



PERMIT CENTER

RECORD CONSTRUCTION DOCUMENT PACKET

Informational Brochure

July 2018

Prepared by:
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RECORD CONSTRUCTION DOCUMENTS

The following requirements are intended to provide information necessary to furnish the City with satisfactory Record Construction Documents, final Public Utility Easements, final Stormwater Site Plan Reports, and the final electronic drawing file:

1. During project construction and through completion of construction activities, the owner's engineer, surveyor, and/or general contractor shall be responsible for tracking all relevant field changes to the Final City Approved and Signed Plans. These changes shall be clearly and comprehensively identified using red-line markups on a single set of the paper drawings.

2. The red-line paper drawings shall be delivered to the City for review and approval. A representative of the owner/agent shall verify that the red-line drawings accurately reflect all field design revisions made during the construction process and sign the Record Drawing Certification block shown below. Each sheet shall include the signed Record Drawing Certification block and the owner's representative must indicate in what capacity they are acting on behalf of the owner (contractor, surveyor, engineer).

RECORD DRAWING CERTIFICATION THESE DRAWINGS CONFORM TO THE CONTRACTOR'S CONSTRUCTION RECORDS.	
BY _____	DATE _____
TITLE/POSITION _____	
CONFIRMED BY CITY _____	DATE _____

3. Following approval of the red-line drawings, the owner's engineer, surveyor, and/or general contractor shall update the project AutoCAD files to clearly reflect the as-built conditions shown in the approved red-line drawings. A final set of as-built drawings will be printed from the updated AutoCAD files on 8-mil water resistant matte polypropylene, sealed and signed by the Engineer of Record, and submitted to the City as Record Construction Drawings.

4. The Record Construction Drawings shall identify all existing or abandoned utilities that were encountered during construction that were not shown on the approved construction drawings.

5. A final Stormwater Site Plan Report shall be submitted with the Record Construction Drawings. Any design changes related to utility location, discharge rates, storage volumes, head changes, or infiltration rates shall be noted in the final Stormwater Site Plan Report. The following statement shall be on the cover sheet of the report and signed, sealed, and dated by a professional engineer registered in the State of Washington

- This final Stormwater Site Plan Report conforms to the field conditions as shown on the Record Construction Documents.
6. The Engineer shall submit the computer-aided design (CAD) drawing files updated to clearly reflect the as-built conditions as specified below:
- FORMAT: Digital files shall be provided in AutoCAD 2015 (2013 format) or older “.DWG” format. All support files required to display or plot the files in the same manner as developed shall be delivered along with these files. Scanned hard copy drawings using raster-to-vector conversion will not be an acceptable digital format. AutoCAD files shall be prepared in accordance with the Layers Standard included in Appendix D, Chapter 3 of the City of Auburn Engineering Design Standards.
 - MEDIA: Digital files shall be submitted on CD, DVD, or thumb/flash drive. Disks and drives shall be clearly labeled with the project name, drawing name(s), name of the drafting/engineering company or individual(s), date, and appropriate City of Auburn identifiers (e.g., BLD#, FAC#, etc.).
 - SPATIAL REFERENCES: Drawings will be at full scale, and shall be accurately located in State Plane Coordinates Washington North Zone, 4601, and tied to two existing and recoverable City of Auburn horizontal control monuments. Datum will be noted on the drawings. All drawings shall use survey control datum NAD 83/91 for horizontal control and NAVD 88 for vertical control.
 - CONTENTS: The digital drawing files shall include, at a minimum, the following:
 - The overall project site plan showing new and existing construction, property lines, easements, and survey references.
 - New and existing water, sanitary sewer, and storm drainage elements showing location, size, and material of utility lines and structures.
 - Any special text font files and shape files (.shx) used in the drawings that are not included in the standard AutoCAD library.
 - Separate layering showing existing impervious surfaces, new impervious surfaces, and annotation on the area of each in square foot units. Layer features for impervious surfaces shall be created from closed polylines to aid in verifying calculations of impervious surface area.
 - DOCUMENTATION: The electronic CAD drawing files will be used by the City to calculate impervious surface quantities and selected features will also be extracted from the drawing files for incorporation into the City’s GIS system. The electronic CAD drawing files will be retained as permanent documents, but will not be released to anyone without the express permission of the Engineer of Record. Final recorded changes shall be clearly reflected when Certified Record Construction Drawings are processed. Proposed features shall use the layer names and descriptions given below. Any layers included that do not meet the descriptions below shall be accompanied by a detailed list of layers and layer descriptions.

Proposed Feature	AutoCAD Layer Name
Buildings - Polygon	C-SITE-BLDG-OTLN
Commercial Fiber - Polyline	C-COMM-FIBR
Conduit: Polyline	C-COMM-CDNT
Curbs - TBC - Polyline	C-ROAD-TBCV
Curbs - Gutter - Polyline	C-ROAD-GTTR
Curbs - Flow (TFC) - Polyline	C-ROAD-FLOW
Driveways - Polyline	C-PVMT-CONC-DRWY
Easements - Polygon	C-PROP-ESMT
Fences - Polyline	C-SITE-FENC
Power Service Cabinets - Point	C-POWR-VALT
Sewer Cleanouts - Point	C-SSWR-SSCO
Sewer Laterals - Polyline	C-SSWR-LATR
Sewer Mains: Polyline	C-SSWR-PIPE
Sewer Manholes - Point	C-SSWR-MHOL
Sidewalks - Polygon	C-PVMT-CONC-SDWK
Storm Catch Basins - Point	C-STRM-STRC
Storm Culverts - Polyline	C-STRM-CULV
Storm Manholes - Point	C-STRM-MHOL
Storm Pipes - Polyline	C-STRM-PIPE
Street Lights - Point	C-POWR-LITE
Street Painted Lines - Polyline	C-ROAD-MRKG
Traffic Signal Cabinets - Point	T-POWR-SGNL-CBNT
Traffic Signal Poles - Point	T-POWR-SGNL-POLE
Traffic Signs - Point	C-SITE-SIGN
Traffic Vaults	T-POWR-VALT
Vegetation - Polygon	C-SITE-VEGE
Trees - Point	C-SITE-TREE
Utility Poles - Point	C-POWR-POLE
Water Auxiliary Equipment - Point	C-WATR-FTTG
Water Hydrants - Point	C-WATR-FHYD
Water Laterals - Polyline	C-WATR-LATR
Water Mains - Polyline	C-WATR-PIPE
Water Meters - Point	C-WATR-METR
Water Valves - Point	C-WATR-VALV
Wetlands - Polygon	C-WETL-DELN

7. Easement locations shall be clearly noted on the final drawings. Prior to plan approval, public utility easements shall be prepared on forms provided by the City and shall include a certified legal description and utility map, prepared by a land surveyor or professional engineer licensed in the State of Washington.

The City shall also be notified of any changes to easement legal documents with the submittal of final Record Construction Drawings. The previously submitted easements shall then be corrected and processed for recording.

The Record Construction Drawings shall identify all deviations from the approved construction drawings as follows:

Site Work

Actual dimensions, arrangement, and materials used when different than shown in the Plans. Accurate locations of storm drainage, sanitary sewer, water mains and other water appurtenances, structures, conduits, light standards, vaults, width of roadways, sidewalks, landscaping areas, building footprints, channelization and pavement markings, etc. Include pipe invert elevations, top of castings (manholes, inlets, etc.).

Sanitary Sewer

Manholes:

- Type and size of structure
- Location to the nearest 1 foot horizontal
- Rim and invert elevations to the nearest 0.1 foot vertical
- Pipe sizes to the nearest 1 inch inside diameter

Pipes:

- Type of pipe
- Location to the nearest 1 foot horizontal
- Length between structures to the nearest 1 foot
- Slopes based on constructed invert elevations
- Pipe sizes to the nearest 1 inch inside diameter

Side Sewers:

- Type of pipe
- Location from reference manhole downstream to the nearest 1 foot horizontal and consistent with the CCTV report
- Length between structures to the nearest 1 foot
- Slopes based on the constructed invert elevations
- Invert elevations at right-of-way lines to the nearest 0.5 feet vertical

Storm Drainage

Manholes and Catch Basins:

- Type and size of structure
- Location to the nearest 1 foot horizontal
- Rim and invert elevations to the nearest 0.1 foot vertical
- Pipes sizes to the nearest 1 inch inside diameter

Pipes:

- Type of pipe
- Location to the nearest 1 foot horizontal
- Length between structures to the nearest 1 foot
- Slopes based on the constructed invert elevations
- Pipes sizes to the nearest 1 inch inside diameter

Ditches:

- Location to the nearest 1 foot horizontal
- Invert elevations to nearest 0.1 vertical
- Identify side slopes (2:1, 3:1, etc.)
- Describe ditch protection such as quarry spalls

Retention/Detention Systems:

- Control structure and orifice sizing
- Volume of storage provided
- Storage and ponding limits
- Overflow elevation and location
- Roof drain connections
- Bypass area
- Permanent stabilization and erosion control

Water Quality and Low Impact Development Systems:

- Bio-swale design width top and bottom, side slopes, and length to nearest 0.1 foot vertical and 0.5 foot horizontal
- Overflow elevation and location
- Final planting information
- Oil/water separator size, model and location
- Pipe sizes to the nearest 1 inch inside diameter

Water

Pipes:

- Type of pipe and type of joint (MJ, Flange, etc.)
- Deflection of bends to the nearest 1 degree
- Location to the nearest 1 foot horizontal
- Location to the nearest 0.5 foot vertical between valves at 50 foot stations and intersections with other utilities
- Length between valves to the nearest 1 foot
- Pipes sizes to the nearest 1 inch inside diameter

Valves, hydrants, blowoffs, air vacs, plugs, caps, tees, crosses, and PRV's:

- Type of facility
- Location to the nearest 1 foot horizontal

Meters and services:

- Size of service and type of material
- Location of service line to the nearest 1 foot horizontal
- Meter location to the nearest 1 foot horizontal
- Meter sizes to the nearest 1/4 inch in diameter

Public Streets

Roadway Section:

- Final roadway pavement material section to nearest 0.1 foot vertical
- Centerline elevations to the nearest 0.1 foot vertical at 100 foot stations
- Centerline slopes and vertical curve data based on the constructed centerline elevations
- Gutterline elevations to the nearest 0.1 foot vertical (if not a standard crown section)
- Gutterline slopes and vertical curve data based on the constructed gutterline elevations (if not a standard crown section)
- Type and location of monuments

Driveways and sidewalks:

- Type of driveway (commercial or residential)
- Centerline driveway location to the nearest 1 foot horizontal
- Driveway and sidewalk width to the nearest 1 foot horizontal

Channelization:

- Traffic islands shown and identified as raised median or painted
- Show stop bars, turn arrows, start and end of tapers
- Type of buttons, reflector, and curbs
- General layout location to the nearest 1 foot horizontal

Signing:

- Type and location of signs to the nearest 1 foot horizontal

Illumination:

- Location and wattage of luminaries, junction boxes, and service cabinets to the nearest 1 foot horizontal
- Mounting height of luminaire to nearest 1 foot vertical

Signalization:

- Location of signal poles, detection loops, junction boxes, service cabinets, and controller cabinets to the nearest 1 foot horizontal
- Location and type of vehicle signal head (3 section, 5 section, optically programmed) and pedestrian signal head to nearest 1 foot horizontal
- Location of pre-emption detector to nearest 1 foot horizontal