ | ___ |

SANITARY SEWER DETAILS

| | | | | | |
|---|---|---|---|---|---|
| ___ | ___ | Sanitary Sewer Manhole (Precast) Detail | ___ | ___ | ___ |
| ___ | ___ | Sewer Sewer Manhole (Flat Top Manhole) Detail | ___ | ___ | ___ |
| ___ | ___ | Standard Steps for Manholes Detail | ___ | ___ | ___ |
| ___ | ___ | Manhole Bases Detail | ___ | ___ | ___ |
| ___ | ___ | Manhole Channel (Flowline) Details | ___ | ___ | ___ |
| ___ | ___ | Sanitary Sewer Service Line Detail | ___ | ___ | ___ |
| ___ | ___ | Manhole Adjustment Detail | ___ | ___ | ___ |
| ___ | ___ | Trench Bedding Detail | ___ | ___ | ___ |

WATER MAIN DETAILS

| | | | | | |
|---|---|---|---|---|---|
| ___ | ___ | Fire Hydrant Installation Detail | ___ | ___ | ___ |
| ___ | ___ | Fire Hydrant Plan, Profile, and Location Detail | ___ | ___ | ___ |
| ___ | ___ | Splash Pad for Fire Hydrant Detail | ___ | ___ | ___ |
| ___ | ___ | Fire Hydrant Tracer Wire Detail | ___ | ___ | ___ |
| ___ | ___ | Thrust Blocking for Water Main Fittings Detail | ___ | ___ | ___ |
| ___ | ___ | Water Main Valves Detail | ___ | ___ | ___ |
| ___ | ___ | Insulation Board Installation Detail | ___ | ___ | ___ |
| ___ | ___ | Cathodic Protection/Tracer Wire Test Stations | ___ | ___ | ___ |

**For City Use Only**

| Comp | N/A | | No Exceptions | Revised and | Construct as |
|---|---|---|---|---|---|

WATER MAIN DETAILS (continued)

| | | | | | |
|---|---|---|---|---|---|
| ___ | ___ | Water/Sanitary Sewer Bore Casing Detail | ___ | ___ | ___ |
| ___ | ___ | (2"- 4") Air Vacuum Air Release Valve Detail | ___ | ___ | ___ |
| ___ | ___ | Typical Water Service Connection Detail | ___ | ___ | ___ |
| ___ | ___ | Water Meter Pit Frame Cover Detail | ___ | ___ | ___ |
| ___ | ___ | Meter Pit for 1" and Smaller Meters | ___ | ___ | ___ |
| ___ | ___ | Typical Meter Installation 1" and Smaller Meters | ___ | ___ | ___ |
| ___ | ___ | Thermal-Coil Meter Box Detail | ___ | ___ | ___ |
| ___ | ___ | Meter Pit for 1 ½" – 2" Meters Detail | ___ | ___ | ___ |
| ___ | ___ | Typical Meter Installation 1 ½" – 2" Meters | ___ | ___ | ___ |
| ___ | ___ | Typical Meter Pit Placement Detail | ___ | ___ | ___ |
| ___ | ___ | 3" and Larger Meter Vault (Outside) | ___ | ___ | ___ |
| ___ | ___ | Water Access Manhole Ring & Cover | ___ | ___ | ___ |
| ___ | ___ | Water Valve Adjustment Detail | ___ | ___ | ___ |

STORM SEWER DETAILS

| | | | | | |
|---|---|---|---|---|---|
| ___ | ___ | Single Inlet Detail | ___ | ___ | ___ |
| ___ | ___ | Double Inlet Detail | ___ | ___ | ___ |
| ___ | ___ | Curb Opening Inlet Detail | ___ | ___ | ___ |
| ___ | ___ | Typical Trickle Channel Detail | ___ | ___ | ___ |
| ___ | ___ | Sub-Drain Detail – New Construction | ___ | ___ | ___ |
| ___ | ___ | Sub-Drain Detail – Existing Construction | ___ | ___ | ___ |
| ___ | ___ | Storm Sewer Manhole Ring & Cover Detail | ___ | ___ | ___ |
| ___ | ___ | Storm Sewer Manhole Detail | ___ | ___ | ___ |
| ___ | ___ | Storm Sewer Manhole (Flat Top Manhole) Detail | ___ | ___ | ___ |

**For City Use Only**

| Comp | N/A | | No Exceptions | Revised and | Construct as |
|---|---|---|---|---|---|
| **GENERAL NOTES** | | | | | |
| ___ | ___ | Each sheet must have in **bold** print the title of the streets shown thereon | ___ | ___ | ___ |
| ___ | ___ | Each plan and profile sheet must have a location map that shows the pertinent area within the site | ___ | ___ | ___ |
| ___ | ___ | All Water Sheets shall contain the following notes: 1. "All valves are to be installed in the exact locations shown on this plan." | ___ | ___ | ___ |
| | | 2. "All valves are to be installed 18"-24" from tees or crosses." | ___ | ___ | ___ |
| ___ | ___ | All Sewer Sheets shall contain the following notes: 1. "A maximum of 8" of adjusting rings is permitted to bring the manhole ring and cover to the finished grade." | ___ | ___ | ___ |
| | | 2. "Ram-nek shall be installed between the cone section and the bottom adjusting ring, between all additional adjusting rings (if necessary), and between the top adjusting ring and the cast iron ring & cover." | ___ | ___ | ___ |
| **FINAL CONSTRUCTION REPORT** (See Section ~~S~~103) | | | | | |
| ___ | ___ | Soil Compaction (Density) Test Results | ___ | ___ | ___ |
| ___ | ___ | Asphalt Pavement Test Results | ___ | ___ | ___ |
| ___ | ___ | Concrete Test Results | ___ | ___ | ___ |
| ___ | ___ | Water Main Pressure Test Results | ___ | ___ | ___ |
| ___ | ___ | Water Main Disinfection (Bac-T) Test Results | ___ | ___ | ___ |
| ___ | ___ | Sewer Light Test Results | ___ | ___ | ___ |
| ___ | ___ | Sewer Leakage Test Results | ___ | ___ | ___ |
| ___ | ___ | Sewer Deflection Test Results | ___ | ___ | ___ |

COMMENTS

_____

_____

_____
(Name of Engineer) (Date)

_____
(Name of Reviewer – City Engineering) (Date)