

60% DESIGN

SEQUALITCHEW CREEK WATERSHED ECOSYSTEM RESTORATION

SOUTH PUGET SOUND SALMON ENHANCEMENT GROUP



LOCATION MAP
SCALE: 1" = 2000'

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PROJECT DATA

LOCATION:	DUPONT, WA SECTIONS 25 AND 26, TOWNSHIP 19N, RANGE 01E
PROJECT ENGINEER:	GRAHAM HART, PE ANCHOR QEA, LLC 949 MARKET STREET, SUITE 700 TACOMA, WA 98402
GEOTECHNICAL ENGINEER:	JOHN LAPLANTE, PE ANCHOR QEA, LLC 1201 3RD AVENUE, SUITE 2600 SEATTLE, WA 98101
PROJECT ADMINISTRATOR:	COLE BALDINO SALMON HABITAT RESTORATION PROJECT MANAGER SOUTH PUGET SOUND SALMON ENHANCEMENT GROUP 6700 MARTIN WAY EAST, SUITE 112 OLYMPIA, WA 98516
CONTRACTING AGENCY:	

- NOTES:
- HORIZONTAL DATUM: WASHINGTON STATE PLANE SOUTH ZONE, NAD83, U.S. SURVEY FEET
 - VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

DRAFT-NOT FOR CONSTRUCTION



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY:	G. HART
DRAWN BY:	T. GRIGA
CHECKED BY:	T. DRURY
APPROVED BY:	J. SMALL
SCALE:	AS NOTED
DATE:	FEBRUARY 2023

SEQUALITCHEW CREEK WATERSHED
ECOSYSTEM RESTORATION PROJECT

COVER SHEET

G01

SHEET NO. 1 OF 41

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Feb 20, 2023 7:49pm tqjga

GENERAL CONSTRUCTION NOTES:

1. CONTRACT DOCUMENTS REFER TO THESE DRAWINGS, THE PROJECT SPECIFICATIONS, AND THE BIDDING DOCUMENTS, AND THE CONSTRUCTION CONTRACT.
2. EXCEPT AS OTHERWISE NOTED HEREIN, ALL MATERIAL AND WORK SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, THE WSDOT/APWA "STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION" (2021 EDITION), OTHER APPLICABLE STANDARDS, AND ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
3. THE CONTRACTOR SHALL HAVE COPIES OF THE APPROVED CONTRACT DOCUMENTS AND THE WSDOT/APWA "STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION" (2021 EDITION) ON THE JOBSITE AT ALL TIMES.
4. THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO CONSTRUCTION AND SHALL BE RESPONSIBLE FOR VERIFYING FIELD CONDITIONS AND DIMENSIONS, AND CONFIRMING THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THESE CONTRACT DOCUMENTS. ANY DISCREPANCIES BETWEEN THE EXISTING FIELD CONDITIONS AND DIMENSIONS SHOWN ON THE CONTRACT DOCUMENTS AND THOSE OBSERVED BY THE CONTRACTOR SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER AND THE PROJECT ADMINISTRATOR PRIOR TO PROCEEDING WITH CONSTRUCTION.
5. A PRE-CONSTRUCTION MEETING BETWEEN THE OWNER, THE PROJECT ADMINISTRATOR AND THE ENGINEER SHALL BE REQUIRED PRIOR TO ANY ON-SITE WORK.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING RIGHT-OF-WAY PERMITS FROM THE CITY OF DUPONT PRIOR TO PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL SUBMIT RIGHT-OF-WAY USE PERMIT APPLICATIONS AND PAY ALL APPLICABLE FEES.
7. THE CONTRACTOR SHALL RECEIVE, IN WRITING, AUTHORIZATION TO PROCEED BEFORE STARTING WITH ANY WORK ON ANY ITEM NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.
8. ALL WORK SHALL BE IN CONFORMANCE WITH EXISTING LABOR LAWS, SAFETY REQUIREMENTS, AND OTHER REGULATIONS, AS REQUIRED BY CITY OF DUPONT, THE STATE OF WASHINGTON, AND THE FEDERAL GOVERNMENT. THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND IS NOT LIMITED TO NORMAL WORKING HOURS.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THIS CONTRACT.
10. ALL MATERIALS SHALL BE NEW AND UNDAMAGED UNLESS OTHERWISE APPROVED BY THE CONTRACTING OFFICER AND HIS ENGINEER. THE SAME MANUFACTURER OF EACH ITEM SHALL BE USED THROUGHOUT THE WORK UNLESS OTHERWISE APPROVED BY THE OWNER'S REPRESENTATIVE.
11. THE CONTRACTOR SHALL MAKE ALL NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, ROADWAYS, DRAINAGE WAYS, CULVERTS, AND VEGETATION UNTIL SUCH ITEMS ARE TO BE DISTURBED OR REMOVED AS INDICATED ON THE CONTRACT DOCUMENTS.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF PROPERTY IN AND AROUND THE PROJECT AREA. UNLESS OTHERWISE NOTED ON THESE DRAWINGS, ITEMS SUCH AS MAILBOXES, CULVERTS, LAWN ORNAMENTS, FENCING, DRIVEWAYS, IRRIGATION BOXES, ETC., THAT ARE AFFECTED BY CONSTRUCTION ACTIVITIES SHALL BE REPAIRED OR REPLACED FOLLOWING CONSTRUCTION.
13. RUBBISH, DEBRIS, AND GARBAGE SHALL BE REMOVED FROM THE JOB SITE PRIOR TO ACCEPTANCE AND DISPOSED OF LEGALLY. SEE THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
14. THE NOTES, DETAILS AND SPECIFICATIONS ON THE CONTRACT DOCUMENTS SHALL TAKE PRECEDENCE OVER THESE GENERAL NOTES.
15. DIMENSION CALL-OUTS SHALL TAKE PRECEDENCE OVER SCALES SHOWN ON THE DRAWINGS.
16. THE CONTRACTOR SHALL MAINTAIN HAND DRAWN REDLINES, FIELD NOTES AND PHOTOGRAPHS ("FIELD DOCUMENTATION") OF ALL IMPROVEMENTS AS THE WORK PROGRESSES. THE CONTRACTOR'S FIELD DOCUMENTATION SHALL BE MAINTAINED ON-SITE AND SHALL BE AVAILABLE FOR REVIEW BY THE OWNER AND THE ENGINEER AT ALL TIMES. THE CONTRACTOR SHALL PROVIDE FIELD DOCUMENTATION TO THE ENGINEER FOR PREPARATION OF CERTIFIED RECORD DRAWINGS PRIOR TO PROJECT ACCEPTANCE.

LOCATION OF EXISTING UTILITIES:

1. THE LOCATIONS OF EXISTING UTILITIES SHOWN ON THESE DRAWINGS ARE APPROXIMATE AND HAVE NOT BEEN FIELD VERIFIED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT THE UTILITY LOCATION REQUEST CENTER (ONE-CALL CENTER) AT 811 OR 1-800-424-5555 FOR UTILITY LOCATIONS NOT LESS THAN TWO (2) BUSINESS DAYS BEFORE THE SCHEDULED DATE FOR EARTHWORK OR TRENCHING THAT MAY IMPACT EXISTING UTILITIES.
2. THE SIZE, LOCATION, AND TYPE OF UNDERGROUND UTILITIES EXPOSED OR MODIFIED BY THE CONTRACTOR SHALL BE ACCURATELY NOTED AND PLACED ON THE CONTRACTOR'S AS-BUILT DRAWINGS.

GENERAL NOTES (STREET CONSTRUCTION)

1. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION.
2. A COPY OF THE APPROVED ROADWAY DRAWINGS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
3. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH CITY OF DUPONT'S PUBLIC WORKS STANDARDS AND STORMWATER MANAGEMENT MANUAL AND THE MOST CURRENT EDITION OF THE STATE OF WASHINGTON STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION.
4. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ADEQUATE TEMPORARY TRAFFIC CONTROL TO ENSURE TRAFFIC SAFETY DURING CONSTRUCTION ACTIVITIES. THEREFORE, THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO THE PUBLIC WORKS DEPARTMENT AT LEAST 48 HOURS PRIOR TO STARTING ANY WORK IN THE RIGHT-OF-WAY. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD).
5. ALL CURB AND GUTTER, STREET GRADES, SIDEWALK GRADES, AND ANY OTHER VERTICAL AND/OR HORIZONTAL ALIGNMENT SHALL BE STAKED BY A PROFESSIONAL ENGINEER OR SURVEYING FIRM CAPABLE OF PERFORMING SUCH WORK.
6. ANY ROADWAY SIGNAGE OR STRIPING REMOVED OR TEMPORARILY MOVED BY THE CONTRACTOR SHALL BE RESTORED SO AS TO MEET THE CURRENT MUTCD STANDARDS.
7. WHERE NEW ASPHALT JOINS EXISTING, THE EXISTING ASPHALT SHALL BE CUT TO A NEAT VERTICAL EDGE AND TACKED WITH ASPHALT EMULSION TYPE CSS-1 IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. THE JOINT SHALL BE SEALED WITH GRADE AR-4000W PAVING ASPHALT.
8. COMPACTION OF SUBGRADE, ROCK, AND ASPHALT SHALL BE IN ACCORDANCE WITH THE WSDOT/APWA STANDARD SPECIFICATIONS. SEE CITY OF DUPONT PUBLIC WORKS STANDARDS TABLE 10.2-1 FOR TESTING AND SAMPLING FREQUENCIES. DENSITY TEST REPORTS WILL BE REQUIRED FOR ALL PUBLIC ROADWAYS.
9. FORM AND SUBGRADE INSPECTION BY THE CITY IS REQUIRED BEFORE PLACING CONCRETE. TWENTY-FOUR HOURS ADVANCE NOTICE IS REQUIRED FOR THE SCHEDULING OF INSPECTION.
10. CALL UNDERGROUND UTILITY LOCATE LINE, 1-800-424-5555, PRIOR TO ANY EXCAVATION.
11. DEAD-END STREETS SHALL BE APPROPRIATELY SIGNED AND BARRICADED.
12. WHERE A SIDEWALK IS TO BE CONSTRUCTED ABOVE A SLOPE OR ADJACENT TO A ROCKERY OR RETAINING WALL, WHERE THE LOWEST FINISHED ELEVATION OF THE SLOPE, ROCKERY, OR RETAINING WALL IS TO BE 30 INCHES OR MORE BELOW THE FINISHED ELEVATION OF THE SIDEWALK, A SAFETY RAILING SHALL BE REQUIRED WHEN:

(a) THE PLANE OF THE WALL FACE IS LESS THAN 4 FEET IN HORIZONTAL DISTANCE FROM THE OUTSIDE EDGE OF THE SIDEWALK.

(b) THE PLANE OF THE WALL FACE IS GREATER THAN 4-FEET HORIZONTAL DISTANCE TO THE OUTSIDE EDGE OF THE SIDEWALK, BUT THE SLOPE DOWN TO THE WALL TOP EXCEEDS THREE TO ONE.

(c) THE SLOPES ADJACENT TO THE SIDEWALK AVERAGE GREATER THAN TWO TO ONE.

GRADING AND EARTHWORK GENERAL NOTES:

1. THE CONTRACTOR SHALL LIMIT DISTURBANCE OF THE EXISTING SURFACE TO THE LIMITS SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL FLAG OR MARK THE CLEARING AND DISTURBANCE LIMITS PRIOR TO CONSTRUCTION.
2. ALL EXPOSED OR EXCAVATED SLOPES STEEPER THAN 3:1 MUST BE STABILIZED WITH JUTE MAT OR OTHER APPROVED STABILIZATION WITHIN 24 HOURS OF EXPOSURE.
3. EXPOSED SOIL MUST BE COVERED WITHIN 5 DAYS OF EXPOSURE DURING THE DRY SEASON (APRIL 1 THROUGH SEPTEMBER 30), AND WITHIN 48 HOURS OF EXPOSURE DURING THE WET SEASON (OCTOBER 1 THROUGH MARCH 31).
4. FOR ADDITIONAL TESC REQUIREMENTS, SEE THE TESC PLANS, THE SPECIFICATIONS, AND THE APPROVED CONSTRUCTION SWPPP.
5. COMPACTION OF SOILS PLACED FOR THE PROJECT SHALL BE AS SHOWN ON THE DRAWINGS OR AS REQUIRED BY THE SPECIFICATIONS. WHERE NOT SHOWN OR SPECIFIED, EMBANKMENT SOILS AND SOILS SUPPORTING STRUCTURES OR TRAFFIC SHALL BE COMPACTED TO AT LEAST 95% MAXIMUM DRY DENSITY, AS DETERMINED BY A MODIFIED PROCTOR TEST. ALL OTHER SOILS SHALL BE COMPACTED TO AT LEAST 90% OF MAXIMUM DRY DENSITY.
6. WHERE REQUIRED BY THE CONTRACTING ORGANIZATION'S REPRESENTATIVE OR THE GEOTECHNICAL ENGINEER, UNSUITABLE SUBGRADE MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE ON-SITE EMBANKMENT FILL OR OTHER MATERIAL DESIGNATED BY THE CONTRACTING ORGANIZATION'S REPRESENTATIVE PRIOR TO COMPACTION AND FINAL GRADING.
7. THE CONTRACTOR SHALL DEWATER OR OTHERWISE DRAIN ALL EXCAVATIONS TO A MINIMUM OF 1 FOOT BELOW SUBGRADE ELEVATION PRIOR TO PLACING AND COMPACTING BACKFILL. DEWATERING AND DISPOSAL OF WATER SHALL COMPLY WITH STATE AND LOCAL REGULATIONS AND APPLICABLE PERMITS REQUIREMENTS. DWATERING WATER SHALL BE DISPERSED ON SITE.
8. A LICENSED GEOTECHNICAL ENGINEER SHALL SUPERVISE PLACEMENT OF ALL EMBANKMENT AND FILL MATERIAL AND SHALL WITNESS ALL ON-SITE GEOTECHNICAL TESTING.
9. CONSTRUCTION RECORDS OF SOIL ACTIVITIES AND COMPACTION TESTING SHALL BE TRANSMITTED TO THE CONTRACTING AGENCY ON A WEEKLY BASIS. ALL TEST RESULTS SHALL INCLUDE A MAP INDICATING THE TEST LOCATION.
10. FOR ADDITIONAL GRADING AND EARTHWORK REQUIREMENTS, SEE THE SPECIFICATIONS.
11. GRADING SHALL BE DONE UNDER THE SUPERVISION OF A LICENSED GEOTECHNICAL ENGINEER IN CONFORMANCE WITH THE RECOMMENDATIONS OF THE *DRAFT GEOTECHNICAL ENGINEERING DESIGN REPORT, SEQUALITCHEW CREEK WATERSHED ECOSYSTEM RESTORATION PROJECT* BY ANCHOR QEA, LLC, DATED NOVEMBER 2022. THIS REPORT IS PART OF THESE PLANS.

TOPOGRAPHIC SURVEY GENERAL NOTES:

1. THIS MAP CORRECTLY REPRESENTS CONDITIONS AND FEATURES EXISTING AT THE TIME OF THIS SURVEY IN MARCH, 2015.
2. CONVENTIONAL AND GPS SURVEY EQUIPMENT WAS USED IN THE PERFORMANCE OF THIS SURVEY. ALL EQUIPMENT IS MAINTAINED IN CONFORMANCE WITH CURRENT STATE STATUTE.
3. THIS SURVEY WAS PREPARED BY FIELD TRAVERSE AS PER WAC 332-130-090, PART C. RELATIVE ACCURACY EXCEEDS 1 FOOT IN TEN THOUSAND.
4. ALL SURFACE FEATURES AND INVERT STRUCTURE ELEVATION SHOWN HEREON WERE FIELD LOCATED AND MEASURED BY PARAMETRIX FOR THIS SURVEY. UNDERGROUND UTILITY LINES ARE BASED UPON A COMBINATION OF SURFACE FEATURE MEASUREMENTS AND ONSITE UNDERGROUND UTILITY MARKINGS PERFORMED BY OTHERS.
5. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE.

ABBREVIATIONS:

'	FEET, MINUTES
"	INCHES, SECONDS
°	DEGREES
ADA	AMERICANS WITH DISABILITIES ACT
APWA	AMERICAN PUBLIC WORKS ASSOCIATION
AWWA	AMERICAN WATER WORKS ASSOCIATION
ASSY	ASSEMBLY
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AVG.	AVERAGE
CFS	CUBIC FEET PER SECOND
CONC	CONCRETE
CMP	CORRUGATED METAL PIPE
CY	CUBIC YARDS
D.I	DUCTILE IRON
DIA	DIAMETER
DWG	DRAWING
E	EAST, EASTING
ELEV	ELEVATION
ETC.	ETCETERA
EX	EXISTING
FG	FINISHED GRADE
FL	FLOW LINE, FLANGE, FLANGED
FPS	FEET PER SECOND
FT	FEET
GALV	GALVANIZED
GPM	GALLONS PER MINUTE
GV	GATE VALVE
HPDE	HIGH-DENSITY POLYETHYLENE
I.D.	INSIDE DIAMETER
IE	INVERT ELEVATION
IN	INCHES
L	LENGTH
LF	LINEAR FEET
LWM	LARGE WOODY MATERIAL
MAX	MAXIMUM
MIN	MINIMUM
MJ	MECHANICAL JOINT
N	NORTH, NORTHING
NAD	NORTH AMERICAN DATUM
NGVD	NATIONAL GEODETIC VERTICAL DATUM
NO., #	NUMBER
NTS	NOT TO SCALE
O.C.	ON CENTERS
O.D.	OUTSIDE DIAMETER
P	POWER
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
P.E.	PROFESSIONAL ENGINEER
R, RAD	RADIUS
REINF	REINFORCED, REINFORCEMENT
ROW	RIGHT OF WAY
S	SLOPE, SANITARY SEWER, SOUTH
SCH	SCHEDULE
STA	STATION
SY	SQUARE YARD
T	TELEPHONE
TYP	TYPICAL
W	WEST, WATER
W/	WITH
WSDOE	WASHINGTON STATE DEPARTMENT OF ECOLOGY
WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
WSEL	WATER SURFACE ELEVATION
WWT	WASHINGTON WATER TRUST

DRAFT-NOT FOR CONSTRUCTION



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: G. HART
DRAWN BY: T. GRIGA
CHECKED BY: T. DRURY
APPROVED BY: J. SMALL
SCALE: AS NOTED
DATE: FEBRUARY 2023

SEQUALITCHEW CREEK WATERSHED
ECOSYSTEM RESTORATION PROJECT

GENERAL NOTES, ABBREVIATIONS, AND
LEGEND

G02

SHEET NO. 2 OF 41

PLAN INTENDED TO BE VIEWED
IN COLOR. ADJACENT BLOCK IS
"BLUE"

ONE INCH
↑
↓
AT FULL SIZE IF NOT ONE
INCH SCALE ACCORDINGLY

SEWER CONSTRUCTION NOTES:

1.

ALL MATERIALS, WORKMANSHIP, AND TESTING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE LATEST EDITION OF THE PIERCE COUNTY SANITARY SEWER DEVELOPMENT SPECIFICATIONS, THE PIERCE COUNTY SANITARY SEWER STANDARD DETAILS MANUAL AND THE PIERCE COUNTY SEWER CODE.
2.

THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER AND THE PIERCE COUNTY DEVELOPMENT ENGINEERING INSPECTOR IN THE EVENT OF DISCOVERY OF POOR SOILS, STANDING GROUND WATER OR DISCREPANCIES FROM THE PLANS IN GRADES, LOCATIONS AND CONSTRUCTION OF UTILITIES, STRUCTURES, AND OTHER EXISTING CONDITIONS.
3.

THE CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF THE POINT OF CONNECTION PRIOR TO CONSTRUCTION.
4.

TESTING BY AIR OR WATER EXFILTRATION IS REQUIRED ON ALL SEWERS, INCLUDING DRY LINES, AND VACUUM TESTING IS REQUIRED ON ALL MANHOLES. PIERCE COUNTY REQUIRES A MINIMUM 24-HOUR ADVANCED NOTICE FOR SITE INSPECTION.
5.

THE CONTRACTOR SHALL BE REGISTERED WITH PIERCE COUNTY PLANNING AND PUBLIC WORKS DEVELOPMENT ENGINEERING SECTION AND HAVE A VALID \$5,000.00 STREET OBSTRUCTION BOND.
6.

PIERCE COUNTY REQUIRES THAT THE OWNER OR THE OWNER'S REPRESENTATIVE, THE ENGINEER AND THE CONTRACTOR ATTEND A PRE-CONSTRUCTION CONFERENCE WITH THE PIERCE COUNTY DEVELOPMENT ENGINEERING INSPECTOR FOR ALL WORK ON THESE PLANS. THE CONFERENCE SHOULD BE SCHEDULED BY CALLING (253) 798-4050 A MINIMUM OF TWO WEEKS PRIOR TO COMMENCEMENT OF WORK.
7.

IT SHALL BE THE RESPONSIBILITY OF THE OWNER/DEVELOPER/CONTRACTOR TO OBTAIN NECESSARY PERMITS, CONSTRUCTION EASEMENTS AND RELEASES.
8.

ANY REVISIONS TO THESE PLANS, ONCE APPROVED BY PIERCE COUNTY MUST BE REVIEWED AND REAPPROVED BY PIERCE COUNTY PLANNING AND PUBLIC WORKS DEVELOPMENT ENGINEERING SECTION PRIOR TO IMPLEMENTATION IN THE FIELD.
9.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE A SET OF THESE APPROVED PLANS ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
10.

SIDE SEWER STUBS SHALL BE INSTALLED AT LEAST 10 FEET FROM PROPERTY LINES, UNLESS OTHERWISE APPROVED BY PIERCE COUNTY PLANNING AND PUBLIC WORKS DEVELOPMENT ENGINEERING SECTION.
11.

ALL MANHOLES LOCATED IN LOW POINTS OF VERTICAL CURVES SHALL HAVE WATERTIGHT LIDS.
12.

ALL NEW MANHOLES WILL BE PRE-CHANNELED WITH PIERCE COUNTY APPROVED MANHOLE INVERT LINERS AND HAVE LOCKING LIDS, UNLESS OTHERWISE NOTED.
13.

SANITARY SEWER LINES AND WATER MAIN CROSSINGS: THE STANDARD MINIMUM VERTICAL SEPARATION FOR WATER LINES IS 1.5 FEET ABOVE THE SANITARY SEWER LINE. SEPARATION SHALL BE MEASURED FROM THE OUTER WALLS OF THE PIPES.

A.

CONTACT DEVELOPMENT ENGINEERING FOR UNUSUAL CIRCUMSTANCES FOR DEVELOPMENT ENGINEERING TO DETERMINE IF A REDUCED MINIMUM VERTICAL SEPARATION WILL BE ALLOWED FOR LESS THAN 1.5 FEET BUT NOT LESS THAN 0.75 FEET. ADDITIONAL PROVISIONS WILL BE REQUIRED.
14.

SANITARY SEWER LINES AND UTILITY CROSSING OTHER THAN WATER LINES:

A.

THE STANDARD MINIMUM VERTICAL SEPARATION FOR UTILITIES OTHER THAN WATER LINES IS 1.5 FEET FROM THE SANITARY SEWER. SEPARATION SHALL BE MEASURED FROM THE OUTER WALLS OF THE PIPES.

B.

IF CONCRETE ENCASEMENT OF THE SANITARY SEWER IS PROVIDED, THEN A REDUCED MINIMUM VERTICAL SEPARATION OF 0.75 FEET WILL BE ALLOWED. THE CONCRETE ENCASEMENT SHALL EXTEND 10 FEET ON EACH SIDE OF THE CROSSING.

C.

CLASS 52 DUCTILE IRON PIPE MAY BE USED FOR THE SANITARY SEWER IN LIEU OF CONCRETE ENCASEMENT PROVIDED THAT THERE IS NO TRANSITIONING TO OTHER PIPE MATERIALS BETWEEN MANHOLES.
15.

TEES SHALL BE USED FOR ALL SIDE SEWER CONNECTIONS TO SEWER MAINLINES.
16.

THE INTERIOR OF ALL DUCTILE IRON PIPE SHALL BE LINED PER PIERCE COUNTY SANITARY SEWER DEVELOPMENT SPECIFICATIONS.
17.

THE INTERIOR WALLS OF ALL CONCRETE MANHOLES FOR INTERCEPTOR SEWERS (15" NOMINAL INSIDE DIAMETER AND LARGER) SHALL BE COATED PER PIERCE COUNTY SANITARY SEWER DEVELOPMENT SPECIFICATIONS.
18.

THE EXTERIOR OF ALL MANHOLES SHALL BE COATED PER PIERCE COUNTY SANITARY SEWER DEVELOPMENT SPECIFICATIONS.

19.

THE MINIMUM LENGTH OF CONCRETE ENCASEMENT SHALL BE 20 LINEAR FEET.
20.

CONCRETE MANHOLES THAT ARE TAPPED FOR A FORCE MAIN CONNECTION SHALL HAVE THEIR INTERIORS RECEIVE PROTECTIVE COATINGS PER PIERCE COUNTY SANITARY SEWER DEVELOPMENT SPECIFICATIONS.
21.

ALL TRENCH RESTORATION REQUIREMENTS, OTHER THAN PIPE BEDDING, SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON ACCOMMODATING UTILITIES IN PIERCE COUNTY RIGHT-OF-WAY. PEA GRAVEL, AS SPECIFIED IN THE PIERCE COUNTY SANITARY SEWER DEVELOPMENT SPECIFICATIONS, SHALL BE USED FOR ALL SANITARY SEWER PIPE BEDDING MATERIAL.
22.

ALL PAVEMENT RESTORATION REQUIREMENTS IN THE PUBLIC RIGHT-OF-WAY SHALL BE DETERMINED BY THE PERMITTING JURISDICTION (I.E. - PIERCE COUNTY TRANSPORTATION SERVICES, CITY OF UNIVERSITY PLACE, CITY OF LAKEWOOD, TOWN OF MILTON, CITY OF TACOMA, CITY OF DUPONT, OR THE STATE OF WASHINGTON, ETC.) UPON APPLICATION AND ISSUANCE OF RIGHT-OF-WAY PERMIT OR EQUAL THEREOF. IN ADDITION, AT THE PERMITTING JURISDICTION'S DISCRETION, ALTERNATIVE CONSTRUCTION METHODS OTHER THAN STANDARD OPEN TRENCH CONSTRUCTION MAY BE REQUIRED FOR SANITARY SEWER CONSTRUCTION SHOWN ON THESE APPROVED CONSTRUCTION PLANS.

EROSION/SEDIMENTATION CONTROL NOTES

THE CONTRACTOR SHALL PROVIDE EROSION CONTROL METHODS ACCORDING TO THE WASHINGTON STATE DEPARTMENT OF ECOLOGY'S (WDOE) "STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON." THE FOLLOWING NOTES ARE ONLY A FEW OF THE MINIMUM REQUIREMENTS AND SHOULD NOT BE INTERPRETED TO EXCLUDE ANY EROSION CONTROL PRACTICES AS SPECIFIED IN THE WDOE STORMWATER MANUAL.

1.

ALL LIMITS OF CLEARING AND AREAS OF VEGETATION PRESERVATION AS PRESCRIBED ON THE PLAN SHALL BE CLEARLY FLAGGED BY THE ENGINEER IN THE FIELD AND OBSERVED DURING CONSTRUCTION.
2.

ALL REQUIRED SEDIMENTATION/EROSION CONTROL FACILITIES MUST BE IN OPERATION PRIOR TO LAND CLEARING AND/OR OTHER CONSTRUCTION TO INSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER THE NATURAL DRAINAGE SYSTEM. ALL EROSION AND SEDIMENT FACILITIES SHALL BE MAINTAINED IN A SATISFACTORY CONDITION UNTIL SUCH TIME THAT CLEARING AND/OR CONSTRUCTION IS COMPLETED AND POTENTIAL FOR ON-SITE EROSION HAS PASSED. THE IMPLEMENTATION, MAINTENANCE, REPLACEMENT AND ADDITIONS TO EROSION/SEDIMENTATION CONTROL SYSTEMS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
3.

THE EROSION AND SEDIMENTATION CONTROL SYSTEMS DEPICTED ON THIS DRAWING ARE INTENDED TO BE MINIMUM REQUIREMENTS TO MEET ANTICIPATED SITE CONDITIONS. AS CONSTRUCTION PROGRESSES AND AS UNEXPECTED OR SEASONAL CONDITIONS DICTATE, THE CONTRACTOR SHOULD ANTICIPATE THAT MORE EROSION AND SEDIMENTATION CONTROL FACILITIES WILL BE NECESSARY TO INSURE COMPLETE SILTATION CONTROL ON THE PROPOSED SITE. DURING THE COURSE OF CONSTRUCTION, IT SHALL BE THE OBLIGATION AND RESPONSIBILITY OF THE CONTRACTOR TO ADDRESS ANY NEW CONDITIONS THAT MAY BE CREATED BY HIS ACTIVITIES AND TO PROVIDE ADDITIONAL FACILITIES, OVER AND ABOVE MINIMUM REQUIREMENTS, AS MAY BE NEEDED TO PROTECT ADJACENT PROPERTIES AND WATER QUALITY OF THE RECEIVING DRAINAGE SYSTEM.

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Feb 20, 2023 7:49pm tg.rga



REVISIONS					
REV	DATE	BY	APP'D	DESCRIPTION	

DESIGNED BY: #####

DRAWN BY: T. GRIGA

CHECKED BY: T. DRURY

APPROVED BY: J. SMALL

SCALE: AS NOTED

DATE: FEBRUARY 2023

SEQUALITCHEW CREEK WATERSHED
ECOSYSTEM RESTORATION PROJECT

GENERAL NOTES, ABBREVIATIONS, AND
LEGEND

G03

SHEET NO. 3 OF 41

DRAFT-NOT FOR CONSTRUCTION

ONE INCH
↑
↓
AT FULL SIZE IF NOT ONE
INCH SCALE ACCORDINGLY

PLAN INTENDED TO BE VIEWED
IN COLOR. ADJACENT BLOCK IS
"BLUE"



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Feb 20, 2023 7:49pm tgriga



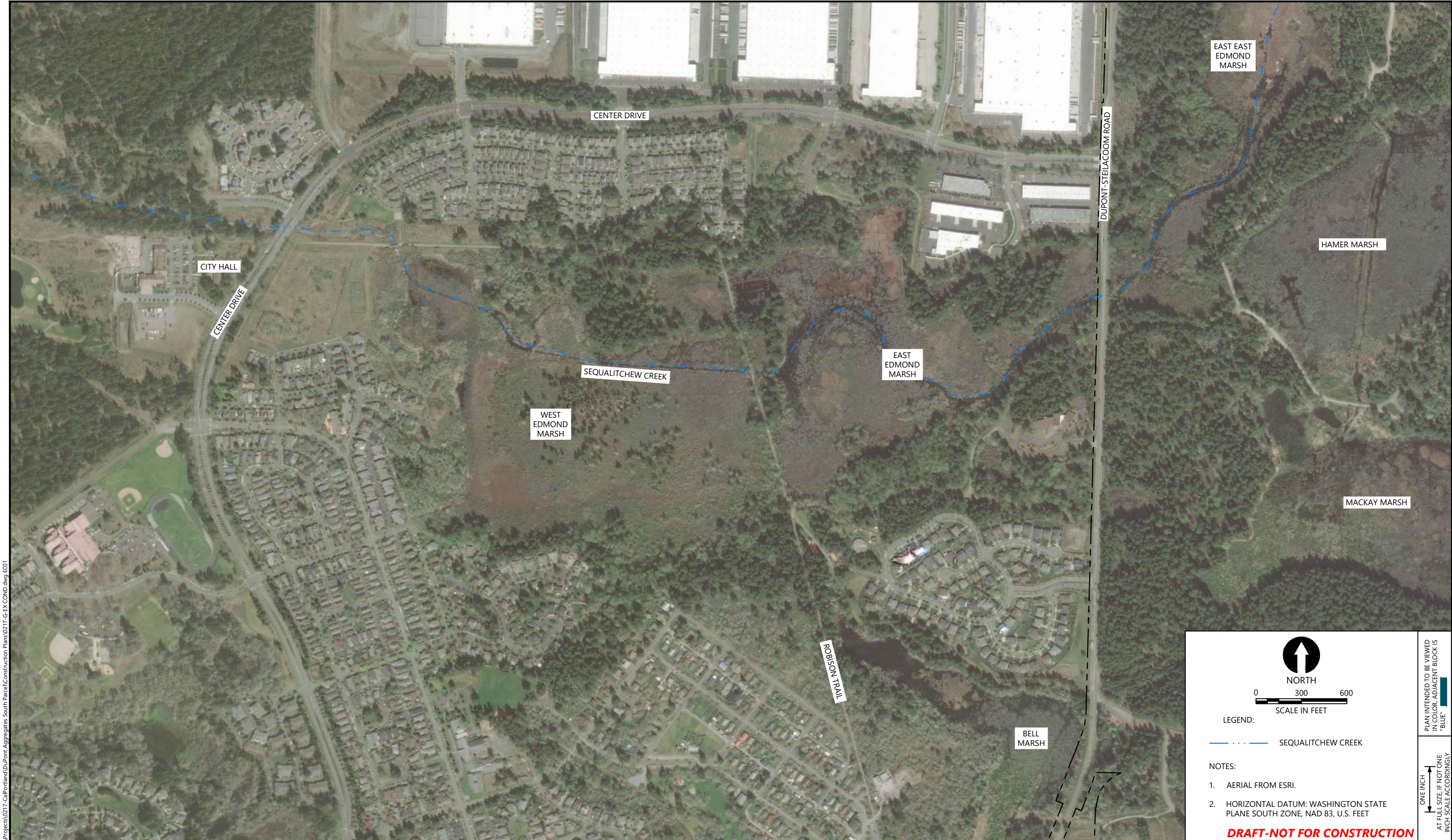
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REV	DATE	BY	APP'D	DESCRIPTION	

DESIGNED BY:	G. HART
DRAWN BY:	T. GRIGA
CHECKED BY:	T. DRURY
APPROVED BY:	J. SMALL
SCALE:	AS NOTED
DATE:	FEBRUARY 2023

SEQUALITCHEW CREEK WATERSHED ECOSYSTEM RESTORATION PROJECT
OVERALL SITE PLAN AND DRAWING INDEX

G04
SHEET NO. 4 OF 41

PLAN INTENDED TO BE VIEWED
IN COLOR. ADJACENT BLOCK IS
"BLUE"
ONE INCH
AT FULL SIZE IF NOT ONE
INCH SCALE ACCORDINGLY



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Feb 20, 2023 7:49pm tgriga



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DATE: FEBRUARY 2023

SEQUALITCHEW CREEK WATERSHED ECOSYSTEM RESTORATION PROJECT	
EXISTING CONDITIONS	

EC01
SHEET NO. 5 OF 41

PLAN INTENDED TO BE VIEWED
IN COLOR. ADJACENT BLOCK IS
"BLUE"
ONE INCH
AT FULL SIZE IF NOT ONE
INCH SCALE ACCORDINGLY





NORTH

0 100 200

SCALE IN FEET

LEGEND:

-  SEQUALITCHEW CREEK
-  ACCESS ROUTE
-  STAGING AREA

NOTES:

- AERIAL FROM ESRI.
- HORIZONTAL DATUM: WASHINGTON STATE PLANE SOUTH ZONE, NAD 83, U.S. FEET

DRAFT-NOT FOR CONSTRUCTION

PLAN INTENDED TO BE VIEWED IN COLOR. ADJACENT BLOCK IS "BLUE"

ONE INCH AT FULL SIZE IF NOT ONE INCH SCALE ACCORDINGLY

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Feb 20, 2023 7:49pm tgriga



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Feb 20, 2023 7:49pm tgriga



REVISIONS					
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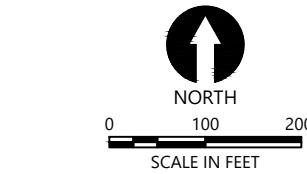
DESIGNED BY: G. HART
DRAWN BY: T. GRIGA
CHECKED BY: T. DRURY
APPROVED BY: J. SMALL
SCALE: AS NOTED
DATE: FEBRUARY 2023

SEQUALITCHEW CREEK WATERSHED
ECOSYSTEM RESTORATION PROJECT

TEMPORARY ACCESS AND STAGING PLAN

T03

SHEET NO. 8 OF 41



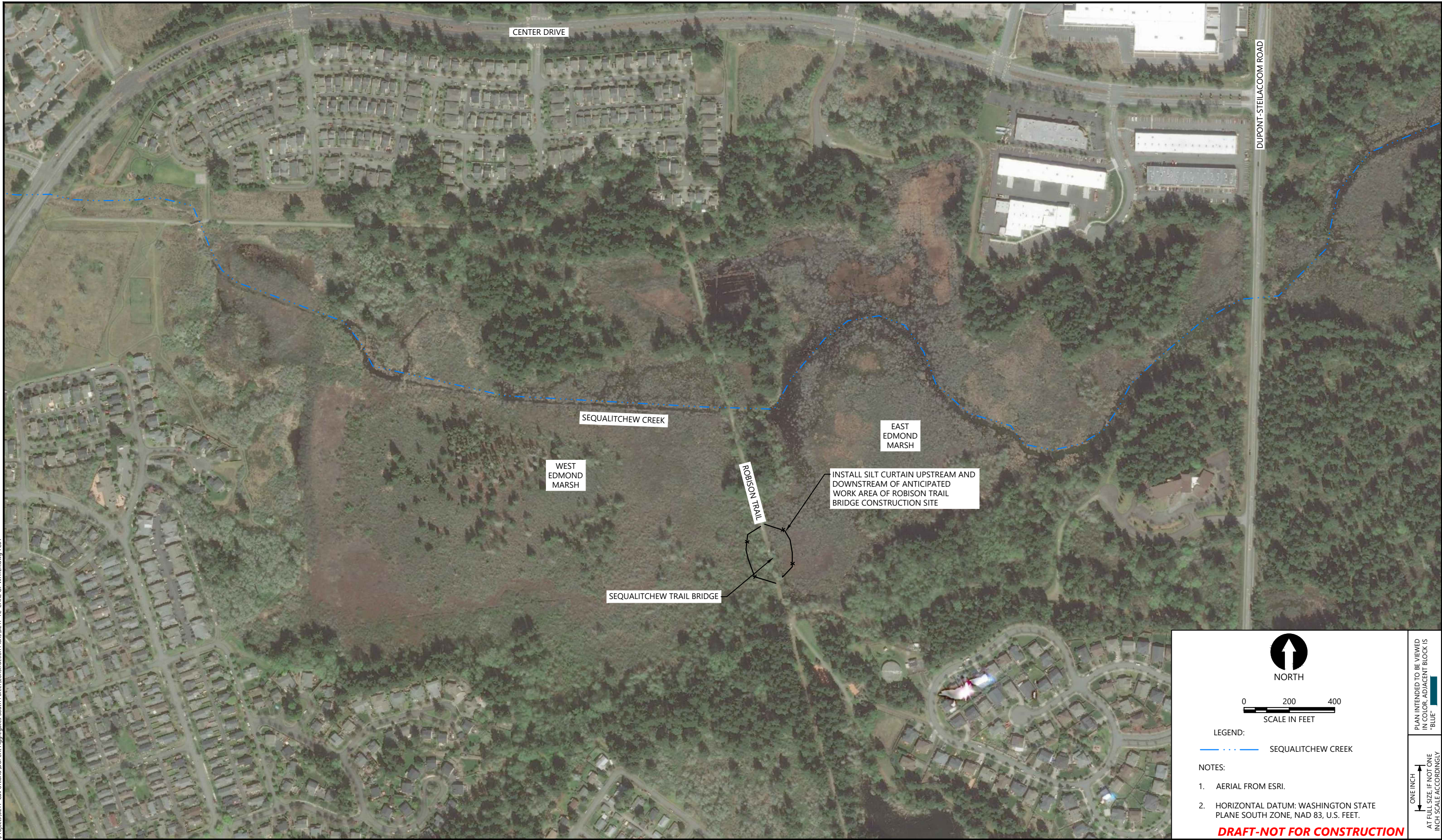
- LEGEND:
- SEQUALITCHEW CREEK
 - ACCESS ROUTE
 - STAGING AREA

- NOTES:
- AERIAL FROM ESRI.
 - HORIZONTAL DATUM: WASHINGTON STATE PLANE SOUTH ZONE, NAD 83, U.S. FEET

DRAFT-NOT FOR CONSTRUCTION

PLAN INTENDED TO BE VIEWED
IN COLOR. ADJACENT BLOCK IS
"BLUE"
ONE INCH
AT FULL SIZE IF NOT ONE
INCH SCALE ACCORDINGLY

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Feb 20, 2023 7:50pm tgriga



LEGEND:
- - - - - SEQUALITCHEW CREEK

- NOTES:
1. AERIAL FROM ESRI.
 2. HORIZONTAL DATUM: WASHINGTON STATE PLANE SOUTH ZONE, NAD 83, U.S. FEET.

DRAFT-NOT FOR CONSTRUCTION

PLAN INTENDED TO BE VIEWED
IN COLOR. ADJACENT BLOCK IS
"BLUE"
ONE INCH
AT FULL SIZE IF NOT ONE
INCH SCALE ACCORDINGLY



REVISIONS					
REV	DATE	BY	APP'D	DESCRIPTION	

DESIGNED BY: G. HART
DRAWN BY: T. GRIGA
CHECKED BY: T. DRURY
APPROVED BY: J. SMALL
SCALE: AS NOTED
DATE: FEBRUARY 2023

**SEQUALITCHEW CREEK WATERSHED
ECOSYSTEM RESTORATION PROJECT**

DETAILED CARE OF WATER PLAN

TC01

SHEET NO. **9** OF **41**



LEGEND:

- WETLAND BOUNDARY
- 100-FOOT WETLAND BUFFER
- SEQUALITCHEW CREEK

NOTES:

- AERIAL FROM ESRI.
- HORIZONTAL DATUM: WASHINGTON STATE PLANE SOUTH ZONE, NAD 83, U.S. FEET
- NOTCH DAM FROM CREST TO TOE WITH A MINIMUM 60 DEGREE CREST ANGLE.

DRAFT-NOT FOR CONSTRUCTION

REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: G. HART

DRAWN BY: T. GRIGA

CHECKED BY: T. DRURY

APPROVED BY: J. SMALL

SCALE: AS NOTED

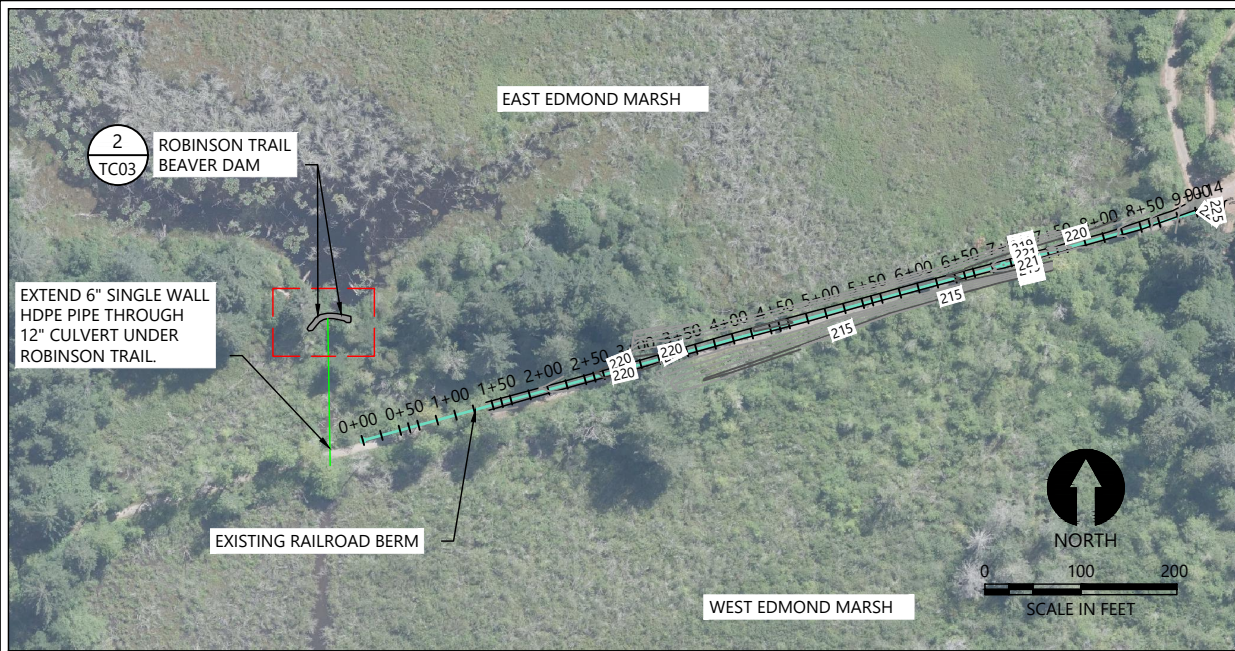
DATE: FEBRUARY 2023

SEQUALITCHEW CREEK WATERSHED ECOSYSTEM RESTORATION PROJECT

BEAVER MANAGEMENT PLAN

TC02

SHEET NO. 10 OF 41

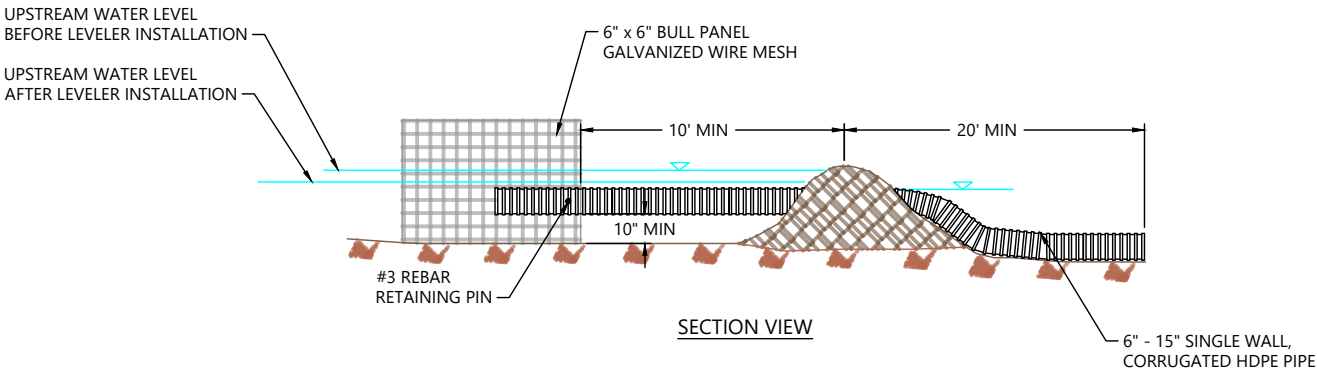
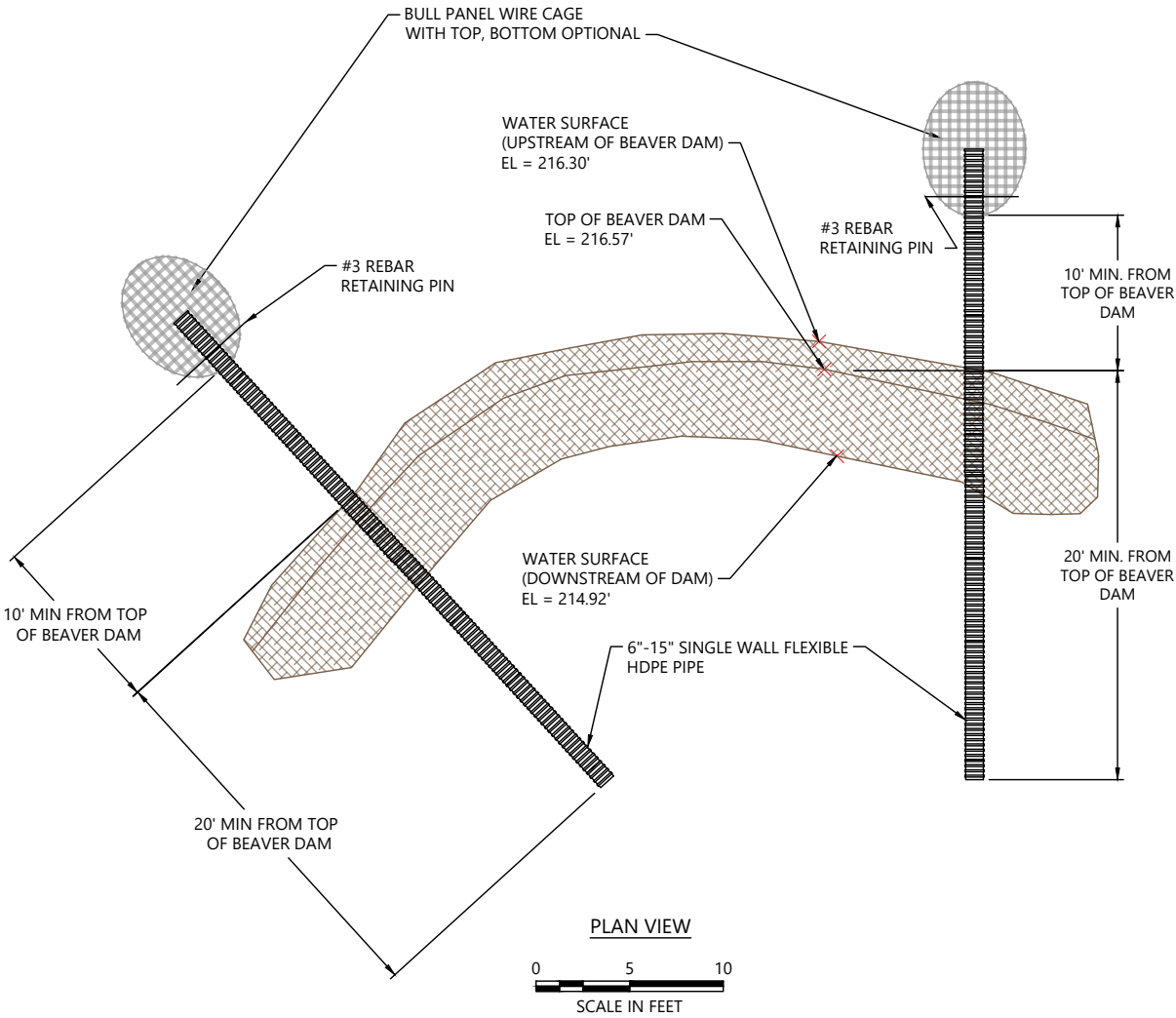


1 ROBINSON TRAIL BEAVER DAM FLEXIBLE LEVELER INSTALLATION
SCALE: NOT TO SCALE



ROBINSON TRAIL BEAVER DAM (FACING NORTH)

- NOTES:
- 1. HORIZONTAL DATUM: WASHINGTON STATE PLANE SOUTH ZONE, NAD 83/91, U.S. FEET
 - 2. VERTICAL DATUM: NAVD88



2 FLEXIBLE POND LEVELER INSTALLATION
SCALE: NOT TO SCALE

DRAFT-NOT FOR CONSTRUCTION



REVISIONS					DESCRIPTION
REV	DATE	BY	APP'D		

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CHECKED BY: T. DRURY
APPROVED BY: J. SMALL
SCALE: AS NOTED
DATE: FEBRUARY 2023

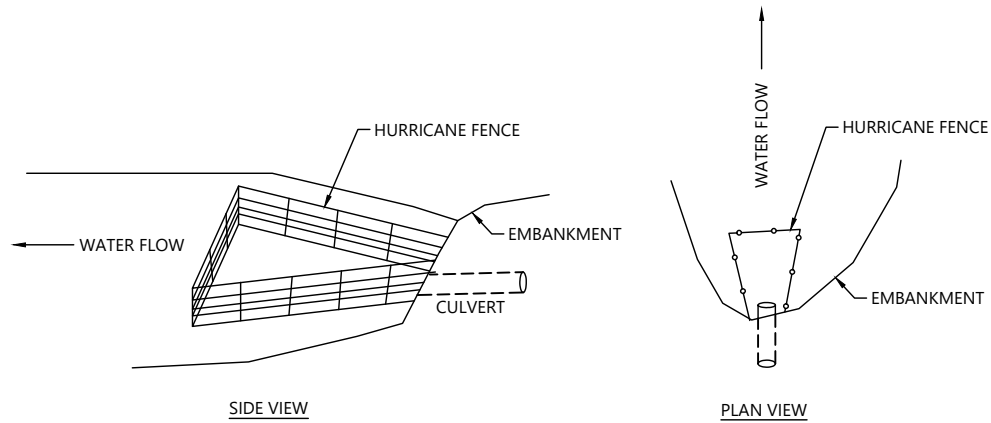
SEQUALITCHEW CREEK WATERSHED
ECOSYSTEM RESTORATION PROJECT

FLEXIBLE LEVELER DETAILS

TC03

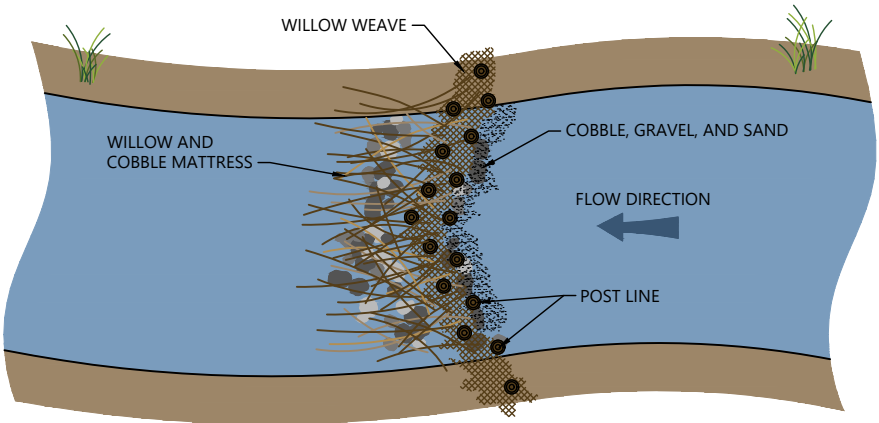
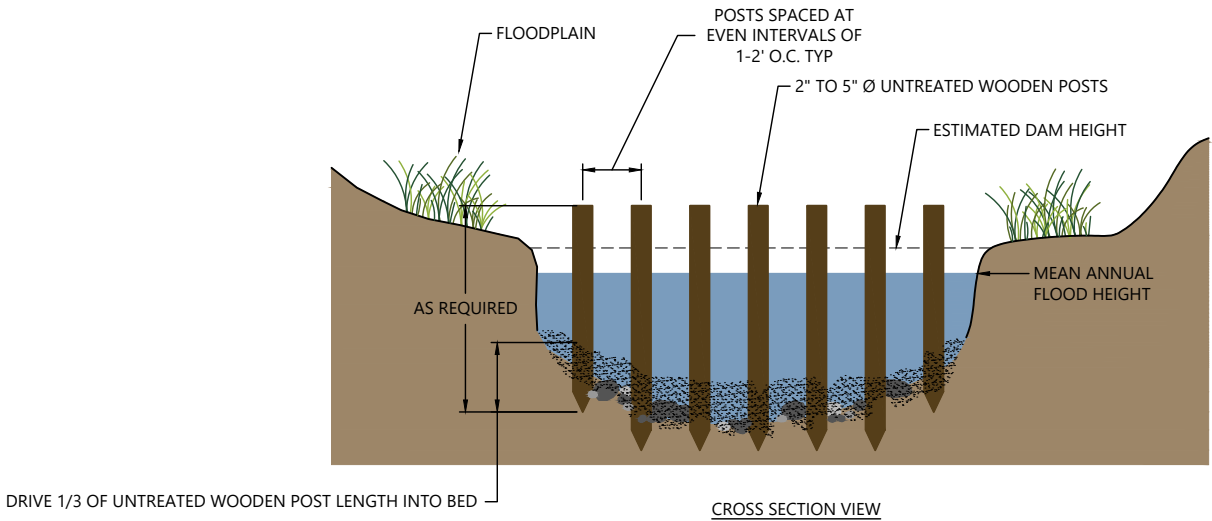
SHEET NO. 11 OF 41

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Feb 20, 2023 7:50pm tg.rga



TYPICAL INSTALLATION

3 BEAVER EXCLUSION DEVICE
TC02 SCALE: NOT TO SCALE



PLAN VIEW (CONVEX PRIMARY DAM)

4 BEAVER DAM ANALOG
TC02 SCALE: NOT TO SCALE

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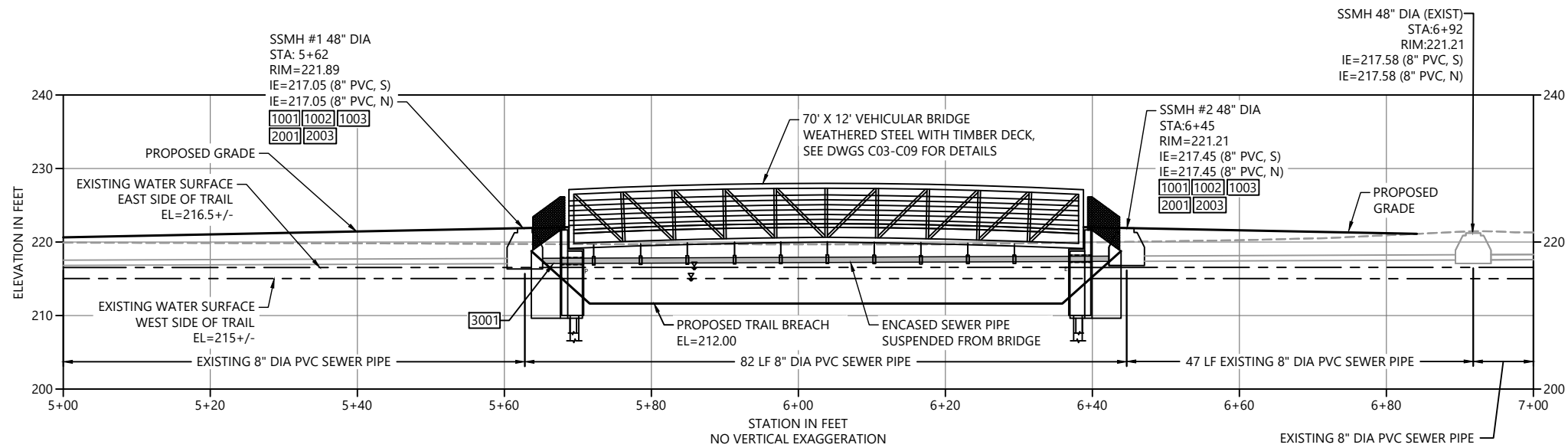
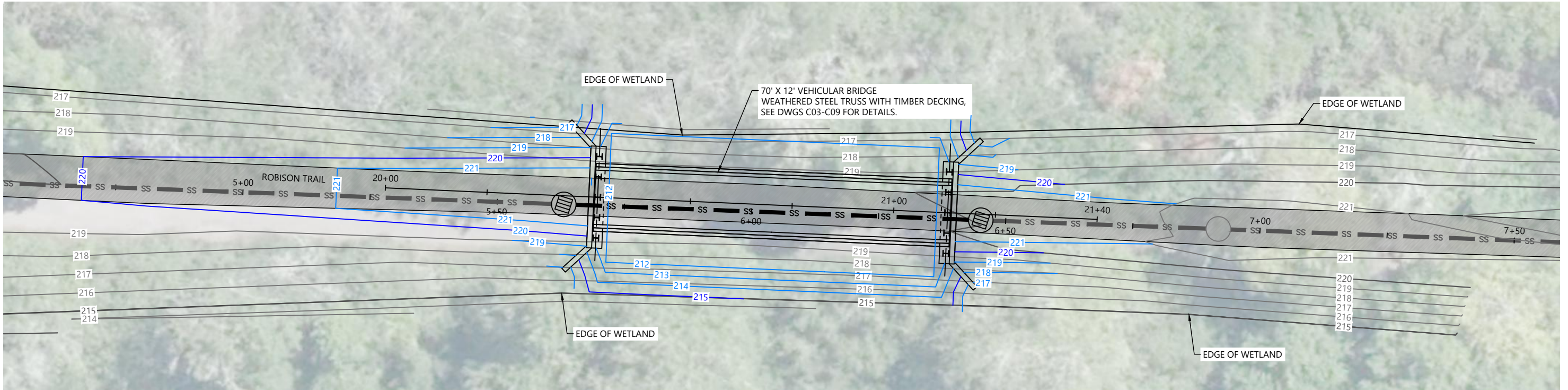
SEQUALITCHEW CREEK WATERSHED
ECOSYSTEM RESTORATION PROJECT

BEAVER MANAGEMENT DETAILS

TC04

SHEET NO. 12 OF 41

PLAN INTENDED TO BE VIEWED
IN COLOR. ADJACENT BLOCK IS
"BLUE"
ONE INCH
AT FULL SIZE IF NOT ONE
INCH SCALE ACCORDINGLY



- NOTES:
- HORIZONTAL DATUM: WASHINGTON STATE PLANE SOUTH ZONE, NAD 83/91, U.S. FEET
 - VERTICAL DATUM: NAVD88
 - PHASE NUMBER SHOWN BEFORE PROPOSED ACTIONS.

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REVISIONS					DESCRIPTION
REV	DATE	BY	APP'D		

DESIGNED BY: G. HART
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CHECKED BY: T. DRURY
APPROVED BY: J. SMALL
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DATE: FEBRUARY 2023

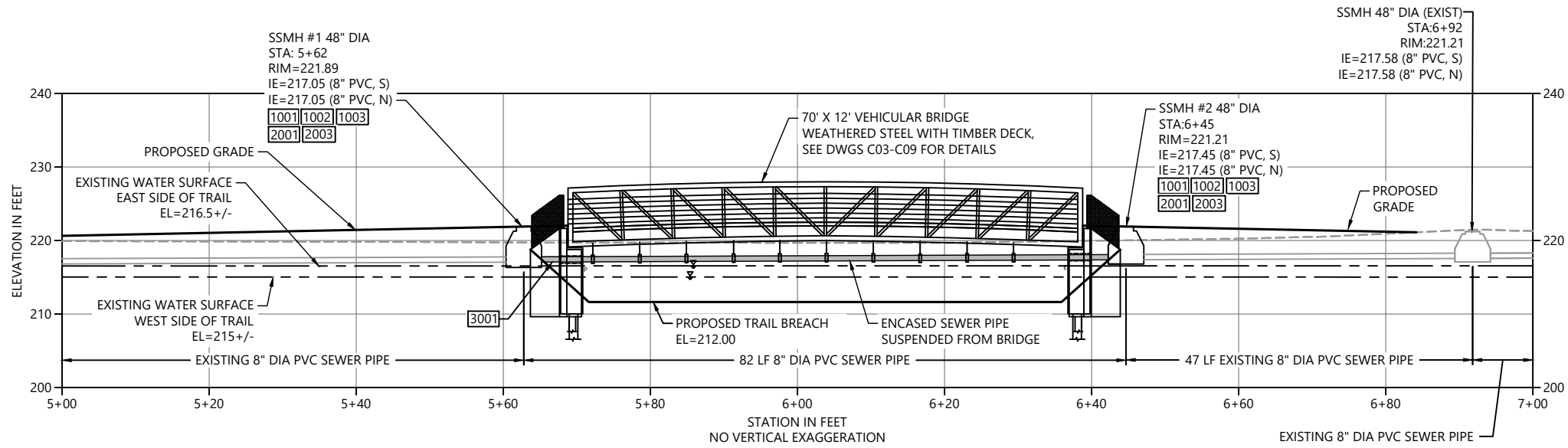
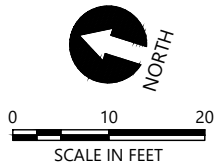
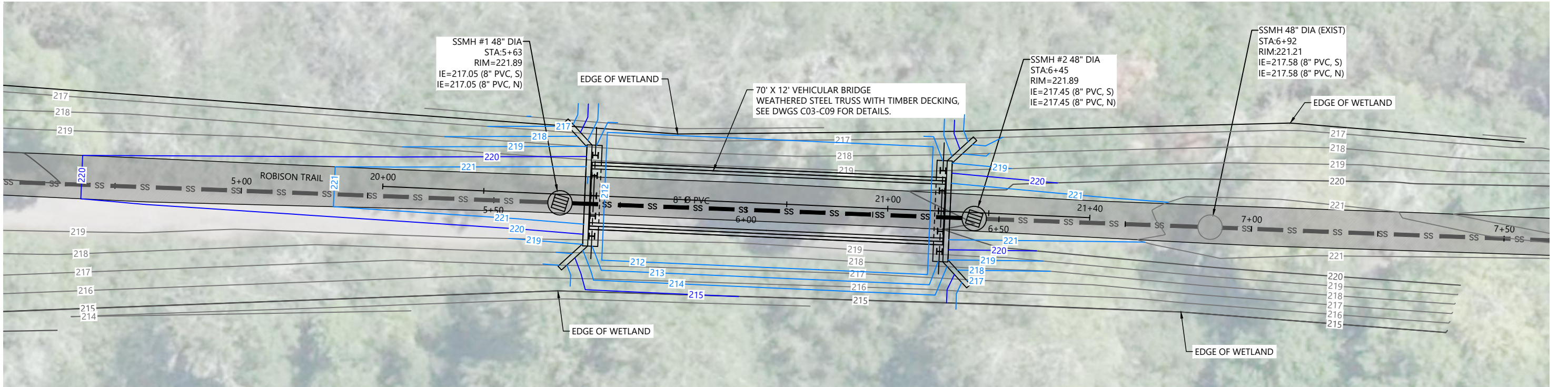
**SEQUALITCHEW CREEK WATERSHED
ECOSYSTEM RESTORATION PROJECT**

**ROBISON BRIDGE TEMPORARY
SEWER PROTECTION MEASURES**

TC05

SHEET NO. 13 OF 41

PLAN INTENDED TO BE VIEWED
IN COLOR. ADJACENT BLOCK IS
"BLUE"
ONE INCH
AT FULL SIZE IF NOT ONE
INCH SCALE ACCORDINGLY



STANDARD UTILITY LEGEND	
STANDARD DETAIL	DESCRIPTION
1001	CONCRETE MANHOLE STEP
1002	CONCRETE MANHOLE COLLAR IN PAVED AREA
1003	PUBLIC MANHOLE FRAME AND LOCKING LID
2001	CONCRETE MANHOLE
2003	NEW CONCRETE MANHOLE CUT INTO EXISTING MAIN
3001	TYPICAL TRENCH SECTION

NOTES:

- HORIZONTAL DATUM: WASHINGTON STATE PLANE SOUTH ZONE, NAD 83/91, U.S. FEET
- VERTICAL DATUM: NAVD88
- PHASE NUMBER SHOWN BEFORE PROPOSED ACTIONS.

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REVISIONS					DESCRIPTION
REV	DATE	BY	APP'D		

DESIGNED BY: G. HART
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CHECKED BY: T. DRURY
APPROVED BY: J. SMALL
SCALE: AS NOTED
DATE: FEBRUARY 2023

**SEQUALITCHEW CREEK WATERSHED
ECOSYSTEM RESTORATION PROJECT**

**ROBISON BRIDGE GRADING AND UTILITY
PLAN AND PROFILE**

C01

SHEET NO. 14 OF 41

BRIDGE GENERAL NOTES

1.

ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION," DATED 2023, AND PROJECT SPECIAL PROVISIONS.
2.

ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL UNLESS OTHERWISE SHOWN.
3.

THE CONTRACTOR SHALL PLAN AND CONDUCT THE WORK IN SUCH A MANNER THAT NO OBJECTS OR FOREIGN MATERIALS FALL FROM THE WORK ON THE NEW BRIDGE TO THE CREEK CHANNEL BELOW. THE CONTRACTOR'S PLAN FOR ACCOMPLISHING THIS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION. ALL WORK ASSOCIATED WITH THIS CONTAINMENT SYSTEM SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
4.

THE STRUCTURE DESIGN IS IN ACCORDANCE WITH THE REQUIREMENTS OF

AASHTO LRFD GUIDE SPECIFICATIONS FOR THE DESIGN OF PEDESTRIAN BRIDGES, 2ND EDITION DATED 2009, AND INTERIM REVSIONS THROUGH 2018.

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION, 2020.

AASHTO GUIDE SPECIFICATIONS FOR LRFD SEISMIC BRIDGE DESIGN, 2ND EDITION, 2011 WITH INTERIMS THROUGH 2015.
5.

FOUNDATION DESIGN BASED ON RECOMMENDATIONS OF ANCHOR QEA IN THE DRAFT GEOTECHNICAL REPORT DATED NOVEMBER, 2022.

DESIGN LOADS:

DEAD LOAD:		
CONCRETE, UNLESS NOTED OTHERWISE	155	PCF
STEEL	490	PCF

LIVE LOAD:		
PEDESTRIAN	90	PSF

BRIDGE SUPERSTRUCTURE REACTIONS:
THE FOLLOWING STRUCTURE REACTIONS WERE ASSUMED FOR THE DESIGN OF SUBSTRUCTURE ELEMENTS.

LOAD	P (KIPS)	H (KIPS)
DEAD		-
LIVE		-
WIND	-	

P = VERTICAL LOAD EACH BASE PLATE (4 EA)
H = HORIZONTAL LOAD EACH FOOTING (2 EA)

SEISMIC DESIGN:		
PGA	=	0.420g
A _s	=	0.504g
S _{DS}	=	1.067g
S _{D1}	=	0.587g
SITE CLASS	=	D

7.

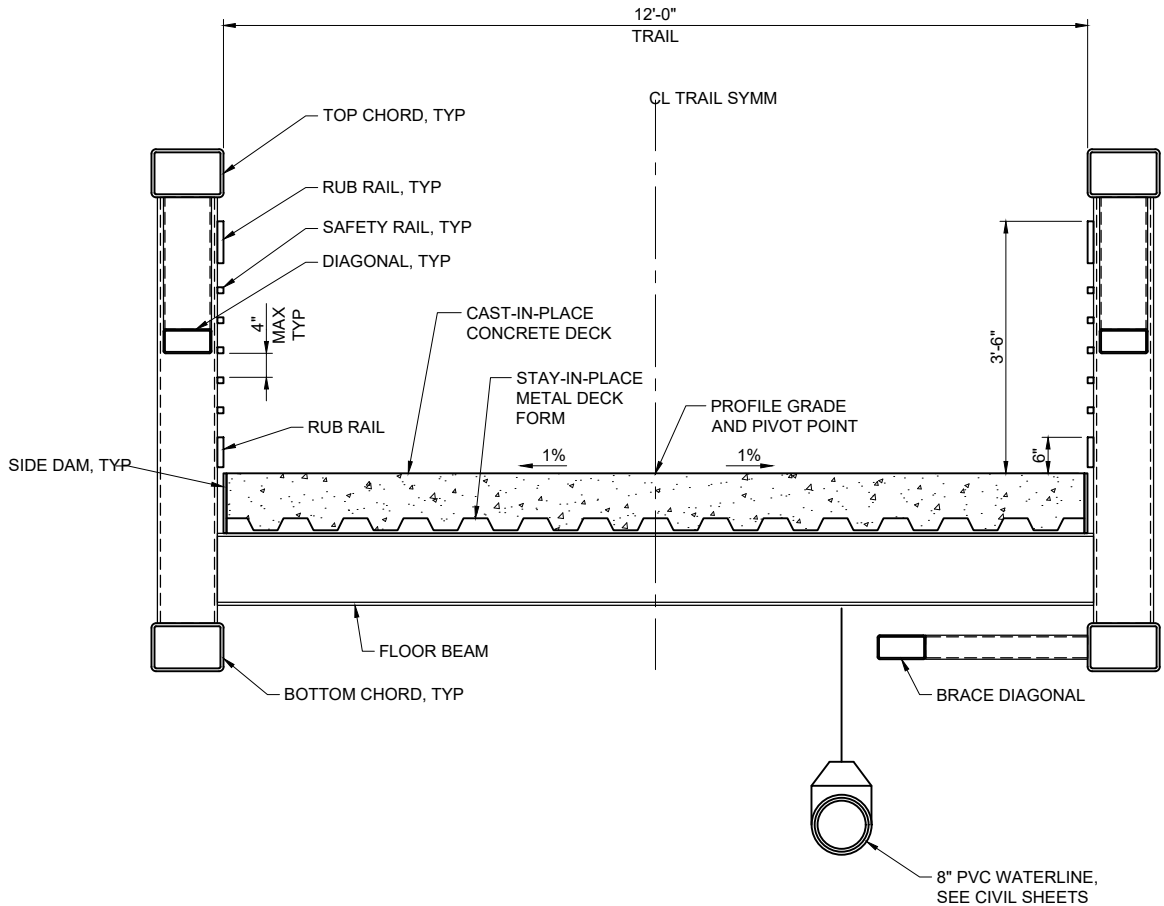
UNLESS OTHERWISE SHOWN IN THE PLANS THE CONCRETE COVER MEASURED FROM THE FACE OF THE CONCRETE TO THE FACE OF ANY REINFORCING STEEL SHALL BE 2 INCHES AT THE TOP OF THE BRIDGE DECK, 3 INCHES AT CONCRETE CAST AGAINST EARTH, AND 1 1/2 INCHES AT ALL OTHER LOCATIONS
8.

CONCRETE SHALL BE CLASS 4000 UNLESS NOTED OTHERWISE BELOW.
9.

CONCRETE STEEL REINFORCING SHALL BE ASTM A706, GRADE 60, UNLESS NOTED OTHERWISE.
10.

ALL EXTERIOR CORNERS AND EDGES SHALL HAVE A 3/4" CHAMFER AND ALL INTERIOR CORNERS SHALL HAVE A 3/4" FILLET UNO.
11.

THE STEEL TRUSS SHALL BE CONTRACTOR DESIGNED. STRUCTURAL STEEL SHALL BE WEATHERING STEEL (ASTM A847 Fy = 50 KSI FOR HSS SECTIONS, ASTM A709 GR50W FOR STEEL SHAPES). TRUSS FLOORBEAMS AND BRACE DIAGONALS SHALL BE PAINTED. THE TRUSS SHALL BE MANUFACTURED WITH DEAD LOAD CAMBER SO THAT THE FINAL GEOMETRY OF THE IN-SITU TRUSS DOES NOT HAVE A SAG.



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

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CHECKED BY: KPFF
APPROVED BY: J. SMALL
SCALE: AS NOTED
DATE: FEBRUARY 2023

SEQUALITCHEW CREEK WATERSHED
ECOSYSTEM RESTORATION PROJECT

ROBISON BRIDGE GENERAL STRUCTURAL
NOTES AND TYPICAL SECTION

C02

SHEET NO. 15 OF 41

PLAN INTENDED TO BE VIEWED
IN COLOR. ADJACENT BLOCK IS
"BLUE"

ONE INCH
↑
AT FULL SIZE IF NOT ONE
INCH SCALE ACCORDINGLY

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DESIGNED BY: KPFF
DRAWN BY: KPFF
CHECKED BY: KPFF
APPROVED BY: J. SMALL
SCALE: AS NOTED
DATE: FEBRUARY 2023

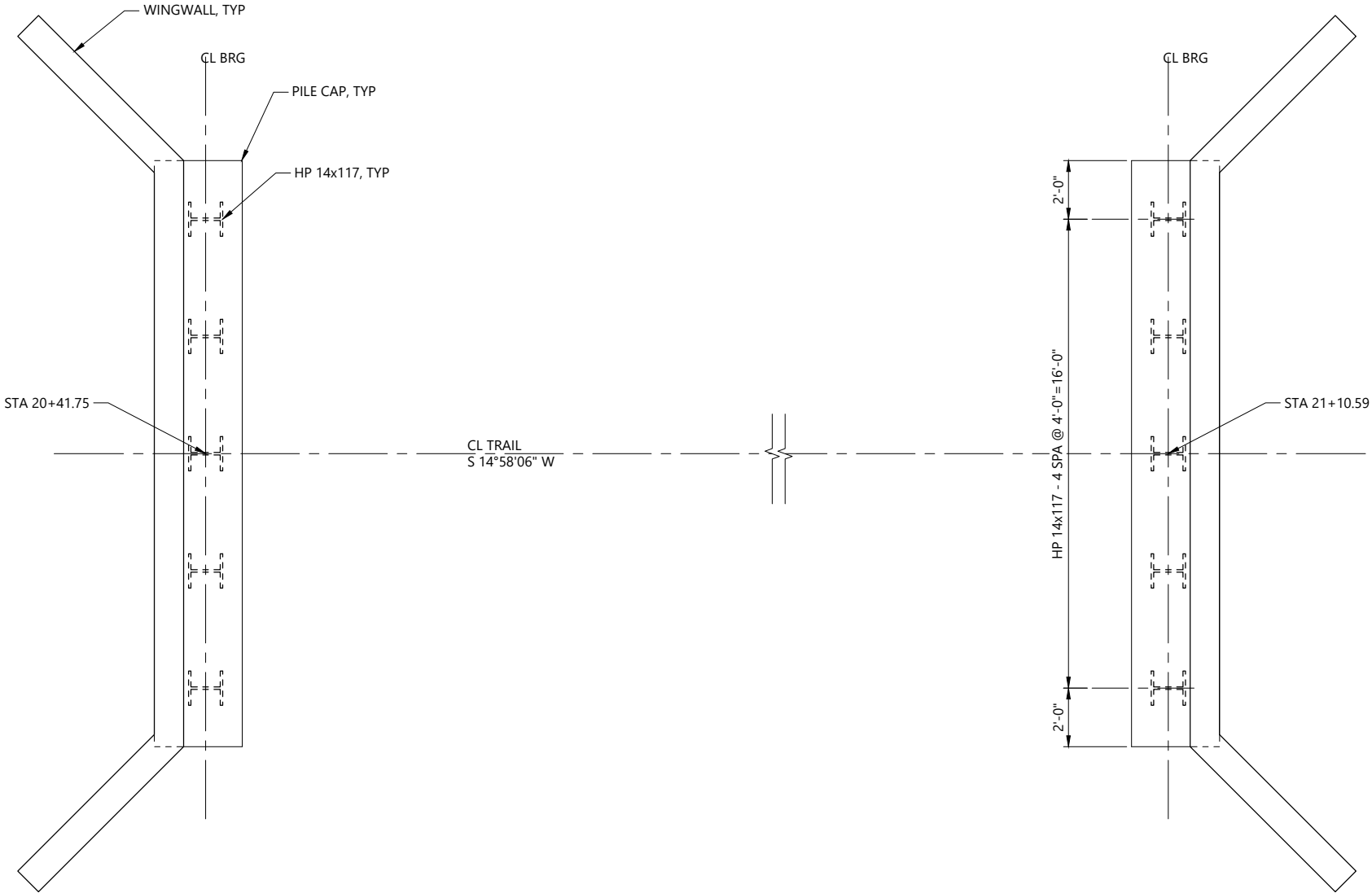
SEQUALITCHEW CREEK WATERSHED
ECOSYSTEM RESTORATION PROJECT

ROBISON BRIDGE FOUNDATION PLAN

C03

SHEET NO. 16 OF 41

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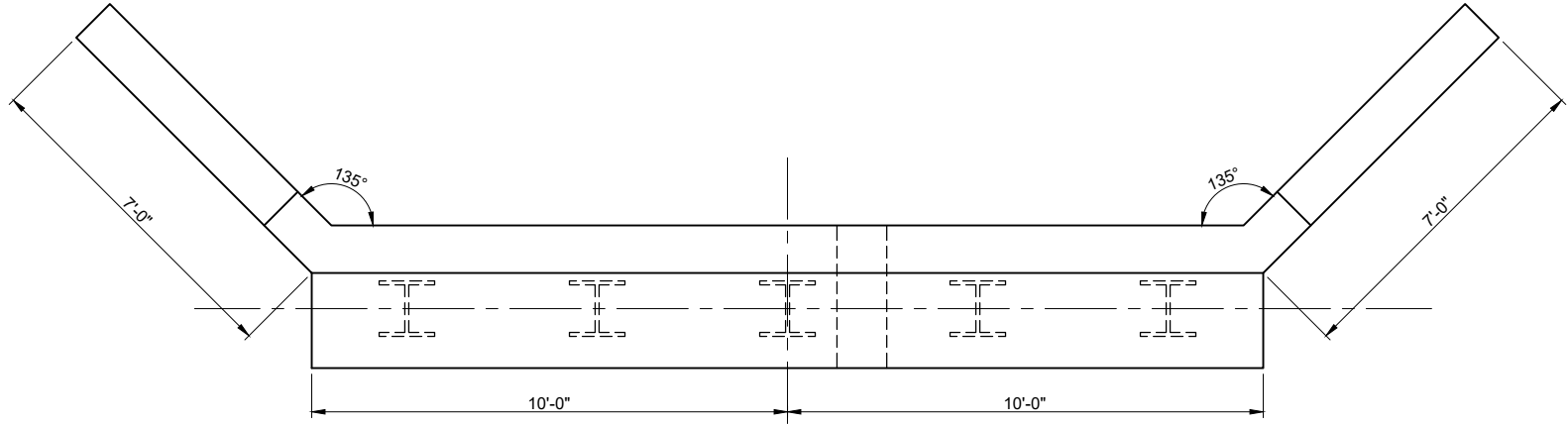
FOUNDATION PLAN

SCALE: 3/8"=1'-0"
BEARING BOTH ABUTMENTS IS N 75°01'54" E

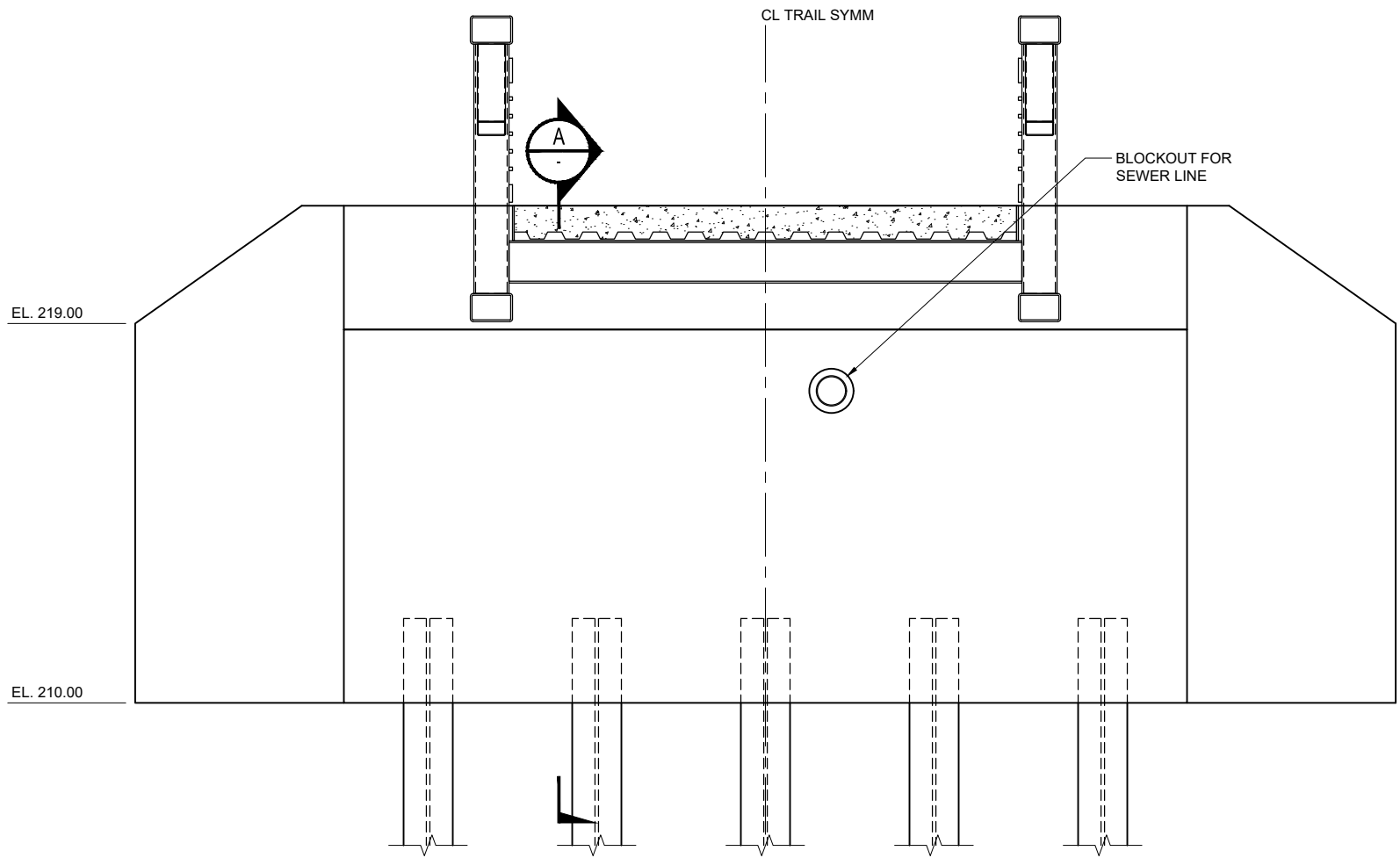
ONE INCH
↑
AT FULL SIZE IF NOT ONE
INCH SCALE ACCORDINGLY

PLAN INTENDED TO BE VIEWED
IN COLOR. ADJACENT BLOCK IS
"BLUE"

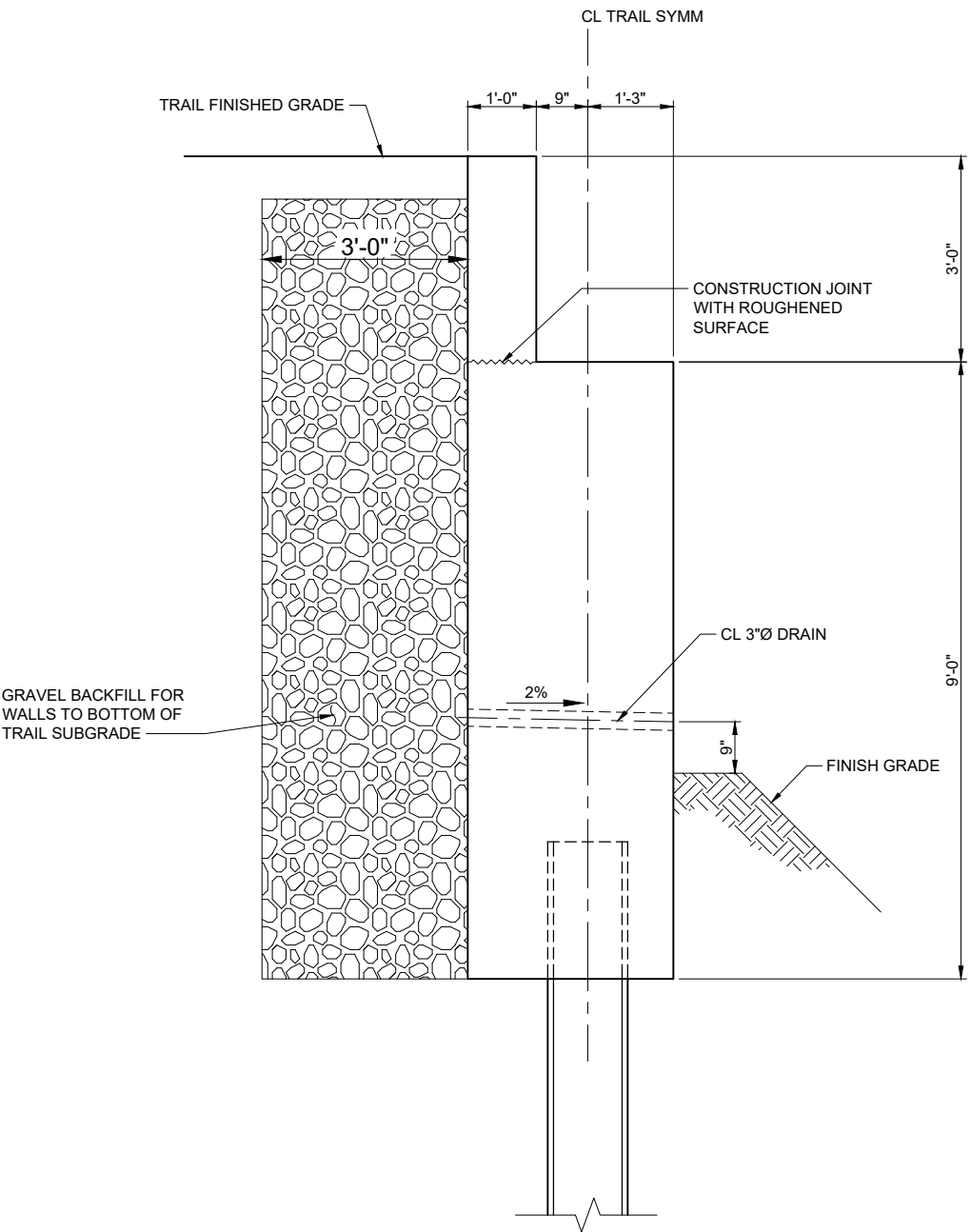
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Feb 20, 2023 7:51 pm tp:iga



ABUTMENT PLAN



ABUTMENT ELEVATION



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

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CHECKED BY: KPFF
APPROVED BY: J. SMALL
SCALE: AS NOTED
DATE: FEBRUARY 2023

**SEQUALITCHEW CREEK WATERSHED
ECOSYSTEM RESTORATION PROJECT**

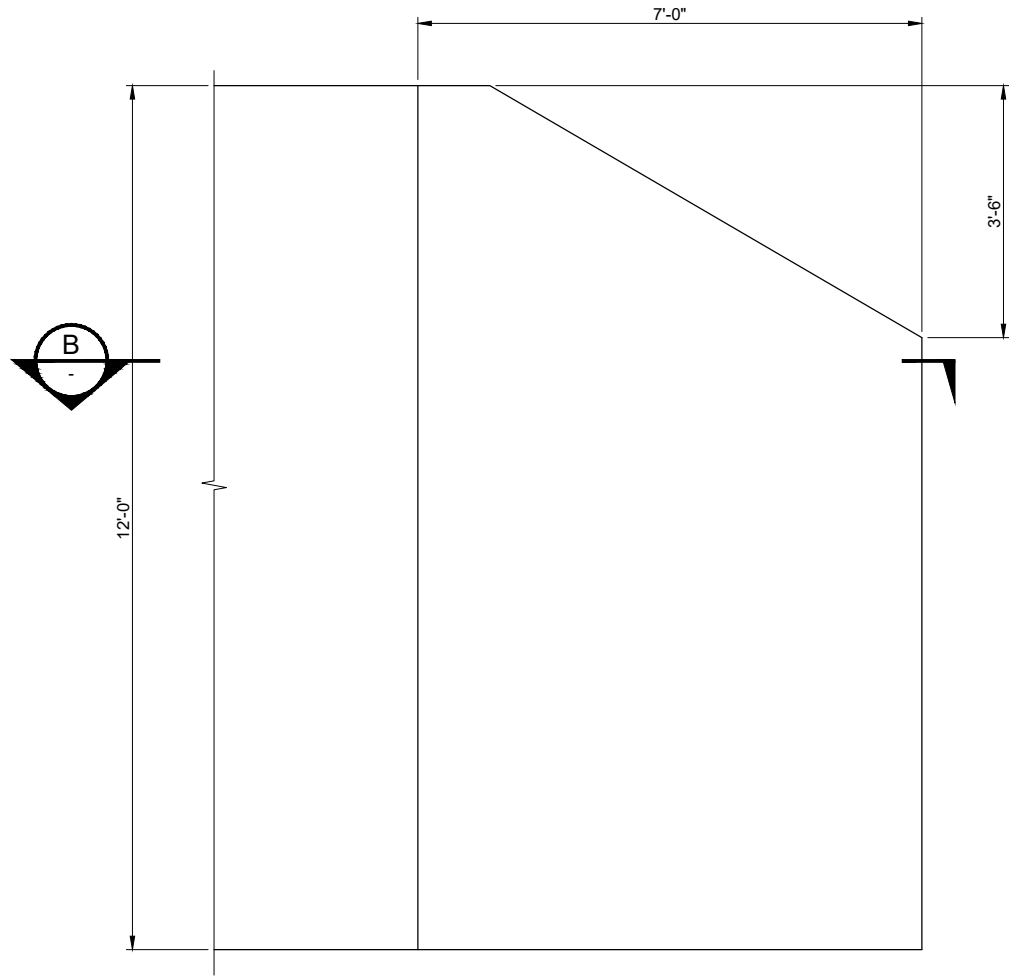
ROBISON BRIDGE ABUTMENT LAYOUT

C04

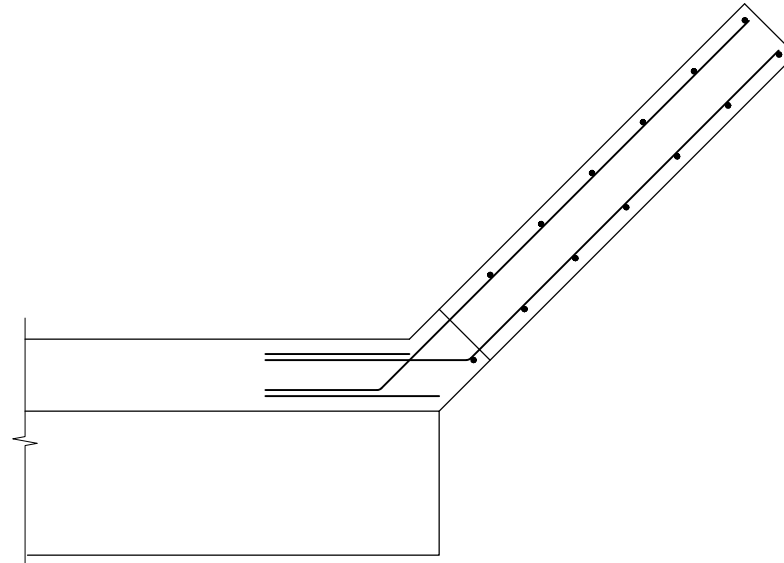
SHEET NO. 17 OF 41

ONE INCH
↑
PLAN INTENDED TO BE VIEWED
IN COLOR. ADJACENT BLOCK IS
"BLUE"

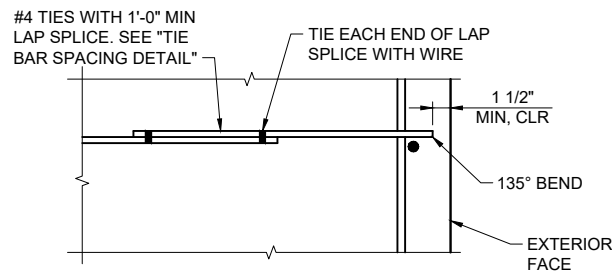
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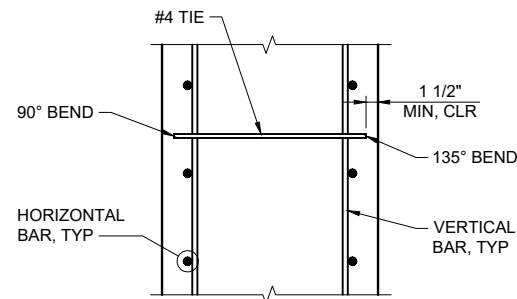
VIEW
SCALE: 3/4"=1'-0"



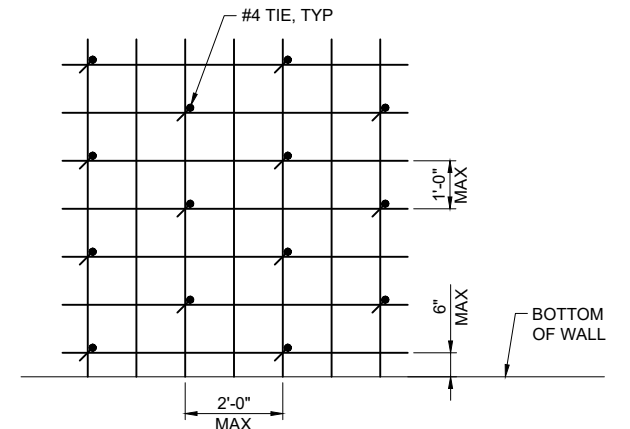
SECTION
SCALE: 3/4"=1'-0"



ALTERNATE TIE BAR DETAIL
SCALE: 1 1/2"=1'-0"



TIE BAR DETAIL
SCALE: 1"=1'-0"
CONSTANT WIDTH SECTION
ALTERNATE 135° BEND EVERY OTHER TIE



TIE BAR SPACING DETAIL
SCALE: 1"=1'-0"

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REVISIONS					
REV	DATE	BY	APP'D	DESCRIPTION	

DESIGNED BY: KPFF
DRAWN BY: KPFF
CHECKED BY: KPFF
APPROVED BY: J. SMALL
SCALE: AS NOTED
DATE: FEBRUARY 2023

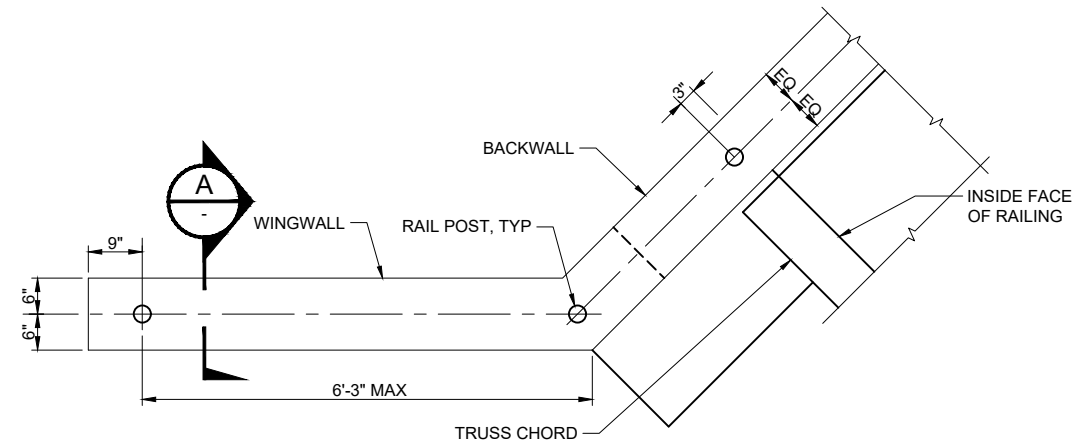
SEQUALITCHEW CREEK WATERSHED
ECOSYSTEM RESTORATION PROJECT

ROBISON BRIDGE ABUTMENT DETAILS

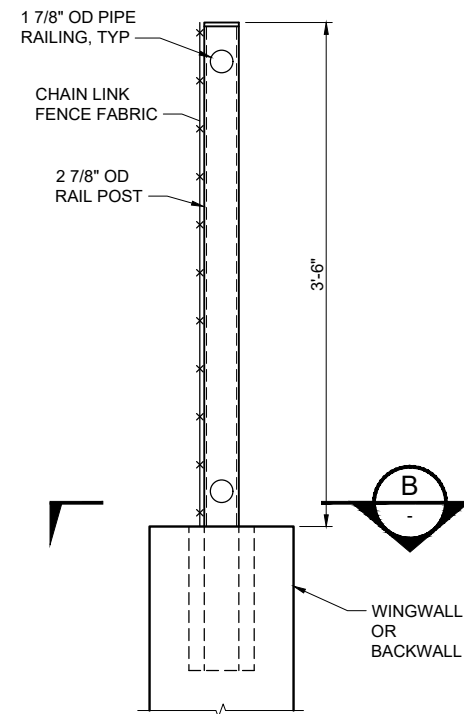
C05

SHEET NO. 18 OF 41

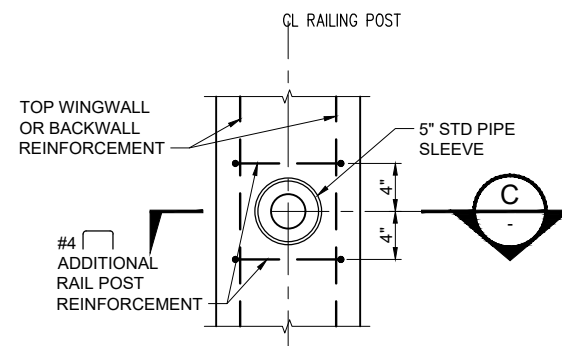
PLAN INTENDED TO BE VIEWED
IN COLOR. ADJACENT BLOCK IS
"BLUE"
ONE INCH
AT FULL SIZE IF NOT ONE
INCH SCALE ACCORDINGLY



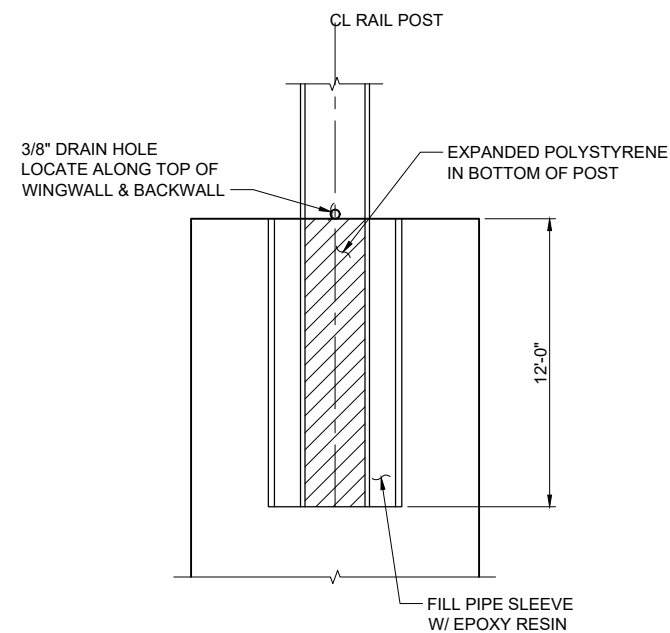
RAIL POST SPACING PLAN DETAIL
SCALE: 3/4"=1'-0"



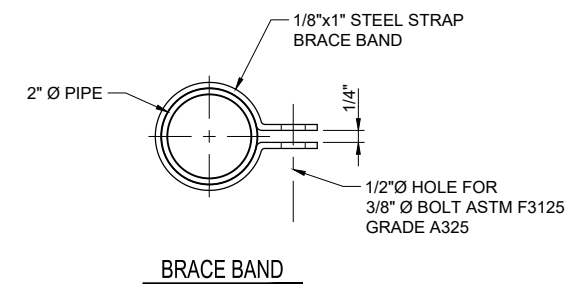
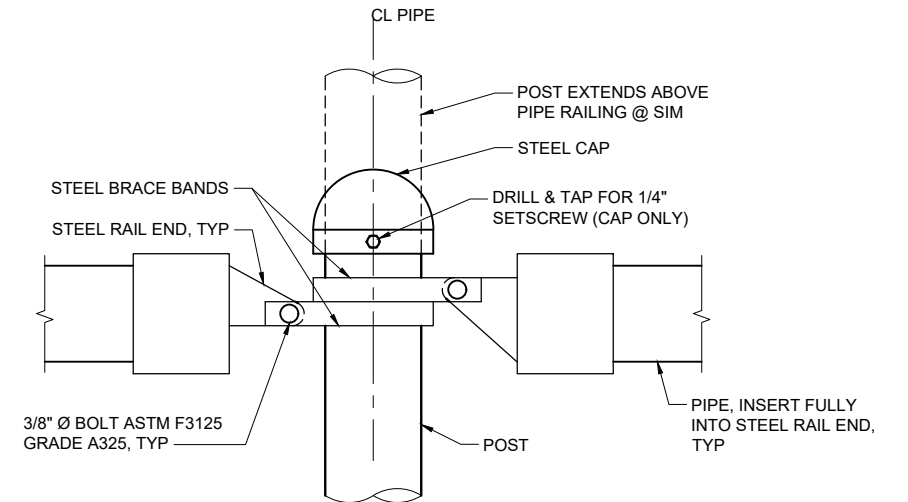
SECTION A
SCALE: 1 1/2"=1'-0"



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



SECTION C
SCALE: 3"=1'-0"



FENCE POST / RAILING CONNECTION DETAIL
SCALE: 6"=1'-0"

DRAFT-NOT FOR CONSTRUCTION



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: KPFF
 DRAWN BY: KPFF
 CHECKED BY: KPFF
 APPROVED BY: J. SMALL
 SCALE: AS NOTED
 DATE: FEBRUARY 2023

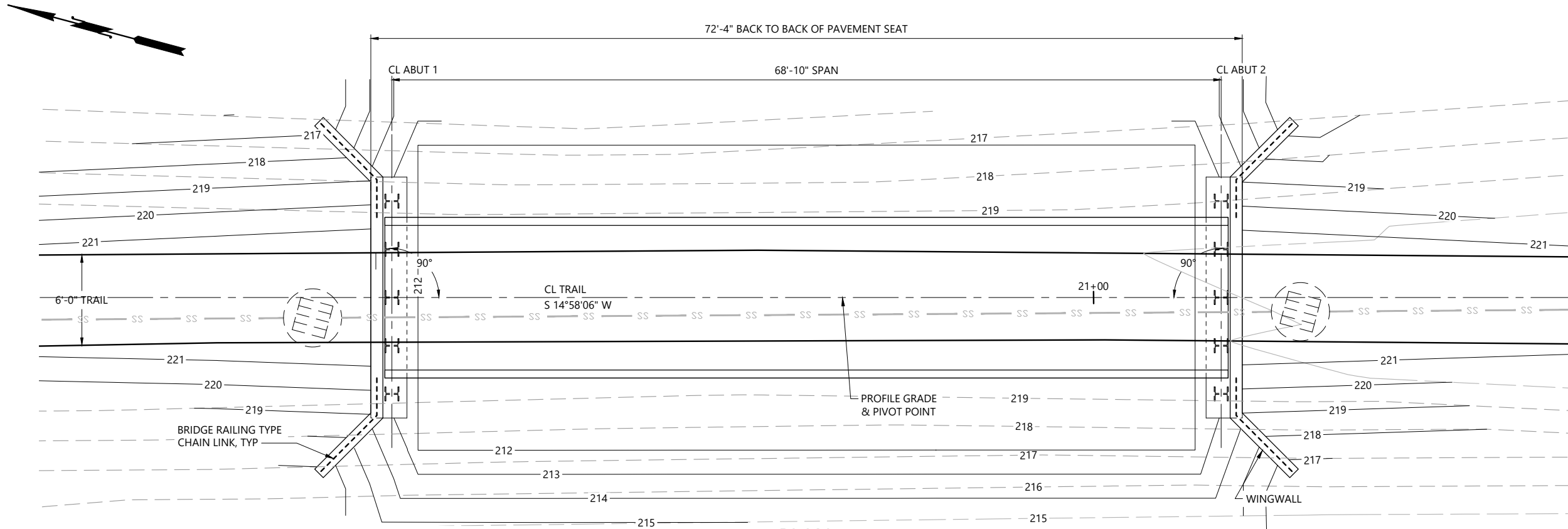
**SEQUALITCHEW CREEK WATERSHED
ECOSYSTEM RESTORATION PROJECT**

ROBISON BRIDGE RAILING DETAILS

C06

SHEET NO. 19 OF 41

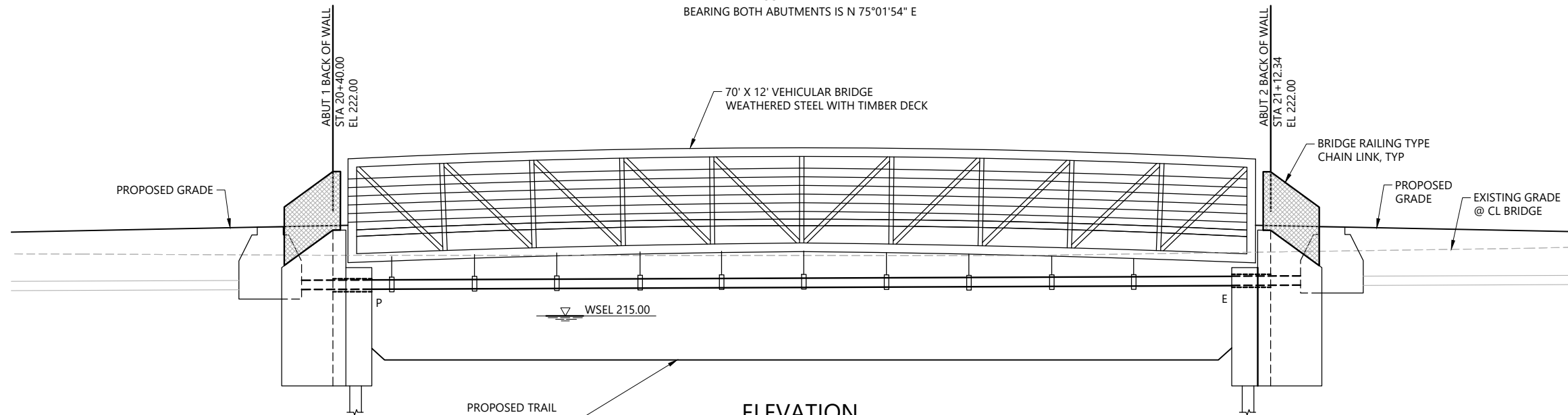
K:\Project\0217_CalPortland\DuPont Aggregates_South Parcel\Construction Plans\0217_PL-KPFF-RBE-BA01.dwg C07
Feb 20, 2023 7:51 pm tp:iga



PLAN

0 5 10
SCALE IN FEET

BEARING BOTH ABUTMENTS IS N 75°01'54" E



ELEVATION

0 5 10
SCALE IN FEET

STEEL TRUSS BRIDGE
HS-20 LOADING

DRAFT-NOT FOR CONSTRUCTION



REVISIONS					DESCRIPTION
REV	DATE	BY	APP'D		

DESIGNED BY: KPFF
DRAWN BY: KPFF
CHECKED BY: KPFF
APPROVED BY: J. SMALL
SCALE: AS NOTED
DATE: FEBRUARY 2023

SEQUALITCHEW CREEK WATERSHED
ECOSYSTEM RESTORATION PROJECT

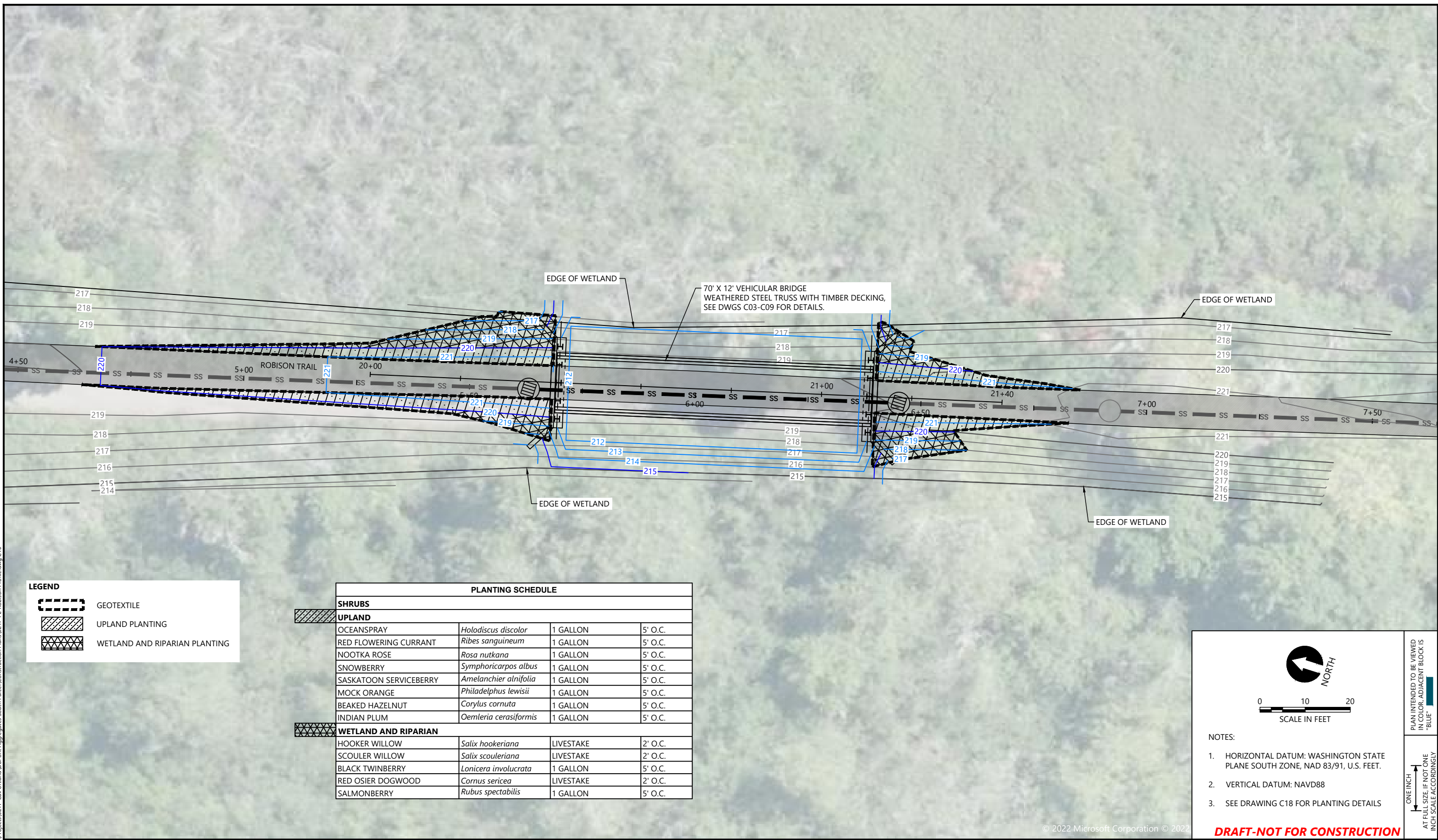
ROBISON BRIDGE PLAN AND ELEVATION

C07

SHEET NO. 20 OF 41

PLAN INTENDED TO BE VIEWED
IN COLOR. ADJACENT BLOCK IS
"BLUE"
ONE INCH
AT FULL SIZE IF NOT ONE
INCH SCALE ACCORDINGLY

K:\Projects\0217_CalPortland\DuPont_Aggregates_South_Parcel\Construction_Plans\0217_PL-Robison_Profile.dwg C10
Feb 20, 2023 7:52pm tg-iga



REVISIONS					
REV	DATE	BY	APP'D	DESCRIPTION	

DESIGNED BY: G. HART
DRAWN BY: T. GRIGA
CHECKED BY: T. DRURY
APPROVED BY: J. SMALL
SCALE: AS NOTED
DATE: FEBRUARY 2023

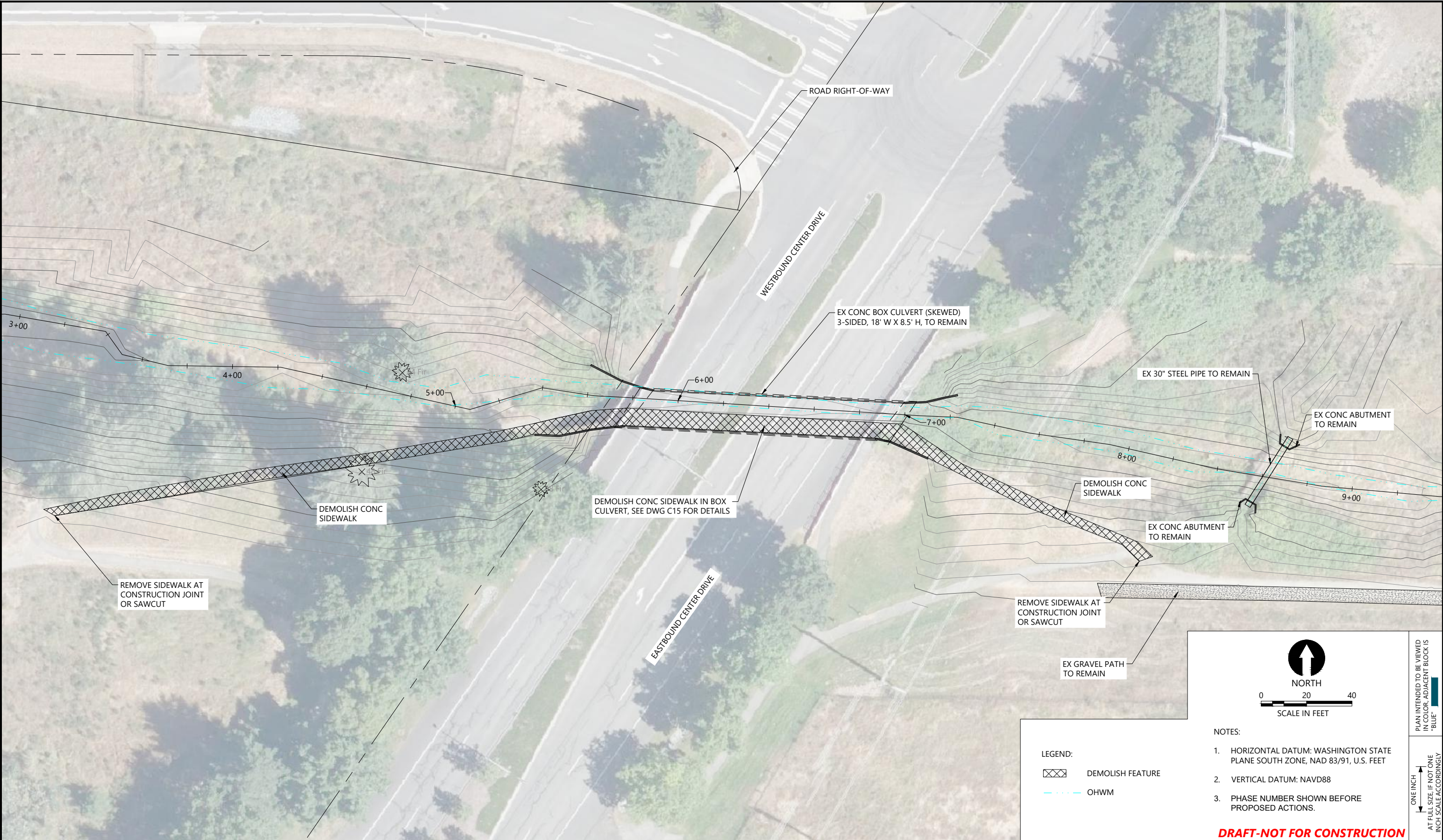
SEQUALITCHEW CREEK WATERSHED
ECOSYSTEM RESTORATION PROJECT

ROBISON BRIDGE PLANTING PLAN AND SCHEDULE

C08

SHEET NO. 21 OF 41

K:\Projects\0217_CalPortland\DuPont_Aggregates_South_Parcel\Construction_Plans\0217_C-Losing Reach Culvert Demo.dwg C11
Feb 20, 2023 7:52pm tgriga



- LEGEND:
- DEMOLISH FEATURE
 - OHWM

- NOTES:
- HORIZONTAL DATUM: WASHINGTON STATE PLANE SOUTH ZONE, NAD 83/91, U.S. FEET
 - VERTICAL DATUM: NAVD88
 - PHASE NUMBER SHOWN BEFORE PROPOSED ACTIONS.

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REVISIONS					
REV	DATE	BY	APP'D	DESCRIPTION	

DESIGNED BY: G. HART
DRAWN BY: T. GRIGA
CHECKED BY: T. DRURY
APPROVED BY: J. SMALL
SCALE: AS NOTED
DATE: FEBRUARY 2023

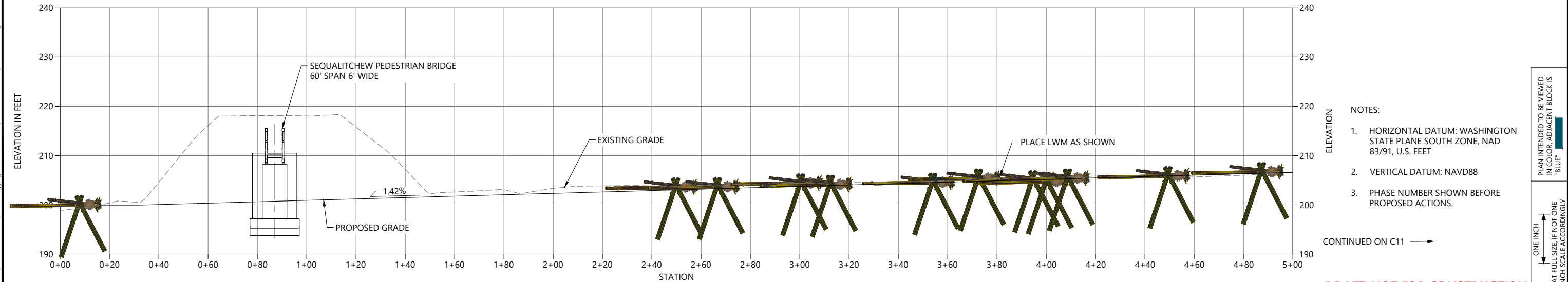
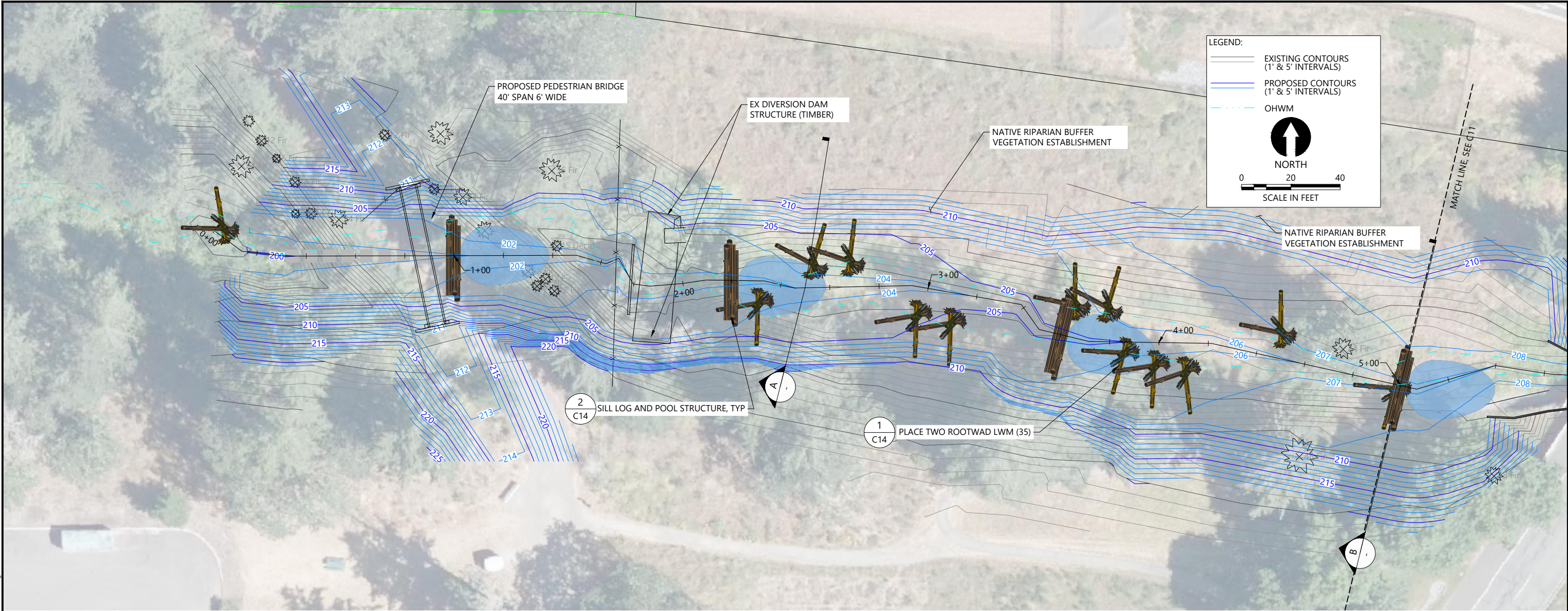
**SEQUALITCHEW CREEK WATERSHED
ECOSYSTEM RESTORATION PROJECT**

**LOSING REACH/CENTER DRIVE CULVERT
DEMOLITION PLAN**

C09

SHEET NO. 22 OF 41

PLAN INTENDED TO BE VIEWED
IN COLOR. ADJACENT BLOCK IS
"BLUE"
ONE INCH
AT FULL SIZE IF NOT ONE
INCH SCALE ACCORDINGLY



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

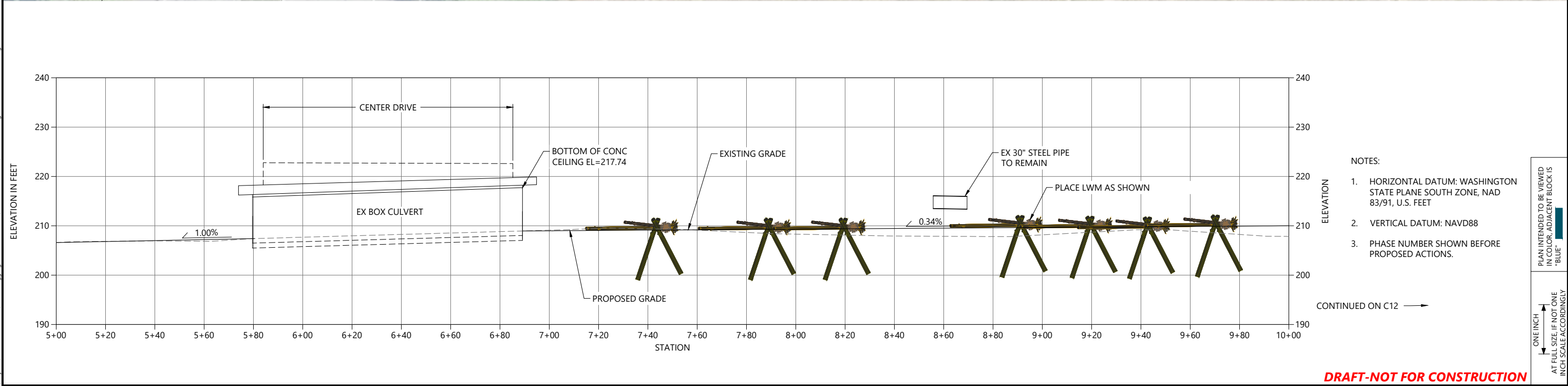
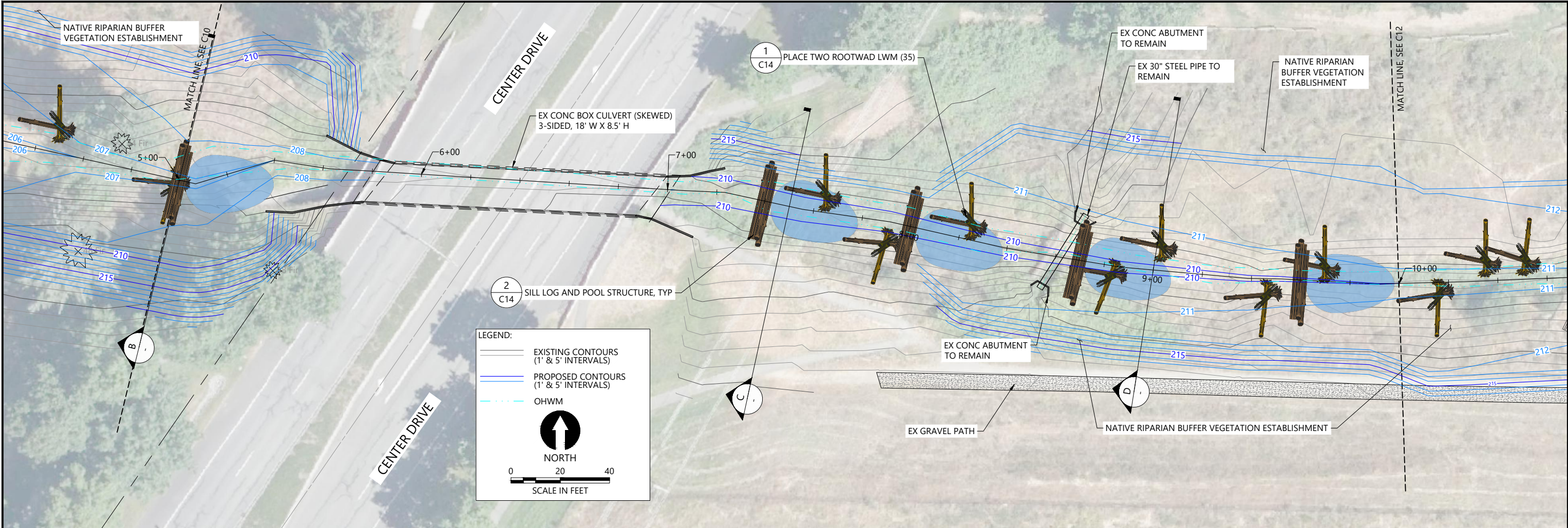
DESIGNED BY: G. HART
DRAWN BY: T. GRIGA
CHECKED BY: T. DRURY
APPROVED BY: J. SMALL
SCALE: AS NOTED
DATE: FEBRUARY 2023

**SEQUALITCHEW CREEK WATERSHED
ECOSYSTEM RESTORATION PROJECT**

**LOSING REACH/CENTER DRIVE CULVERT
MATERIALS AND LAYOUT PLAN**

C10

SHEET NO. 23 OF 41



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: G. HART

DRAWN BY: T. GRIGA

CHECKED BY: T. DRURY

APPROVED BY: J. SMALL

SCALE: AS NOTED

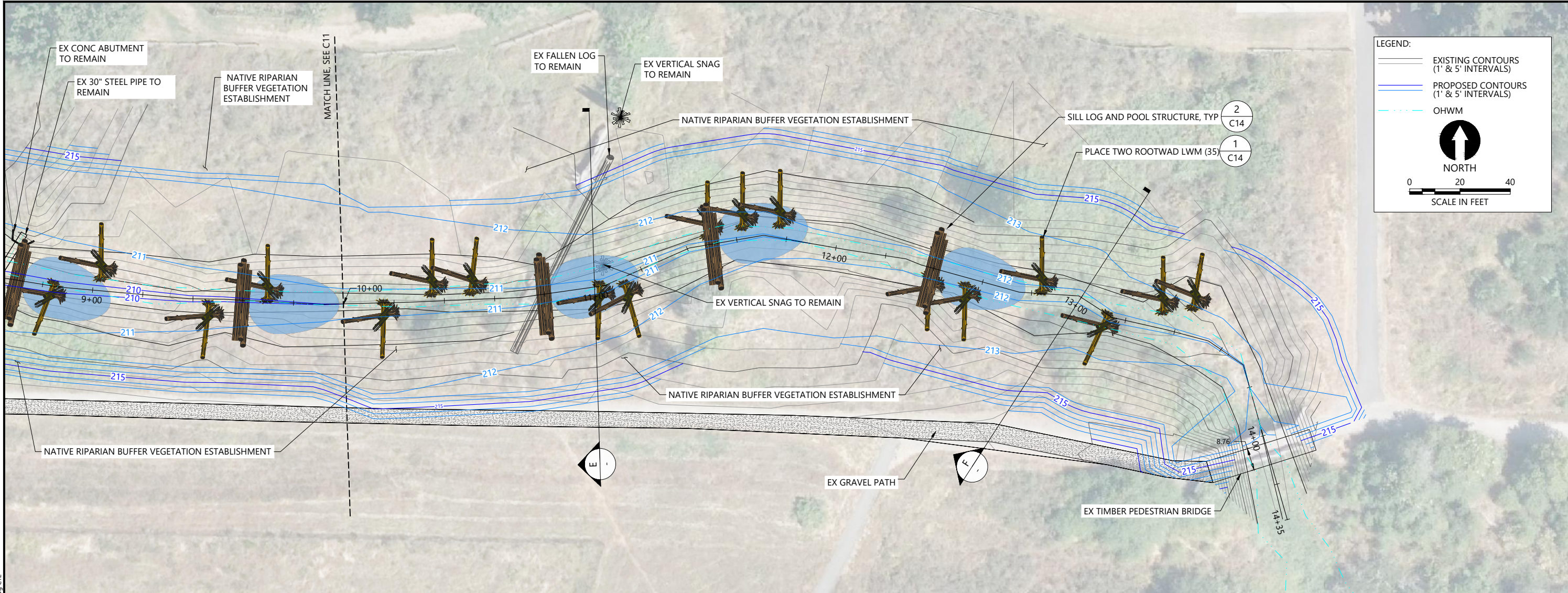
DATE: FEBRUARY 2023

SEQUALITCHEW CREEK WATERSHED ECOSYSTEM RESTORATION PROJECT

LOSING REACH/CENTER DRIVE CULVERT MATERIALS AND LAYOUT PLAN

C11

SHEET NO. 24 OF 41



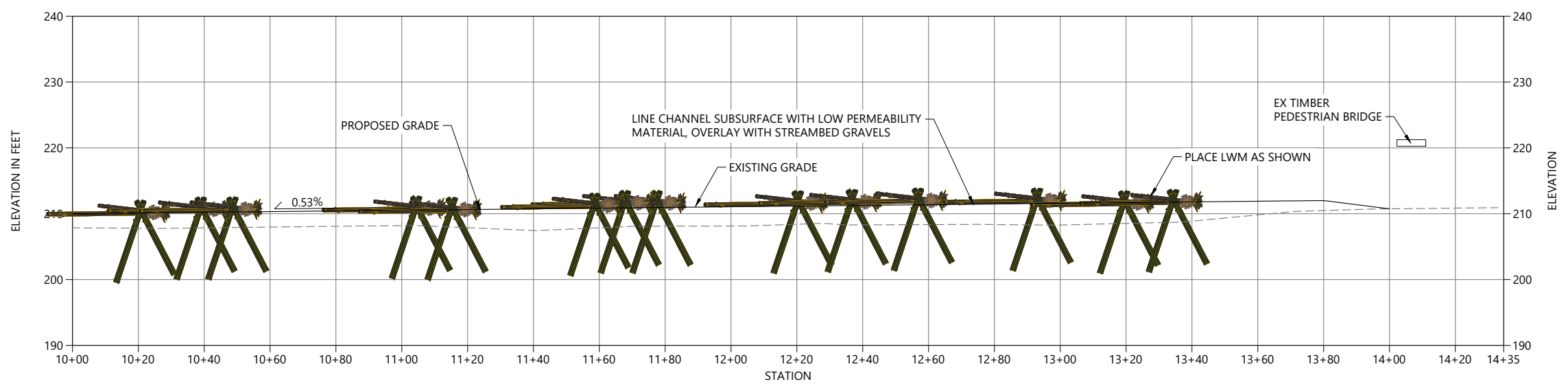
LEGEND:

- EXISTING CONTOURS (1' & 5' INTERVALS)
- PROPOSED CONTOURS (1' & 5' INTERVALS)
- OHWM

NORTH

0 20 40

SCALE IN FEET



- NOTES:
- HORIZONTAL DATUM: WASHINGTON STATE PLANE SOUTH ZONE, NAD 83/91, U.S. FEET
 - VERTICAL DATUM: NAVD88
 - PHASE NUMBER SHOWN BEFORE PROPOSED ACTIONS.

DRAFT-NOT FOR CONSTRUCTION

K:\Projects\0217_CalPortland\DuPont Aggregates South Parcel\Construction Plans\0217_PL-Losing Reach Center Drive.dwg C12
Feb 20, 2023 7:53pm tgriga



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: G. HART

DRAWN BY: T. GRIGA

CHECKED BY: T. DRURY

APPROVED BY: J. SMALL

SCALE: AS NOTED

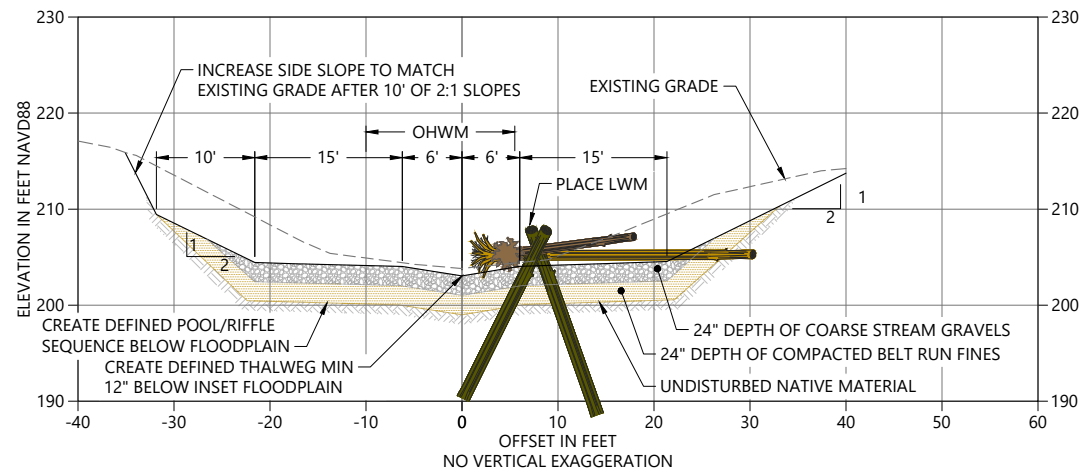
DATE: FEBRUARY 2023

SEQUALITCHEW CREEK WATERSHED ECOSYSTEM RESTORATION PROJECT

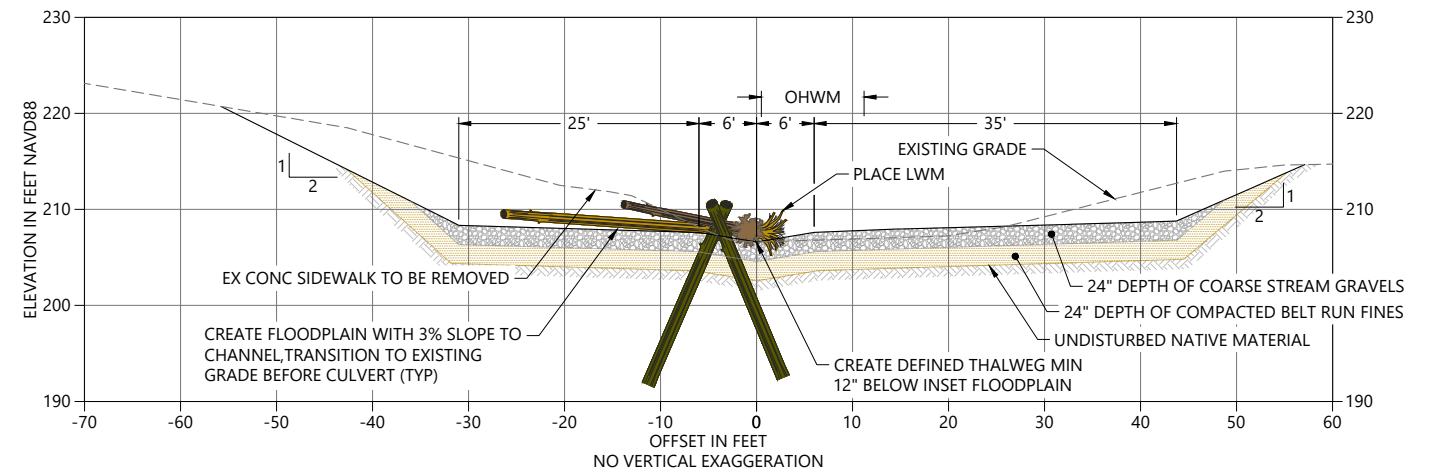
LOSING REACH/CENTER DRIVE CULVERT MATERIALS AND LAYOUT PLAN

C12

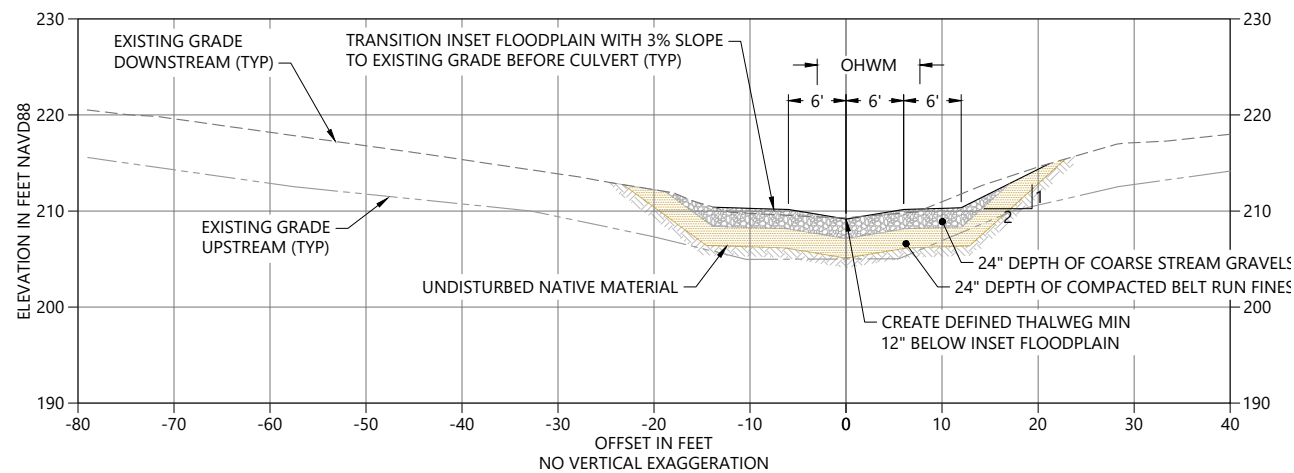
SHEET NO. 25 OF 41



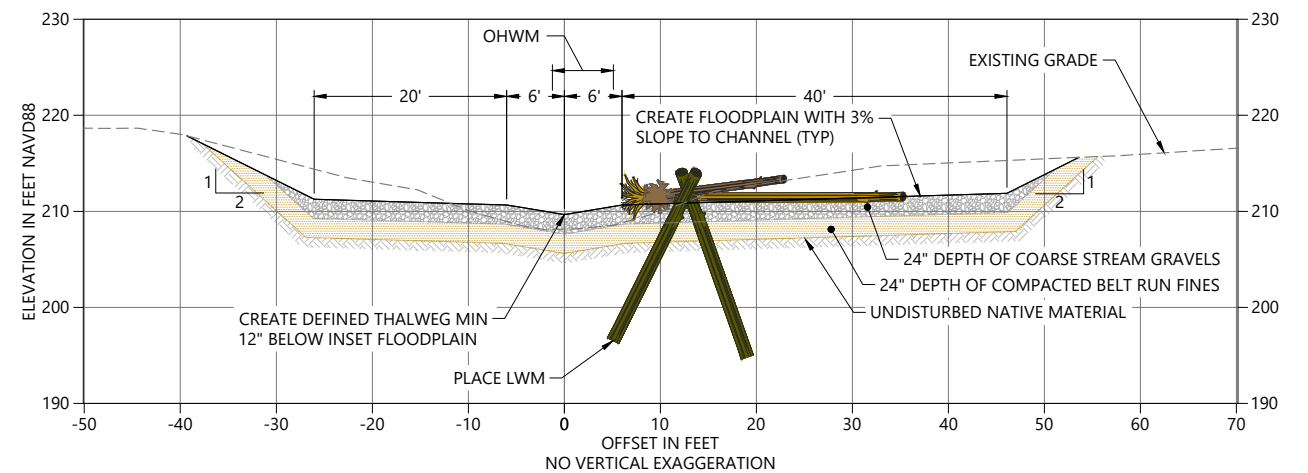
A STA 2+50 LOSING REACH TYPICAL SECTION
C10
HORIZ. SCALE: 1" = 10'
VERT. SCALE: 1" = 10'



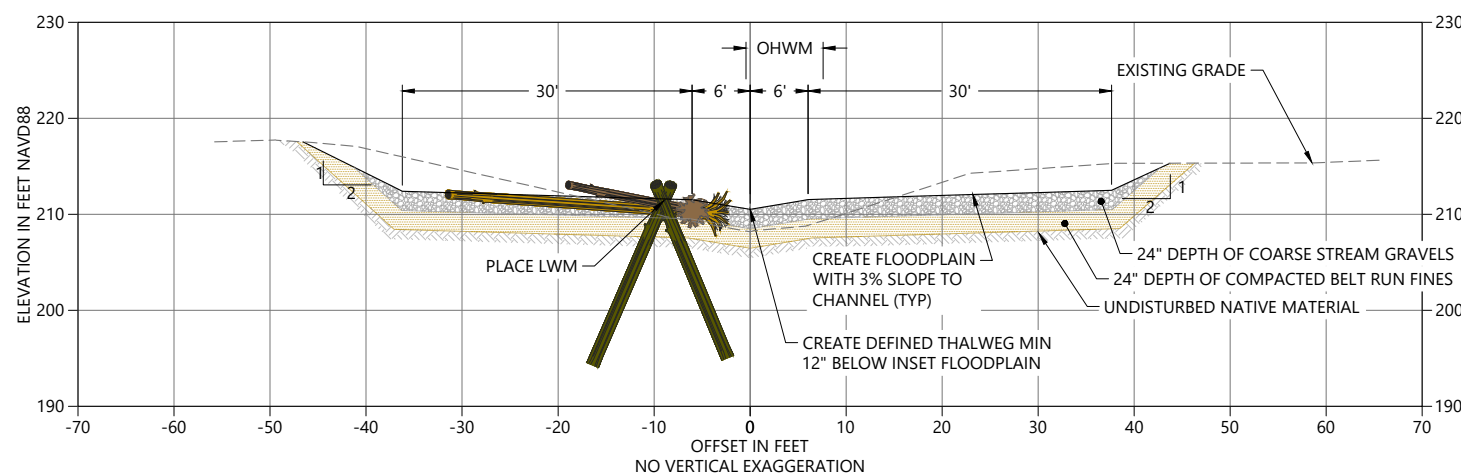
B STA 5+00 LOSING REACH TYPICAL SECTION
C10
HORIZ. SCALE: 1" = 10'
VERT. SCALE: 1" = 10'



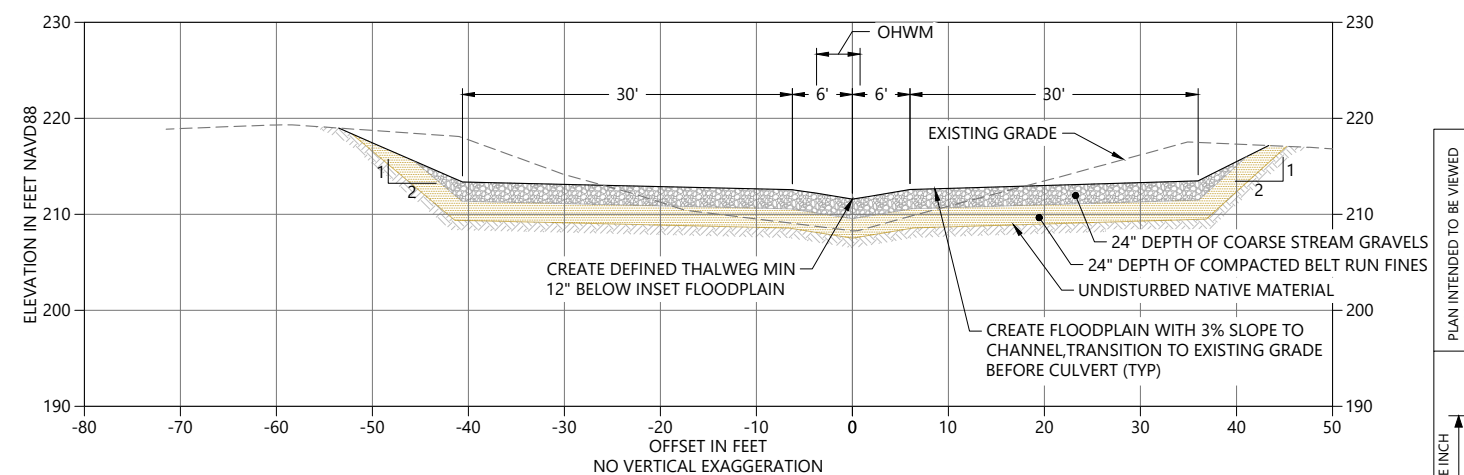
C STA 7+50 LOSING REACH TYPICAL SECTION
C11
HORIZ. SCALE: 1" = 10'
VERT. SCALE: 1" = 10'



D STA 9+00 LOSING REACH TYPICAL SECTION
C11
HORIZ. SCALE: 1" = 10'
VERT. SCALE: 1" = 10'



E STA 11+00 LOSING REACH TYPICAL SECTION
C12
HORIZ. SCALE: 1" = 10'
VERT. SCALE: 1" = 10'



F STA 13+00 LOSING REACH TYPICAL SECTION
C12
HORIZ. SCALE: 1" = 10'
VERT. SCALE: 1" = 10'

DRAFT-NOT FOR CONSTRUCTION



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: G. HART
DRAWN BY: T. GRIGA
CHECKED BY: T. DRURY
APPROVED BY: J. SMALL
SCALE: AS NOTED
DATE: FEBRUARY 2023

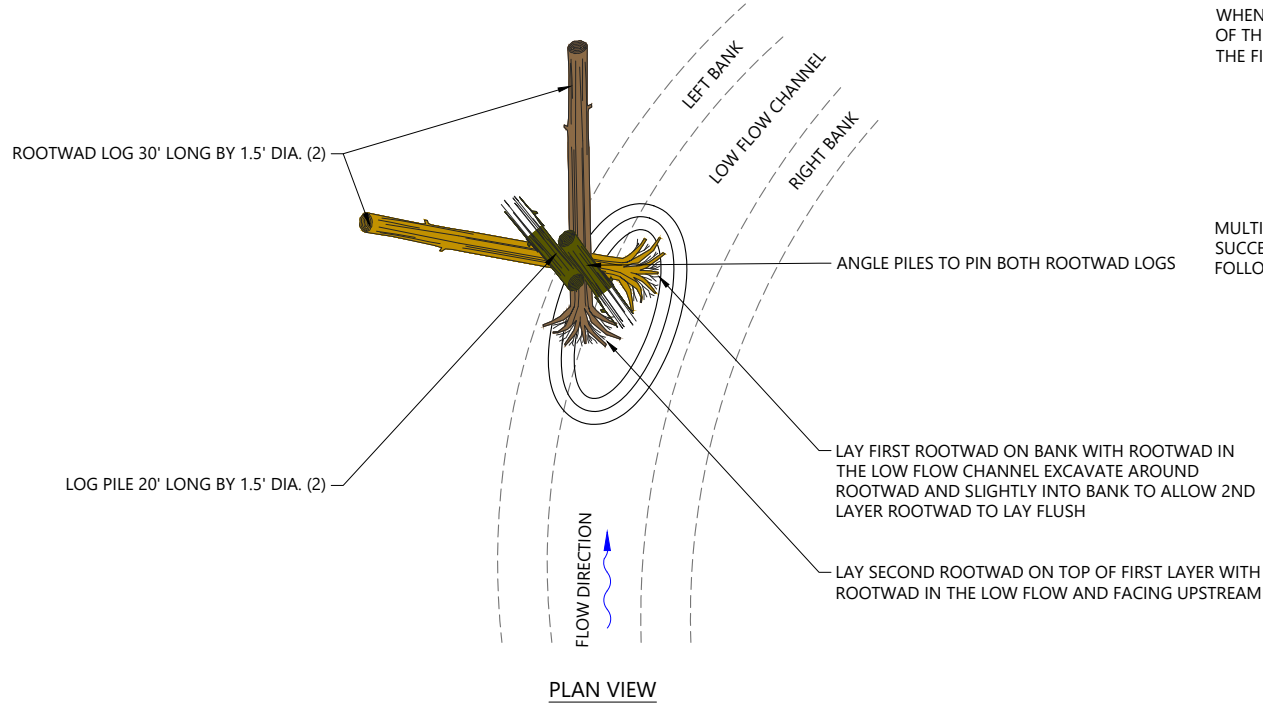
**SEQUALITCHEW CREEK WATERSHED
ECOSYSTEM RESTORATION PROJECT**

**LOSING REACH/CENTER DRIVE CULVERT
RESTORATION SECTIONS**

C13

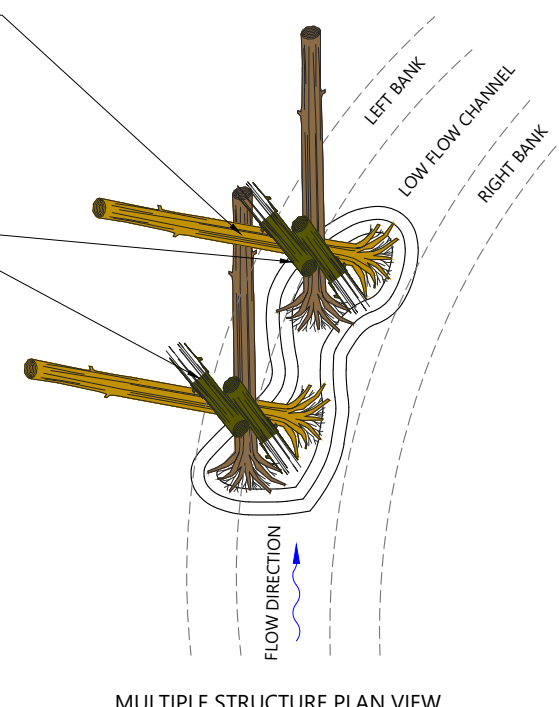
SHEET NO. 26 OF 41

K:\Projects\0217_CalPortland\DuPont Aggregates South Parcel\Construction Plans\0217-PL-Losing Reach Center Drive.dwg C14
Feb 20, 2023 7:53pm tg:iga



WHEN PLACING MULTIPLE STRUCTURES OVERLAP THE BACK OF THE SECOND LAYER OF THE UPSTREAM STRUCTURE WITH THE FIRST LAYER OF THE DOWNSTREAM STRUCTURE

MULTIPLE LWM STRUCTURES MAY BE PLACED IN SUCCESSION AS SHOWN ON DESIGN PLANS, FOLLOW ALL NOTES FOR INDIVIDUAL PLACEMENT

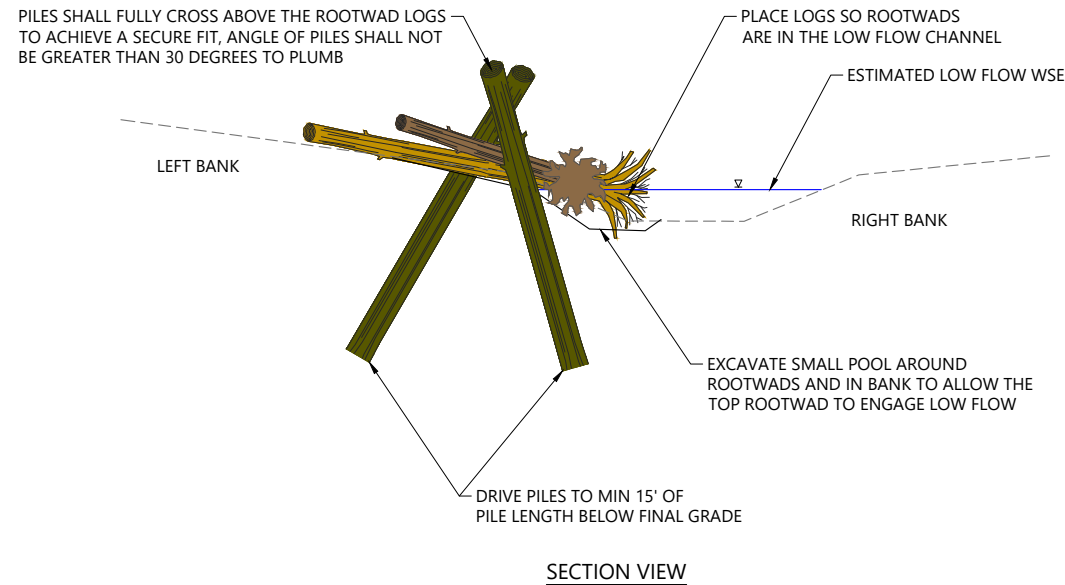


NOTES:

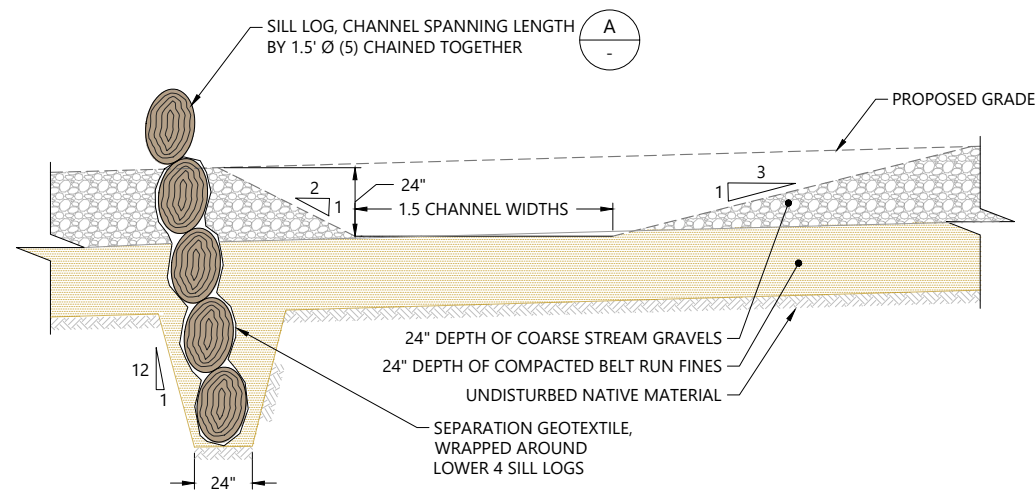
- LOG DIAMETER TO BE MEASURED 4.5' FROM ROOTWAD COLLAR.
- LOG PILES AND ROOTWAD LOGS SHALL BE DOUGLAS FIR. OTHER SPECIES MAY BE ALLOWED AT THE DIRECTION OF THE ENGINEER. LENGTHS AND DIAMETERS SHALL BE AS SPECIFIED IN THE TYPICAL.
- PILES SHALL MEET THE REQUIREMENTS OF ASTM D25 WITH THE EXCEPTION THAT NO PRESSURE TREATMENT OR OTHER CHEMICAL TREATMENT SHALL BE USED.
- LOW FLOW DEPTH MAY OR MAY NOT BE PRESENT DURING CONSTRUCTION. IF FLOW IS NOT PRESENT LOW FLOW DEPTH SHOULD BE CONSIDERED BELOW THE BANKFULL DEPTH OR AT THE SPECIFICATION OF THE ENGINEER.
- NO HYDRAULIC MODELING WAS PERFORMED FOR THE DESIGN OF THESE STRUCTURES. STABILITY AND SCOUR REQUIREMENTS ARE ESTIMATED BASED ON ENGINEERS BEST JUDGEMENT AND THE ASSUMPTIONS DETAILED IN THE BASIS OF DESIGN REPORT.

NOTES:

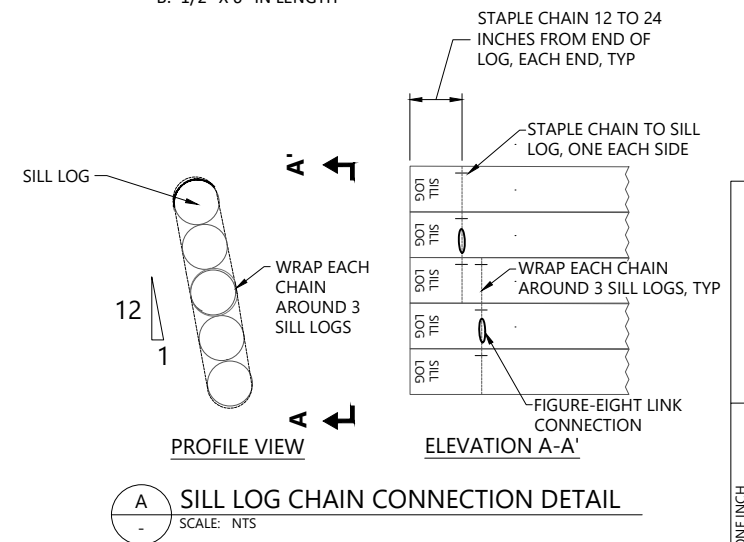
- ALL CONNECTIONS SHALL BE APPROVED BY THE ENGINEER.
- PRIOR TO FINISHING A CONNECTION REMOVE ALL SLACK FROM THE CONNECTION USING MECHANICAL ADVANTAGE
- CHAIN MUST MEET THE FOLLOWING SPECIFICATIONS:
 - 1/2-INCH TRADE SIZE
 - GRADE 40/43 STEEL
 - HOT-DIPPED GALVANIZED
 - WLL NO LESS THAN 9,200 LB
- CHAIN COUPLING LINKS MUST MEET THE FOLLOWING SPECIFICATIONS:
 - HAMMERLOCK OR FIGURE EIGHT TWO PIECE - COUPLING TYPE
 - HOT DIPPED GALVANIZED
 - GRADE 80 OR 100
 - FOR TRADE SIZES OF 1/2 INCH
 - WLL 12,000 LB OR GREATER
- STAPLES MUST MEET THE FOLLOWING SPECIFICATIONS:
 - GALVANIZED OR ZINC PLATED STEEL
 - 1/2" X 6" IN LENGTH



1 TYPICAL LWM PLACEMENT
SCALE: NTS



2 SILL LOG AND POOL STRUCTURE
SCALE: NTS



A SILL LOG CHAIN CONNECTION DETAIL
SCALE: NTS

DRAFT-NOT FOR CONSTRUCTION



REVISIONS					DESCRIPTION
REV	DATE	BY	APP'D		

DESIGNED BY: G. HART
DRAWN BY: T. GRIGA
CHECKED BY: T. DRURY
APPROVED BY: J. SMALL
SCALE: AS NOTED
DATE: FEBRUARY 2023

SEQUALITCHEW CREEK WATERSHED
ECOSYSTEM RESTORATION PROJECT

LOSING REACH/CENTER DRIVE CULVERT
LMW TYPICALS

C14

SHEET NO. 27 OF 41

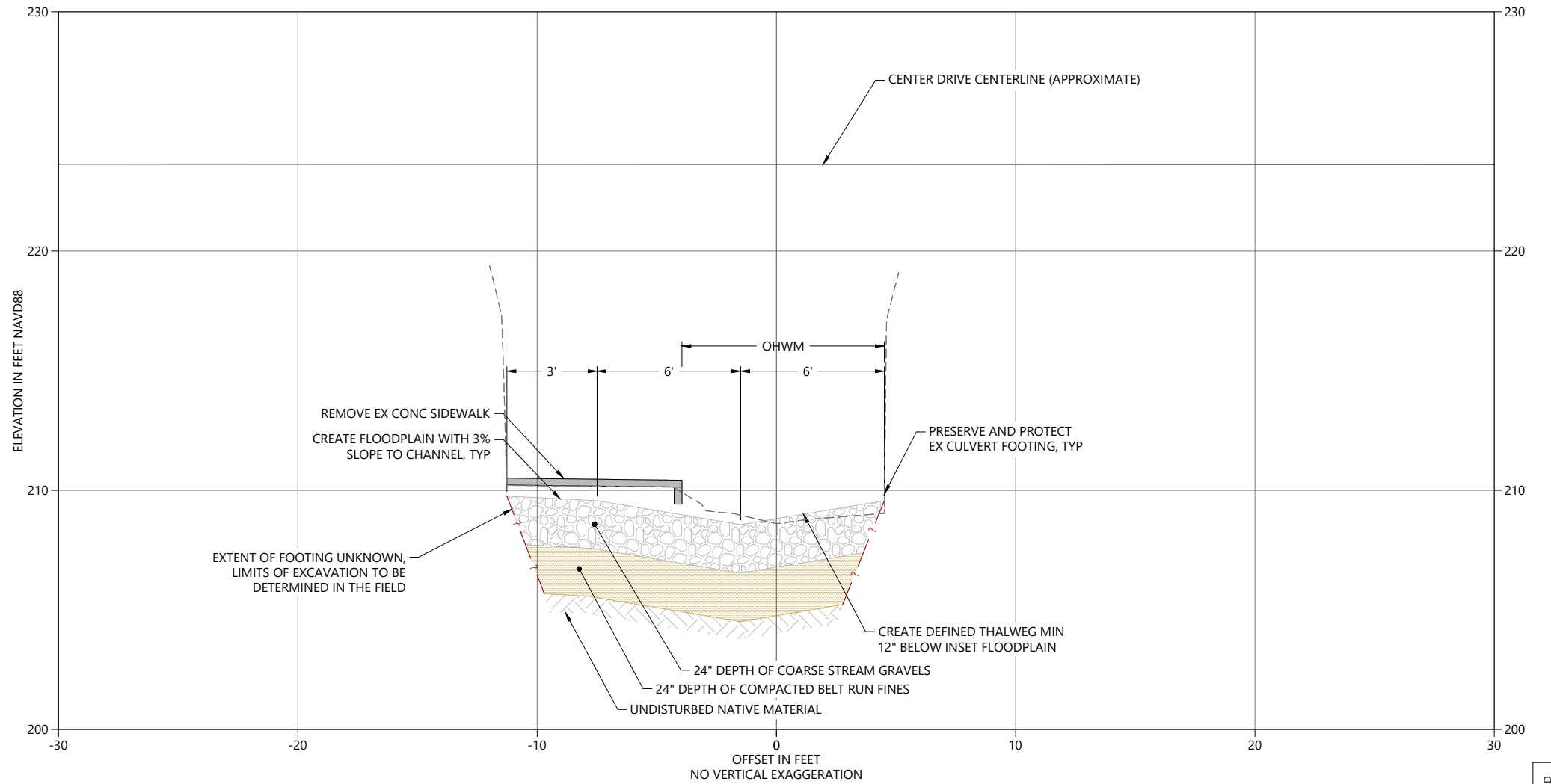
PLAN INTENDED TO BE VIEWED
IN COLOR. ADJACENT BLOCK IS
"BLUE"
ONE INCH
AT FULL SIZE IF NOT ONE
INCH SCALE ACCORDINGLY

K:\Projects\0217_CalPortland\DuPont Aggregates South Parcel\Construction Plans\0217_PL-Losing Reach Center Drive.dwg C15
Feb 20, 2023 7:53pm tg.iga



DEMOLISH SIDEWALK AT CONSTRUCTION JOINTS, ENSURE NOT TO DAMAGE/REMOVE CULVERT FOOTING, TYP

1
C09
CENTER DRIVE CULVERT SIDEWALK DEMOLITION
(WEST END OF CULVERT LOOKING EAST)
SCALE: NTS



2
C09
STA 6+64 LOSING REACH TYPICAL SECTION
HORIZ. SCALE: 1\"/>

- NOTES:
1. HORIZONTAL DATUM: WASHINGTON STATE PLANE SOUTH ZONE, NAD 83/91, U.S. FEET
 2. VERTICAL DATUM: NAVD88
 3. PHASE NUMBER SHOWN BEFORE PROPOSED ACTIONS.

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REVISIONS					DESCRIPTION
REV	DATE	BY	APP'D		

DESIGNED BY: G. HART
DRAWN BY: T. GRIGA
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APPROVED BY: J. SMALL
SCALE: AS NOTED
DATE: FEBRUARY 2023

**SEQUALITCHEW CREEK WATERSHED
ECOSYSTEM RESTORATION PROJECT**

LOSING REACH/CENTER DRIVE CULVERT DETAILS

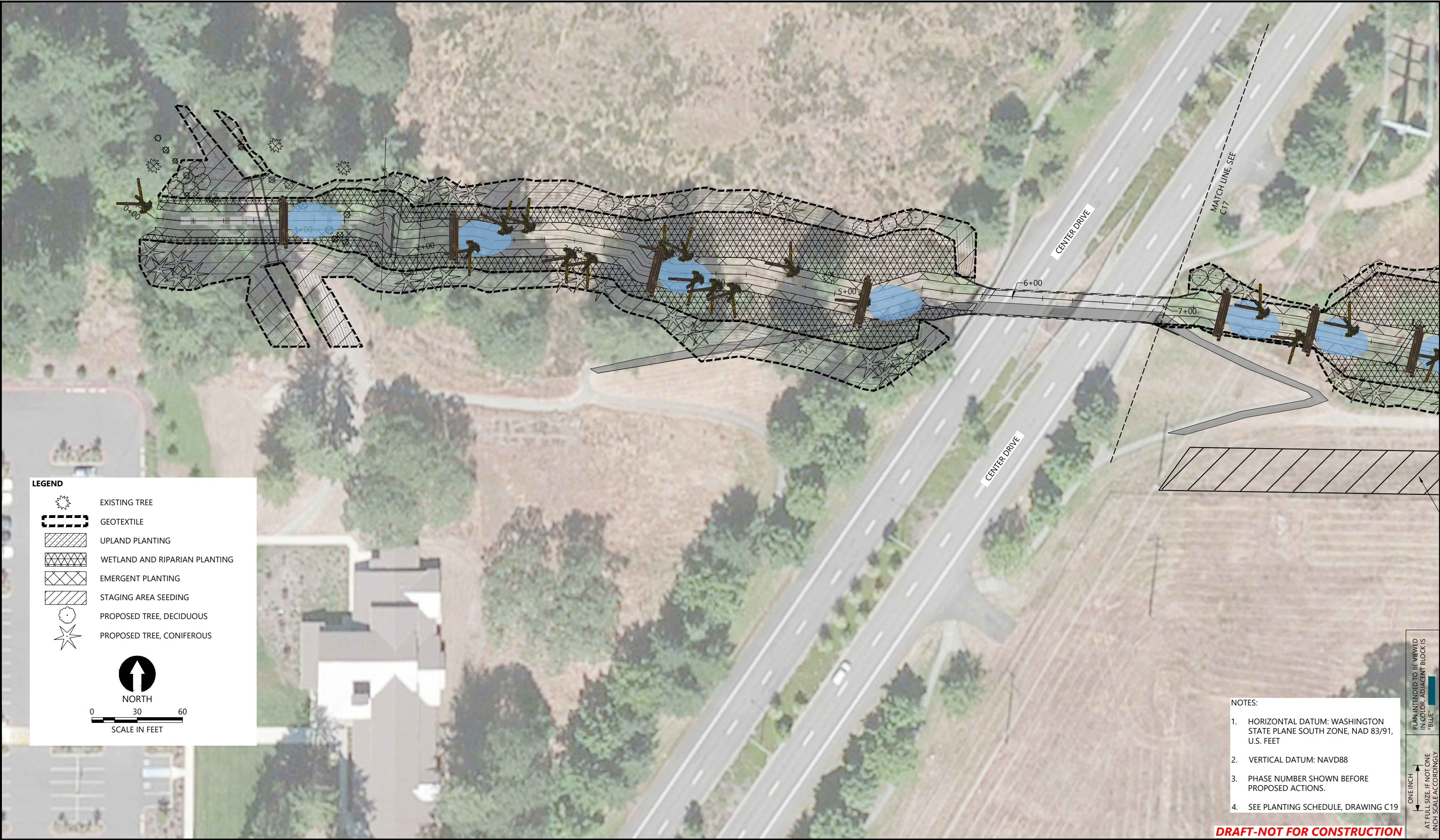
C15

SHEET NO. 28 OF 41

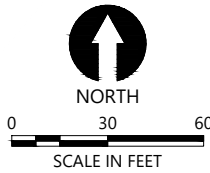
PLAN INTENDED TO BE VIEWED
IN COLOR. ADJACENT BLOCK IS
"BLUE"

ONE INCH
↑
AT FULL SIZE IF NOT ONE
INCH SCALE ACCORDINGLY
↓

K:\Projects\0217_CalPortland\DuPont Aggregates South Parcel\Construction Plans\0217-C-Losing Reach Culvert Planting.dwg C16
Feb 20, 2023 7:54pm tg.rga



- LEGEND**
- EXISTING TREE
 - GEOTEXTILE
 - UPLAND PLANTING
 - WETLAND AND RIPARIAN PLANTING
 - EMERGENT PLANTING
 - STAGING AREA SEEDING
 - PROPOSED TREE, DECIDUOUS
 - PROPOSED TREE, CONIFEROUS



- NOTES:**
- HORIZONTAL DATUM: WASHINGTON STATE PLANE SOUTH ZONE, NAD 83/91, U.S. FEET
 - VERTICAL DATUM: NAVD88
 - PHASE NUMBER SHOWN BEFORE PROPOSED ACTIONS.
 - SEE PLANTING SCHEDULE, DRAWING C19

DRAFT-NOT FOR CONSTRUCTION



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: G. HART
DRAWN BY: T. GRIGA
CHECKED BY: T. DRURY
APPROVED BY: J. SMALL
SCALE: AS NOTED
DATE: FEBRUARY 2023

**SEQUALITCHEW CREEK WATERSHED
ECOSYSTEM RESTORATION PROJECT**

**LOSING REACH/CENTER DRIVE
CULVERT PLANTING PLAN**

C16

SHEET NO. 29 OF 41

PLAN INTENDED TO BE VIEWED
IN COLOR. ADJACENT BLOCK IS
"BLUE"
ONE INCH
AT FULL SIZE IF NOT ONE
INCH SCALE ACCORDINGLY

K:\Projects\0217_CalPortland\DuPont Aggregates South Parcel\Construction Plans\0217-C-Losing Reach Culvert Planting.dwg C17
Feb 20, 2023 7:54pm tgiga



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: G. HART
DRAWN BY: T. GRIGA
CHECKED BY: T. DRURY
APPROVED BY: J. SMALL
SCALE: AS NOTED
DATE: FEBRUARY 2023

SEQUALITCHEW CREEK WATERSHED
ECOSYSTEM RESTORATION PROJECT

LOSING REACH/CENTER DRIVE
CULVERT PLANTING PLAN

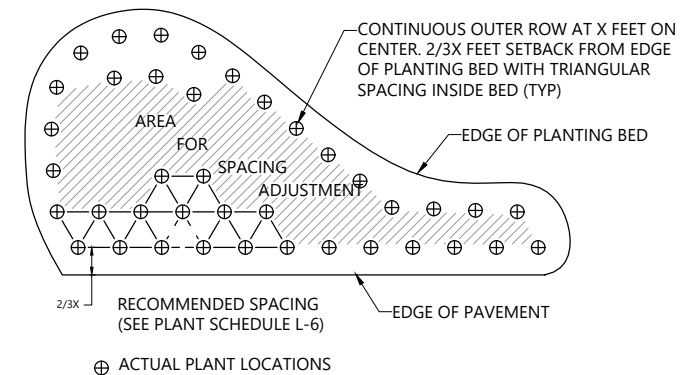
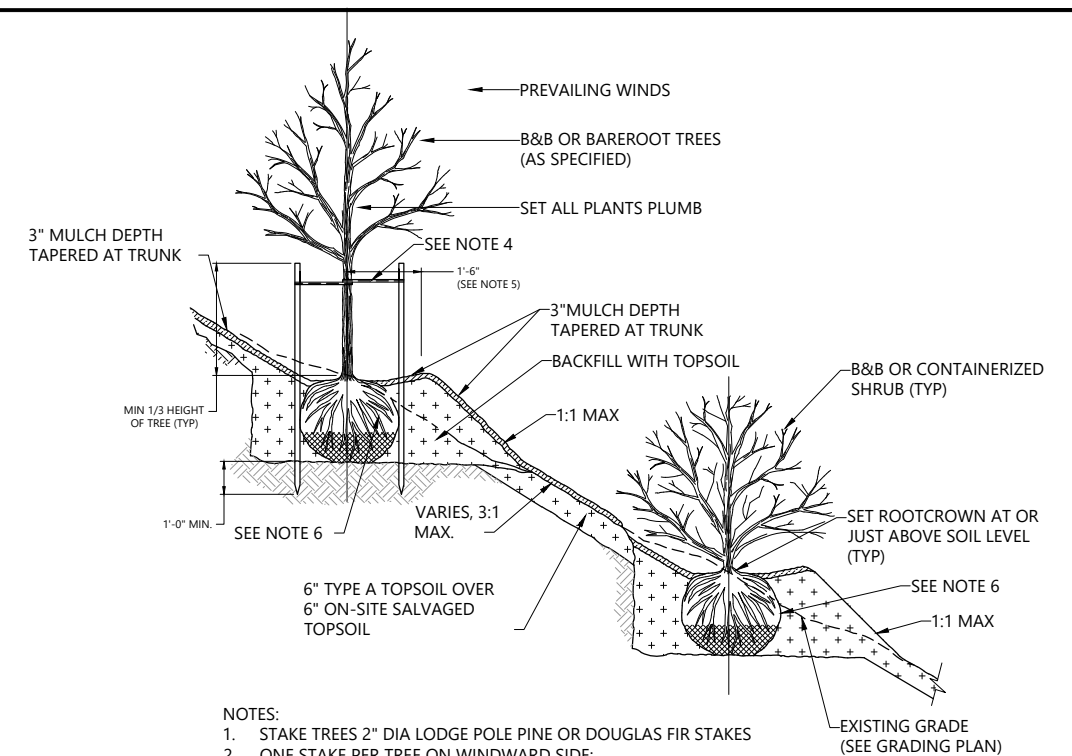
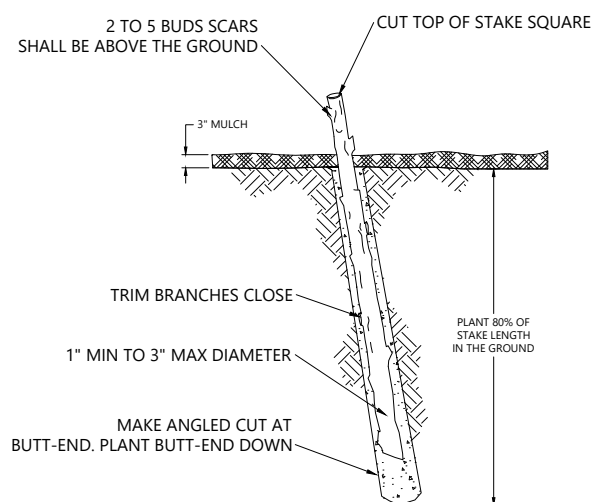
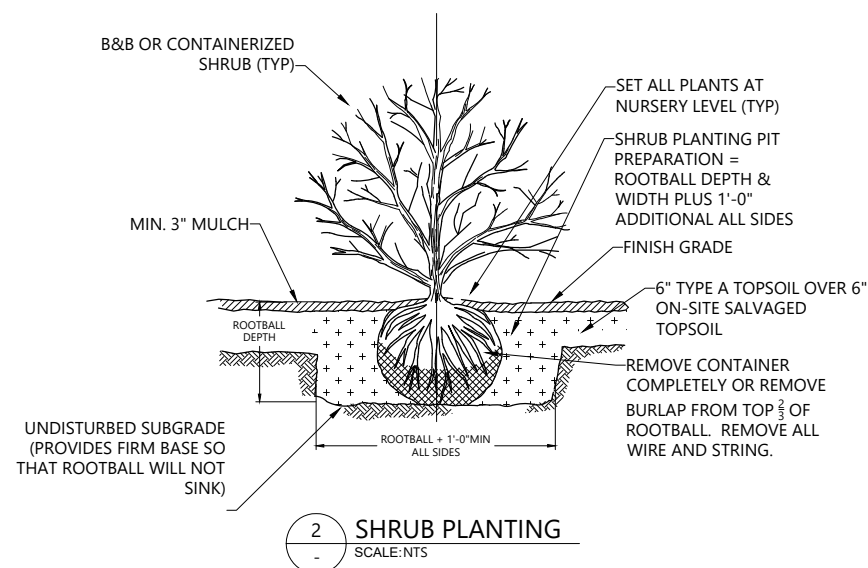
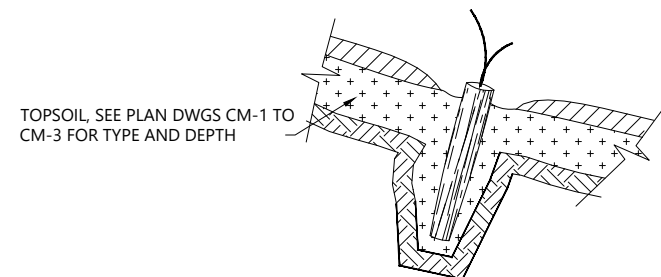
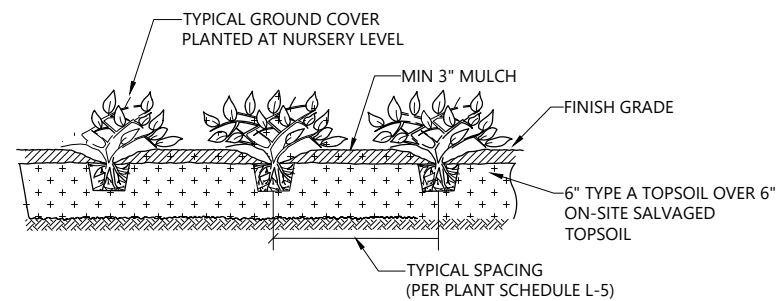
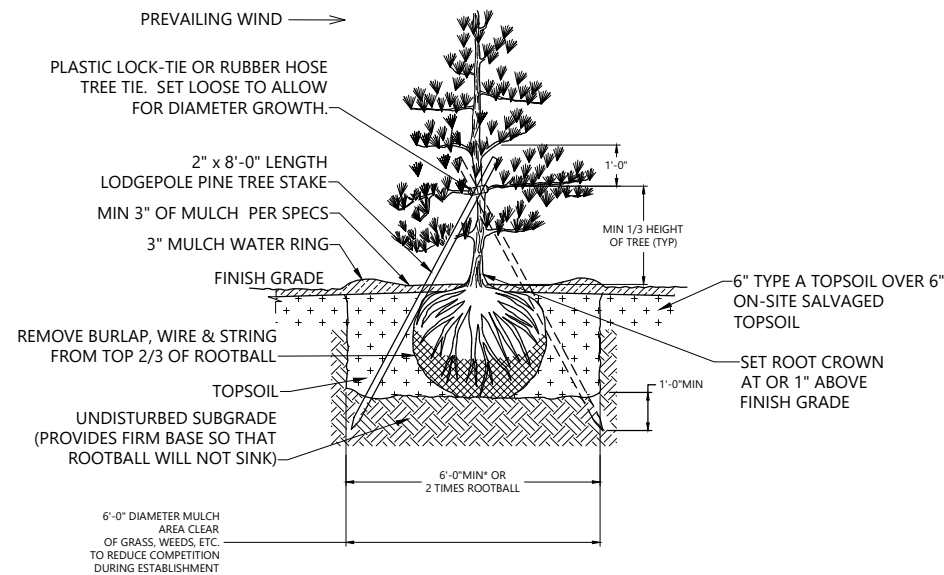
C17

SHEET NO. 30 OF 41

- NOTES:
1. HORIZONTAL DATUM: WASHINGTON STATE PLANE SOUTH ZONE, NAD 83/91, U.S. FEET
 2. VERTICAL DATUM: NAVD88
 3. PHASE NUMBER SHOWN BEFORE PROPOSED ACTIONS.
 4. SEE PLANTING SCHEDULE, DRAWING C19

DRAFT-NOT FOR CONSTRUCTION

PLAN INTENDED TO BE VIEWED
IN COLOR. ADJACENT BLOCK IS
"BLUE"
ONE INCH
AT FULL SIZE IF NOT ONE
INCH SCALE ACCORDINGLY



NOTES: APPLY PLANTING PATTERN FOR SHRUB, GROUNDCOVER, GRASS, AND PERENNIAL PLANTINGS

DRAFT-NOT FOR CONSTRUCTION

[illegible]

DESIGNED BY: G. HART
DRAWN BY: T. GRIGA
CHECKED BY: T. DRURY
APPROVED BY: J. SMALL
SCALE: AS NOTED
DATE: FEBRUARY 2023

**SEQUALITCHEW CREEK WATERSHED
ECOSYSTEM RESTORATION PROJECT**

LOSING REACH/CENTER DRIVE CULVERT PLANTING DETAILS

C18

SHEET NO. 31 OF 41

K:\Projects\0217_CalPortland\DuPont Aggregates South Parcel\Construction Plans\0217-C-Losing Reach Culvert Planting.dwg C19
Feb 20, 2023 7:54pm tg.iga

PLANTING SCHEDULE			
COMMON NAME	SPECIES NAME	SIZE	SPACING
TREES			
CONIFERS			
GRAND FIR	<i>Abies grandis</i>	5-6-FT HEIGHT	AS SHOWN
DOUGLAS FIR	<i>Pseudotsuga menziesii</i>	5-6-FT HEIGHT	AS SHOWN
WESTERN RED CEDAR	<i>Thuja plicata</i>	5-6-FT HEIGHT	AS SHOWN
WESTERN HEMLOCK	<i>Tsuga heterophylla</i>	5-6-FT HEIGHT	AS SHOWN
CRYPTOMERIA	<i>Cryptomeria japonica</i>	5-6-FT HEIGHT	AS SHOWN
DECIDUOUS			
RED ALDER	<i>Alnus rubra</i>	5-6-FT HEIGHT	AS SHOWN
BLACK COTTONWOOD	<i>Populus trichocarpa</i>	5-6-FT HEIGHT	AS SHOWN

PLANTING SCHEDULE				
SHRUBS				
UPLAND				
OCEANSPRAY	<i>Holodiscus discolor</i>	1 GALLON	5' O.C.	
RED FLOWERING CURRANT	<i>Ribes sanguineum</i>	1 GALLON	5' O.C.	
NOOTKA ROSE	<i>Rosa nutkana</i>	1 GALLON	5' O.C.	
SNOWBERRY	<i>Symphoricarpos albus</i>	1 GALLON	5' O.C.	
SASKATOON SERVICEBERRY	<i>Amelanchier alnifolia</i>	1 GALLON	5' O.C.	
MOCK ORANGE	<i>Philadelphus lewisii</i>	1 GALLON	5' O.C.	
BEAKED HAZELNUT	<i>Corylus cornuta</i>	1 GALLON	5' O.C.	
INDIAN PLUM	<i>Oemleria cerasiformis</i>	1 GALLON	5' O.C.	
WETLAND AND RIPARIAN				
HOOKEER WILLOW	<i>Salix hookeriana</i>	LIVESTAKE	2' O.C.	
SCOULER WILLOW	<i>Salix scouleriana</i>	LIVESTAKE	2' O.C.	
BLACK TWINBERRY	<i>Lonicera involucrata</i>	1 GALLON	5' O.C.	
RED OSIER DOGWOOD	<i>Cornus sericea</i>	LIVESTAKE	2' O.C.	
SALMONBERRY	<i>Rubus spectabilis</i>	1 GALLON	5' O.C.	

EMERGENT				
RED OSIER DOGWOOD	<i>Cornus sericea</i>	LIVESTAKE	2' O.C.	
SALMONBERRY	<i>Rubus spectabilis</i>	1 GALLON	5' O.C.	
COMMON RUSH	<i>Juncus effusus</i>	10-CUBIC INCH PLUG	2' O.C.	
CREEPING SPIKE-RUSH	<i>Eleocharis palustris</i>	10-CUBIC INCH PLUG	2' O.C.	
HARDSTEM BULRUSH	<i>Scirpus acutus</i>	10-CUBIC INCH PLUG	2' O.C.	
SMALL-FRUITED BULRUSH	<i>Scirpus microcarpus</i>	10-CUBIC INCH PLUG	2' O.C.	
SWITCHGRASS	<i>Panicum virgatum</i> 'Shenadoah'	1 GALLON	2' O.C.	
SMALL-FRUITED BULRUSH	<i>Scirpus microcarpus</i>	10-CUBIC INCH PLUG	2' O.C.	
SLOUGH SEDGE	<i>Carex obnupta</i>	10-CUBIC INCH PLUG	2' O.C.	
STAGING AREA SEEDING				
NORTHWEST MEADOWSCAPES NORTHWEST PRAIRIE MIX OR APPROVED EQUAL, APPLY AS HYDROSEED WITH MULCH, FERTILIZER AND TACKIFIER ACCORDING TO SUPPLIERS RECOMENDATIONS				

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REVISIONS					
REV	DATE	BY	APP'D	DESCRIPTION	

DESIGNED BY: G. HART
DRAWN BY: T. GRIGA
CHECKED BY: T. DRURY
APPROVED BY: J. SMALL
SCALE: AS NOTED
DATE: FEBRUARY 2023

SEQUALITCHEW CREEK WATERSHED
ECOSYSTEM RESTORATION PROJECT

LOSING REACH/CENTER DRIVE
CULVERT PLANTING SCHEDULE

C19

SHEET NO. 32 OF 41

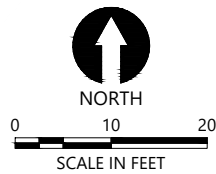
ONE INCH
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PLAN INTENDED TO BE VIEWED
IN COLOR. ADJACENT BLOCK IS
"BLUE"
↓
AT FULL SIZE IF NOT ONE
INCH SCALE ACCORDINGLY

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Feb 20, 2023 7:54pm tgiga



- LEGEND:
- DEMOLISH LINEAR FEATURE
 - DEMOLISH FEATURE

- NOTES:
- AERIAL FROM ESRI.
 - HORIZONTAL DATUM: WASHINGTON STATE PLANE SOUTH ZONE, NAD 83, U.S. FEET
 - VERTICAL DATUM: NAVD88



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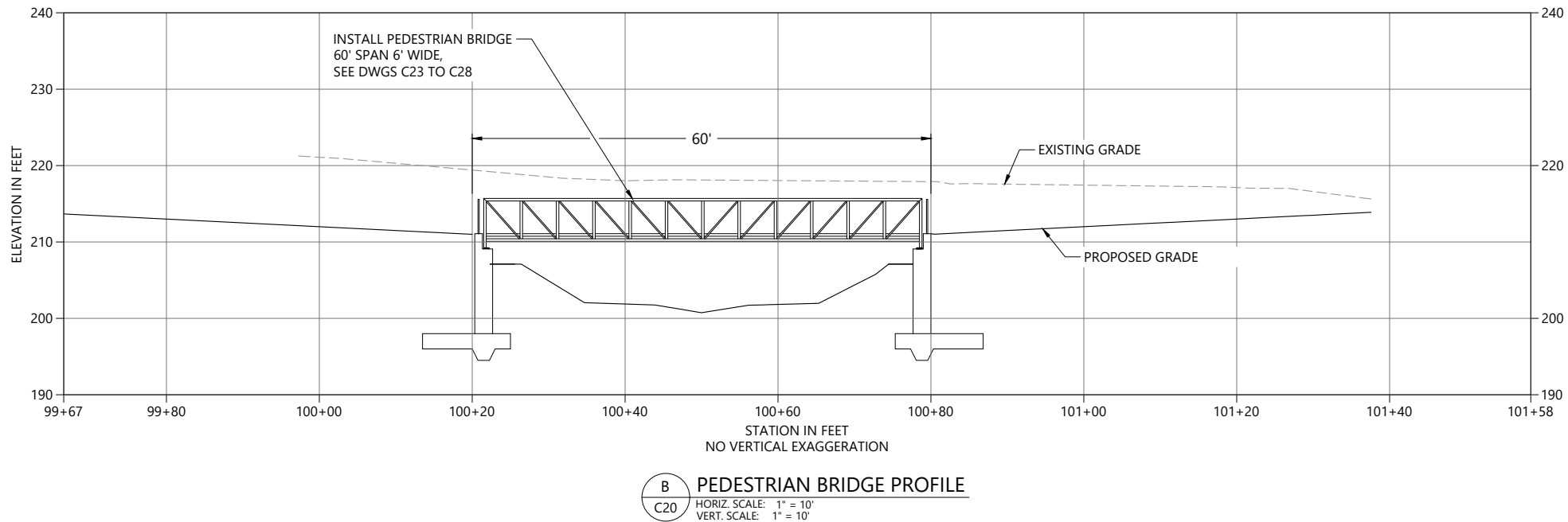
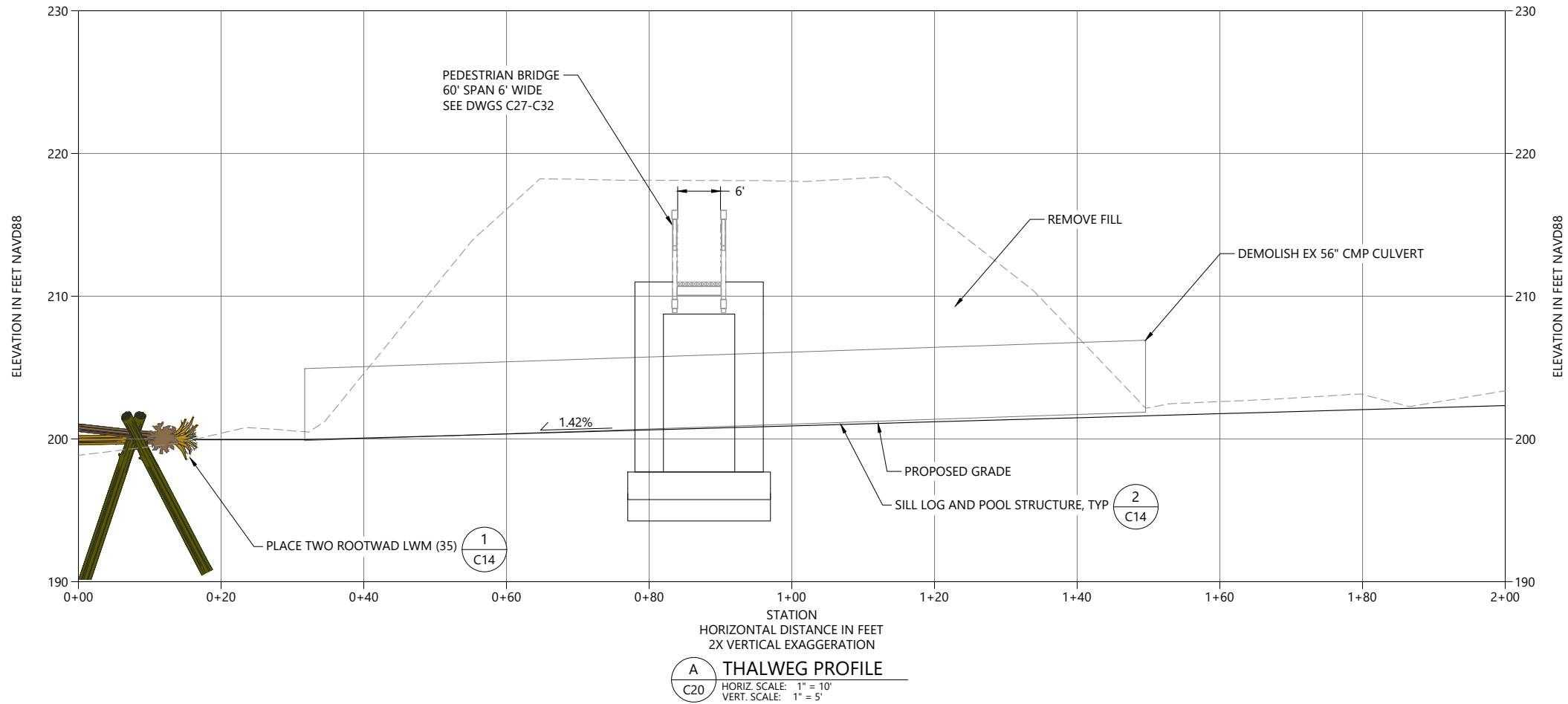
**SEQUALITCHEW CREEK WATERSHED
ECOSYSTEM RESTORATION PROJECT**

CITY HALL BRIDGE DEMOLITION PLAN

C20

SHEET NO. **33** OF **41**

K:\Project\0217-City Hall Bridge\Drawings\0217-C-CITY HALL BRIDGE.dwg C22
Feb 20, 2023 7:54pm tgriga



NOTES:

1. HORIZONTAL DATUM: WASHINGTON STATE PLANE SOUTH ZONE, NAD 83, U.S. FEET
2. VERTICAL DATUM: NAVD88
3. PHASE NUMBER SHOWN BEFORE PROPOSED ACTIONS.

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REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DESIGNED BY: G. HART
DRAWN BY: T. GRIGA
CHECKED BY: T. DRURY
APPROVED BY: J. SMALL
SCALE: AS NOTED
DATE: FEBRUARY 2023

**SEQUALITCHEW CREEK WATERSHED
ECOSYSTEM RESTORATION PROJECT**

**CITY HALL BRIDGE GRADING AND
DEMOLITION SECTIONS**

C22

SHEET NO. **35** OF **41**

PLAN INTENDED TO BE VIEWED
IN COLOR. ADJACENT BLOCK IS
"BLUE"
ONE INCH
AT FULL SIZE IF NOT ONE
INCH SCALE ACCORDINGLY

BRIDGE GENERAL NOTES

1.

ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION," DATED 2023, AND PROJECT SPECIAL PROVISIONS.
2.

ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL UNLESS OTHERWISE SHOWN.
3.

THE CONTRACTOR SHALL PLAN AND CONDUCT THE WORK IN SUCH A MANNER THAT NO OBJECTS OR FOREIGN MATERIALS FALL FROM THE WORK ON THE NEW BRIDGE TO THE CREEK CHANNEL BELOW. THE CONTRACTOR'S PLAN FOR ACCOMPLISHING THIS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION. ALL WORK ASSOCIATED WITH THIS CONTAINMENT SYSTEM SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
4.

THE STRUCTURE DESIGN IS IN ACCORDANCE WITH THE REQUIREMENTS OF

AASHTO LRFD GUIDE SPECIFICATIONS FOR THE DESIGN OF PEDESTRIAN BRIDGES, 2ND EDITION DATED 2009, AND INTERIM REVISIONS THROUGH 2018.

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION, 2020.

AASHTO GUIDE SPECIFICATIONS FOR LRFD SEISMIC BRIDGE DESIGN, 2ND EDITION, 2011 WITH INTERIMS THROUGH 2015.
5.

FOUNDATION DESIGN BASED ON RECOMMENDATIONS OF ANCHOR QEA IN THE DRAFT GEOTECHNICAL REPORT DATED NOVEMBER, 2022.

FOOTING, FACTORED BEARING CAPACITY		
SERVICE	STRENGTH	EXTREME
6.3 KSF	8.6 KSF	17.1 KSF

DESIGN LOADS:

DEAD LOAD:

CONCRETE, UNLESS NOTED OTHERWISE	155 PCF
STEEL	490 PCF

LIVE LOAD:

PEDESTRIAN	90 PSF
------------	--------

BRIDGE SUPERSTRUCTURE REACTIONS:

THE FOLLOWING STRUCTURE REACTIONS WERE ASSUMED FOR THE DESIGN OF SUBSTRUCTURE ELEMENTS.

LOAD	P (KIPS)	H (KIPS)
DEAD		-
LIVE		-
WIND	-	

P = VERTICAL LOAD EACH BASE PLATE (4 EA)
H = HORIZONTAL LOAD EACH FOOTING (2 EA)

SEISMIC DESIGN:

PGA	=	0.420g
A _s	=	0.504g
S _{DS}	=	1.164g
S _{D1}	=	0.435g
SITE CLASS	=	C

7.

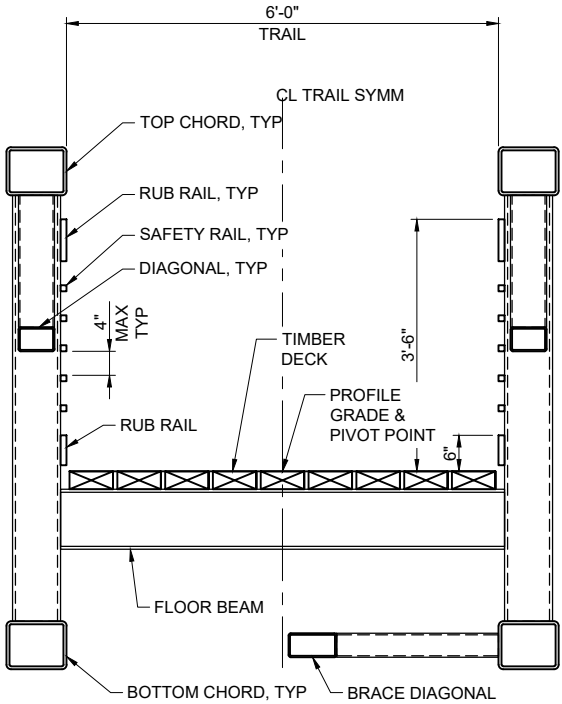
UNLESS OTHERWISE SHOWN IN THE PLANS THE CONCRETE COVER MEASURED FROM THE FACE OF THE CONCRETE TO THE FACE OF ANY REINFORCING STEEL SHALL BE 2 INCHES AT THE TOP OF THE BRIDGE DECK, 3 INCHES AT CONCRETE CAST AGAINST EARTH, AND 1 1/2 INCHES AT ALL OTHER LOCATIONS
8.

CONCRETE SHALL BE CLASS 4000 UNLESS NOTED OTHERWISE BELOW.
9.

CONCRETE STEEL REINFORCING SHALL BE ASTM A706, GRADE 60, UNLESS NOTED OTHERWISE.
10.

ALL EXTERIOR CORNERS AND EDGES SHALL HAVE A 3/4" CHAMFER AND ALL INTERIOR CORNERS SHALL HAVE A 3/4" FILLET UNO.
11.

THE STEEL TRUSS SHALL BE CONTRACTOR DESIGNED. STRUCTURAL STEEL SHALL BE WEATHERING STEEL (ASTM A847 Fy = 50 KSI FOR HSS SECTIONS, ASTM A709 GR50W FOR STEEL SHAPES). TRUSS FLOORBEAMS AND BRACE DIAGONALS SHALL BE PAINTED. THE TRUSS SHALL BE MANUFACTURED WITH DEAD LOAD CAMBER SO THAT THE FINAL GEOMETRY OF THE IN-SITU TRUSS DOES NOT HAVE A SAG.



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

PLAN INTENDED TO BE VIEWED IN COLOR. ADJACENT BLOCK IS "BLUE"

ONE INCH
↑
AT FULL SIZE IF NOT ONE INCH SCALE ACCORDINGLY

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REVISIONS					DESCRIPTION
REV	DATE	BY	APP'D		

DESIGNED BY: KPFF
DRAWN BY: KPFF
CHECKED BY: KPFF
APPROVED BY: J. SMALL
SCALE: AS NOTED
DATE: FEBRUARY 2023

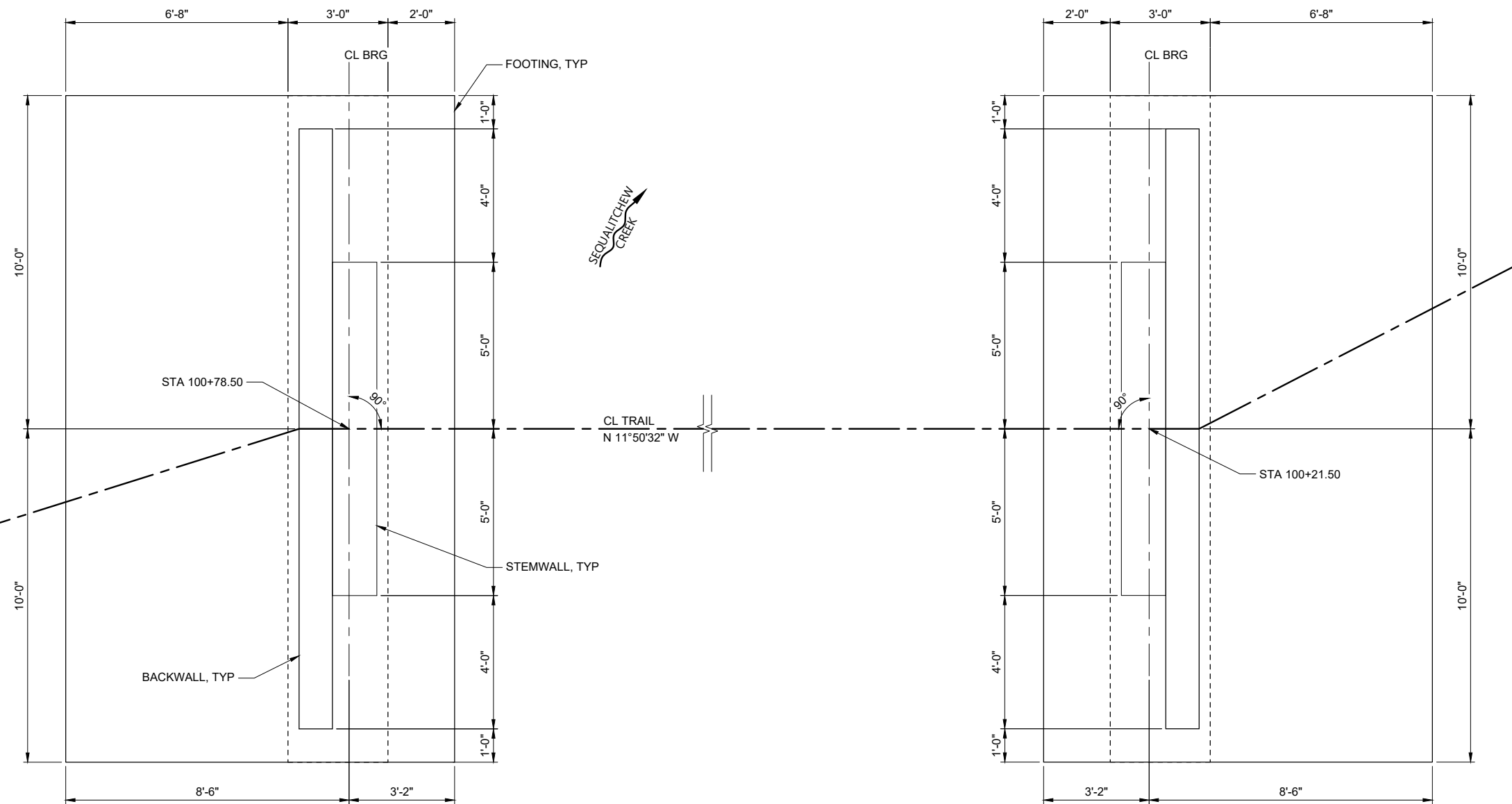
SEQUALITCHEW CREEK WATERSHED
ECOSYSTEM RESTORATION PROJECT

CITY HALL BRIDGE GENERAL NOTES AND
TYPICAL SECTION

C23

SHEET NO. 36 OF 41

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Feb 20, 2023 7:54pm tpjga



FOUNDATION PLAN

SCALE: 1/2"=1'-0"
BEARING OF BOTH ABUTMENTS IS S 78°09'28" W

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REVISIONS					
REV	DATE	BY	APP'D	DESCRIPTION	

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**SEQUALITCHEW CREEK WATERSHED
ECOSYSTEM RESTORATION PROJECT**

CITY HALL BRIDGE FOUNDATION PLAN

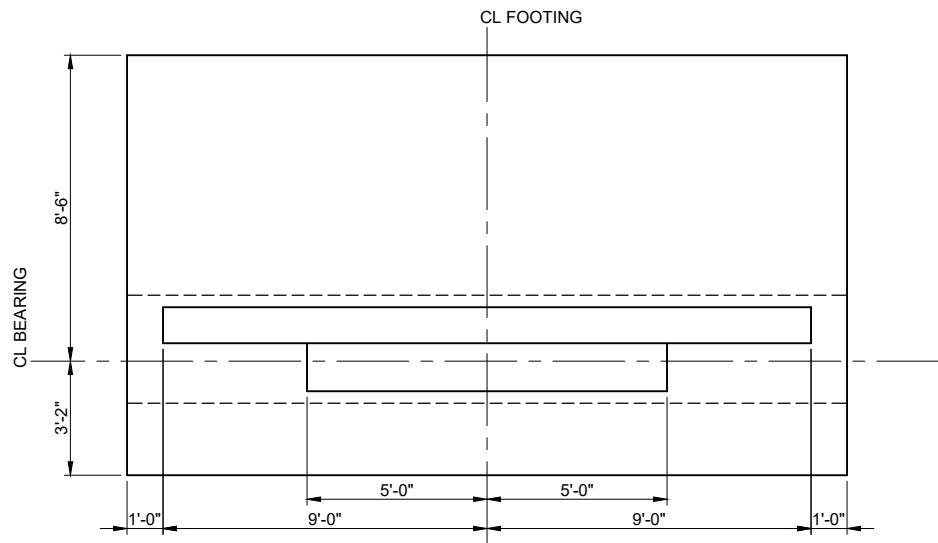
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SHEET NO. 37 OF 41

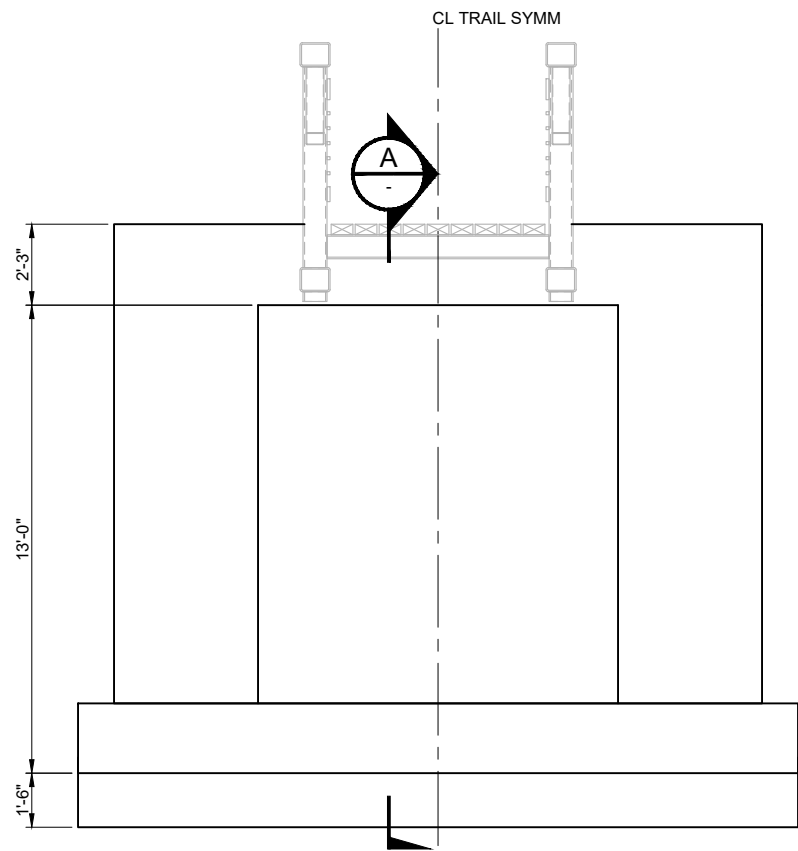
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IN COLOR. ADJACENT BLOCK IS
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ONE INCH
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INCH SCALE ACCORDINGLY

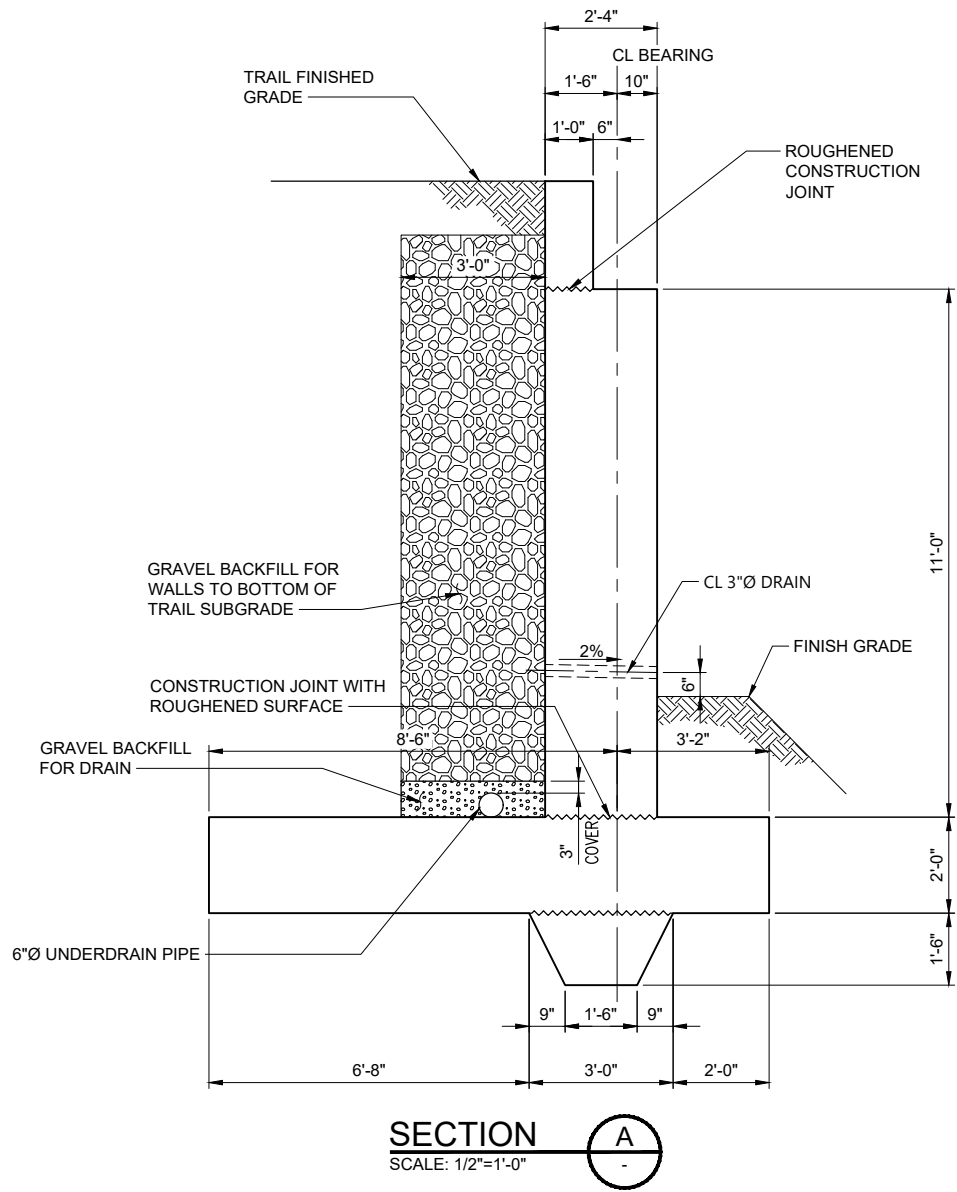
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Feb 20, 2023 7:54pm tp:iga



ABUTMENT PLAN
SCALE: 3/4"=1'-0"



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



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

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SEQUALITCHEW CREEK WATERSHED
ECOSYSTEM RESTORATION PROJECT

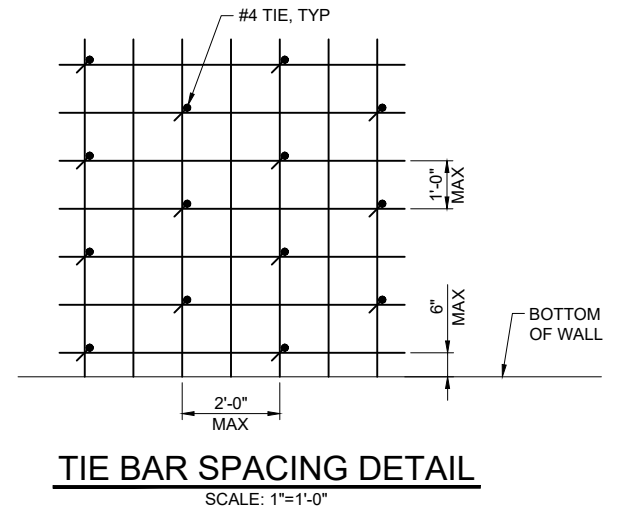
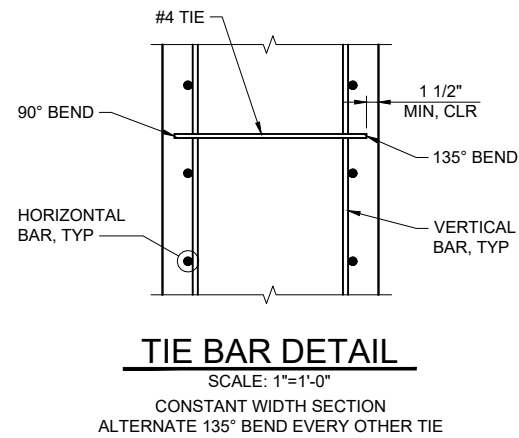
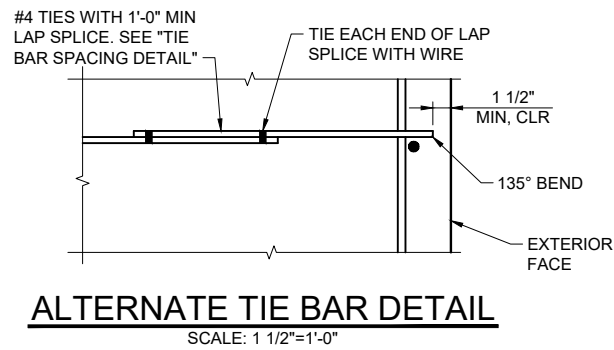
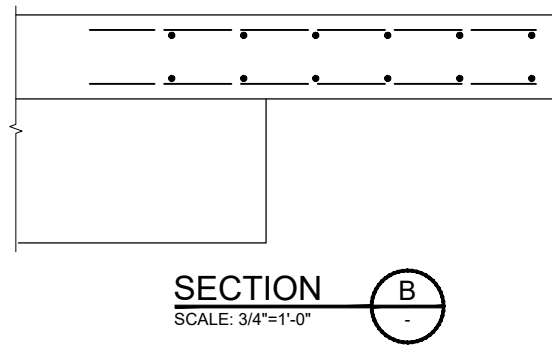
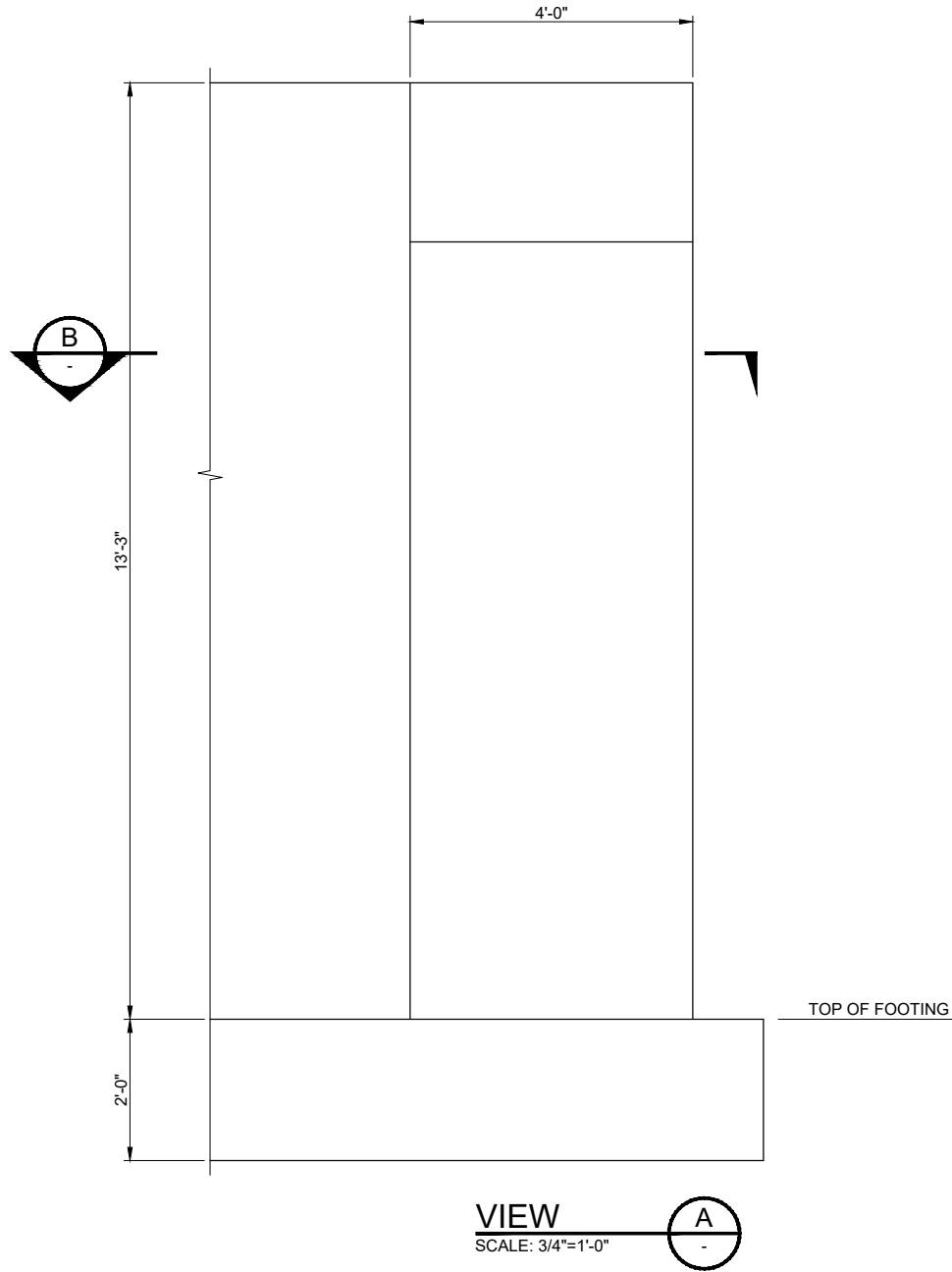
CITY HALL BRIDGE ABUTMENT LAYOUT

C25

SHEET NO. 38 OF 41

PLAN INTENDED TO BE VIEWED
IN COLOR. ADJACENT BLOCK IS
"BLUE"
ONE INCH
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INCH SCALE ACCORDINGLY

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SEQUALITCHEW CREEK WATERSHED
ECOSYSTEM RESTORATION PROJECT

CITY HALL BRIDGE ABUTMENT DETAILS

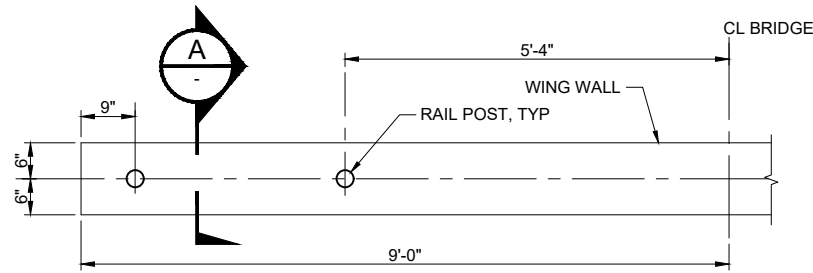
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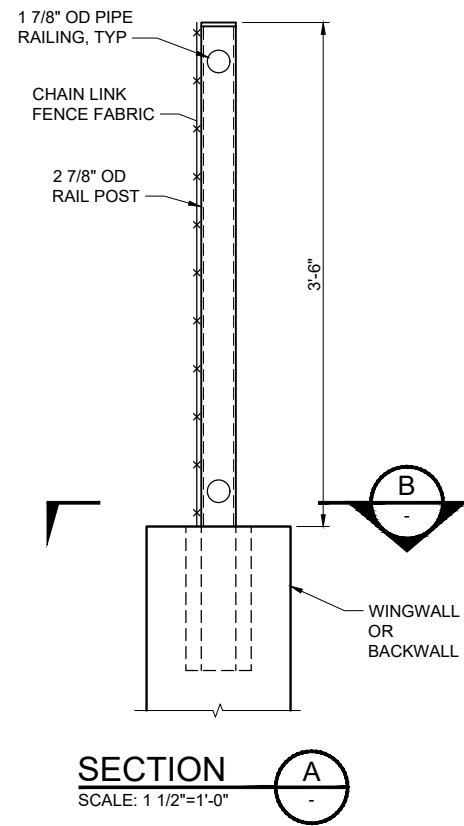
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SHEET NO. 39 OF 41

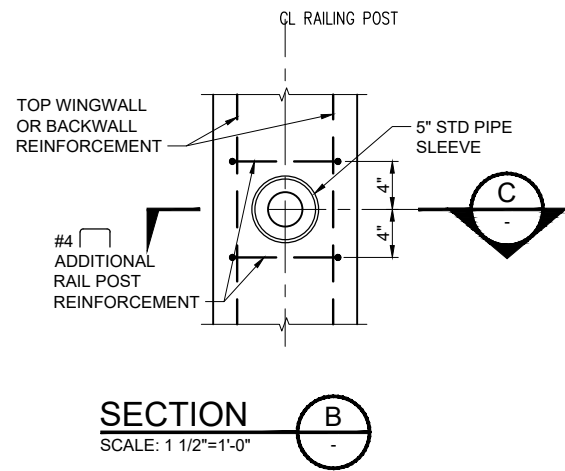
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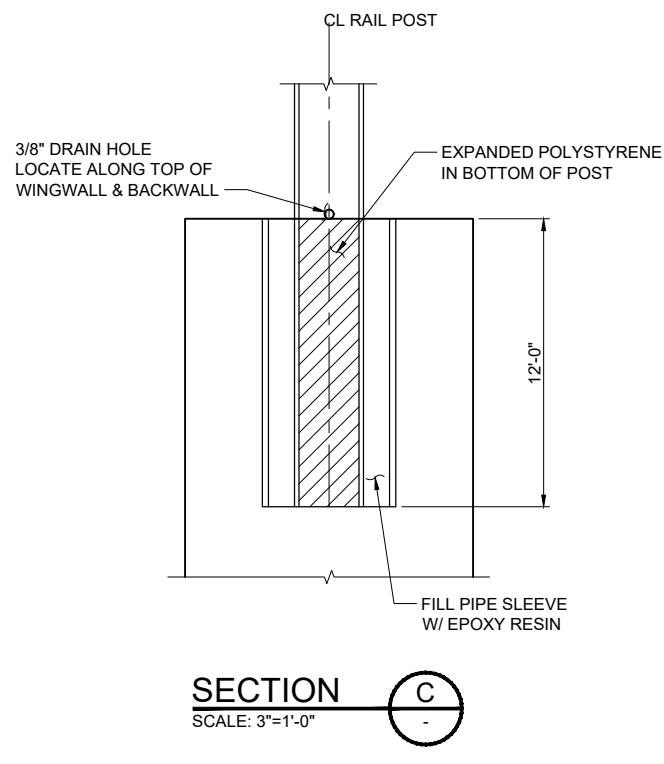
RAIL POST SPACING PLAN DETAIL
SCALE: 3/4"=1'-0"



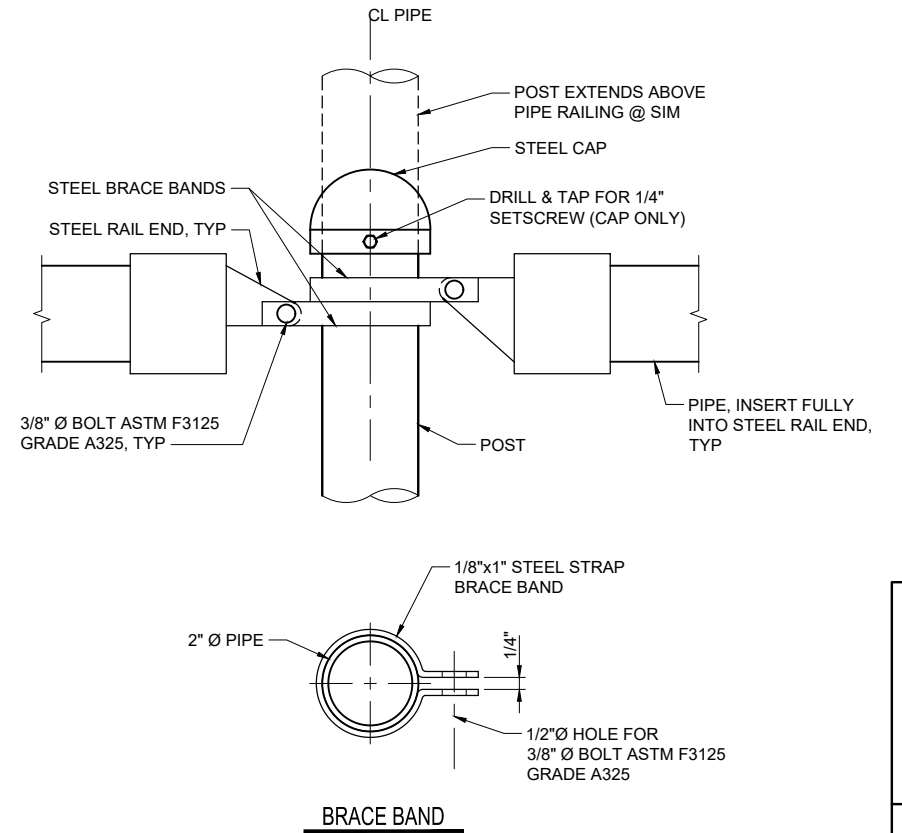
SECTION A
SCALE: 1 1/2"=1'-0"



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



SECTION C
SCALE: 3"=1'-0"



FENCE POST / RAILING CONNECTION DETAIL
SCALE: 6"=1'-0"

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**SEQUALITCHEW CREEK WATERSHED
ECOSYSTEM RESTORATION PROJECT**

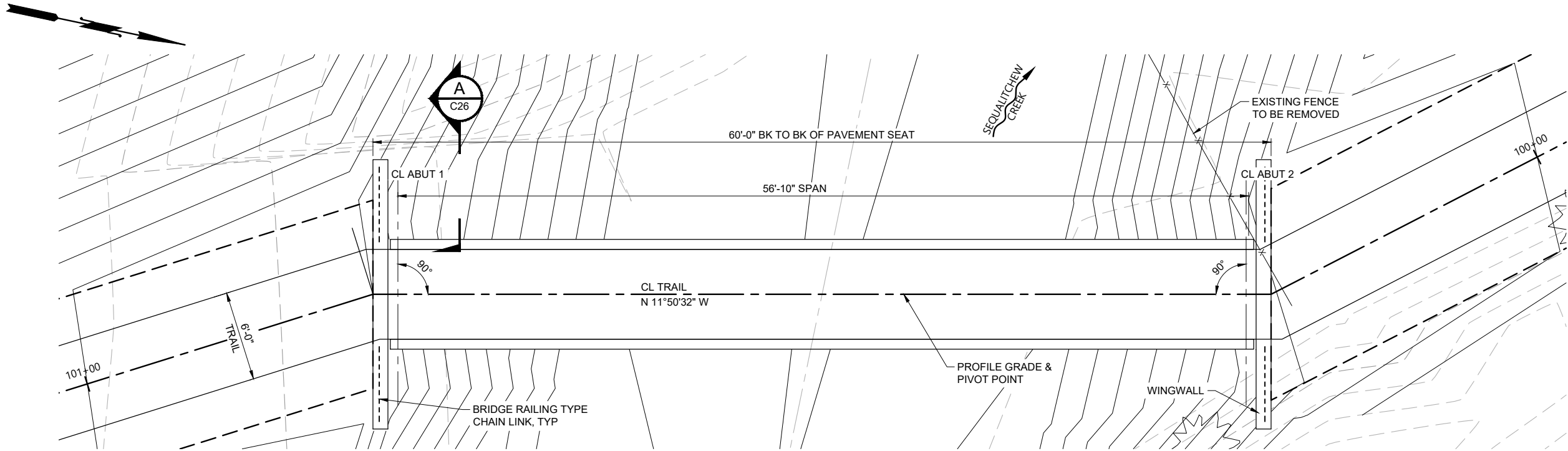
CITY HALL BRIDGE RAILING DETAILS

C27

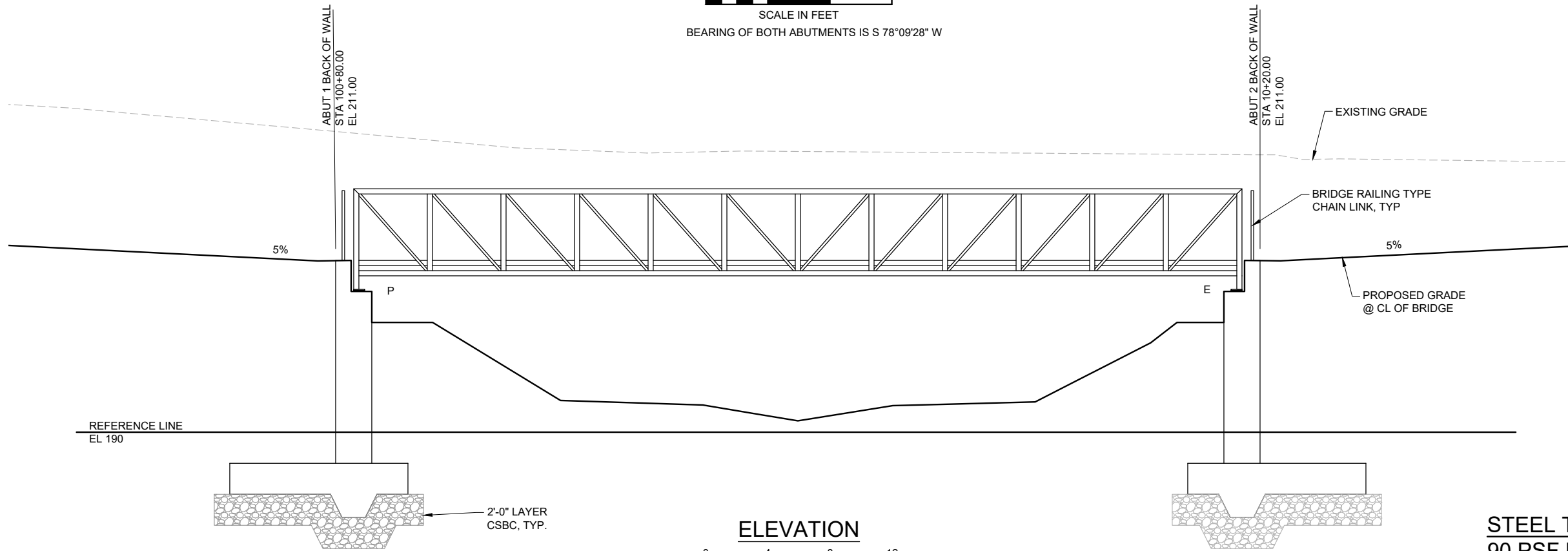
SHEET NO. 40 OF 41

PLAN INTENDED TO BE VIEWED
IN COLOR. ADJACENT BLOCK IS
"BLUE"
ONE INCH
AT FULL SIZE IF NOT ONE
INCH SCALE ACCORDINGLY

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PLAN
0 4 8 12
SCALE IN FEET
BEARING OF BOTH ABUTMENTS IS S 78°09'28" W



ELEVATION
0 4 8 12
SCALE IN FEET

STEEL TRUSS BRIDGE
90 PSF PEDESTRIAN LOADING

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SEQUALITCHEW CREEK WATERSHED
ECOSYSTEM RESTORATION PROJECT

CITY HALL BRIDGE PLAN AND ELEVATION

C28

SHEET NO. 41 OF 41

PLAN INTENDED TO BE VIEWED
IN COLOR. ADJACENT BLOCK IS
"BLUE"
ONE INCH
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INCH SCALE ACCORDINGLY