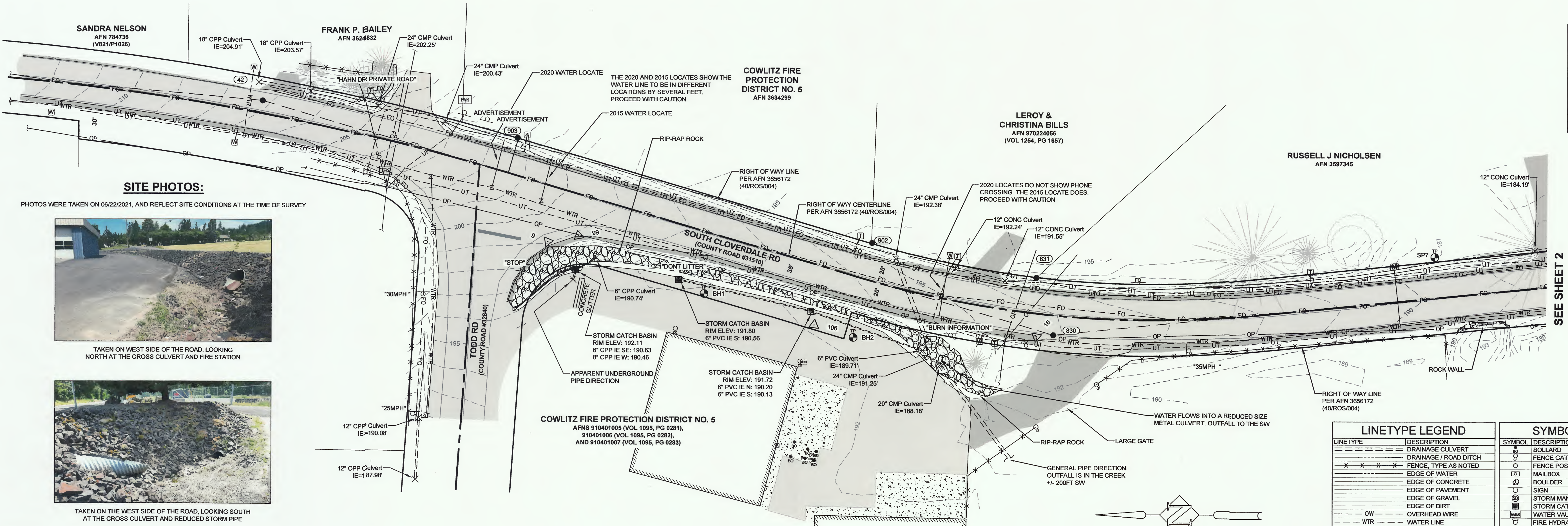




**PURPOSE OF SURVEY**  
THE PURPOSE OF THIS SURVEY WAS TO PROVIDE TOPOGRAPHIC INFORMATION FOR A PORTION OF SOUTH CLOVERDALE ROAD AND CONFER ROAD, FOR PURPOSES OF DESIGN. THIS IS NOT A BOUNDARY SURVEY. SEE 40ROS004 FOR RIGHT OF WAY RESOLUTION.

COUNTY PROJECT NUMBER: 1235 (COMBINED WITH #1301 - CONFER RD)

**VERTICAL DATUM**  
ELEVATION DATUM: NAVD 88  
BENCHMARK: SURVEY CONTROL POINT #6  
LOCATION: AS SHOWN HEREON  
ELEVATION: 186.75'

**HORIZONTAL DATUM / BASIS OF BEARINGS / CONTROL SCHEME**  
BASED ON WASHINGTON STATE PLANE, SOUTH ZONE (SPC 4602 WA S), UTILIZING GROUND DISTANCES, SO DRAWING COORDINATES ARE APPROXIMATELY STATE PLANE (APPROXIMATELY ±0.3') - SEE BELOW.

HORIZONTAL COORDINATES AND BASIS OF BEARINGS ARE BASED ON WASHINGTON STATE PLANE (SOUTH ZONE) - REFERENCE FRAME: NAD83 (2011) (EPOCH+2010.0000), US SURVEY FEET. ALL DISTANCES ARE GROUND, SO STATE PLANE COORDINATES ARE APPROXIMATE, AND WERE DETERMINED FROM NOS OPUS SOLUTIONS, WHICH WERE DERIVED FROM 2 HOUR MINIMUM GPS OBSERVATIONS ON CONTROL POINTS 1 AND 9 (SHOWN HEREON), UTILIZING THE FOLLOWING EXISTING BASE STATIONS:

| PID         | DESIGNATION               | LATITUDE(°)    | LONGITUDE(°)    |
|-------------|---------------------------|----------------|-----------------|
| DG8344 P420 | FANTASYD_1W2004 CORS ARP  | N46°55'18.52"  | W122°51'58.73"  |
| DN2111      | JIME JIM ELAM CORS ARP    | N45°31'23.214" | W122°59'25.841" |
| DK4151 P446 | KELSO_AIR_W2007 CORS ARP  | N46°06'56.369" | W122°53'33.975" |
| DH4129 P688 | MSH_SESLPEVA2004 CORS ARP | N46°10'24.461" | W122°09'38.141" |

CONTROL POINTS 1 AND 9 WERE THEN TIED TOGETHER USING STANDARD TRAVERSE TECHNIQUES, THE RESULTS OF WHICH WERE ADJUSTED TOGETHER IN A WEIGHTED LEAST SQUARES ADJUSTMENT, UTILIZING STARNET SOFTWARE. AN AVERAGE PROJECT COMBINED SCALE FACTOR (0.9999814836) WAS CALCULATED AND APPLIED TO THE PROJECT TO GENERATE GROUND DISTANCES. THE RESULTS WERE THEN TRANSLATED TO MATCH THE ADJUSTED STATE PLANE COORDINATES OF CONTROL POINT NUMBER 6.

-THE CONVERGENCE ANGLE IS -1°40'51" AT CONTROL POINT NUMBER 9.

LOCAL BASIS OF BEARINGS BETWEEN GPS OBSERVED AND ADJUSTED CONTROL POINTS 1 AND 9 IS N08°21'27"W, 2959.12'(GROUND) 2959.01'(GRID).

GROUND COORDINATES THAT ARE SHOWN HEREON HAVE BEEN TRUNCATED TO ELIMINATE CONFUSION WITH TRUE STATE PLANE. ACTUAL STATE PLANE COORDINATES (AFTER LEAST SQUARES ADJUSTMENT OF OPUS COORDINATES AND TRAVERSE) FOR GPS OBSERVED CONTROL POINTS 1, AND 9, AS WELL AS TRAVERSED AND COMPUTED POINT 6 ARE AS FOLLOWS:

|                   |                 |
|-------------------|-----------------|
| 1: N 240836.68673 | E 1052612.89518 |
| 6: N 242348.71156 | E 1052204.97482 |
| 9: N 245764.27674 | E 1052182.80987 |

**RELATIVE VERTICAL POSITIONAL ACCURACY**  
THE CONTOURS SHOWN HEREON ARE FROM DIRECT FIELD OBSERVATIONS. THE RELATIVE VERTICAL POSITIONAL ACCURACY OF THE CONTOURS AND SPOT ELEVATIONS SHOWN HEREON MEETS THOSE STANDARDS DEFINED BY THE NATIONAL SOCIETY OF PROFESSIONAL SURVEYORS (NSPS) PER THAT CERTAIN DOCUMENT ENTITLED "NSPS MODEL STANDARDS FOR TOPOGRAPHIC SURVEYS" (LABELED AS SECTION E), APPROVED 3/12/2002. THOSE STANDARDS ARE AS FOLLOWS FOR A 1" CONTOUR MAP:

CONTOUR LINES AT 1' INTERVALS: ±0.65' VERTICAL POSITIONAL ACCURACY

SPOT ELEVATIONS FOR WELL DEFINED PLANIMETRIC FEATURES: ±0.10' VERTICAL POSITIONAL ACCURACY

**METHOD OF SURVEY**  
FIELD SURVEYS WERE ACCOMPLISHED UTILIZING STANDARD CLOSED TRAVERSE AND RADIAL SURVEY METHODS, AS WELL AS STANDARD GLOBAL POSITIONING SYSTEM (GPS) NETWORK RTK GPS METHODS (60 SECOND OBSERVATIONS, MINIMUM). MEASUREMENTS WERE PERFORMED USING A TOPCON 3-SECOND TOTAL STATION AND TOPCON GR3, SURVEY GRADE GPS UNITS. THE ANGULAR CLOSURE OF TRAVERSE MEETS STANDARDS AS SET FORTH IN WAC332-130-086, LINEAR CLOSURE AFTER AZIMUTH ADJUSTMENT IS GREATER THAN 1:10000. A LEAST SQUARES ADJUSTMENT OF THE DATA WAS PERFORMED.

**NARRATIVE**  
SEE MY RECORD OF SURVEY, AFN 3656172 (40ROS/004) FOR ALL RIGHT OF WAY RESOLUTION AND ALL MONUMENT PRESERVATION INFORMATION. THE CENTERLINE AND RIGHT OF WAY LINES ARE SHOWN HEREON FOR REFERENCE PURPOSES ONLY.

| POINT | NORTHING  | EASTING   | DESCRIPTION                                                  | ORIGIN                    |
|-------|-----------|-----------|--------------------------------------------------------------|---------------------------|
| 42    | 43922.533 | 52260.933 | FD 5/8" IRON ROD NO CAP                                      | CCPWFB 1947-02            |
| 830   | 43483.319 | 52131.671 | FD 1" IRON PIPE                                              | CCPWFB 1947-02            |
| 831   | 43492.778 | 52163.438 | FD 1/2" IRON ROD WITH YPC MARKED "BARBIERI 6386" IN CONCRETE | 23ROS/19                  |
| 902   | 43584.164 | 52182.590 | FD 5/8" IRON ROD WITH YPC MARKED "COWLITZ COUNTY LS 34667"   | COUNTY PROJECT #1204-2009 |
| 903   | 43781.180 | 52240.320 | FD 5/8" IRON ROD WITH YPC MARKED "COWLITZ COUNTY LS 34667"   | COUNTY PROJECT #1204-2009 |

| POINT | NORTHING  | EASTING   | ELEVATION | DESCRIPTION                                                 | ORIGIN      |
|-------|-----------|-----------|-----------|-------------------------------------------------------------|-------------|
| 9     | 43764.330 | 52182.810 | 199.06    | SET MAGNETIC NAIL                                           | THIS SURVEY |
| 16    | 43492.746 | 52130.805 | 194.16    | FD MAGNETIC NAIL                                            | UNKNOWN     |
| 99    | 43747.246 | 52186.058 | 198.90    | FD MAGNETIC NAIL                                            | UNKNOWN     |
| 106   | 43616.331 | 52136.947 | 191.84    | SET MAGNETIC NAIL W/ WASHER MARKED "COWLITZ COUNTY CONTROL" | THIS SURVEY |

#### MONUMENT LEGEND:

- FOUND MONUMENT AS NOTED. PROTECT / PRESERVE WHERE POSSIBLE. - IF TO BE DESTROYED, A PERMIT TO REMOVE A MONUMENT MUST BE FILED WITH THE DEPARTMENT OF NATURAL RESOURCES, THEN REPLACE MONUMENT AFTER CONSTRUCTION

- ▲ ELEV. DESC. - TEMPORARY CONTROL POINT
- #### - SEE MONUMENT DESCRIPTIONS

- NOTES:
- ALL PIPE DIAMETERS ARE INSIDE DIMENSIONS, UNLESS NOTED OTHERWISE.
  - THE TERM "IRON ROD" REFERS TO REINFORCING BAR, SMOOTH RODS (IF ANY) ARE NOTED AS SUCH.
  - ALL FOUND MONUMENTS WERE VISITED AND TIED DURING THIS SURVEY (APRIL 2015, VERIFIED 05/13/2020).
  - SEE RECORD OF SURVEY FILED AT THE COWLITZ COUNTY ENGINEERS OFFICE FOR RIGHT OF WAY RESOLUTION.
  - ANY PRIVATE PROPERTY LINES SHOWN HEREON ARE FOR GENERAL REFERENCE ONLY AS THEY HAVE NOT BEEN RESOLVED NOR MADE PART OF THIS SURVEY.

#### ABBREVIATIONS:

|        |                                          |
|--------|------------------------------------------|
| AFN    | = AUDITOR'S FILE NUMBER                  |
| CCPWFB | = COWLITZ COUNTY PUBLIC WORKS FIELD BOOK |
| CMP    | = CORRUGATED METAL PIPE                  |
| CONC   | = CONCRETE PIPE                          |
| CPP    | = CORRUGATED PLASTIC PIPE                |
| FD     | = FOUND                                  |
| IE     | = INVERT ELEVATION                       |
| IP     | = IRON PIPE                              |
| IR     | = IRON ROD                               |
| MON    | = MONUMENT                               |
| PVC    | = PLASTIC PIPE                           |
| REBAR  | = REINFORCING BAR                        |
| RPC    | = RED PLASTIC CAP                        |
| YPC    | = YELLOW PLASTIC CAP                     |

#### UTILITY STATEMENT:

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM UTILITY PAINT MARKINGS PROVIDED BY OTHERS, THAT WERE AVAILABLE DURING THE FIELD SURVEY. AS-BUILT MAPS WERE REQUESTED FROM THE NOTIFIED UTILITIES - NONE WERE RECEIVED.

THIS SURVEY MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE OF ALL SUCH UTILITIES IN THE AREA. THE UNDERGROUND UTILITIES SHOWN MAY NOT BE IN THE EXACT LOCATION AS NOTED ON THIS SURVEY, AND ARE LOCATED FROM THE INFORMATION PROVIDED. MANHOLES OTHER THAN SANITARY AND STORM SEWER WERE IDENTIFIED BY MANHOLE LIDS AND MAY NOT BE LABELED CORRECTLY.

UTILITY LOCATIONS MUST BE VERIFIED BY THE STATE UTILITY NOTIFICATION CENTER IMMEDIATELY PRIOR TO ANY EXCAVATION.

UTILITY LOCATES WERE REQUESTED FEB 27, 2015 UNDER TICKET NUMBER 15051467 FOLLOWING IS A LIST OF UTILITY PROVIDERS NOTIFIED:

|          |                                |               |
|----------|--------------------------------|---------------|
| 360NET01 | 360 NETWORKS USA               | (888)587-9911 |
| CMCST04  | COMCAST CABLE COMM. MNGMT, LLC | (253)833-2343 |
| COMPU003 | COWLITZ COUNTY PUD             | (360)777-7548 |
| KALAMA01 | CITY OF KALAMA                 | (360)873-3706 |
| KALTEL01 | KALAMA TELEPHONE COMPANY       | (360)873-2755 |
| OLNWA08  | CTLQ-CENTURYLINK               | (800)283-4237 |
| QWEST05  | CTLQ-CENTURYLINK               | (800)283-4237 |

UTILITY LOCATES WERE REQUESTED FEB 2, 2020 UNDER TICKET NUMBER 20038340 FOLLOWING IS A LIST OF UTILITY PROVIDERS NOTIFIED:

|          |                                |               |
|----------|--------------------------------|---------------|
| 360NET01 | ZAYO FNA 360 NETWORKS          | (888)267-1063 |
| CMCST04  | COMCAST CABLE COMM. MNGMT, LLC | (800)778-9140 |
| COMPU003 | COWLITZ COUNTY PUD             | (360)501-8546 |
| HEW004   | HEWLETS & MCCOY                | (509)577-3251 |
| KALAMA01 | CITY OF KALAMA                 | (360)873-3706 |
| KALTEL01 | KALAMA TELEPHONE COMPANY       | (360)873-2755 |
| LEVL301  | LEVEL 3 NOW CENTURYLINK        | (877)368-6344 |
| MC01     | MC                             | (800)288-3427 |
| OLNWA16  | CTLQ-CENTURYLINK               | (800)778-9140 |

NOTE: MULTIPLE DISCREPANCIES WERE DISCOVERED BETWEEN THE LOCATIONS OF THE 2015 AND 2020 UTILITY LOCATES. THE PAINT MARKS FOR VARIOUS PHONE LINES AND FIBER OPTIC LINES INDICATE EITHER A MISREPRESENTATION OF THE UTILITY (ERROR) OR A PHYSICAL CHANGE HAS BEEN MADE AS TO THE LOCATION OF THE UTILITY. FOR MORE SPECIFIC INFORMATION, SEE THE INDIVIDUAL NOTES SHOWN HEREON.

#### LINETYPE LEGEND

| LINETYPE | DESCRIPTION                             |
|----------|-----------------------------------------|
| ---      | DRAINAGE CULVERT                        |
| ---      | DRAINAGE / ROAD DITCH                   |
| X X X    | FENCE, TYPE AS NOTED                    |
| ---      | EDGE OF WATER                           |
| ---      | EDGE OF CONCRETE                        |
| ---      | EDGE OF PAVEMENT                        |
| ---      | EDGE OF GRAVEL                          |
| ---      | EDGE OF DIRT                            |
| ---      | OVERHEAD WIRE                           |
| ---      | WATER LINE                              |
| ---      | FIBER OPTIC LINE                        |
| ---      | TELEPHONE LINE                          |
| ---      | TELEVISION LINE                         |
| ---      | ELECTRIC LINE                           |
| ---      | UTILITY LINE PAINT ENDS                 |
| ---      | HERE, CONNECTION NOT LOCATED OR UNKNOWN |
| ---      | BUILDING LINE                           |
| ---      | MAJOR CONTOUR - SPACED AT 5' INTERVALS  |
| ---      | MINOR CONTOUR - SPACED AT 1' INTERVALS  |

#### HATCH LEGEND

| HATCH | DESCRIPTION               |
|-------|---------------------------|
| ---   | EXISTING ASPHALT SURFACE  |
| ---   | EXISTING CONCRETE SURFACE |
| ---   | EXISTING GRAVEL SURFACE   |

\* NOTE THAT APPROXIMATE TREE DIAMETERS WERE COLLECTED, BUT NOT SHOWN HEREON DUE TO CLARITY ISSUES. PLEASE REQUEST THIS INFORMATION IF NECESSARY. HOWEVER, IT IS LIKELY THE DIAMETERS HAVE CHANGED SINCE THE MAJORITY OF THE INFORMATION WAS COLLECTED IN 2015. WITH THAT SAID, IT IS ALSO LIKELY THERE ARE TREES 6" IN DIAMETER AND LARGER NOT SHOWN HEREON.

#### SYMBOL LEGEND

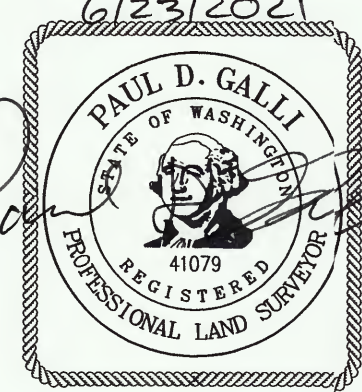
| SYMBOL | DESCRIPTION                                                                    |
|--------|--------------------------------------------------------------------------------|
| ○      | BOLLARD                                                                        |
| ○      | FENCE GATE POST                                                                |
| ○      | FENCE POST                                                                     |
| ○      | MAILBOX                                                                        |
| ○      | BOLLARD                                                                        |
| ○      | SIGN                                                                           |
| ○      | STORM MANHOLE                                                                  |
| ○      | STORM CATCH BASIN                                                              |
| ○      | WATER VAULT                                                                    |
| ○      | FIRE HYDRANT                                                                   |
| ○      | WATER METER                                                                    |
| ○      | WATER VALVE                                                                    |
| ○      | GUY ANCHOR                                                                     |
| ○      | GUY POLE                                                                       |
| ○      | LIGHT POLE                                                                     |
| ○      | POWER MARKER                                                                   |
| ○      | POWER METER                                                                    |
| ○      | POWER VAULT                                                                    |
| ○      | POWER TRANSFORMER                                                              |
| ○      | UTILITY POLE                                                                   |
| ○      | YARD LIGHT                                                                     |
| ○      | FIBER OPTIC MARKER                                                             |
| ○      | FIBER OPTIC VAULT                                                              |
| ○      | TELEPHONE PEDESTAL                                                             |
| ○      | TELEPHONE VAULT                                                                |
| ○      | CABLE TV PEDESTAL                                                              |
| ○      | HEDGE                                                                          |
| ○      | SHRUB                                                                          |
| ○      | CONIFER TREE*                                                                  |
| ○      | CONIFER TREE CLUMP*                                                            |
| ○      | DECIDUOUS TREE*                                                                |
| ○      | DECIDUOUS TREE CLUMP*                                                          |
| ○      | WETLAND OR OHWL FLAG DELINEATED BY OTHERS TIED ON 9/30/2020. LABELED AS SHOWN. |
| ○      | TEST PIT OR BORE HOLE TIED ON 9/30/2020. LABELED AS SHOWN.                     |

#### NOTE

IN 2020 AND 2021, VISUAL INSPECTIONS WERE MADE IN AN EFFORT TO IDENTIFY AND UPDATE NOTICEABLE CHANGES TO GROUND DATA AND SURFACE FEATURES. SEVERAL AREAS WITHIN THE PROJECT LIMITS HAVE UNDERGONE MODERATE TO SIGNIFICANT CHANGES BY THE HOMEOWNERS SINCE 2015. EXAMPLES OF THESE CHANGES INCLUDE (BUT ARE NOT LIMITED TO) GRADING, FENCE REMOVAL/BUILDING, TREE REMOVAL/PLANTING, AND DRIVEWAY ALTERATIONS. IT IS APPARENT THAT THIS AREA IS SUBJECT TO CHANGE AT ANY GIVEN TIME. THE SITE CONDITIONS SHOWN HEREON ARE VALID AT THE TIME OF SURVEY. I WOULD RECOMMENDED FURTHER INSPECTION/UPDATES TO THE GROUND DATA AND SURFACE FEATURES FOR FUTURE DESIGN PURPOSES.

#### REFERENCE SURVEYS LEGEND:

- ###/CR### - LAND CORNER RECORD BOOK AND PAGE, COWLITZ COUNTY SURVEY RECORDS
- ###/PLATS### - SHORT PLAT BOOK AND PAGE, COWLITZ COUNTY SURVEY RECORDS
- ###/ROSD### - SUBDIVISION PLAT BOOK AND PAGE, COWLITZ COUNTY SURVEY RECORDS
- ###/ROS### - RECORD OF SURVEY BOOK AND PAGE, COWLITZ COUNTY SURVEY RECORDS
- CCPWFB-####-## - COWLITZ COUNTY PUBLIC WORKS FIELD BOOK YEAR AND NUMBER, ON FILE IN THE OFFICE OF THE COWLITZ COUNTY ENGINEER.
- ###-## - MEASURED DIMENSION
- ###-##(##) - RECORD DIMENSION PER REFERENCE NUMBER (BELOW)
- ###-##(##) - MEASURED AND RECORD DIMENSION PER REF. NO. (BELOW)
- (1) - RECORD INFORMATION PER (RECORD INFO. HERE)
- (2) - RECORD INFORMATION PER (RECORD INFO. HERE)
- (3) - RECORD INFORMATION PER (RECORD INFO. HERE)
- (4) - RECORD INFORMATION PER (RECORD INFO. HERE)



|                     |                |
|---------------------|----------------|
| CA PROJECT MANAGER  | N/A DATE       |
| PG CB DRAWN BY      | 6/23/2021 DATE |
| PG CB BH CHECKED BY | 6/23/2021 DATE |

|                                                  |
|--------------------------------------------------|
| HORIZ. SCALE: 1" = 30'                           |
| VERT. SCALE: 1" = 10'                            |
| PROJECT ID: 1235                                 |
| ROAD NO.: 31510                                  |
| COMPUTER FILE: 1235 S CLOVERDALE-CONFER 2021.DWG |
| FIELD BOOK(S): 2015-01, 2019-02 & 2021-02        |

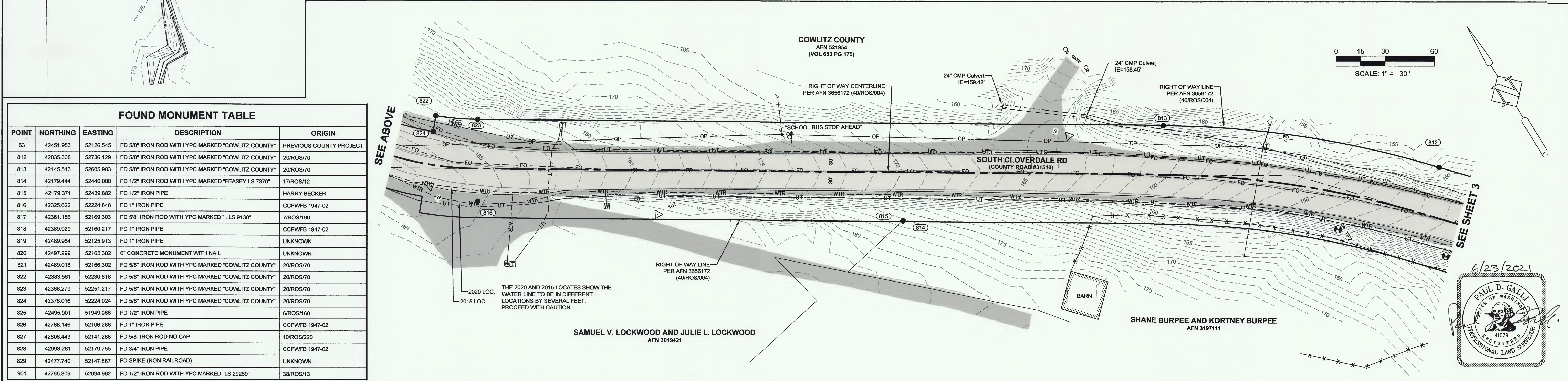
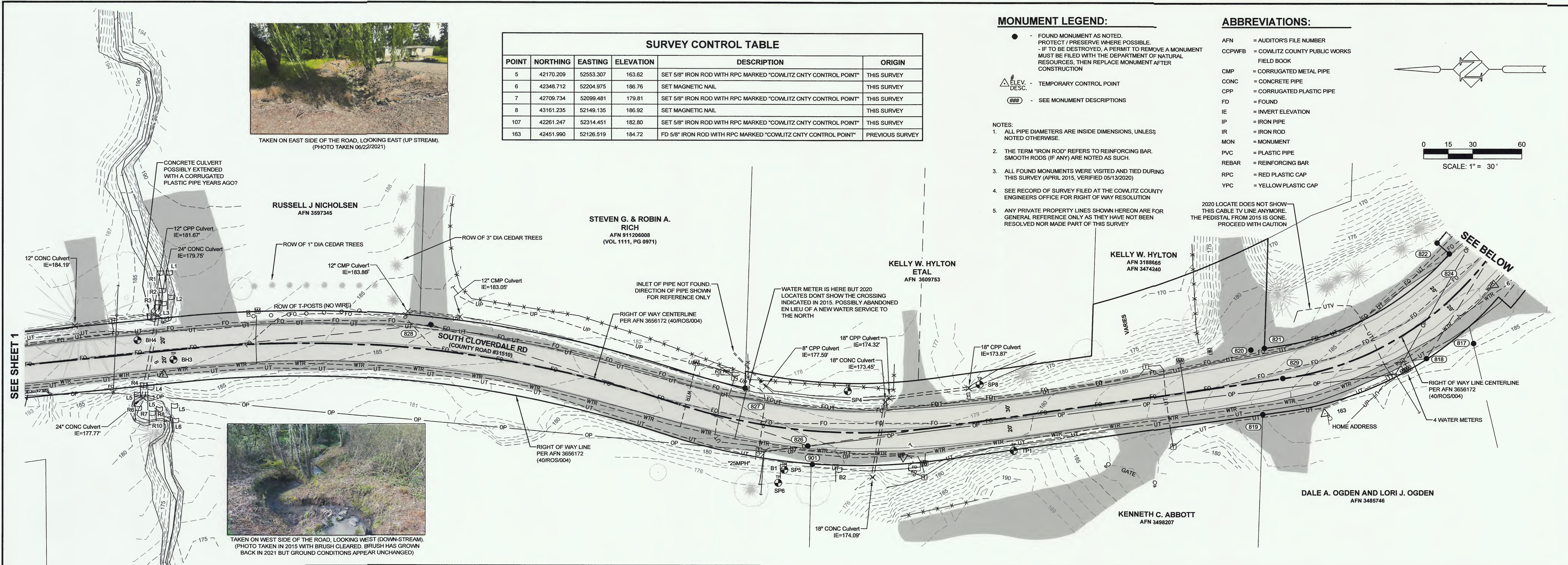


DEPARTMENT OF PUBLIC WORKS  
1600 13TH AVENUE SOUTH  
KELSO, WASHINGTON 98626

LOCATED IN THE NE ONE-QUARTER AND THE SE ONE-QUARTER OF SECTION 28, TOWNSHIP 6 NORTH, RANGE 1 WEST, WILLAMETTE MERIDIAN  
COWLITZ COUNTY, WASHINGTON  
FIELD WORK DATES: FEB-APRIL 2015, FEB-MAY 2020, & SEPTEMBER 30, 2020 (TEST PITS AND FLAGGING)  
JUNE 2021

**SOUTH CLOVERDALE RD & CONFER RD**  
**TOPOGRAPHIC SURVEY FOR ROAD & INTERSECTION IMPROVEMENTS**

SHEET  
1  
OF  
5



# SITE PHOTOS:

PHOTOS WERE TAKEN PRIOR TO THIS SURVEY, BUT REFLECT GROUND CONDITIONS AT THE TIME OF THIS SURVEY



TAKEN WEST OF THE BOX CULVERT, LOOKING EAST AT THE GABION WALL AND OUTLET OF THE CULVERT. (PHOTO TAKEN IN 2015 WITH BRUSH CLEARED. BRUSH HAS GROWN BACK IN 2021 BUT THE GROUND CONDITIONS APPEAR UNCHANGED)



TAKEN FROM INSIDE THE BOX CULVERT AT THE WEST END, LOOKING WEST AT THE OUTFALL. (TAKEN IN 2020)



TAKEN ON THE WEST END OF THE ROAD ON TOP OF THE GABION WALL, LOOKING DOWNSTREAM TO THE WEST. (PHOTO TAKEN IN 2015 WITH BRUSH CLEARED. BRUSH HAS GROWN BACK IN 2021 BUT GROUND CONDITION APPEAR UNCHANGED)

# SITE PHOTOS:

PHOTOS WERE TAKEN PRIOR TO THIS SURVEY, BUT REFLECT GROUND CONDITIONS AT THE TIME OF THIS SURVEY



TAKEN ON EAST SIDE OF THE ROAD, UPSTREAM FROM THE CULVERT, LOOKING WEST AT THE BOX INLET (PHOTO TAKEN 3/12/2020)



TAKEN AT THE INLET OF THE CULVERT, LOOKING WEST THROUGH THE BOX (PHOTO TAKEN 3/12/2020)



TAKEN ON WEST SIDE OF THE ROAD, LOOKING SOUTHEASTERLY AT THE ROCK CLIFF (PHOTO TAKEN 3/12/2020)

# ABBREVIATIONS:

|        |                                          |
|--------|------------------------------------------|
| AFN    | = AUDITOR'S FILE NUMBER                  |
| CCPWFB | = COWLITZ COUNTY PUBLIC WORKS FIELD BOOK |
| CMP    | = CORRUGATED METAL PIPE                  |
| CONC   | = CONCRETE PIPE                          |
| CPP    | = CORRUGATED PLASTIC PIPE                |
| FD     | = FOUND                                  |
| IE     | = INVERT ELEVATION                       |
| IP     | = IRON PIPE                              |
| IR     | = IRON ROD                               |
| MON    | = MONUMENT                               |
| PVC    | = PLASTIC PIPE                           |
| REBAR  | = REINFORCING BAR                        |
| RPC    | = RED PLASTIC CAP                        |
| YPC    | = YELLOW PLASTIC CAP                     |

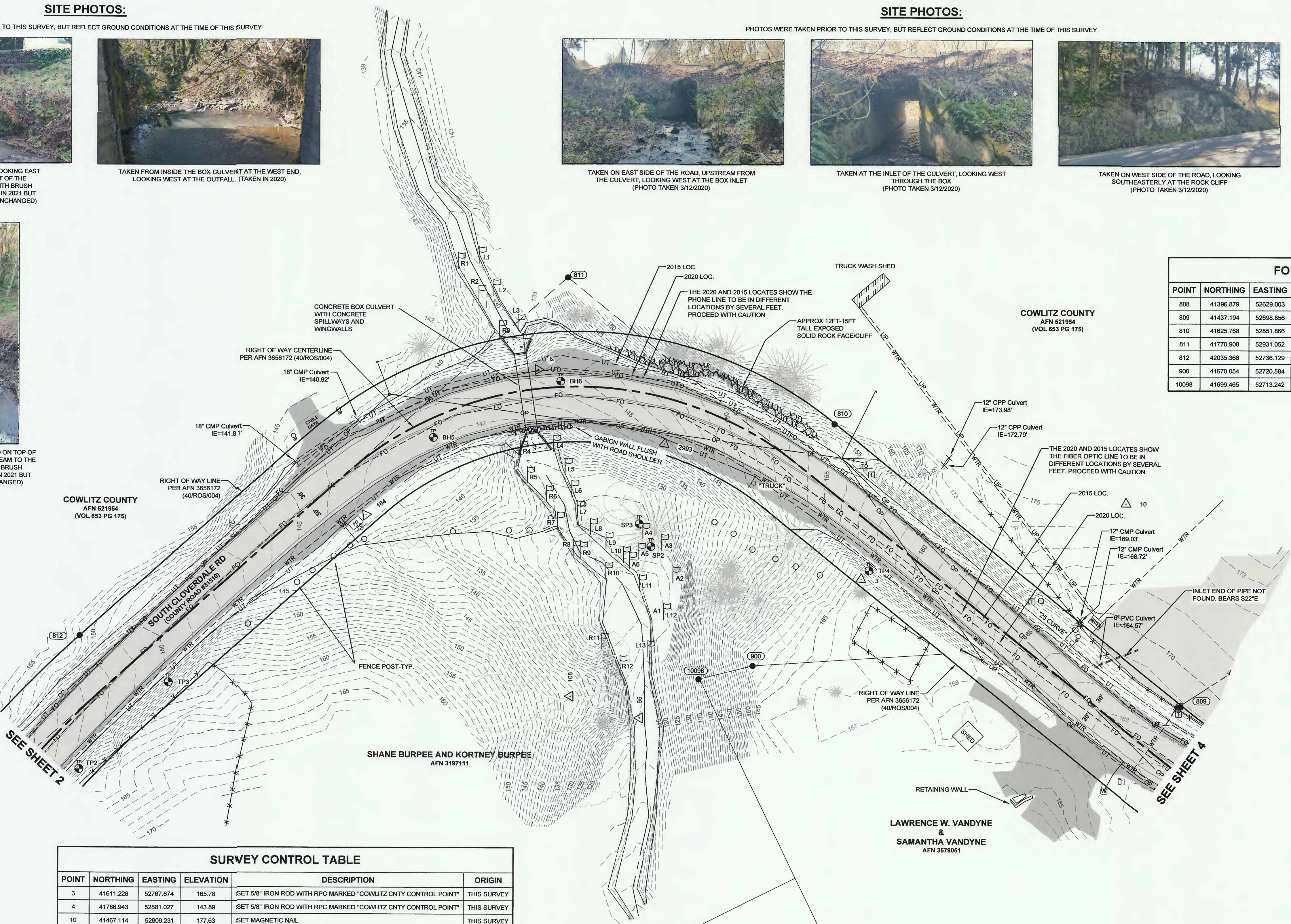
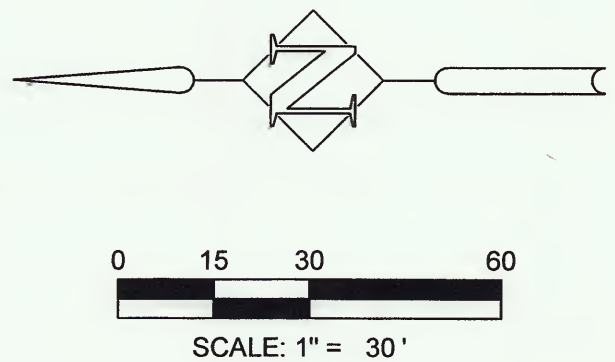
# FOUND MONUMENT TABLE

| POINT | NORTHING  | EASTING   | DESCRIPTION                                       | ORIGIN         |
|-------|-----------|-----------|---------------------------------------------------|----------------|
| 808   | 41396.879 | 52629.003 | FD 5/8" IRON ROD WITH YPC MARKED "COWLITZ COUNTY" | CCPWFB 1947-02 |
| 809   | 41437.194 | 52698.856 | FD 5/8" IRON ROD WITH YPC MARKED "COWLITZ COUNTY" | 20/ROS/70      |
| 810   | 41625.768 | 52851.866 | FD 5/8" IRON ROD WITH YPC MARKED "COWLITZ COUNTY" | 20/ROS/70      |
| 811   | 41770.908 | 52931.052 | FD 1" IRON PIPE                                   | CCPWFB 1947-02 |
| 812   | 42035.368 | 52736.129 | FD 5/8" IRON ROD WITH YPC MARKED "COWLITZ COUNTY" | 20/ROS/70      |
| 900   | 41670.054 | 52720.584 | FD 1/2" IRON PIPE GALVANIZED                      | 25/ROS/8       |
| 10098 | 41699.465 | 52713.242 | FD 5/8" IRON ROD WITH YPC MARKED "LS 18087"       | 25/ROS/8       |

# MONUMENT LEGEND:

- FOUND MONUMENT AS NOTED. PROTECT / PRESERVE WHERE POSSIBLE. IF TO BE DESTROYED, A PERMIT TO REMOVE A MONUMENT MUST BE FILED WITH THE DEPARTMENT OF NATURAL RESOURCES. THEN REPLACE MONUMENT AFTER CONSTRUCTION
- TEMPORARY CONTROL POINT
- SEE MONUMENT DESCRIPTIONS

- NOTES:
- ALL PIPE DIAMETERS ARE INSIDE DIMENSIONS, UNLESS NOTED OTHERWISE.
  - THE TERM "IRON ROD" REFERS TO REINFORCING BAR. SMOOTH RODS (IF ANY) ARE NOTED AS SUCH.
  - ALL FOUND MONUMENTS WERE VISITED AND TIED DURING THIS SURVEY (APRIL 2015, VERIFIED 05/13/2020)
  - SEE RECORD OF SURVEY FILED AT THE COWLITZ COUNTY ENGINEERS OFFICE FOR RIGHT OF WAY RESOLUTION
  - ANY PRIVATE PROPERTY LINES SHOWN HEREON ARE FOR GENERAL REFERENCE ONLY AS THEY HAVE NOT BEEN RESOLVED NOR MADE PART OF THIS SURVEY



# SURVEY CONTROL TABLE

| POINT | NORTHING  | EASTING   | ELEVATION | DESCRIPTION                                                    | ORIGIN      |
|-------|-----------|-----------|-----------|----------------------------------------------------------------|-------------|
| 3     | 41611.228 | 52767.674 | 165.78    | SET 5/8" IRON ROD WITH RPC MARKED "COWLITZ CNTY CONTROL POINT" | THIS SURVEY |
| 4     | 41786.943 | 52881.027 | 143.89    | SET 5/8" IRON ROD WITH RPC MARKED "COWLITZ CNTY CONTROL POINT" | THIS SURVEY |
| 10    | 41467.114 | 52809.231 | 177.63    | SET MAGNETIC NAIL                                              | THIS SURVEY |
| 65    | 41731.328 | 52891.980 | 114.94    | SET SCRIBE "X"                                                 | THIS SURVEY |
| 108   | 41769.121 | 52703.633 | 139.59    | SET 5/8" IRON ROD WITH RPC MARKED "COWLITZ CNTY CONTROL POINT" | THIS SURVEY |
| 164   | 41880.302 | 52801.803 | 142.63    | SET HUB AND TACK                                               | THIS SURVEY |
| 2993  | 41718.214 | 52840.698 | 144.61    | SET HUB AND TACK                                               | THIS SURVEY |

CA PROJECT MANAGER N/A DATE  
PG CB DRAWN BY 6/23/2021 DATE  
PG CB BH 6/23/2021 DATE  
CHECKED BY

HORIZ. SCALE: 1" = 30'  
VERT. SCALE: 1" = 30' CONTOURS  
PROJECT ID: 1235  
ROAD NO.: 31510  
COMPUTER FILE: 1235-CLOVERDALE-CONFER 2021.DWG  
FIELD BOOK(S): 2015-01, 2019-02 & 2021-02



DEPARTMENT OF PUBLIC WORKS

1600 13TH AVENUE SOUTH  
KELSO, WASHINGTON 98626

LOCATED IN THE NE ONE-QUARTER AND THE SE ONE-QUARTER OF SECTION 28, TOWNSHIP 6 NORTH, RANGE 1 WEST, WILLAMETTE MERIDIAN  
COWLITZ COUNTY, WASHINGTON

FIELD WORK DATES: FEB-APRIL 2015, FEB-MAY 2020, & SEPTEMBER 30, 2020 (TEST PITS AND FLAGGING)  
JUNE 2021

**SOUTH CLOVERDALE RD & CONFER RD**

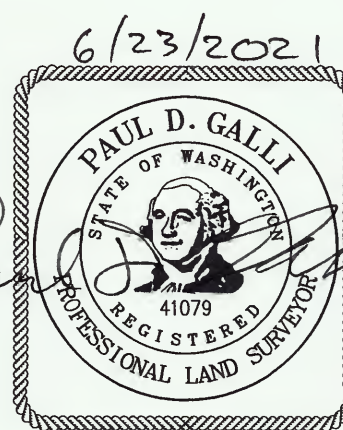
**TOPOGRAPHIC SURVEY FOR ROAD & INTERSECTION IMPROVEMENTS**

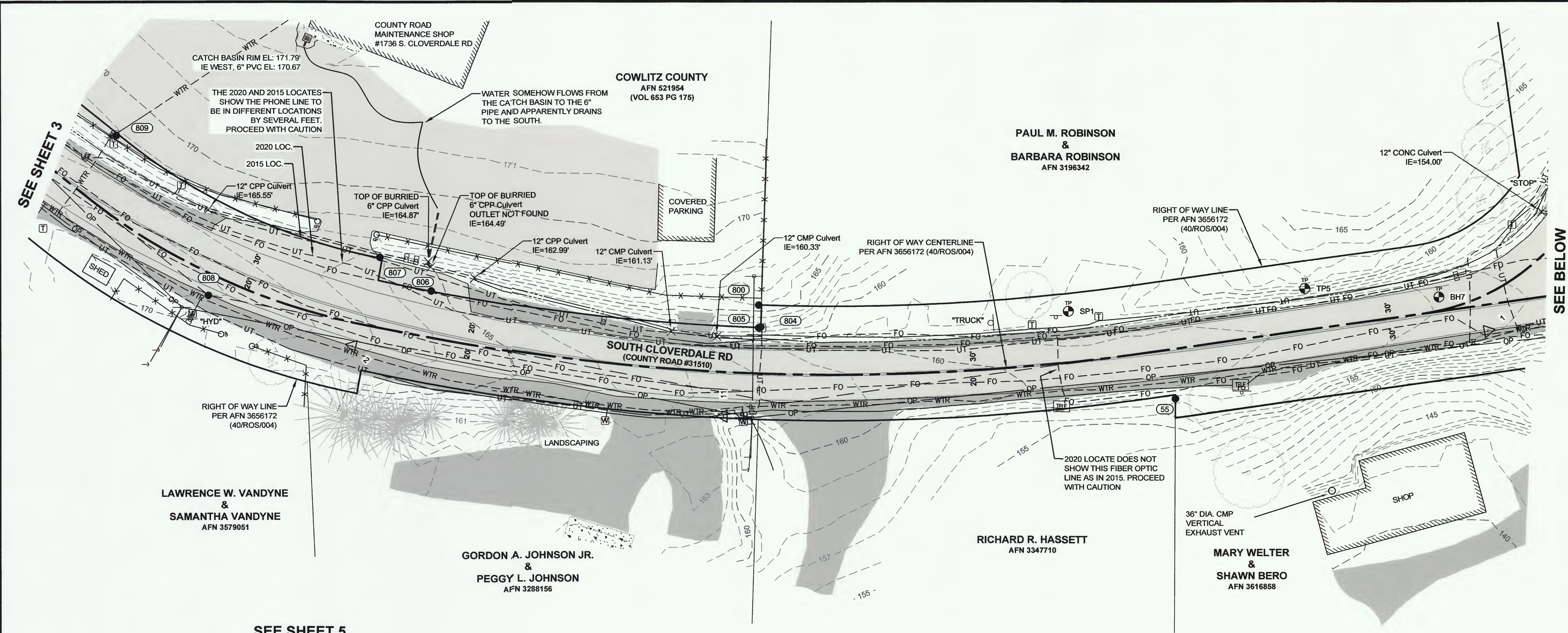
SHEET

3

OF

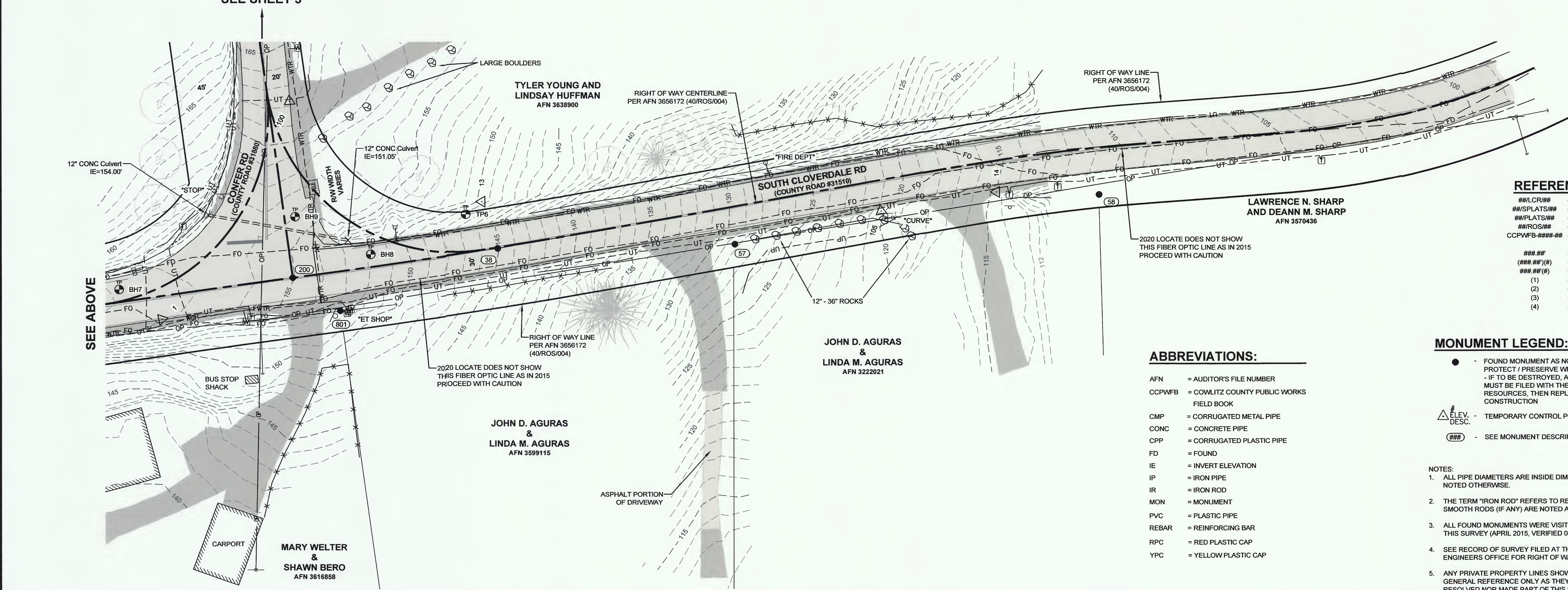
5





| FOUND MONUMENT TABLE |           |           |                                                        |                |
|----------------------|-----------|-----------|--------------------------------------------------------|----------------|
| POINT                | NORTHING  | EASTING   | DESCRIPTION                                            | ORIGIN         |
| 38                   | 40668.123 | 52648.016 | FD SPIKE                                               | CCPWFB 1947-02 |
| 55                   | 40973.706 | 52583.467 | FD 5/8" IRON ROD WITH RPC MARKED "NICHOLSON PLS 13064" | 9/SPLATS/28    |
| 57                   | 40548.835 | 52650.118 | FD 5/8" IRON ROD WITH RPC MARKED "NICHOLSON PLS 13064" | 9/SPLATS/28    |
| 58                   | 40365.723 | 52675.076 | FD 5/8" IRON ROD WITH RPC MARKED "NICHOLSON PLS 13064" | 9/SPLATS/28    |
| 200                  | 40770.741 | 52633.738 | FD BRIDGE SPIKE                                        | CCPWFB 1947-02 |
| 800                  | 41156.149 | 52624.493 | FD 1" IRON PIPE                                        | UNKNOWN        |
| 801                  | 40746.846 | 52617.223 | FD 5/8" IRON ROD WITH RPC MARKED "NICHOLSON PLS 13064" | 9/SPLATS/28    |
| 804                  | 41155.276 | 52614.724 | FD 5/8" IRON ROD WITH YPC MARKED "COWLITZ COUNTY"      | 20/ROS/70      |
| 805                  | 41156.179 | 52614.434 | FD 5/8" IRON ROD NO CAP                                | UNKNOWN        |
| 806                  | 41299.200 | 52630.988 | FD 5/8" IRON ROD NO CAP                                | 20/ROS/70      |
| 807                  | 41321.694 | 52645.632 | FD 5/8" IRON ROD WITH YPC, UNREADABLE                  | 20/ROS/70      |
| 808                  | 41396.879 | 52629.003 | FD 5/8" IRON ROD WITH YPC MARKED "COWLITZ COUNTY"      | CCPWFB 1947-02 |

| SURVEY CONTROL TABLE |           |           |           |                                                                |
|----------------------|-----------|-----------|-----------|----------------------------------------------------------------|
| POINT                | NORTHING  | EASTING   | ELEVATION | DESCRIPTION                                                    |
| 1                    | 40836.630 | 52612.910 | 157.04    | FD MAGNETIC NAIL                                               |
| 2                    | 41333.882 | 52606.914 | 167.31    | FD MAGNETIC NAIL                                               |
| 11                   | 41171.641 | 52575.933 | 161.31    | SET 5/8" IRON ROD WITH RPC MARKED "COWLITZ CNTY CONTROL POINT" |
| 13                   | 40676.071 | 52671.570 | 149.51    | SET 5/8" IRON ROD WITH RPC MARKED "COWLITZ CNTY CONTROL POINT" |
| 14                   | 40417.351 | 52676.505 | 114.81    | SET 5/8" IRON ROD WITH RPC MARKED "COWLITZ CNTY CONTROL POINT" |
| 100                  | 40772.285 | 52722.206 | 162.31    | FD PK NAIL 2916                                                |
| 105                  | 40475.278 | 52666.781 | 120.50    | FD HUB 2718                                                    |

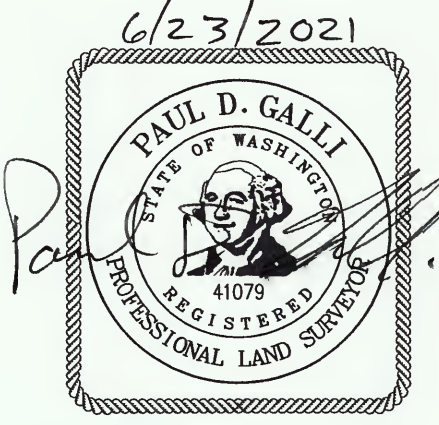


- REFERENCE SURVEYS LEGEND:**
- ###/CRJ### - LAND CORNER RECORD BOOK AND PAGE, COWLITZ COUNTY SURVEY RECORDS
  - ###/SPLATS### - SHORT PLAT BOOK AND PAGE, COWLITZ COUNTY SURVEY RECORDS
  - ###/PLATS### - SUBDIVISION PLAT BOOK AND PAGE, COWLITZ COUNTY SURVEY RECORDS
  - ###/ROS### - RECORD OF SURVEY BOOK AND PAGE, COWLITZ COUNTY SURVEY RECORDS
  - CCPWFB-####### - COWLITZ COUNTY PUBLIC WORKS FIELD BOOK YEAR AND NUMBER, ON FILE IN THE OFFICE OF THE COWLITZ COUNTY ENGINEER.
  - #### - MEASURED DIMENSION
  - (####)### - RECORD DIMENSION PER REFERENCE NUMBER (BELOW)
  - ####(##) - MEASURED AND RECORD DIMENSION PER REF. NO. (BELOW)
  - (1) - RECORD INFORMATION PER (RECORD INFO. HERE)
  - (2) - RECORD INFORMATION PER (RECORD INFO. HERE)
  - (3) - RECORD INFORMATION PER (RECORD INFO. HERE)
  - (4) - RECORD INFORMATION PER (RECORD INFO. HERE)

**MONUMENT LEGEND:**

- - FOUND MONUMENT AS NOTED. PROTECT / PRESERVE WHERE POSSIBLE. - IF TO BE DESTROYED, A PERMIT TO REMOVE A MONUMENT MUST BE FILED WITH THE DEPARTMENT OF NATURAL RESOURCES, THEN REPLACE MONUMENT AFTER CONSTRUCTION
- △ ELEV. - TEMPORARY CONTROL POINT
- DESC. -
- ### - SEE MONUMENT DESCRIPTIONS

- NOTES:
- ALL PIPE DIAMETERS ARE INSIDE DIMENSIONS, UNLESS NOTED OTHERWISE.
  - THE TERM "IRON ROD" REFERS TO REINFORCING BAR. SMOOTH RODS (IF ANY) ARE NOTED AS SUCH.
  - ALL FOUND MONUMENTS WERE VISITED AND TIED DURING THIS SURVEY (APRIL 2015, VERIFIED 05/13/2020)
  - SEE RECORD OF SURVEY FILED AT THE COWLITZ COUNTY ENGINEERS OFFICE FOR RIGHT OF WAY RESOLUTION
  - ANY PRIVATE PROPERTY LINES SHOWN HEREON ARE FOR GENERAL REFERENCE ONLY AS THEY HAVE NOT BEEN RESOLVED NOR MADE PART OF THIS SURVEY



CA  
PROJECT MANAGER

N/A  
DATE

PG CB  
DRAWN BY

6/23/2021  
DATE

PG CB BH  
CHECKED BY

6/23/2021  
DATE

HORIZ. SCALE: 1" = 30'

VERT. SCALE: 1" CONTOURS

PROJECT ID: 1235

ROAD NO. : 31510

COMPUTER FILE: 1235-CLOVERDALE-  
CONFER 2021.DWG

FIELD BOOK(S): 2015-01, 2019-02 & 2021-02

DEPARTMENT  
OF  
PUBLIC WORKS

1600 13TH AVENUE SOUTH  
KELSO, WASHINGTON 98626

LOCATED IN THE NE ONE-QUARTER AND THE SE ONE-QUARTER OF SECTION 28,  
TOWNSHIP 6 NORTH, RANGE 1 WEST, WILLAMETTE MERIDIAN  
COWLITZ COUNTY, WASHINGTON

FIELD WORK DATES: FEB-APRIL 2015, FEB-MAY 2020, & SEPTEMBER 30, 2020 (TEST PITS AND FLAGGING)  
JUNE 2021

**SOUTH CLOVERDALE RD &  
CONFER RD**

**TOPOGRAPHIC SURVEY FOR  
ROAD & INTERSECTION IMPROVEMENTS**

SHEET  
**4**  
OF  
**5**

REFERENCE SURVEYS LEGEND:

- ##(LCR)## - LAND CORNER RECORD BOOK AND PAGE, COWLITZ COUNTY SURVEY RECORDS  
##(SP)## - SHORT PLAT BOOK AND PAGE, COWLITZ COUNTY SURVEY RECORDS  
##(PL)## - SUBDIVISION PLAT BOOK AND PAGE, COWLITZ COUNTY SURVEY RECORDS  
##(ROS)## - RECORD OF SURVEY BOOK AND PAGE, COWLITZ COUNTY SURVEY RECORDS  
CCPWF#-###-### - COWLITZ COUNTY PUBLIC WORKS FIELD BOOK YEAR AND NUMBER, ON FILE IN THE OFFICE OF THE COWLITZ COUNTY ENGINEER
- ### - MEASURED DIMENSION  
###(REF) - RECORD DIMENSION PER REFERENCE NUMBER (BELOW)  
###(M) - MEASURED AND RECORD DIMENSION PER REF. NO. (BELOW)  
(1) - RECORD INFORMATION PER (RECORD INFO. HERE)  
(2) - RECORD INFORMATION PER (RECORD INFO. HERE)  
(3) - RECORD INFORMATION PER (RECORD INFO. HERE)  
(4) - RECORD INFORMATION PER (RECORD INFO. HERE)

SYMBOL LEGEND

| SYMBOL | DESCRIPTION                                                                    |
|--------|--------------------------------------------------------------------------------|
|        | FENCE GATE POST                                                                |
|        | FENCE POST                                                                     |
|        | MAILBOX                                                                        |
|        | BOULDER                                                                        |
|        | SIGN                                                                           |
|        | STORM CATCH BASIN                                                              |
|        | FIRE HYDRANT                                                                   |
|        | WATER METER                                                                    |
|        | WATER VALVE                                                                    |
|        | GUY ANCHOR                                                                     |
|        | GUY POLE                                                                       |
|        | LIGHT POLE                                                                     |
|        | POWER MARKER                                                                   |
|        | POWER METER                                                                    |
|        | POWER VAULT                                                                    |
|        | POWER TRANSFORMER                                                              |
|        | UTILITY POLE                                                                   |
|        | YARD LIGHT                                                                     |
|        | FIBER OPTIC MARKER                                                             |
|        | FIBER OPTIC VAULT                                                              |
|        | TELEPHONE PEDESTAL                                                             |
|        | TELEPHONE VAULT                                                                |
|        | CABLE TV PEDESTAL                                                              |
|        | HEDGE                                                                          |
|        | SHRUB                                                                          |
|        | CONIFER TREE*                                                                  |
|        | CONIFER TREE CLUMP*                                                            |
|        | DECIDUOUS TREE*                                                                |
|        | DECIDUOUS TREE CLUMP*                                                          |
|        | WETLAND OR OHWL FLAG DELINEATED BY OTHERS TIED ON 9/30/2020. LABELED AS SHOWN. |
|        | TEST PIT OR BORE HOLE TIED ON 9/30/2020. LABELED AS SHOWN.                     |

LINETYPE LEGEND

| LINETYPE | DESCRIPTION                                                     |
|----------|-----------------------------------------------------------------|
|          | DRAINAGE CULVERT                                                |
|          | DRAINAGE / ROAD DITCH                                           |
|          | FENCE, TYPE AS NOTED                                            |
|          | EDGE OF WATER                                                   |
|          | EDGE OF CONCRETE                                                |
|          | EDGE OF PAVEMENT                                                |
|          | EDGE OF GRAVEL                                                  |
|          | EDGE OF DIRT                                                    |
|          | OVERHEAD WIRE                                                   |
|          | WATER LINE                                                      |
|          | FIBER OPTIC LINE                                                |
|          | TELEPHONE LINE                                                  |
|          | TELEVISION LINE                                                 |
|          | ELECTRIC LINE                                                   |
|          | UTILITY LINE PAINT ENDS HERE, CONNECTION NOT LOCATED OR UNKNOWN |
|          | BUILDING LINE                                                   |
|          | MAJOR CONTOUR - SPACED AT 5' INTERVALS                          |
|          | MINOR CONTOUR - SPACED AT 1' INTERVALS                          |

HATCH LEGEND

| HATCH | DESCRIPTION               |
|-------|---------------------------|
|       | EXISTING ASPHALT SURFACE  |
|       | EXISTING CONCRETE SURFACE |
|       | EXISTING GRAVEL SURFACE   |

\* NOTE THAT APPROXIMATE TREE DIAMETERS WERE COLLECTED, BUT NOT SHOWN HEREON DUE TO CLARITY ISSUES. PLEASE REQUEST THIS INFORMATION IF NECESSARY. HOWEVER, IT IS LIKELY THE DIAMETERS HAVE CHANGED SINCE THE MAJORITY OF THE INFORMATION WAS COLLECTED IN 2015. WITH THAT SAID, IT IS LIKELY THERE ARE TREES 6" IN DIAMETER AND LARGER NOT SHOWN HEREON.

FOUND MONUMENT TABLE

| POINT | NORTHING  | EASTING   | DESCRIPTION                                | ORIGIN         |
|-------|-----------|-----------|--------------------------------------------|----------------|
| 31    | 40781.484 | 52829.153 | FD 5/8" IRON ROD WITH YPC MARKED "LS 9025" | 12/ROS/176     |
| 201   | 40924.604 | 53124.376 | FD 5/8" IRON ROD WITH YPC MARKED "LS 9025" | 12/ROS/176     |
| * 202 | 41126.211 | 53422.049 | FD 5/8" IRON ROD WITH YPC MARKED "LS 9025" | 7/PLATS/84     |
| * 203 | 41141.832 | 53423.603 | FD 1" IRON PIPE                            | CCPWF# 1947-02 |

\* NOT SHOWN HEREON

SURVEY CONTROL TABLE

| POINT | NORTHING  | EASTING   | ELEVATION | DESCRIPTION           | ORIGIN             |
|-------|-----------|-----------|-----------|-----------------------|--------------------|
| 12    | 40889.079 | 52927.864 | 163.65    | SET HUB AND TACK      | THIS SURVEY        |
| 100   | 40772.285 | 52722.206 | 162.31    | FD PK NAIL 2916       | CCPW PROJECT #1301 |
| 101   | 40787.800 | 52835.357 | 171.04    | FD PK NAIL 1642       | CCPW PROJECT #1301 |
| 102   | 40804.260 | 52905.824 | 172.00    | FD 60D SPIKE 3215     | CCPW PROJECT #1301 |
| 103   | 40843.249 | 52994.218 | 171.56    | FD HUB 2458           | CCPW PROJECT #1301 |
| 104   | 40780.670 | 52796.137 | 168.92    | FD MAGNETIC NAIL 2948 | CCPW PROJECT #1301 |

MONUMENT LEGEND:

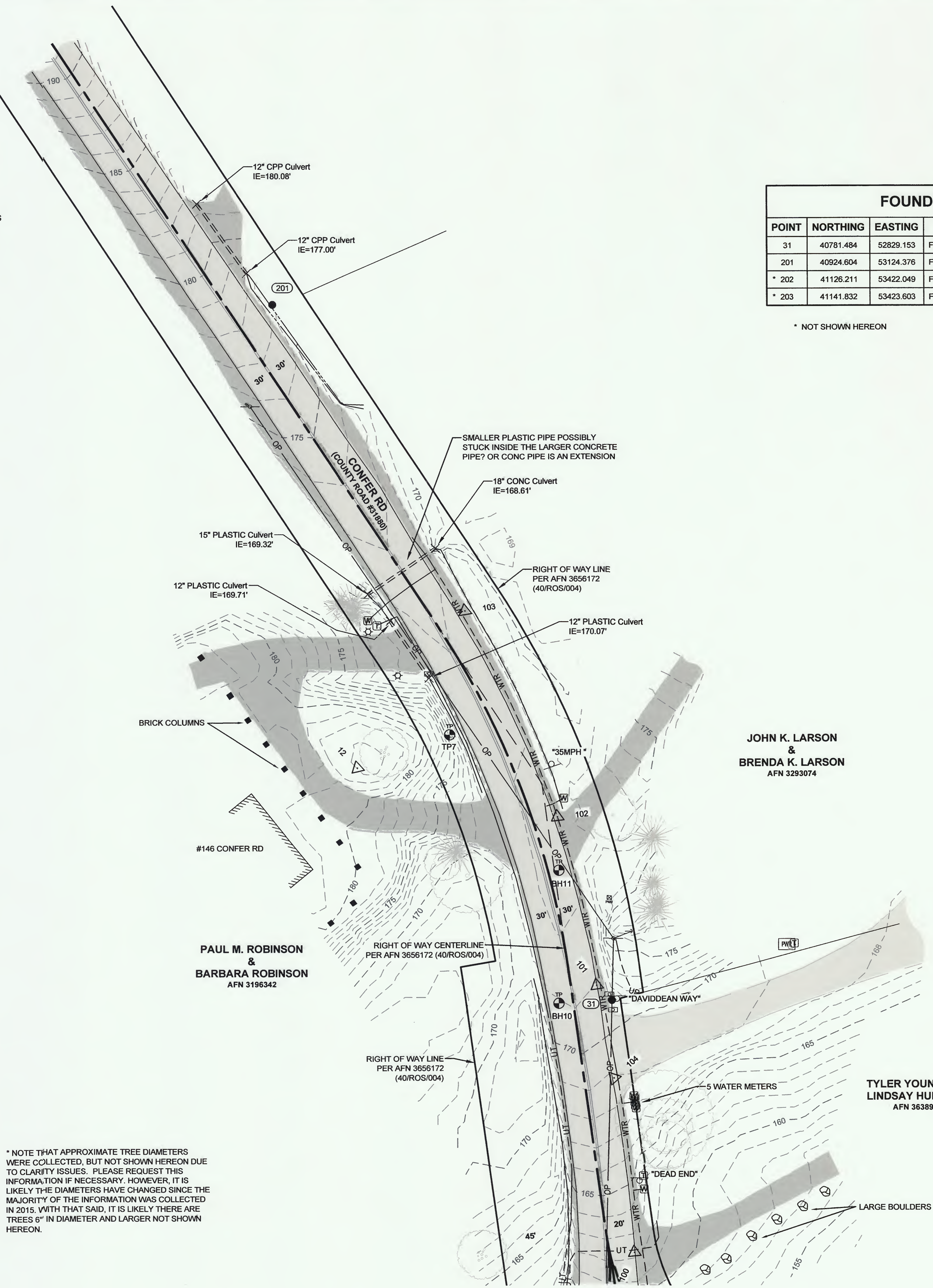
- - FOUND MONUMENT AS NOTED. PROTECT / PRESERVE WHERE POSSIBLE. IF TO BE DESTROYED, A PERMIT TO REMOVE A MONUMENT MUST BE FILED WITH THE DEPARTMENT OF NATURAL RESOURCES, THEN REPLACE MONUMENT AFTER CONSTRUCTION
- ELEV. DESC. - TEMPORARY CONTROL POINT
- ### - SEE MONUMENT DESCRIPTIONS

NOTES:

- ALL PIPE DIAMETERS ARE INSIDE DIMENSIONS, UNLESS NOTED OTHERWISE.
- THE TERM "IRON ROD" REFERS TO REINFORCING BAR. SMOOTH RODS (IF ANY) ARE NOTED AS SUCH.
- ALL FOUND MONUMENTS WERE VISITED AND TIED DURING THIS SURVEY (APRIL 2015, VERIFIED 05/13/2020)
- SEE RECORD OF SURVEY FILED AT THE COWLITZ COUNTY ENGINEERS OFFICE FOR RIGHT OF WAY RESOLUTION
- ANY PRIVATE PROPERTY LINES SHOWN HEREON ARE FOR GENERAL REFERENCE ONLY AS THEY HAVE NOT BEEN RESOLVED NOR MADE PART OF THIS SURVEY

ABBREVIATIONS:

- AFN = AUDITOR'S FILE NUMBER  
CCPWF# = COWLITZ COUNTY PUBLIC WORKS FIELD BOOK  
CMP = CORRUGATED METAL PIPE  
CONC = CONCRETE PIPE  
CPP = CORRUGATED PLASTIC PIPE  
FD = FOUND  
IE = INVERT ELEVATION  
IP = IRON PIPE  
IR = IRON ROD  
MON = MONUMENT  
PVC = PLASTIC PIPE  
REBAR = REINFORCING BAR  
RPC = RED PLASTIC CAP  
YPC = YELLOW PLASTIC CAP



SEE SHEET 4

CA PROJECT MANAGER N/A DATE  
PG CB DRAWN BY 6/23/2021 DATE  
PG CB BH CHECKED BY 6/23/2021 DATE

HORIZ. SCALE: 1" = 30'  
VERT. SCALE: 1" = 30' CONTOURS  
PROJECT ID: 1235  
ROAD NO. : 31510  
COMPUTER FILE: 1235-CLOVERDALE-CONFER 2021.DWG  
FIELD BOOK(S): 2015-01, 2019-02 & 2021-02



DEPARTMENT OF PUBLIC WORKS  
1600 13TH AVENUE SOUTH  
KELSO, WASHINGTON 98626

LOCATED IN THE NE ONE-QUARTER AND THE SE ONE-QUARTER OF SECTION 28, TOWNSHIP 6 NORTH, RANGE 1 WEST, WILLAMETTE MERIDIAN  
COWLITZ COUNTY, WASHINGTON  
FIELD WORK DATES: FEB-APRIL 2015, FEB-MAY 2020, & SEPTEMBER 30, 2020 (TEST PITS AND FLAGGING)  
JUNE 2021

SOUTH CLOVERDALE RD & CONFER RD  
TOPOGRAPHIC SURVEY FOR  
ROAD & INTERSECTION IMPROVEMENTS

SHEET 5 OF 5

PURPOSE OF SURVEY

THE PURPOSE OF THIS SURVEY WAS TO PROVIDE TOPOGRAPHIC INFORMATION FOR A PORTION OF COWLITZ COUNTY REAL PROPERTY (AFN 521954) FOR PURPOSES OF DESIGN. THIS IS IN ADDITION TO MY PREVIOUS TOPOGRAPHIC SURVEYS FOR THE SOUTH CLOVERDALE RD PROJECT. THIS IS NOT A BOUNDARY SURVEY. SEE 401ROS0004 FOR RIGHT OF WAY RESOLUTION.

COUNTY PROJECT NUMBER: 1235 (COMBINED WITH #1301 - CONFER RD)

VERTICAL DATUM

ELEVATION DATUM: NAVD 88  
BENCHMARK: SURVEY CONTROL POINT #5  
LOCATION: AS SHOWN HEREON  
ELEVATION: 163.62'

HORIZONTAL DATUM / BASIS OF BEARINGS / CONTROL SCHEME

BASED ON WASHINGTON STATE PLANE, SOUTH ZONE (SPC 4602 WA S), UTILIZING GROUND DISTANCES, SO DRAWING COORDINATES ARE APPROXIMATELY STATE PLANE (APPROXIMATELY ±0.3') - SEE BELOW:

HORIZONTAL COORDINATES AND BASIS OF BEARINGS ARE BASED ON WASHINGTON STATE PLANE (SOUTH ZONE) - REFERENCE FRAME: NAD83 (2011) (EPOCH:2010.0000), US SURVEY FEET. ALL DISTANCES ARE GROUND, SO STATE PLANE COORDINATES ARE APPROXIMATE, AND WERE DETERMINED FROM NGS OPUS SOLUTIONS, WHICH WERE DERIVED FROM 2 HOUR MINIMUM GPS OBSERVATIONS ON CONTROL POINTS 1 AND 9 (SHOWN HEREON), UTILIZING THE FOLLOWING EXISTING BASE STATIONS:

| PID         | DESIGNATION               | LATITUDE(")    | LONGITUDE(")    |
|-------------|---------------------------|----------------|-----------------|
| DG8344 P420 | FANTASYFD_WA2004 CORS ARP | N48°39'18.952" | W122°51'58.733" |
| DN2111      | JME_JIM ELAM CORS ARP     | N45°31'23.214" | W122°59'25.541" |
| DK4151 P446 | KELSO_AIR_WA2007 CORS ARP | N46°06'56.369" | W122°53'33.975" |
| DH4129 P698 | MSH_SESLFEWA2004 CORS ARP | N46°10'24.41"  | W122°09'38.141" |

CONTROL POINTS 1 AND 9 WERE THEN TIED TOGETHER USING STANDARD TRAVERSE TECHNIQUES, THE RESULTS OF WHICH WERE ADJUSTED TOGETHER IN A WEIGHTED LEAST SQUARES ADJUSTMENT, UTILIZING STARNET SOFTWARE. AN AVERAGE PROJECT COMBINED SCALE FACTOR (0.9999614936) WAS CALCULATED AND APPLIED TO THE PROJECT TO GENERATE GROUND DISTANCES. THE RESULTS WERE THEN TRANSLATED TO MATCH THE ADJUSTED STATE PLANE COORDINATES OF CONTROL POINT NUMBER 6. -THE CONVERGENCE ANGLE IS -1°40'51" AT CONTROL POINT NUMBER 9.

LOCAL BASIS OF BEARINGS BETWEEN GPS OBSERVED AND ADJUSTED CONTROL POINTS 1 AND 9 IS N08°21'27"W, 2959.12'(GROUND) 2959.01'(GRID).

GROUND COORDINATES THAT ARE SHOWN HEREON HAVE BEEN TRUNCATED TO ELIMINATE CONFUSION WITH TRUE STATE PLANE. ACTUAL STATE PLANE COORDINATES (AFTER LEAST SQUARES ADJUSTMENT OF OPUS COORDINATES AND TRAVERSE) FOR GPS OBSERVED CONTROL POINTS 1, AND 9, AS WELL AS TRAVERSED AND COMPUTED POINT 6 ARE AS FOLLOWS:

|                   |                 |
|-------------------|-----------------|
| 1: N 240836.68673 | E 1052612.89518 |
| 6: N 242348.71156 | E 1052204.97482 |
| 9: N 243764.27674 | E 1052182.80997 |

RELATIVE VERTICAL POSITIONAL ACCURACY

THE CONTOURS SHOWN HEREON ARE FROM DIRECT FIELD OBSERVATIONS. THE RELATIVE VERTICAL POSITIONAL ACCURACY OF THE CONTOURS AND SPOT ELEVATIONS SHOWN HEREON MEETS THOSE STANDARDS DEFINED BY THE NATIONAL SOCIETY OF PROFESSIONAL SURVEYORS (NSPS) PER THAT CERTAIN DOCUMENT ENTITLED "NSPS MODEL STANDARDS FOR TOPOGRAPHIC SURVEYS" (LABELED AS SECTION E), APPROVED 3/12/2002. THOSE STANDARDS ARE AS FOLLOWS FOR A 1" CONTOUR MAP: CONTOUR LINES AT 1' INTERVALS: ±0.65' VERTICAL POSITIONAL ACCURACY SPOT ELEVATIONS FOR WELL DEFINED PLANIMETRIC FEATURES: ±0.10' VERTICAL POSITIONAL ACCURACY

METHOD OF SURVEY

FIELD SURVEYS WERE ACCOMPLISHED UTILIZING STANDARD CLOSED TRAVERSE AND RADIAL SURVEY METHODS, AS WELL AS STANDARD GLOBAL POSITIONING SYSTEM (GPS) NETWORK RTK GPS METHODS (60 SECOND OBSERVATIONS, MINIMUM). MEASUREMENTS WERE PERFORMED USING A TOPCON 3-SECOND TOTAL STATION AND TOPCON GR3 SURVEY GRADE GPS UNITS. THE ANGULAR CLOSURE OF TRAVERSE MEETS STANDARDS AS SET FORTH IN WAC332-130-090. LINEAR CLOSURE AFTER AZIMUTH ADJUSTMENT IS GREATER THAN 1:10000. A LEAST SQUARES ADJUSTMENT OF THE DATA WAS PERFORMED.

NARRATIVE

SEE MY RECORD OF SURVEY, AFN 3656172 (401ROS/004) FOR ALL RIGHT OF WAY RESOLUTION AND ALL MONUMENT PRESERVATION INFORMATION. THE CENTERLINE AND RIGHT OF WAY LINES ARE SHOWN HEREON FOR REFERENCE PURPOSES ONLY.

UTILITY STATEMENT:

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM UTILITY PAINT MARKINGS PROVIDED BY OTHERS, THAT WERE AVAILABLE DURING THE FIELD SURVEY. AS-BUILT MAPS WERE REQUESTED FROM THE NOTIFIED UTILITIES - NONE WERE RECEIVED.

THIS SURVEY MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE OF ALL SUCH UTILITIES IN THE AREA. THE UNDERGROUND UTILITIES SHOWN MAY NOT BE IN THE EXACT LOCATION AS NOTED ON THIS SURVEY, AND ARE LOCATED FROM THE INFORMATION PROVIDED. MANHOLES OTHER THAN SANITARY AND STORM SEWER WERE IDENTIFIED BY MANHOLE LIDS AND MAY NOT BE LABELED CORRECTLY.

UTILITY LOCATIONS MUST BE VERIFIED BY THE STATE UTILITY NOTIFICATION CENTER IMMEDIATELY PRIOR TO ANY EXCAVATION.

UTILITY LOCATES WERE REQUESTED FEB 27, 2015 UNDER TICKET NUMBER 15051467 FOLLOWING IS A LIST OF UTILITY PROVIDERS NOTIFIED:

|          |                                |               |
|----------|--------------------------------|---------------|
| 360NET01 | 360 NETWORKS USA               | (888)587-9911 |
| CMCST04  | COMCAST CABLE COMM. MNGMT, LLC | (253)833-2343 |
| COWPUD03 | COWLITZ COUNTY PUD             | (360)577-7546 |
| KALAMA01 | CITY OF KALAMA                 | (360)673-3706 |
| KALTEL01 | KALAMA TELEPHONE COMPANY       | (360)673-2755 |
| QLNWA08  | CTLQ-CENTURYLINK               | (800)283-4237 |
| QWES05   | CTLQ-CENTURYLINK               | (800)283-4237 |

UTILITY LOCATES WERE REQUESTED FEB 2, 2020 UNDER TICKET NUMBER 20038340 FOLLOWING IS A LIST OF UTILITY PROVIDERS NOTIFIED:

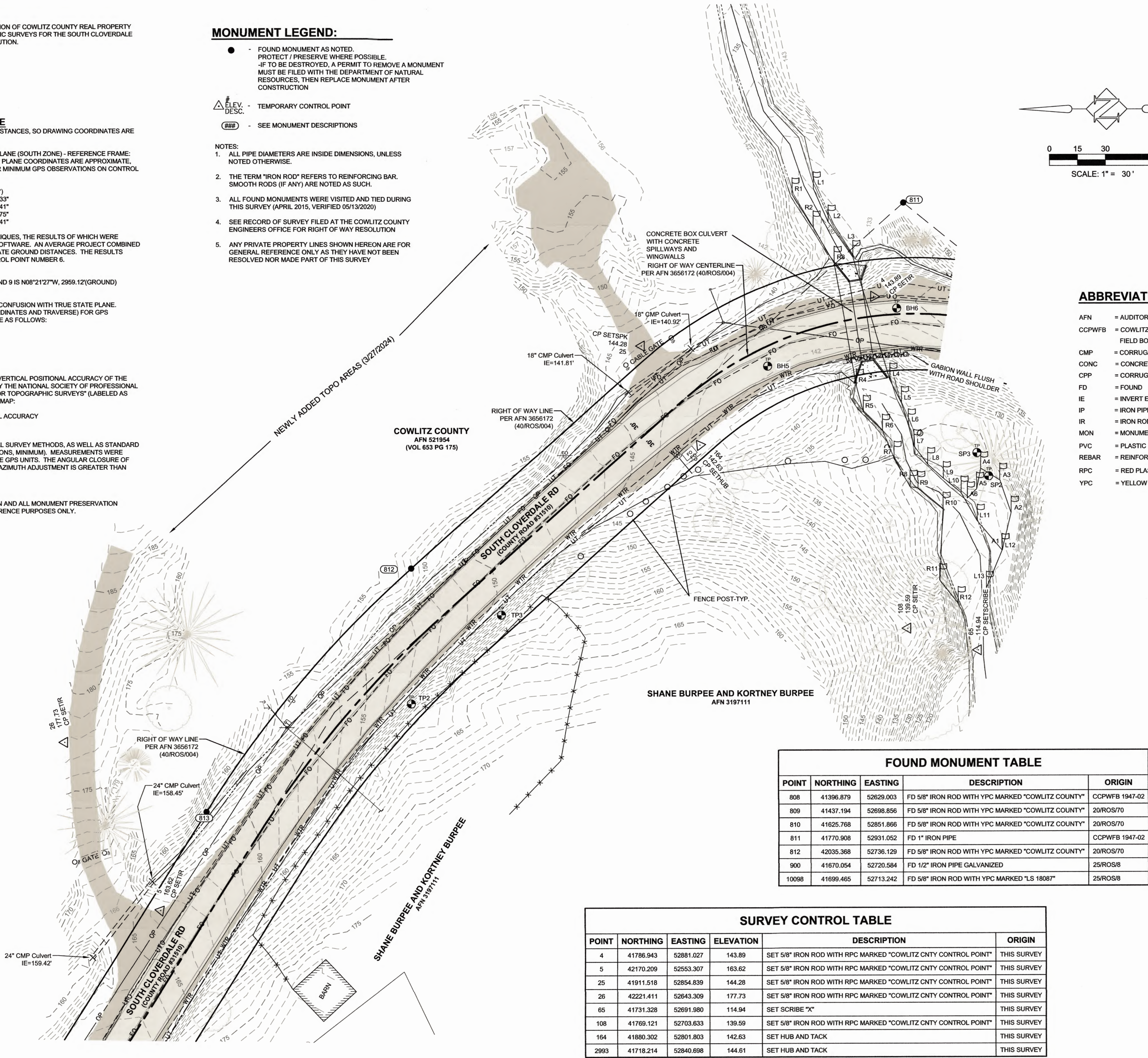
|          |                                |               |
|----------|--------------------------------|---------------|
| 360NET01 | ZAYO FNA 360 NETWORKS          | (888)267-1063 |
| CMCST04  | COMCAST CABLE COMM. MNGMT, LLC | (800)778-9140 |
| COWPUD03 | COWLITZ COUNTY PUD             | (360)501-9546 |
| HENK04   | HENKELS & MCCOY                | (503)577-2051 |
| KALAMA01 | CITY OF KALAMA                 | (360)673-3706 |
| KALTEL01 | KALAMA TELEPHONE COMPANY       | (360)673-2755 |
| LEVL301  | LEVEL 3 NOW CENTURYLINK        | (877)366-8344 |
| MCI01    | MCI                            | (800)289-3427 |
| QLNWA16  | CTLQ-CENTURYLINK               | (800)778-9140 |

MONUMENT LEGEND:

- - FOUND MONUMENT AS NOTED. PROTECT / PRESERVE WHERE POSSIBLE. -IF TO BE DESTROYED, A PERMIT TO REMOVE A MONUMENT MUST BE FILED WITH THE DEPARTMENT OF NATURAL RESOURCES, THEN REPLACE MONUMENT AFTER CONSTRUCTION
- △ ELEV. DESC. - TEMPORARY CONTROL POINT
- #### - SEE MONUMENT DESCRIPTIONS

NOTES:

- ALL PIPE DIAMETERS ARE INSIDE DIMENSIONS, UNLESS NOTED OTHERWISE.
- THE TERM "IRON ROD" REFERS TO REINFORCING BAR. SMOOTH RODS (IF ANY) ARE NOTED AS SUCH.
- ALL FOUND MONUMENTS WERE VISITED AND TIED DURING THIS SURVEY (APRIL 2015, VERIFIED 05/13/2020)
- SEE RECORD OF SURVEY FILED AT THE COWLITZ COUNTY ENGINEERS OFFICE FOR RIGHT OF WAY RESOLUTION
- ANY PRIVATE PROPERTY LINES SHOWN HEREON ARE FOR GENERAL REFERENCE ONLY AS THEY HAVE NOT BEEN RESOLVED NOR MADE PART OF THIS SURVEY



|                    |           |
|--------------------|-----------|
| CA PROJECT MANAGER | N/A       |
| DATE               |           |
| PG CB              | 6/04/2024 |
| DRAWN BY           | DATE      |
| PG CB BH           | 6/04/2024 |
| CHECKED BY         | DATE      |

HORIZ. SCALE: 1" = 30'  
VERT. SCALE: 1" = 10 FEET  
PROJECT ID: 1235  
ROAD NO. : 31510  
COMPUTER FILE: 1235-CLOVERDALE-CONFER 2021.DWG  
FIELD BOOK(S): 2015-01, 2019-02 & 2021-02



DEPARTMENT  
OF  
PUBLIC WORKS

1600 13TH AVENUE SOUTH  
KELSO, WASHINGTON 98626

LOCATED IN THE SE ONE-QUARTER OF SECTION 28,  
TOWNSHIP 6 NORTH, RANGE 1 WEST, WILLAMETTE MERIDIAN  
COWLITZ COUNTY, WASHINGTON  
FIELD WORK DATES: FEB-APRIL 2015, FEB-MAY 2020, & SEPTEMBER 30, 2020 (TEST PITS AND FLAGGING)  
JUNE 2021; MARCH 26 & 27, 2024 (ADD. TOPO - DWs ON COUNTY SHOP PROPERTY)

**SOUTH CLOVERDALE RD &  
CONFER RD**  
**TOPOGRAPHIC SURVEY FOR  
ROAD & INTERSECTION IMPROVEMENTS**

SHEET  
**1**  
OF  
**1**