## Control

| PT | LINE | CODE | DESCRIPTION | Z |
|---|---|---|---|---|
| F | | **BM** | Bench Mark | 10 |
| F | | **CP** | Control Point | 10 |
| F | | **GPS** | Global Positioning Point | 10 |
| F | | **IS** | Instrument Station | 10 |
| F | | **TBM** | Temporary Bench Mark | 10 |
| F | | **TCP** | Temporary Control Point | 10 |

## Boundary

| PT | LINE | CODE | DESCRIPTION | Z |
|---|---|---|---|---|
| F | | **FC** | Fence Corner | 20 |
| F | | **MON** | Monument | 20 |
| F | | **PROPC** | Property Corner | 20 |
| F | | **ROWM** | Right of Way Marker | 20 |

## Utilities

| PT | LINE | CODE | DESCRIPTION | Z |
|---|---|---|---|---|
| F | | **CCAB** | Control Cabinet | 30 |
| F | F | **CND** | Conduit and Wiring | 30 |
| F | | **DGA** | Down Guy Anchor | 30 |
| F | | **EB** | Electrical Box | 30 |
| F | | **FH** | Fire Hydrant | 30 |
| F | | **GROD** | Ground Rod | 30 |
| F | | **GUY** | Guy Wire or Guy Pole | 30 |
| F | | **LVD1T** | Induction Loop Vehicle Detector Type 1 | 30 |
| F | | **LVD2T** | Induction Loop Vehicle Detector Type 2 | 30 |
| F | | **IRBX** | Irrigation Box | 30 |
| F | | **IRSH** | Irrigation Sprinkler Head | 30 |
| F | | **JB1T** | Junction Box Type 1 | 30 |
| F | | **JB2T** | Junction Box Type 2 | 30 |
| F | | **JB3T** | Junction Box Type 3 | 30 |
| F | | **L** | Yard Light | 30 |
| F | | **LP** | Light Std (Single Metal) | 30 |
| F | | **LSDM** | Light Std (Double Metal) | 30 |
| F | | **LSDT** | Light Std (Double Timber) | 30 |
| F | | **LST** | Light Std (Single Timber) | 30 |
| F | F | **OCAB** | Overhead Cable TV | 30 |
| F | F | **OOFC** | Overhead Optic Fiber Cable | 30 |
| F | F | **OPOW** | Overhead Power Line | 30 |
| F | F | **OSIG** | Overhead Signal Wiring | 30 |
| F | F | **OTEL** | Overhead Telephone Line | 30 |
| F | F | **OU** | Overhead Utilities (Multi Types) | 30 |
| F | | **PBX** | Power Box | 30 |
| F | | **PEDP** | Pedestrian Signal Pole | 30 |
| F | F | **PIPE** | Pipeline | 30 |
| F | | **PP** | Power Pole | 30 |
| F | | **SBX** | Signal Box | 30 |
| F | | **SCAB** | Service Cabinet | 30 |
| F | | **SGP** | Signal Pole | 30 |
| F | | **STT** | Steel Transmission Tower | 30 |
| F | | **TANK** | Tank | 30 |
| F | | **TBTH** | Telephone Booth | 30 |
| F | | **TBX** | Telephone Box | 30 |
| F | | **TP** | Telephone Pole | 30 |
| F | | **TSB** | Traffic Signal Box | 30 |
| F | F | **TSL** | Traffic Signal Loop | 30 |
| F | | **UBX** | Utility Box | 30 |
| F | F | **UCAB** | Underground Cable TV | 30 |
| F | | **UCB** | Underground Cable Box | 30 |
| F | F | **UGAS** | Underground Gas Line | 30 |
| F | F | **UOFC** | Underground Optic Fiber Cable | 30 |
| F | F | **UOIL** | Underground Oil Line | 30 |

| PT | LINE | CODE | DESCRIPTION | Z |
|---|---|---|---|---|
| F | | **UP** | Utility Pole | 30 |
| F | | **UDL** | Under Deck Luminaire | 30 |
| F | F | **UPOW** | Underground Power Line | 30 |
| F | F | **USEW** | Underground Sanitary Sewer Line | 30 |
| F | F | **USIG** | Underground Signal Wiring | 30 |
| F | | **UTANK** | Underground Tank | 30 |
| F | | **UTB** | Underground Telephone box | 30 |
| F | F | **UTEL** | Underground Telephone Cable | 30 |
| F | F | **UU** | Underground Utilities (Multiple types) | 30 |
| F | F | **UWAT** | Underground Water Line | 30 |
| F | | **VAULT** | Underground Utility Vault | 30 |
| F | | **VENT** | Vent Underground Utility | 30 |
| F | | **VG** | Valve Gas | 30 |
| F | | **VW** | Valve Water | 30 |
| F | | **W** | Well | 30 |
| F | | **WMB** | Water Meter Box | 30 |
| F | | **WTT** | Wooden Transmission Tower | 30 |

## Drainage

| PT | LINE | CODE | DESCRIPTION | Z |
|---|---|---|---|---|
| G | G | **AD** | Asphalt Ditch | 40 |
| G | | **AI** | Area Inlet | 40 |
| F | F | **BCUL** | Box Culvert | 40 |
| G | G | **BIOF** | Biofiltration Swale | 40 |
| F | | **BRD** | Bridge Drain | 40 |
| G | | **CB** | Catch Basin | 40 |
| F | | **CB2D** | Catch Basin 2D | 40 |
| F | F | **CBFL** | Catch Basin Flow Line | 40 |
| F | F | **CB1FL** | Catch Basin Flow Line Pipe #1 | 40 |
| F | F | **CB2FL** | Catch Basin Flow Line Pipe #2 | 40 |
| F | F | **CB3FL** | Catch Basin Flow Line Pipe #3 | 40 |
| F | F | **CB4FL** | Catch Basin Flow Line Pipe #4 | 40 |
| F | F | **CB5FL** | Catch Basin Flow Line Pipe #5 | 40 |
| F | F | **CB6FL** | Catch Basin Flow Line Pipe #6 | 40 |
| F | F | **CB7FL** | Catch Basin Flow Line Pipe #7 | 40 |
| F | F | **CB8FL** | Catch Basin Flow Line Pipe #8 | 40 |
| G | | **CI** | Concrete Inlet | 40 |
| G | | **CMI** | Cast Metal Inlet | 40 |
| F | F | **CUL** | Culvert | 40 |
| G | G | **DB** | Ditch Bottom | 40 |
| G | G | **DBB** | Ditch Bottom Back | 40 |
| G | | **DI** | Drop Inlet | 40 |
| G | G | **DIKE** | Dike | 40 |
| F | F | **DIK2D** | Dike | 40 |
| F | | **DP** | Drain Pipe | 40 |
| G | F | **DRL** | Drain Line | 40 |
| F | F | **FL** | Flow Line for pipes | 40 |
| G | | **GI** | Grate Inlet | 40 |
| G | G | **HDW** | Head Wall | 40 |
| G | G | **HDWB** | Head Wall Bottom | 40 |
| G | G | **HDWT** | Head Wall Top | 40 |
| G | G | **HWL** | High Water Line | 40 |
| G | | **INL** | Unknown Type of Inlet | 40 |
| G | G | **ISTRE** | Intermittent Stream | 40 |
| G | G | **LAKE** | Lake - Edge Water Line | 40 |
| G | | **MH** | Manhole | 40 |
| G | F | **MLN** | Marsh Line | 40 |
| G | G | **POND** | Pond - Edge of Water Line | 40 |
| G | G | **RIV** | River - Edge Water Line | 40 |
| G | F | **SPG** | Spring | 40 |
| G | F | **SWTA** | Storm Water Treatment Area | 60 |
| G | G | **STRE** | Stream - Edge Water Line | 40 |

| PT | LINE | CODE | DESCRIPTION | Z |
|---|---|---|---|---|
| F | F | **UDRL** | Under Drain Line | 40 |
| F | F | **UST** | Underground Storm Water Line | 40 |
| G | F | **WLA** | Wetland Area | 40 |
| G | F | **INVW** | Inventory Wetland Boundary | 40 |
| G | F | **WLB** | Wetland Boundary | 40 |
| G | | **WLF** | Wetland Flag | 40 |
| G | G | **WW** | Wing Wall | 40 |
| G | G | **WWB** | Wing Wall Bottom | 40 |
| G | G | **WWT** | Wing Wall Top | 40 |

## Roadway

| PT | LINE | CODE | DESCRIPTION | Z |
|---|---|---|---|---|
| G | G | **AC** | Asphalt Curb Face | 50 |
| G | G | **APB** | Asphalt Pavement Break | 70 |
| G | G | **BST** | BST Shoulder Edge | 50 |
| G | G | **CBB** | Curb Back | 50 |
| G | G | **CBT** | Curb Top | 50 |
| G | G | **CF** | Curb Face | 50 |
| G | G | **CFTI** | Curb Face Traffic Island | 50 |
| G | G | **CR** | Crown of Road | 70 |
| G | G | **CRD** | County Road | 50 |
| G | G | **DWE** | Driveway Edge | 50 |
| G | G | **EGDW** | Edge of Gravel Drive Way | 50 |
| G | G | **EGR** | Edge of Gravel Road | 50 |
| G | G | **EGS** | Edge of Gravel Shoulder | 50 |
| G | G | **EP** | Edge of Traveled Way | 50 |
| G | G | **EPDW** | Edge of Paved Drive Way | 50 |
| G | G | **EPS** | Edge of Paved Shoulder | 50 |
| G | G | **EPT** | Edge of Pavement Taper | 50 |
| G | G | **GF** | Gutter Face | 50 |
| G | | **P** | Pavement selective | 70 |
| G | G | **SW** | Sidewalk | 50 |
| G | G | **SWB** | Sidewalk Back | 50 |
| G | G | **SWF** | Sidewalk Face | 50 |

## Pavement Markings

| PT | LINE | CODE | DESCRIPTION | Z |
|---|---|---|---|---|
| G | | **ASM** | Aerial Surveillance Marker | 60 |
| F | | **BIKE** | Bike Symbol | 60 |
| G | G | **BL** | Barrier Line | 60 |
| F | | **CDS** | Cycle Detector Symbol | 60 |
| G | F | **CW** | Cross Walk Stripe | 60 |
| G | G | **DEL** | Dotted Extension Line | 60 |
| G | G | **DWL** | Dotted Wide Line | 60 |
| G | G | **DLL** | Dotted Lane Line | 60 |
| F | | **DM** | Drainage Marking | 60 |
| G | G | **DY** | Double Yellow Center Line | 60 |
| G | G | **EL** | Edge Line | 60 |
| G | G | **WL** | Wide Line | 60 |
| F | | **HPSS** | Handicapped Parking Stall Symbol | 60 |
| F | | **JBM** | Junction Box Marking | 60 |
| G | G | **LL** | Lane Line | 60 |
| G | G | **NPL** | No Pass Line | 60 |
| F | | **PLS** | Preferential Lane Symbol | 60 |
| G | G | **RLL** | Reversible Lane Line | 60 |
| F | | **RRS** | Railroad Crossing Symbol | 60 |
| G | F | **SL** | Stop Line | 60 |
| F | F | **SB2D** | Stop Bar | 60 |
| G | G | **SCL** | Skip Center Line | 60 |
| G | G | **WLS** | Wide Line Skip | 60 |
| F | | **TABS** | Traffic Arrow Type 5 Big Straight | 60 |
| F | | **TAL** | Traffic Arrow Left | 60 |
| F | | **TALR** | Traffic Arrow Left Right | 60 |

| PT | LINE | CODE | DESCRIPTION | Z |
|---|---|---|---|---|
| F | | **TALRS** | Traffic Arrow Left Right Straight | 60 |
| F | | **TAR** | Traffic Arrow Right | 60 |
| F | | **TARS** | Traffic Arrow Right Straight | 60 |
| F | | **TAS** | Traffic Arrow Straight | 60 |
| F | | **TLET** | Traffic Letters | 60 |
| G | G | **TWLT** | Two Way Left Turn Stripe | 60 |

## Ground

| PT | LINE | CODE | DESCRIPTION | Z |
|---|---|---|---|---|
| G | G | **BB** | Bank Bottom | 70 |
| G | G | **BKL** | Breakline generic ground break | 70 |
| F | F | **BRS2D** | Brush Line | 1 |
| G | F | **BRSH** | Brush Line | 1 |
| G | G | **BT** | Bank Top | 70 |
| G | G | **CSP** | Concrete Slope Protect | 70 |
| G | G | **CUTB** | Cut Bottom | 70 |
| G | G | **CUTT** | Cut Top | 70 |
| G | G | **FT** | Fill Toe | 70 |
| G | | **G** | Ground selective | 70 |
| G | G | **GPA** | Gravel Parking Area | 1 |
| G | F | **HDG** | Hedge | 1 |
| F | F | **HDG2D** | Hedge | 1 |
| G | G | **PAR** | Paved Area | 1 |
| G | G | **PATH** | Pedestrian or Bike Path | 1 |
| G | G | **PPA** | Paved Parking Area | 1 |
| G | G | **RIP** | Rip Rap Edge | 70 |
| G | | **ROC** | Rock | 70 |
| G | G | **ROCS** | Rock Outcrop | 70 |
| G | | **SE** | Spot Elevation | 70 |
| G | F | **SF** | Stress Fracture | 70 |
| G | | **SN** | Sounding | 70 |
| G | G | **SPB** | Stockpile Bottom | 1 |
| G | G | **SPT** | Stockpile Top | 1 |
| F | | **STUMP** | Stump | 70 |
| G | | **T** | Tree | 1 |
| F | | **T2D** | Tree | 1 |
| G | F | **TL** | Tree Line | 1 |
| F | F | **TL2D** | Tree Line | 1 |
| G | G | **TPL** | Topography Limit | 70 |

## Structures

| PT | LINE | CODE | DESCRIPTION | Z |
|---|---|---|---|---|
| F | F | **BA** | Barrier | 1 |
| G | G | **BAS** | Bridge Approach Slab | 70 |
| G | F | **BF** | Barrier Face | 1 |
| G | G | **BPS** | Back of Pavement Seat | 1 |
| F | F | **BR** | Bridge Rail | 1 |
| F | F | **BRCF** | Bridge Curb Face | 1 |
| F | F | **BRCL** | Bridge Centerline | 1 |
| F | F | **BREJ** | Bridge Expansion Joint | 70 |
| F | F | **BREL** | Bridge Edge Line | 60 |
| F | F | **BRF** | Bridge Footing | 1 |
| F | F | **BRGR** | Bridge Guard Rail | 1 |
| F | F | **BRLL** | Bridge Lane Line | 60 |
| F | F | **BRP** | Bridge Pier | 1 |
| F | F | **BRPB** | Bridge Pavement Break | 70 |
| F | F | **BSWB** | Bridge Sidewalk Back | 1 |
| F | F | **BSWF** | Bridge Sidewalk Face | 1 |
| G | G | **BU** | Building | 1 |
| F | F | **BU2D** | Building | 1 |
| F | F | **BUC2D** | Building Under Construction | 1 |
| F | F | **DECK** | Deck | 70 |
| F | F | **DOCK** | Dock | 1 |

| PT | LINE | CODE | DESCRIPTION | Z |
|---|---|---|---|---|
| G | F | **FE** | Fence | 1 |
| F | F | **FE2D** | Fence | 1 |
| G | F | **FGR** | Fence Guard Rail | 1 |
| G | F | **GATE** | Gate | 1 |
| G | G | **GBW** | Gabion Wall | 1 |
| G | G | **GBWB** | Gabion Wall Bottom | 1 |
| G | G | **GBWT** | Gabion Wall Top | 1 |
| G | F | **GR** | Guardrail | 1 |
| F | F | **GR2D** | Guardrail | 1 |
| G | | **GRA** | Guardrail Anchor | 1 |
| G | G | **NB** | Noise Berm | 1 |
| F | F | **NW** | Noise Wall | 1 |
| F | | **PILE** | Piling | 70 |
| F | F | **RBU2D** | Ruins | 1 |
| G | G | **RR** | R/R Center of Tracks | 1 |
| F | F | **RR2D** | R/R Center of Tracks (2D) | 1 |
| F | | **RRS** | Rail Road Symbol | 1 |
| F | F | **RRT** | Rail Road (top of track) | 1 |
| G | G | **RW** | Retaining Wall | 1 |
| G | G | **RWB** | Retaining Wall Bottom | 1 |
| G | G | **RWT** | Retaining Wall Top | 1 |
| G | G | **SLAB** | Concrete Slab | 1 |
| F | F | **STU2D** | Structure | 1 |
| F | F | **TUN** | Tunnel | 1 |

## Misc.

| PT | LINE | CODE | DESCRIPTION | Z |
|---|---|---|---|---|
| F | F | **ARUC** | Area Under Construction | 70 |
| F | | **BBMP** | Bill Board Multiple Support Post | 1 |
| F | | **BBSP** | Bill Board Single Support Post | 1 |
| G | | **BH** | Bore Hole / Drill Hole | 1 |
| F | | **BOL** | Bollard | 1 |
| F | | **FPOLE** | Flag Pole | 1 |
| F | | **GP** | Guide Post | 1 |
| F | | **IA** | Impact Attenuator | 1 |
| F | | **MB** | Mail Box | 1 |
| F | | **MCC** | Monument Case and Cover | 1 |
| F | | **PM** | Parking Meter | 1 |
| F | | **POST** | Post | 1 |
| F | | **SIGN** | Sign | 1 |
| F | | **SP** | Sign Post | 1 |
| F | | **UOBJ** | Unknown Object | 1 |
| G | G | **WC** | Wooden Curb | 1 |
| | | | | |
| | | | | |

## Special Codes

| PT | LINE | CODE | DESCRIPTION | Z |
|---|---|---|---|---|
| F | | **LOS** | Line of Sight Used in Traversing | 70 |
| | | **ERR** | Error (Not Process) | |
| | | **BSCK** | Back Sight Check (Not Process) | |

### Standard Note Format for Collector File

@ Job creation first note
*Line 1* Description of project
*Line 2* Crew initials, Crew Chief first
*Line 3* PE's name
*Line 4* Weather
*Line 5* Datum

# *Standard Survey Codes*

## WSDOT Feature Table WA_0003.ftb

### *SORTED BY GROUP*

### Summary of DTM Collection

1. Collect topography data in the data collector. Always use the Standard Survey Codes.
2. Record supplemental notes to further describe topography items as required.
3. Use **BEG** and **END** codes to begin and end line strings.
4. Append a **R** or **L** to any line code so up to 3 of the same line code can be used at the same time.
5. Curved strings can be collected by following any Standard Survey Code with **BC** Begin Curve and **EC** End Curve. For example, a curved curb face would be:

   **CF BC** at the beginning of curb face curve
   **CF** at any point on the curve
   **CF EC** at the end of curb face curve

6. Do not cross 3-D breaklines.
7. The digital terrain model will only be built by lines and points with an attribute of "**G**" (3D).
8. Collect breakline and feature line data in the direction of increasing point numbers.
9. Increasing the number of breaklines will improve the digital terrain model.
10. Take shots on the high and low spots.
11. Do not exceed 50 foot spacing on pavement or 150 foot spacing on original ground.
12. Do not take shots more than 750 feet away from the instrument.
13. Set zero on your backsight and check in often.
14. Download, edit, and print data collector files daily.
15. Keep track of point numbers used on previous days.