Section 5.3

# Capital Projects Example

## Overview - Section 5.3

This section outlines how Denver Water's Capital Project drawings should appear.

- Survey Control
- Plan & Profile
- Plan, Profile & Sections
- Architectural & Structural Dimensioning
- Mechanical Dimensioning

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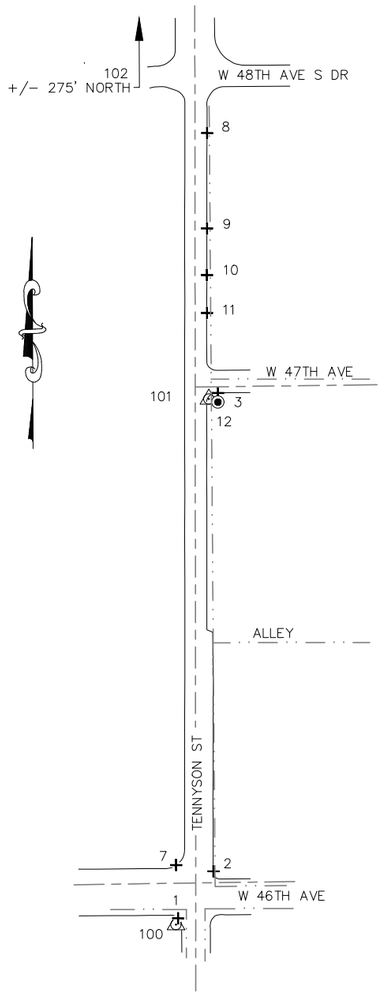
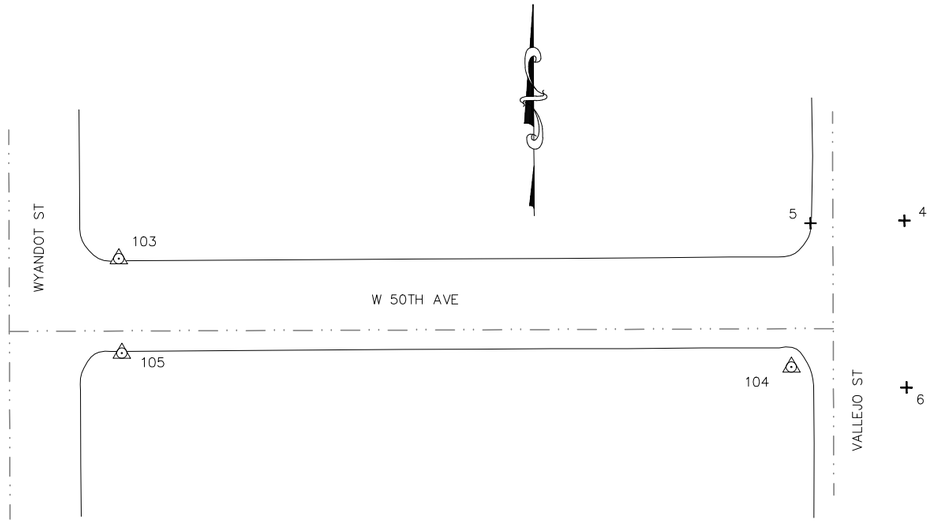


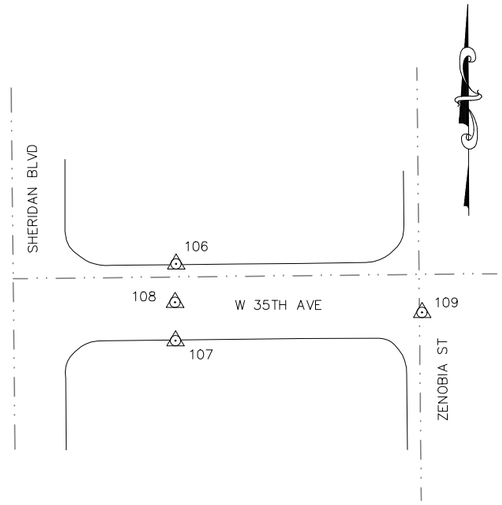

## TENNYSON ST & W 47TH AVE

SCALE: 1" = 100'




## W 50TH AVE & WYANDOT ST

SCALE: 1" = 30'




## W 35TH AVE & SHERIDAN BLVD

SCALE: 1" = 30'

LEGEND:

- CONTROL POINT
- FOUND CHISELED "+"
- FOUND 1 1/2" PLASTIC CAP
- RANGE LINE
- SECTION LINE

### FOUND SURVEY MARKERS

| POINT | NORTHING | EASTING | DESCRIPTION |
|---|---|---|---|
| 1 | 109364.57 | 128302.00 | FOUND CHISELED CROSS |
| 2 | 109426.53 | 128348.67 | FOUND CHISELED CROSS |
| 3 | 110057.70 | 128354.68 | FOUND CHISELED CROSS |
| 4 | 112098.87 | 136886.47 | FOUND CHISELED CROSS |
| 5 | 112097.85 | 136849.29 | FOUND CHISELED CROSS |
| 6 | 112032.83 | 136887.29 | FOUND CHISELED CROSS |
| 7 | 109434.85 | 128299.27 | FOUND CHISELED CROSS |
| 8 | 110400.87 | 128340.25 | FOUND CHISELED CROSS |
| 9 | 110274.90 | 128340.20 | FOUND CHISELED CROSS |
| 10 | 110213.37 | 128340.02 | FOUND CHISELED CROSS |
| 11 | 110163.41 | 128340.06 | FOUND CHISELED CROSS |
| 12 | 110045.69 | 128354.68 | FOUND 1 1/2" PLASTIC CAP STAMPED "MILLER E&S" |

### SURVEY PROJECT CONTROL

| POINT | NORTHING | EASTING | ELEVATION | DESCRIPTION |
|---|---|---|---|---|
| 100 | 109356.08 | 128299.24 | 5376.91 | 1/2" SHINER IN SIDEWALK ON THE SOUTHWEST CORNER OF TENNYSON ST AND W 46TH AVE |
| 101 | 110049.66 | 128342.62 | 5367.38 | CROWS FOOT CHISELED IN SIDEWALK ON THE SOUTHEAST CORNER OF TENNYSON AND W 47TH AVE |
| 102 | 110749.07 | 128303.49 | 5358.64 | 1 1/2" ALUMINUM CAP ON THE NORTHWEST SIDE OF TENNYSON ST AND W 48TH AVE |
| 103 | 112083.80 | 136575.48 | 5305.72 | CHISELED "X" IN BACK OF CURB ON THE NORTHEAST CORNER OF W 50TH AVE AND WYANDOT ST |
| 104 | 112040.95 | 136841.76 | 5298.37 | 3\4" COPPER PLUG ON THE SOUTHWEST CORNER OF W 50TH AVE AND VALLEJO ST |
| 105 | 112046.37 | 136576.68 | 5305.76 | CHISELED "X" IN BACK OF CURB ON THE SOUTHEAST CORNER OF W 50TH AVE AND WYANDOT ST |
| 106 | 104110.00 | 125814.79 | 5455.35 | CHISELED "X" IN BACK OF CURB ON THE NORTH SIDE OF W 35TH AVE BETWEEN SHERIDAN BLVD AND ZENOBIA ST |
| 107 | 104079.65 | 125814.54 | 5455.77 | CHISELED "X" IN BACK OF CURB ON THE SOUTH SIDE OF W 35TH AVE BETWEEN SHERIDAN BLVD AND ZENOBIA ST |
| 108 | 104094.83 | 125814.35 | 5455.89 | CHISELED "+"IN NORTH EDGE OF MANHOLE RIM LOCATED ALONG 35TH AVE BETWEEN SHERIDAN BLVD AND ZENOBIA ST |
| 109 | 104090.78 | 125912.14 | 5456.23 | CHISELED "+"IN NORTH EDGE OF MANHOLE RIM LOCATED AT THE INTERSECTION OF 35TH AVE AND ZENOBIA ST |

NOTES:

THIS PROJECT IS ON A MODIFIED COLORADO STATE PLANE CENTRAL ZONE COORDINATE SYSTEM, NAD 83

GRID NAME: DW_METRO_GRID
TRUNCATION NORTH: 1600030
TRUNCATION EAST: 2999880
COMBINED FACTOR: 1.00026
UNITS: US SURVEY FEET

TO CONVERT FROM STATE PLANE COORDINATES TO DW_METRO_GRID COORDINATES:
GRID NORTH = (SP NORTH −1600030)*1.00026
GRID EAST = (SP EAST −2999880)*1.00026

VERTICAL DATUM: THE PUBLISHED ELEVATIONS SHOWN ARE ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
−W 35TH AVE & SHERIDAN BLVD ELEVATIONS ARE BASED ON THE CITY & COUNTY OF DENVER BENCHMARK 110A
−W 50TH AVE & WYANDOT ST ELEVATIONS ARE BASED ON THE CITY & COUNTY OF DENVER BENCHMARK VM_11
−TENNYSON ST & W 47TH AVE ELEVATIONS ARE BASED ON THE CITY & COUNTY OF DENVER BENCHMARK 479B

*— INDICATES DRAFTER INPUT REQUIRED*

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# DENVER WATER ENGINEERING − DESIGN DRAFTING

DRAFTING STANDARDS FOR CAPTIAL PROJECTS

REFERENCE:
CAPITAL PROJECTS
CONSTRUCTION STANDARDS 2014
www.denverwater.org
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## CAPITAL PROJECTS SURVEY CONTROL

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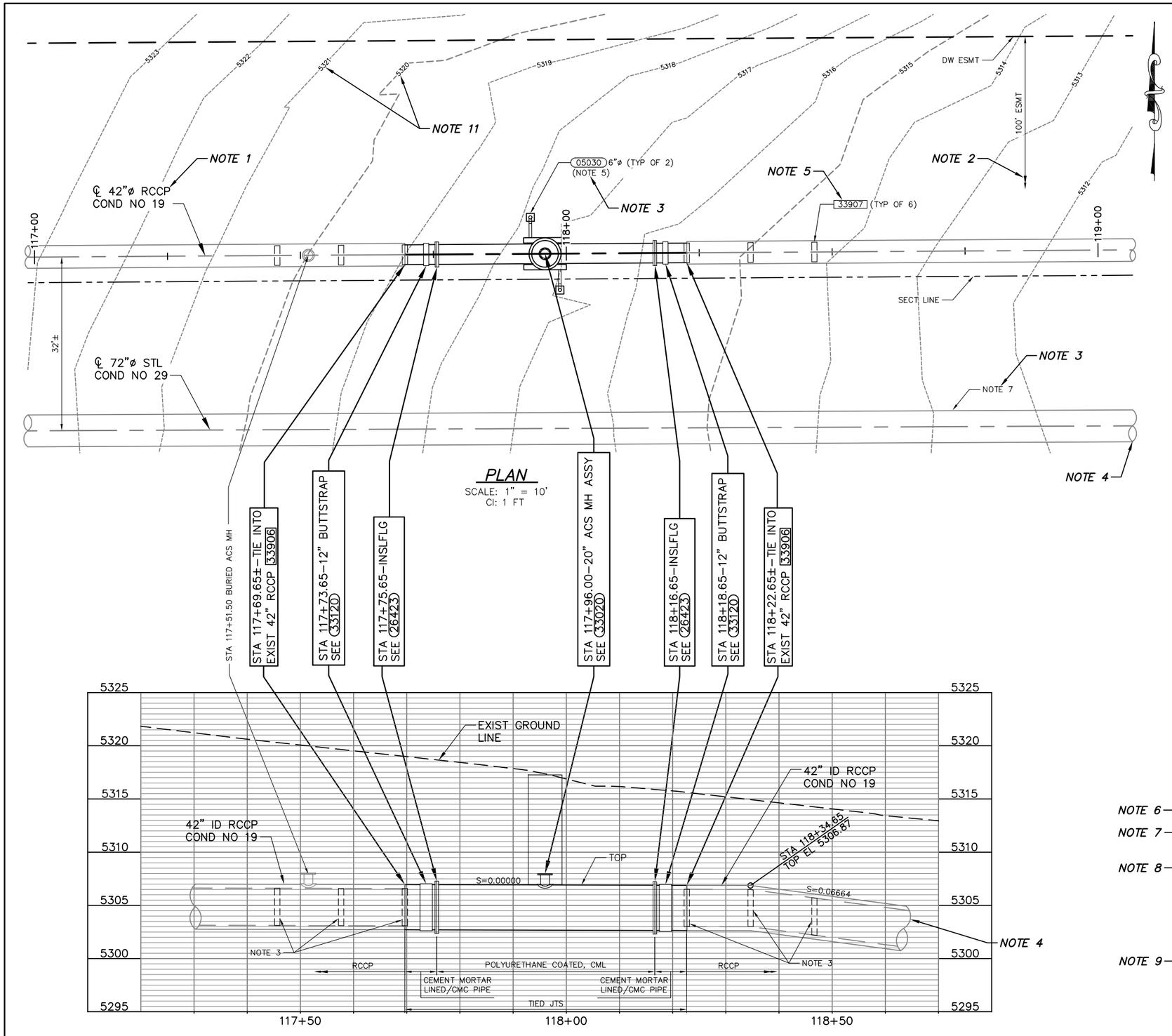


## PLAN

SCALE: 1" = 10'
CI: 1 FT




## PROFILE

SCALE: 1" = 10' HORIZ
1" = 5' VERT

### INSTRUCTION NOTES:

1. EXISTING CONDUIT CENTERLINE CALLOUTS USE L140 TEXT. CREATED ON A CORRESPONDING ANNOTATION LAYER, FOR EXAMPLE: "G–ANNO–L140". NEW CONDUIT CENTERLINE CALLOUTS USE L175 TEXT CREATED ON A CORRESPONDING ANNOTATION LAYER.
2. DOUBLE ARROWHEADS TO INDICATE THAT THE DIMENSION CONTINUES AND THE TERMINATING END IS NOT SHOWN.
3. STAND ALONE REFERENCE NOTES DO NOT USE PARENTHESIS. REFERENCE NOTES THAT ACCOMPANY CALLOUTS USE PARENTHESIS.
4. PIPE END BREAK SYMBOL REQUIRED FOR ALL PIPES, THE HALF–HEIGHT SHALL BE ø/2 AND THE WIDTH SHALL BE ø/8.
5. BLOCK NAME IS "CPCS Detail callouts". VISIBILITY STATE IS SET TO "Revised" BECAUSE THE DETAIL IS INCLUDED WITHIN THE SUBJECT PLAN SET (DETAIL NOT INCLUDED IN THIS EXAMPLE DRAWING SET).
6. MULTITEXT OBJECT CREATED ON AN L120 ANNOTATION LAYER, FOR EXAMPLE: "G–ANNO–L120". THE TEXT HEIGHT AND COLOR OF "NOTES:" IS MODIFIED USING THE MULTITEXT EDITOR. THE SETTINGS ARE MODIFIED TO 0.14 AND COLOR PEN 23 RESPECTIVELY. GENERALLY, NOTES ARE PLACED IN THE LOWER RIGHT HAND CORNER OF THE SHEET.
7. THERE ARE TWO CARRIAGE RETURNS FOLLOWING "NOTES:".
8. ONE SPACE INDENT SET BEFORE THE NUMBERED BULLET AND A TWO SPACE INDENT SET AFTER THE NUMBERED BULLET.
9. USE A HYPHEN WHEN DESCRIBING A UNIT OF MEASURE IN NOTES ONLY (NOT KEYED NOTES OR IN PLAN VIEW CALLOUTS)
10. AMPERSAND SHALL ONLY BE USED WHEN THE DRAWING TITLE IS TOO LONG TO OTHERWISE FIT IN THE TITLE BLOCK SPACE.
11. CONTOUR LABELING SHALL USE THE DW TEMPLATE STYLE OF "MAJOR LABELS" AND "MINOR LABELS".
12. DATES IN TITLE BLOCK SHOULD BE ENTERED THRU SSM, IN THE SET MANAGER NOT THE SHEET MANAGER, USE MM/DD/YR FORMAT, DO NOT ADD LEADING ZEROS.

*– INDICATES DRAFTER INPUT REQUIRED*

NOTE 12

NOTE 6
NOTE 7
NOTE 8
NOTE 9

NOTES:

1. ADJUST STARTING AND ENDING STATIONS BASED ON LOCATION OF CONCRETE PIPE JOINTS.
2. PIPE SHALL BE LAID AT EVEN SLOPE BETWEEN TIE–IN POINTS.
3. INSTALL INTERNAL SEALS AT EACH STEEL TO CONCRETE PIPE JOINT AND 2 CONCRETE JOINTS BEYOND (TOTAL = 6). ASSUMED JOINT SPACING IS 12–FEET.
4. DO NOT STOCKPILE EQUIPMENT OR MATERIALS ON CONDUITS NUMBER 19 OR 29.
5. SITE CONTAINS HIGH METHANE LEVELS. MONITOR GAS LEVELS AND USE APPROPRIATE SAFETY PROCEDURES. VENT PIPES ADDED FOR MANHOLE VENTILATION.
6. ENGINEER TO COORDINATE WITH OWNER TO ADD REFERENCE MARKINGS TO VENT POST AFTER IT IS PAINTED.

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DRAFTING STANDARDS FOR CAPTIAL PROJECTS

REFERENCE:
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CAPITAL PROJECTS CIVIL PLAN AND PROFILE – 1

NOTE 10

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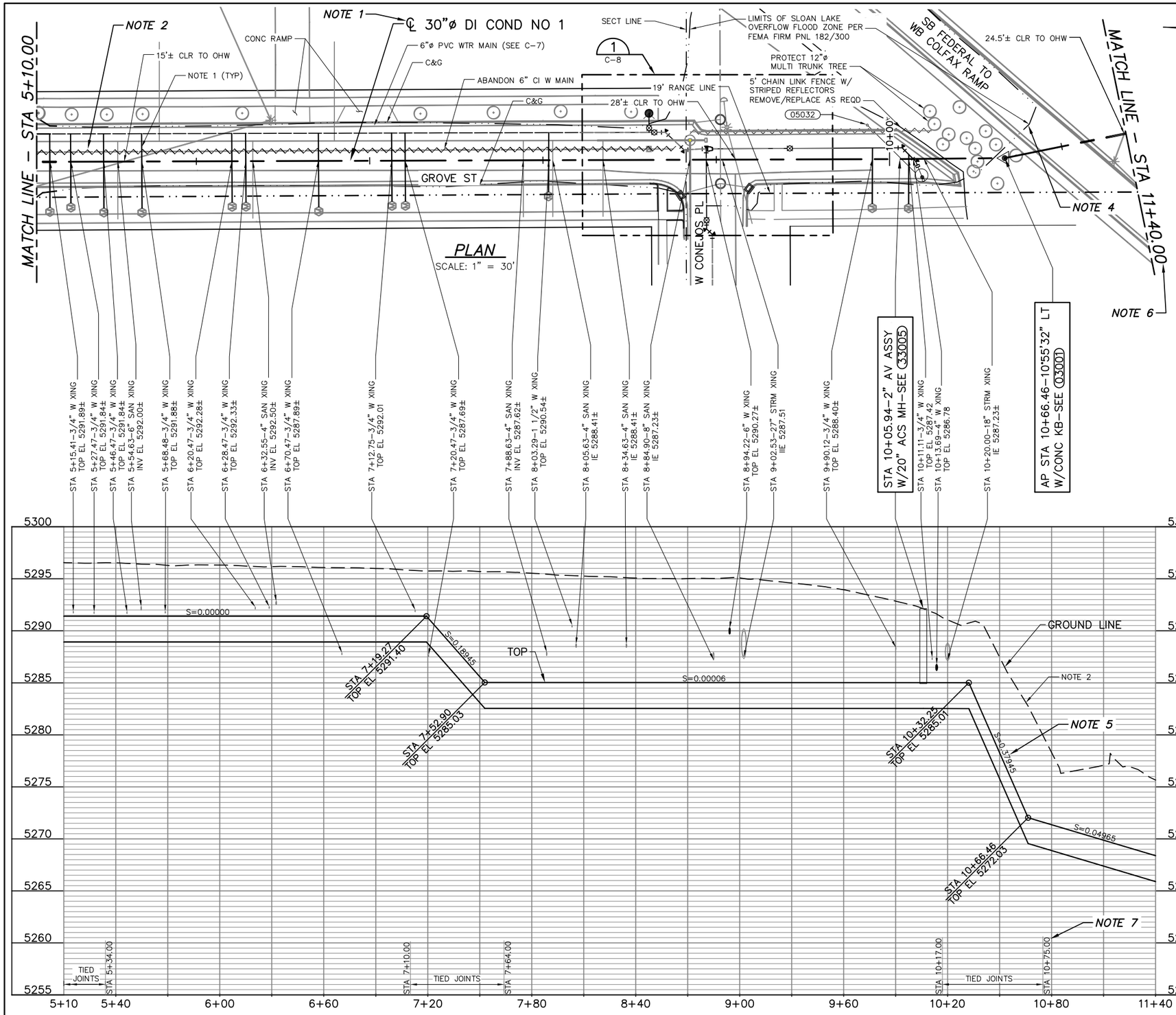


## PROFILE

SCALE: 1" = 30' HORIZ
1" = 5' VERT

## INSTRUCTION NOTES:

1. NEW CONDUIT INSTALLATION CALLOUT IS A MULTILEADER, STYLE L175 CREATED ON LAYER "C-ANNO-L175", LAYER COLOR PEN 204.
2. "ZIGZAG" HATCH PATTERN OR LINETYPE INDICATES ABANDONED UTILITY PER CPCS (01010). CREATED ON LAYER "G-PATT". NOTE 3
3. BLOCK NAME IS "CPCS Detail callouts". SCALE THE BLOCK BY A FACTOR OF 1.2, WHEN USED IN NOTES (AS SHOWN).
4. FLOOD ZONE LIMITS CREATED ON LAYER "V-FLHA" (SURVEY: FLOOD HAZARD), LINE TYPE "RIVER2", COLOR PEN 133.
5. PIPE LABEL STYLE "Conduit Slope". NO NEGATIVE SLOPES ALLOWED. USE A TEXT OBJECT IN LIEU OF A "Conduit Slope" PIPE LABEL FOR SLOPE LABELS THAT ARE NEGATIVE.
6. BLOCK NAME IS "DW MATCHLINE" RESIDES ON LAYER "C-ANNO-MATC". CREATE MATCH LINES ON A EVEN STATION THAT CORRESPONDS TO THE MAJOR GRID STATION ON THE PROFILE.
7. PROFILE LABEL STYLE "Tied Joints Right".

— *INDICATES DRAFTER INPUT REQUIRED*

## NOTES:

1. REPLACE EXISTING SERVICE TO METER PIT WITH COPPER PIPE, SIZE AS SHOWN. EXTEND TO NEW MAIN AS REQUIRED PER DENVER WATER ENGINEERING STANDARD SHEET 54. NEW SERVICES TO EXTEND OVER CONDUIT WITH MINIMUM SEPARATION OF 6-INCHES.
2. SLOPE STABILIZATION WITH EROSION CONTROL BLANKET REQUIRED FOR RESTORATION.
3. SEE DRAWING G-4 FOR REQUIRED CATHODIC PROTECTION.
4. REMOVE VEGETATION ON SLOPE AS NECESSARY.
5. FROM STATION 10+20 TO STATION 15+30, LIMIT WORK AREA TO 50-FEET ON EITHER SIDE OF CENTERLINE OF PIPE.

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# CAPITAL PROJECTS CIVIL PLAN AND PROFILE - 2

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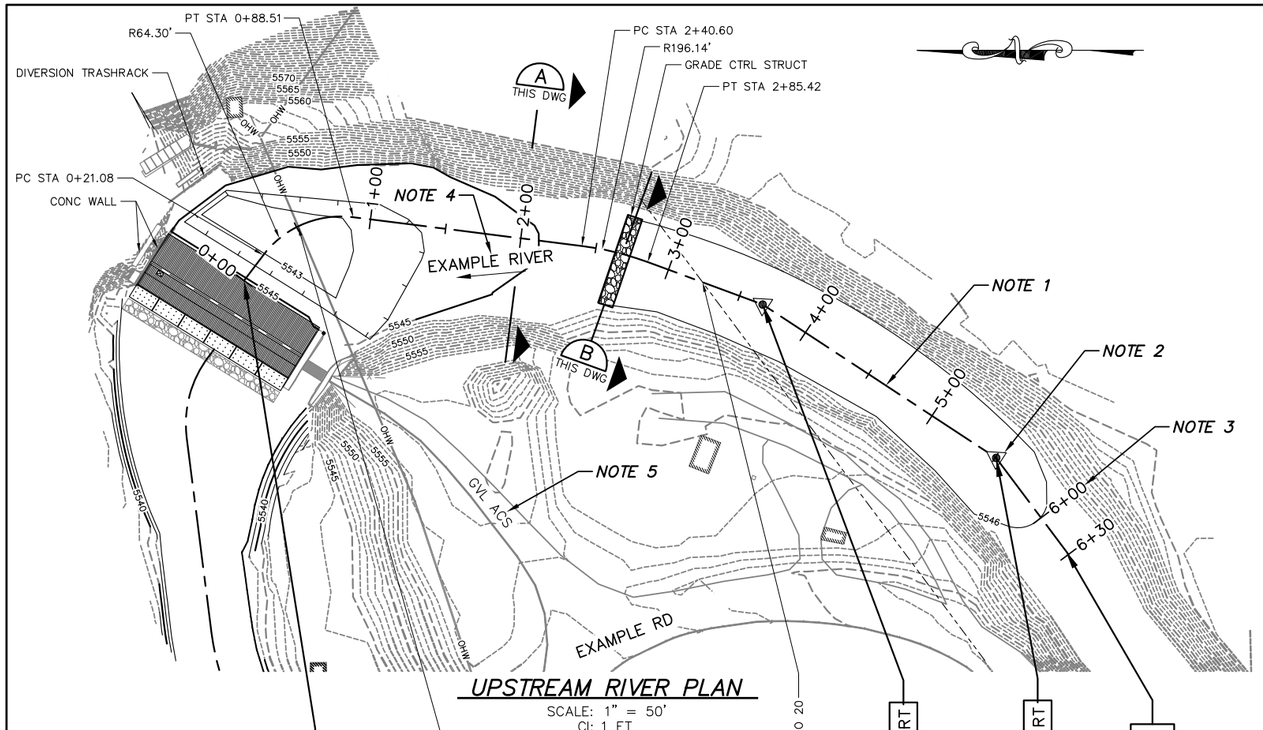
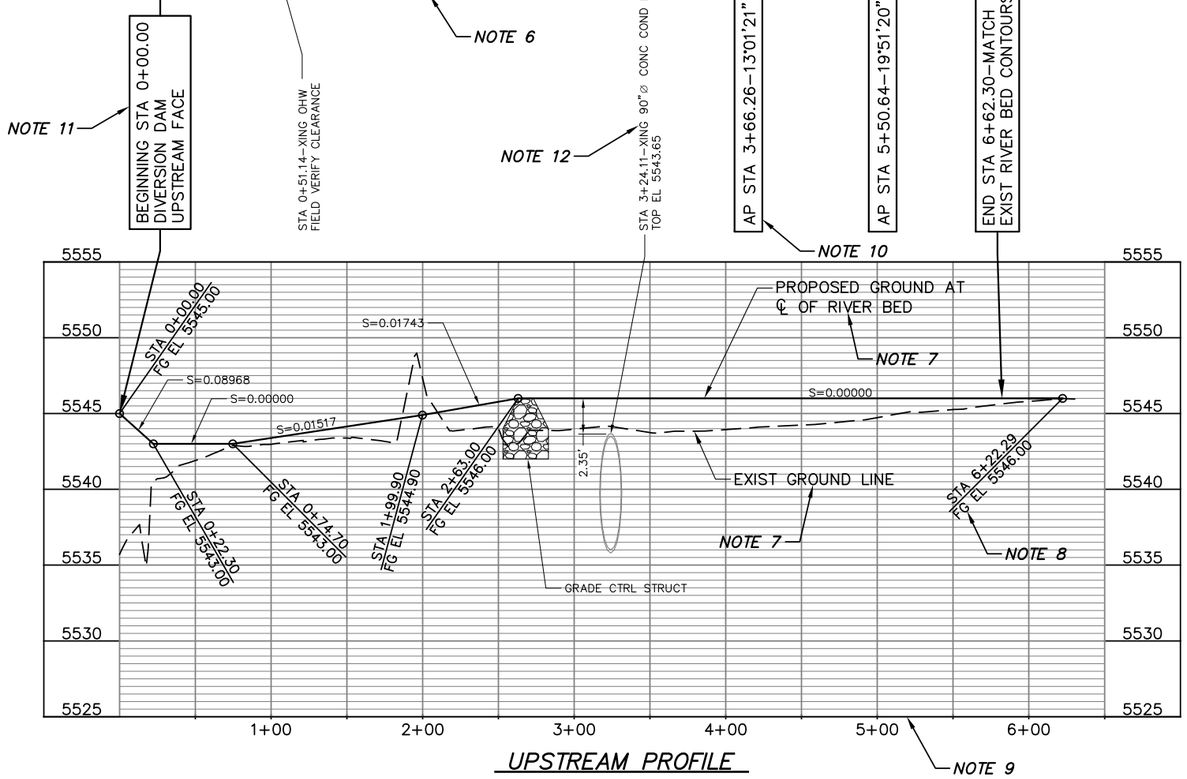



## UPSTREAM RIVER PLAN

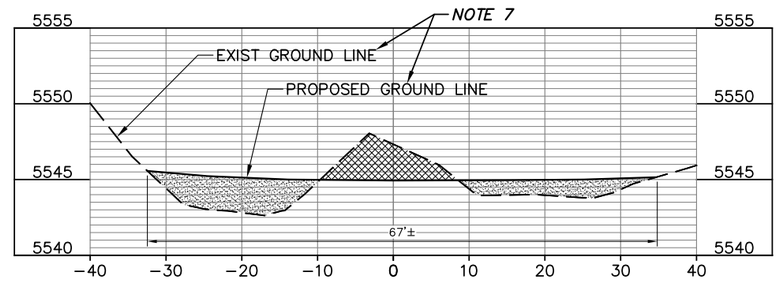
SCALE: 1" = 50'
CI: 1 FT

NOTE 6




## UPSTREAM PROFILE

SCALE: 1" = 50' HORIZ
1" = 5' VERT



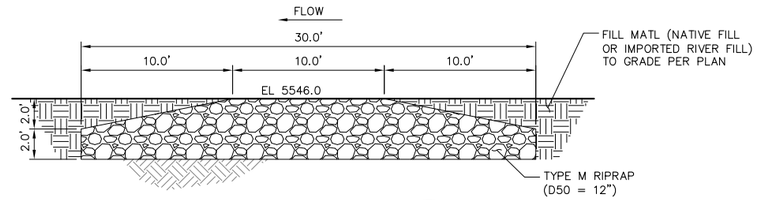

## STA 2+00 (A THIS DWG)

SCALE: 1" = 10' HORIZ
1" = 5' VERT

NOTE 13

LEGEND:

- REQUIRED FILL AREA
- REQUIRED EXCAVATION AREA




## SECTION (B THIS DWG)

SCALE: 1" = 5'

***INSTRUCTION NOTES:***

1. CENTERLINE ALIGNMENT DISPLAYED ON LAYER "CU–WATR–CNTR".
2. BLOCK NAME "DW_Bend Conduit", INSERTED AT ANGLE POINTS ALONG THE ALIGNMENT. INSERT THE BLOCK ON LAYER "C–ANNO–MARK" OR "G–ANNO–SYMB".
3. MAJOR STATION LABEL STYLE IS "Perpendicular with Tick". SET THE BACKGROUND MASK TO "TRUE" WHEN STATIONS APPEAR ON TOP OF LINE WORK.
4. "EXAMPLE RIVER" IS A PROPER NOUN FOR THIS EXAMPLE. L140 TEXT STYLE SIZE IS USED FOR ALL PROPER NOUNS IN PLAN VIEW. THE LAYER IS "C–ANNO–L140" WHICH CORRESPONDS TO THE TEXT OBJECT STYLE.
5. TEXT OBJECT STYLE IS L120. THIS SIZE IS USED TO IDENTIFY GENERAL INFORMATION ABOUT THE PLAN THAT IS SIGNIFICANT TO THE PLAN USER BUT NOT SPECIFICALLY RELATED TO THE DESIGN FEATURES. OTHER EXAMPLES OF GENERAL INFORMATION IS "DW ℄", OR "HYDROELECTRIC POWERHOUSE" (NOT INCLUDED IN THIS EXAMPLE PLAN VIEW).
6. THE "CONTOUR INTERVAL" VISIBILITY STATE OF THE BLOCK "PLAN Title" IS TOGGLED ON AND THE CONTOUR INTERVAL FIELD IS POPULATED WITH THE CORRESPONDING PLAN VIEW INTERVAL VALUE, IN THIS CASE "1 FT".
7. EXISTING AND PROPOSED GROUND LINE CALLOUTS ARE CREATED USING L140 MULTILEADER STYLES, ON PROFILES WITH GRID AND SECTIONS WITH GRID. THE CALLOUT IS CREATED ON LAYER "C–ANNO–L140". ADDING "EXISTING" TO "GROUND LINE" IS ONLY REQUIRED WHEN A "PROPOSED" GROUND LINE IS BEING SHOWN WITHIN THE SAME PROFILE THAT THE EXISTING GROUND LINE IS BEING SHOWN.
8. PROFILE VIEW LABEL STYLE "Engineering Profile Labels Pipes [Left]". THIS LABEL IS MOST COMMONLY USED FOR "TOP" (TOP OF PIPE) CALLOUTS. IN THIS CASE THE "Edit Label Text" COMMAND WAS USED TO CHANGE THE DEFAULT "TOP" TO "FG" (FINISH GRADE) WITHIN THE LABEL. THE MARKER STYLE IS SET TO "Profile Marker", WHICH CREATES A CIRCLE AT THE ANCHOR POINT OF THE LABEL.
9. PROFILE VIEW STYLE IS "50 Scale Left to Right". THE PROFILE HORIZONTAL SCALE MUST MATCH THE PLAN VIEW SCALE. MAJOR GRID LINES ARE SPACED AT 1 PER INCH, VERTICALLY AND HORIZONTALLY.
10. PROFILE VIEW LABEL STYLE "Angle Point". THE PLAN VIEW LEADER IS CREATED IN PAPER SPACE ON LAYER "G–ANNO–L175", WITH AN ARROWHEAD SIZE OF 0.25 AND PEN 4 LINE WEIGHT.
11. PROFILE VIEW LABEL STYLE "Beginning" CREATED IN MODEL SPACE. THE PROFILE LEADER IS CREATED IN MODEL SPACE ON LAYER "G–ANNO–L175" WITH AN ARROWHEAD SIZE OF 0.25. THE PLAN VIEW LEADER IS CREATED IN PAPER SPACE ON THE SAME LAYER AS THE PROFILE LEADER.
12. PROFILE VIEW LABEL STYLE "Design Labels [Interference]" USED TO IDENTIFY UTILITIES AND STRUCTURES THAT CROSS THE PROFILE SUBJECT ALIGNMENT. THE PROFILE VIEW LABEL AND THE PROFILE LEADER ARE CREATED IN MODEL SPACE ON LAYER "C–ANNO–DIMS" WITH AN ARROWHEAD SIZE OF 0.125. THE PLAN VIEW LEADER IS CREATED IN PAPER SPACE ON THE SAME LAYER AS THE PROFILE LEADER.
13. ALIGNMENT SAMPLE LINE SECTION TITLE CREATED USING BLOCK NAME "Section or Detail Title – scale". THE HORIZONTAL AND VERTICAL SCALE ARE CREATED USING MULTI–TEXT.

*– INDICATES DRAFTER INPUT REQUIRED*

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# CAPITAL PROJECTS CIVIL PLAN, PROFILE AND SECTIONS

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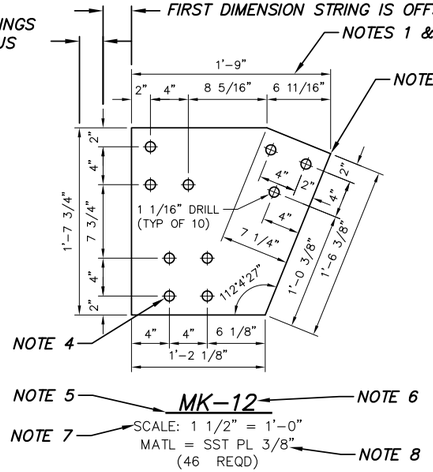
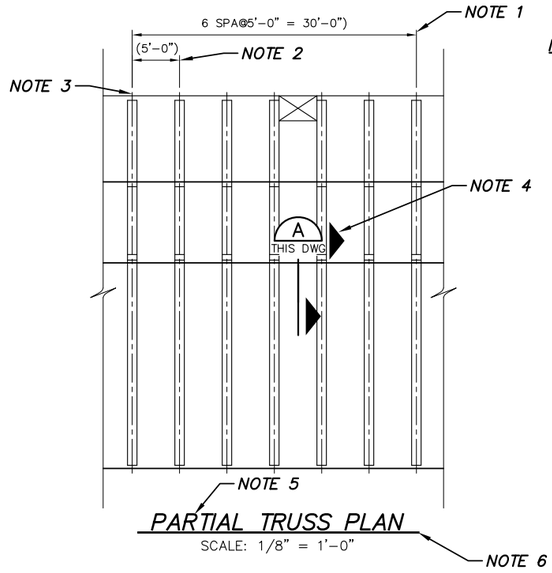
*SECOND AND ALL SUCCESSIVE DIMENSION STRINGS ARE OFFSET 5/16" FROM FIRST OR PREVIOUS DIMENSION STRING*



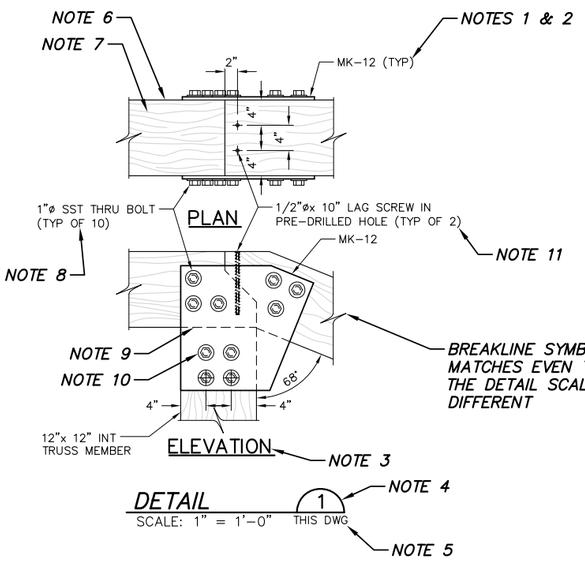

*INSTRUCTION NOTES:*

1. DIMENSION STYLE USED IS "L100 – nearest 32nd". ALL LINE WORK, TEXT OBJECTS, AND SUBJECT GRAPHICS CREATED IN MODEL SPACE.
2. DIMENSIONING IS CREATED ON LAYER "S–ANNO–DIMS". THE DISCIPLINE DESIGNATION IN THE LAYER NAME VARIES (I.E. "M–ANNO–DIMS").
3. DETAIL SUBJECT GRAPHICS CREATED ON LAYER "S–DETL–METL" (STRUCTURAL: DETAIL: METAL).
4. CIRCLES (DRILLED HOLE) HAS CENTER LINES ALONG THE X AND Y AXES, DRAWN ON LAYER "S–ANNO–DIMS–CNTR", PEN 31, "CENTER4" LINE TYPE. THE CENTERLINES EXTEND PAST THE LIMIT OF THE CIRCLE TO A DISTANCE THAT IS LEGIBLE AND LOGICAL.
5. BLOCK NAME IS "PLAN title". INSERTION UNITS IS "FEET"(2), INSERTED IN PAPER SPACE AND MAY BE MOVED INTO MODEL SPACE THROUGH THE VIEWPORT USING THE "CHSPACE" COMMAND. THE PLAN TITLE HAS 1 LEADING AND 1 TRAILING UNDERLINED SPACE. TO CREATE THE UNDERLINE SPACE, HOLD THE "Alt" KEY AND TYPE "0160".
6. THE DETAIL IS A MARK ("MK") NUMBERED DETAIL, IDENTIFIED IN SEVERAL OTHER DETAILS WITHIN THE PLAN SET BUT NOT ALWAYS SHOWN EXACTLY AS REPRESENTED IN THIS VIEW. MARK NUMBERS, DETAIL NUMBERS, SECTION ALPHABETIC CHARACTERS, AND CPCS NUMBERS SHOULD APPEAR IN ASCENDING ORDER FROM LEFT TO RIGHT AND TOP TO BOTTOM.
7. THE SCALE IS IN ARCHITECTURAL UNITS, FEET AND INCHES.
8. MULTI–TEXT L120 CENTER JUSTIFIED.



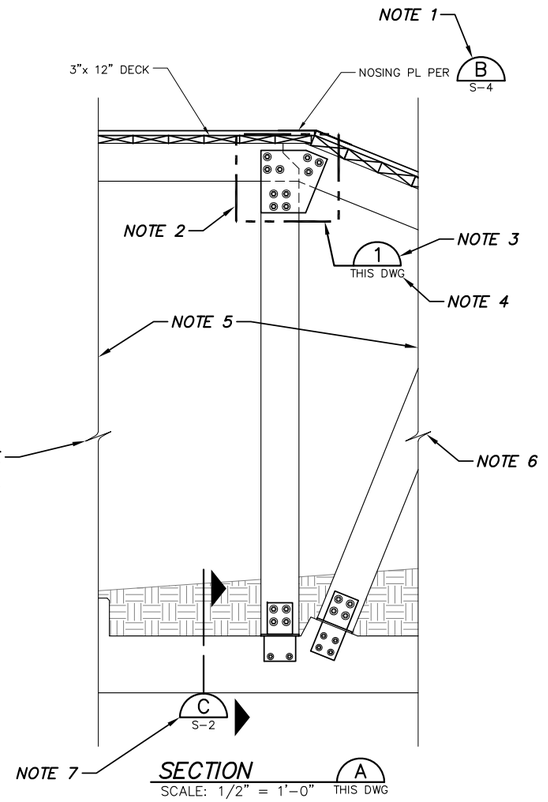

*INSTRUCTION NOTES:*

1. DIMENSION FORMAT USED WHEN DIMENSIONING A SERIES OF IDENTICAL AND REPEATING DIMENSIONS. IN THIS CASE 6 SPACES AT A DIMENSION OF 5'–0" IS REPEATED. THE TOTAL DISTANCE BEING DIMENSIONED IS 30'–0".
2. THIS DIMENSION IS REQUIRED TO INDICATE THE SUBJECT MATTER OF THE SERIES DIMENSION DISCUSSED IN NOTE 1.
3. A CENTERLINE IS USED TO ESTABLISH THE DIMENSION ORIGIN. THE CENTERLINE IS CREATED ON LAYER "S–ANNO–DIMS–CNTR", PEN 31, "CENTER4" LINE TYPE.
4. BLOCK NAME IS "Section line". INSERTION UNITS IS "FEET"(2), INSERTED IN PAPER SPACE AND MAY BE MOVED INTO MODEL SPACE THROUGH THE VIEWPORT USING THE "CHSPACE" COMMAND. A WIPEOUT POLYLINE FRAME IS USED TO CLEAR THE BACKGROUND LINEWORK. THE WIPEOUT POLYLINE IS CREATED ON LAYER "G–SECT" AND THE "FRAME" TOGGLE SET TO "OFF". SECTIONS ARE ASSIGNED AN ALPHA CHARACTER DESIGNATION, IN THIS CASE SECTION "A".
5. "PARTIAL..." DESIGNATION ADDED BECAUSE THE COMPLETE "TRUSS PLAN" IS IDENTIFIED SOMEWHERE ELSE IN THE PLAN SET (NOT INCLUDED IN THE EXAMPLE DRAWING SET).
6. BLOCK NAME IS "PLAN title". INSERTION UNITS IS "FEET"(2), INSERTED IN PAPER SPACE AND MAY BE MOVED INTO MODEL SPACE THROUGH THE VIEWPORT USING THE "CHSPACE" COMMAND. THE PLAN TITLE HAS 1 LEADING AND 1 TRAILING UNDERLINED SPACE. TO CREATE THE UNDERLINE SPACE, HOLD THE "Alt" KEY AND TYPE "0160".




*INSTRUCTION NOTES:*

1. THE MULTILEADERS ARE CREATED ON LAYER S–ANNO–L100. THE SIZE OF THE MULTILEADER TEXT DICTATES THE LAYER WHICH THE MULTILEADER IS ASSIGNED TO.
2. "(TYP)" IS INCLUDED IN THE "MK–12" CALL OUT BECAUSE IT APPEARS TWICE IN THE "PLAN" PORTION OF THE DETAIL.
3. L175 MULTITEXT ON LAYER "G–ANNO–L175" WITH NO LEADING OR TRAILING SPACE.
4. BLOCK NAME IS "Section or Detail Title – scale". INSERTION UNITS IS "FEET"(2), INSERTED IN PAPER SPACE AND MAY BE MOVED INTO MODEL SPACE THROUGH THE VIEWPORT USING THE "CHSPACE" COMMAND.
5. "THIS DWG" IS A BLOCK ATTRIBUTE AND DIRECTS THE READER TO THE CORRESPONDING LOCATION WITHIN THE PLAN SET.
6. DETAIL GRAPHIC CREATED ON LAYER "S–DETL–WOOD" (STRUCTURAL: DETAIL: WOOD).
7. DETAIL GRAPHIC CREATED ON LAYER "S–PATT–WOOD". LAYER COLOR SET TO PEN 252 TO INCREASE LINE WEIGHT SCREENING.
8. "(TYP OF 10)" INDICATES THAT THE SUBJECT OBJECT OF THE MULTILEADER, APPEARS 10 TIMES IN THE DETAIL, 2 LEADERS ARE ALLOWED IN THIS INSTANCE BECAUSE THE SUBJECT OBJECT APPEARS IN THE "PLAN" AND "ELEVATION" PORTIONS OF THE DETAIL.
9. DETAIL GRAPHIC CREATED ON LAYER "S–DETL–WOOD–HDLN". LAYER LINE TYPE IS SET TO "HIDDEN2" AND A PEN 1 COLOR.
10. DETAIL GRAPHIC CREATED ON LAYER "S–DETL–HRDW", (STRUCTURAL: DETAIL: HARDWARE).
11. "(TYP OF 2)" ADDED TO CALL OUT BECAUSE THE CALL OUT LEADER POINTS TO DIFFERENT VIEWS OF THE SUBJECT OBJECT BEING IDENTIFIED. IN THE "ELEVATION" VIEW THE THE SUBJECT OBJECT IS SHOWN ONCE, IN THE "PLAN" VIEW THE SUBJECT IS SHOWN TWICE.




*INSTRUCTION NOTES:*

1. BORDER AND "B" CREATED ON LAYER "G–SECT". "S–4" IS CREATED ON LAYER "G–SECT–TEXT". CALLOUT IDENTIFIES A COMPONENT THAT IS INCLUDED IN A PORTION OF A SECTION OR DETAIL. IN THIS CASE THE "NOSING PL (PLATE)" MATERIAL AND INSTALLATION INFORMATION IS IDENTIFIED IN SECTION "B" ON SHEET S–4 (NOT INCLUDED IN THE EXAMPLE DRAWING SET).
2. POLYLINE CREATED ON LAYER "S–ANNO–MATC", THE LINETYPE GENERATION IS "ENABLED" THROUGH THE PROPERTIES DIALOG BOX. THE GRAPHIC DEFINES THE EXTENTS OF DETAIL 1.
3. BLOCK NAME IS "Detail callout". INSERTION UNITS IS "FEET"(2), INSERTED IN PAPER SPACE AND MAY BE MOVED INTO MODEL SPACE THROUGH THE VIEWPORT USING THE "CHSPACE" COMMAND. DETAILS ARE ASSIGNED A NUMERIC CHARACTER DESIGNATION, IN THIS CASE "1".
4. "THIS DWG" IS A BLOCK ATTRIBUTE AND DIRECTS THE READER TO THE CORRESPONDING LOCATION WITHIN THE PLAN SET.
5. BREAKLINES ON BOTH ENDS OF THE SECTION TO INDICATE THAT THE SUBJECT GRAPHICS CONTINUE BEYOND THE SECTION.
6. ONLY ONE BREAKLINE SYMBOL IS REQUIRED ON A BREAKLINE.
7. BLOCK NAME IS "Section line". INSERTION UNITS IS "FEET"(2), INSERTED IN PAPER SPACE AND MAY BE MOVED INTO MODEL SPACE THROUGH THE VIEWPORT USING THE "CHSPACE" COMMAND. THE SECTION DESIGNATION IS "C" BECAUSE "A" & "B" DESIGNATIONS ARE ALREADY IN USE ON THIS DRAWING.

– *INDICATES DRAFTER INPUT REQUIRED*

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# DENVER WATER ENGINEERING – DESIGN DRAFTING

DRAFTING STANDARDS FOR CAPTIAL PROJECTS

REFERENCE:
CAPITAL PROJECTS CONSTRUCTION STANDARDS 2014
www.denverwater.org /DoingBusinesswithUs/EngineeringOverview/CPCS

THIS DRAWING IS BASED ON THE COORDINATE SYSTEM

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# CAPITAL PROJECTS ARCHITECTURAL AND STRUCTURAL DIMENSIONING


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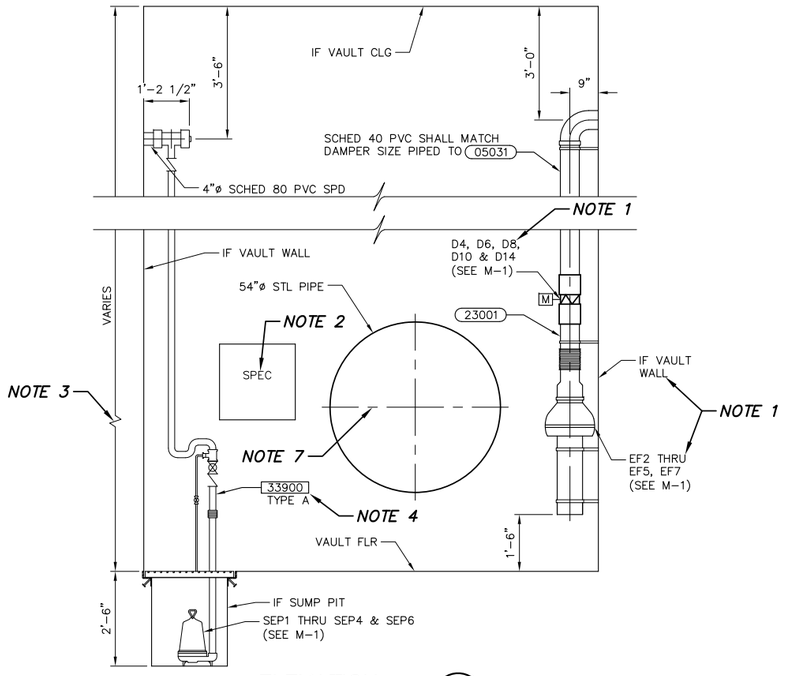
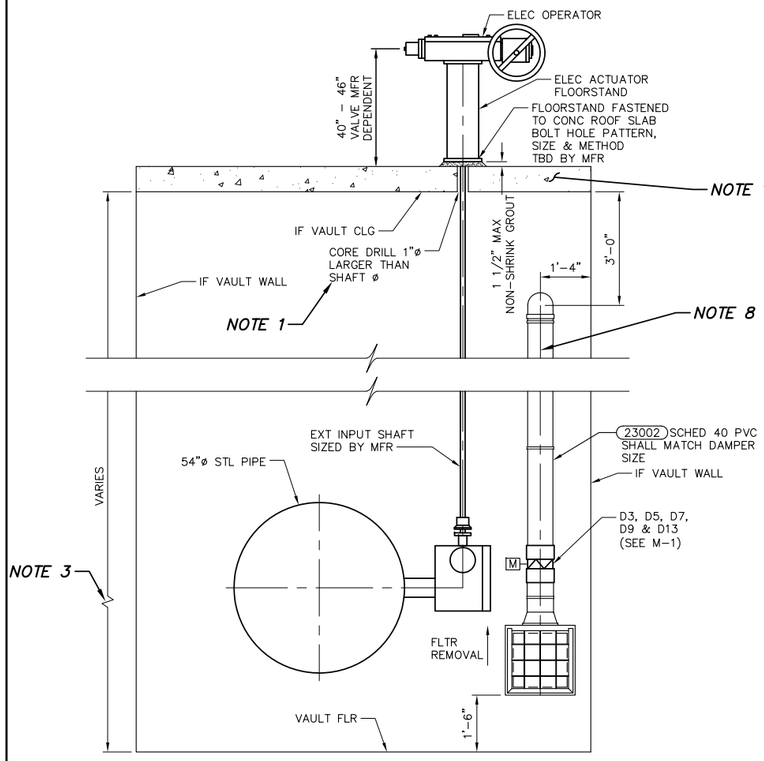
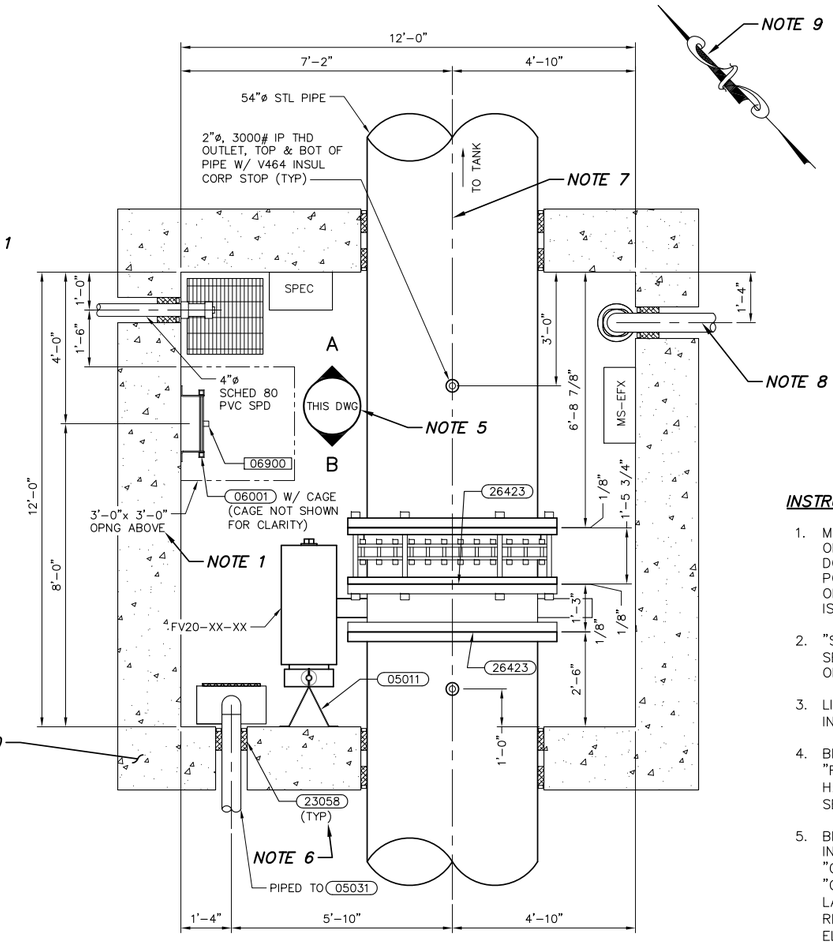



ELEVATION A
SCALE: 1/2" = 1'-0" THIS DWG




ELEVATION B
SCALE: 1/2" = 1'-0" THIS DWG




VAULTS NO 1 THRU 3 PLAN
SCALE: 1/2" = 1'-0"

***INSTRUCTION NOTES:***

1. MULTILEADER STYLE L100, LEFT JUSTIFIED, LEADER ANCHORS TO THE MIDDLE OF THE BOTTOM LINE OF TEXT WHEN LEADER IS POINTING TO THE RIGHT AND DOWN. LEADER ANCHORS TO MIDDLE OF TOP LINE OF TEXT WHEN LEADER IS POINTING TO THE RIGHT AND UP. LEADER ANCHORS TO THE TOP MIDDLE LINE OF TEXT WHEN LEADER IS POINTING TO THE LEFT REGARDLESS IF THE LEADER IS POINTING UP OR DOWN.
2. "SPEC" IS AN ELECTRICAL ENCLOSURE DESIGNATION RELATIVE TO THE PLAN SET. CREATED ON LAYER "E-ANNO-L100" WITH A PEN 1 COLOR. THIS IS THE ONLY TIME PEN 1 IS ACCEPTABLE FOR L100 SIZE TEXT.
3. LINEAR DIMENSION CREATED IN MODEL SPACE ON LAYER "M-ANNO-DIMS", AND INCLUDES A "JOG LINE" BECAUSE THE DIMENSION SPANS ACROSS A BREAKLINE.
4. BLOCK NAME IS "CPCS Detail Callouts", WITH THE VISIBILITY STATE SET TO "Revised". "TYPE A" IS INCLUDED BECAUSE THE DETAIL BEING REFERENCED HAS MULTIPLE CONFIGURATIONS (NOT INCLUDED IN THIS EXAMPLE DRAWING SET).
5. BLOCK NAME IS "Interior Elevation Indicator". INSERTION UNITS IS "FEET"(2), INSERTED IN PAPER SPACE AND MOVED THROUGH THE VIEWPORT USING THE "CHSPACE" COMMAND. "THIS DWG" IS L100 TEXT ON LAYER "G-WALL-ELEV-TEXT", COLOR SET TO PEN 12. "A" AND "B" IS L175 TEXT ON LAYER "G-WALL-ELEV", COLOR SET TO PEN 4. THE BLOCK REFERS THE READER TO ELEVATION "A" AND ELEVATION "B" ON THIS DRAWING. IF THE ELEVATIONS BEING REFERRED TO RESIDE ON A DIFFERENT SHEET, THEN "THIS DWG" WOULD BE REPLACED WITH THE CORRESPONDING SHEET, FOR EXAMPLE "M-3" (NOT INCLUDED IN THIS EXAMPLE SET).
6. "(TYP)" IS A MULTITEXT OBJECT PLACED BELOW OR BESIDE THE CPCS REFERENCE BLOCK WHEN THE DETAIL INDICATED IS SHOWN IN MULTIPLE PLACES WITHIN THE PLAN VIEW.
7. CENTERLINE OF PIPE CREATED ON LAYER "M-WATR-PIPE-CNTR" (MECHANICAL: WATER: PIPE: CENTERLINE), LAYER COLOR PEN 51 AND "CENTER2" LINE TYPE. CENTERLINE OF PIPE REQUIRED IN ELEVATION AND PLAN VIEW FOR DIMENSION ORIGIN ANCHOR POINT.
8. CENTERLINE OF PIPE CREATED ON LAYER "M-MPIP-CNTR" (MECHANICAL: MISCELLANEOUS PIPING: CENTERLINE), LAYER COLOR PEN 51 AND "CENTER2" LINE TYPE. CENTERLINE OF PIPE REQUIRED IN ELEVATION AND PLAN VIEW FOR DIMENSION ORIGIN ANCHOR POINT.
9. NORTH ARROW REQUIRED FOR ALL "PLAN" REPRESENTATIONS, ON LAYER G-ANNO-SYMBOL.
10. HATCH PATTERN PAPER SPACE SIZE MATCHES IN ALL PLACES SHOWN ON SHEET REGARDLESS OF SCALE.

*– INDICATES DRAFTER INPUT REQUIRED*

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CAPITAL PROJECTS MECHANICAL DIMENSIONING

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