

CULVERT REPLACEMENT, BRIDGE AND RIPARIAN CONSTRUCTION

SANDPIPER EAST APARTMENTS, KELSEY CREEK, BELLEVUE, WA

PROJECT ADDRESS: 1312 139TH AVE NE BELLEVUE WA, 98005

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PROJECT CONTACT INFORMATION

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 STREET ADDRESS CITY, STATE ZIP

GEOENGINEERS
 JOE CALLAGHAN (253) 383-4940
 NAME PHONE

1101 FAWCETT AVE TACOMA, WA 98402
 STREET ADDRESS CITY, STATE ZIP

LEGAL DESCRIPTION

THE NORTH HALF OF THE SOUTH HALF OF THE NORTHEAST QUARTER OF THE
 SOUTHWEST QUARTER OF SECTION 27, TOWNSHIP 25 NORTH, RANGE 5 EAST,
 WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON;

EXCEPT THE EAST 30 FEET THEREOF CONVEYED TO KING COUNTY FOR ROAD BY
 DEED RECORDED UNDER RECORDING NUMBER 941044.

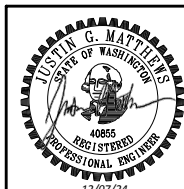
DATUM AND SURVEY CONTROL

- HORIZONTAL DATUM: NAD 8391 WASHINGTON STATE
 PLANE COORDINATES NORTH ZONE PER KING COUNTY
 GPS CONTROL
- VERTICAL DATUM: NAVD 88
- SEE ALTA AND TOPOGRAPHIC SURVEY INCLUDED AT
 END OF PLAN SET FOR SURVEY CONTROL

VICINITY MAP



CAD USER: jmc PLOT DATE: Dec 05, 2024-03:58pm PATH: Z:\2200001-2209999\2200336 KCHA Illahae Sandpiper Flood Control\CADD\Design\KCHA-S-CV.dwg



NO.	DATE	BY	REVISION

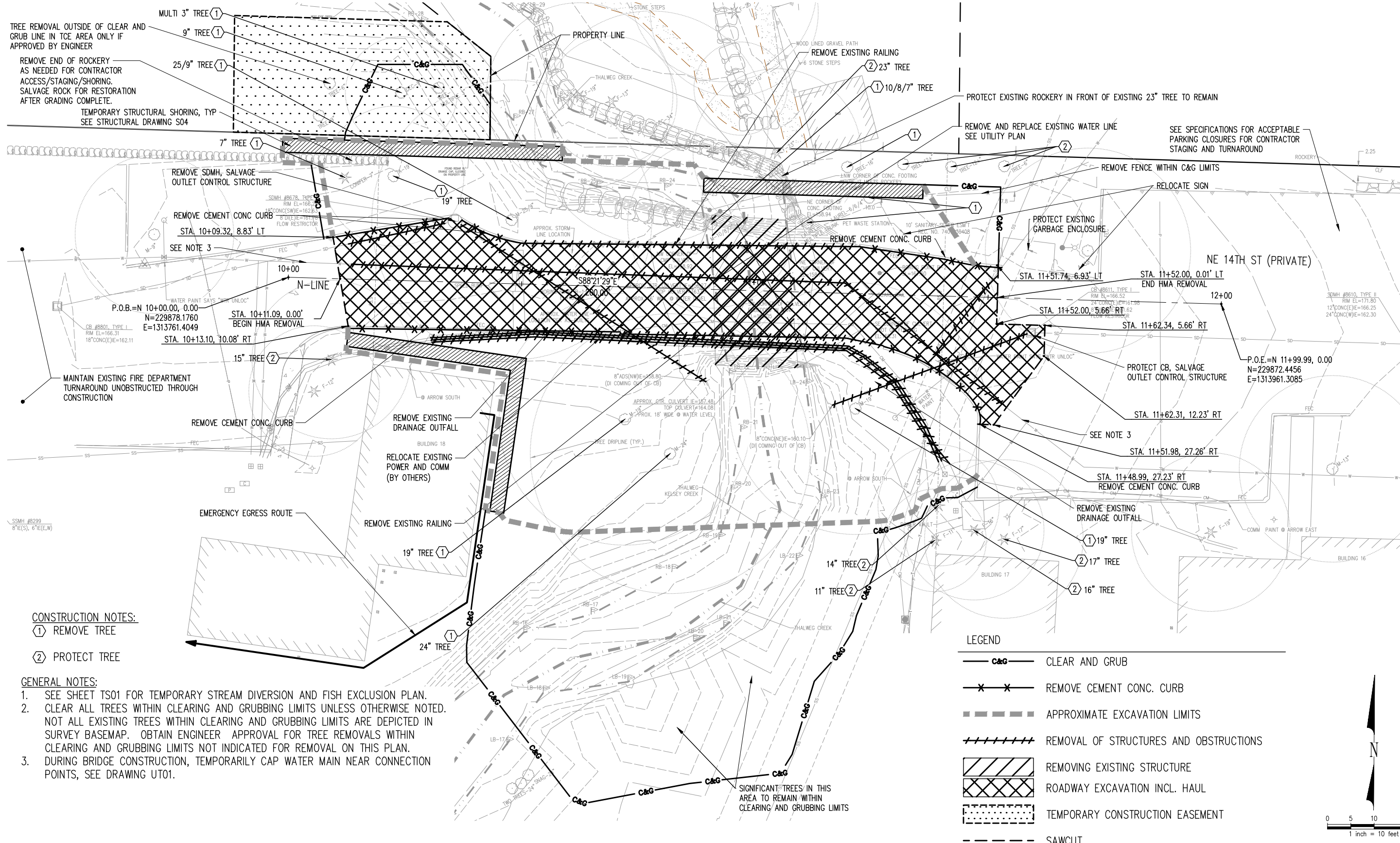


CULVERT REPLACEMENT, BRIDGE AND RIPARIAN CONSTRUCTION
 SANDPIPER EAST APARTMENTS, KELSEY CREEK, BELLEVUE, WA

**NE 14TH ST BRIDGE
 COVER SHEET**

DRAWN: MRV	PROJECT NO.: 2200204
DESIGN: BSP	SCALE: NTS
CHECKED: JGM	DATE: 05-2024
DRAWING NO.	CV01
SHEET NO. 1	OF 40

Xrefs:
X-KCHA-S-SV
X-KCHA-S-CN-14TH
X-KCHA-S-SP-14TH
X-KCHA-BRIDGE-14TH
X-KCHA-S-TB
MATHEW



CONSTRUCTION NOTES:

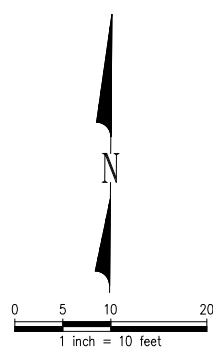
- ① REMOVE TREE
- ② PROTECT TREE

GENERAL NOTES:

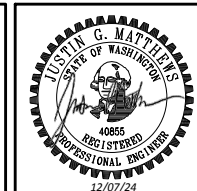
1. SEE SHEET TS01 FOR TEMPORARY STREAM DIVERSION AND FISH EXCLUSION PLAN.
2. CLEAR ALL TREES WITHIN CLEARING AND GRUBBING LIMITS UNLESS OTHERWISE NOTED. NOT ALL EXISTING TREES WITHIN CLEARING AND GRUBBING LIMITS ARE DEPICTED IN SURVEY BASEMAP. OBTAIN ENGINEER APPROVAL FOR TREE REMOVALS WITHIN CLEARING AND GRUBBING LIMITS NOT INDICATED FOR REMOVAL ON THIS PLAN.
3. DURING BRIDGE CONSTRUCTION, TEMPORARILY CAP WATER MAIN NEAR CONNECTION POINTS, SEE DRAWING UT01.

LEGEND

- CLEAR AND GRUB
- REMOVE CEMENT CONC. CURB
- APPROXIMATE EXCAVATION LIMITS
- REMOVAL OF STRUCTURES AND OBSTRUCTIONS
- REMOVING EXISTING STRUCTURE
- ROADWAY EXCAVATION INCL. HAUL
- TEMPORARY CONSTRUCTION EASEMENT
- SAWCUT



CAD USER: jmc PLOT DATE: Dec 05, 2024 - 03:38pm
PATH: Z:\2200001-2209999\2200336 KCHA Illahee Sandpiper Flood Control\CADD\Design\KCHA-S-SP.dwg



NO.	DATE	BY	REVISION



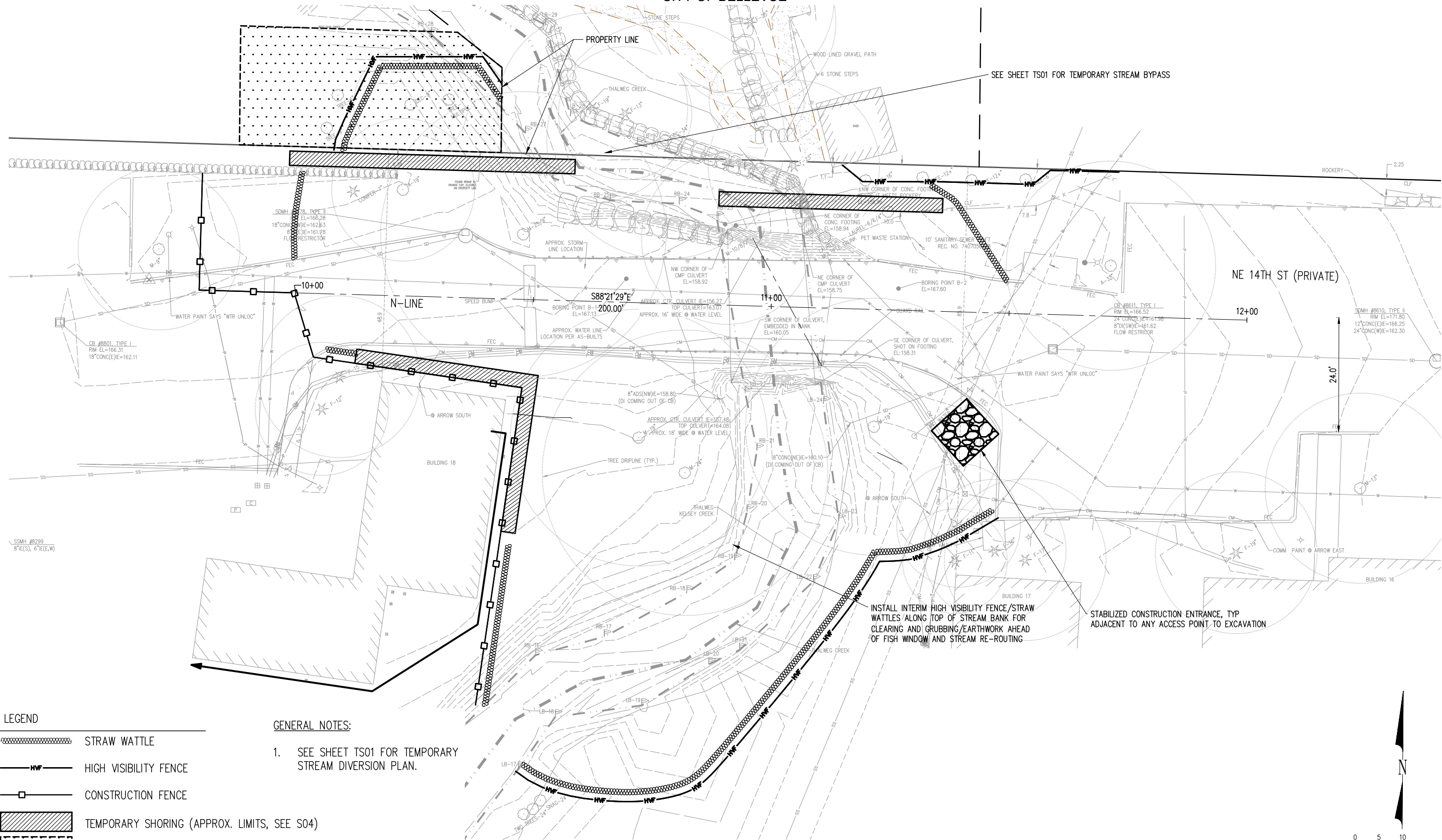
CULVERT REPLACEMENT, BRIDGE AND RIPARIAN CONSTRUCTION
SANDPIPER EAST APARTMENTS, KELSEY CREEK, BELLEVUE, WA

**NE 14TH ST BRIDGE
SITE PREPARATION PLAN**

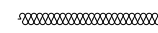

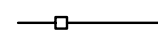


DRAWN: MRV	PROJECT NO.: 2200204
DESIGN: BSP	SCALE:
CHECKED: JGM	DATE: 05-2024
DRAWING NO.:	SP01
SHEET NO.: 2	OF 40

SEC. 27, T. 25 N., R. 5E., W.M.
CITY OF BELLEVUE

Xrefs:
X-KCHA-S-SV
X-KCHA-S-CN-14TH
X-KCHA-S-TESC-14TH
X-KCHA-BRIDGE-14TH
X-KCHA-S-TB
X-KCHA-S-SP-14TH
MATTHEW

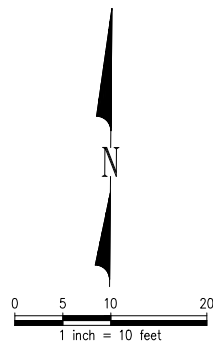


LEGEND

-  STRAW WATTLE
-  HIGH VISIBILITY FENCE
-  CONSTRUCTION FENCE
-  TEMPORARY SHORING (APPROX. LIMITS, SEE S04)
-  TEMPORARY CONSTRUCTION EASEMENT

GENERAL NOTES:

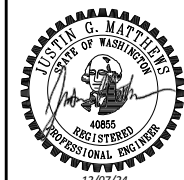
1. SEE SHEET TS01 FOR TEMPORARY STREAM DIVERSION PLAN.



CAD USER: michaelv PLOT DATE: Jan 26, 2024-02:00pm PATH: Z:\2200001-2209999\2200336 KCHA Illahae Sandpiper Flood Control\CADD\Design\KCHA-S-TESC.dwg



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SANDPIPER EAST APARTMENTS, KELSEY CREEK, BELLEVUE, WA

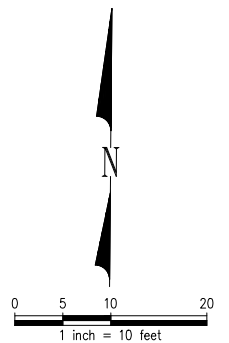
NE 14TH ST BRIDGE
TESC PLAN

DRAWN: MRV	PROJECT NO.: 2200204
DESIGN: BSP	SCALE:
CHECKED: JGM	DATE: 01-2024
DRAWING NO. EC01	
SHEET NO. 3	OF 40

SEC. 27, T. 25 N., R.5E., W.M.
CITY OF BELLEVUE

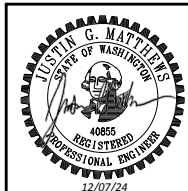
EROSION CONTROL NOTES

1. ALL CLEARING & GRADING CONSTRUCTION MUST BE IN ACCORDANCE WITH CITY OF BELLEVUE (COB) CLEARING & GRADING CODE, CLEARING & GRADING DEVELOPMENT STANDARDS, LAND USE CODE, UNIFORM BUILDING CODE, PERMIT CONDITIONS, AND ALL OTHER APPLICABLE CODES, ORDINANCES, AND STANDARDS. THE DESIGN ELEMENTS WITHIN THESE PLANS HAVE BEEN REVIEWED ACCORDING TO THESE REQUIREMENTS. ANY VARIANCE FROM ADOPTED EROSION CONTROL STANDARDS IS NOT ALLOWED UNLESS SPECIFICALLY APPROVED BY THE CITY OF BELLEVUE DEVELOPMENT SERVICES (DSD) PRIOR TO CONSTRUCTION. IT SHALL BE THE SOLE RESPONSIBILITY OF THE APPLICANT AND THE PROFESSIONAL CIVIL ENGINEER TO CORRECT ANY ERROR, OMISSION, OR VARIATION FROM THE ABOVE REQUIREMENTS FOUND IN THESE PLANS. ALL CORRECTIONS SHALL BE AT NO ADDITIONAL COST OR LIABILITY TO THE COB.
2. APPROVAL OF THIS EROSION/SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G. SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).
3. A COPY OF THE APPROVED PLANS AND DRAWINGS MUST BE ON-SITE DURING CONSTRUCTION. THE APPLICANT IS RESPONSIBLE FOR OBTAINING ANY OTHER REQUIRED OR RELATED PERMITS PRIOR TO BEGINNING CONSTRUCTION.
4. THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED AND VEGETATION/LANDSCAPING IS ESTABLISHED.
5. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM, ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS.
6. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DO NOT LEAVE THE SITE.
7. ALL LOCATIONS OF EXISTING UTILITIES HAVE BEEN ESTABLISHED BY FIELD SURVEY OR OBTAINED FROM AVAILABLE RECORDS AND SHOULD, THEREFORE, BE CONSIDERED ONLY APPROXIMATE AND NOT NECESSARILY COMPLETE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS AND TO DISCOVER AND AVOID ANY OTHER UTILITIES NOT SHOWN WHICH MAY BE AFFECTED BY THE IMPLEMENTATION OF THIS PLAN.
8. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE APPLICANT/CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
9. CLEARING SHALL BE LIMITED TO THE AREAS WITHIN THE APPROVED DISTURBANCE LIMITS. EXPOSED SOILS MUST BE COVERED AT THE END OF EACH WORKING DAY WHEN WORKING FROM OCTOBER 1ST THROUGH APRIL 30TH. FROM MAY 1ST THROUGH SEPTEMBER 30TH, EXPOSED SOILS MUST BE COVERED AT THE END OF EACH CONSTRUCTION WEEK AND AT THE THREAT OF RAIN.
10. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A TRAPPED CATCH ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.
11. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT.
12. THE CONTRACTOR MUST MAINTAIN A SWEEPER ON SITE DURING EARTHWORK AND IMMEDIATELY REMOVE SOIL THAT HAS BEEN TRACKED ONTO PAVED AREAS AS RESULT OF CONSTRUCTION.
13. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.
14. ANY EXCAVATED MATERIAL REMOVED FROM THE CONSTRUCTION SITE AND DEPOSITED ON PROPERTY WITHIN THE CITY LIMITS MUST BE DONE IN COMPLIANCE WITH A VALID CLEARING & GRADING PERMIT. LOCATIONS FOR THE MOBILIZATION AREA AND STOCKPILED MATERIAL MUST BE APPROVED BY THE CLEARING AND GRADING INSPECTOR AT LEAST 24 HOURS IN ADVANCE OF ANY STOCKPILING.
15. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN THE 48 HOURS FOLLOWING A MAJOR STORMEVENT.
16. FINAL SITE GRADING MUST DIRECT DRAINAGE AWAY FROM ALL BUILDING STRUCTURES AT A MINIMUM 5% SLOPE, PER THE INTERNATIONAL RESIDENTIAL CODE (IRC) R401.3.



Xrefs:
X-KCHA-S-SV
X-KCHA-S-CN-14TH
X-KCHA-S-TESC-14TH
X-KCHA-BRIDGE-14TH
X-KCHA-S-TB
X-KCHA-S-SP-14TH
MATTHEW

CAD USER: brenip PLOT DATE: Jan 16, 2024 11:04am
PATH: Z:\2200001-2209999\2200336 KCHA Illahce Sandpiper Flood Control\CADD\Design\KCHA-S-TESC.dwg



NO.	DATE	BY	REVISION



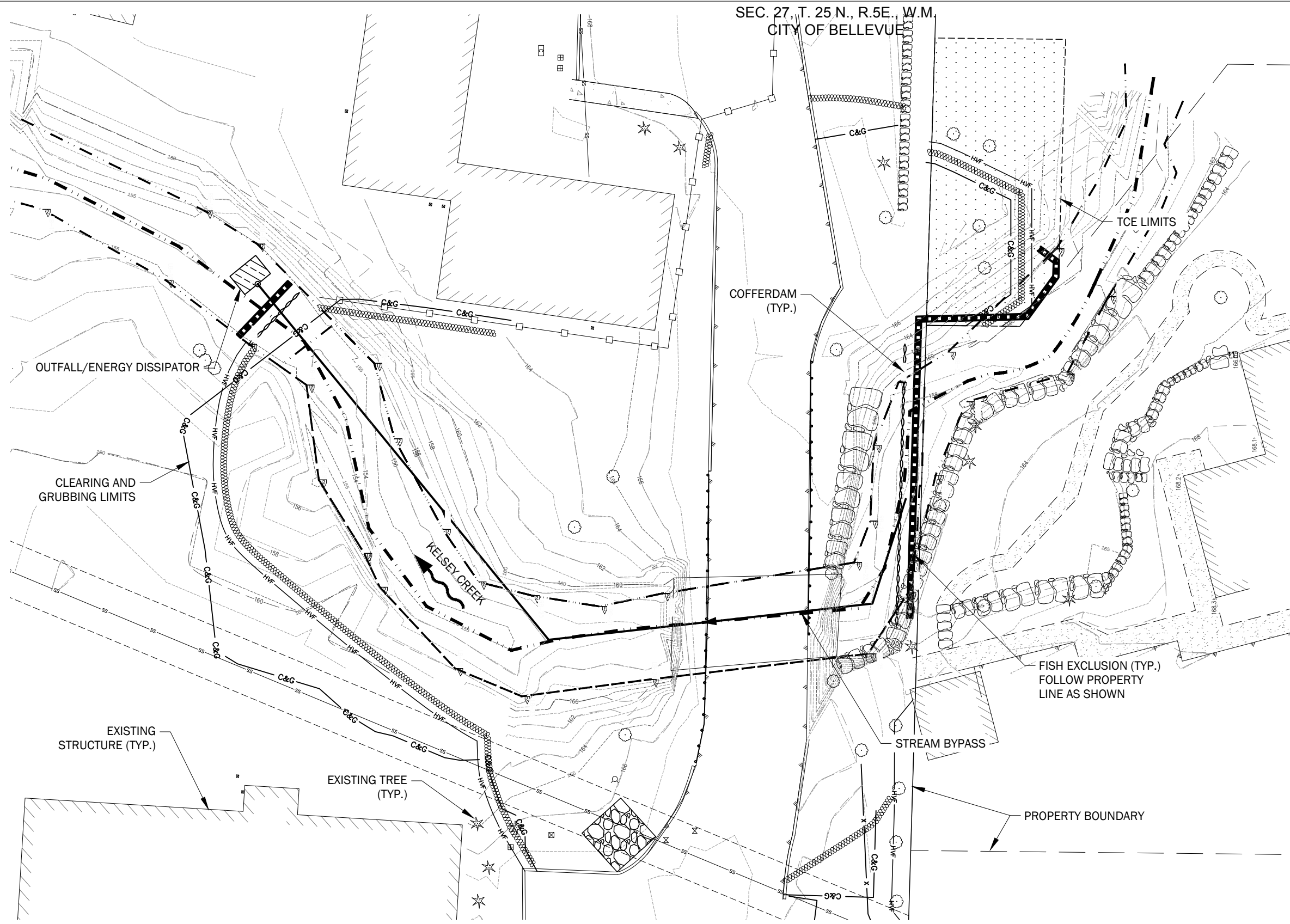
CULVERT REPLACEMENT, BRIDGE AND RIPARIAN CONSTRUCTION
SANDPIPER EAST APARTMENTS, KELSEY CREEK, BELLEVUE, WA

**NE 14TH ST BRIDGE
TESC NOTES**

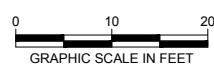
DRAWN: MRV	PROJECT NO.: 2200204
DESIGN: BSP	SCALE:
CHECKED: JGM	DATE: 01-2024
DRAWING NO.	EC02
SHEET NO. 4	OF 40

SEC. 27, T. 25 N., R. 5E., W.M.
CITY OF BELLEVUE

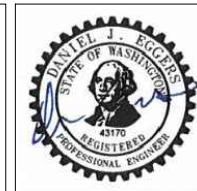
- NOTES:
1. CONCEPT TEMP STREAM DIVERSION SHOWN FOR REFERENCE. TEMP STREAM DIVERSION AND PUMP LOCATION PLAN TO BE SUBMITTED BY CONTRACTOR AND APPROVED BY ENGINEER.



PLAN



CAD USER: apederson PLOT DATE: Nov 20, 2024-04:34pm
PATH: P:\1\1329022\CAD\03\04_Sandpiper Basis of Design 90 Percent\132902203_Sht 5_11 [Temporary Stream Diversion & Dewatering Concept Plan].dwg



NO.	DATE	BY	REVISION

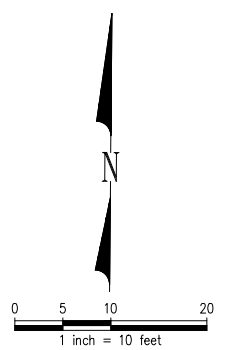
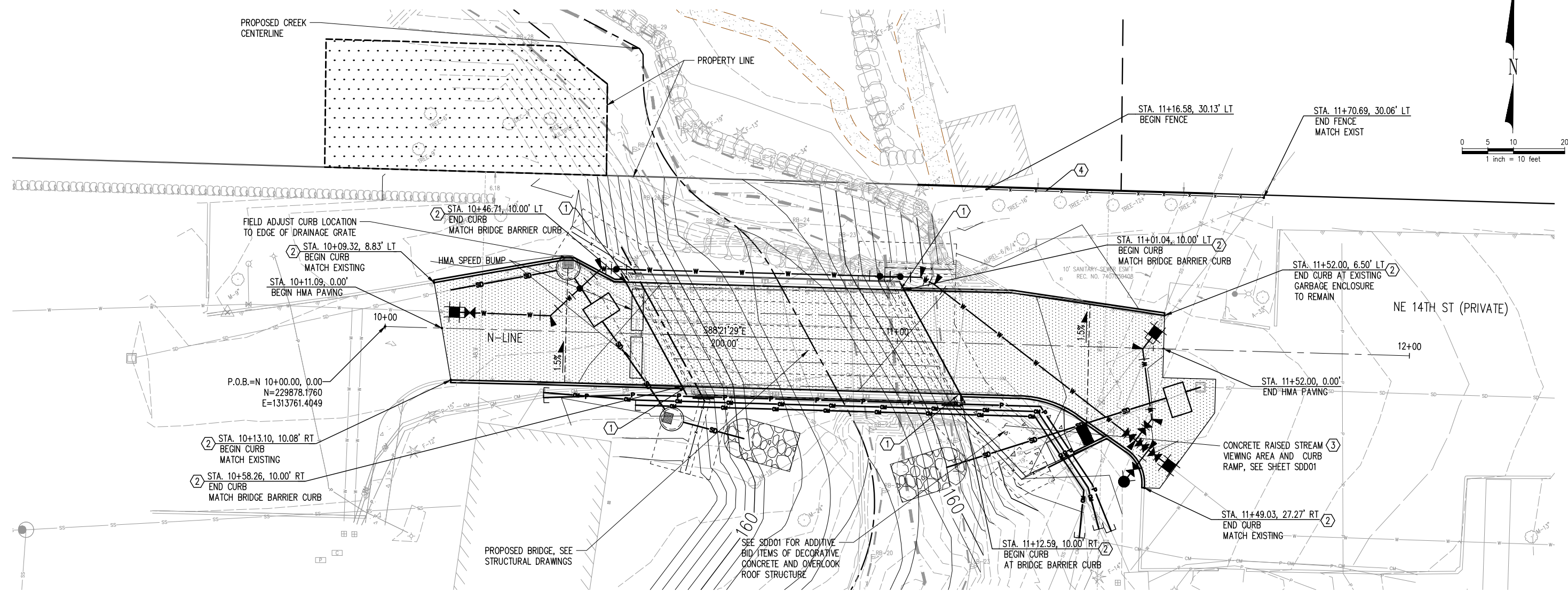
CULVERT REPLACEMENT, BRIDGE AND RIPARIAN CONSTRUCTION
SANDPIPER EAST APARTMENTS, KELSEY CREEK, BELLEVUE, WA

TEMPORARY STREAM DIVERSION & DEWATERING CONCEPT PLAN

DRAWN: AGP	PROJECT NO.: 2200204
DESIGN: AGP	SCALE:
CHECKED: DJE	DATE: 11-2024
DRAWING NO.	TS01
SHEET NO. 5	OF 40

SEC. 27, T. 25 N., R.5E., W.M.
CITY OF BELLEVUE

Xrefs:
X-KCHA-S-SV
X-KCHA-BRIDGE-14TH
X-KCHA-S-CN-14TH
X-KCHA-S-PV-14TH
X-KCHA-S-SD-14TH
X-KCHA-S-TB
X-KCHA-S-UT-14TH
X-KCHA-S-SP-14TH
MATTHEW



GENERAL NOTES:

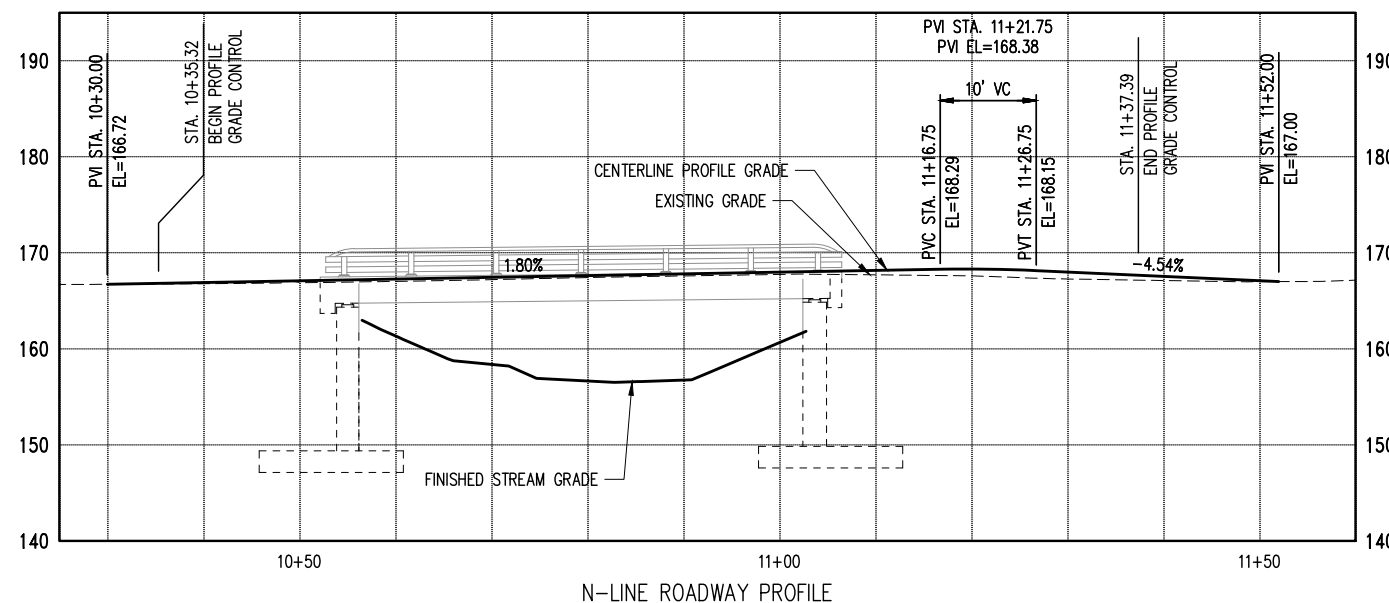
- N-LINE DRIVEWAY TYPICAL SECTION IS A UNIFORM 1.5% CROSS SLOPE MATCHING BRIDGE SECTION ON S09 BETWEEN STATION N 10+35.32 TO 11+37.39 AND CONTROLLED BY THE ROADWAY PROFILE GRADE. OUTSIDE OF THAT STATION RANGE, SEE DRAWINGS SD01 AND SDD01 FOR SUPPLEMENTAL FINISHED GRADING.
- SEE UT DRAWINGS FOR UTILITY CONSTRUCTION.

CONSTRUCTION NOTES:

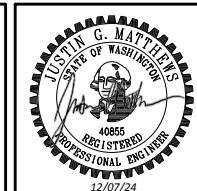
- TYPE 3 OBJECT MARKER ON SIGN POST AT END OF BRIDGE RAILING (MUTCD OM-3L AND OM-3R)
- CEMENT CONCRETE TRAFFIC CURB (WSDOT STD PLAN F-10.12-04)
- CEMENT CONCRETE SIDEWALK (WSDOT STD PLAN F-30.10-04), MODIFIED PER SDD01
- CONSTRUCT BLACK VINYL COATED CHAIN LINK FENCE TYPE 3 (WSDOT STD PLAN L-20.10-03)

LEGEND

- GRADE BREAK
- SD STORM DRAIN
- W WATER MAIN
- 3" HMA CL 1/2" PG 58H-22 OVER 6" CSBC
- TEMPORARY CONSTRUCTION EASEMENT
- CEMENT CONC SIDEWALK



CAD USER: jmc PLOT DATE: Dec 06, 2024-04:02pm
PATH: Z:\2200001-2209999\2200336 KCHA Illahee Sandpiper Flood Control\CADD\Design\KCHA-S-CS.dwg



NO.	DATE	BY	REVISION

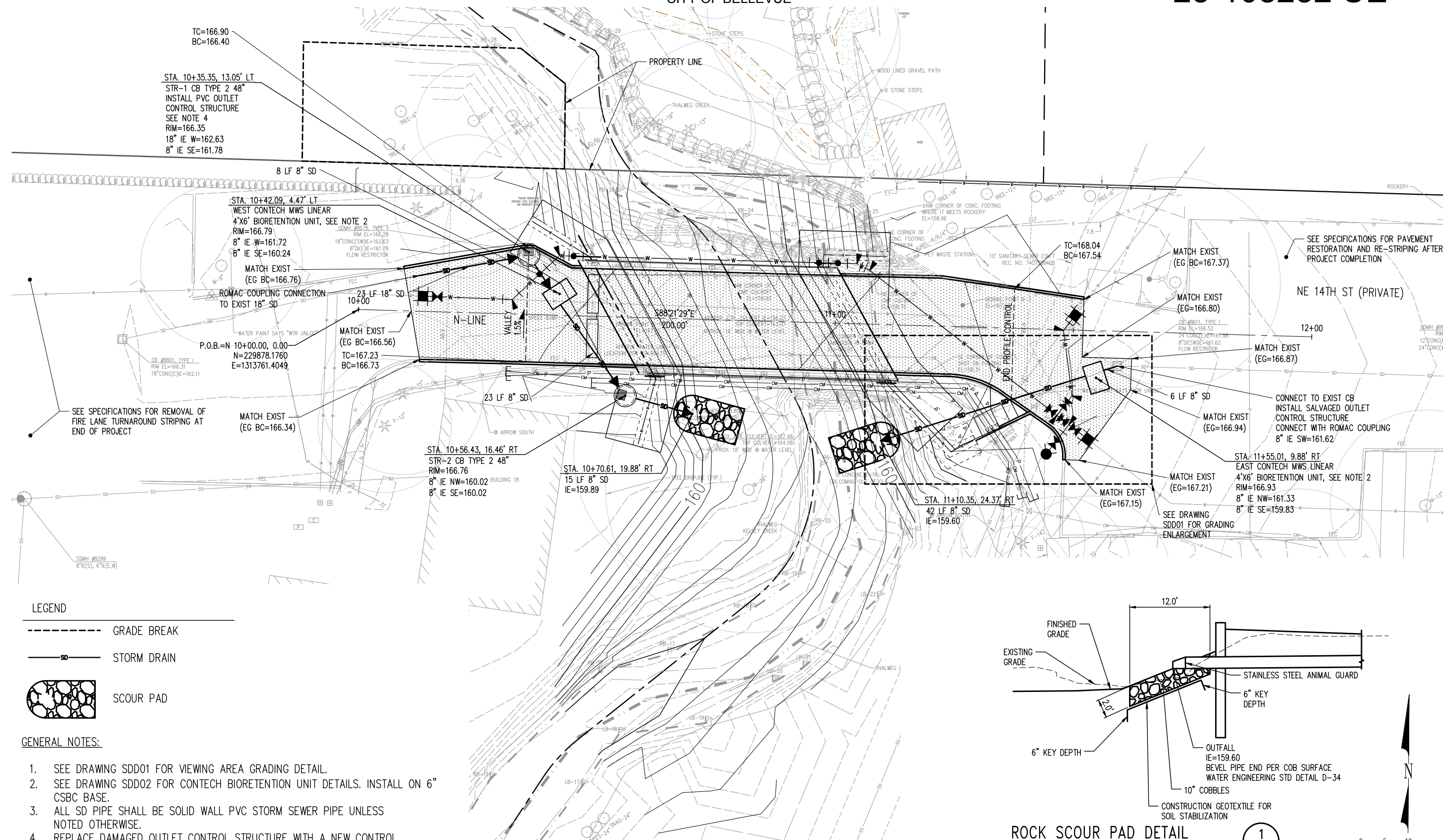


CULVERT REPLACEMENT, BRIDGE AND RIPARIAN CONSTRUCTION
SANDPIPER EAST APARTMENTS, KELSEY CREEK, BELLEVUE, WA

**NE 14TH ST BRIDGE
PAVING PLAN AND PROFILE**

DRAWN: MRV	PROJECT NO.: 2200204
DESIGN: BSP	SCALE:
CHECKED: JGM	DATE: 05-2024
DRAWING NO. CS01	
SHEET NO. 6	OF 40

Xrefs:
X-KCHA-S-SV
X-KCHA-BRIDGE-14TH
X-KCHA-S-CN-14TH
X-KCHA-S-PV-14TH
X-KCHA-S-SD-14TH
X-KCHA-S-UT-14TH
X-KCHA-S-TB
MATTHEW
X-KCHA-S-SP-14TH

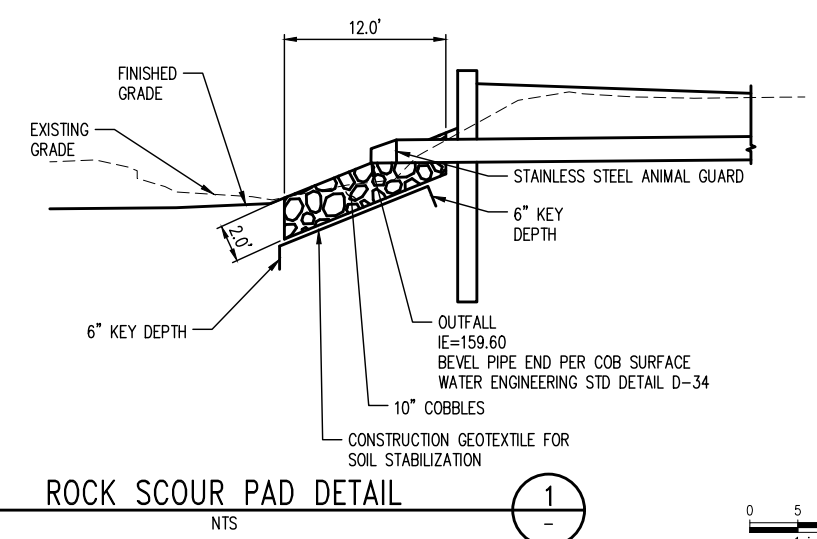


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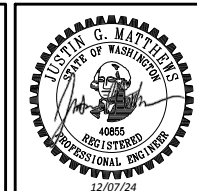
- GRADE BREAK
- SD --- STORM DRAIN
- SCOUR PAD

GENERAL NOTES:

1. SEE DRAWING SDD01 FOR VIEWING AREA GRADING DETAIL.
2. SEE DRAWING SDD02 FOR CONTECH BIORETENTION UNIT DETAILS. INSTALL ON 6" CSBC BASE.
3. ALL SD PIPE SHALL BE SOLID WALL PVC STORM SEWER PIPE UNLESS NOTED OTHERWISE.
4. REPLACE DAMAGED OUTLET CONTROL STRUCTURE WITH A NEW CONTROL STRUCTURE MATCHING THE SIZE AND CONFIGURATION OF EXISTING TO MAINTAIN EXISTING FLOW CHARACTERISTICS.



CAD USER: jmc PLOT DATE: Dec 06, 2024 06:41am
PATH: Z:\2200001-2209999\2200336 KCHA Illahae Sandpiper Flood Control\CADD\Design\KCHA-S-SD.dwg



NO.	DATE	BY	REVISION



CULVERT REPLACEMENT, BRIDGE AND RIPARIAN CONSTRUCTION
SANDPIPER EAST APARTMENTS, KELSEY CREEK, BELLEVUE, WA

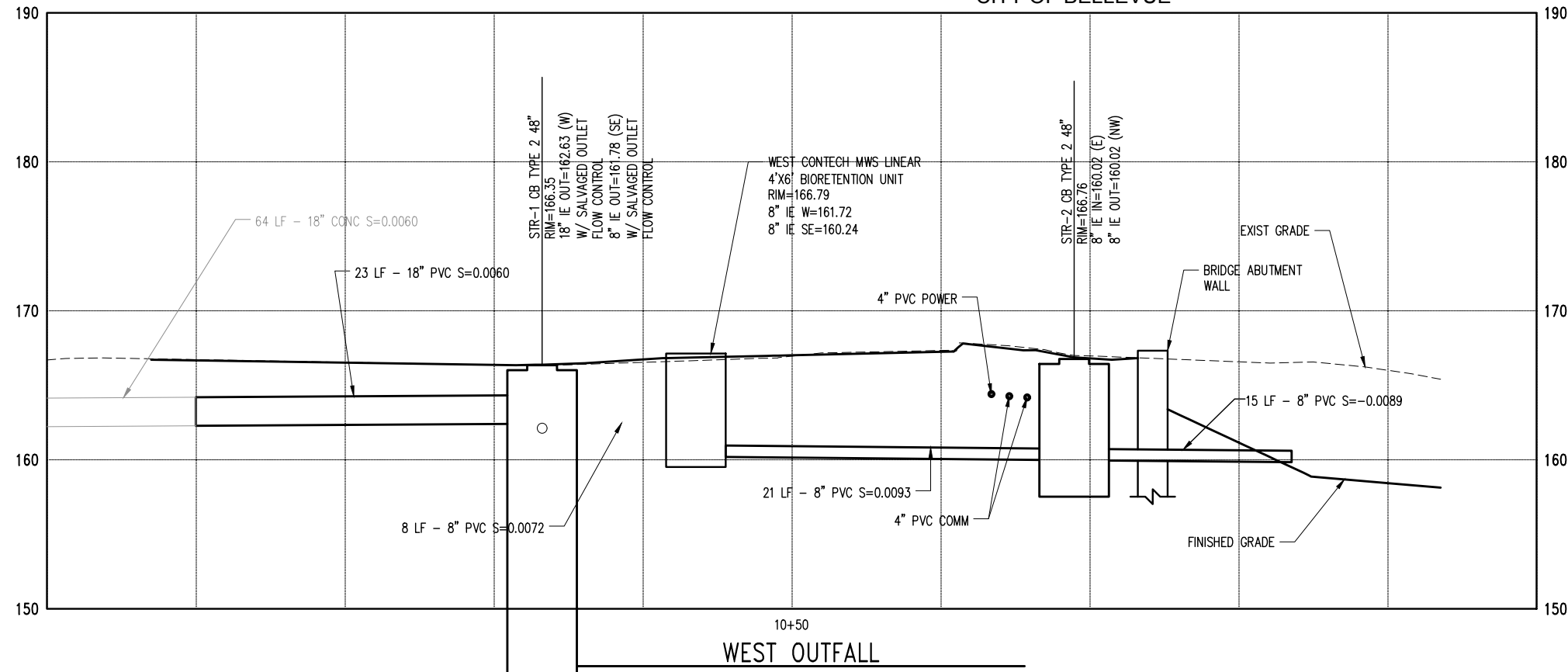
NE 14TH ST BRIDGE
GRADING AND DRAINAGE PLAN

DRAWN: MRV	PROJECT NO.: 2200204
DESIGN: BSP	SCALE:
CHECKED: JGM	DATE: 05-2024
DRAWING NO. SD01	
SHEET NO. 7	OF 40

Xrefs:
 X-KCHA-S-SV
 X-KCHA-BRIDGE-14TH
 X-KCHA-S-CN-14TH
 X-KCHA-S-PV-14TH
 X-KCHA-S-SD-14TH
 X-KCHA-S-UT-14TH
 X-KCHA-S-TB
 MATTHEW
 X-KCHA-S-SP-14TH

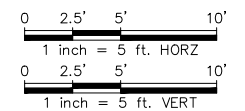
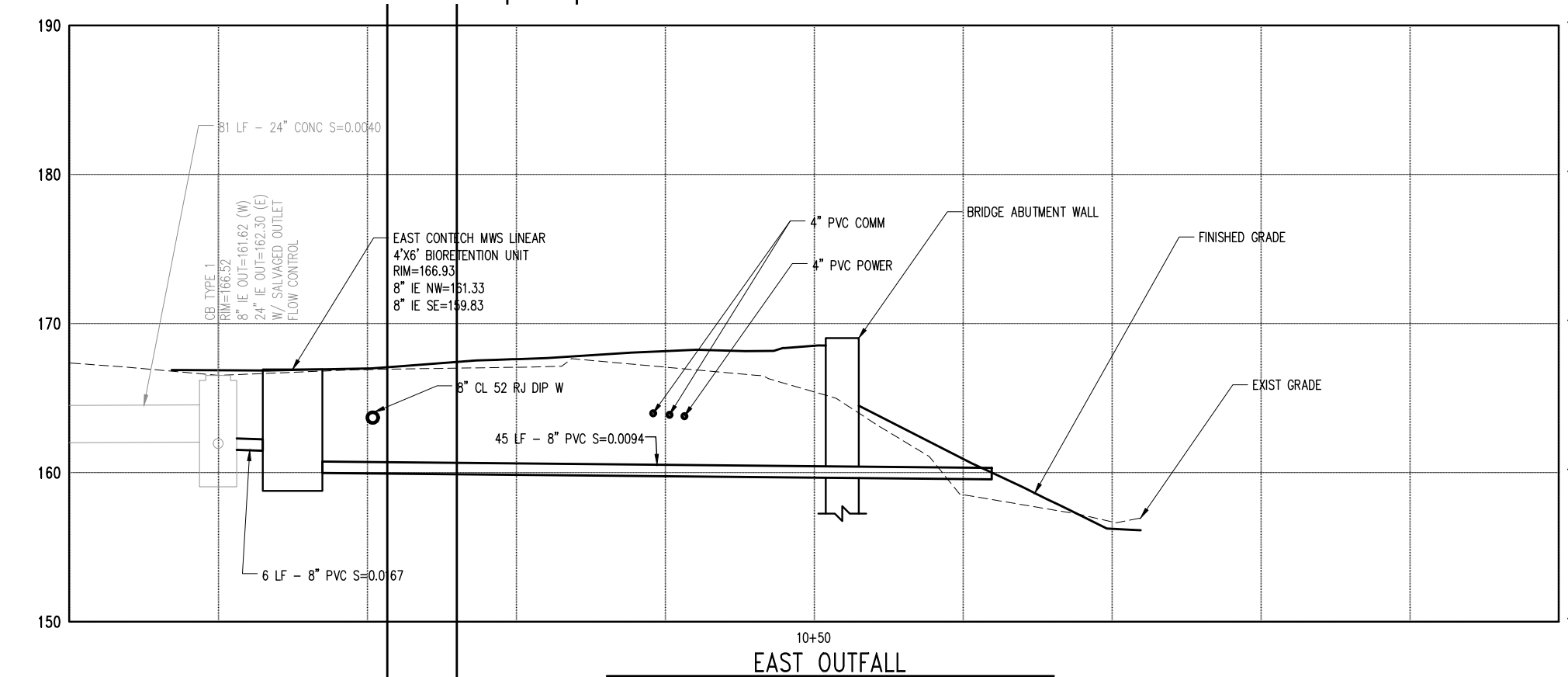
SEC. 27, T. 25 N., R.5E., W.M.
 CITY OF BELLEVUE

23-108232 UE



GENERAL NOTES:

1. INSTALL ETHAFOAM BLOCKING AT SD CROSSINGS IF LESS THAN 1 FOOT OF SEPARATION.
2. SEE DRAINAGE GENERAL NOTES ON SD01.



CAD USER: brentip PLOT DATE: Jun 18, 2024-08:34am
 PATH: Z:\2200001-2209999\2200336 KCHA Illhee Sandpiper Flood Control\CADD\Design\KCHA-S-SD.dwg



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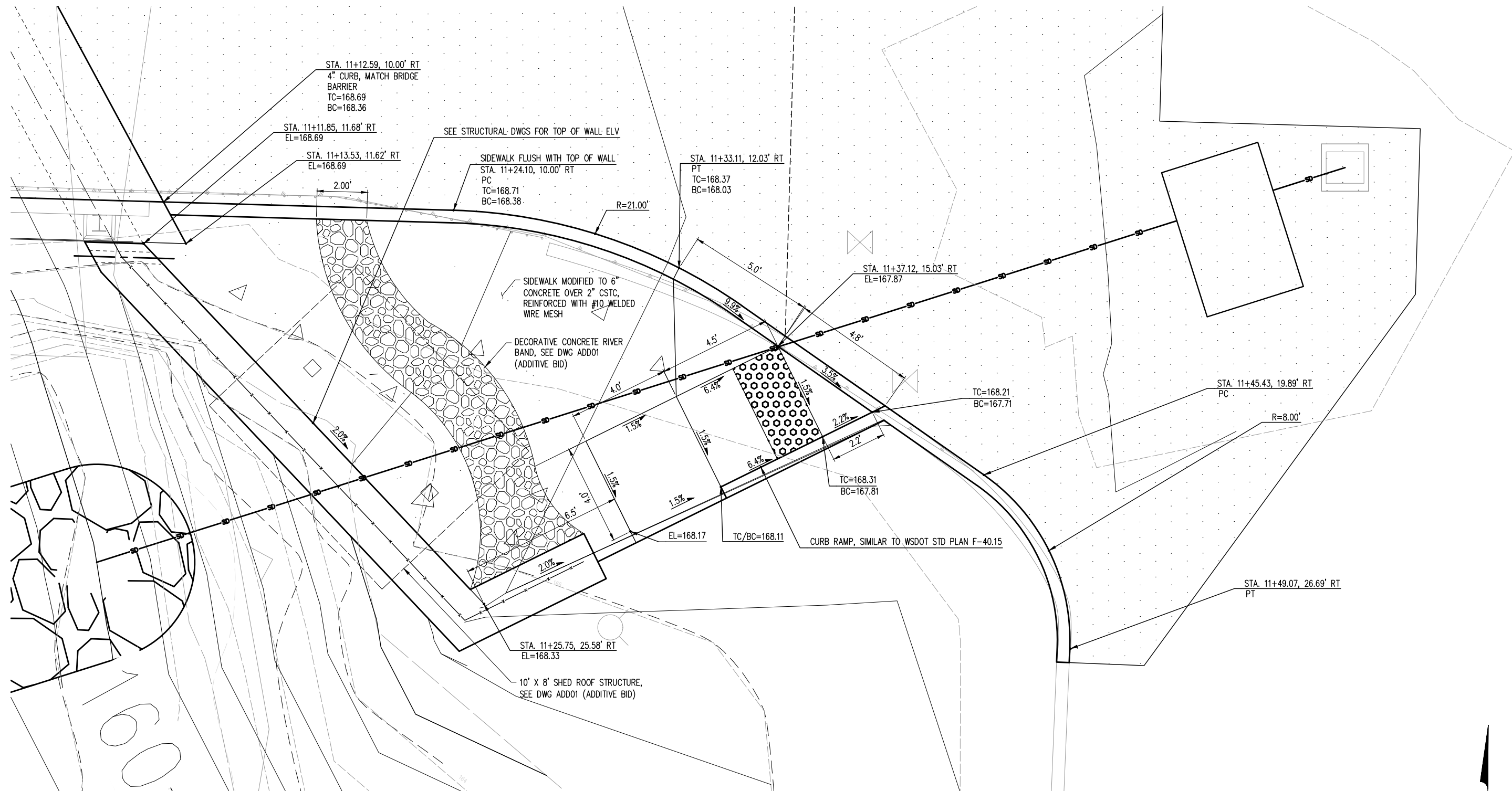
CULVERT REPLACEMENT, BRIDGE AND RIPARIAN CONSTRUCTION
 SANDPIPER EAST APARTMENTS, KELSEY CREEK, BELLEVUE, WA

NE 14TH ST BRIDGE
 DRAINAGE PROFILES

DRAWN: MRV	PROJECT NO.: 2200204
DESIGN: BSP	SCALE:
CHECKED: JGM	DATE: 05-2024
DRAWING NO. SD02	
SHEET NO. 8	OF 40

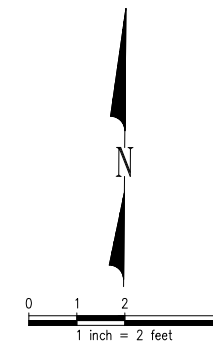
SEC. 27, T. 25 N., R.5E., W.M.
CITY OF BELLEVUE

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X-KCHA-S-PV-14TH
X-KCHA-S-SD-14TH
X-KCHA-S-TB
MATTHEW

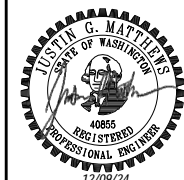


LEGEND

--- LIMIT OF PROFILE GRADE CONTROL



CAD USER: jmc PLOT DATE: Dec 09, 2024 08:22am
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NO.	DATE	BY	REVISION



CULVERT REPLACEMENT, BRIDGE AND RIPARIAN CONSTRUCTION
SANDPIPER EAST APARTMENTS, KELSEY CREEK, BELLEVUE, WA

NE 14TH ST BRIDGE
GRADING DETAIL

DRAWN: MRV	PROJECT NO.: 2200204
DESIGN: BSP	SCALE:
CHECKED: JGM	DATE: 05-2024
DRAWING NO. SDD01	
SHEET NO. 9	OF 40

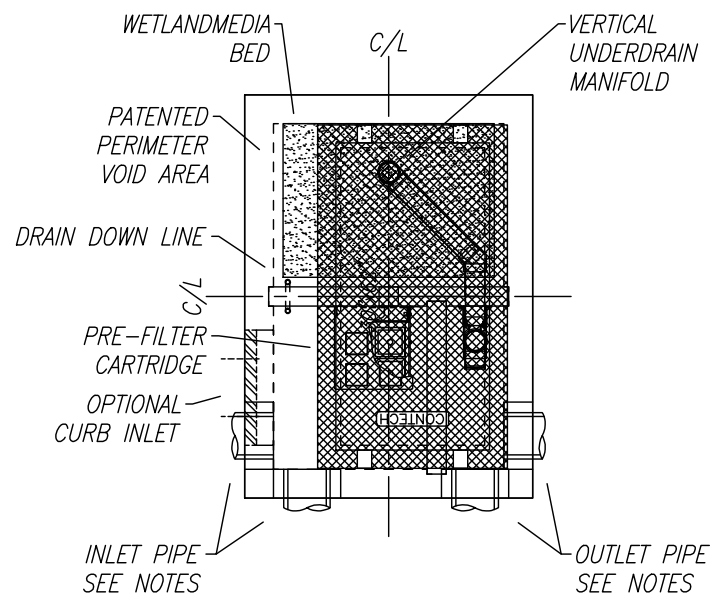
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 X-KCHA-S-TB
 MATTHEW

SEC. 27, T. 25 N., R.5E., W.M.
 CITY OF BELLEVUE

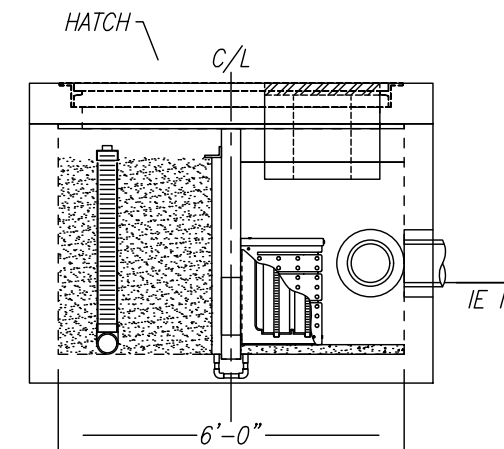
23-108232 UE

INSTALLATION NOTES

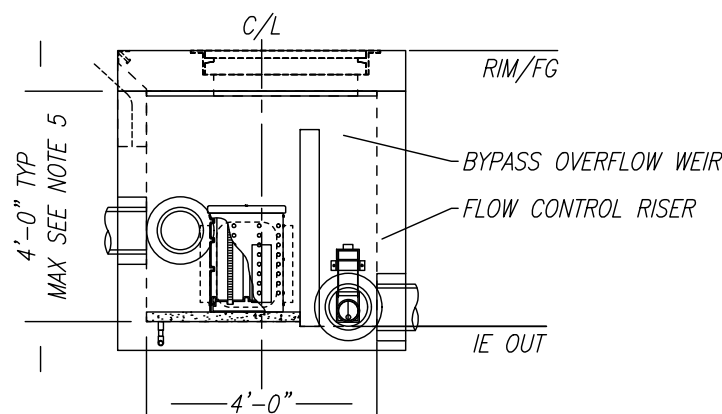
1. CONTRACTOR TO PROVIDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS REQUIRED TO OFFLOAD AND INSTALL THE SYSTEM AND APPURTENANCES IN ACCORDANCE WITH THIS DRAWING AND THE MANUFACTURER'S SPECIFICATIONS, UNLESS OTHERWISE STATED IN MANUFACTURER'S CONTRACT.
2. UNIT MUST BE INSTALLED ON LEVEL BASE. MANUFACTURER RECOMMENDS A MINIMUM 6" LEVEL ROCK BASE UNLESS SPECIFIED BY THE PROJECT ENGINEER. CONTRACTOR IS RESPONSIBLE FOR VERIFYING PROJECT ENGINEER'S RECOMMENDED BASE SPECIFICATIONS.
3. CONTRACTOR TO SUPPLY AND INSTALL ALL EXTERNAL CONNECTING PIPES. ALL PIPES MUST BE FLUSH WITH INSIDE SURFACE OF CONCRETE (PIPES CANNOT INTRUDE BEYOND FLUSH). INVERT OF OUTFLOW PIPE MUST BE FLUSH WITH DISCHARGE CHAMBER FLOOR. ALL PIPES SHALL BE SEALED WATERTIGHT PER MANUFACTURER'S STANDARD CONNECTION DETAIL.
4. CONTRACTOR RESPONSIBLE FOR CONTACTING CONTECH FOR ACTIVATION OF UNIT. MANUFACTURER'S WARRANTY IS VOID WITHOUT PROPER ACTIVATION BY A CONTECH REPRESENTATIVE.
5. VERTICAL HEIGHT VARIES BASED ON SITE SPECIFIC REQUIREMENTS.



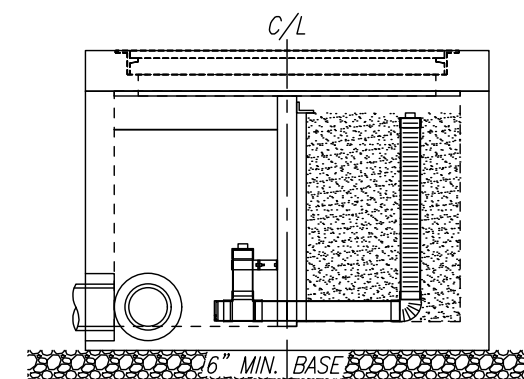
PLAN VIEW



LEFT END VIEW



ELEVATION VIEW



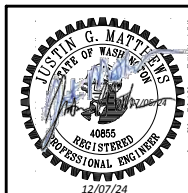
RIGHT END VIEW

**MWS-L-4-6-V-UG
 STORMWATER BIOFILTRATION SYSTEM
 STANDARD DETAIL**

CAD USER: brentip PLOT DATE: Jul 03, 2024-02:18pm
 PATH: Z:\2200001-2209999\2200336 KCHA Illahce Sandpiper Flood Control\CADD\Design\KCHA-S-SDD.dwg



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CULVERT REPLACEMENT, BRIDGE AND RIPARIAN CONSTRUCTION
 SANDPIPER EAST APARTMENTS, KELSEY CREEK, BELLEVUE, WA

**NE 14TH ST BRIDGE
 DRAINAGE DETAIL**

DRAWN: MRV	PROJECT NO.: 2200204
DESIGN: BSP	SCALE:
CHECKED: JGM	DATE: 05-2024
DRAWING NO. SDD02	
SHEET NO. 10	OF 40

GENERAL NOTES

1. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE IN FEET AND CONDUIT SIZES ARE IN INCHES.
2. THE CONTRACTOR SHALL POTHOLE ALL POTENTIAL CONFLICTS WITH UTILITIES TO VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF THE EXISTING UTILITIES.
3. CALL UTILITIES UNDERGROUND LOCATION CENTER AT 1-800-424-5555 A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION.
4. STATION AND OFFSETS PROVIDED FOR VAULTS, SWEEPS/BENDS, POLES, AND MANHOLES (CENTER OF STRUCTURE) ALL REFERENCE TO THE CENTER OF THE APPURTENANCE LOCATION.
5. CONDUITS AND VAULTS FOR PRIVATE UTILITIES ARE TO BE INSTALLED BY CONTRACTOR. CONDUCTORS AND WIRING WILL BE INSTALLED AND PULLED BY OTHERS.
6. PROFILES ARE SHOWN ALONG THE CENTERLINE OF EACH TRENCH SEGMENT AND PROVIDE GENERALIZED ELEVATION INFORMATION FOR SWEEP CONNECTIONS RELATIVE TO THE TRENCH CENTERLINE. DEPTH SHOWN REFLECTS MAXIMUM HEIGHT OF JUT.
7. ALL VAULTS, JUNCTION BOXES, MANHOLES, ETC SHALL BE LOCATED SQUARE TO ADJACENT PAVEMENT AND LANDSCAPE EDGES.

WATER GENERAL PLAN NOTES

1. ALL WORK SHALL CONFORM TO THE 2022 CITY OF BELLEVUE WATER ENGINEERING STANDARDS AND THE DEVELOPER EXTENSION AGREEMENT.
2. ALL PIPE SHALL BE DUCTILE IRON CLASS 52 UNLESS OTHERWISE SHOWN.
3. ALL PIPE AND FITTINGS NOT TO BE DISINFECTED IN PLACE PER AWWA C651 SHALL BE SWABBED WITH 1% AVAILABLE CHLORINE SOLUTION PRIOR TO INSTALLATION.
4. THE NEW WATER MAIN SHALL BE CONNECTED TO THE EXISTING SYSTEM ONLY AFTER NEW MAIN IS PRESSURE TESTED, FLUSHED, DISINFECTED AND SATISFACTORY BACTERIOLOGICAL SAMPLE RESULTS ARE OBTAINED AND RECEIVED BY THE CITY'S INSPECTOR. SEE STANDARD DETAIL W-9.
5. AFTER DISINFECTING THE WATER MAIN, DISPOSE OF CHLORINATED WATER BY DISCHARGING TO THE NEAREST OPERATING SANITARY SEWER.
6. WATER MAIN SHUT-DOWNS SHALL BE COORDINATED WITH THE WATER OPERATIONS DIVISION FOR PREFERRED TIMING DURING FLOW CONTROL CONDITIONS. WATER MAIN SHUTDOWNS SHALL NOT BE SCHEDULED TO TAKE PLACE ON FRIDAYS, OR ON THE FIVE DAYS BEFORE NOR ONE DAY AFTER A CITY HOLIDAY, UNLESS OTHERWISE APPROVED BY THE UTILITY.
7. THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN HEREON HAVE BEEN ESTABLISHED BY FIELD SURVEY OR OBTAINED FROM AVAILABLE RECORDS AND SHOULD THEREFORE BE CONSIDERED APPROXIMATE ONLY AND NOT NECESSARILY COMPLETE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS SHOWN, AND TO FURTHER DISCOVER AND AVOID ANY OTHER UTILITIES NOT SHOWN HEREON WHICH MAY BE AFFECTED BY THE IMPLEMENTATION OF THIS PLAN.
8. DEFLECT THE WATER MAIN ABOVE OR BELOW EXISTING UTILITIES AS REQUIRED TO MAINTAIN 3 FT. MINIMUM COVER AND 12-INCH MINIMUM VERTICAL CLEARANCE BETWEEN UTILITIES UNLESS OTHERWISE SPECIFIED.
9. WRAP ALL DUCTILE IRON PIPE AND ADJACENT VALVES AND FITTINGS WITH 8-MIL. POLYETHYLENE CONFORMING TO AWWA C105.
10. THE WATER MAIN SHALL BE INSTALLED ONLY AFTER THE ROADWAY SUBGRADE IS BACKFILLED, GRADED AND COMPACTED IN CUT AND FILL AREAS.

11. TRENCH BACKFILL AND SURFACE RESTORATION OF EXISTING ASPHALT PAVEMENT SHALL BE AS REQUIRED BY THE RIGHT-OF-WAY USE PERMIT.
12. ALL FITTINGS SHALL BE BLOCKED PER STANDARD DETAILS UNLESS OTHERWISE SPECIFIED.
13. ALL SERVICES SHALL BE 1" X 1" PER STANDARD DETAILS UNLESS OTHERWISE SPECIFIED. ADAPTORS FOR 3/4" METERS SHALL BE USED WHERE APPLICABLE.
14. WHEN WORKING WITH ASBESTOS CEMENT PIPE, THE CONTRACTOR IS REQUIRED TO MAINTAIN WORKERS' EXPOSURE TO ASBESTOS MATERIAL AT OR BELOW THE LIMIT PRESCRIBED IN WAC 296-62-07705.
15. CALL 1-800-424-5555, OR 811, 72 HOURS BEFORE CONSTRUCTION FOR UTILITY LOCATIONS.
16. UNIFORM PLUMBING CODE REQUIRES THE INSTALLATION OF PRIVATELY OWNED AND OPERATED PRESSURE REDUCING VALVES WHERE THE OPERATING PRESSURE EXCEEDS 80 PSI.
17. THE CONTRACTOR SHALL USE A VACUUM STREET SWEEPER TO REMOVE DUST AND DEBRIS FROM PAVEMENT AREAS AS DIRECTED BY THE ENGINEER. FLUSHING OF STREETS SHALL NOT BE PERMITTED WITHOUT PRIOR CITY APPROVAL.
18. BEFORE COMMENCEMENT OF TRENCHING, THE CONTRACTOR SHALL PROVIDE CATCH BASIN INSERTS FOR ALL CATCH BASINS THAT WILL RECEIVE RUNOFF FROM THE PROJECT SITE. THE CONTRACTOR SHALL PERIODICALLY INSPECT THE CONDITION OF ALL INSERTS AND REPLACE AS NECESSARY.
19. ABANDONMENT OF EXISTING WATER SERVICES SHALL BE ACCOMPLISHED AS FOLLOWS: (SEE W5-29 ABANDONING FACILITIES FOR OTHER FACILITY ABANDONMENT)
 - A. REMOVE EXISTING SERVICE SADDLE FROM WATER MAIN AND REPLACE WITH NEW STAINLESS STEEL REPAIR BAND, ROMAC SS2, FORD SERVICE SADDLE FC101, CC THREADED SADDLE AND A CC THREAD BRASS PLUG, OR APPROVED EQUAL (WILL NOT BE REQUIRED WHEN WATER MAIN IS TO BE ABANDONED).
 - B. REMOVE AND DISPOSE OF EXISTING SETTER AND METER BOX.
 - C. CAP OR CRIMP (IF COPPER) EXISTING SERVICE LINE TO BE ABANDONED IN PLACE EACH END.
 - D. RETURN EXISTING METER TO THE UTILITY INSPECTOR.
20. AVOID CROSSING WATER OR SEWER MAINS AT HIGHLY ACUTE ANGLES. THE SMALLEST ANGLE MEASURE BETWEEN UTILITIES SHOULD BE 45 TO 90 DEGREES.
21. WHERE WATER MAIN CROSSES ABOVE OR BELOW SANITARY SEWER, ONE FULL LENGTH OF WATER PIPE SHALL BE CENTERED FOR MAXIMUM JOINT SEPARATION.
22. AT POINTS WHERE EXISTING THRUST BLOCKING IS FOUND, MINIMUM CLEARANCE BETWEEN THE CONCRETE BLOCKING AND OTHER BURIED UTILITIES OR STRUCTURES SHALL BE 5 FEET.
23. WORKERS MUST FOLLOW CONFINED SPACE REGULATIONS AND PROCEDURES WHEN ENTERING OR DOING WORK IN COB OWNED CONFINED SPACES. COMPLETED PERMIT MUST BE GIVEN TO THE UTILITIES INSPECTOR PRIOR TO ENTRY.
24. MANHOLES, CATCH BASINS AND VAULTS ARE CONSIDERED TO BE PERMIT-REQUIRED CONFINED SPACES. ENTRY INTO THESE SPACES SHALL BE IN ACCORDANCE WITH CHAPTER 296-809 WAC.
25. WHEN WORK IS TO OCCUR IN EASEMENTS, THE CONTRACTOR SHALL NOTIFY THE EASEMENT GRANTOR AND BELLEVUE UTILITIES IN WRITING A MINIMUM OF 48 HOURS IN ADVANCE OF BEGINNING WORK (NOT INCLUDING WEEKENDS OR HOLIDAYS). FAILURE TO NOTIFY GRANTOR AND BELLEVUE UTILITIES WILL RESULT IN A STOP WORK ORDER BEING POSTED UNTIL THE MATTER IS RESOLVED TO THE SATISFACTION OF BELLEVUE UTILITIES. A WRITTEN RELEASE FROM THE EASEMENT GRANTOR SHALL BE FURNISHED TO THE UTILITIES INSPECTOR PRIOR TO PERMIT SIGNOFF.
26. THE CONTRACTOR SHALL RESTORE THE RIGHT-OF-WAY AND EXISTING PUBLIC UTILITY EASEMENT(S) AFTER CONSTRUCTION TO A CONDITION EQUAL OR BETTER THAN CONDITION PRIOR TO ENTRY. CONTRACTOR SHALL FURNISH A SIGNED RELEASE FROM ALL AFFECTED PROPERTY OWNERS AFTER RESTORATION HAS BEEN COMPLETED.

CAD USER: brentip PLOT DATE: Jun 18, 2024-08:32am
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NO.	DATE	BY	REVISION

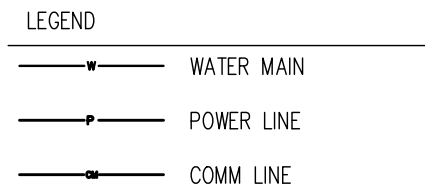
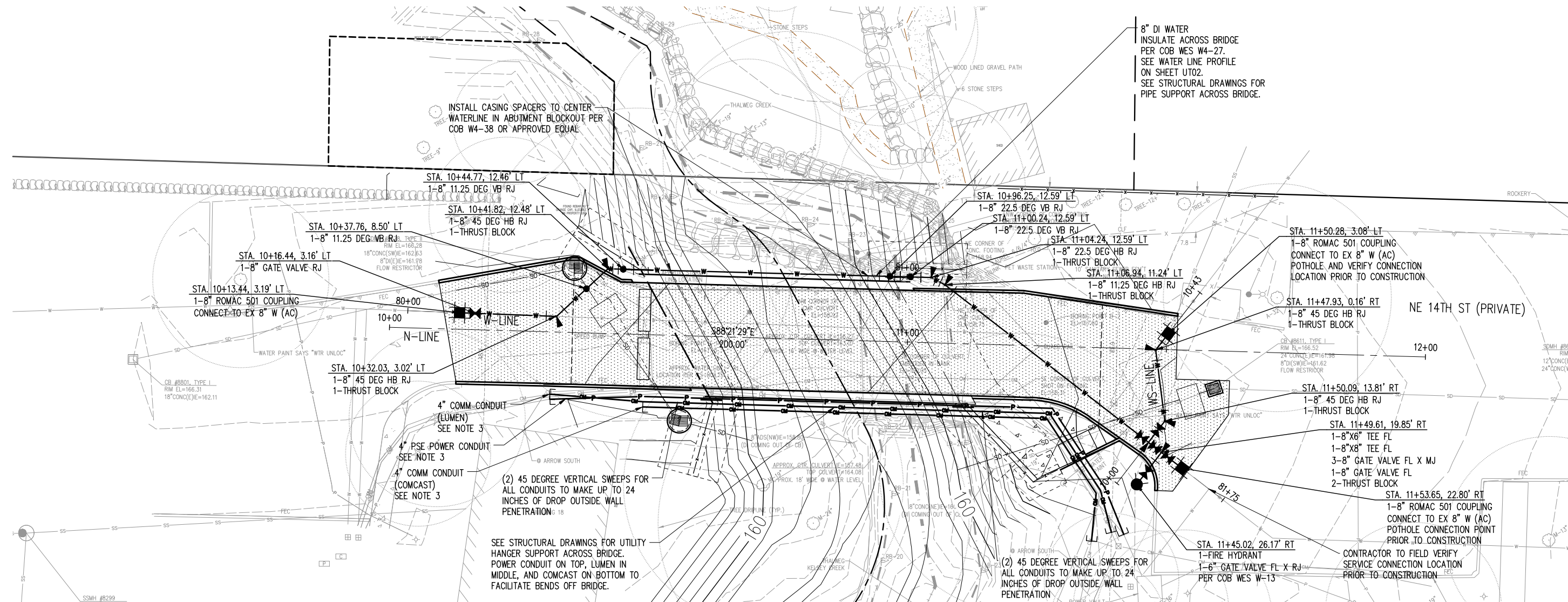


CULVERT REPLACEMENT, BRIDGE AND RIPARIAN CONSTRUCTION
SANDPIPER EAST APARTMENTS, KELSEY CREEK, BELLEVUE, WA

**NE 14TH ST BRIDGE
UTILITY NOTES**

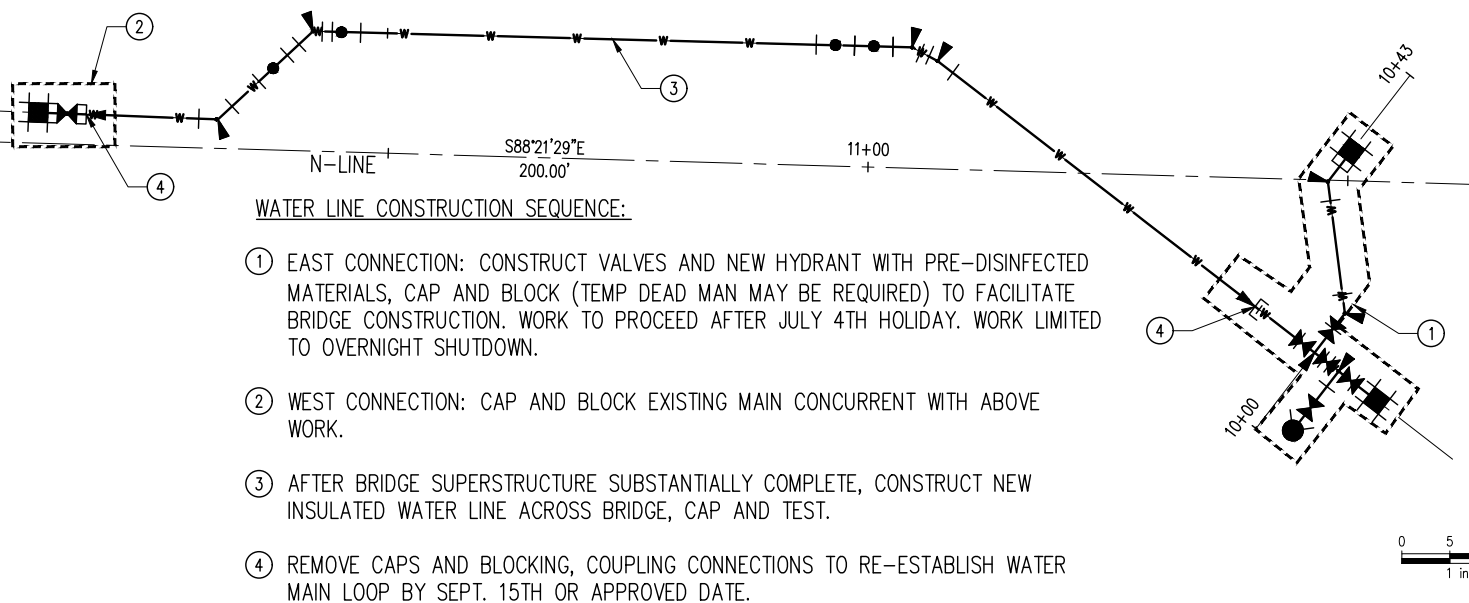
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DESIGN: BSP	SCALE:
CHECKED: JGM	DATE: 05-2024
DRAWING NO. UTOO	
SHEET NO. 11	OF 40

Xrefs:
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X-KCHA-BRIDGE-14TH
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X-KCHA-S-PV-14TH
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X-KCHA-S-TB
MATTHEW
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X-KCHA-S-SP-14TH



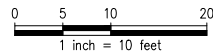
GENERAL NOTES:

- SEE UTILITY GENERAL NOTES ON SHEET UT00.
- WATER PIPE SHALL BE DUCTILE IRON, CLASS 52. SEE SHEET UT02 FOR PIPE LENGTHS.
- PSE, COMCAST, AND LUMEN TO REMOVE EXISTING WIRING/SERVICE THROUGH CONSTRUCTION AREA PRIOR TO CONSTRUCTION.
- CONTRACTOR TO FURNISH AND INSTALL 4" SCHEDULE 80 PVC COMM AND POWER CONDUITS ACROSS BRIDGE AND IN ADJACENT TRENCHED SECTION AS SHOWN. CONDUIT SHALL BE CAPPED AND STAKED FOR FRANCHISE UTILITIES TO MAKE CONNECTIONS TO EXISTING FACILITIES.
- DISPOSAL OF ASBESTOS CEMENT PIPE WILL INCLUDE DOUBLE BAGGING AND SEALING REMOVED PIPE AND DEBRIS IN ACCORDANCE WITH LOCAL REQUIREMENTS AND DISPOSING AT AN AUTHORIZED LOCATION.

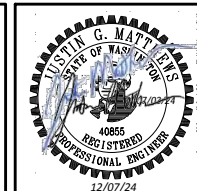


WATER LINE CONSTRUCTION SEQUENCE:

- EAST CONNECTION: CONSTRUCT VALVES AND NEW HYDRANT WITH PRE-DISINFECTED MATERIALS, CAP AND BLOCK (TEMP DEAD MAN MAY BE REQUIRED) TO FACILITATE BRIDGE CONSTRUCTION. WORK TO PROCEED AFTER JULY 4TH HOLIDAY. WORK LIMITED TO OVERNIGHT SHUTDOWN.
- WEST CONNECTION: CAP AND BLOCK EXISTING MAIN CONCURRENT WITH ABOVE WORK.
- AFTER BRIDGE SUPERSTRUCTURE SUBSTANTIALLY COMPLETE, CONSTRUCT NEW INSULATED WATER LINE ACROSS BRIDGE, CAP AND TEST.
- REMOVE CAPS AND BLOCKING, COUPLING CONNECTIONS TO RE-ESTABLISH WATER MAIN LOOP BY SEPT. 15TH OR APPROVED DATE.



CAD USER: brentip PLOT DATE: Jul 03, 2024-12:21pm
PATH: Z:\2200001-2209999\2200336 KCHA Illahae Sandpiper Flood Control\CADD\Design\KCHA-S-UT.dwg



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CULVERT REPLACEMENT, BRIDGE AND RIPARIAN CONSTRUCTION
SANDPIPER EAST APARTMENTS, KELSEY CREEK, BELLEVUE, WA

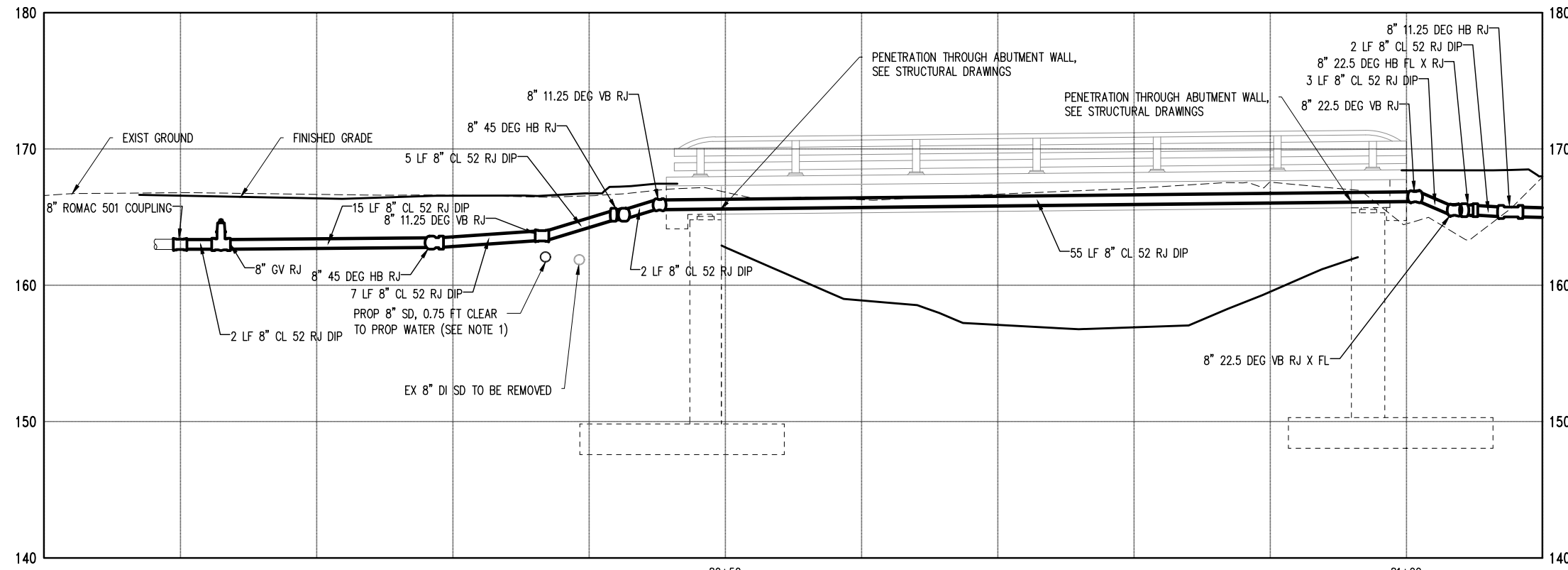
**NE 14TH ST BRIDGE
UTILITY PLAN**

DRAWN: MRV	PROJECT NO.: 2200204
DESIGN: BSP	SCALE:
CHECKED: JGM	DATE: 05-2024
DRAWING NO. UT01	
SHEET NO. 12	OF 40

Xrefs:
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 X-KCHA-S-TB
 MATTHEW
 KCHA-BRIDGE-14TH

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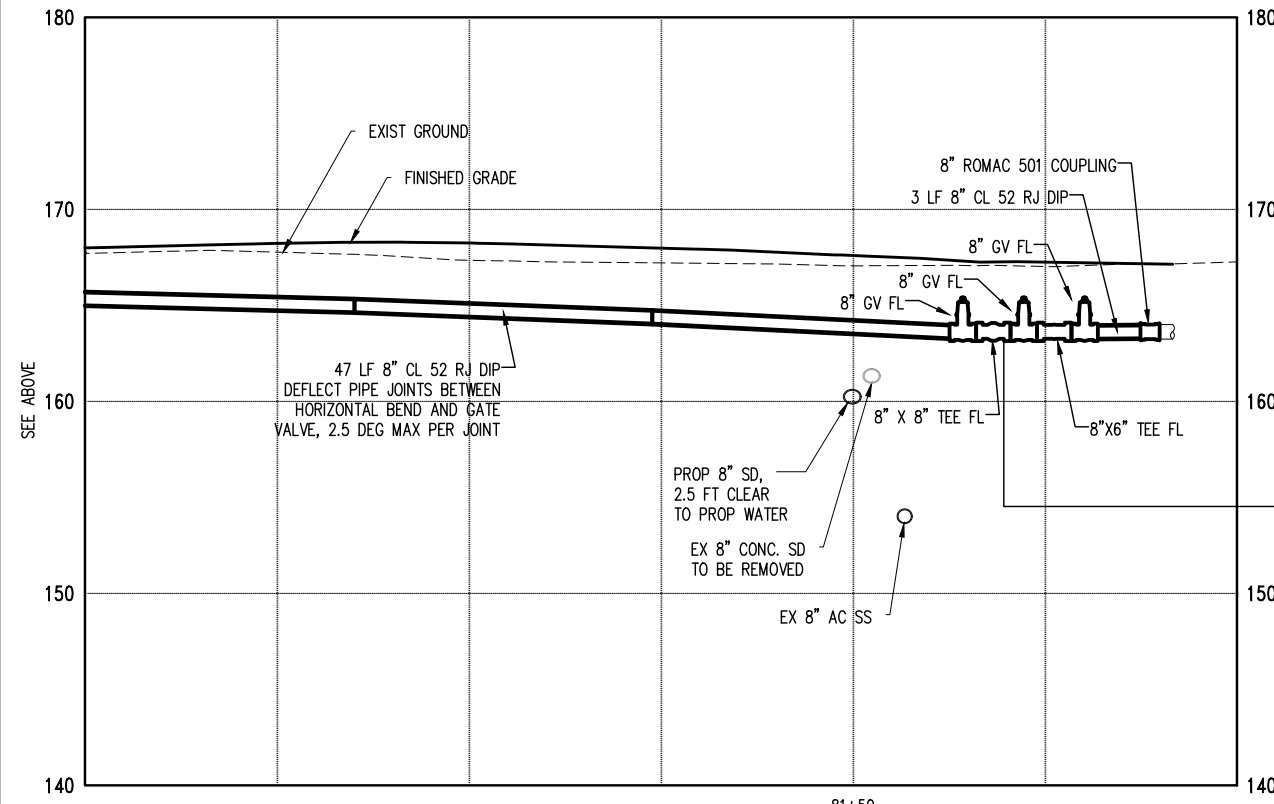


SEE BELOW

GENERAL NOTES:

1. INSTALL ETHAFOAM BLOCKING AT UTILITY CROSSINGS IF LESS THAN 6 INCHES OF SEPARATION.
2. CONTINUE PIPE INSULATION TO ABUTMENT WALL.
3. SEE UTILITY GENERAL NOTES ON UT01.

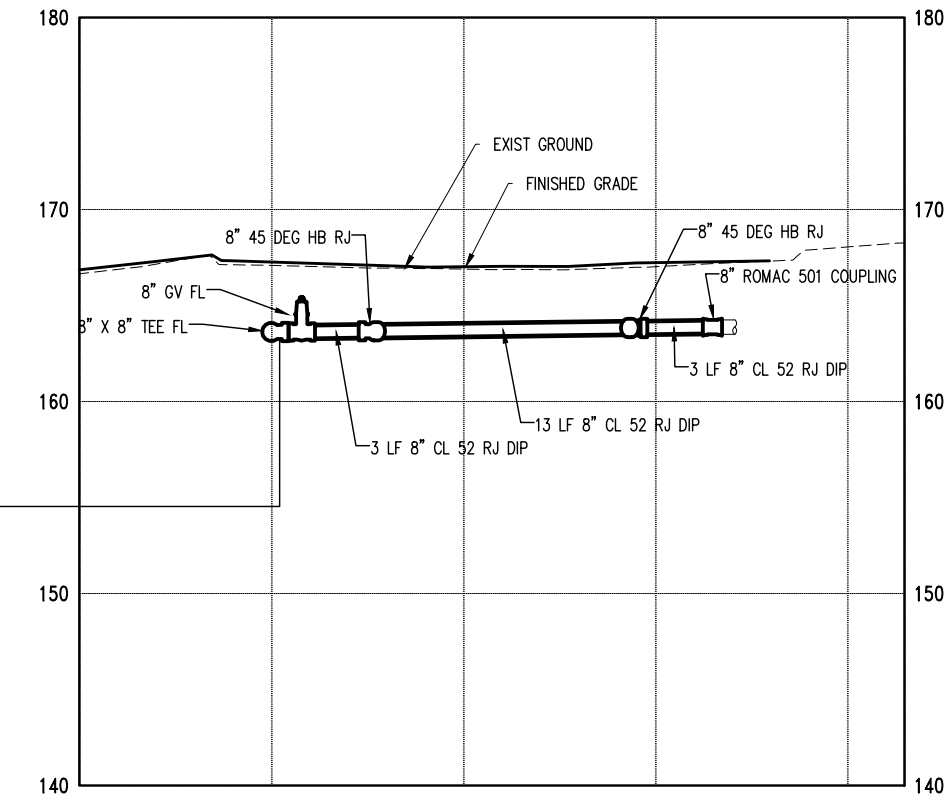
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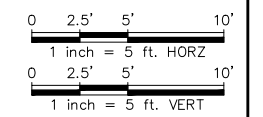
SEE ABOVE

SAME FITTING

W-LINE



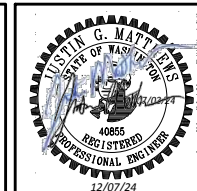
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CAD USER: brentip PLOT DATE: Jun 18, 2024-08:36am
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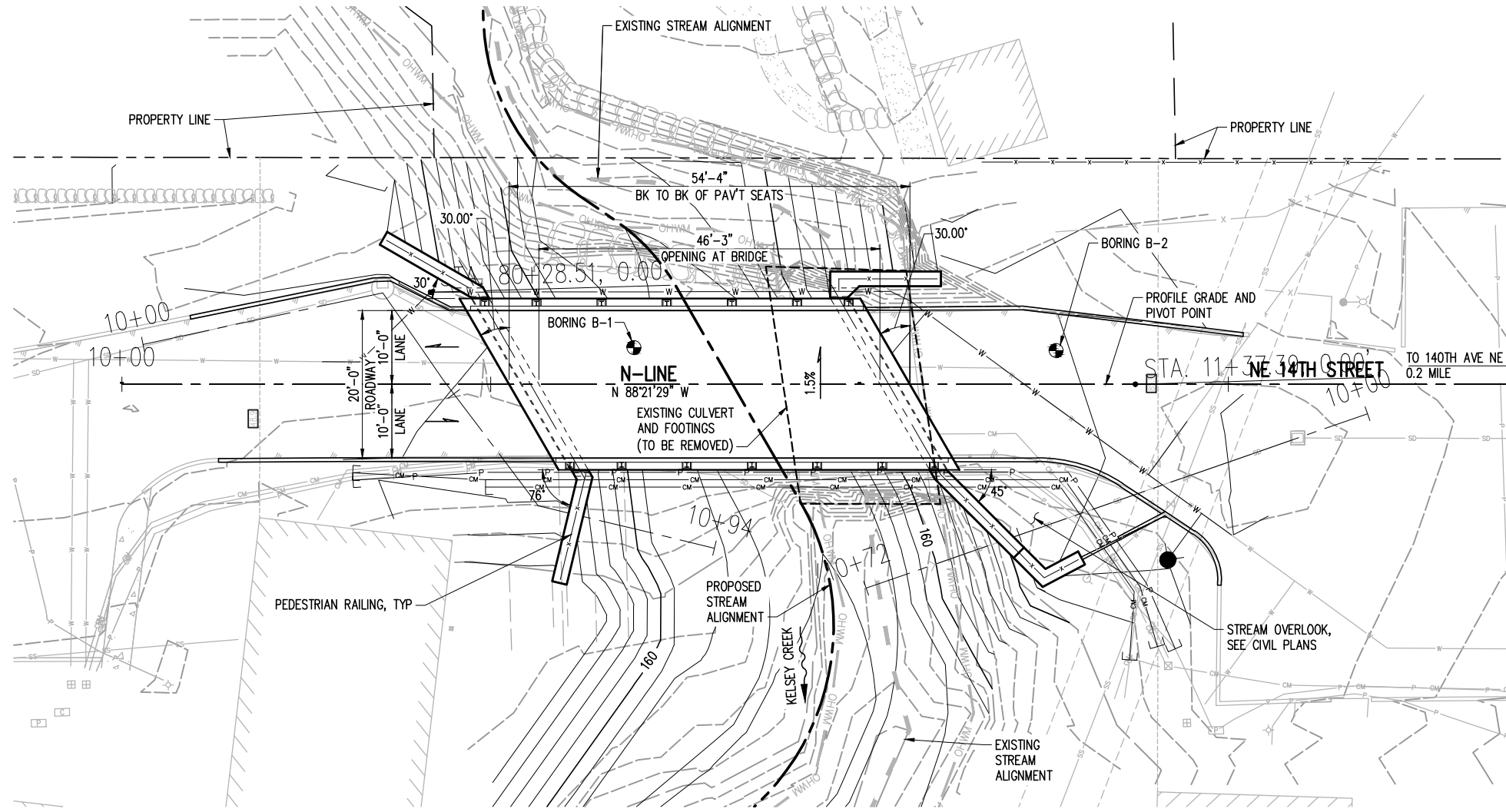


CULVERT REPLACEMENT, BRIDGE AND RIPARIAN CONSTRUCTION
 SANDPIPER EAST APARTMENTS, KELSEY CREEK, BELLEVUE, WA

**NE 14TH ST BRIDGE
 UTILITY PROFILES**

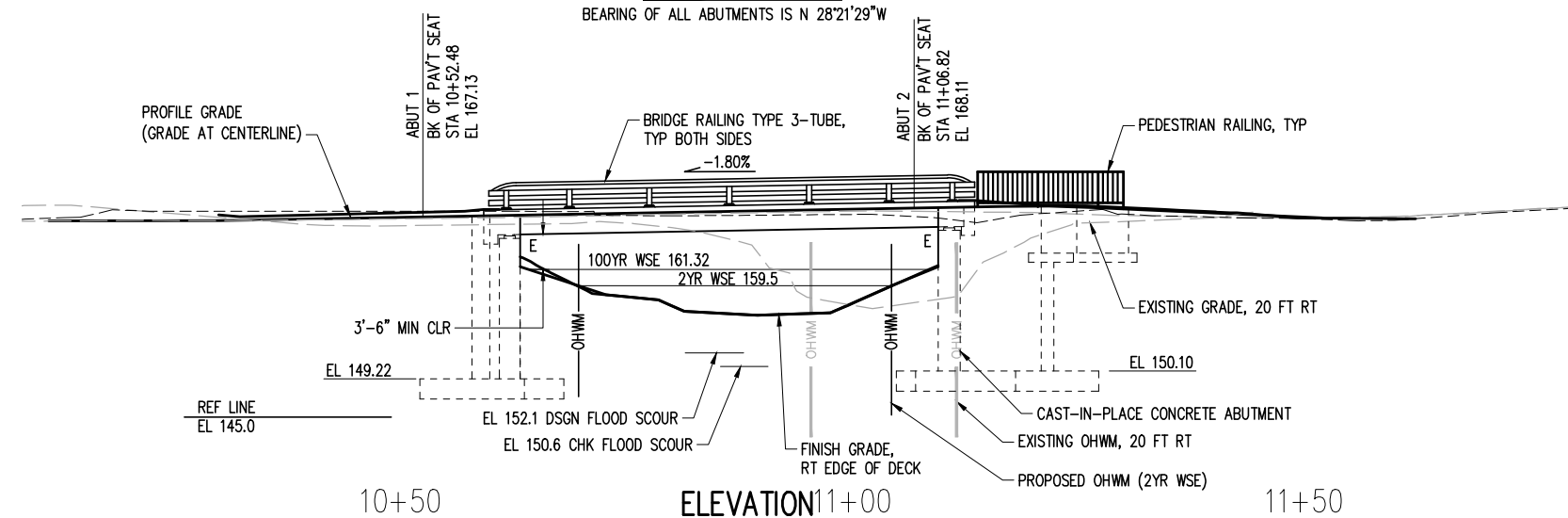
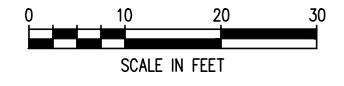
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DESIGN: BSP	SCALE:
CHECKED: JGM	DATE: 05-2024
DRAWING NO. UT02	
SHEET NO. 13	OF 40

SEC. 27, T. 25 N., R.5E., W.M.
CITY OF BELLEVUE



PLAN

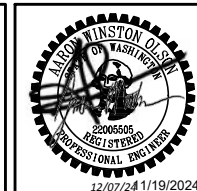
BEARING OF ALL ABUTMENTS IS N 28°21'29\"/>



ELEVATION

PROFILE GRADE ELEVATIONS SHOWN ARE FINISH GRADE AT TOP OF HMA OVERLAY
SOUTH ELEVATION SHOWN, LOOKING NORTH

PRECAST PRESTRESSED
(24") SLAB UNITS
LOADING: HL-93



NO.	DATE	BY	REVISION



CULVERT REPLACEMENT, BRIDGE AND RIPARIAN CONSTRUCTION
SANDPIPER EAST APARTMENTS, KELSEY CREEK, BELLEVUE, WA

NE 14TH ST BRIDGE
BRIDGE PLAN & ELEVATION

DRAWN: RRT	PROJECT NO.: 2200204
DESIGN: RCL	SCALE: AS SHOWN
CHECKED: AWO	DATE: 11-2024
DRAWING NO.	S01
SHEET NO. 14	OF 40

BRIDGE GENERAL NOTES

- ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE PROJECT SPECIFICATIONS AND THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION," DATED 2024, AND PROJECT SPECIAL PROVISIONS.
- ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL UNLESS OTHERWISE SHOWN.
- THE CONTRACTOR SHALL PLAN AND CONDUCT THE WORK IN SUCH A MANNER THAT NO OBJECTS OR FOREIGN MATERIALS FALL FROM THE WORK ON THE EXISTING OR NEW BRIDGE TO THE CREEK CHANNEL BELOW. ALL WORK ASSOCIATED WITH THIS CONTAINMENT SYSTEM SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
- THE EXISTING CULVERT IS LOAD RESTRICTED. THE NORTH HALF OF THE ROADWAY OVER THE CULVERT IS CLOSED. LOADING ON THE SOUTH HALF OF THE ROADWAY SHALL BE LIMITED TO A SINGLE VEHICLE WITH A TOTAL WEIGHT OF 5 TONS OR LESS. THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING AND BRACING OF ALL STRUCTURAL MEMBERS AND EXCAVATIONS. SHORING AND BRACING SHALL CONSIDER THE SEQUENCE OF WORK AND NOT BE REMOVED UNTIL ALL FINAL CONNECTIONS ARE COMPLETE AND MATERIALS HAVE ACHIEVED THEIR DESIGN STRENGTH. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY, STABILITY, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES REQUIRED TO PERFORM THE WORK.

THE WEST SIDE OF KELSEY CREEK CAN BE ACCESSED VIA NE 13TH STREET.
- THE STRUCTURE DESIGN IS IN ACCORDANCE WITH THE REQUIREMENTS OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 9TH EDITION, 2020, AND AASHTO GUIDE SPECIFICATIONS FOR LRFD SEISMIC BRIDGE DESIGN, 2ND EDITION, 2011 WITH INTERIMS THROUGH 2015.
- THE GEOTECHNICAL ENGINEERING REPORT, SANDPIPER EAST APARTMENTS – KELSEY CREEK CROSSINGS, DATED NOVEMBER 15, 2023 IS THE BASIS FOR THE DESIGN.
- THE HYDRAULIC ENGINEERING BASIS OF DESIGN REPORT, KCHA FLOOD CONTROL IMPROVEMENTS, SANDPIPER EAST – NORTH CROSSING, DATED APRIL 1, 2023 IS THE BASIS FOR THE DESIGN.
- THE STRUCTURE SEISMIC DESIGN USES:

PGA	=	0.56g
As	=	0.61g
Sps	=	1.31g
Spt	=	0.84g
SITE CLASS	=	D
- DESIGN LOADS:

<u>DEAD LOAD:</u>	
CONCRETE, UNLESS NOTED OTHERWISE	155 PCF
PRECAST, PRESTRESSED CONCRETE GIRDERS	165 PCF
ASPHALT OVERLAY	140 PCF
<u>LIVE LOAD:</u>	
VEHICLE	AASHTO HL93 WITH IMPACT
- UNLESS OTHERWISE SHOWN IN THE PLANS THE CONCRETE COVER MEASURED FROM THE FACE OF THE CONCRETE TO THE FACE OF ANY REINFORCING STEEL SHALL BE 3 INCHES AT CONCRETE CAST AGAINST EARTH, AND 1 1/2 INCHES AT ALL OTHER LOCATIONS.
- CONCRETE SHALL BE CLASS 4000 UNLESS NOTED OTHERWISE BELOW.

END DIAPHRAGM	CLASS 4000
BRIDGE RAILING CURB	CLASS 4000
- CONCRETE STEEL REINFORCING SHALL BE ASTM A706, GRADE 60, UNLESS NOTED OTHERWISE.
- THE COLOR OF PIGMENTED SEALER FOR CONCRETE SURFACES SHALL BE WASHINGTON GRAY.
- ALL EXTERIOR CORNERS AND EDGES SHALL HAVE A 3/4" CHAMFER AND ALL INTERIOR CORNERS SHALL HAVE A 3/4" FILLET UNO.
- BRIDGE RAILING TYPE 3-TUBE, SEE BRIDGE RAILING SHEETS FOR NOTES.

TEMPORARY STRUCTURAL SHORING NOTES

- ALL COSTS IN CONNECTION WITH THE CONTRACT REQUIREMENTS DESCRIBED IN THESE NOTES SHALL BE INCLUDED IN THE BID ITEM "TEMPORARY STRUCTURAL SHORING AND MONITORING" AND WILL NOT BE PAID SEPARATELY.
- THE PRIMARY SHORING SYSTEM SHALL CONSIST OF A DRILLED SOLDIER PILE SYSTEM. USE OF AN ALTERNATIVE SYSTEM REQUIRES APPROVAL BY THE ENGINEER.
- THE TOP OF THE TEMPORARY STRUCTURAL SHORING SHALL BE AT OR ABOVE EXISTING GRADE.
- WHEN THE WORK IS COMPLETE, THE CONTRACTOR SHALL REMOVE STRUCTURAL SHORING AT THE SOUTH SIDE OF ABUT 1 TO A DEPTH OF 2 FEET BELOW THE FINISH GROUND LINE. THE REMAINDER OF THE STRUCTURAL SHORING AT THE SOUTH SIDE OF ABUT 1 SHALL BE REMAIN IN PLACE. OTHER LOCATIONS OF STRUCTURAL SHORING CAN BE REMOVED IN THEIR ENTIRETY AT THE CONTRACTOR'S OPTION.
- SHORING MONITORING
 - PRECONSTRUCTION SURVEY. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL COMPLETE A WRITTEN AND PHOTOGRAPHIC LOG OF THE EXISTING CONDITION OF THE BUILDINGS ADJACENT TO THE PROPOSED BRIDGE. IT SHALL INCLUDE CONDITIONS THAT MIGHT BE MISCONSTRUED AS DAMAGE CAUSED BY THE ABSENCE OF, THE INSTALLATION OF, OR THE PERFORMANCE OF EXCAVATION SUPPORT AND PROTECTION SYSTEMS. THE SURVEY SHALL INCLUDE, AT A MINIMUM, THE BUILDINGS AT THE SOUTHWEST AND SOUTHEAST CORNERS OF THE PROPOSED BRIDGE. A LICENSED SURVEYOR SHALL DOCUMENT ALL EXISTING SUBSTANTIAL CRACKS IN EXISTING STRUCTURES. CRACK GAUGES MAY BE REQUIRED BY THE ENGINEER. THIS SURVEY SHALL BE SUBMITTED AS A TYPE 1 SUBMITTAL BEFORE THE START OF SHORING INSTALLATION.
 - SURVEY POINTS SHALL BE ESTABLISHED NEAR THE TOP OF THE SHORING WALL AT 15-FOOT INTERVALS. SURVEY POINTS SHALL ALSO BE ESTABLISHED ON THE ADJACENT BUILDINGS TO THE SOUTHWEST AND SOUTHEAST. THERE SHALL BE A MINIMUM OF THREE POINTS ON EACH BUILDING, SPACED AT A MINIMUM OF 15 FEET. THE LOCATION OF THESE POINTS SHALL BE IDENTIFIED IN THE STRUCTURAL SHORING SUBMITTAL.
 - MONITORING OF SURVEY POINTS SHALL INCLUDE VERTICAL AND HORIZONTAL MEASUREMENTS ACCURATE TO AT LEAST 0.01 FEET. THE FREQUENCY OF THE READINGS IS DEPENDENT ON THE CONSTRUCTION STAGE, AS NOTED BELOW:

CONSTRUCTION STAGE	MONITORING FREQUENCY
DURING EXCAVATION AND UNTIL WALL MOVEMENTS HAVE STABILIZED	TWICE WEEKLY
DURING EXCAVATION IF LATERAL WALL MOVEMENTS EXCEED D2 (SEE TABLE BELOW), OR AT THE DISCRETION OF THE ENGINEER	DAILY AT MINIMUM
AFTER EXCAVATION IS COMPLETE AND WALL MOVEMENTS HAVE STABILIZED, IF THE DATA INDICATES LITTLE OR NO MOVEMENT	WEEKLY
 - ESTABLISH A BASELINE READING OF THE LOCATION AND ELEVATION OF THE MONITORING POINTS BEFORE SHORING INSTALLATION. ESTABLISH A BASELINE READING OF THE MONITORING POINTS ON THE SHORING WALL PRIOR TO BEGINNING EXCAVATION.
 - SUBMIT SURVEY DATA TO THE GEOTECHNICAL ENGINEER AND CONTRACTOR'S SHORING ENGINEER WEEKLY. THE ENGINEER AND CONTRACTOR'S SHORING ENGINEER OF RECORD SHALL BE IMMEDIATELY NOTIFIED IF ANY UNUSUAL OR SIGNIFICANT INCREASE IN MOVEMENT OCCURS.
 - THE GEOTECHNICAL ENGINEER SHALL REVIEW SURVEY DATA AND PROVIDE AN EVALUATION OF WALL PERFORMANCE, ALONG WITH THE SURVEY DATA, TO THE ENGINEER AND THE CONTRACTOR'S SHORING ENGINEER OF RECORD ON AT LEAST A WEEKLY BASIS.
 - MONITORING SHALL CONTINUE UNTIL THE BACKFILL IS COMPLETE UP TO FINAL GRADES AND TERMINATION IS REVIEWED AND APPROVED BY THE ENGINEER AND GEOTECHNICAL ENGINEER.
 - AFTER SUBSTANTIAL COMPLETION, THE CONTRACTOR SHALL PERFORM A POST-CONSTRUCTION SURVEY FOR ALL FACILITIES FOR WHICH A PRE-CONSTRUCTION CONDITION SURVEY WAS PERFORMED. THE POST CONSTRUCTION CONDITION SURVEY SHALL IDENTIFY ALL CHANGES FOUND IN THE CONDITION OF THE FACILITY. THE POST-CONSTRUCTION SURVEY SHALL BE DOCUMENTED IN A POST-CONSTRUCTION SURVEY REPORT AND SUBMITTED AS A TYPE 2 SUBMITTAL.

TEMPORARY STRUCTURAL SHORING NOTES (CONT)

- SHORING DEFLECTION LIMITS AND MITIGATION MEASURES. SEE THE TABLE BELOW FOR D1 AND D2 VALUES FOR EACH SHORING WALL.

 IF LATERAL MOVEMENTS OF THE SHORING WALL EXCEEDS D1 OF TOTAL MOVEMENT OR D1 OF MOVEMENT OCCURS BETWEEN TWO CONSECUTIVE READINGS, STOP CONSTRUCTION OF THE SHORING WALL IN THE VICINITY OF THE AFFECTED PORTION OF WALL. IMMEDIATELY AND DIRECTLY NOTIFY THE ENGINEER, GEOTECHNICAL ENGINEER, AND CONTRACTOR'S SHORING ENGINEER OF RECORD.

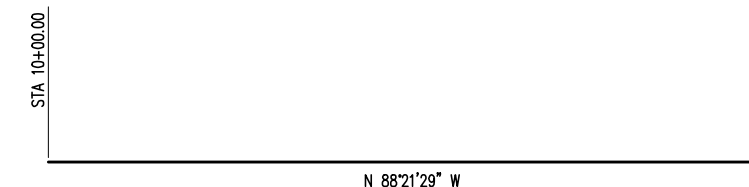
 THE CONTRACTOR, ENGINEER, AND GEOTECHNICAL ENGINEER SHALL DETERMINE THE CAUSE OF DISPLACEMENT AND DEVELOP REMEDIAL MEASURES SUFFICIENT TO LIMIT WALL MOVEMENTS TO D2. THESE MEASURES MAY CONSIST OF INTERNAL BRACING (I.E. WALES AND RAKERS) AND/OR SOIL BERMING.

 THE FREQUENCY OF SHORING MONITORING SHALL BE INCREASED TO ONCE PER DAY UNTIL DIRECTED OTHERWISE BY THE GEOTECHNICAL ENGINEER.

 IF LATERAL MOVEMENT OF THE SHORING WALL EXCEEDS D2 TOTAL MOVEMENT, BERM SOIL AGAINST THE SUBJECT WALL TO ARREST THE WALL MOVEMENT AND NOTIFY THE ENGINEER IMMEDIATELY.

DEFLECTION LIMITS		
SHORING WALL	D1	D2
ABUT 1 SOUTH SIDE	0.5 INCH	1.0 INCH
ABUT 1 NORTH SIDE	1.0 INCH	2.0 INCH
ABUT 2 NORTH SIDE	1.0 INCH	2.0 INCH

- A SHORING PRECONSTRUCTION MEETING SHALL BE HELD AT LEAST 5 WORKING DAYS PRIOR TO THE INSTALLATION OF SHORING AND START OF EXCAVATION. ATTENDEES SHALL INCLUDE REPRESENTATIVES OF THE ENGINEER, THE GENERAL CONTRACTOR, THE EXCAVATION AND SHORING CONTRACTORS, THE GEOTECHNICAL ENGINEER, AND INSPECTION PERSONNEL. THE MEETING SHALL REVIEW THE STRUCTURAL SHORING SUBMITTAL AND THE REQUIREMENTS OF THESE NOTES.



N-LINE ALIGNMENT AT BRIDGE



N-LINE PROFILE AT BRIDGE

FOOTING, FACTORED BEARING CAPACITY	
STRENGTH	12.96 KSF
EXTREME	20.11 KSF
SERVICE	29.51 KSF



NO.	DATE	BY	REVISION



CULVERT REPLACEMENT, BRIDGE AND RIPARIAN CONSTRUCTION
SANDPIPER EAST APARTMENTS, KELSEY CREEK, BELLEVUE, WA

NE 14TH ST BRIDGE
BRIDGE GENERAL NOTES

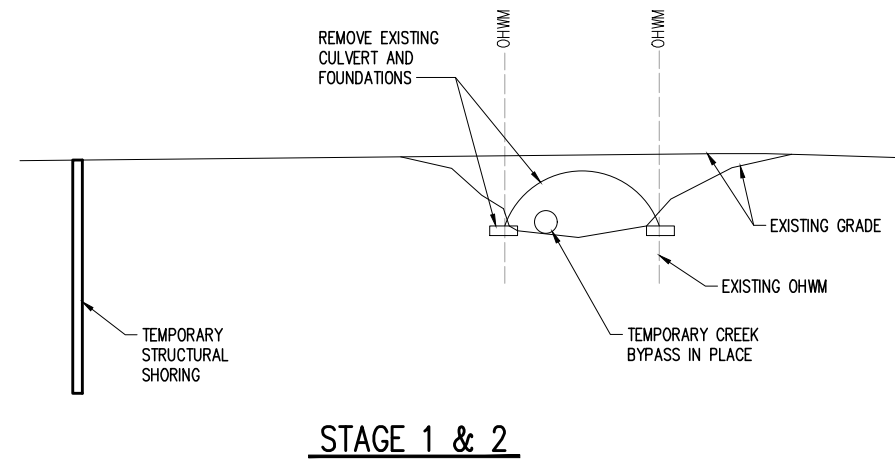
DRAWN: RRT	PROJECT NO.: 2200204
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BRIDGE PROPOSED CONSTRUCTION SEQUENCE:

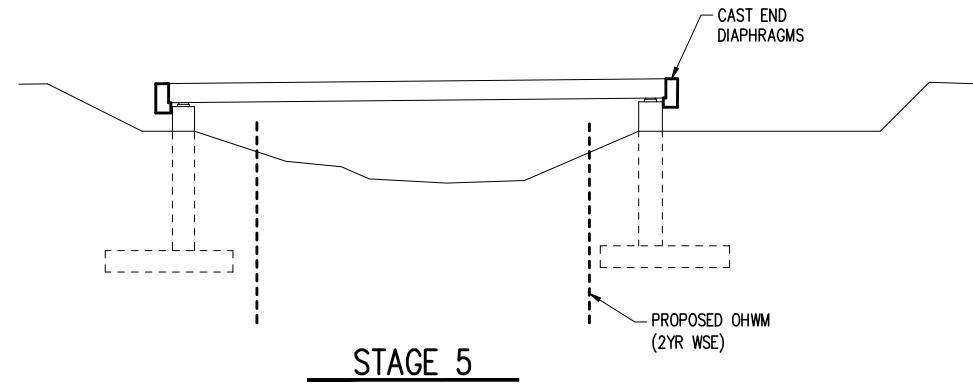
1. ROUTE TRAFFIC ONTO NE 13TH STREET.
2. INSTALL TEMPORARY CREEK BYPASS AND TEMPORARY STRUCTURAL SHORING. REMOVE EXISTING CULVERT AND FOUNDATIONS.
3. CONSTRUCT ABUTMENTS. PLACE BACKFILL.
4. SET GIRDERS IN PLACE. CUT TEMPORARY STRANDS. SEE "TEMPORARY STRAND CUTTING SEQUENCE" NOTES, THIS SHEET.
EQUALIZE GIRDER CAMBER, IF NEEDED. WELD TIES AND GROUT KEYWAYS.
5. CAST END DIAPHRAGMS.
6. CONSTRUCT BRIDGE RAILING CURB AND INSTALL BRIDGE RAILING WHEN END DIAPHRAGM CONCRETE HAS REACHED A MINIMUM OF 3000 PSI.
7. INSTALL WATERPROOFING MEMBRANE AND HMA.

TEMPORARY STRAND CUTTING SEQUENCE:

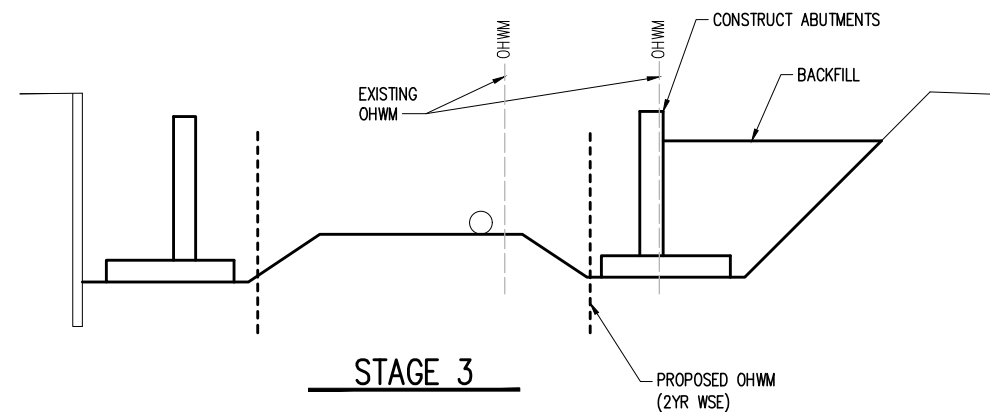
1. ERECT GIRDERS.
2. JUST PRIOR TO CUTTING THE TEMPORARY STRANDS, REMOVE EXPANDED POLYSTYRENE IN BLOCKOUTS IN TOP FLANGE OF GIRDERS. ONCE THE EXPANDED POLYSTYRENE HAS BEEN REMOVED FROM THE STRAND DETENSIONING BLOCKOUT, PREVENT MOISTURE FROM ENTERING THE BLOCKOUT UNTIL THE TEMPORARY TOP STRAND IS CUT AND THE BLOCKOUT IS FILLED WITH GROUT.
3. CUT STRANDS IN BLOCKOUTS. STRANDS MAY BE CUT BY USING A CUTTING TORCH AND MOVING THE FLAME BACK AND FORTH OVER THE LENGTH OF THE EXPOSED STRAND TO LET INDIVIDUAL WIRES BREAK ONE AT A TIME TO LESSEN THE SHOCK TO THE GIRDER. STRAND SHALL BE RELEASED IN A SYMMETRICAL MANNER ABOUT THE GIRDER CENTERLINE, STARTING WITH THOSE FURTHEST FROM THE CENTERLINE AND WORKING INWARDS. FOR POST-TENSIONED TEMPORARY TOP STRANDS, ACTIVELY RESTRAIN THE STRAND CHUCKS AT THE GIRDER ENDS DURING CUTTING.
4. WITHIN 24 HOURS OF CUTTING THE TEMPORARY STRANDS, FILL THE BLOCKOUTS WITH A GROUT CONFORMING TO STD. SPEC. 9-20.3(2). REMOVE ALL MOISTURE IN BLOCKOUTS PRIOR TO FILLING THEM WITH GROUT.



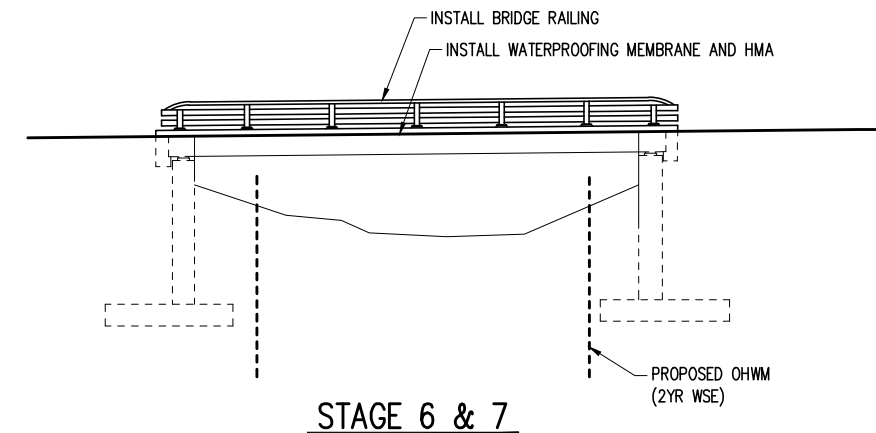
STAGE 1 & 2



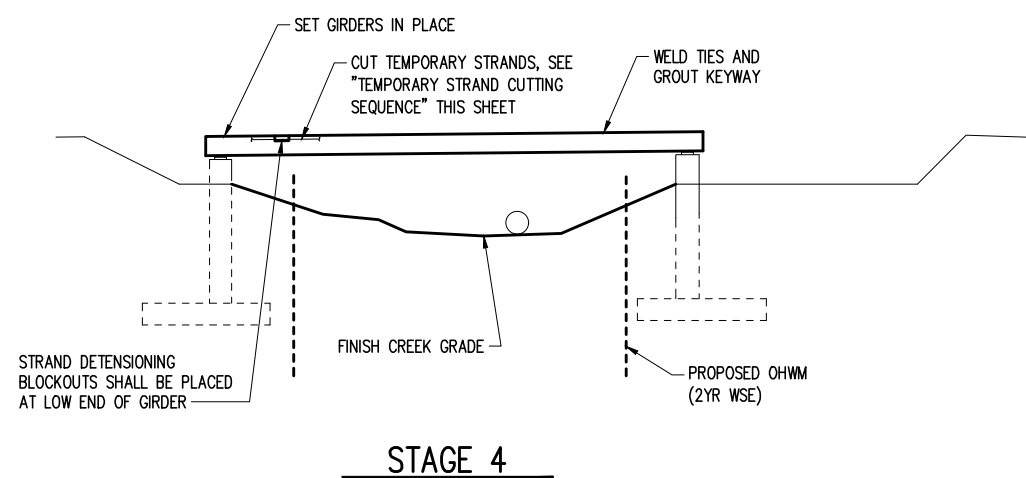
STAGE 5



STAGE 3



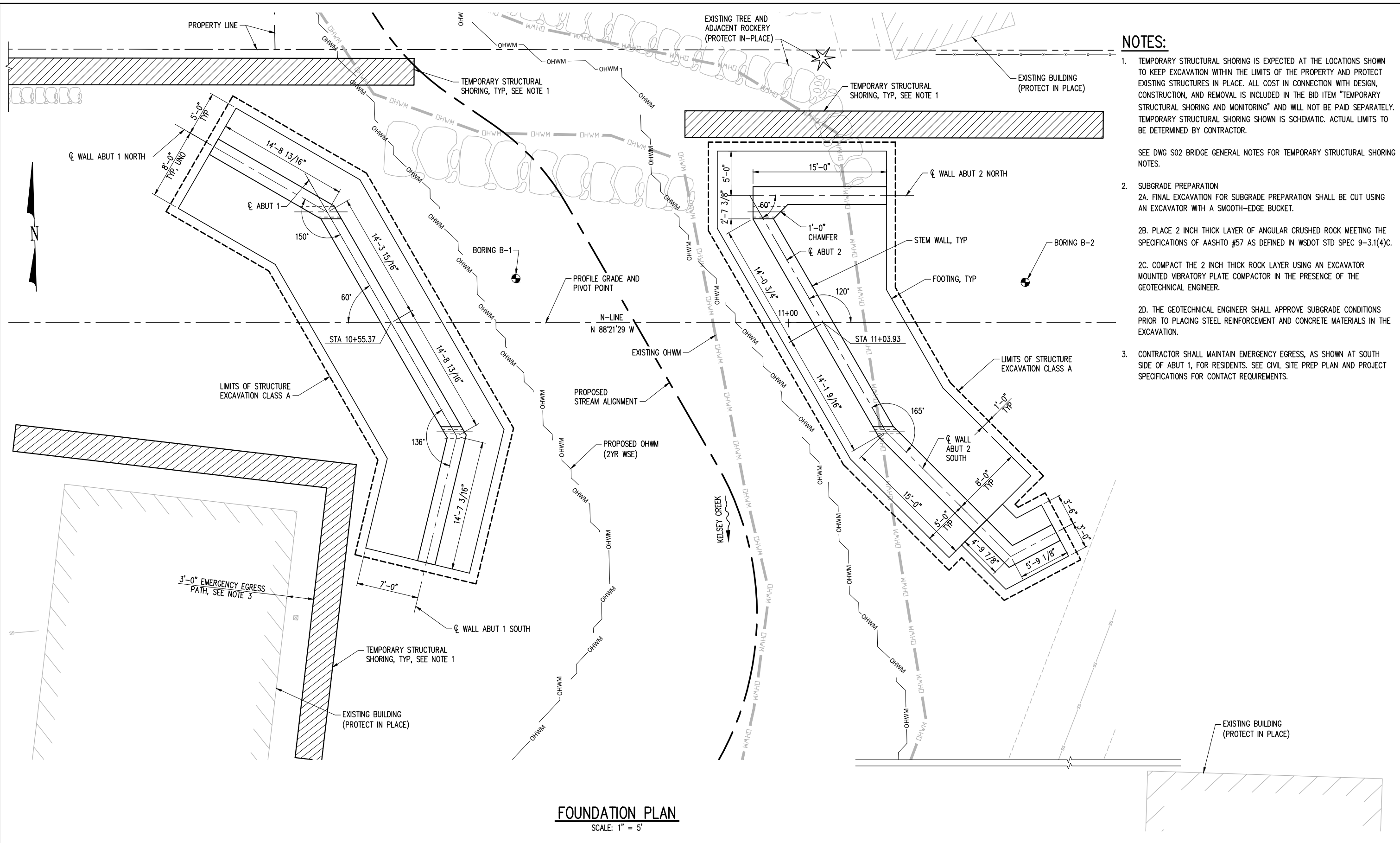
STAGE 6 & 7



STAGE 4

NO.	DATE	BY	REVISION

DRAWN: RRT	PROJECT NO.: 2200204
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FOUNDATION PLAN
SCALE: 1" = 5'

- NOTES:**
- TEMPORARY STRUCTURAL SHORING IS EXPECTED AT THE LOCATIONS SHOWN TO KEEP EXCAVATION WITHIN THE LIMITS OF THE PROPERTY AND PROTECT EXISTING STRUCTURES IN PLACE. ALL COST IN CONNECTION WITH DESIGN, CONSTRUCTION, AND REMOVAL IS INCLUDED IN THE BID ITEM "TEMPORARY STRUCTURAL SHORING AND MONITORING" AND WILL NOT BE PAID SEPARATELY. TEMPORARY STRUCTURAL SHORING SHOWN IS SCHEMATIC. ACTUAL LIMITS TO BE DETERMINED BY CONTRACTOR.

SEE DWG S02 BRIDGE GENERAL NOTES FOR TEMPORARY STRUCTURAL SHORING NOTES.
 - SUBGRADE PREPARATION
2A. FINAL EXCAVATION FOR SUBGRADE PREPARATION SHALL BE CUT USING AN EXCAVATOR WITH A SMOOTH-EDGE BUCKET.
2B. PLACE 2 INCH THICK LAYER OF ANGULAR CRUSHED ROCK MEETING THE SPECIFICATIONS OF AASHTO #57 AS DEFINED IN WSDOT STD SPEC 9-3.1(4)C.
2C. COMPACT THE 2 INCH THICK ROCK LAYER USING AN EXCAVATOR MOUNTED VIBRATORY PLATE COMPACTOR IN THE PRESENCE OF THE GEOTECHNICAL ENGINEER.
2D. THE GEOTECHNICAL ENGINEER SHALL APPROVE SUBGRADE CONDITIONS PRIOR TO PLACING STEEL REINFORCEMENT AND CONCRETE MATERIALS IN THE EXCAVATION.
 - CONTRACTOR SHALL MAINTAIN EMERGENCY EGRESS, AS SHOWN AT SOUTH SIDE OF ABUT 1, FOR RESIDENTS. SEE CIVIL SITE PREP PLAN AND PROJECT SPECIFICATIONS FOR CONTACT REQUIREMENTS.



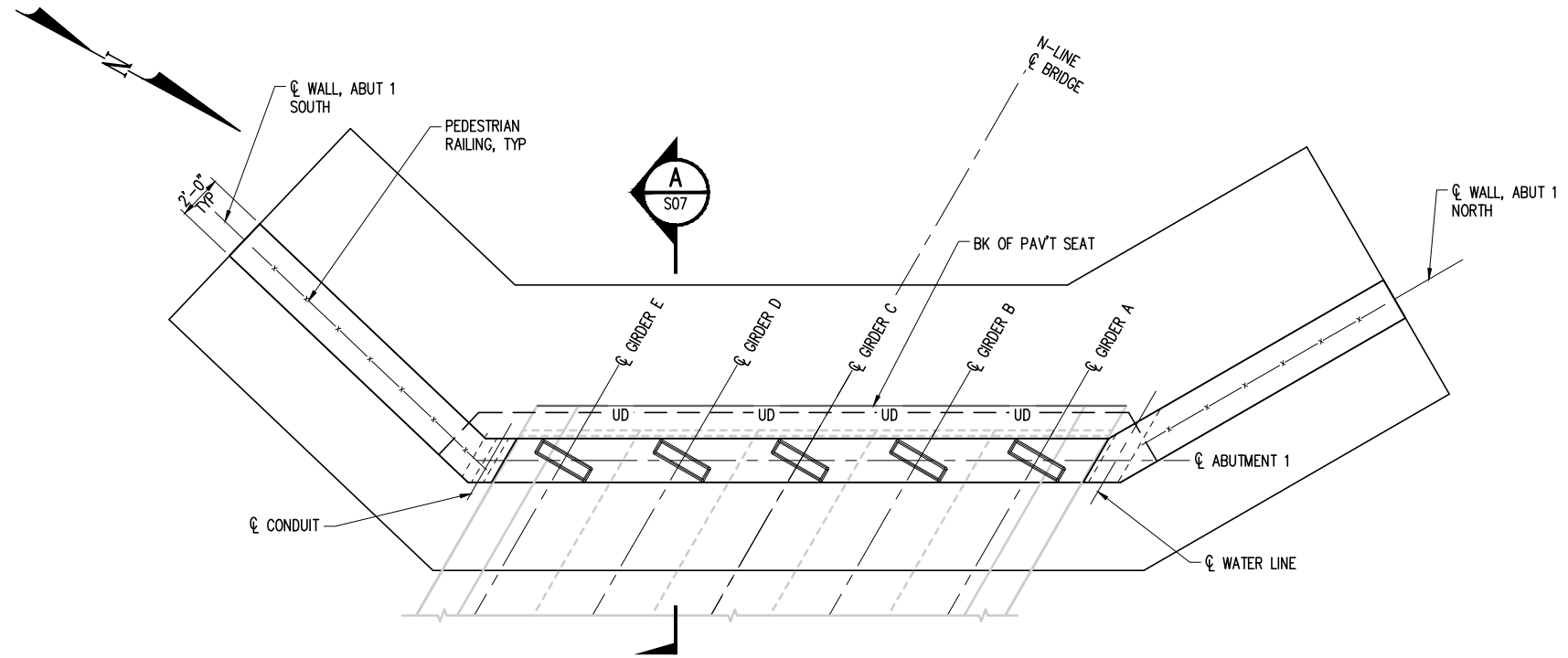
NO.	DATE	BY	REVISION



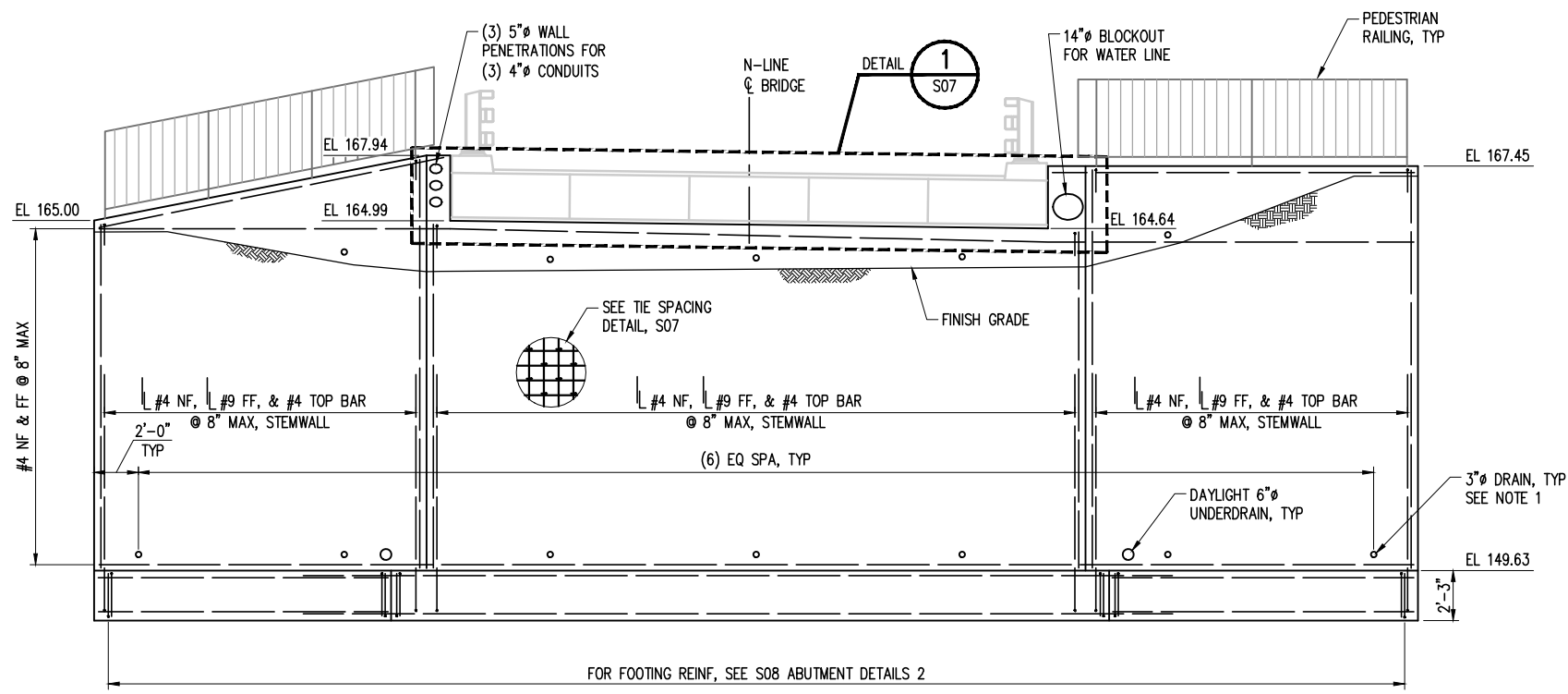
CULVERT REPLACEMENT, BRIDGE AND RIPARIAN CONSTRUCTION
SANDPIPER EAST APARTMENTS, KELSEY CREEK, BELLEVUE, WA

**NE 14TH ST BRIDGE
FOUNDATION PLAN**

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ABUTMENT 1 PLAN
SCALE: 1/4" = 1'-0"

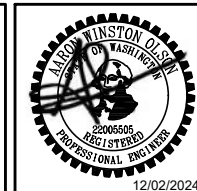


ABUTMENT 1 DEVELOPED ELEVATION
SCALE: 1/4" = 1'-0"
LOOKING DOWNSTATION

NOTES:

- COVER DRAIN WITH 1'x 1' GEOTEXTILE FOR DRAINAGE. BOND TO CONCRETE WITH APPROVED ADHESIVE. COVER BOTTOM DRAINS ON NEAR AND FAR FACES. COVER TOP DRAINS ONLY ON FAR FACE.
- APPLY PIGMENTED SEALER TO ABUTMENT AND WALLS TO 1 FT BELOW FINISH GRADE.
- SEE S16 FOR PEDESTRIAN RAILING DETAILS.
- THE VERTICAL CONCRETE WALL SURFACES FACING THE CREEK SHALL HAVE A RIVER ROCK FINISH AS DEFINED IN WSDOT STD SPEC 6-02.3(14)D. THE DIMENSIONS IN THE PLANS ARE FOR THE STRUCTURAL MEMBERS. ADDITIONAL THICKNESS SHALL BE PROVIDED TO ACCOUNT FOR THE RELIEF OF THE FORM LINER.

ABUTMENT 1 TOP OF GROUT PAD ELEVATIONS	
GIRDER	ELEVATION
A	167.04
B	167.11
C	167.18
D	167.25
E	167.32



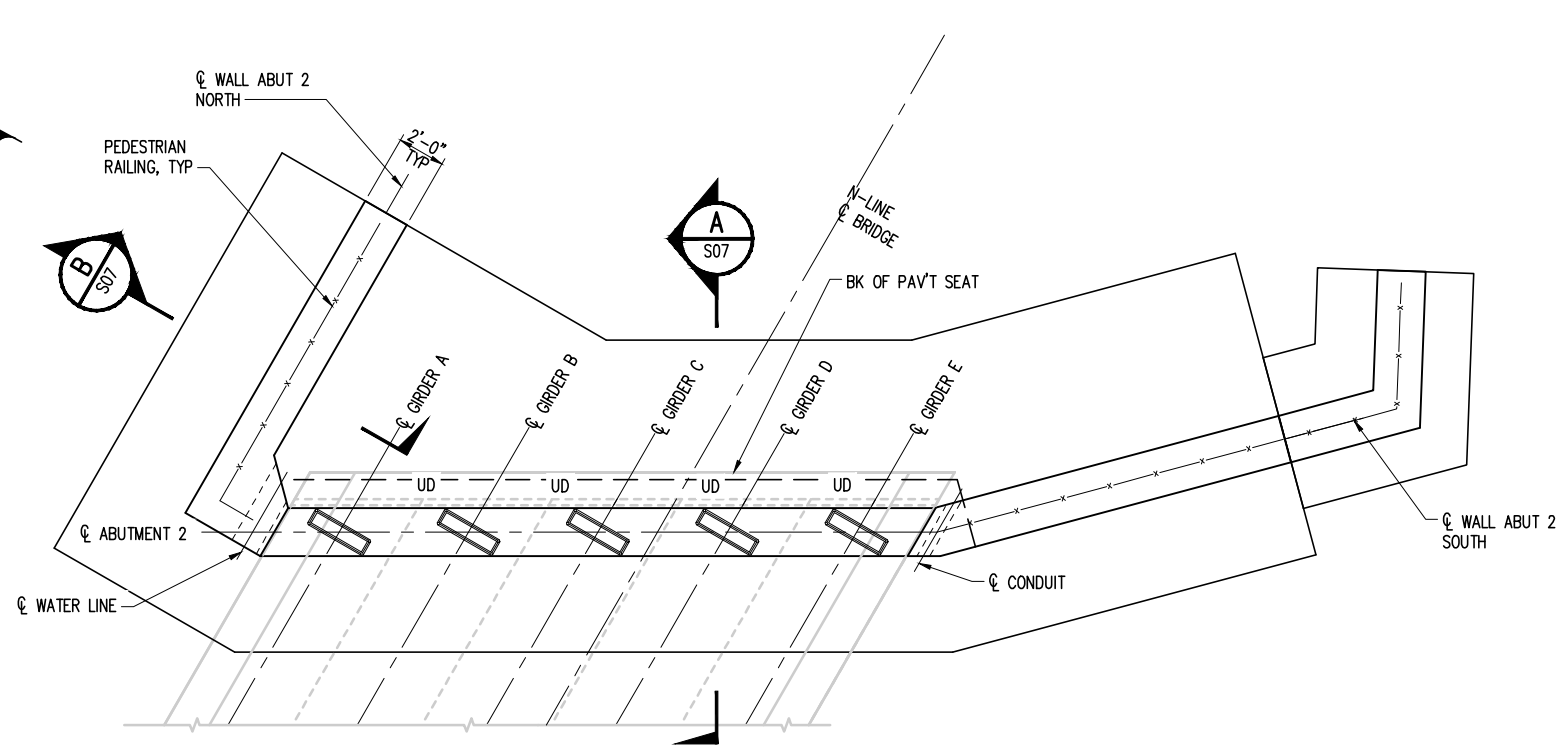
NO.	DATE	BY	REVISION



CULVERT REPLACEMENT, BRIDGE AND RIPARIAN CONSTRUCTION
SANDPIPER EAST APARTMENTS, KELSEY CREEK, BELLEVUE, WA

NE 14TH ST BRIDGE
ABUTMENT 1 PLAN AND ELEVATION

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ABUTMENT 2 PLAN

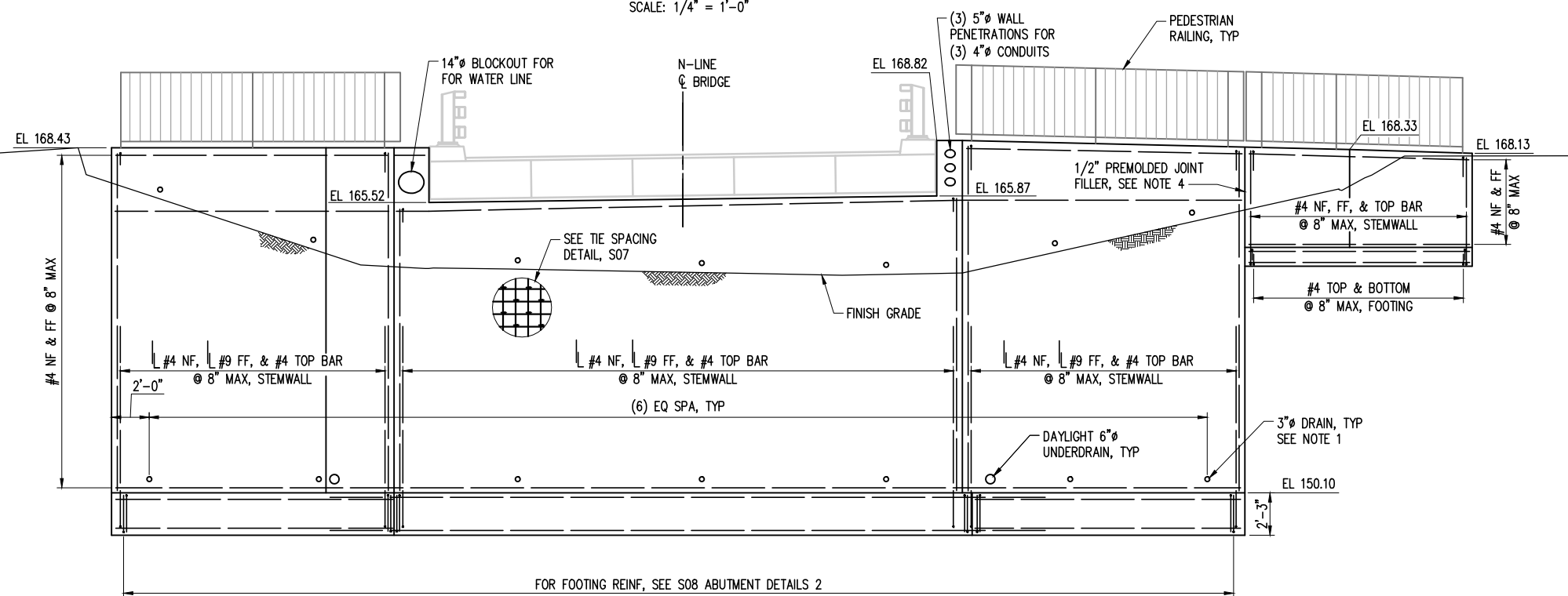
SCALE: 1/4" = 1'-0"

NOTES:

- COVER DRAIN WITH 1'x1' GEOTEXTILE FOR DRAINAGE. BOND TO CONCRETE WITH APPROVED ADHESIVE. COVER BOTTOM DRAINS ON NEAR AND FAR FACES. COVER TOP DRAINS ONLY ON FAR FACE.
- APPLY PIGMENTED SEALER TO ABUTMENT AND WALLS TO 1 FT BELOW FINISH GRADE.
- SEE S16 FOR PEDESTRIAN RAILING DETAILS.
- THE VERTICAL CONCRETE WALL SURFACES FACING THE CREEK SHALL HAVE A RIVER ROCK FINISH AS DEFINED IN WSDOT STD SPEC 6-02.3(14)D. THE DIMENSIONS IN THE PLANS ARE FOR THE STRUCTURAL MEMBERS. ADDITIONAL THICKNESS SHALL BE PROVIDED TO ACCOUNT FOR THE RELIEF OF THE FORM LINER.
- BEFORE BACKFILLING BEHIND THE WALL JOINT, PLACE GEOSYNTHETIC FABRIC ACROSS THE JOINT BETWEEN THE TWO WALLS. ATTACH THE FABRIC TO THE BACK OF THE WALLS WITH AN APPROPRIATE ADHESIVE.

ABUTMENT 2 TOP OF GROUT PAD ELEVATIONS

GIRDER	ELEVATION
A	165.68
B	165.75
C	165.82
D	165.89
E	165.96



ABUTMENT 2 DEVELOPED ELEVATION

SCALE: 1/4" = 1'-0"

LOOKING UPSTATION



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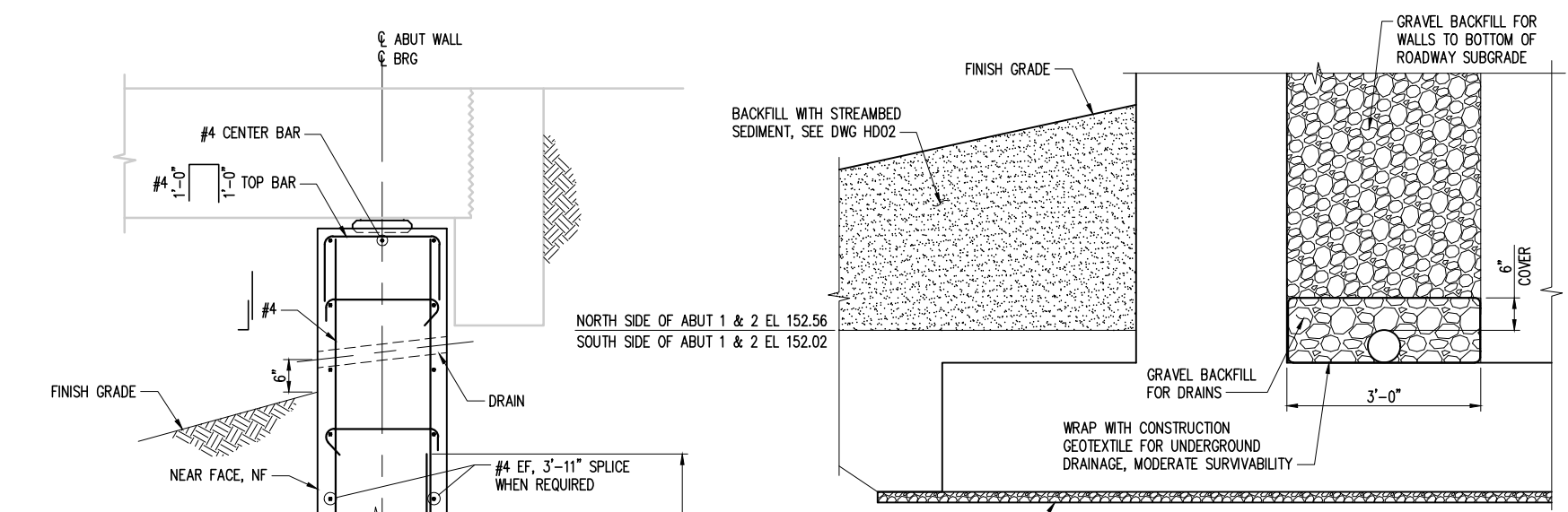
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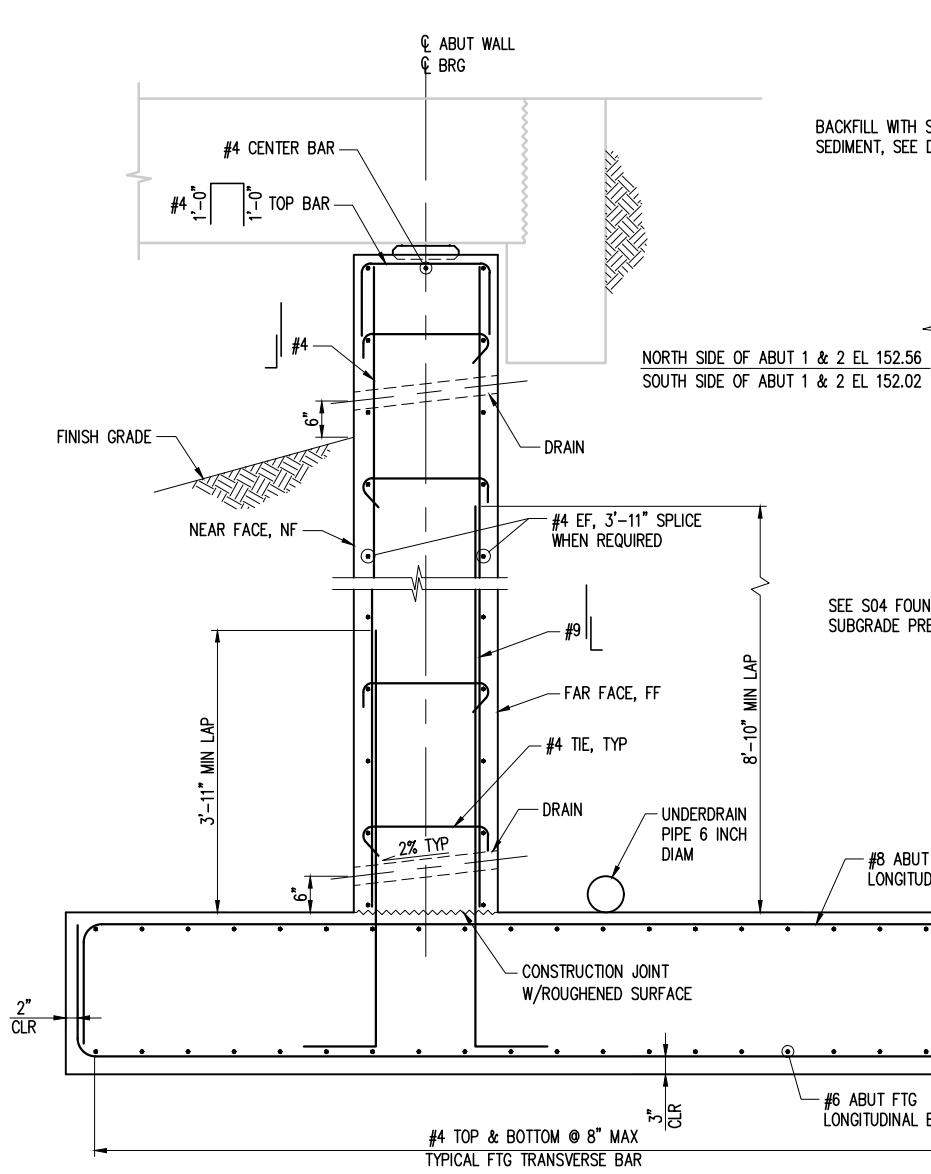
CULVERT REPLACEMENT, BRIDGE AND RIPARIAN CONSTRUCTION
SANDPIPER EAST APARTMENTS, KELSEY CREEK, BELLEVUE, WA

NE 14TH ST BRIDGE
ABUTMENT 2 PLAN AND ELEVATION

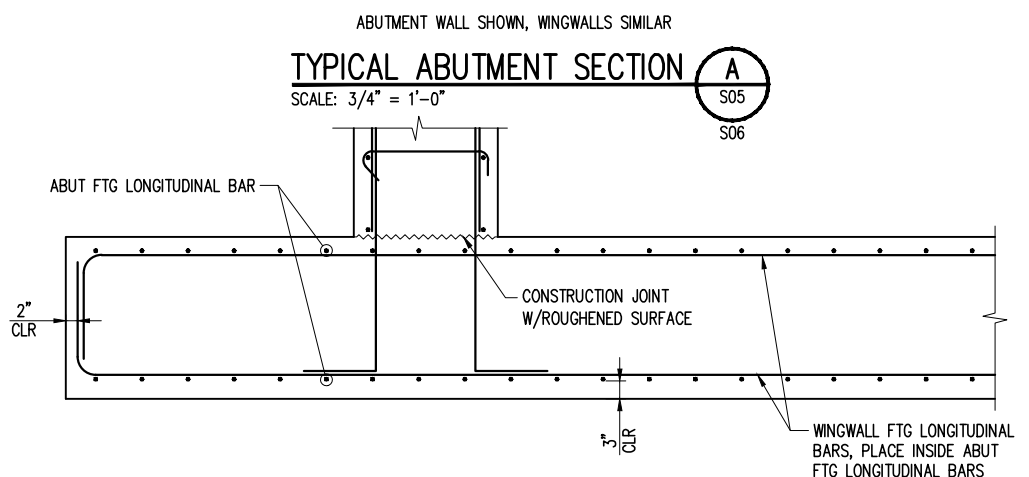
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DESIGN: RCL	SCALE: AS SHOWN
CHECKED: AWO	DATE: 11-2024
DRAWING NO.	S06
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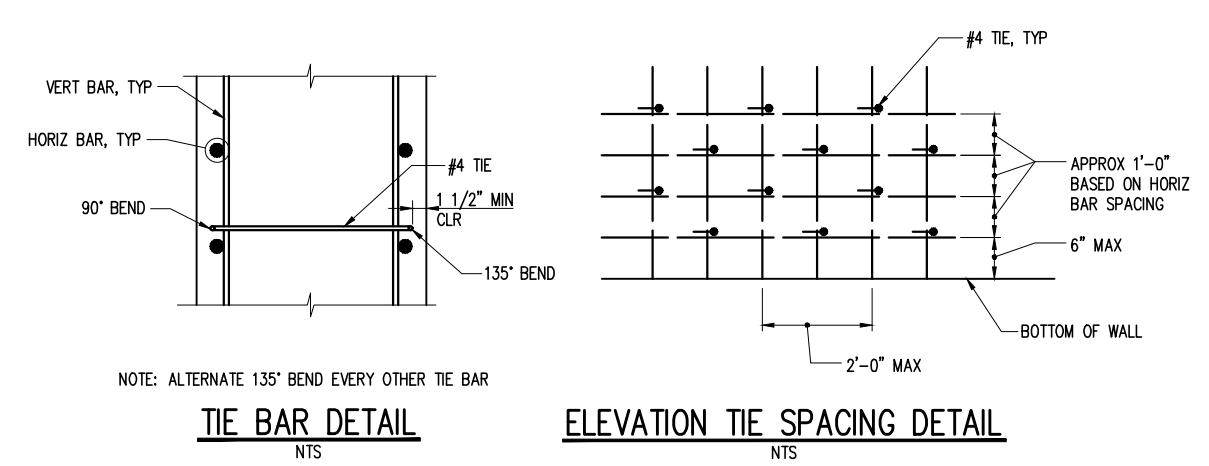
BACKFILL DETAIL
SCALE: 3/4" = 1'-0"



TYPICAL ABUTMENT SECTION A
SCALE: 3/4" = 1'-0"

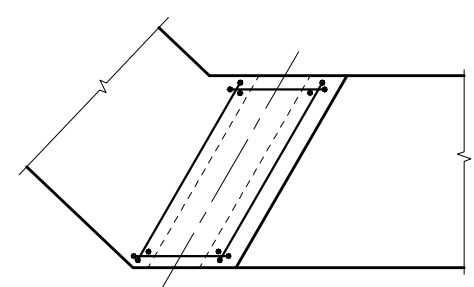


ABUTMENT 2 NORTH WINGWALL SECTION B
SCALE: 3/4" = 1'-0"

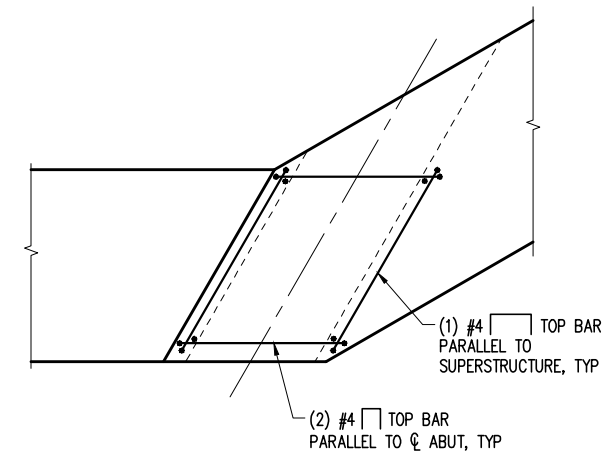


TIE BAR DETAIL
NTS

ELEVATION TIE SPACING DETAIL
NTS



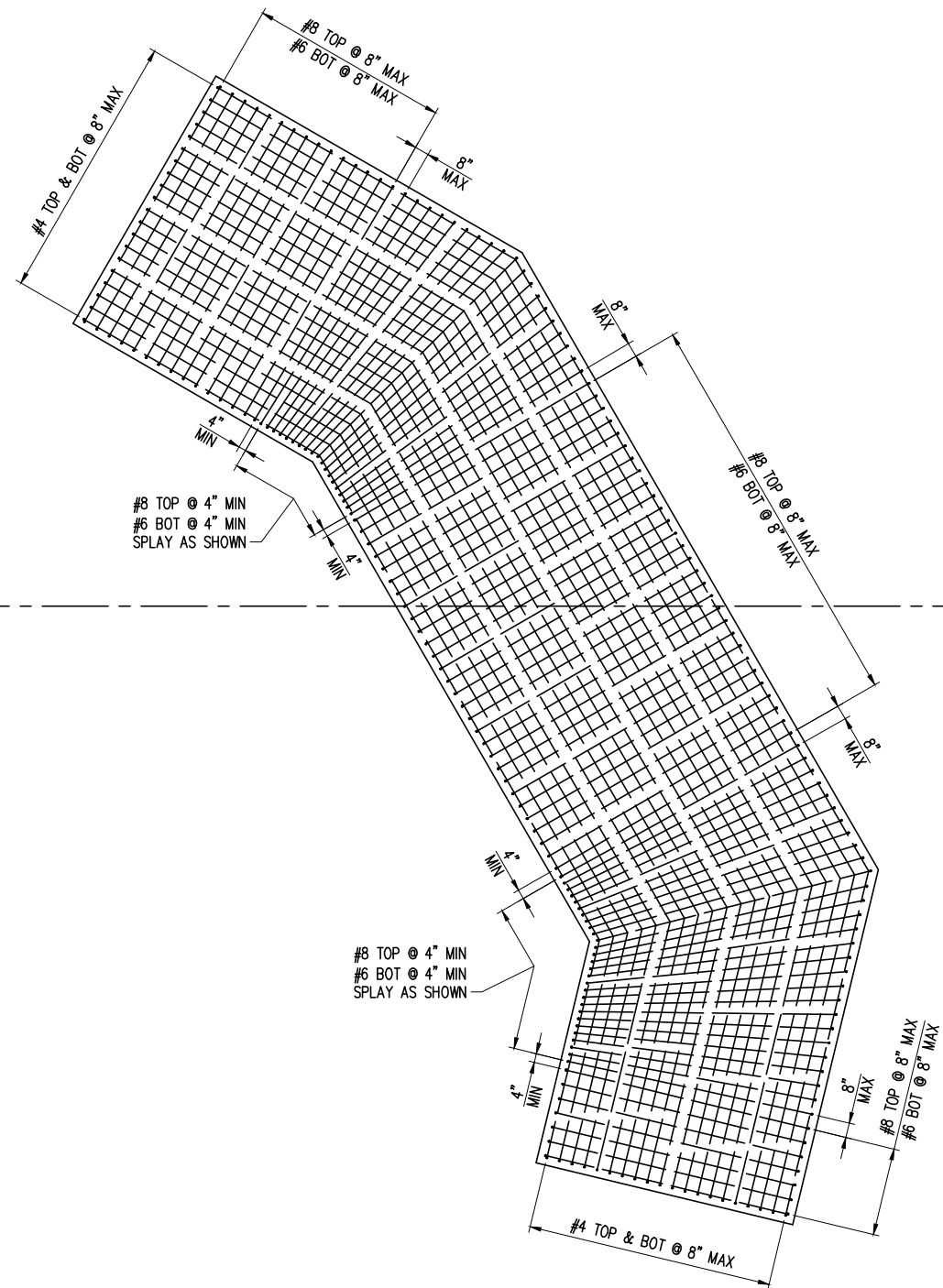
PLAN



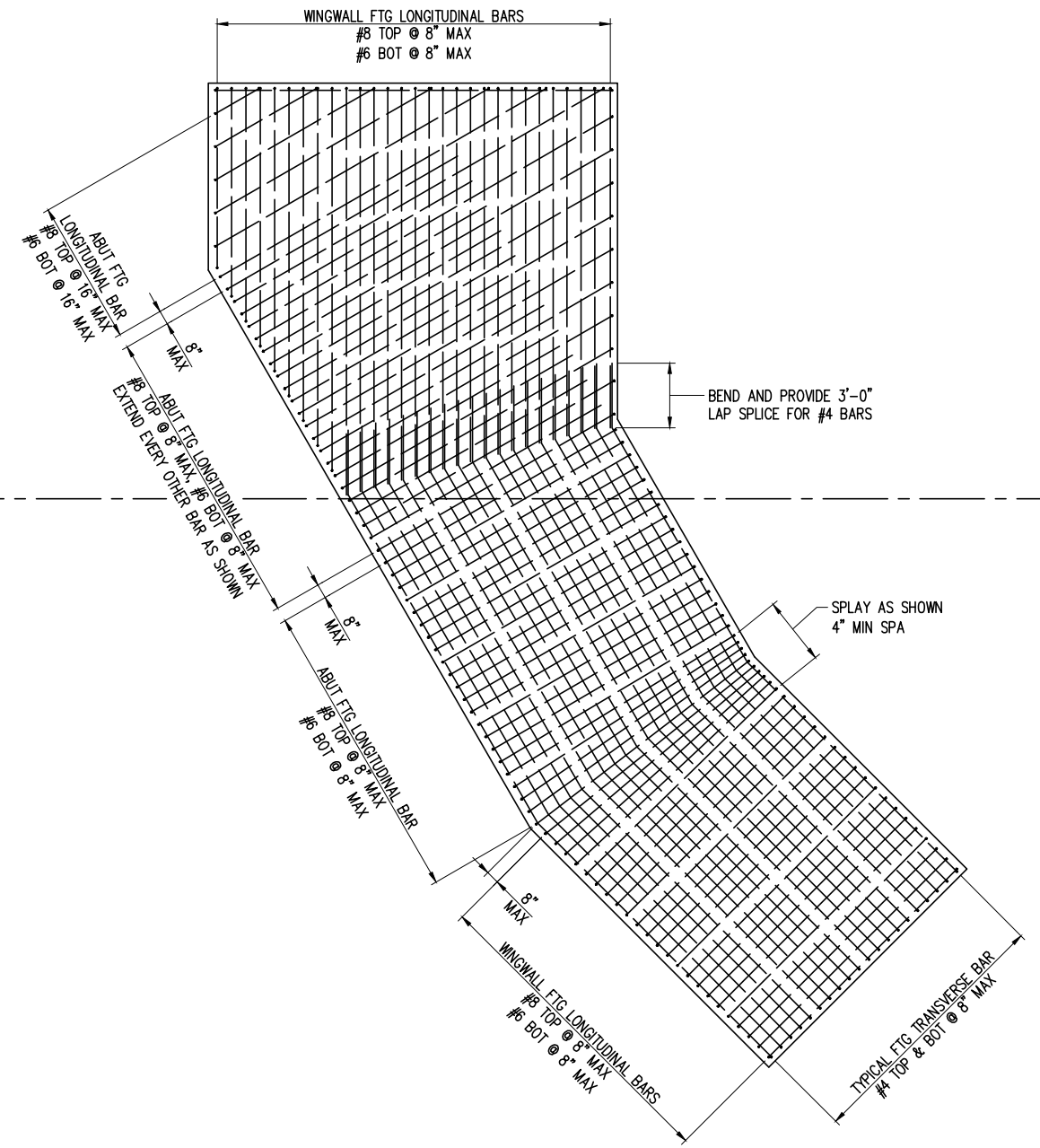
ELEVATION

DETAIL - GIRDER STOPS 1
SCALE: 1" = 1'-0"

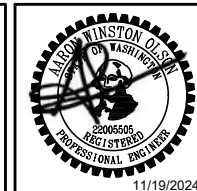
NO.	DATE	BY	REVISION



ABUTMENT 1 FOOTING REINFORCEMENT PLAN
SCALE: 1/4" = 1'-0"



ABUTMENT 2 FOOTING REINFORCEMENT PLAN
SCALE: 1/4" = 1'-0"



NO.	DATE	BY	REVISION



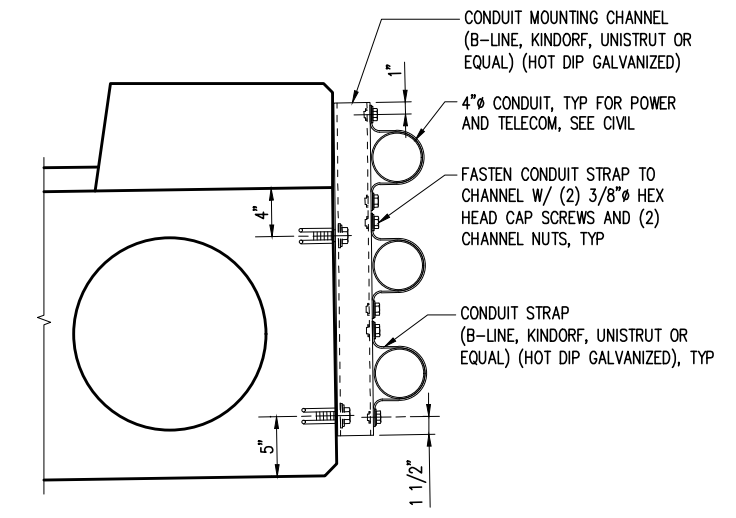
CULVERT REPLACEMENT, BRIDGE AND RIPARIAN CONSTRUCTION
SANDPIPER EAST APARTMENTS, KELSEY CREEK, BELLEVUE, WA

**NE 14TH ST BRIDGE
ABUTMENT DETAILS 2**

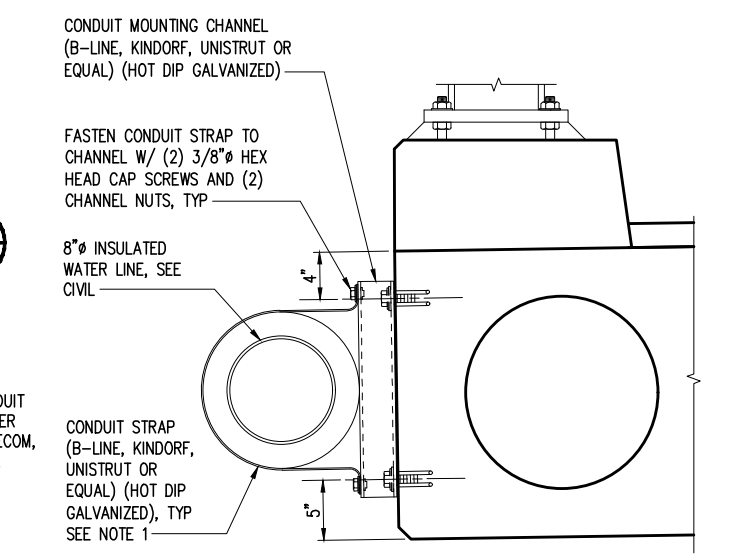
DRAWN: RRT	PROJECT NO.: 2200204
DESIGN: RCL	SCALE: AS SHOWN
CHECKED: AWO	DATE: 11-2024
DRAWING NO.	S08
SHEET NO. 21	OF 40

NOTES:

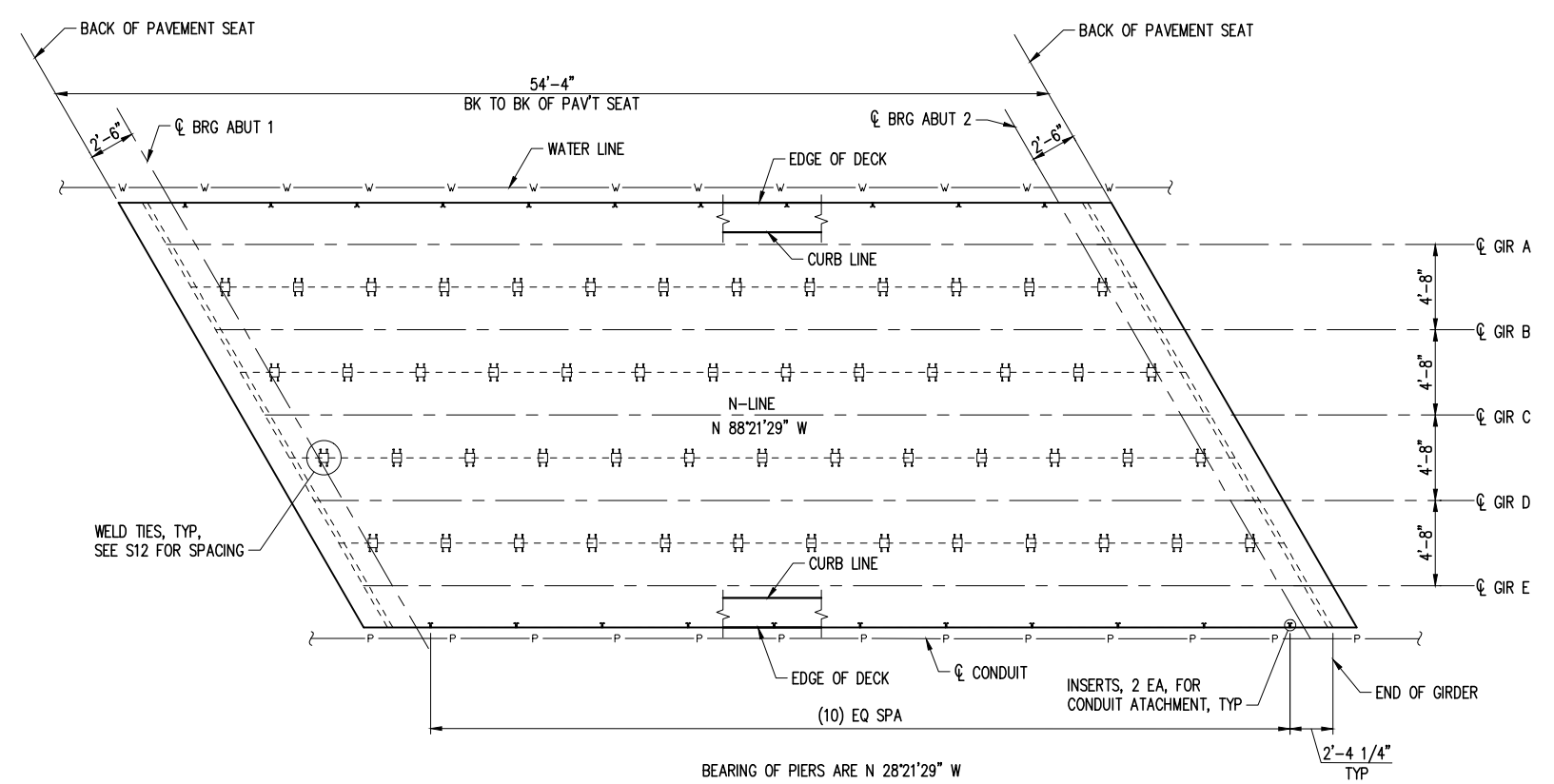
1. WATER LINE STRAP CAPACITY SHALL EXCEED 300 LB (UNFACTORED).



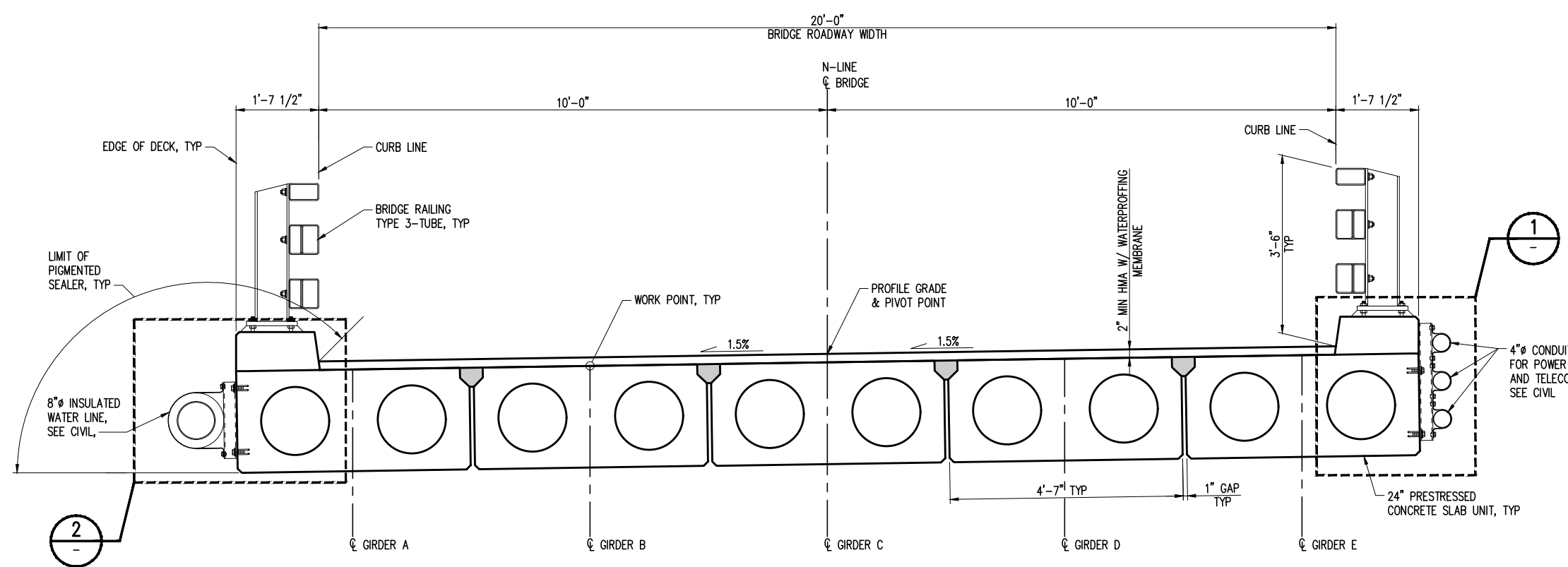
DETAIL 1
SCALE: 1 1/2" = 1'-0"



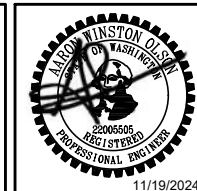
DETAIL 2
SCALE: 1 1/2" = 1'-0"



BEARING OF PIERS ARE N 28°21'29" W
BRIDGE FRAMING PLAN
SCALE: 1" = 5'



TYPICAL BRIDGE SECTION
SCALE: 3/4" = 1'-0"



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CULVERT REPLACEMENT, BRIDGE AND RIPARIAN CONSTRUCTION
SANDPIPER EAST APARTMENTS, KELSEY CREEK, BELLEVUE, WA

NE 14TH ST BRIDGE
FRAMING PLAN AND TYPICAL SECTION

DRAWN: RRT	PROJECT NO.: 2200204
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CHECKED: AWO	DATE: 11-2024
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GIRDER SCHEDULE

SPAN	GIRDER	GIRDER HEIGHT H	GIRDER WIDTH W	PLAN LENGTH (ALONG GIRDER GRADE) (SEE GIRDER NOTE 1)	VOIDS		GIRDER END DETAILS				MIN CONCRETE COMP STRENGTH		PRESTRESSING STRANDS (SEE GIRDER NOTES 2 - 4)								"A" DIMENSION AT ζ BEARINGS	DECK SCORED CAMBER C	MIDSPAN VERTICAL DEFLECTION D		TRANSVERSE REINFORCEMENT									LONGITUDINAL REINFORCEMENT			SHIPPING AND HANDLING DETAILS									
					NUMBER	DIAMETER	END 1 TYPE	END 2 TYPE	θ_1	θ_2	ϕ 28-DAYS F'C (KSI)	ϕ RELEASE F'C (KSI)	ROW 1			ROW 2			ROW 3				TOP ROW		ZONE 1	ZONE 2			ZONE 3			G1		G2		MAXIMUM MIDSPAN VERTICAL DEFLECTION AT SHIPPING	L	L ₁	L ₂	K ϕ MINIMUM SHIPPING SUPPORT ROTATIONAL SPRING CONSTANT (kip-in/rad)	W _{CC} MINIMUM SHIPPING SUPPORT CNTR-TO-CNTR WHEEL SPACING					
													PERMANENT STRANDS	EXTENDED NUMBER AND LENGTH	DEBONDED NUMBER AND LENGTH	PERMANENT STRANDS	EXTENDED NUMBER AND LENGTH	DEBONDED NUMBER AND LENGTH	PERMANENT STRANDS	EXTENDED NUMBER AND LENGTH			DEBONDED NUMBER AND LENGTH	PERMANENT STRANDS		EXTENDED NUMBER AND LENGTH	DEBONDED NUMBER AND LENGTH	PERMANENT STRANDS	TEMPORARY STRANDS	BAR SIZE	SPACING	LENGTH	BAR SIZE	SPACING	LENGTH							BAR SIZE	SPACING	LENGTH	BAR SIZE	NO. OF BARS
1	A-E	2'-0"	4'-7"	56'-9 5/8"	2	15.7"	A	A	60	60	7.0	5.0	19	4 ϕ 1'-9"	4 ϕ 3'-0"	-	-	-	-	-	-	2	4	-	-	1/2"	1"	#5	3"	1'-0"	#5	5"	5'-0"	#5	6"	6'-0"	#5	5	#5	5	3/4"	3'-0"	3'-0"	3'-0"	40,000 K-IN/RAD	6'-0"

GIRDER NOTES:

1. PLAN LENGTH SHALL BE INCREASED AS NECESSARY TO COMPENSATE FOR SHORTENING DUE TO PRESTRESS AND SHRINKAGE.
2. ALL STRANDS SHALL BE 0.6" ϕ AASHTO M203 GRADE 270 LOW RELAXATION STRANDS, JACKED TO 202.5 KSI (43.94 KIPS PER STRAND). STRANDS SHALL BE SYMMETRICAL ABOUT THE GIRDER CENTERLINE. EXTERIOR STRANDS IN EACH ROW SHALL BE FULLY BONDED.
3. SPACE EXTENDED STRANDS SYMMETRICALLY AND EVENLY ACROSS GIRDER WIDTH. STAGGER EXTENDED STRAND LOCATIONS WITH RESPECT TO GIRDERS IN ADJACENT SPANS.
4. DEBONDED STRANDS SHALL BE DEBONDED AT EACH GIRDER END FOR THE INDICATED LENGTH PARALLEL TO THE GIRDER CENTERLINE. DEBONDED STRANDS SHALL NOT BE EXTENDED PAST GIRDER ENDS. DEBONDED STRANDS SHALL BE SYMMETRICALLY PLACED ABOUT THE GIRDER CENTERLINE. DEBONDED LENGTHS OF PAIRS OF STRANDS THAT ARE SYMMETRICALLY POSITIONED ABOUT THE GIRDER CENTERLINE SHALL BE EQUAL.



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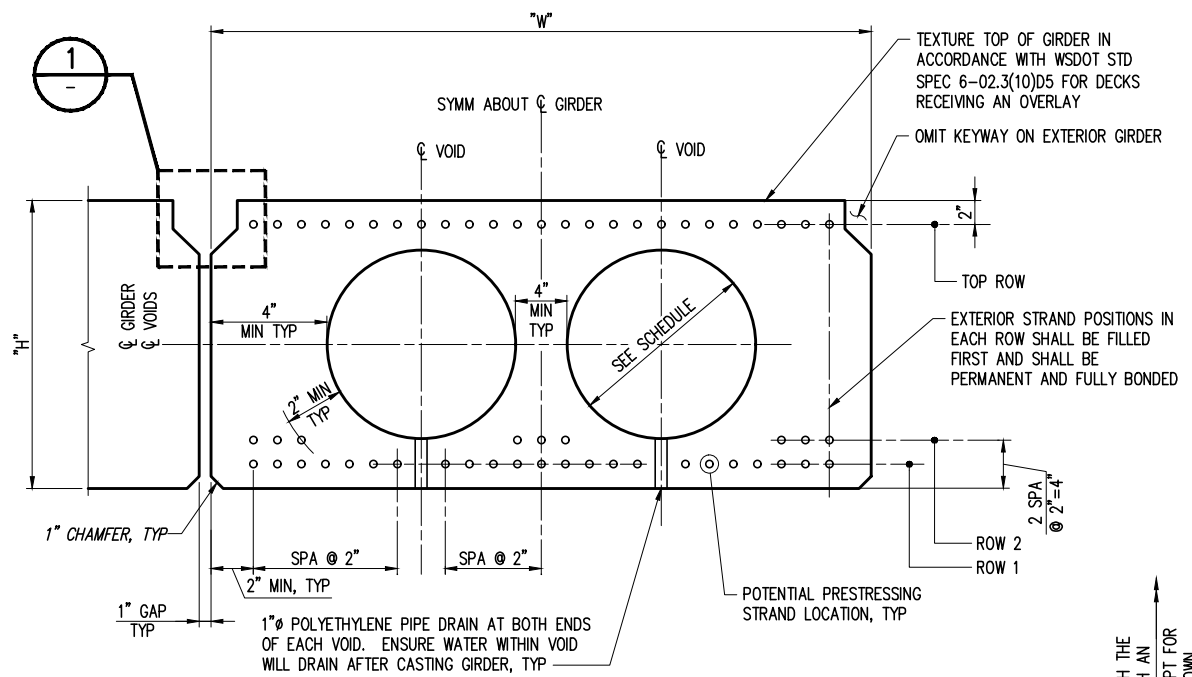
NO.	DATE	BY	REVISION



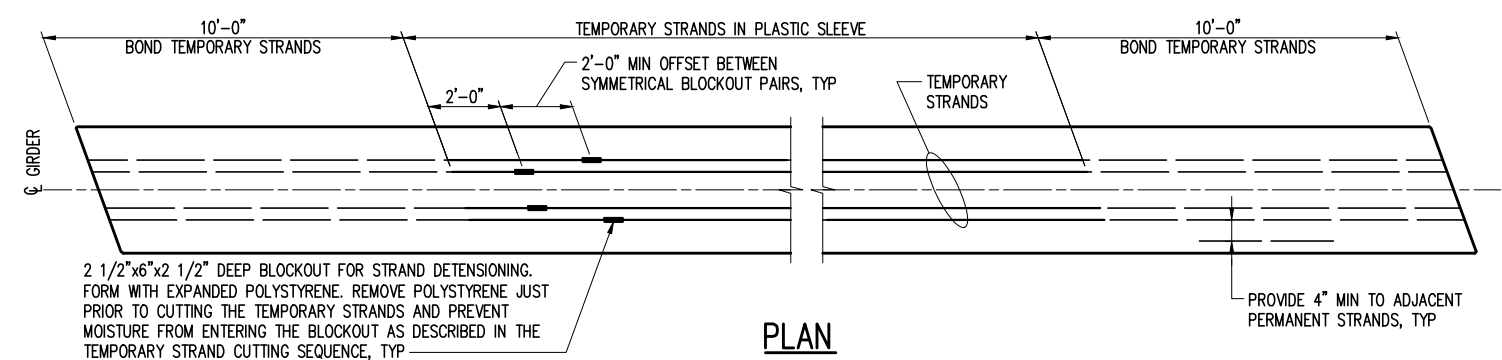
CULVERT REPLACEMENT, BRIDGE AND RIPARIAN CONSTRUCTION
SANDPIPER EAST APARTMENTS, KELSEY CREEK, BELLEVUE, WA

NE 14TH ST BRIDGE
GIRDER SCHEDULE

DRAWN: RRT	PROJECT NO.: 2200204
DESIGN: RCL	SCALE: AS SHOWN
CHECKED: AWO	DATE: 11-2024
DRAWING NO.	S10
SHEET NO. 23	OF 40



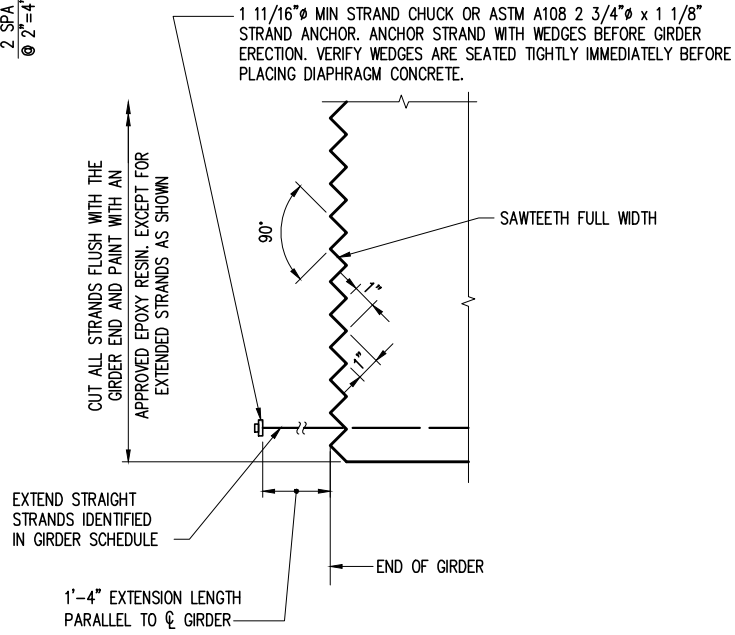
TYPICAL GIRDER SECTION



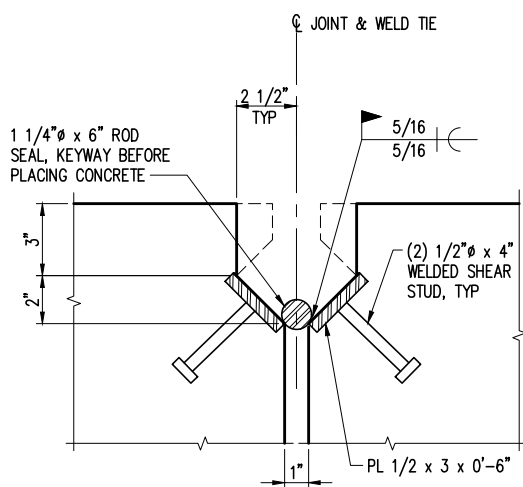
PLAN TEMPORARY STRANDS

GIRDER NOTES:

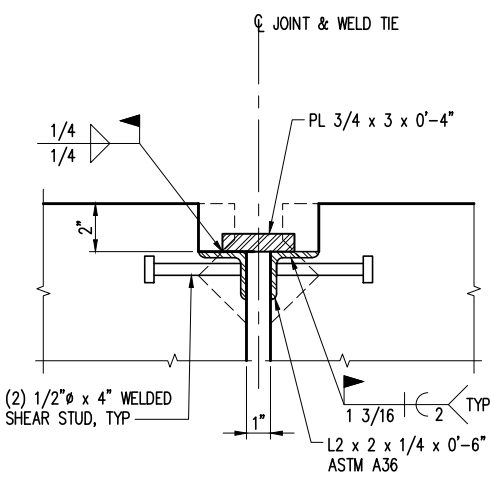
1. SEE GIRDER SCHEDULE FOR REQUIRED NUMBER OF TEMPORARY STRANDS. TEMPORARY STRANDS SHALL BE PLACED IN THE TOP ROW.
2. FOR GIRDERS ERECTED ON A LONGITUDINAL GRADE, STRAND DETENSING BLOCKOUTS SHALL BE PLACED AT THE LOW END OF THE GIRDER.
3. SEE "TEMPORARY STRAND CUTTING SEQUENCE" ON CONSTRUCTION SEQUENCE SHEET FOR TEMPORARY STRAND DETENSING PROCEDURE.



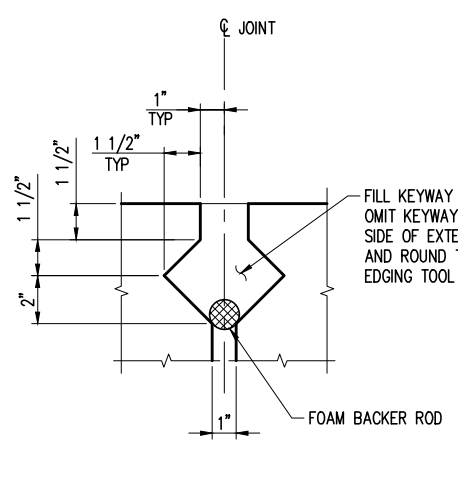
END TYPE A



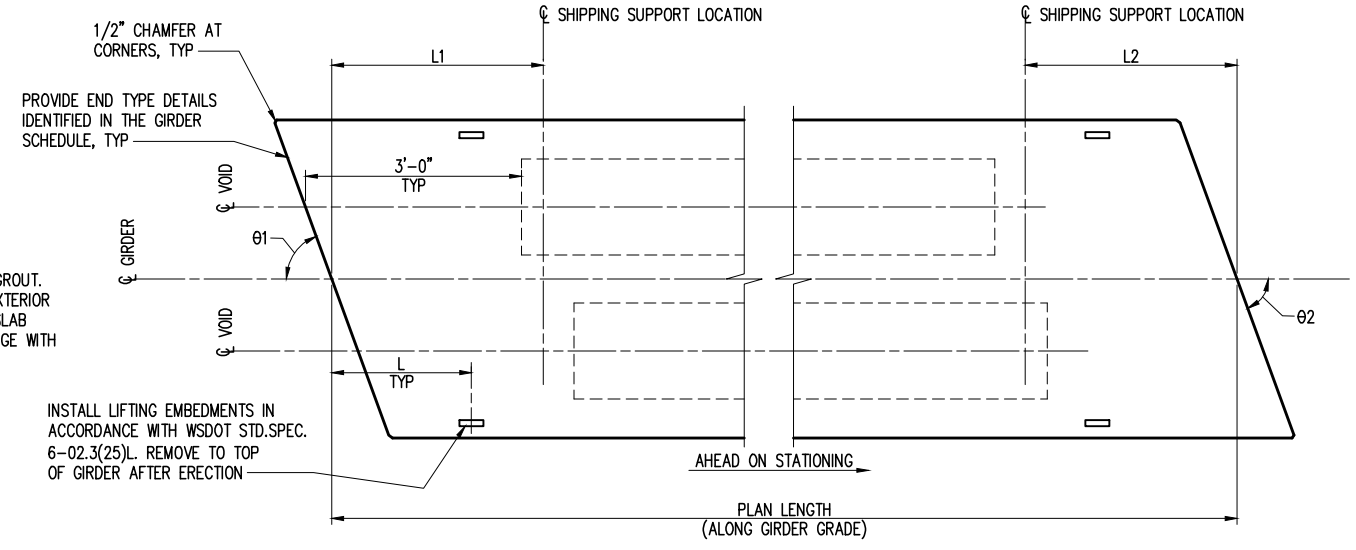
DETAIL WELD TIE ALT 1



DETAIL WELD TIE ALT 2



DETAIL KEYWAY



END 1

PLAN

END 2



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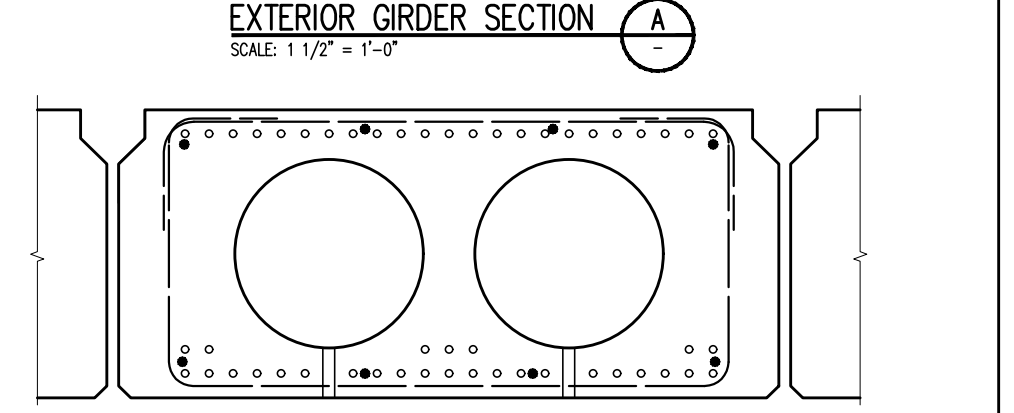
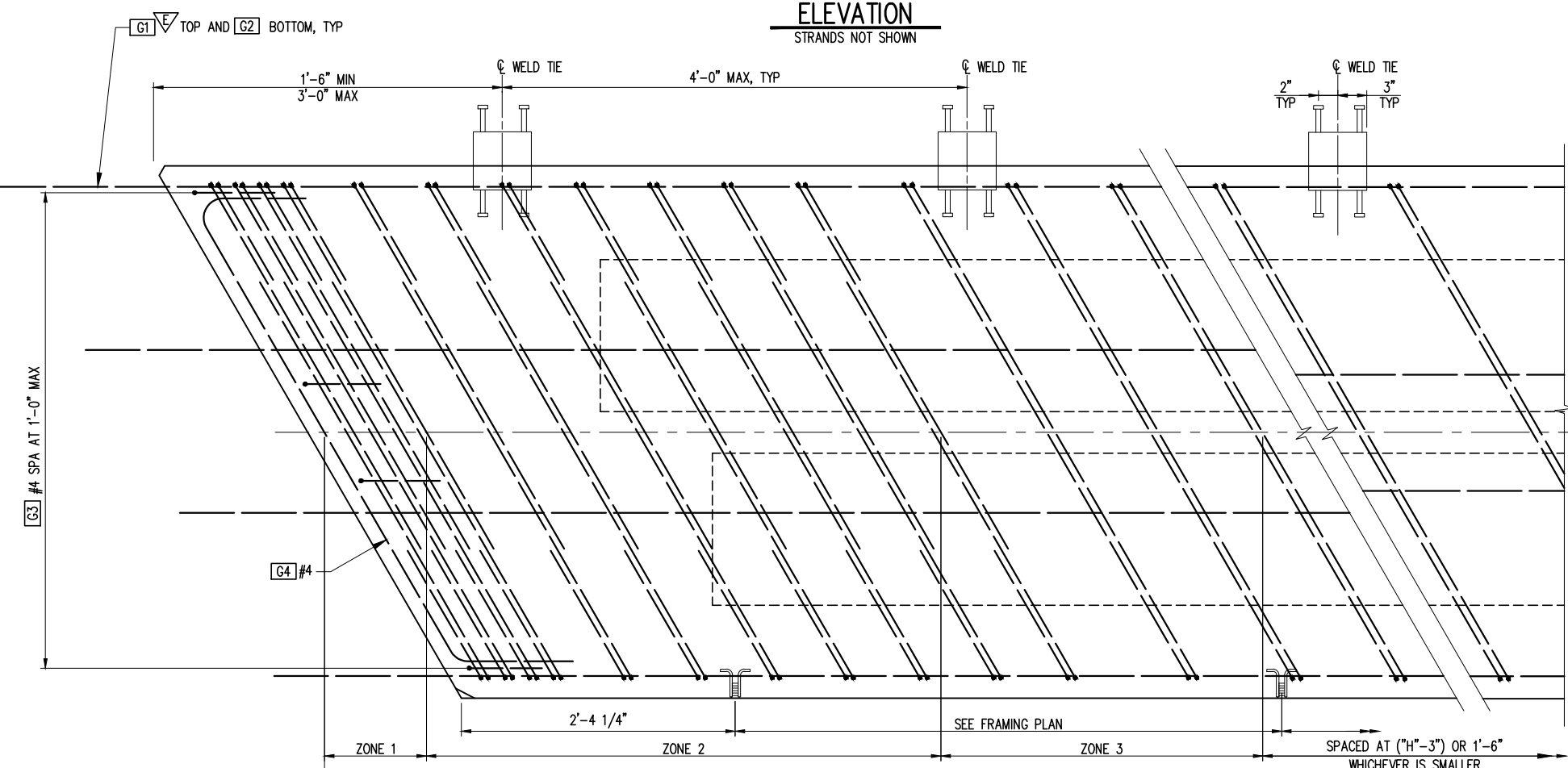
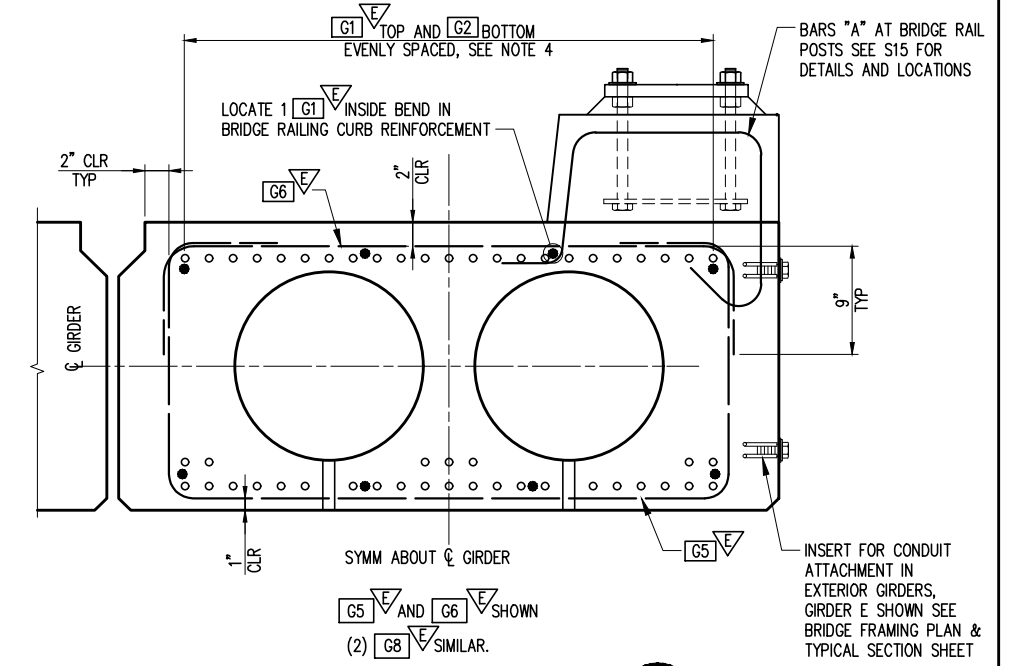
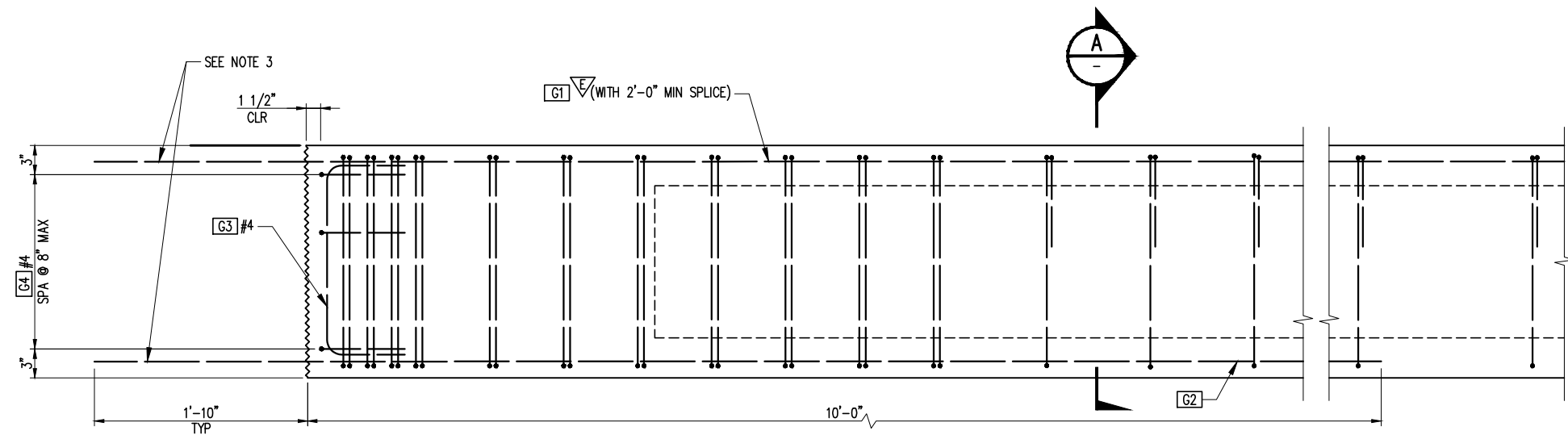
NO.	DATE	BY	REVISION



CULVERT REPLACEMENT, BRIDGE AND RIPARIAN CONSTRUCTION
SANDPIPER EAST APARTMENTS, KELSEY CREEK, BELLEVUE, WA

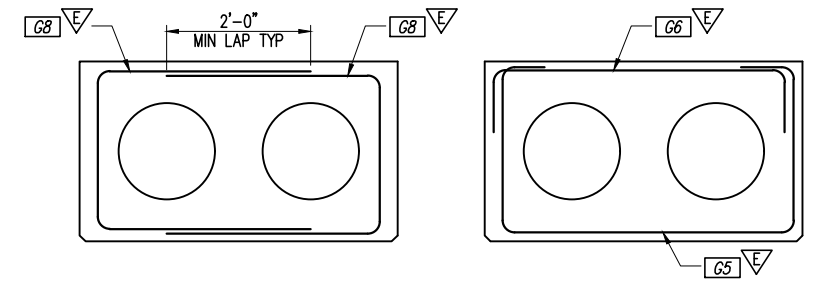
NE 14TH ST BRIDGE
GIRDER SCHEDULE

DRAWN: RRT	PROJECT NO.: 2200204
DESIGN: RCL	SCALE: AS SHOWN
CHECKED: AWO	DATE: 11-2024
DRAWING NO.	S11
SHEET NO. 24	OF 40



NOTE: SEE EXTERIOR GIRDER SECTION A FOR INFORMATION NOT SHOWN

INTERIOR GIRDER SECTION A
SCALE: 1 1/2" = 1'-0"



TRANSVERSE REINFORCEMENT OPTIONS

REINFORCING NOTES:

1. DEFORMED WELDED WIRE REINFORCEMENT MAY BE SUBSTITUTED FOR MILD REINFORCEMENT IN ACCORDANCE WITH STANDARD SPECIFICATION 6-02.3(25)A.
2. SEE GIRDER SCHEDULE FOR BAR SIZE AND SPACING AND LENGTH OF ZONES.
3. FIELD BEND G1 TO OBTAIN 1 1/2" COVER AT PAVEMENT SEAT IF NECESSARY.
4. MAY BE BUNDLED IF SPACING DOES NOT EXCEED 1'-0". SEE GIRDER SCHEDULE.

PLAN

BRIDGE RAILING BARS NOT SHOWN FOR CLARITY. SEE BRIDGE RAILING SHEETS FOR DETAILS AND LOCATIONS. OTHER END SIMILAR. STRANDS NOT SHOWN.



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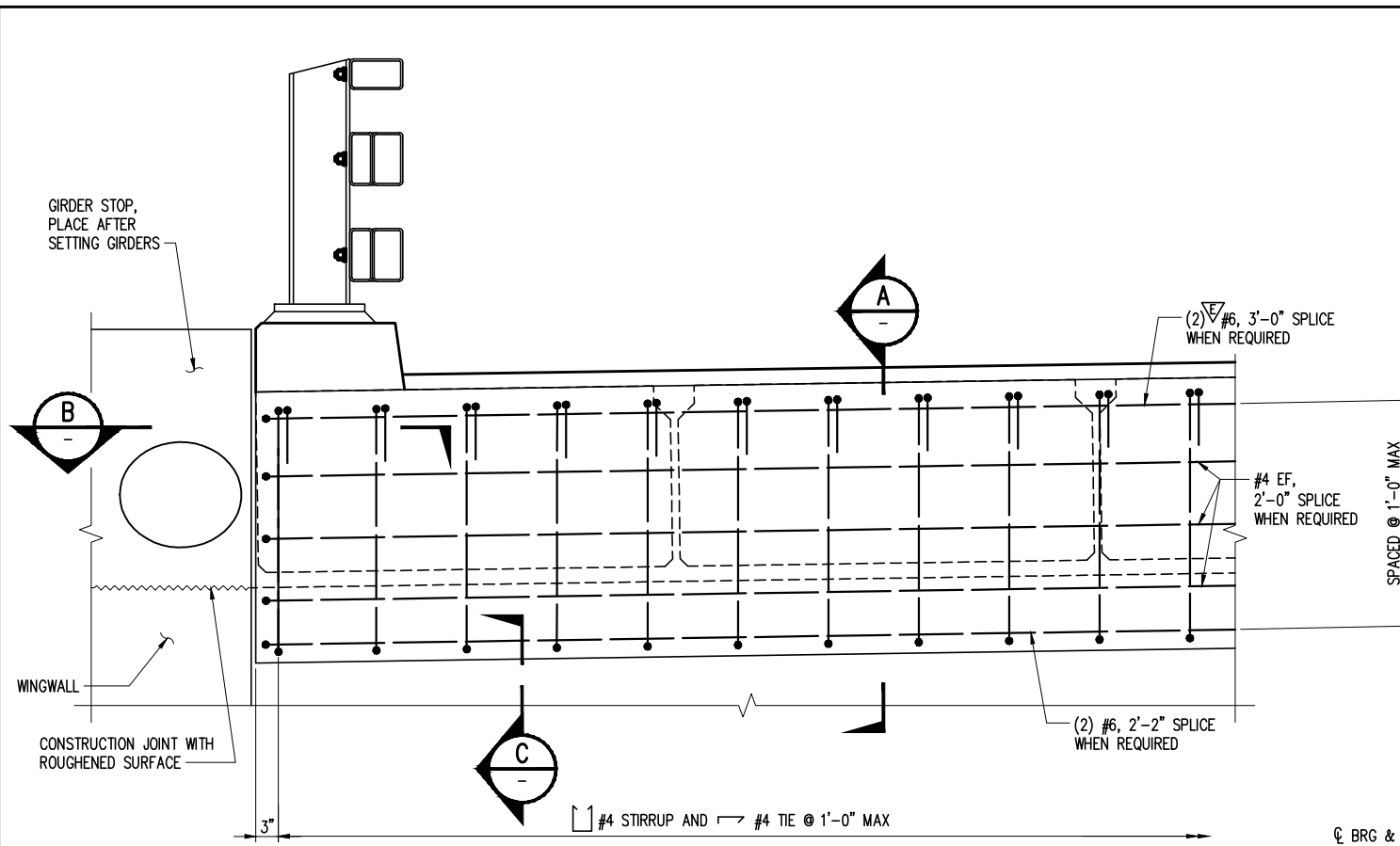


NO.	DATE	BY	REVISION

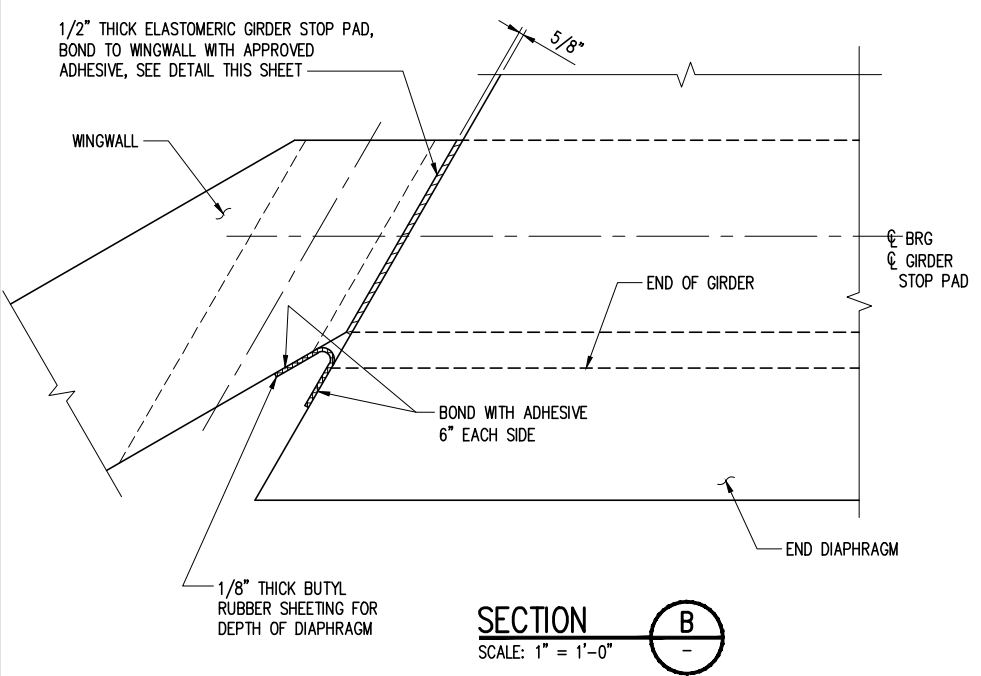


CULVERT REPLACEMENT, BRIDGE AND RIPARIAN CONSTRUCTION
SANDPIPER EAST APARTMENTS, KELSEY CREEK, BELLEVUE, WA
**NE 14TH ST BRIDGE
GIRDER DETAILS 2**

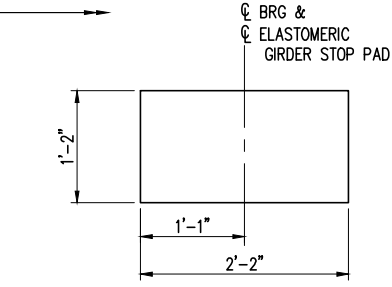
DRAWN: RRT	PROJECT NO.: 2200204
DESIGN: RCL	SCALE: AS SHOWN
CHECKED: AWO	DATE: 11-2024
DRAWING NO.	S12
SHEET NO. 25	OF 40



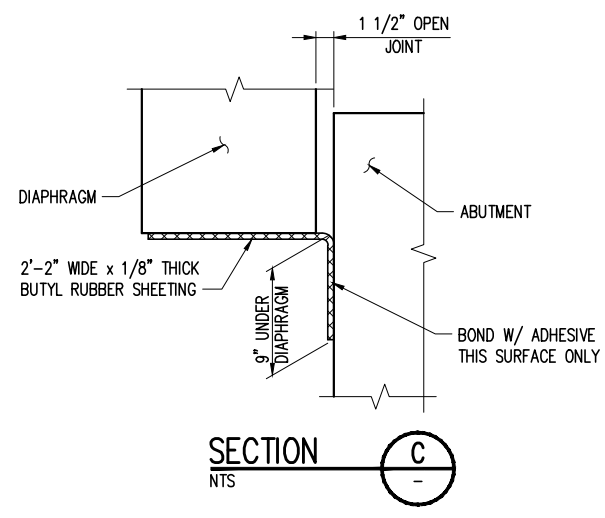
ELEVATION – END DIAPHRAGM
 SCALE: 1" = 1'-0"
 DIMENSIONS ARE PARALLEL TO CL PIER



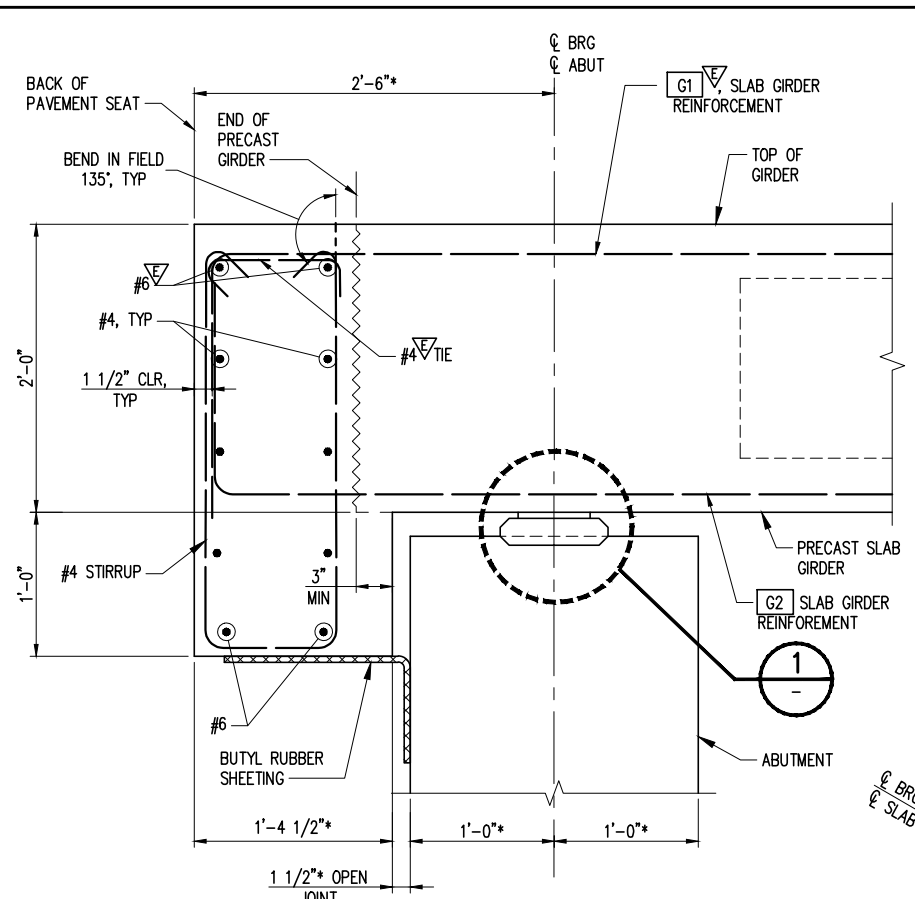
SECTION B
 SCALE: 1" = 1'-0"



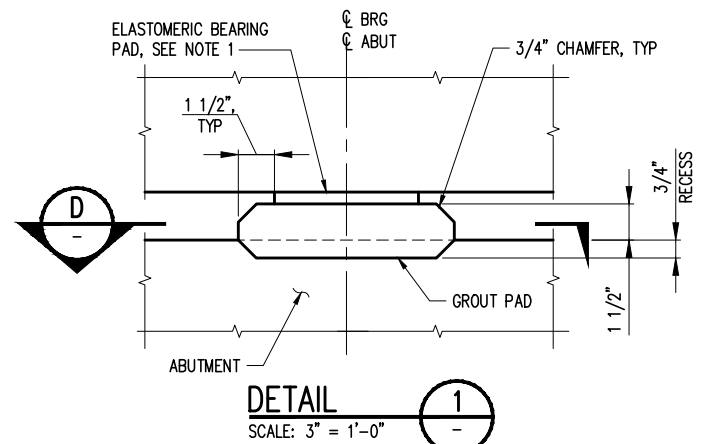
ELASTOMERIC GIRDER STOP PAD
 SHEAR MODULUS = 165 PSI



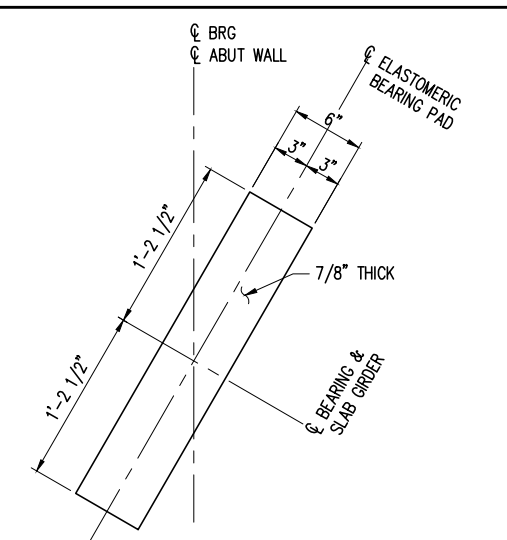
SECTION C
 NTS



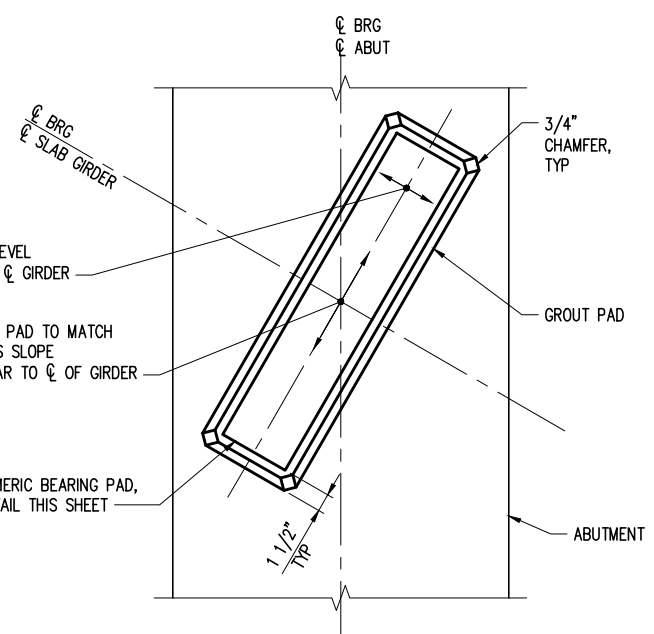
SECTION A
 SCALE: 1 1/2" = 1'-0"



DETAIL 1
 SCALE: 3" = 1'-0"



ELASTOMERIC BEARING PAD
 ELASTOMERIC PAD SHALL BE COTTON DUCT REINFORCED AND CONFORM TO THE REQUIREMENTS OF STD SPEC 9-31.8



SECTION D
 SCALE: 1 1/2" = 1'-0"

NOTES:

1. FULL BEARING OF SLAB UNIT IS REQUIRED AT EACH ELASTOMERIC BEARING.



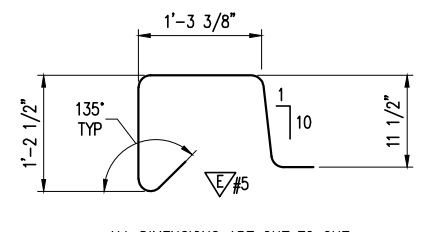
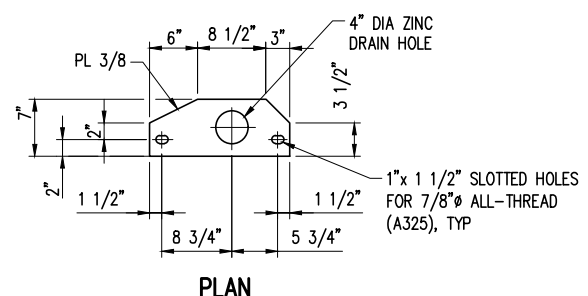
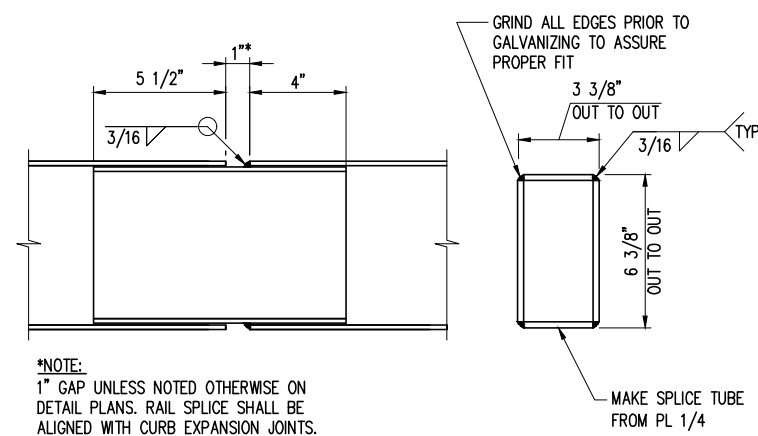
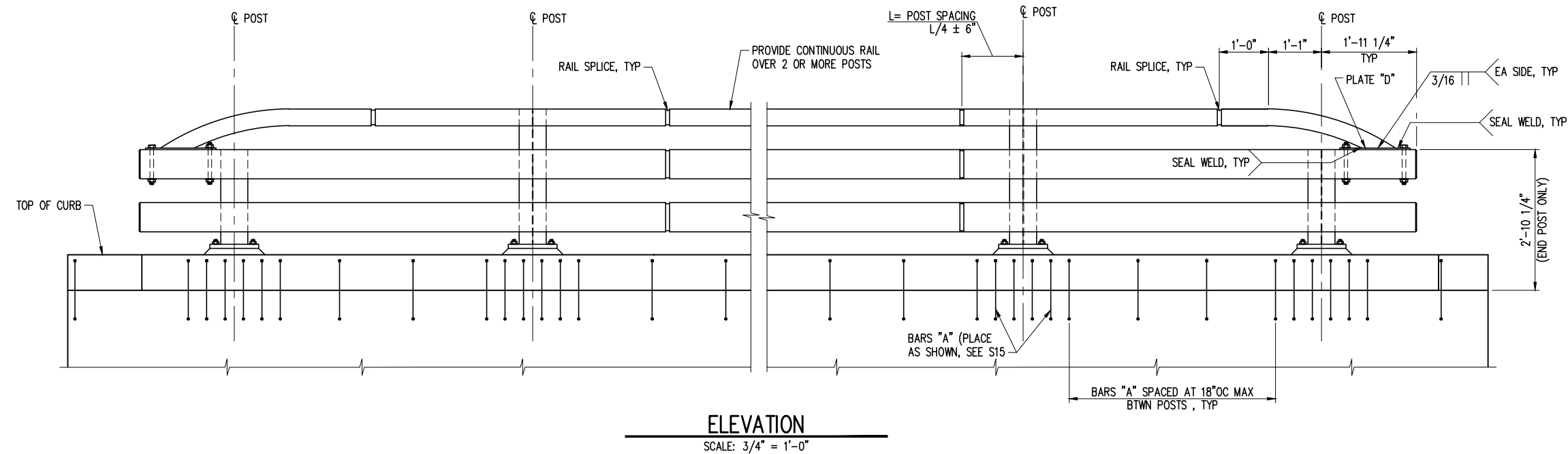
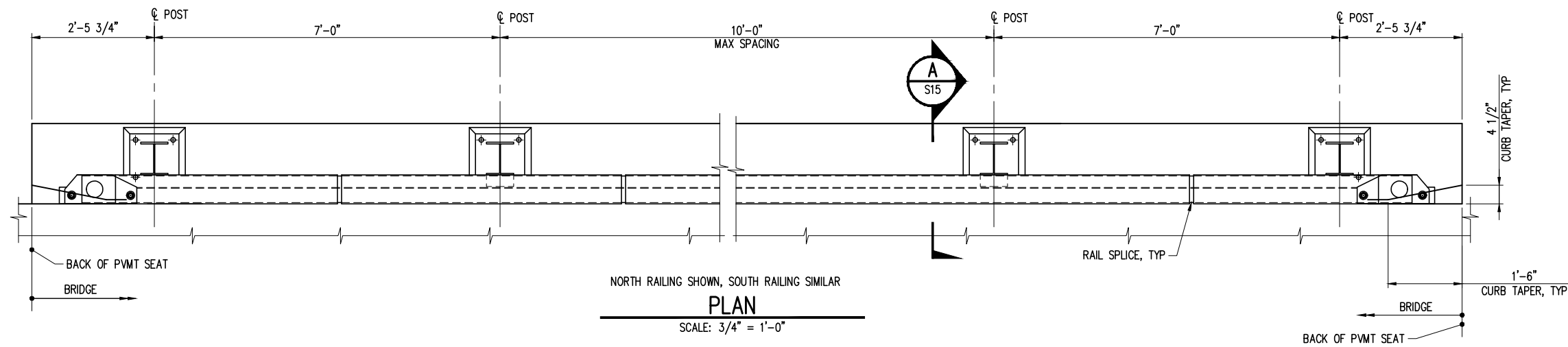
NO.	DATE	BY	REVISION



CULVERT REPLACEMENT, BRIDGE AND RIPARIAN CONSTRUCTION
 SANDPIPER EAST APARTMENTS, KELSEY CREEK, BELLEVUE, WA

END DIAPHRAGM AND BEARING DETAILS

DRAWN: RRT	PROJECT NO.: 2200204
DESIGN: RCL	SCALE: AS SHOWN
CHECKED: AWO	DATE: 11-2024
DRAWING NO.	S13
SHEET NO. 26	OF 40



*NOTE:
1" GAP UNLESS NOTED OTHERWISE ON
DETAIL PLANS. RAIL SPLICE SHALL BE
ALIGNED WITH CURB EXPANSION JOINTS.

GRIND ALL EDGES PRIOR TO
GALVANIZING TO ASSURE
PROPER FIT

3 3/8" OUT TO OUT

3/16" TYP

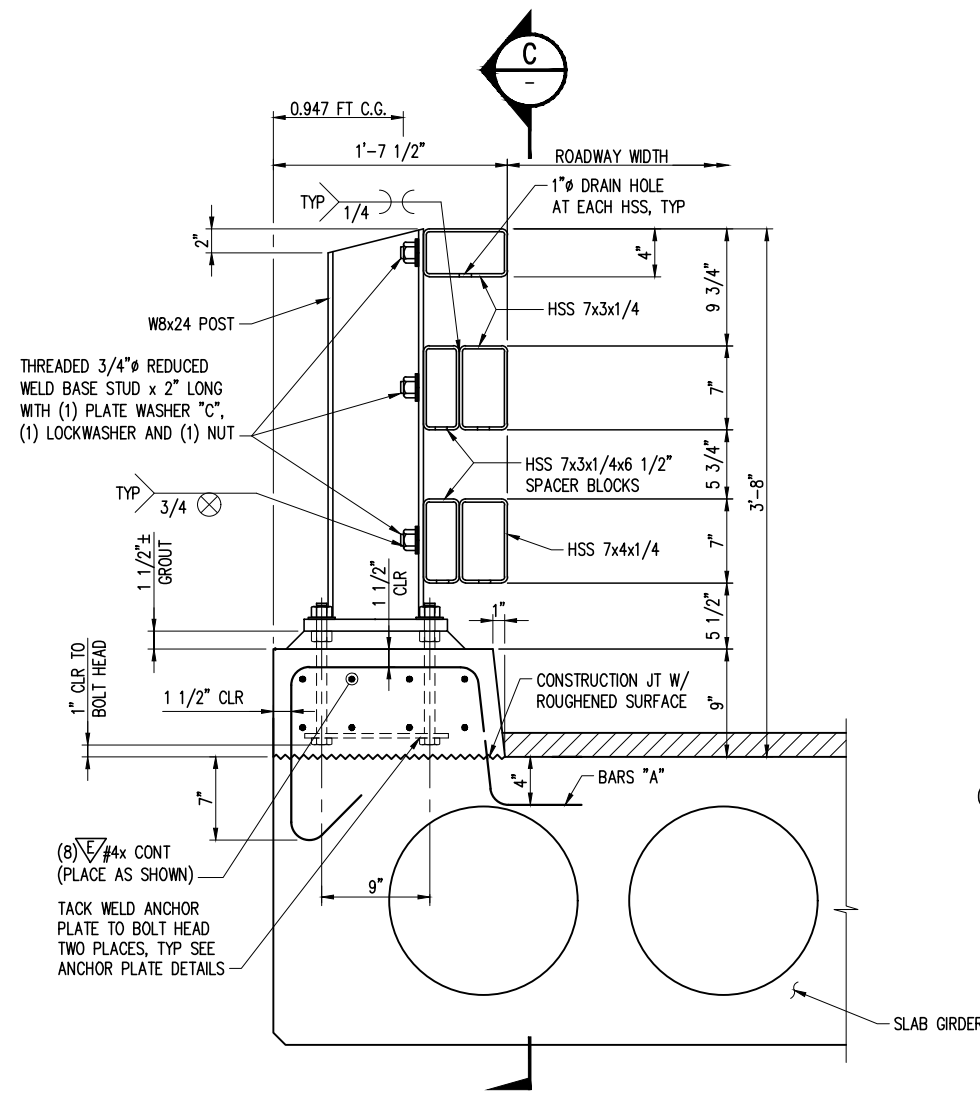
6 3/8" OUT TO OUT

MAKE SPLICE TUBE
FROM PL 1/4"

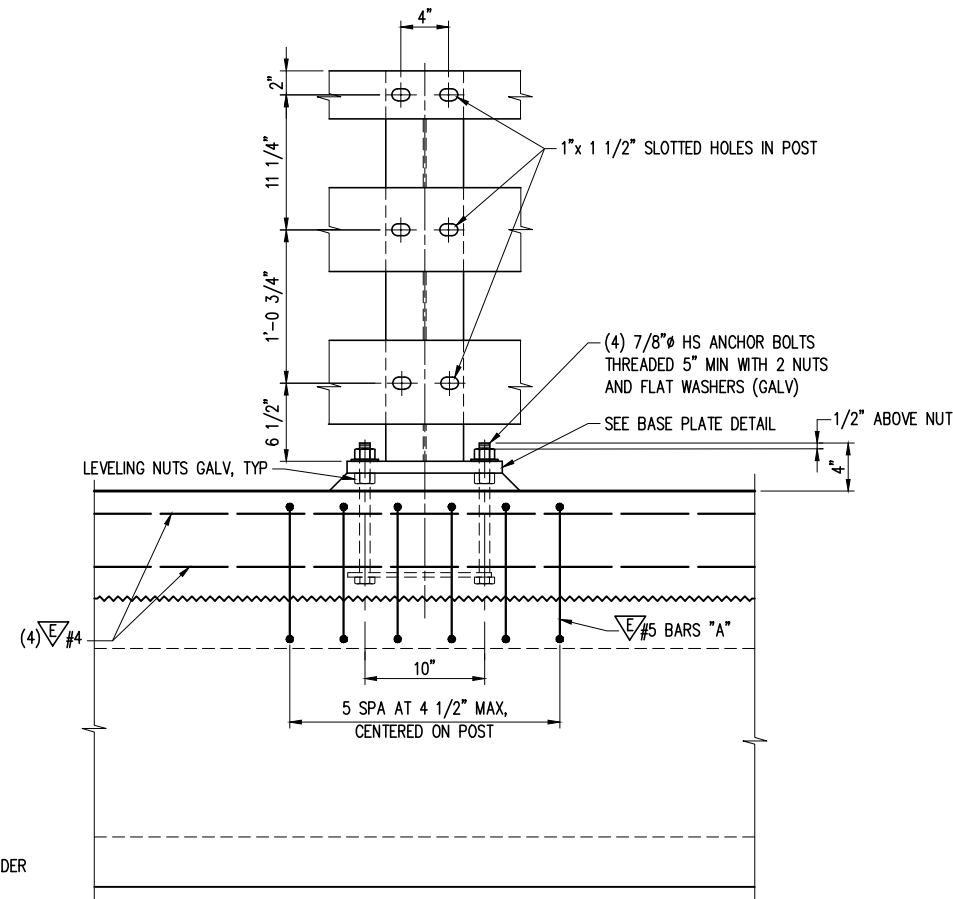
NO.	DATE	BY	REVISION

GENERAL NOTES

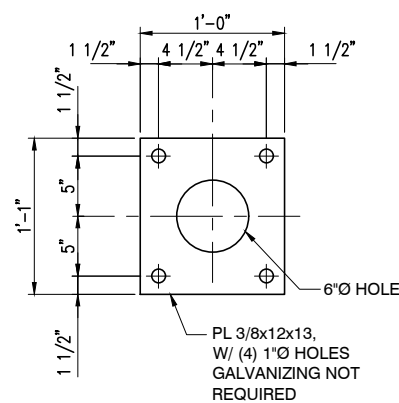
1. RAIL ELEMENTS FOR THE STRUCTURAL TUBING SHALL CONFORM TO ASTM SPECIFICATION A500 GRADE B, OR A501 GRADE B.
2. PROVIDE STEEL POSTS AND PLATES CONFORMING TO ASTM SPECIFICATION A36 UNLESS OTHERWISE NOTED.
3. PROVIDE HIGH STRENGTH ANCHOR BOLTS (GRADE 105) ACCORDING TO STD. SPEC. 9-06.5(4).
4. CONSTRUCT RAILING CONFORMING TO THE HORIZONTAL AND VERTICAL ALIGNMENT OF THE STRUCTURE. INSTALL POSTS NORMAL TO GRADE IN LONGITUDINAL DIRECTION AND VERTICAL IN THE TRANSVERSE DIRECTION.
5. HOT-DIP GALVANIZED STRUCTURAL STEEL INCLUDING FASTENERS IN ACCORDANCE WITH AASHTO M111/M232 (ASTM A123/A153) AFTER FABRICATION, EXCEPT AS NOTED. FIELD REPAIR OF GALVANIZING SHALL OCCUR AFTER ERECTION AND IN ACCORDANCE WITH ASTM A780.



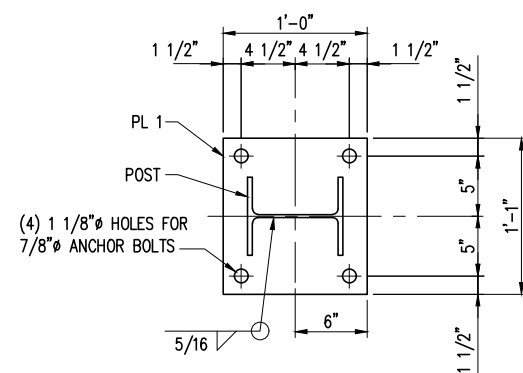
CURB AND POST DETAIL (A)
SCALE: 1 1/2" = 1'-0"
S14



SECTION (C)
SCALE: 1 1/2" = 1'-0"



ANCHOR PLATE DETAILS
SCALE: 1 1/2" = 1'-0"



BASE PLATE DETAILS
SCALE: 1 1/2" = 1'-0"

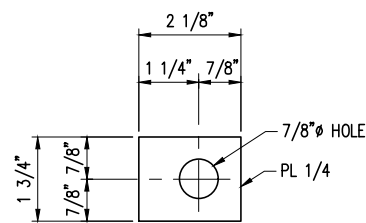
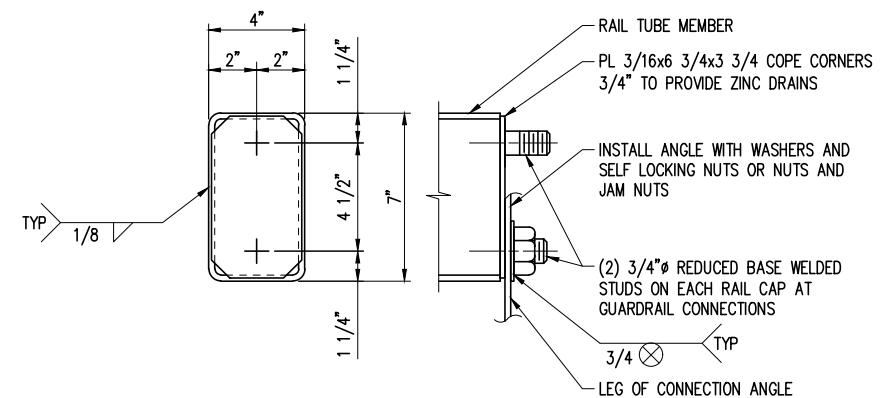
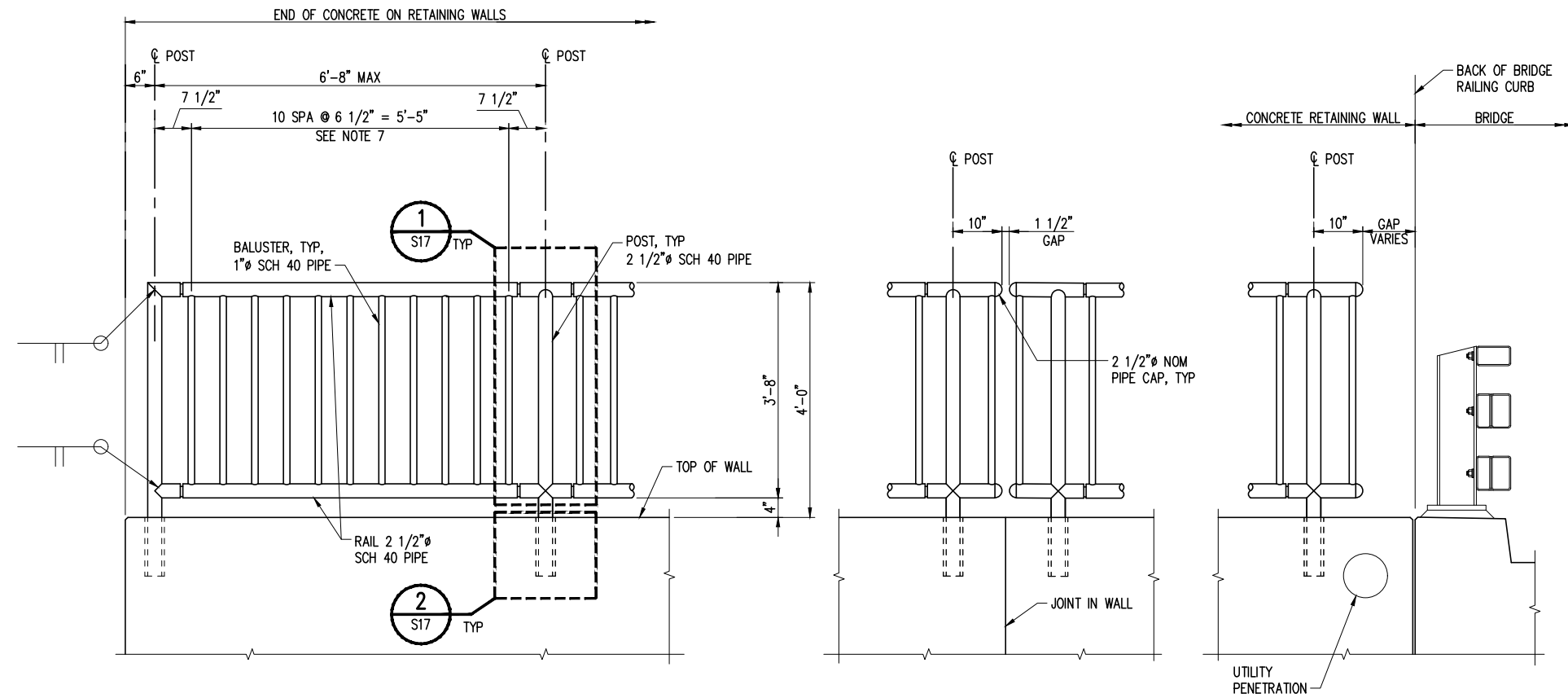


PLATE WASHER "C"
SCALE: 6" = 1'-0"



RAIL CAP DETAILS
SCALE: 3" = 1'-0"

NO.	DATE	BY	REVISION



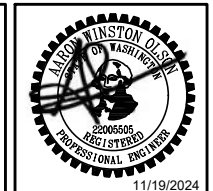
ELEVATION
SCALE: 3/4" = 1'-0"

NOTES:

- PIPE RAILING AND PIPE RAILING SPLICES SHALL BE BENT TO THE HORIZONTAL CURVE WHERE THE RADIUS OF CURVATURE IS LESS THAN 200'. THESE ITEMS MAY BE HEATED TO NOT MORE THAN 400° F FOR A PERIOD NOT TO EXCEED 30 MINUTES TO FACILITATE FORMING OR BENDING TO HORIZONTAL CURVATURE.
- SHOP DRAWINGS OF RAILING SHALL BE SUBMITTED AS A TYPE 2 WORKING DRAWING SHOWING COMPLETE DIMENSIONS AND DETAILS OF FABRICATION AND INCLUDING AN ERECTION DIAGRAM. MATERIAL SPECIFICATIONS SHALL BE PROVIDED IN THE SHOP DRAWING FOR ALL COMPONENTS.
- CUTTING SHALL BE DONE BY SAWING OR MILLING AND ALL CUTS SHALL BE TRUE AND SMOOTH. FLAME CUTTING WILL NOT BE PERMITTED.
- WELDING OF ALUMINUM SHALL CONFORM TO STD SPEC SECTION 9-28.14(3).
- ALL ALUMINUM PARTS SHALL BE GIVEN A CLEAR ANODIC COATING OF AT LEAST 0.0006" THICK AND SEALED TO MEET THE REQUIREMENTS OF ASTM B 580 WITH A UNIFORM FINISH.
- PIPE RAILING, PIPE BALUSTERS AND PIPE RAILING SPLICES SHALL BE ADEQUATELY WRAPPED TO ENSURE SURFACE PROTECTION DURING HANDLING AND TRANSPORTATION TO THE JOB SITE.
- ADJUST NUMBER OF BALUSTERS SO THAT LENGTH OF PEDESTRIAN RAILING MATCHES THE WALL LENGTH.
- BALUSTERS SHALL BE ORIENTED NORMAL TO THE TOP OF WALL. TOP AND BOTTOM RAILS SHALL BE PARALLEL TO THE TOP OF WALL.

MATERIAL SPECIFICATION TABLE

MATERIAL	PART	MATERIAL SPECIFICATION
ALUMINUM	RAILS & BALUSTERS	ASTM B221-6005-T5, 6005A-T5 OR ASTM B241-6061-T6
	STRIP	ASTM B221-6005-T5
STEEL	ANCHOR BOLTS, BUTS & WASHERS	STANDARD SPECIFICATION SECTION 9-06.5(4) GR. 36 (GALVANIZE IN ACCORDANCE WITH AASHTO SPECIFICATION M 232)
	DRIVE PINS	ASTM A276 OR A240 TYPE 302 STAINLESS STEEL



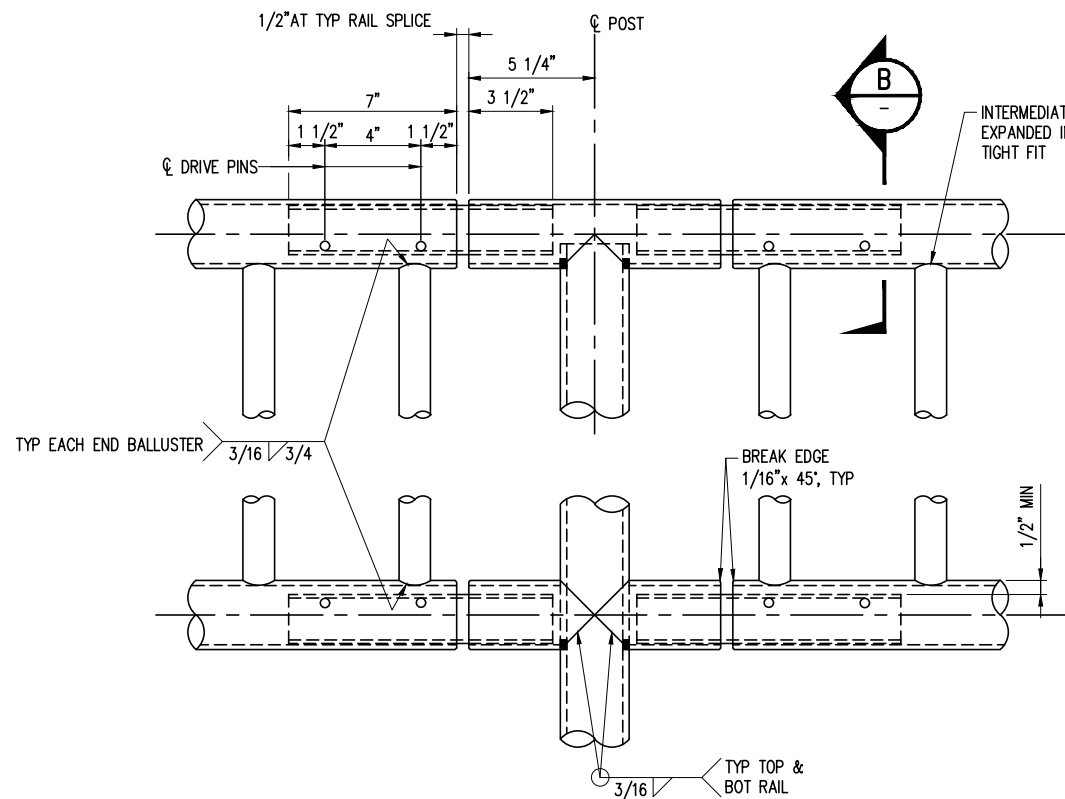
NO.	DATE	BY	REVISION



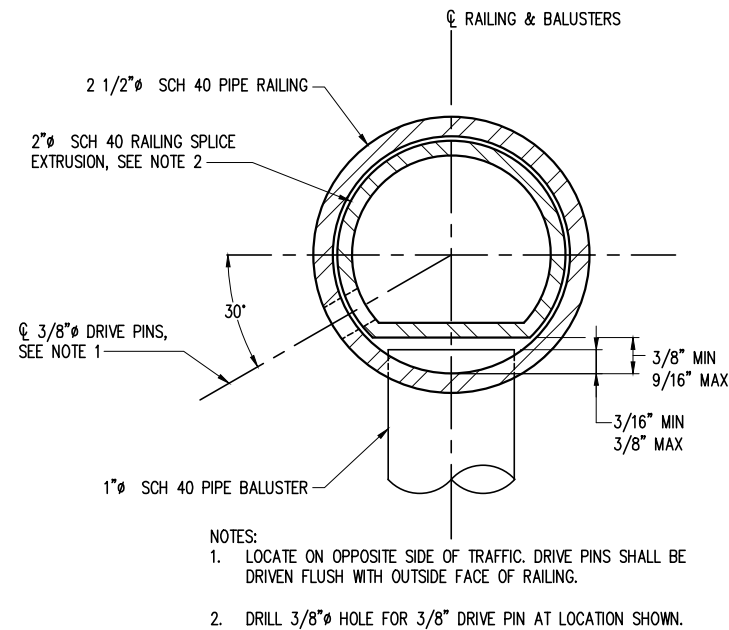
CULVERT REPLACEMENT, BRIDGE AND RIPARIAN CONSTRUCTION
SANDPIPER EAST APARTMENTS, KELSEY CREEK, BELLEVUE, WA

**NE 14TH ST BRIDGE
PEDESTRIAN RAILING DETAILS 1**

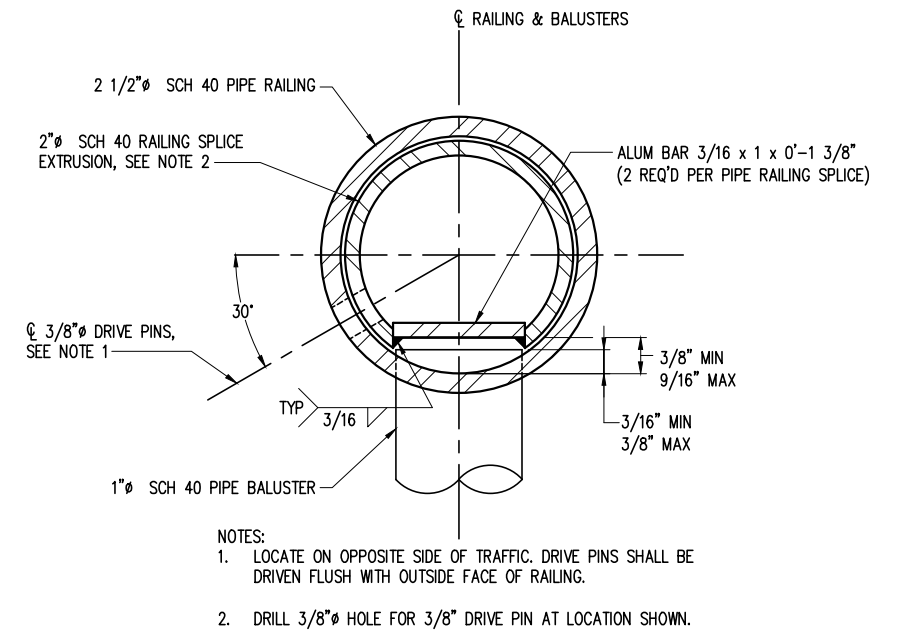
DRAWN: RRT	PROJECT NO.: 2200204
DESIGN: RCL	SCALE: AS SHOWN
CHECKED: AWO	DATE: 11-2024
DRAWING NO.	S16
SHEET NO. 29	OF 40



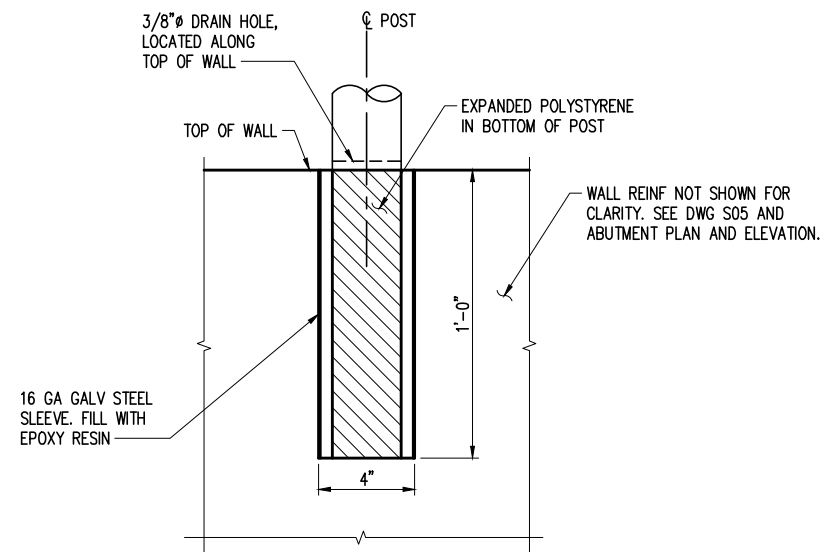
DETAIL 1
SCALE: 3" = 1'-0"
S16



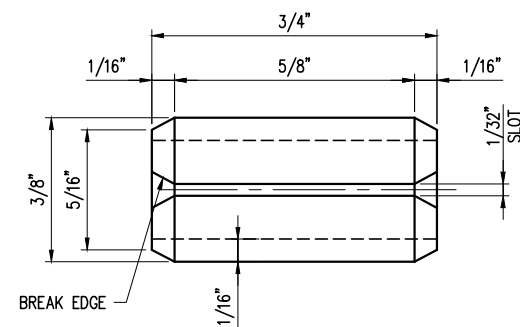
OPTION #1
SECTION
SCALE: 1"=1"
B



OPTION #2
SECTION
SCALE: 1"=1"
B



DETAIL 2
SCALE: 3" = 1'-0"
S16



DRIVE PIN DETAIL
NTS
SLOTTED TYPE SPRING PIN (ANSI B18.8.2)

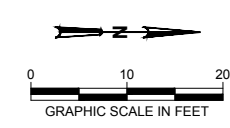
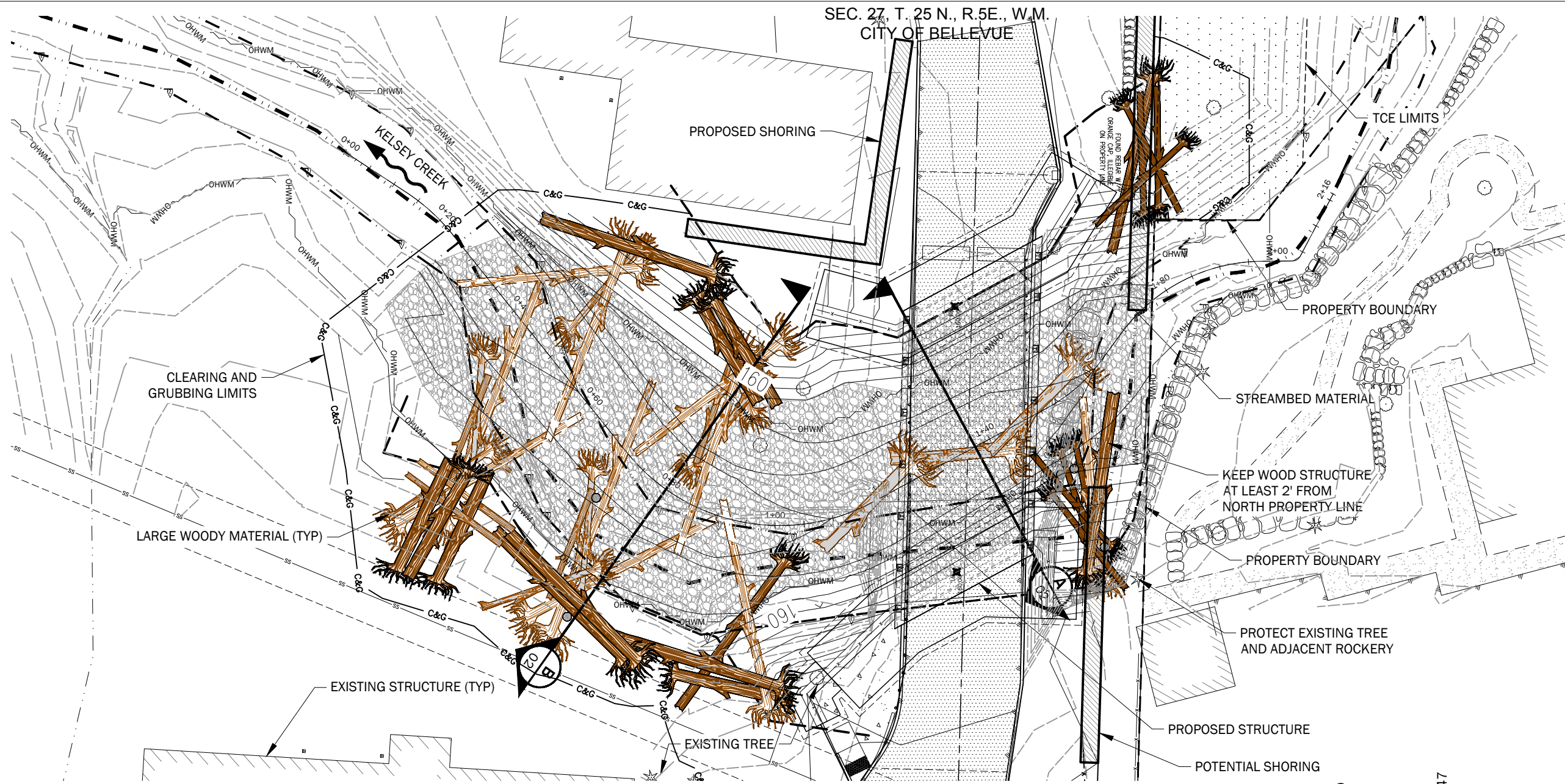
NO.	DATE	BY	REVISION

DRAWN: RRT	PROJECT NO.: 2200204
DESIGN: RCL	SCALE: AS SHOWN
CHECKED: AWO	DATE: 11-2024
DRAWING NO.	S17
SHEET NO. 30	OF 40

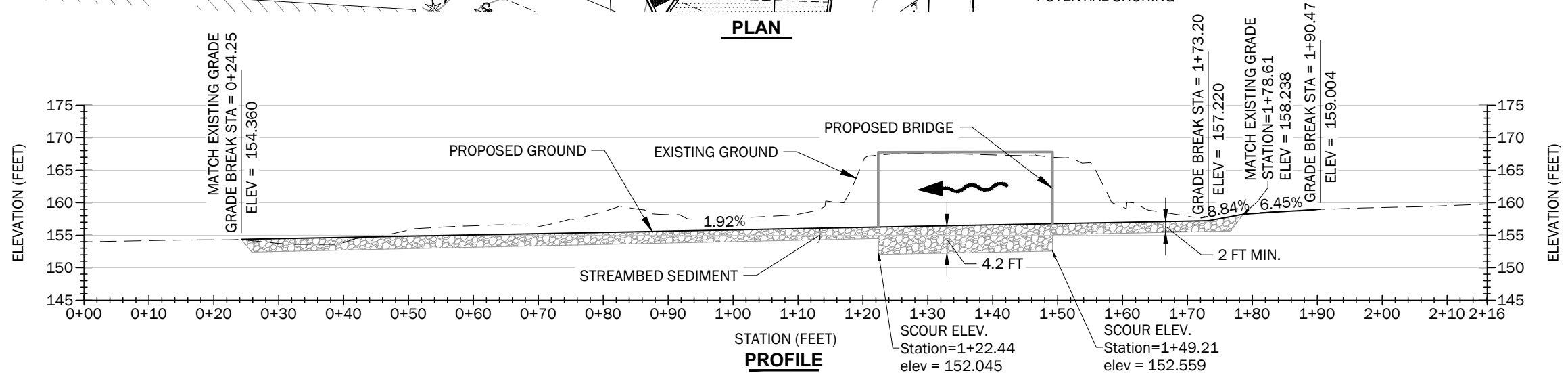
SEC. 27, T. 25 N., R. 5E., W.M.
CITY OF BELLEVUE

- LEGEND**
- PROPOSED 5 FT CONTOUR
 - PROPOSED 1 FT CONTOUR
 - - - EXISTING 5 FT CONTOUR
 - - - EXISTING 1 FT CONTOUR
 - OHWM APPRX ORDINARY HIGH WATER MARK
 - PROPOSED STREAM ALIGNMENT
 - - - APPROXIMATE DISTURBANCE LIMITS
 - - - PROPERTY BOUNDARY
 - C&G - CLEARING AND GRUBBING LIMITS

- GENERAL NOTES:**
1. SEE SHEET HD02 FOR TYPICAL CROSS SECTIONS.
 2. ROOTWADS SHOWN ARE ENLARGED FOR ILLUSTRATIVE PURPOSES.

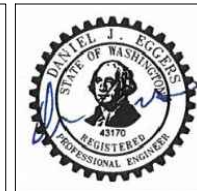


PLAN



PROFILE

CAD USER: apederson PLOT DATE: Nov 20, 2024-04:33pm PATH: P:\1\1329022\CAD\03\04_Sandpiper Basis of Design 90 Percent\132902203_Sht 1_01 [Proposed Stream Plan and Profile].dwg



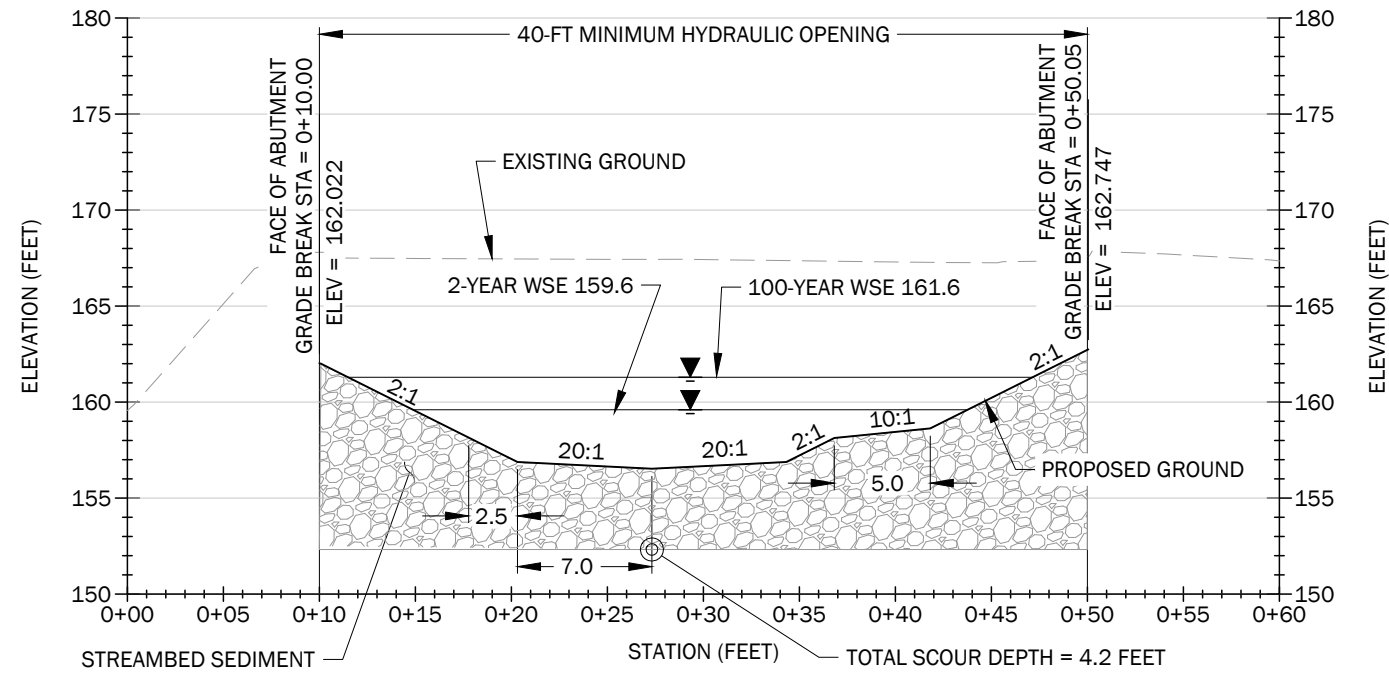
NO.	DATE	BY	REVISION

CULVERT REPLACEMENT, BRIDGE AND RIPARIAN CONSTRUCTION
SANDPIPER EAST APARTMENTS, KELSEY CREEK, BELLEVUE, WA

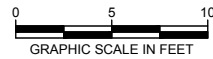
PROPOSED STREAM PLAN AND PROFILE

DRAWN: AGP	PROJECT NO.: 2200204
DESIGN: AGP	SCALE:
CHECKED: DJE	DATE: 11-2024
DRAWING NO. H001	
SHEET NO. 31	OF 40

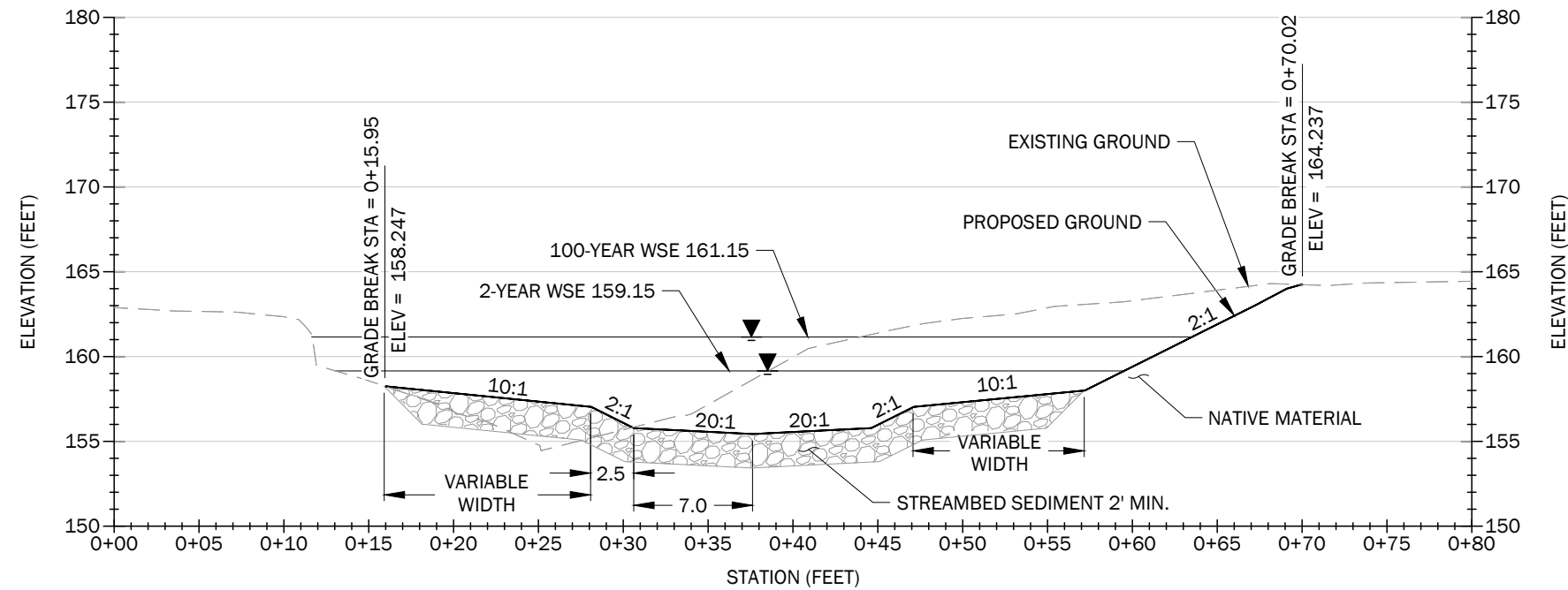
SEC. 27, T. 25 N., R.5E., W.M.
CITY OF BELLEVUE



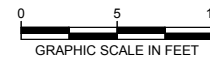
BRIDGE SECTION STA 1+37.2 (TYP.) A
SCALE: 1:10 01



CROSS SECTION DETAILS						
STA	LEFT BENCH WIDTH	LEFT BENCH SLOPE	LEFT CUT SLOPE	RIGHT BENCH WIDTH	RIGHT BENCH SLOPE	RIGHT CUT SLOPE
0+50	23.5	20:1	TIE TO EXISTING	3.5	20:1	2:1
0+70	10.5	20:1	TIE TO EXISTING	9.3	20:1	2:1
0+90	11.9	20:1	TIE TO EXISTING	10.5	20:1	2:1
1+00	2.6	20:1	2:1	11.1	20:1	2:1
1+10	0	20:1	2:1	10.9	20:1	2:1
1+22	0	20:1	2:1	10.5	20:1	2:1
1+50	0	20:1	3:1	5	20:1	2:1
1+60	3.3	20:1	TIE TO EXISTING	5	20:1	2:1
1+70	0	NA	NA	0	NA	2:1



DOWNSTREAM SECTION STA 0+80 (TYP.) B
SCALE: 1:10 01



CAD USER: apederson PLOT DATE: Nov 20, 2024-04:33pm
PATH: P:\1\1329022\CAD\03\04_Sandpiper Basis of Design 90 Percent\132902203_Sht 2_02 [Proposed Stream Sections].dwg



NO.	DATE	BY	REVISION



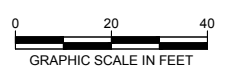
CULVERT REPLACEMENT, BRIDGE AND RIPARIAN CONSTRUCTION
SANDPIPER EAST APARTMENTS, KELSEY CREEK, BELLEVUE, WA

PROPOSED STREAM SECTIONS

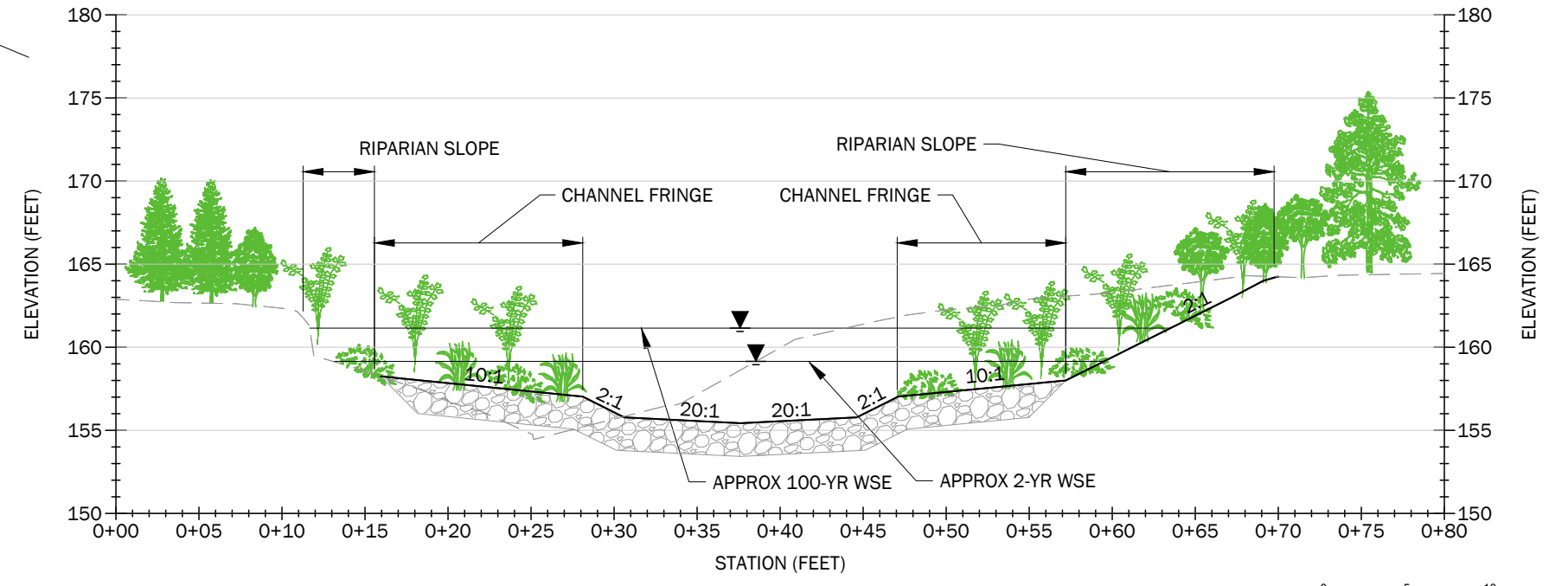
DRAWN: AGP	PROJECT NO.: 2200204
DESIGN: AGP	SCALE:
CHECKED: DJE	DATE: 11-2024
DRAWING NO.	HD02
SHEET NO. 32	OF 40



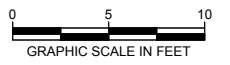
- LEGEND**
- PROPOSED 5 FT CONTOUR
 - PROPOSED 1 FT CONTOUR
 - - - EXISTING 5 FT CONTOUR
 - - - EXISTING 1 FT CONTOUR
 - OHWM APPRX ORDINARY HIGH WATER MARK
 - PROPOSED STREAM ALIGNMENT
 - - - PROPERTY BOUNDARY
 - - - APPROXIMATE DISTURBANCE LIMITS
 - - - C&G - CLEARING AND GRUBBING LIMITS
- CHANNEL FRINGE PLANTING ZONE 0.06 AC
 - RIPARIAN SLOPE PLANTING ZONE (0.09 AC)



PLAN



SECTION



CAD USER: apederson PLOT DATE: Nov 20, 2024-04:34pm
PATH: P:\1\1329022\CAD\03\04_Sandpiper Basis of Design 90 Percent\132902203_Sht_3_03 [Revegetation and Planting Plan].dwg



NO.	DATE	BY	REVISION

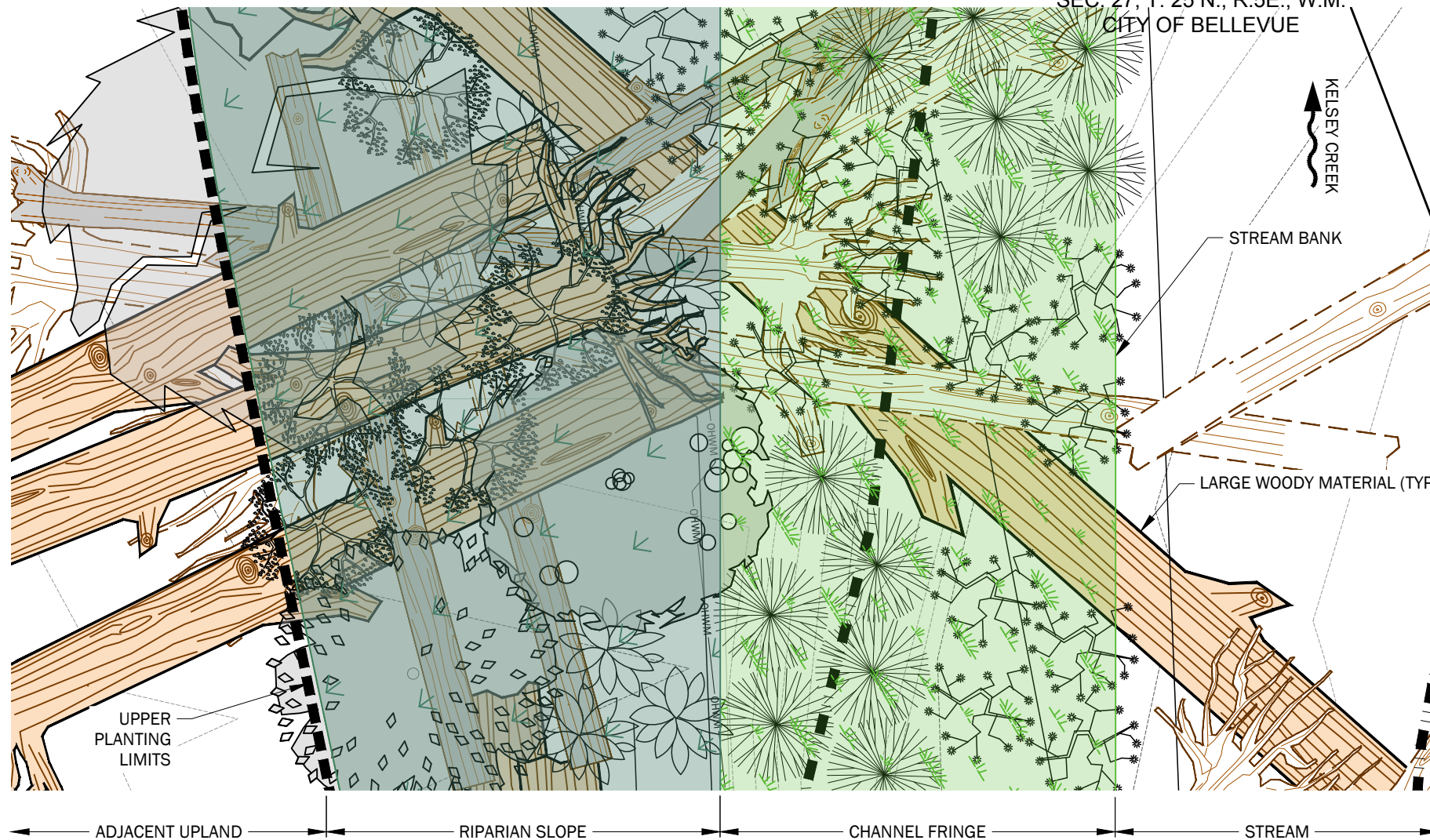


CULVERT REPLACEMENT, BRIDGE AND RIPARIAN CONSTRUCTION
SANDPIPER EAST APARTMENTS, KELSEY CREEK, BELLEVUE, WA

REVEGETATION AND PLANTING PLAN

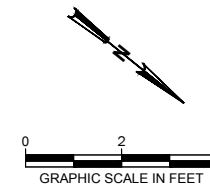
DRAWN: AGP	PROJECT NO.: 2200204
DESIGN: AGP	SCALE:
CHECKED: DJE	DATE: 11-2024
DRAWING NO. HD03	
SHEET NO. 33	OF 40

SEC. 27, T. 25 N., R.5E., W.M.
CITY OF BELLEVUE

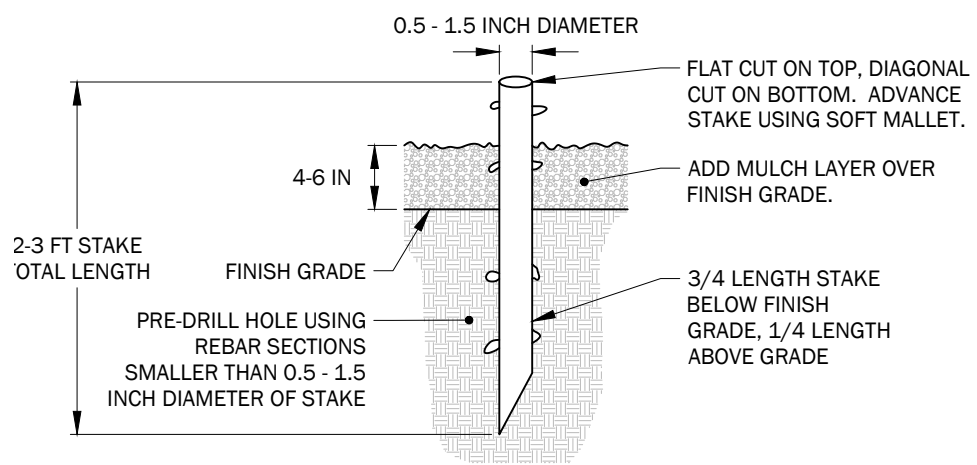


COMMUNITY	TYPE	COMMON NAME	LATIN NAME	SYMBOL	FORM	PLANT SPACING	QUANTITY
CHANNEL FRINGE/FREQUENTLY FLOODED (BELOW OHWM)	SHRUB	REDSTEM DOGWOOD	CORNUS SERICEA		LIVESTAKE	3 FT	150
		SITKA WILLOW	SALIX SITCHENSIS		LIVESTAKE	3 FT	150
	EMERGENT	EMERGENT SEED MIX	--		SEED MIX	--	--
RIPARIAN SLOPE (ABOVE OHWM)	TREE	DOUGLAS FIR	PSEUDOTSUGA MENZIESII		1-GALLON	12 FT	30
	SHRUB	RED ELDERBERRY	SAMBUCUS RACEMOSA		1-GALLON	8 FT	20
		OSOBERRY	OEMLERIA CERASIFORMIS		1-GALLON	8 FT	20
		SNOWBERRY	SYMPHORICARPOS ALBUS		1-GALLON	4 FT	200
GROUNDCOVER	SWORD FERN	POLYSTICHUM MUNITUM		1-GALLON	3 FT	200	

PLANT SCHEDULE

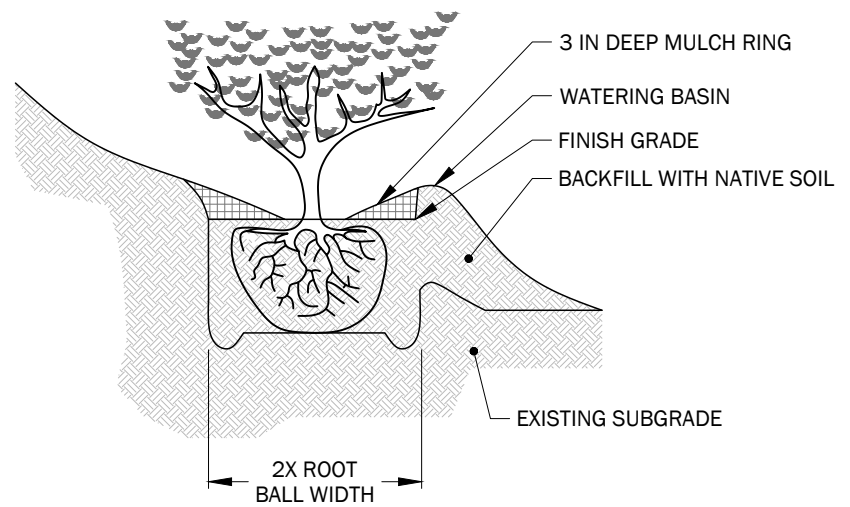


TYPICAL PLANTING PLAN

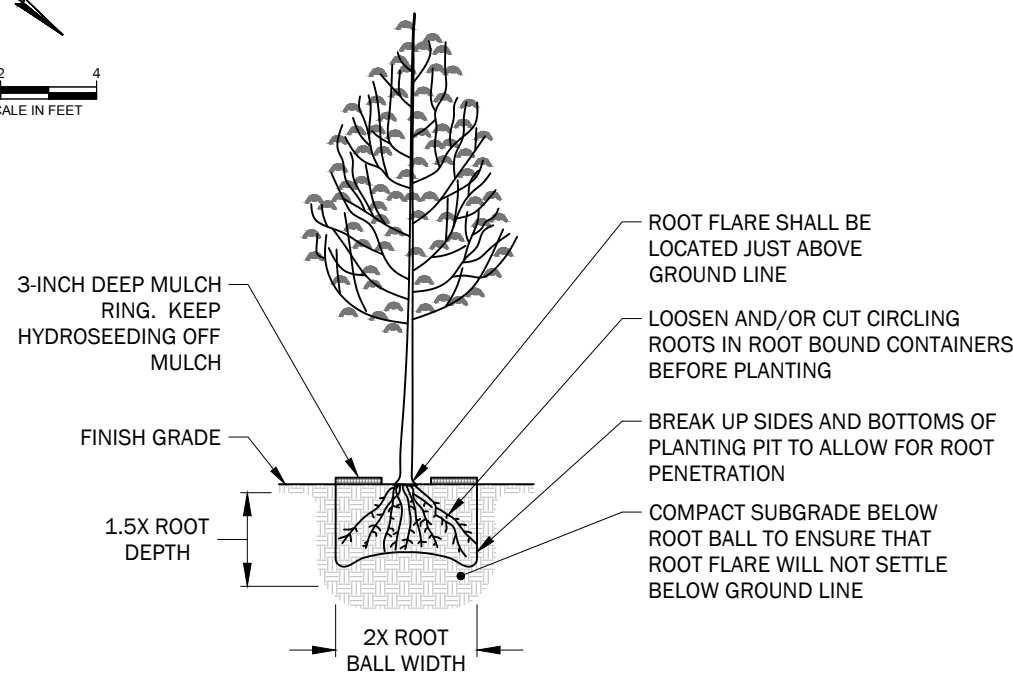


NOTES:
1. FOR PLANTING ON SLOPES 3H:1V AND STEEPER, PLANT PER DETAIL 2.

LIVE STAKING (TYP) DETAIL 1
SCALE: NOT TO SCALE



PLANTING TREE/SHRUB ON SLOPES 3H:1V AND STEEPER DETAIL 2
SCALE: NOT TO SCALE



NOTES:
1. FOR PLANTING ON SLOPES 3H:1V AND STEEPER, PLANT PER DETAIL 2.

TREE PLANTING (TYP) DETAIL 3
SCALE: NOT TO SCALE

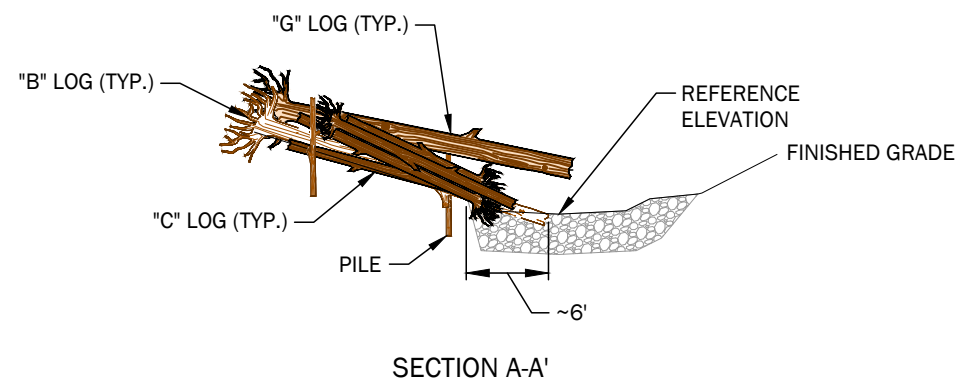
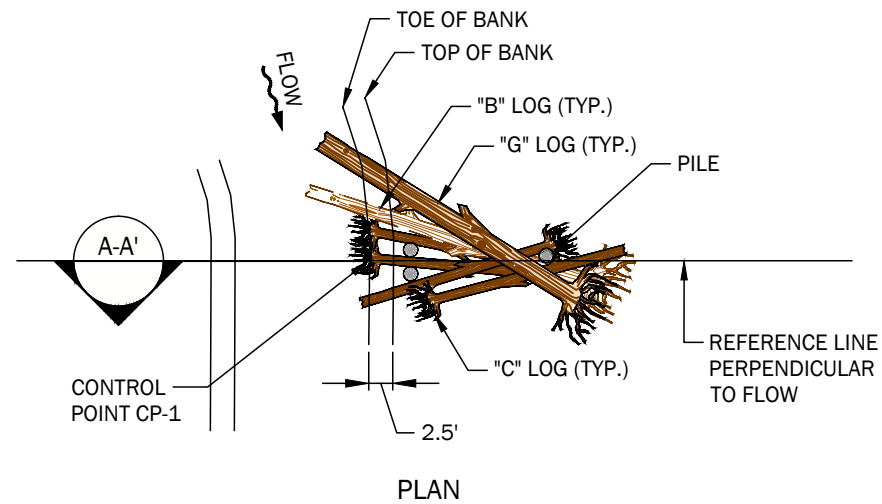
CAD USER: apederson PLOT DATE: Nov 20, 2024-04:34pm
PATH: P:\1\1329022\CAD\03\04_Sandpiper Basis of Design 90_Percent\132902203_Sht 4_04 [Planting Details].dwg

NO.	DATE	BY	REVISION

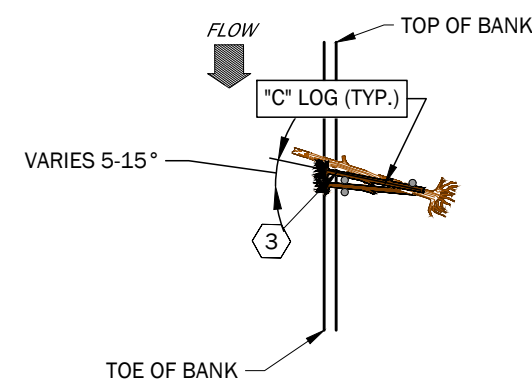
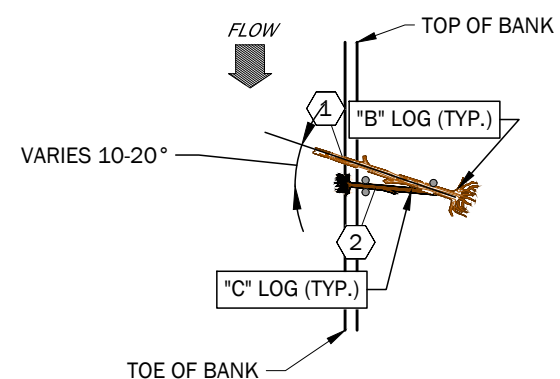
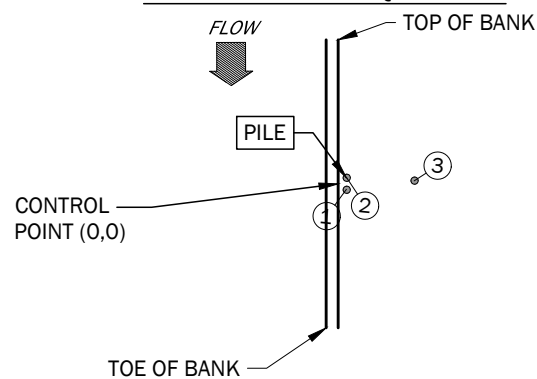
CULVERT REPLACEMENT, BRIDGE AND RIPARIAN CONSTRUCTION
SANDPIPER EAST APARTMENTS, KELSEY CREEK, BELLEVUE, WA

PLANTING DETAILS

DRAWN: AGP	PROJECT NO.: 2200204
DESIGN: AGP	SCALE:
CHECKED: DJE	DATE: 11-2024
DRAWING NO. HD04	
SHEET NO. 34	OF 40



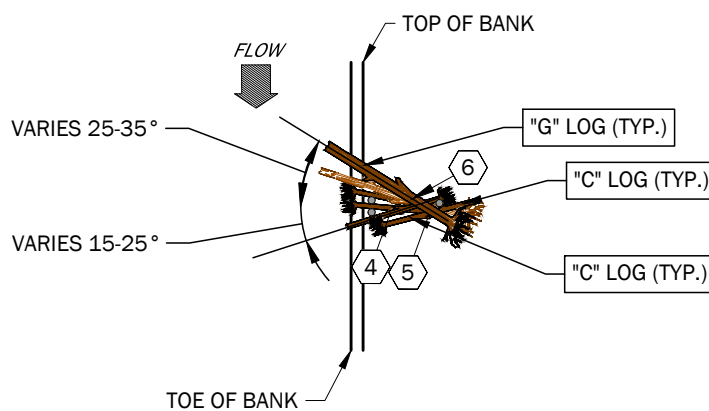
CONSTRUCTION SEQUENCING



1. ESTABLISH REFERENCE ELEVATION PRIOR TO CONSTRUCTION AND CONFIRM WITH HYDRAULIC ENGINEER. REFERENCE GRADE HUB SHOULD BE ESTABLISHED OUTSIDE OF DISTURBANCE LIMITS AND USED TO CHECK STRUCTURE EMBEDDED DEPTHS. REFERENCE GRADE IS THE THALWEG ELEVATION ADJACENT TO THE STRUCTURE.
2. EMBED PILES 6 FEET BELOW REFERENCE ELEVATION PER PILE DETAIL ON DRAWING HD9.

3. EXCAVATE A TRENCH FOR LOG 1. TRENCH DEPTH SHALL BE 1.5 FEET BELOW THE REFERENCE ELEVATION.
4. PLACE LOG 2 (TYPE C) PERPENDICULAR (0°) TO THE TOE OF THE BANK BETWEEN PILES 1 AND 2, SO THAT THE ROOTWAD COLLAR IS RESTING ON THE TOP OF BANK.
5. PLACE LOG 1 (TYPE A) ORIENTED BETWEEN 10-20° TO THE REFERENCE LINE. PLACE LOG 1 UPSTREAM OF PILE 1 AND DOWNSTREAM OF PILE 2. THE LOG STEM EXTENDS 6 FEET PAST THE TOE OF THE BANK AND SHALL BE PARTIALLY EMBEDDED IN THE CHANNEL.
6. PLACE SLASH BETWEEN LOGS 1 AND 2.

7. PLACE LOG 3 (TYPE C) 3 ON TOP OF LOG 1 AND BETWEEN PILES 2 AND 3. ORIENT LOG 3 5-15° TO THE REFERENCE LINE SO THAT THE ROOTWAD COLLAR IS RESTING ON THE TOP OF BANK.



8. PLACE LOG 4 (TYPE C) ABOVE LOG 3, DOWNSTREAM OF PILE 2 AND UPSTREAM OF PILE 3. ORIENT LOG 4 15-25° TO THE REFERENCE LINE. THE LOG STEM EXTENDS 1.0 FEET PAST THE TOE OF THE BANK.
9. PLACE LOG 5 (TYPE C) ABOVE LOG 3, DOWNSTREAM OF PILE 3. ORIENT LOG 5 15-25° TO THE REFERENCE LINE. THE LOG BOLE EXTENDS 5 FEET ABOVE THE TOP OF BANK (MEASUREMENT DOES NOT INCLUDE ROOTWAD).
10. PLACE LOG 6 (TYPE G) ABOVE LOGS 4 AND 5 WITH THE ROOTWAD RESTING ON THE FLOODPLAIN ORIENTED 25-35° TO THE REFERENCE LINE.

11. WEAVE THE REMAINING RACKING MATERIAL AND SLASH BETWEEN THE ROOTWADS AND PILES.
12. REVEGETATE THE BANK AROUND THE STRUCTURE PER REVEGETATION DETAILS ON DRAWING HD03.

CONTROL POINT TABLE		
CONTROL POINTS	NORTHING (FT)	EASTING (FT)
CP-1	229892.1341	1313846.1312

- NOTES:**
1. INSTALLATION OF LWM STRUCTURES SHALL NOT COMMENCE UNTIL WORK ISOLATION STRUCTURES ARE INSTALLED, FISH EXCLUSION AND SALVAGE HAS BEEN PERFORMED, AND WORK AREA HAS BEEN DEWATERED PER THE SPECIAL PROVISIONS.
 2. FOLLOWING COMPLETION OF LWM INSTALLATION AND APPROVAL BY THE ENGINEER, WATER SHALL BE GRADUALLY REINTRODUCED BACK INTO THE WORK AREA AND WORK ISOLATION STRUCTURES REMOVED.

- PURPOSE:**
- PROVIDES INCREASED HYDRAULIC ROUGHNESS THROUGHOUT THE REACH
 - REDIRECTS FLOWS TO OPPOSITE BANK
 - OVER TIME ACCUMULATES ADDITIONAL LARGE WOOD MATERIAL

- DESIGN SPECIFICS:**
- THE DESIGN ENGINEER SHALL MAINTAIN THE ABILITY TO MAKE ADJUSTMENTS TO THE PROPOSED STRUCTURE IF SITE CONDITIONS WARRANT.
 - SEE TABLE FOR MATERIAL SIZES AND QUANTITIES

STRUCTURE QUANTITIES				
LOG TYPE B - LARGE ROOTWAD	LOG TYPE C - LARGE ROOTWAD	LOG TYPE G - LARGE ROOTWAD	PILE	SLASH MATERIAL (CY)
30' MIN. LOG WITH ROOTWAD 16" TO 20" DBH	20' MIN. LOG WITH ROOTWAD 10" TO 14" DBH	30' MIN. LOG WITH ROOTWAD 22" TO 26" DBH	10-12' LONG, 12" AVG. DIA.	
1	4	1	3	2

TYPICAL LWM STRUCTURE TYPE 1 - FLOW DEFLECTION JAM

NTS



CAD USER: apederson PLOT DATE: Nov 20, 2024-04:34pm PATH: P:\1\1329022\CAD\03\04_Sandpiper Basis of Design 90 Percent\132902203_Sht 6_05 [Large Woody Material Structure Details].dwg



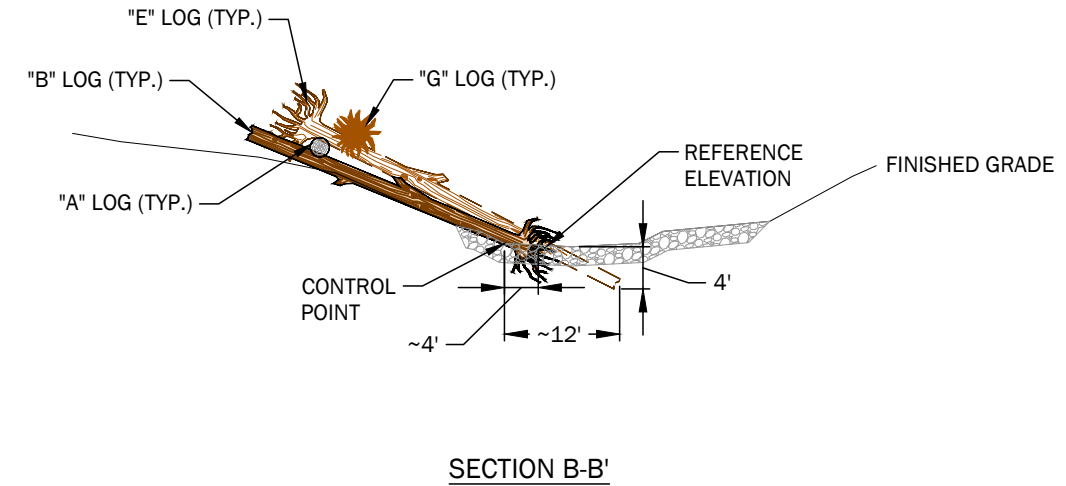
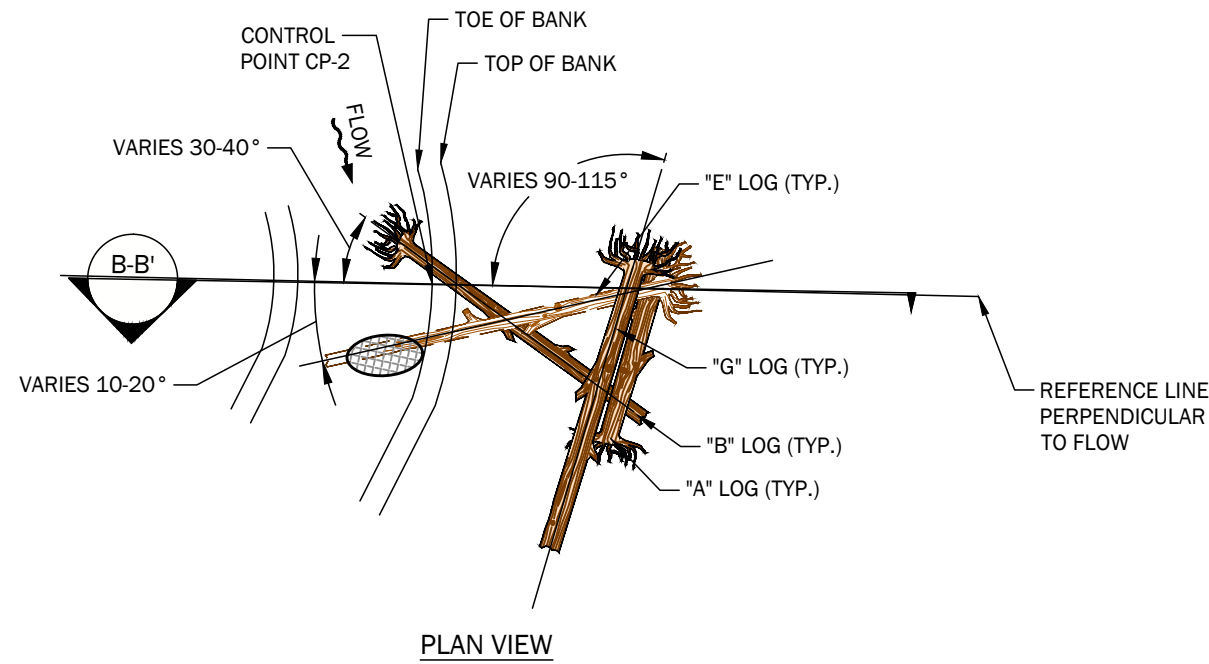
NO.	DATE	BY	REVISION



CULVERT REPLACEMENT, BRIDGE AND RIPARIAN CONSTRUCTION
SANDPIPER EAST APARTMENTS, KELSEY CREEK, BELLEVUE, WA

LARGE WOODY MATERIAL STRUCTURE DETAILS

DRAWN: AGP	PROJECT NO.: 2200204
DESIGN: AGP	SCALE:
CHECKED: DJE	DATE: 11-2024
DRAWING NO.	HD05
SHEET NO. 35	OF 40



PURPOSE:

- REDIRECTS FLOW.
- CREATES SCOUR.
- ENCOURAGES GRAVEL DEPOSITION.

DESIGN SPECIFICS:

- THE DESIGN ENGINEER SHALL MAINTAIN THE ABILITY TO MAKE ADJUSTMENT TO THE PROPOSED STRUCTURE IF SITE CONDITIONS WARRANT.
- SEE TABLE FOR MATERIAL SIZES AND QUANTITIES

NOTES:

1. INSTALLATION OF LWM STRUCTURES SHALL NOT COMMENCE UNTIL WORK ISOLATION STRUCTURES ARE INSTALLED, FISH EXCLUSION AND SALVAGE HAS BEEN PERFORMED, AND WORK AREA HAS BEEN DEWATERED PER THE SPECIAL PROVISIONS.
2. FOLLOWING COMPLETION OF LWM INSTALLATION AND APPROVAL BY THE ENGINEER, WATER SHALL BE GRADUALLY REINTRODUCED BACK INTO THE WORK AREA AND WORK ISOLATION STRUCTURES REMOVED.

CONSTRUCTION SEQUENCING:

1. ESTABLISH REFERENCE ELEVATION PRIOR TO CONSTRUCTION AND CONFIRM WITH HYDRAULIC ENGINEER. REFERENCE GRADE HUB SHOULD BE ESTABLISHED OUTSIDE OF DISTURBANCE LIMITS AND USED TO CHECK STRUCTURE EMBEDDED DEPTHS. REFERENCE GRADE IS THE TOP OF THE BANK WHERE SWEEPER LOGS WILL BE INSTALLED.
2. PARTIALLY EMBED THE TYPE B LOG ROOTWAD A MINIMUM OF 1 FOOT BELOW THE REFERENCE ELEVATION. PLACE THE STEM OF THE TYPE B LOG ON THE BANK, ORIENTED 30-40° TO THE REFERENCE LINE.
3. PLACE THE TYPE A LOG WITH THE ROOTWAD COLLAR ON TOP OF THE STEM OF THE TYPE B LOG, ORIENTED 90-115° TO THE REFERENCE LINE.
4. EXCAVATE A TRENCH FOR THE TYPE E LOG. TRENCH DEPTH SHALL BE A MINIMUM OF 4 FEET BELOW THE REFERENCE ELEVATION. EMBED THE STEM OF TYPE B LOG INTO THE CHANNEL AND PLACE THE ROOT COLLAR ABOVE THE TYPE A LOG, ORIENTED 10-20° TO THE REFERENCE LINE.
5. BACKFILL STRUCTURE IN 1 FT MAXIMUM LIFTS. COMPACT EACH LIFT FOLLOWING PLACEMENT USING AN EXCAVATOR BUCKET.
6. PLACE TYPE G LOG ABOVE THE TYPE E AND TYPE B LOGS WITH THE ROOTWAD ORIENTED 90-115° TO THE REFERENCE LINE. THE ROOTWAD SHALL BE A MINIMUM OF 5 FEET FROM THE WINGWALL.
7. REVEGETATE THE BANK AROUND THE STRUCTURE PER REVEGETATION DETAILS ON DRAWING HD04.

STRUCTURE QUANTITIES			
LOG TYPE A - LARGE ROOTWAD	LOG TYPE B - LARGE ROOTWAD	LOG TYPE E - LARGE ROOTWAD	LOG TYPE G - LARGE ROOTWAD
20' MIN. LOG WITH ROOTWAD 22" TO 26" DBH	30' MIN. LOG WITH ROOTWAD 16" TO 20" DBH	35' MIN. LOG WITH ROOTWAD 16" TO 20" DBH	30' MIN. LOG WITH ROOTWAD 22" TO 26" DBH
1	1	1	1

CONTROL POINT TABLE		
CONTROL POINTS	NORTHING (FT)	EASTING (FT)
CP-2	229842.7404	1313863.9192

TYPICAL LWM STRUCTURE TYPE 2 - CHANNEL BEND LOGS

NTS

2

HD06



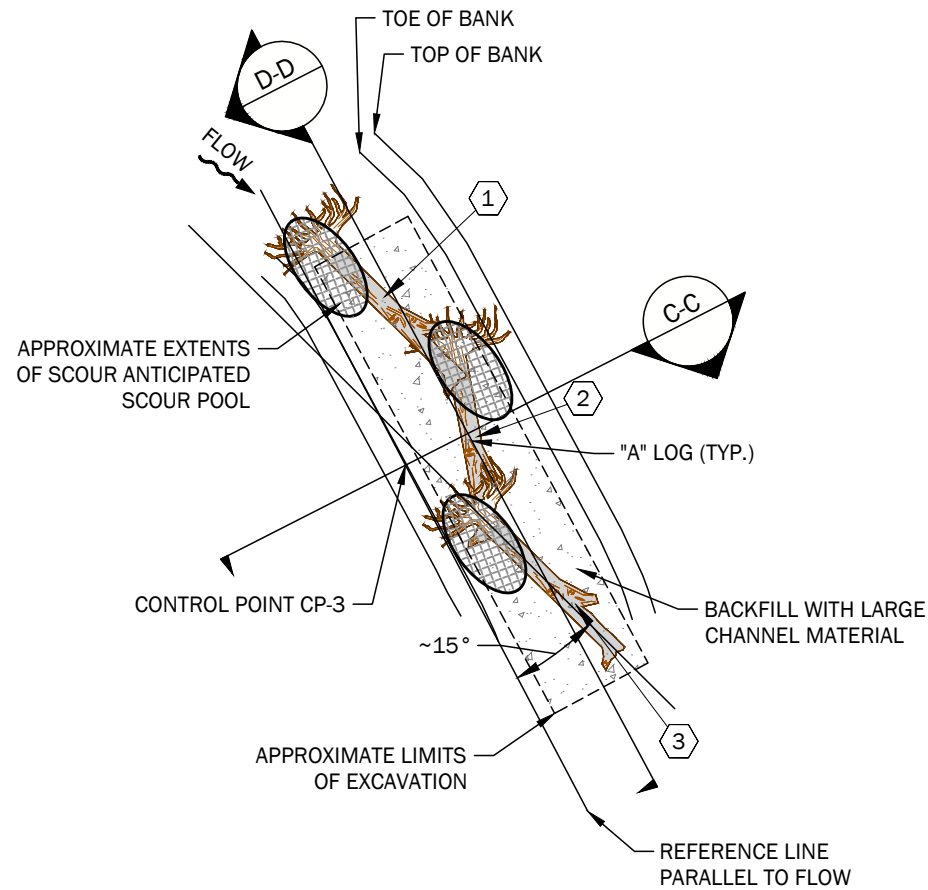
NO.	DATE	BY	REVISION



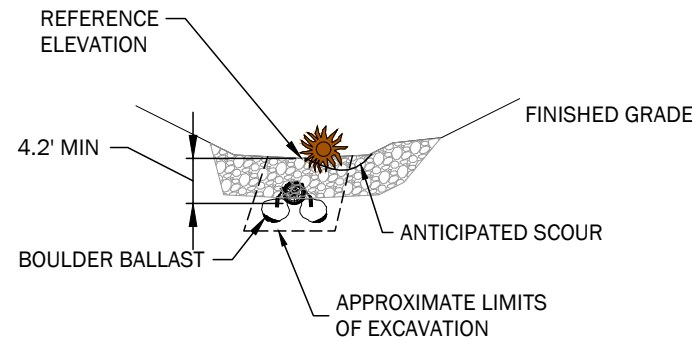
CULVERT REPLACEMENT, BRIDGE AND RIPARIAN CONSTRUCTION
SANDPIPER EAST APARTMENTS, KELSEY CREEK, BELLEVUE, WA

LARGE WOODY MATERIAL STRUCTURE DETAILS

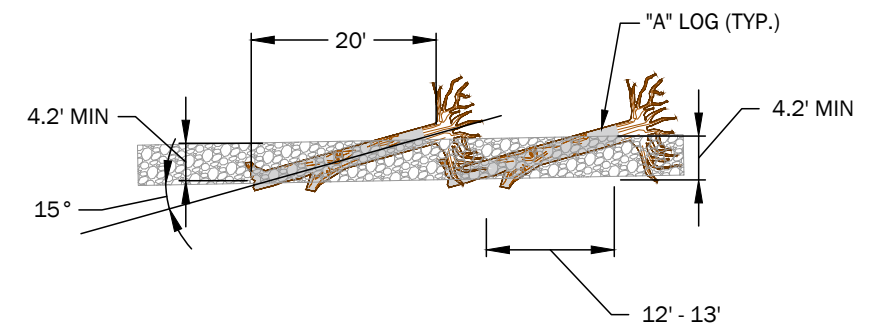
DRAWN: AGP	PROJECT NO.: 2200204
DESIGN: AGP	SCALE:
CHECKED: DJE	DATE: 11-2024
DRAWING NO. HD06	
SHEET NO. 36	OF 40



PLAN VIEW



SECTION C-C'



SECTION D-D'

NOTES:

1. INSTALLATION OF LWM STRUCTURES SHALL NOT COMMENCE UNTIL WORK ISOLATION STRUCTURES ARE INSTALLED, FISH EXCLUSION AND SALVAGE HAS BEEN PERFORMED, AND WORK AREA HAS BEEN DEWATERED PER THE SPECIAL PROVISIONS.
2. FOLLOWING COMPLETION OF LWM INSTALLATION AND APPROVAL BY THE ENGINEER, WATER SHALL BE GRADUALLY REINTRODUCED BACK INTO THE WORK AREA AND WORK ISOLATION STRUCTURES REMOVED.

PURPOSE:

- CREATES LATER SCOUR POOL.
- PROMOTES GRAVEL BAR FORMATION.
- CREATES DIVERSE FISH HABITAT.
- PROVIDES COVER.

DESIGN SPECIFICS:

- THE TOP OF ROOTWADS SHALL NOT EXTEND MORE THAN 1.5 FT ABOVE TOP OF BANK.
- EACH LOG WILL HAVE TWO DEADMAN BOULDER COLLAR ANCHORS, WITH EACH BOULDER COLLAR ANCHOR INCLUDING TWO 30" DIAMETER OR TYPE 3 BOULDERS. DEADMAN ANCHORS SHALL BE PLACED A MINIMUM OF 3 FEET FROM THE LOG STEM AND 3 FEET FROM THE ROOTWAD COLLAR.
- BACKFILL STRUCTURE IN 1 FT MAXIMUM LIFTS. COMPACT EACH LIFT FOLLOWING PLACEMENT USING EXCAVATOR BUCKET.
- THE DESIGN ENGINEER SHALL MAINTAIN THE ABILITY TO MAKE ADJUSTMENTS TO THE PROPOSED STRUCTURE IF SITE CONDITIONS WARRANT.
- TRIM ROOTWADS SUCH THAT THE MAXIMUM WIDTH IS 5 FEET.

CONSTRUCTION SEQUENCING:

1. ESTABLISH REFERENCE ELEVATION PRIOR TO CONSTRUCTION AND CONFIRM WITH HYDRAULIC ENGINEER. REFERENCE GRADE HUB SHOULD BE ESTABLISHED OUTSIDE OF DISTURBANCE LIMITS AND USED TO CHECK STRUCTURE EMBEDDED DEPTHS. REFERENCE GRADE IS THE CHANNEL THALWEG WHERE LONGITUDINAL LOGS WILL BE INSTALLED.
2. EXCAVATE A TRENCH FOR THE TYPE A LOGS. TRENCH DEPTH SHALL BE A MINIMUM OF 4.2 FEET BELOW THE REFERENCE ELEVATION.
3. ANCHOR THE TYPE A LOGS TO THE BOULDER BALLASTS PER BOULDER COLLAR DETAILS IN DRAWING HD9 AND INSTALL LOGS IN NUMERICAL ORDER.
4. EMBED THE STEM OF THE TYPE A LOG INTO THE CHANNEL AND PLACE THE ROOT COLLAR ABOVE THE STEM OF THE UPSTREAM TYPE A LOG.
5. TYPE A LOGS WILL BE ORIENTED AT 15° TO THE CHANNEL GRADE AND WILL BE ORIENTED 10-15° TO THE TOE OF THE CHANNEL.
6. BACKFILL STRUCTURE IN 1 FT MAXIMUM LIFTS. COMPACT EACH LIFT FOLLOWING PLACEMENT USING AN EXCAVATOR BUCKET.

STRUCTURE QUANTITIES	
LOG TYPE A - LARGE ROOTWAD	BOULDER COLLAR
20' MIN. LOG WITH ROOTWAD 22" TO 26" DBH	30" DIA. TYPE 3 BOULDER
3	12

CONTROL POINT TABLE		
CONTROL POINTS	NORTHING (FT)	EASTING (FT)
CP-3	229873.6169	1313837.0992

TYPICAL LWM STRUCTURE TYPE 3 - LONGITUDINAL LOGS

NTS

3
HD07

CAD USER: apederson PLOT DATE: Nov 20, 2024-04:35pm PATH: P:\1\1329022\CAD\03\04_Sandpiper Basis of Design 90 Percent\132902203_Sht 8_07 [Large Woody Material Structure Details].dwg



NO.	DATE	BY	REVISION

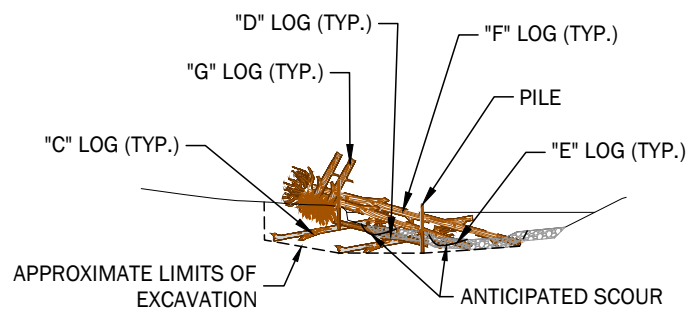
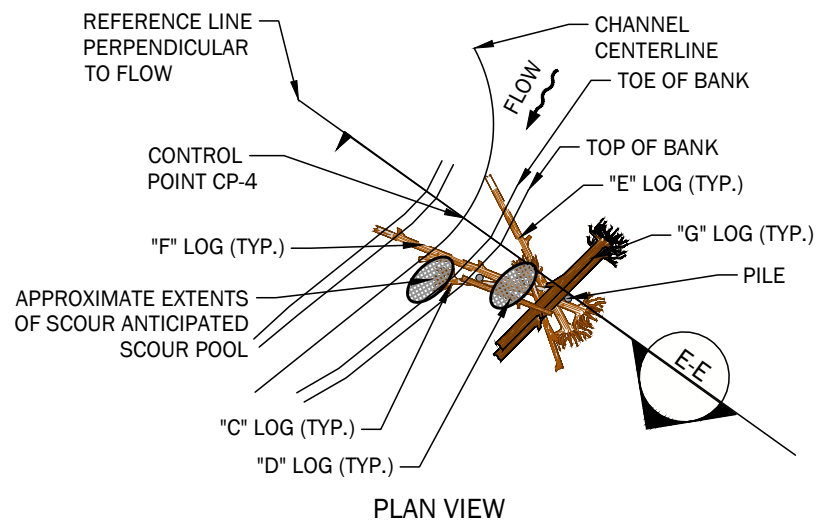


CULVERT REPLACEMENT, BRIDGE AND RIPARIAN CONSTRUCTION
SANDPIPER EAST APARTMENTS, KELSEY CREEK, BELLEVUE, WA

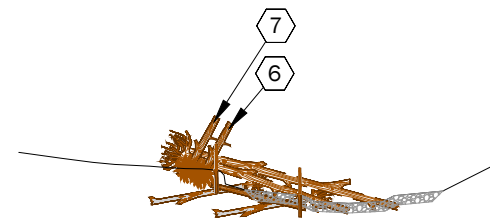
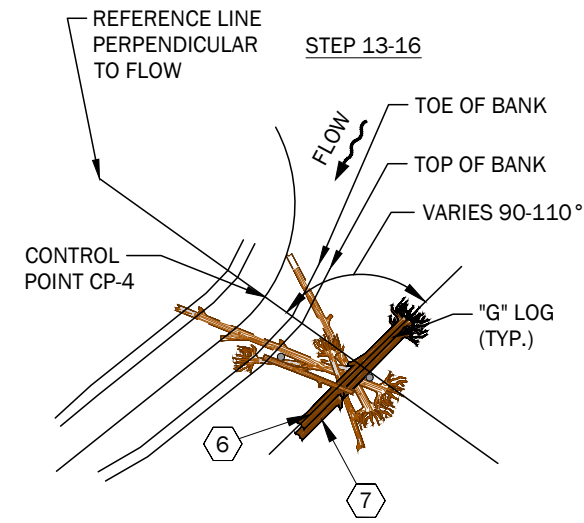
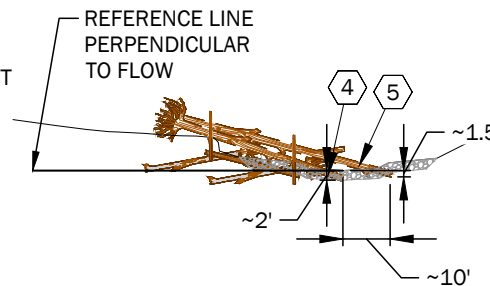
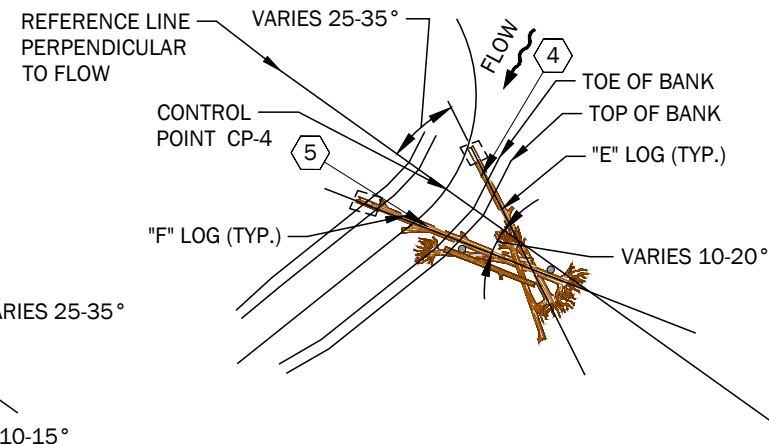
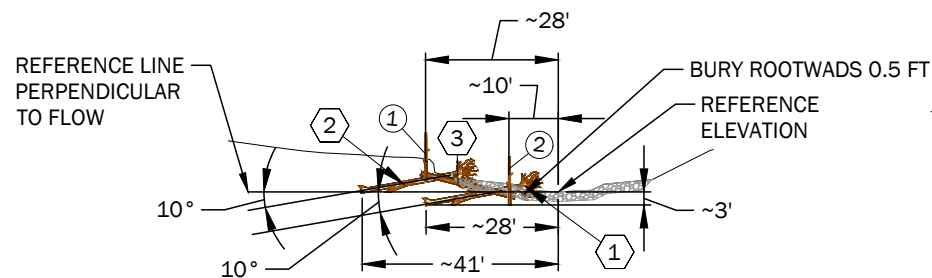
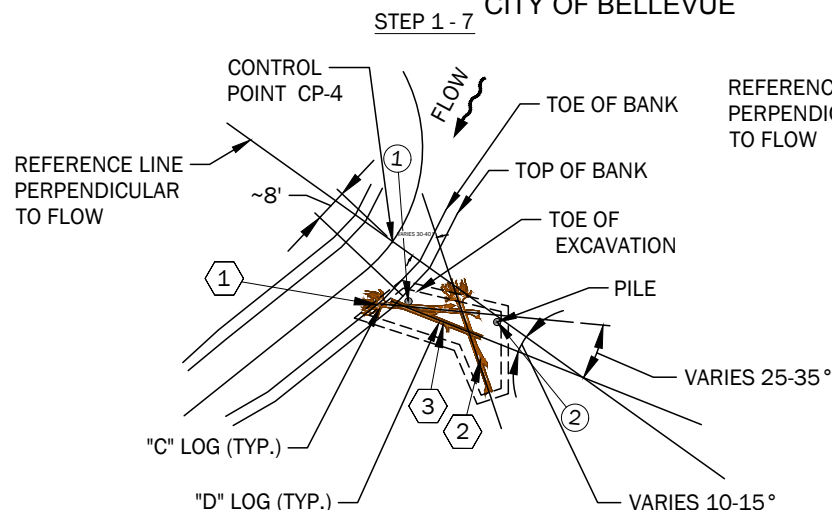
LARGE WOODY MATERIAL STRUCTURE DETAILS

DRAWN: AGP	PROJECT NO.: 2200204
DESIGN: AGP	SCALE:
CHECKED: DJE	DATE: 11-2024
DRAWING NO. HD07	
SHEET NO. 37	OF 40

CONSTRUCTION SEQUENCING



SECTION E-E'



- PURPOSE:**
- INCREASES POOL DEPTH.
 - CREATES DIVERSE FISH HABITAT.
 - CREATES SCOUR
 - CREATES DIVERSE HYDRAULIC CONDITIONS
 - REDIRECTS FLOW AND ENCOURAGES MEANDERS

- DESIGN SPECIFICS:**
- ALL TYPE 4 STRUCTURES THAT CONTAIN THE SAME LOG TYPES SHALL BE INSTALLED IN A MANNER THAT MATCHES THE TYPICAL. PLAN VIEW ORIENTATION OF TYPE 4 STRUCTURES INSTALLED ON THE RIGHT BANK SHALL BE APPROXIMATELY 180° TO THE ORIENTATIONS SHOWN IN THIS TYPICAL. ADDITIONAL BALLAST LOGS SHALL BE INSTALLED TO MATCH THE PLAN VIEW TO THE BEST OF ABILITY.
 - THE DESIGN ENGINEER SHALL MAINTAIN THE ABILITY TO MAKE ADJUSTMENTS TO THE PROPOSED STRUCTURE IF SITE CONDITIONS WARRANT.

STRUCTURE QUANTITIES						
LOG TYPE C - SMALL ROOTWAD	LOG TYPE D - SMALL TREE NO ROOTWAD	LOG TYPE E - LARGE ROOTWAD	LOG TYPE G - LARGE ROOTWAD	LOG TYPE G - LARGE ROOTWAD	PILE	SLASH MATERIAL (CY)
20' MIN. LOG WITH ROOTWAD 10" TO 14" DBH	20' MIN. LOG 10" TO 14" DBH	35' LOG WITH ROOTWAD 16" TO 20" DBH	45' LOG WITH ROOTWAD 16" TO 20" DBH	20' LOG WITH ROOTWAD 22" TO 26" DBH	10-12' LONG, AVG. 12" DIA.	
2	1	1	1	2	2	1

CONSTRUCTION SEQUENCING:

1. ESTABLISH REFERENCE ELEVATION PRIOR TO CONSTRUCTION AND CONFIRM WITH HYDRAULIC ENGINEER. REFERENCE GRADE HUB SHOULD BE ESTABLISHED OUTSIDE OF DISTURBANCE LIMITS AND USED TO CHECK STRUCTURE EMBEDDED DEPTHS. REFERENCE GRADE IS THE TOP OF THE BANK.
2. EXCAVATE A TRENCH WITHIN APPROXIMATE LIMITS OF EXCAVATION TO A DEPTH OF APPROXIMATELY 3 FEET BELOW THE REFERENCE ELEVATION.
3. EMBED PILE 1 APPROXIMATELY 3 FEET BELOW THE REFERENCE ELEVATION AND PILE APPROXIMATELY 2 FEET ABOVE THE REFERENCE ELEVATION PER PILE DETAIL ON DRAWING HD9.
4. PLACE LOG 1 (TYPE C) WITH THE STEM EMBEDDED TO A DEPTH OF ~3 FEET BELOW THE REFERENCE ELEVATION, ORIENTED 25-35° TO THE REFERENCE LINE. ORIENT THE LOG SO THAT THE STEM IS 10° BELOW THE CONTROL POINT. EMBED THE ROOTWAD APPROXIMATELY 0.5 FEET INTO THE CHANNEL. INSTALL THE LOG SO THAT THE ROOTWAD DOES NOT EXTEND MORE THAN 0.5 FEET ABOVE THE TOP OF BANK.
5. PLACE LOG 2 (TYPE C) WITH THE STEM EMBEDDED TO A DEPTH OF EQUAL TO THE REFERENCE ELEVATION, ORIENTED 30-40° TO THE REFERENCE LINE. ORIENT THE LOG SO THAT THE STEM IS 10° BELOW THE CONTROL POINT. EMBED THE ROOTWAD APPROXIMATELY 0.5 FEET INTO THE CHANNEL. INSTALL THE LOG SO THAT THE ROOTWAD DOES NOT EXTEND MORE THAN 0.5 FEET ABOVE THE BACK OF FLOODPLAIN BENCH/ X FEET ABOVE THE REFERENCE ELEVATION.
6. PLACE LOG 3 (TYPE D) ABOVE LOGS 1 AND 2, ORIENTED 10-15° TO THE REFERENCE LINE. LOG 3 SHALL BE EMBEDDED A MINIMUM OF 0.5 FEET BELOW THE CHANNEL.
7. BACKFILL OVER LOGS 1, 2, AND 3 USING CHANNEL MATERIAL IN 1 FT LIFTS UNTIL THE HEIGHT OF THE BACKFILL ABOVE THE STRUCTURE UNTIL THE CHANNEL GRADE IS MET.

CONSTRUCTION SEQUENCING:

8. EXCAVATE A TRENCH TO EMBED THE STEMS OF LOGS 4 AND 5. FOR LOG 4 (TYPE E) EXCAVATE TO A MINIMUM DEPTH OF 2 FEET. FOR LOG 5 (TYPE F) EXCAVATE TO A MINIMUM DEPTH OF 1.5 FEET.
9. PLACE LOG 4 WITH THE ROOTWAD BURIED 0.5 FEET INTO THE BANK, APPROXIMATELY 10 FEET FROM THE CONTROL POINT, ORIENTED 25-35° TO THE REFERENCE LINE.
10. PLACE LOG 5 ABOVE LOG E WITH LOG BOLE UPSTREAM OF PILE 1 AND DOWNSTREAM OF PILE 2. ORIENT LOG 5 10-20° TO THE REFERENCE LINE.
11. BACKFILL OVER THE STEMS OF LOGS 4 AND 5 USING CHANNEL MATERIAL IN 1 FT LIFTS UNTIL THE HEIGHT OF THE FILL IS EQUAL TO THE CHANNEL GRADE.
12. WEAVE SLASH BETWEEN THE ROOTWADS AND PILES.

CONSTRUCTION SEQUENCING:

13. INSTALL LOGS 6 AND 7 (TYPE G) ABOVE LOG 5. EMBED ROOTWADS OF LOGS 6 AND 7 ORIENTED 90-110° TO THE REFERENCE LINE. INSTALL LOGS 6 AND 7 ON THE CHANNEL SIDE OF PILE 2. ORIENT LOGS AND/OR CUT ROOTWADS TO KEEP LOGS OUT OF SANITARY SEWER RIGHT OF WAY.
14. BURY THE ROOTWADS OF LOGS 6 AND 7 0.5 FEET INTO THE BANK.
15. WEAVE SLASH BETWEEN THE ROOTWADS AND PILES.
16. REVEGETATE THE BANK AROUND THE STRUCTURE PER REVEGETATION DETAILS ON DRAWING HD04.

TYPICAL LWM STRUCTURE TYPE 4 - CHANNEL SPANNING LOG WITH BANK ROOTWAD COMPLEX



CONTROL POINT TABLE		
CONTROL POINTS	NORTHING (FT)	EASTING (FT)
CP-4	229824.2084	1313850.6899

CAD USER: apederson PLOT DATE: Nov 20, 2024-04:35pm
PATH: P:\1\1329022\CAD\03\04_Sandpiper Basis of Design 90_Percent\132902203_Sht_9_08 [Large Woody Material Structure Details].dwg



NO.	DATE	BY	REVISION

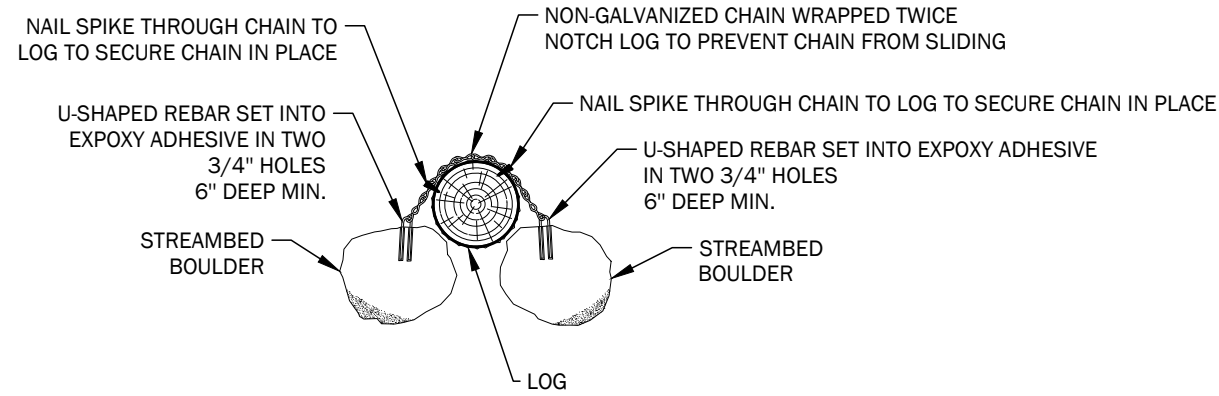


CULVERT REPLACEMENT, BRIDGE AND RIPARIAN CONSTRUCTION
SANDPIPER EAST APARTMENTS, KELSEY CREEK, BELLEVUE, WA

LARGE WOODY MATERIAL STRUCTURE DETAILS

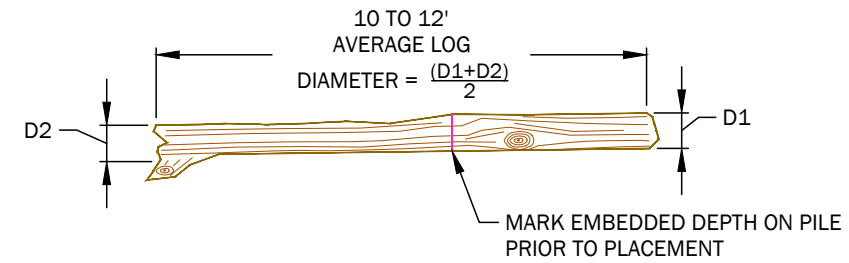
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DESIGN: AGP	SCALE:
CHECKED: DJE	DATE: 11-2024
DRAWING NO.	HD08
SHEET NO. 38	OF 40

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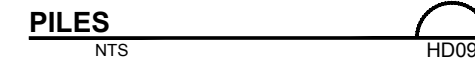
NOTES:

- HOLES DRILLED INTO BOULDER ANCHORS SHALL BE THOROUGHLY CLEANED AND DRY PRIOR TO EPOXY APPLICATION.
- CHAIN SIZE TO BE DETERMINED IN FUTURE DESIGN PHASES.
- MIN. WEIGHT OF EACH BOULDER TO BE DETERMINED IN FUTURE DESIGN PHASES.
- ALL CHAIN AND CONNECTING HARDWARE SHALL BE NON-GALVANIZED
- CHAIN LENGTH VARIES BY LOG.
- SECURE CHAIN TO LOG BY DRIVING NAIL/SPIKE THROUGH CHAIN INTO LOG.
- REMOVE ALL SLACK FROM THE WITH A CHAIN BINDER PRIOR TO DRIVING NAIL/SPIKE.



PILE NOTES:

- LOG DIAMETER IS THE AVERAGE OF THE DIAMETER MEASURED ON EITHER END OF THE LOG.
- LOG DIAMETER ON EITHER SIDE OF THE PILE MAY VARY BETWEEN 10 TO 14 INCHES.
- AVERAGE DIAMETER SHALL BE 12 INCHES.
- PILE LENGTH MAY VARY BETWEEN 10 AND 12 FEET.
- PILE SHALL NOT EXTEND MORE THAN 2 FEET ABOVE THE TALLEST KEY MEMBER. BREAK OR CUT THE TOP OF THE PILE TO DESIRED HEIGHT FOLLOWING STRUCTURE INSTALLATION.
- PILE CAN BE EXCAVATED AND PLACED OR DRIVEN. IF PILES ARE DRIVEN USE A VIBRATORY HEAD DRIVER. AN IMPACT HAMMER SHALL NOT BE USED.
- MARK MINIMUM EMBEDDED DEPTHS ON THE PILE PRIOR TO PLACEMENT.



LWM STRUCTURE QUANTITIES										
STRUCTURE TYPE	STRUCTURE DETAIL	LOG TYPE A - LARGE ROOTWAD	LOG TYPE B - LARGE ROOTWAD	LOG TYPE C - SMALL ROOTWAD	LOG TYPE D - SMALL TREE NO ROOTWAD	LOG TYPE E - LARGE ROOTWAD	LOG TYPE F - LARGE ROOTWAD	LOG TYPE G - LARGE ROOTWAD	PILE	SLASH MATERIAL (CY)
		20' MIN. LOG WITH ROOTWAD 22" TO 26" DBH	30' MIN. LOG WITH ROOTWAD 16" TO 20" DBH	20' MIN. LOG WITH ROOTWAD 10" TO 14" DBH	20' MIN. LOG 10" TO 14" DBH	35' LOG WITH ROOTWAD 16" TO 20" DBH	45' LOG WITH ROOTWAD 16" TO 20" DBH	20' LOG WITH ROOTWAD 22" TO 26" DBH		
1	FLOW DEFLECTION JAM		1	4						2
1A	FLOW DEFLECTION JAM		1	4				1	3	2
2	CANNEL BEND LOGS	1	1			1		1		
3	LONGITUDINAL LOGS	3								
4A	CANNEL SPANNING LOG WITH BANK ROOTWAD COMPLEX			2	1	1	1	2	2	1
4B	CANNEL SPANNING LOG WITH BANK ROOTWAD COMPLEX	2	1	2	1	1				1
4C	CANNEL SPANNING LOG WITH BANK ROOTWAD COMPLEX	3		2	3	1	1			1
4D	CANNEL SPANNING LOG WITH BANK ROOTWAD COMPLEX		1	1		1		1		1

NOTES:

1. INSTALLATION OF LWM STRUCTURES SHALL NOT COMMENCE UNTIL WORK ISOLATION STRUCTURES ARE INSTALLED, FISH EXCLUSION AND SALVAGE HAS BEEN PERFORMED, AND WORK AREA HAS BEEN DEWATERED PER THE SPECIAL PROVISIONS.
2. FOLLOWING COMPLETION OF LWM INSTALLATION AND APPROVAL BY THE ENGINEER, WATER SHALL BE GRADUALLY REINTRODUCED BACK INTO THE WORK AREA AND WORK ISOLATION STRUCTURES REMOVED.

CAD USER: apederson PLOT DATE: Nov 20, 2024-04:35pm PATH: P:\1\1329022\CAD\03\04_Sandpiper Basis of Design 90_Percent\132902203_Sht_10_09 [Large Woody Material Structure Details].dwg



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CULVERT REPLACEMENT, BRIDGE AND RIPARIAN CONSTRUCTION
SANDPIPER EAST APARTMENTS, KELSEY CREEK, BELLEVUE, WA

LARGE WOODY MATERIAL STRUCTURE DETAILS

DRAWN: AGP	PROJECT NO.: 2200204
DESIGN: AGP	SCALE:
CHECKED: DJE	DATE: 11-2024
DRAWING NO. HD09	
SHEET NO. 39	OF 40

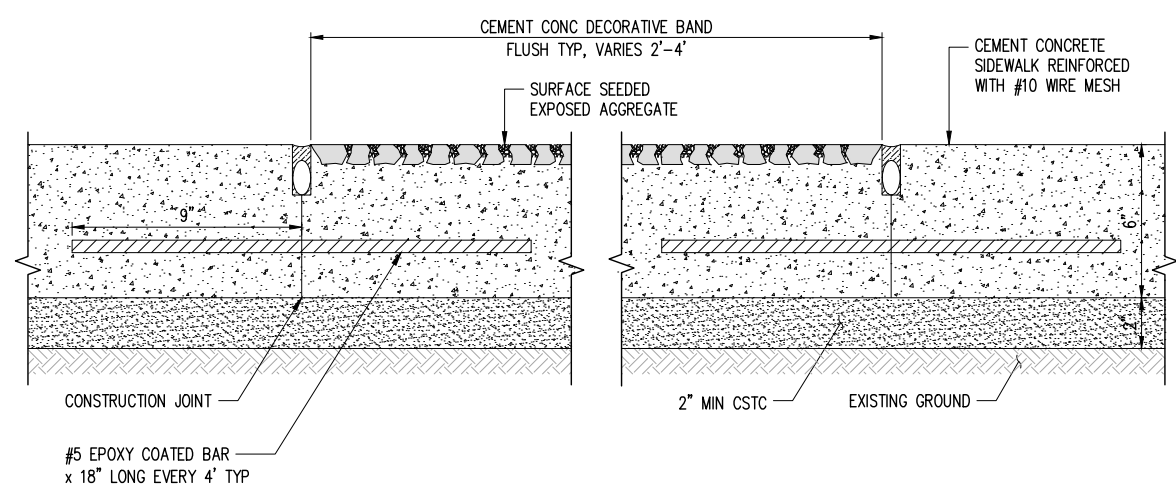
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PHOTO RENDERING OF DESIRED SURFACE SEEDED DECORATIVE CONCRETE BAND



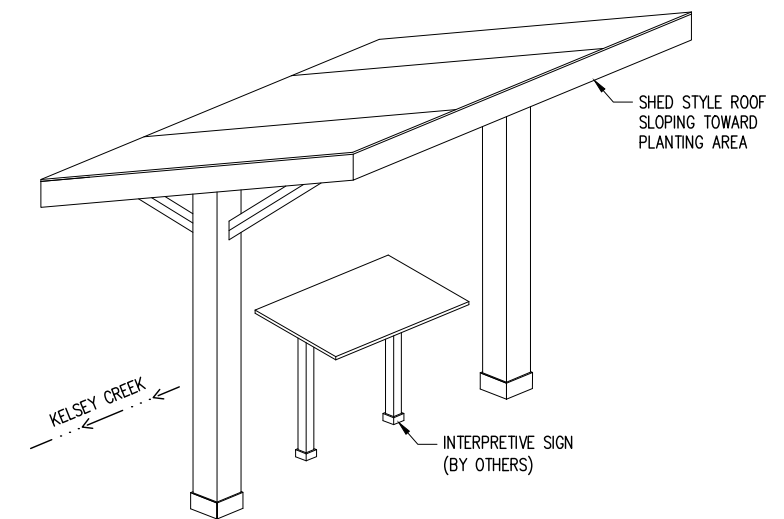
PHOTO RENDERING OF DESIRED STRUCTURE CONCEPT, EXCEPT PEAK ROOF SYSTEM SHOWN INSTEAD OF SHED STYLE



DECORATIVE CONCRETE BAND DETAIL

NTS

1
SDD01

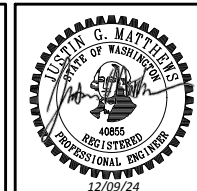


OVERLOOK STRUCTURE CONCEPT

NTS

2
SDD01

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CULVERT REPLACEMENT, BRIDGE AND RIPARIAN CONSTRUCTION
SANDPIPER EAST APARTMENTS, KELSEY CREEK, BELLEVUE, WA

NE 14TH ST BRIDGE
ADDITIVE BID DETAILS

DRAWN: MRV	PROJECT NO.: 2200204
DESIGN: BSP	SCALE:
CHECKED: JGM	DATE: 05-2024
DRAWING NO. ADD01	
SHEET NO. 40	OF 40