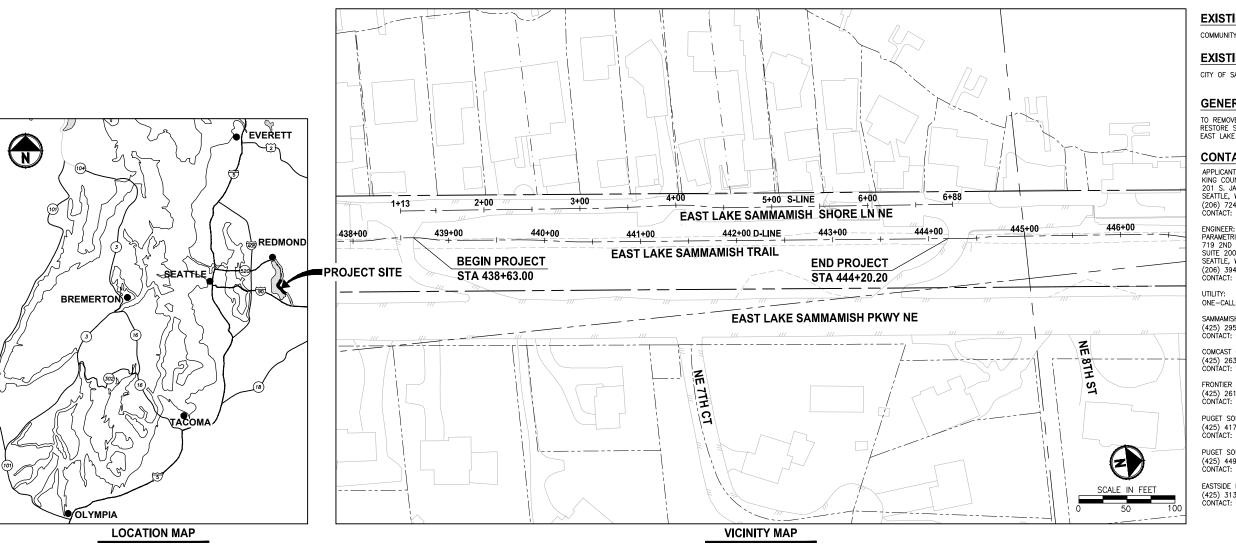
East Lake Sammamish Master Plan Trail, South Sammamish Segment B - Phase 2 Schedule C: George Davis Creek Culvert Replacements King County, Washington



EXISTING ZONE CLASSIFICATION:

COMMUNITY FACILITIES CF-F

EXISTING SHORELINE ENVIRONMENT DESIGNATION:

CITY OF SAMMAMISH DESIGNATION: SHORELINE RESIDENTIAL

GENERAL PURPOSE OF THIS PROJECT:

TO REMOVE AND REPLACE FISH PASSAGE BARRIER CULVERTS AND RESTORE STREAM CHANNEL AT EAST LAKE SAMMAMISH TRAIL AND EAST LAKE SAMMAMISH SHORE LANE NE.

CONTACT INFORMATION:

APPLICANT/OWNER: KING COUNTY PARKS AND RECREATION DIVISI 201 S. JACKSON, 7TH FLR SEATTLE, WA 98104 (206) 724–1296 CONTACT: GINA AULD

PARAMETRIX 719 2ND AVENUE SUITE 200 SEATTLE, WA 98104 (206) 394-3700 CONTACT: CRAIG BUITRAGO, P.E.

UTILITY: ONE-CALL 1 (800) 424-5555

SAMMAMISH PLATEAU WATER AND SEWER DISTRICT (425) 295-3203 CONTACT: KYLE WONG

COMCAST CABLE (425) 263-5348/(425) 319-4968 CONTACT: JOSEPH FORDON

FRONTIER COMMUNICATIONS NW INC. (425) 261-6342/(425) 210-2870 CONTACT: THOMAS PACEY

PUGET SOUND ENERGY (POWER AND POLE) (425) 417-9188 CONTACT: DENNIS BOOTH

PUGET SOUND ENERGY (GAS) (425) 449-7410/(425) 463-6550 CONTACT: JEANNE COLEMAN

EASTSIDE FIRE/RESCUE (425) 313-3203 CONTACT: GREG TRYON

RIGHT OF WAY NOTE:

RIGHT OF WAY LINES SHOWN ARE BASED ON KING COUNTY MAP VAULT SURVEY OF EAST LAKE SAMMAMISH TRAIL, MAP NUMBER 311—99, DATED AUGUST 8TH, 1998, WITH SUBSEQUENT CONVEYANCES AND EASEMENTS BEING UPDATED ACCORDING TO AUDITOR DOCUMENTS OF RECORD.

PROPERTY INFORMATION:

PARCEL NUMBERS: 322506-9015 (13.79 ACRES)

PROJECT & SITE INFORMATION:

KING COUNTY PROPOSED FISH PASSAGE CULVERT REPLACEMENTS AND ASSOCIATED STREAM RESTORATION AS PART OF THE CRITICAL AREAS MITIGATION FOR THE EAST LAKE SAMMAMISH MASTER PLAN TRAIL PROLECT. LOCATED IN THE CITY OF SAMMAMISH NEAR THE INTERSECTION OF EAST LAKE SAMMAMISH PARKWAY NE AND NE 7TH CT.

DISTURBED AREA = 0.6 AC
EXISTING IMPERVIOUS AREA = 0.2 AC
PROPOSED IMPERVIOUS AREA = 0.5 AC
VOLUME OF ESTIMATED FILL = 749 CY
VOLUME OF ESTIMATED EXCAVATION = 1,100 CY

WRITTEN DESCRIPTION OF THE PROJECT:

THE EXISTING STREAM CULVERTS AT THE TRAIL AND EAST LAKE SAMMAMISH SHORE LANE NE CROSSINGS WILL BE REMOVED AND REPLACED WITH CONCRETE BOX CULVERTS

THE PROPOSED IMPROVEMENTS INCLUDE PRECAST CONCRETE BOX CULVERTS AND ASSOCIATED WINGWALLS, STREAM GRADINGS, RELOCATING UNDERGROUND UTILITIES, TEMPORARY ACCESS IMPROVEMENTS, FENCE AND MITIGATION FOR IMPACTS TO STREAM BUFFERS.

SCHEDULE B WORK INCLUDES ALL WORK WITHIN KING COUNTY PROPERTY BOUNDARY

CITY OF SAMMAMISH PUBLIC WORKS DEVELOPMENT REVIEW

These drawings have been reviewed for compliance with City of Sammamish Clearing and Grading and Stormwater requirements and also in accordance with the requirements as established in the Settlement Agreement between King County vs. City of Sammamish No. C17-0921 JCC and King County vs. City of Sammamish No. 17-2-29922-7 SEA and have been deemed ACCEPTABLE. The reviewer accepts n responsibility for any errors and/or omissions made by the preparer of these drawings.

17 February 2022

CG2016-03470 SSDP2016-00415

SUITE 200 SEATTLE, WA 98104

(425) 820-3420

CONTACT: BOB LAYTON

(206) 394-3700 CONTACT: ROBERT PUSEY

AMERICAN FOREST MANAGEMENT, INC 11415 NE 128TH ST SUITE 110 KIRKLAND, WA 98034

CITY OF SAMMAMISH	APPROVAL
City Engineer	Date
Community Development	Date

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\triangle	REVISIONS	DATE	BY	DESIGNED C. BUITRAGO	lſ
				DRAWN	
				B. PURGANAN CHECKED	П
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				APPROVED J. BAILFY	H

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DATE
JUNE 2021



CONFORMED DRAWINGS



PROJECT N

EAST LAKE SAMMAMISH
MASTER PLAN TRAIL
SOUTH SAMMAMISH SEGMENT B - PHASE 2

SAMMAMISH WA

SE 2 ||

COVER SHEET

183 OF 213

ABBREVIATIONS:

AC ASBESTOS CEMENT PIPE MINIMUM MON MONUMENT ACP ASPHALT CONCRETE PAVEMENT ADVANCED DRAINAGE SYSTEMS POLYETHYLENE PIPE APPROX APPROXIMATE NORTH, NORTHING BACK OF CURB BOC N.I.C. NOT IN CONTRACT втм воттом NST NOT STEEPER THAN PC POINT OF CURVE BVCE BEGIN VERTICAL CURVE ELEVATION POLYETHYLENE PIPE BEGIN VERTICAL CURVE STATION BVCS POINT OF TANGENT CB CATCH BASIN P/L PROPERTY LINE C&G CURB AND GUTTER PRO PROPOSED C/L, CL PUD PUBLIC UTILITY DISTRICT CO CLEANOUT PVC COM COMMUNICATION PVI CONCRETE

CONC CORR CORRUGATED RCP COS CITY OF SAMMAMISH CONST CONSTRUCTION CMP CORRUGATED METAL PIPE CP CONCRETE PIPE CSTC CRUSHED SURFACING TOP COURSE

SIM DUCTILE IRON PIPE SEW EAST, EASTING SPECS ELEVATION SPWSD EOA SS EVCE END VERTICAL CURB ELEVATION END VERTICAL CURB STATION

EVCS EOG FDGE OF GRAVEL EOP EDGE OF PAVEMENT EX, EXIST FOC FACE OF CURB FL FLANGE, FLOWLINE

EL

G

LF

GAS GRADE BREAK HDPE HIGH DENSITY POLYETHYLENE PIPE HOT MIX ASPHALT INVERT ELEVATION

> LINEAR FEET LOW POINT

POLYVINYL CHLORIDE PIPE POINT OF VERTICAL INTERSECTION

REINFORCED CONCRETE PIPE

REINFORCED RFINE ROW, R/W RIGHT-OF-WAY

STORM DRAIN SDMH STORMWATER MANHOLE SIMII AR

> STRUCTURAL EARTH RETAINING WALL SPECIFICATIONS

SANITARY SEWER SANITARY SEWER FORCE MAIN

ST STEEL STA STATION STD STANDARD

TEL TELEPHONE TEMPORARY EROSION AND SEDIMENT CONTROL TESC

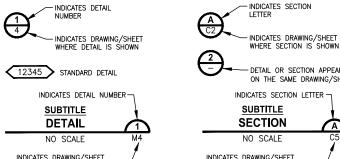
TOW TOP OF WALL UNDERDRAIN UD TYPICAL

W, WTR WATER WATER SERVICE

WSDOT WASHINGTON STATE DEPARTMENT WELDED WIRE MESH

MATCH EXISTING

DETAIL AND SECTION DESIGNATION



— DETAIL OR SECTION APPEARS ON THE SAME DRAWING/SHEET INDICATES SECTION LETTER -SUBTITLE **SECTION** NO SCALE INDICATES DRAWING/SHEET

CONFORMED DRAWINGS

Δ	REVISIONS	DATE	BY	DESIGNED C. BUITRAGO
				DRAWN
				B. PURGANAN CHECKED
				Y. HO
				APPROVED J. BAILEY

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TRAFFIC CONTROL 213	TC1	TRAFFIC CONTROL PLAN	

INDEX TO DRAWINGS

SHT NO. | SHEET TITLE

COVER SHEET

DWG NO.

GENERAL

CITY OF SAMMAMISH PUBLIC WORKS DEVELOPMENT REVIEW

with City of Sammamish Clearing and Grading and Stormwater requirements and also in accordance with the requirements as established in the Settler Agreement between King County vs. City of mish No. C17-0921 JCC and King County vs. City of Sammamish No. 17-2-29922-7 SEA and have been deemed ACCEPTABLE. The reviewer accepts no responsibility for any errors and/or omissions made by the preparer of these drawings.

17 February 2022

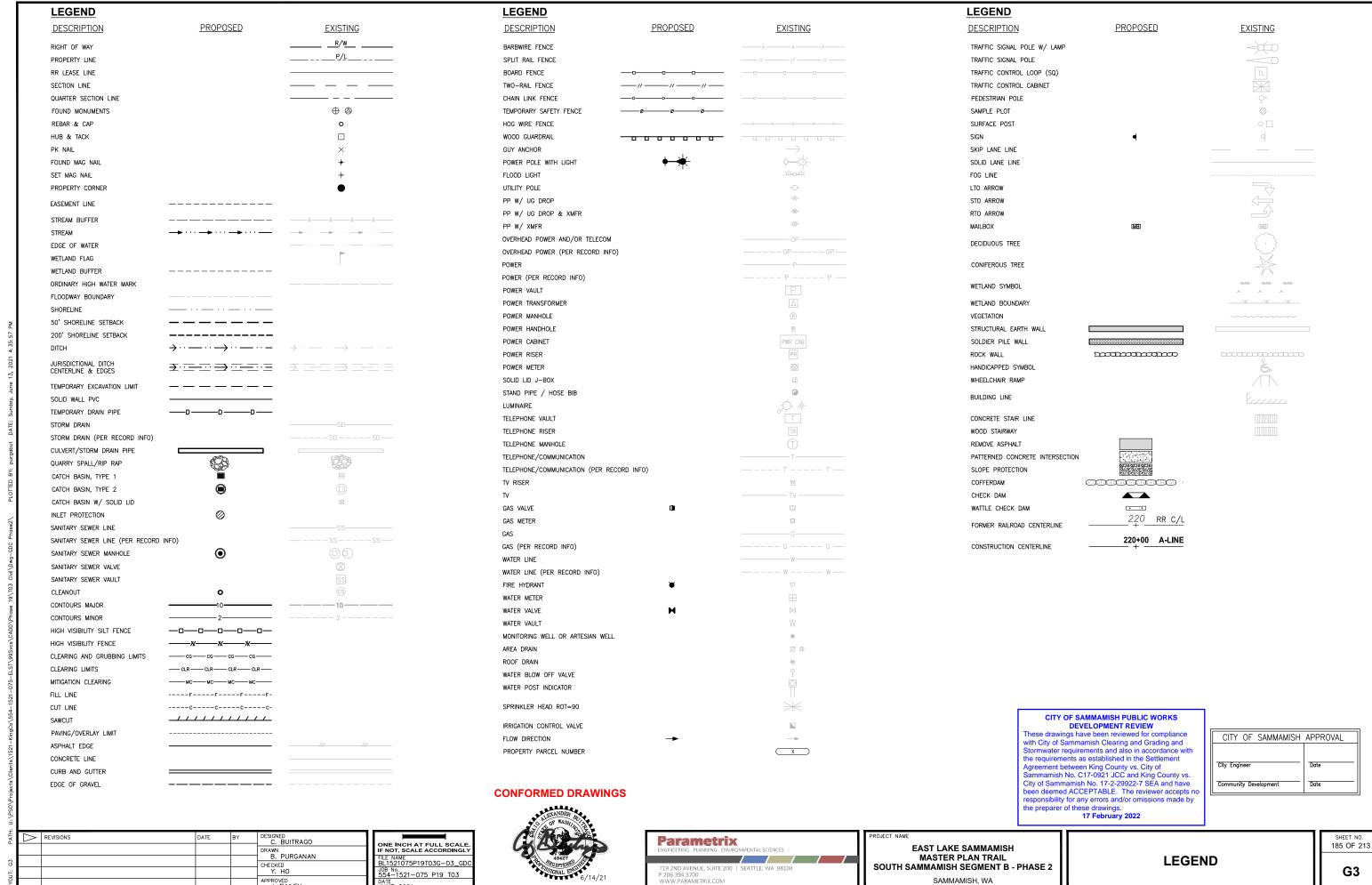
CITY OF SAMMAMISH	APPROVAL
City Engineer	Date
Community Development	Date
Community Development	Dute

EAST LAKE SAMMAMISH MASTER PLAN TRAIL SOUTH SAMMAMISH SEGMENT B - PHASE 2

SAMMAMISH. WA

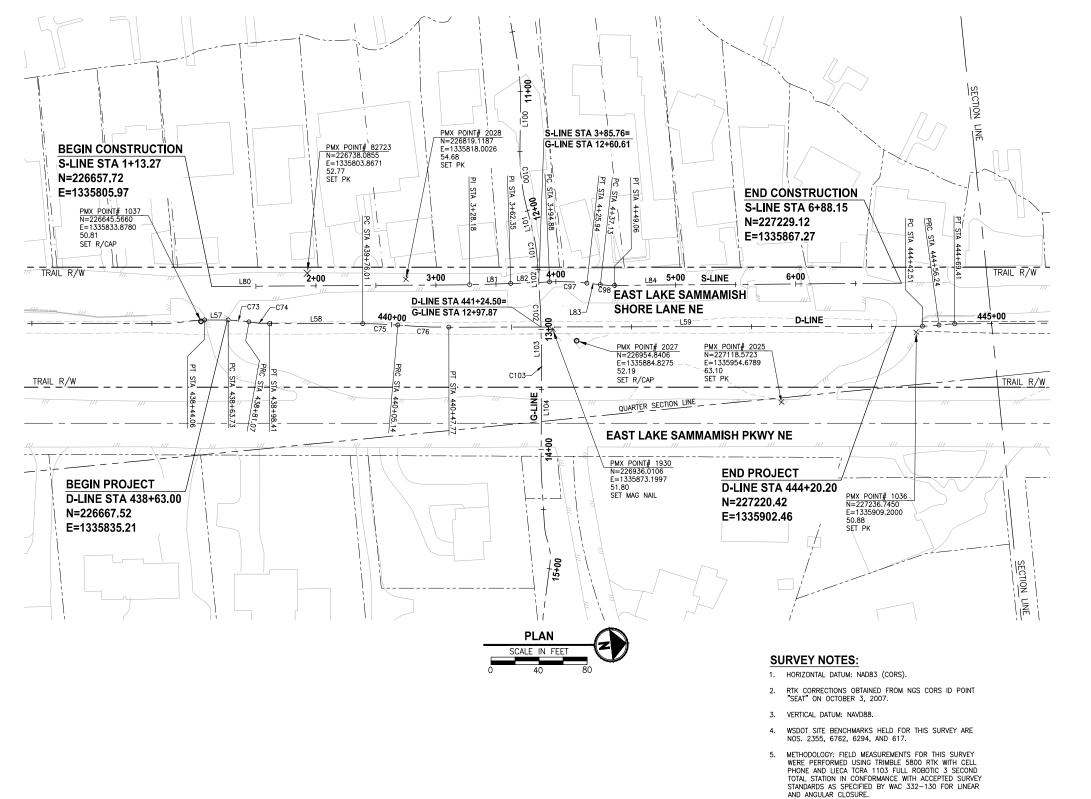
ABBREVIATIONS AND SHEET LIST

SHEET NO. 184 OF 213



PPROVED
J. BAILEY

SAMMAMISH, WA



ALIGNMENT DATA

	D-LINE LINE TABLE							
LINE	LENGTH	BEARING	BEGIN EASTING	BEGIN NORTHING	END EASTING	END NORTHING		
L57	19.67	N6* 24' 06"E	1335833.10	226648.70	1335835.29	226668.25		
L58	77.60	N6° 24' 06"E	1335842.12	226702.21	1335850.77	226779.32		
L59	394.74	N6° 17' 08"E	1335861.69	226850.23	1335904.91	227242.59		

	D-LINE CURVE TABLE							
CURVE	LENGTH	RADIUS	DELTA	BEGIN EASTING	BEGIN NORTHING	END EASTING	END NORTHING	
C73	17.34	100.00	9*56'11"	1335835.29	226668.25	1335838.71	226685.23	
C74	17.34	100.00	9*56'11"	1335838.71	226685.23	1335842.12	226702.21	
C75	29.13	350.00	4*46'08"	1335850.77	226779.32	1335855.22	226808.11	
C76	42.63	500.00	4*53'06"	1335855.22	226808.11	1335861.69	226850.23	

	S-LINE LINE TABLE							
LINE	LENGTH	BEARING	BEGIN EASTING	BEGIN NORTHING	END EASTING	END NORTHING		
L80	214.90	N6° 01' 37"E	1335805.97	226657.72	1335828.53	226871.44		
L81	34.17	N4° 40' 47"E	1335828.53	226871.44	1335831.32	226905.50		
L82	32.53	N3° 53' 40"E	1335831.32	226905.50	1335833.53	226937.95		
L83	11.20	N12* 47' 30"E	1335838.03	226968.65	1335840.51	226979.57		
L84	239.08	N5* 57' 29"E	1335842.45	226991.33	1335867.27	227229.12		

	S-LINE CURVE TABLE								
CURVE	LENGTH	RADIUS	DELTA	BEGIN EASTING	BEGIN NORTHING	END EASTING	END NORTHING		
C97	31.06	200.00	8*53'49"	1335833.53	226937.95	1335838.03	226968.65		
C98	11.93	100.00	6.50,00,	1335840.51	226979.57	1335842.45	226991.33		

	G-LINE LINE TABLE							
LINE	LENGTH	BEARING	BEGIN EASTING	BEGIN NORTHING	END EASTING	END NORTHING		
L100	45.07	S83 02 16 E	1335679.10	226930.75	1335723.84	226925.29		
L101	17.19	N81° 44' 27"E	1335770.19	226925.81	1335787.20	226928.28		
L102	37.91	S87' 16' 21"E	1335815.89	226929.67	1335853.76	226927.86		
L103	35.39	S84° 39' 50"E	1335860.57	226927.38	1335895.80	226924.09		
L104	73.27	S83° 14' 09"E	1335908.19	226922.78	1335980.95	226914.15		

G-LINE CURVE TABLE								
CURVE	LENGTH	RADIUS	DELTA	BEGIN EASTING	BEGIN NORTHING	END EASTING	END NORTHING	
C100	46.49	175.00	15°13′17"	1335723.84	226925.29	1335770.19	226925.81	
C101	28.76	150.00	10*59'12"	1335787.20	226928.28	1335815.89	226929.67	
C102	6.83	150.00	2*36'31"	1335853.76	226927.86	1335860.57	226927.38	
C103	12.46	500.00	1°25'41"	1335895.80	226924.09	1335908.19	226922.78	

CITY OF S	SAMMAMISH A	APPROVAL
City Engineer		Date
Community Devel	Date	

CONFORMED DRAWINGS



R. PUSEY

APPROVED

J. BAILEY

DRAWN B. PURGANAN

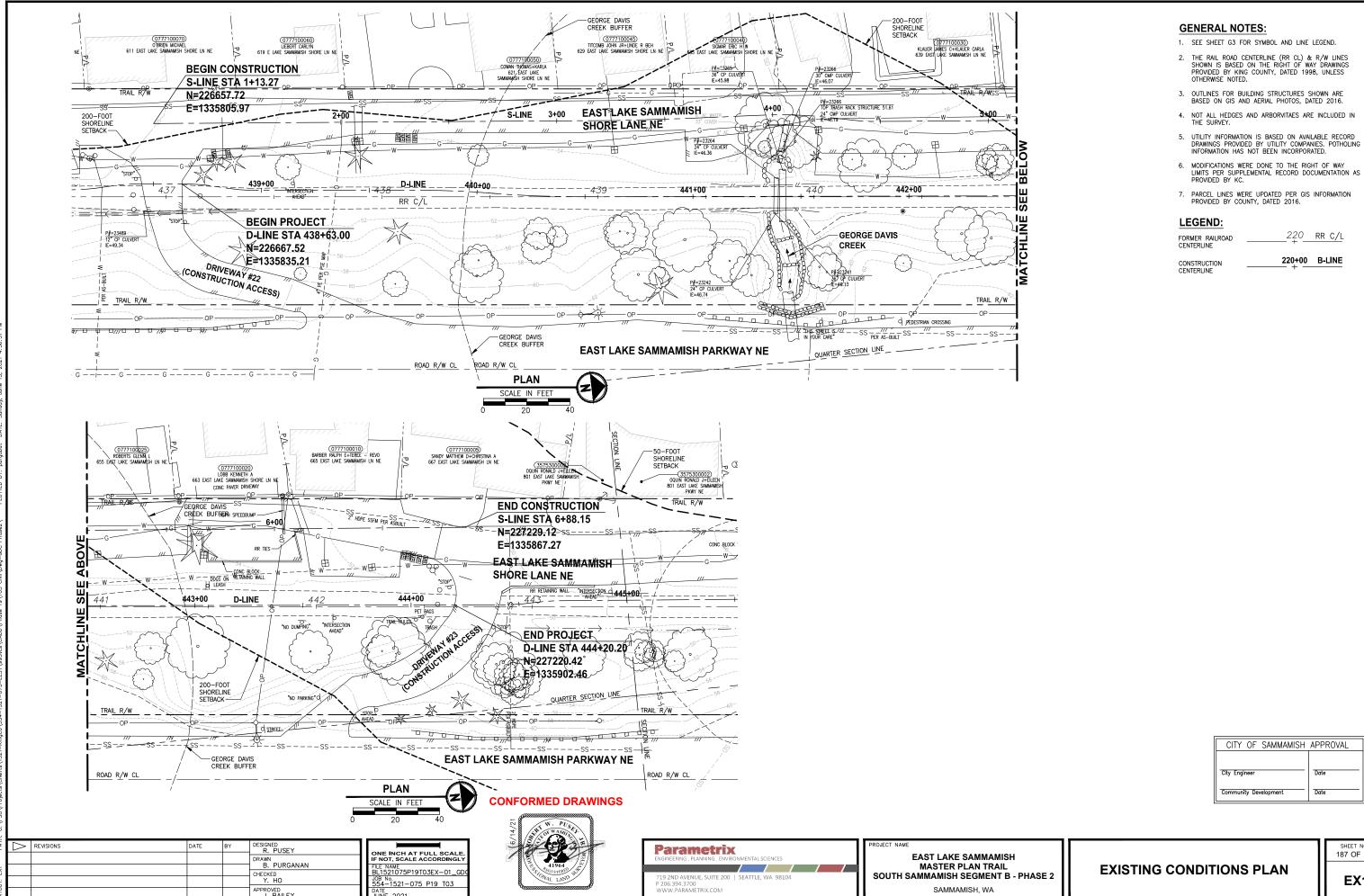
Parametrix 719 2ND AVENUE, SUITE 200 | SEATTLE, WA 98104 P 206.394.3700 WWW.PARAMETRIX.COM

6. THE RIGHT-OF-WAY DIMENSIONS SHOWN WERE PROVIDED BY KING COUNTY SURVEY DATED 1998 AND DO NOT REPRESENT A BOUNDARY SURVEY PERFORMED BY PARAMETRIX, UNLESS OTHERWISE NOTED ON EX SHEETS.

EAST LAKE SAMMAMISH MASTER PLAN TRAIL SOUTH SAMMAMISH SEGMENT B - PHASE 2 SAMMAMISH, WA

SURVEY CONTROL PLAN

SHEET NO. 186 OF 213



APPROVED

J. BAILEY

- 2. THE RAIL ROAD CENTERLINE (RR CL) & R/W LINES SHOWN IS BASED ON THE RIGHT OF WAY DRAWINGS PROVIDED BY KING COUNTY, DATED 1998, UNLESS

- 6. MODIFICATIONS WERE DONE TO THE RIGHT OF WAY LIMITS PER SUPPLEMENTAL RECORD DOCUMENTATION AS

220 RR C/L

220+00 B-LINE

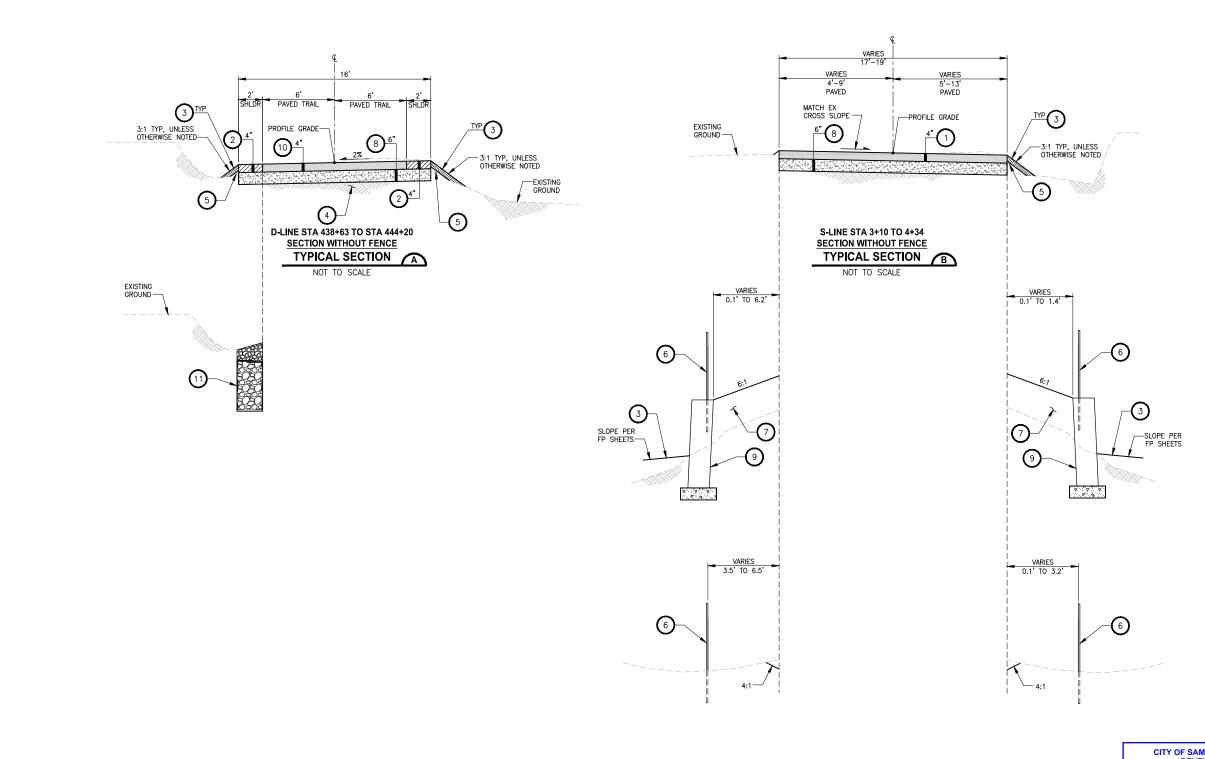
CITY OF SAMMAMISH APPROVAL

SAMMAMISH, WA

Date Date

SHEET NO. 187 OF 213

EX1



CONSTRUCTION NOTES:

1 HMA CL. 1/2" PG 64-22.

5/8" MINUS CRUSHED LEDGE ROCK, 100% FRACTURED. SEE SPECIAL PROVISIONS FOR SPECIFICATIONS.

3 SEE SLOPE RESTORATION DETAILS ON LA SHEETS.

4 EXISTING BALLAST BASE.

SELECT BORROW INCL. HAUL.

4-FOOT COATED CHAIN LINK FENCE. SEE AL PLANS FOR LOCATIONS AND SEE DETAILS ON SHEET MD1.

7 GRAVEL BACKFILL FOR WALL.

8 CRUSHED SURFACING BASE COURSE.

9 WING WALL , SEE FP SHEETS FOR PROFILE AND DETAILS.

(10) HMA CL. 3/8" PG 64-22.

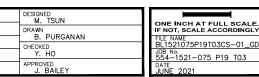
INFILTRATION TRENCH. SEE AL SHEETS FOR INFILTRATION TRENCH LOCATIONS AND DETAIL 3 ON SHEET MD4.

CITY OF SAMMAMISH PUBLIC WORKS
DEVELOPMENT REVIEW

These drawings have been reviewed for compliance with City of Sammamish Clearing and Grading and Stormwater requirements and also in accordance with the requirements as established in the Settlement Agreement between King County vs. City of Sammamish No. C17-0921 JCC and King County vs. City of Sammamish No. 17-2-29922-7 SEA and have been deemed ACCEPTABLE. The reviewer accepts of the control of the co been deemed ACCEPTABLE. The reviewer accepts no responsibility for any errors and/or omissions made by the preparer of these drawings. 17 February 2022

CITY OF SAMMAMISH	APPROVAL
City Engineer	Date
Community Development	Date
Community Development	Dute

CONFORMED DRAWINGS





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719 2ND AVENUE, SUITE 200 SEATTLE, WA 98104 P 206.394.3700 WWW.PARAMETRIX.COM	l

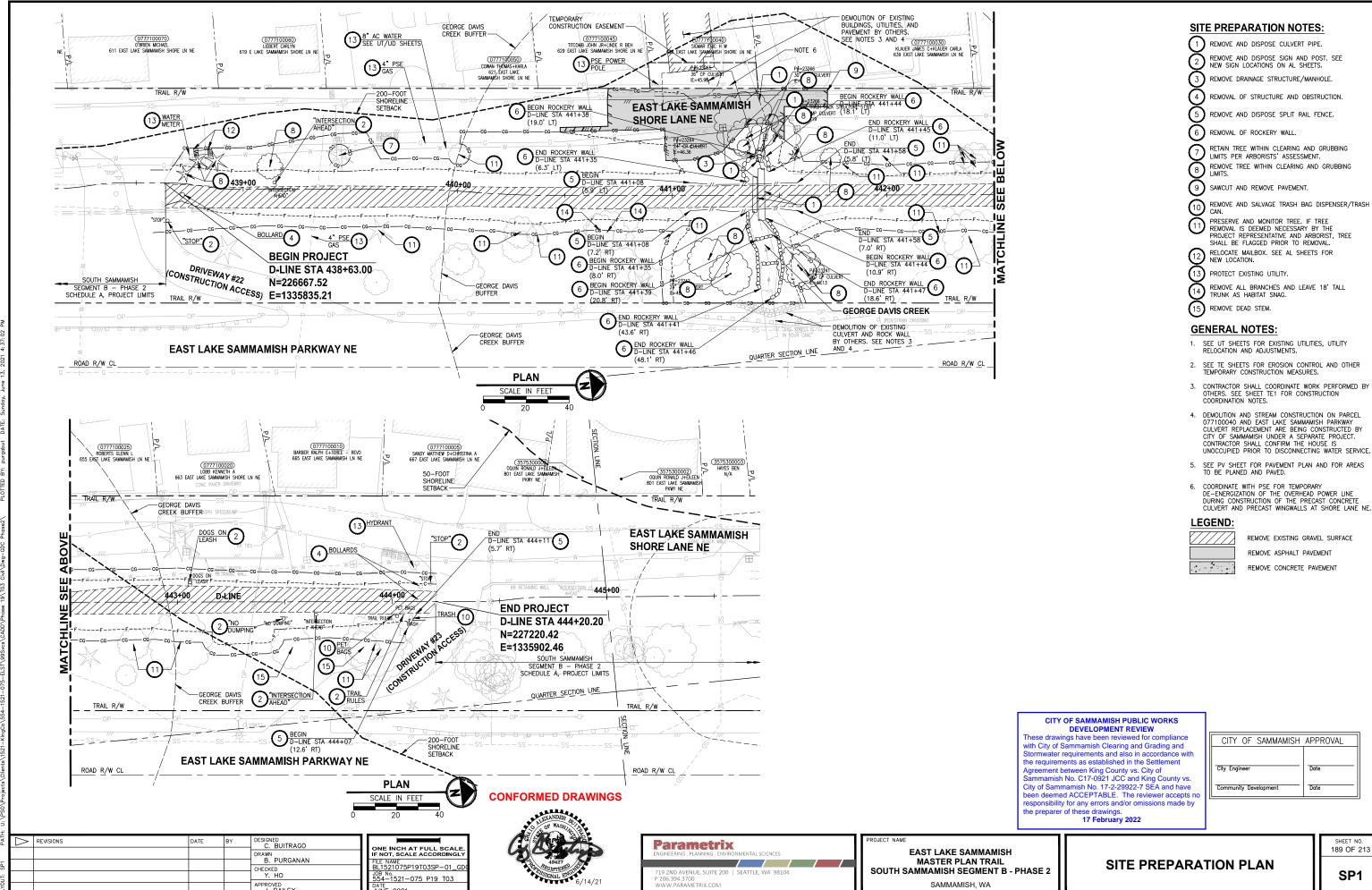
EAST LAKE SAMMAMISH MASTER PLAN TRAIL SOUTH SAMMAMISH SEGMENT B - PHASE 2

SAMMAMISH, WA

TYPICAL CROSS SECTIONS

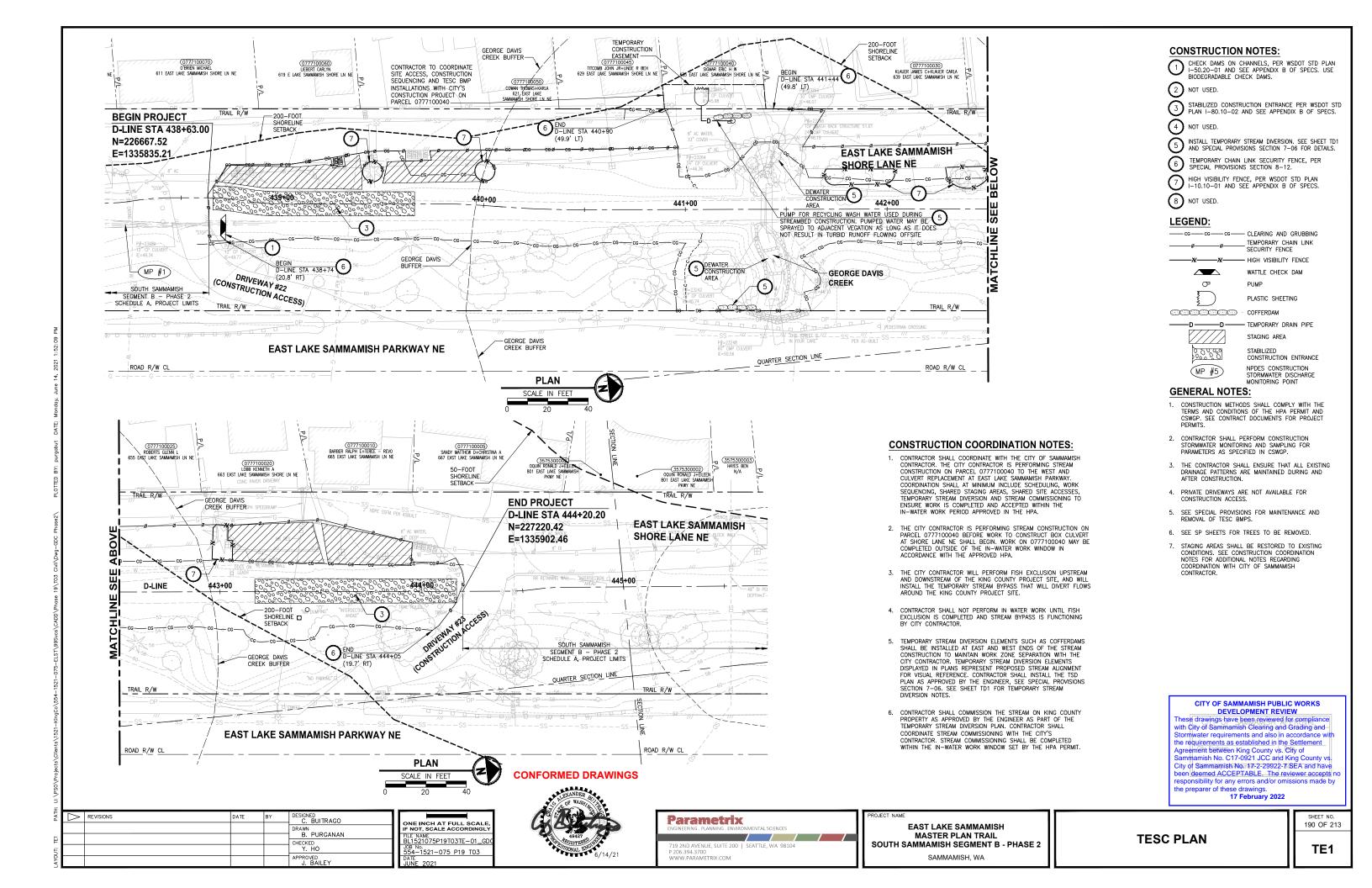
SHEET NO. 188 OF 213

CS1



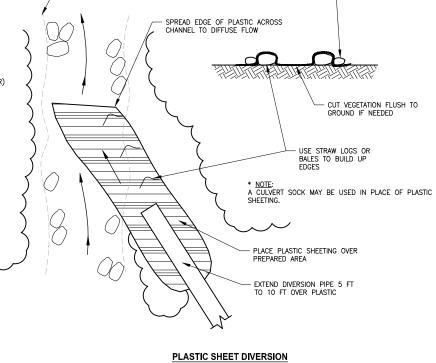
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J. BAILEY

SAMMAMISH, WA



- ROCK GRAVEL BAGS PER WSDOT STD. SPEC 9-03.12(4), WATER BAG DAM, PORT-A-DAM, OR OTHER MEANS APPROVED BY THE ENGINEER. GRAVEL BAGS SHALL BE CONSTRUCTED OF WOVEN SYNTHETIC FIBER.
- THE HEIGHT AND WIDTH OF THE COFFERDAMS SHALL BE DETERMINED BY THE CONTRACTOR BASED ON THE WATER SURFACE ELEVATION AND CHANNEL SHAPE AT THE TIME OF CONSTRUCTION.
- 3. REMOVE LOOSE COBBLE AND BOULDERS FROM THE STREAMBED BEFORE PLACING
- 4. EXTEND THE COFFERDAM ENDS UP THE BANKS OF THE CHANNEL AS NEEDED TO PREVENT EROSION FROM OCCURRING AROUND THE ENDS OF THE COFFERDAM.
- 5. COFFERDAM MATERIALS SHALL BE REMOVED FROM THE SITE AND BECOME THE PROPERTY OF THE CONTRACTOR.

COFFERDAM DETAIL NOT TO SCALE



DETAIL

NOT TO SCALE

WEIGHT EDGES WITH COBBLE AS

NEEDED TO HOLD PLASTIC IN PLACE -

EX. STREAM BANK,

DEWATER CONSTRUCTION AREA NOTES:

- CONTRACTOR SHALL SUBMIT A DEWATERING PLAN FOR THE ENTIRE PROJECT TO THE ENGINEER FOR REVIEW AND APPROVAL WITH THE TEMPORARY STREAM DIVERSION PLAN, PER SPECIAL PROVISIONS SECTION 7-06.
- THE DEWATERING PLAN SHALL INCLUDE LOCATION FOR PUMPED WATER DISPOSAL. PUMPED WATER MAY BE SPRAYED OVER EXISTING VEGETATION OR CONNECTED TO TEMPORARY BYPASS (STREAM OR STORM DRAIN), HOWEVER IF PUMPED TO SURFACE WATER, SITE DISCHARGE WATER SHALL MEET TURBIDITY REQUIRMENTS OF THE CONSTRUCTION STORMWATER GENERAL PERMIT.
- 3. THE DEWATERING SYSTEM SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED TO ENSURE CONTINUED PROPER FUNCTIONING.
- 4. DEWATERING COSTS FOR STREAM CONSTRUCTION SHALL BE INCIDENTAL TO BID ITEM TEMPORARY STREAM DIVERSION.

TEMPORARY STREAM DIVERSION NOTES:

- CONTRACTOR SHALL SUBMIT THE TEMPORARY STREAM DIVERSION (TSD) PLAN TO THE ENGINEER AT THE PRECONSTRUCTION CONFERENCE PER SPECIAL PROVISIONS SECTION. 7, 06.
- 2. CONTRACTOR SHALL COORDINATE TEMPORARY STREAM DIVERSION WITH THE STREAM BYPASS SYSTEM IMPLEMENTED BY THE CITY OF SAMMAMISH CONTRACTOR COMPLETING THE CULVERT REPLACEMENT AND STREAM CONSTRUCTION BOTH ON THE DOWNSTREAM PARCEL (0777100040) AND AT THE EAST LAKE SAMMAMISH PARKWAY
- 3. THE CITY CONTRACTOR WILL PERFORM FISH EXCLUSION UPSTREAM AND DOWNSTREAM OF THE KING COUNTY PROJECT SITE, AND WILL INSTALL THE TEMPORARY SITREAM BYPASS THAT WILL USE THE EMERGENCY OVERFLOW CONVEYANCE SYSTEM THAT DIVERTS FLOWS UPSTREAM OF EAST LAKE SAMMAMISH PARKWAY AND OUTFALLS TO THE LAKE NORTH OF THE KING COUNTY PROJECT SITE.
- 4. THE CONTRACTOR SHALL FURNISH WATER NEEDED DURING STREAMBED CONSTRUCTION FOR WASHING STREAMBED
 SEDIMENTS INTO EACH LIFT OF STREAMBED MATERIAL PLACED
 TO SEAL THE BED, SEE FP SHEETS FOR DETAILS.
- 5. METHODS FOR STREAM (REWATERING) COMMISSIONING SHALL BE DETAILED IN THE TEMPORARY STREAM DIVERSION PLAN, PER SPECIAL PROVISION 7-06. BECAUSE THE STREAM BYPASS BY THE CITY'S CONTRACTOR WILL DIRECT FLOW AWAY FROM THE PROJECT SITE, THE CONTRACTOR SHALL FURNISH WATER NEEDED DURING STREAMBED CONSTRUCTION PER CONSTRUCTION NOTES IN FP SHEETS. WATER MAY BE RE-USED OR RECYCLED DURING STREAMBED CONSTRUCTION, BUT WATER EXCEEDING BACKGROUND STREAM TURBIDITY BENCHMARKS MAY NOT BE DISCHARGED DOWNSTREAM, PER THE TSD PLAN AND APPROVED HPA.
- 6. STREAM COMMISSIONING SHALL BE COORDINATED WITH THE CITY'S CONTRACTOR AT LEAST 10 DAYS BEFORE THAT WORK ELEMENT IS TO BEGIN. THE PLAN SHALL BE DISCUSSED AT A CONSTRUCTION MEETING WITH THE PROJECT REPRESENTATIVE.
- 7. THE CONTRACTOR SHALL COMPLETE ALL WORK BELOW GEORGE DAVIS CREEK ORDINARY HIGH WATER MARK BY SEPTEMBER 30, IN ACCORDANCE WITH THE APPROVED HPA.
- 8. STREAM FLOW RATES ARE INLCUDED IN A TABLE BELOW AS REFERENCE TO THE CONTRACTOR, BUT A PUMP FOR THE LOW FLOW OR OTHER MAY NOT BE NECESSARY BECAUSE THE CITY'S PROJECT WILL INSTALL A TEMPORARY STREAM BYPASS THAT WILL DIVERT FLOWS AROUND THE PROJECT SITE. ALL IN WATER STREAM WORK MUCH BE COMPLETE WITHIN THE DATES ESTABLISHED IN THE APPROVED HPA.

TEMPORARY BYPASS FLOW RATES * FISH PASSAGE CULVERTS				
STA	STREAM	LOW FLOW (CFS)	FLOW (GPM)	
441+40	GEORGE DAVIS CREEK	11.0	4,937	

^{*} SEE NOTE 8

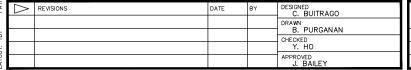
CITY OF SAMMAMISH PUBLIC WORKS DEVELOPMENT REVIEW These drawings have been reviewed for compliance

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II	CITY OF SAMMAMISH	APPROVAL
II		
II	City Engineer	Date
I	Community Development	Date
II	Community Development	Date

17 February 2022

CONFORMED DRAWINGS



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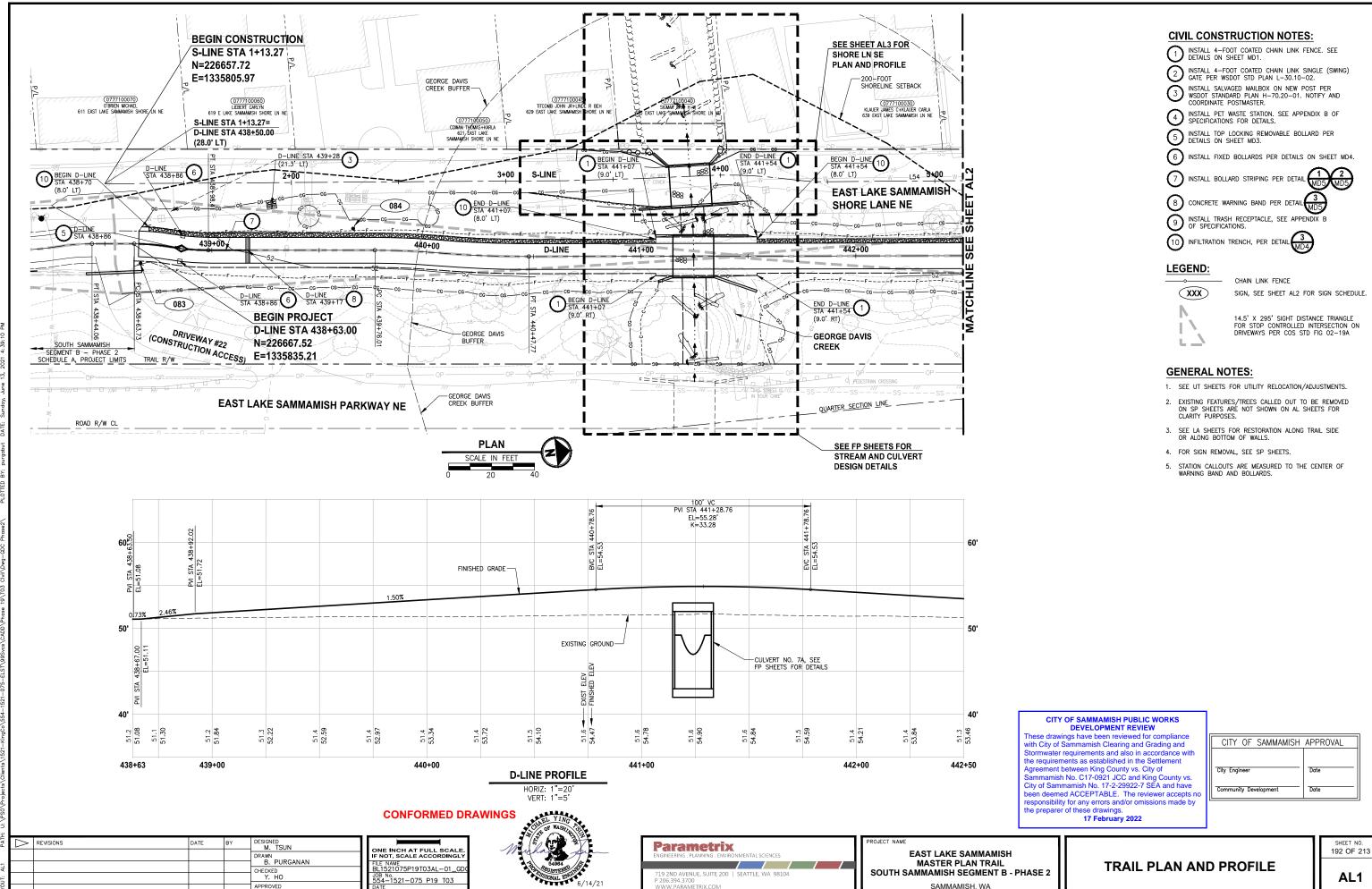
EAST LAKE SAMMAMISH MASTER PLAN TRAIL SOUTH SAMMAMISH SEGMENT B - PHASE 2

SAMMAMISH, WA

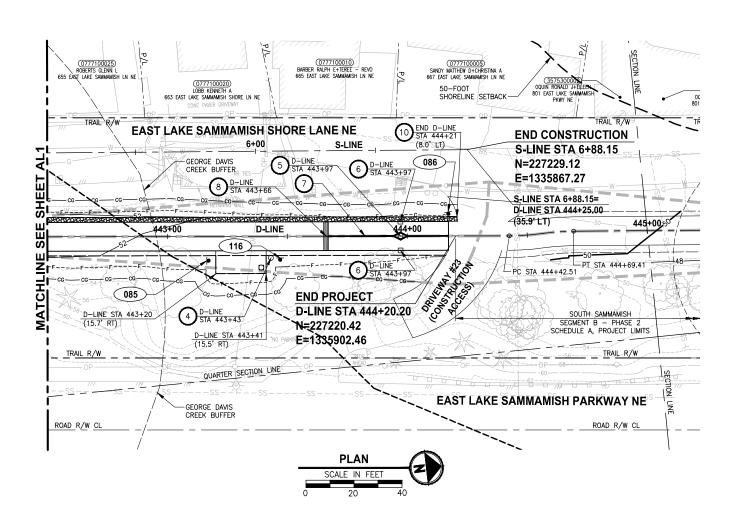
TESC DETAILS

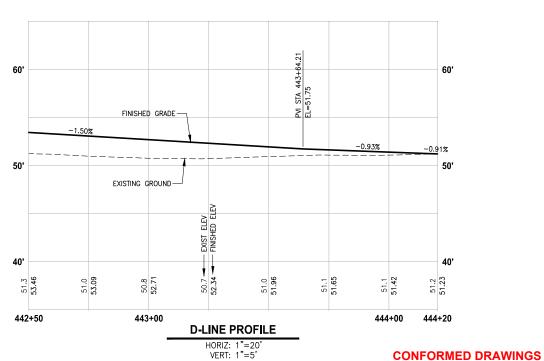
191 OF 213

TD1



PPROVED
J. BAILEY





CIVIL CONSTRUCTION NOTES:

1) INSTALL 4-FOOT COATED CHAIN LINK FENCE. SEE DETAILS ON SHEET MD1.

2 INSTALL 4-FOOT COATED CHAIN LINK SINGLE (SWING) GATE PER WSDOT STD PLAN L-30.10-02.

3 INSTALL SALVAGED MAILBOX ON NEW POST PER WSDOT STANDARD PLAN H-70.20-01. NOTIFY AND COORDINATE POSTMASTER.

4 INSTALL PET WASTE STATION. SEE APPENDIX B OF SPECIFICATIONS FOR DETAILS.

5 INSTALL TOP LOCKING REMOVABLE BOLLARD PER DETAILS ON SHEET MD3.

(6) INSTALL FIXED BOLLARDS PER DETAILS ON SHEET MD4.

7) INSTALL BOLLARD STRIPING PER DETAIL MD5.

8 CONCRETE WARNING BAND PER DETAIL MD5

9 INSTALL TRASH RECEPTACLE, SEE APPENDIX B OF SPECIFICATIONS.



LEGEND:

CHAIN LINK FENCE

(XXX)

SIGN, SEE SHEET AL2 FOR SIGN SCHEDULE.

14.5' X 295' SIGHT DISTANCE TRIANGLE FOR STOP CONTROLLED INTERSECTION ON DRIVEWAYS PER COS STD FIG 02-19A

GENERAL NOTES:

- 1. SEE UT SHEETS FOR UTILITY RELOCATION/ADJUSTMENTS.
- 2. EXISTING FEATURES/TREES CALLED OUT TO BE REMOVED ON SP SHEETS ARE NOT SHOWN ON AL SHEETS FOR CLARITY PURPOSES.
- 3. SEE LA SHEETS FOR RESTORATION ALONG TRAIL SIDE OR ALONG BOTTOM OF WALLS.
- 4. FOR SIGN REMOVAL, SEE SP SHEETS.
- 5. STATION CALLOUTS ARE MEASURED TO THE CENTER OF WARNING BAND AND BOLLARDS.

SIGN SCHEDULE

	SIGN SCHEDOLL								
	SIGN NUMBER LOCATION		SICNI NII IMPED	DESCRIPTION	MUTCD	SIGN SIZE	POST SIZE/TYPE	REMARK	
٥	IGN NOWIDER	LINE	STATION	OFFSET	SIGN	SIGN	SIGN SIZE	POST SIZE/TIPE	REWARK
	083	D-LINE	438+67	9.0' RT	STOP	R1-1	30" X 30"	2" STEEL SQUARE*	NEW SIGN AND POST
	084	D-LINE	439+66	10.1' LT	INTERSECTION WARNING SYMBOL	W2-1	18" X 18"	2" STEEL SQUARE*	NEW SIGN AND POST
	085	D-LINE	443+17	10.1' RT	INTERSECTION WARNING SYMBOL	W2-1	18" X 18"	2" STEEL SQUARE*	NEW SIGN AND POST
	086	D-LINE	444+17	9.25' LT	STOP	R1-1	30" X 30"	2" STEEL SQUARE*	NEW SIGN AND POST
	116	D-LINE	443+47	9.75' RT	ELST TRAIL RULES	CUSTOM	N/A		NEW SIGN AND POST. SIGN TO BE PROVIDED BY THE OWNER.

^{*} SEE SHEET MD1 FOR SIGN POST DETAILS.

CITY OF SAMMAMISH PUBLIC WORKS DEVELOPMENT REVIEW

These drawings have been reviewed for compliance with City of Sammamish Clearing and Grading and Stormwater requirements and also in accordance with the requirements as established in the Settlement Agreement between King County vs. City of Sammamish No. C17-0921 JCC and King County City of Sammamish No. 17-2-299 been deemed ACCEPTABLE. The responsibility for any errors and/o the preparer of these drawings.

17 February 2022

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or omissions made by		

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CITY OF SAMMAMISH APPROVAL

Date

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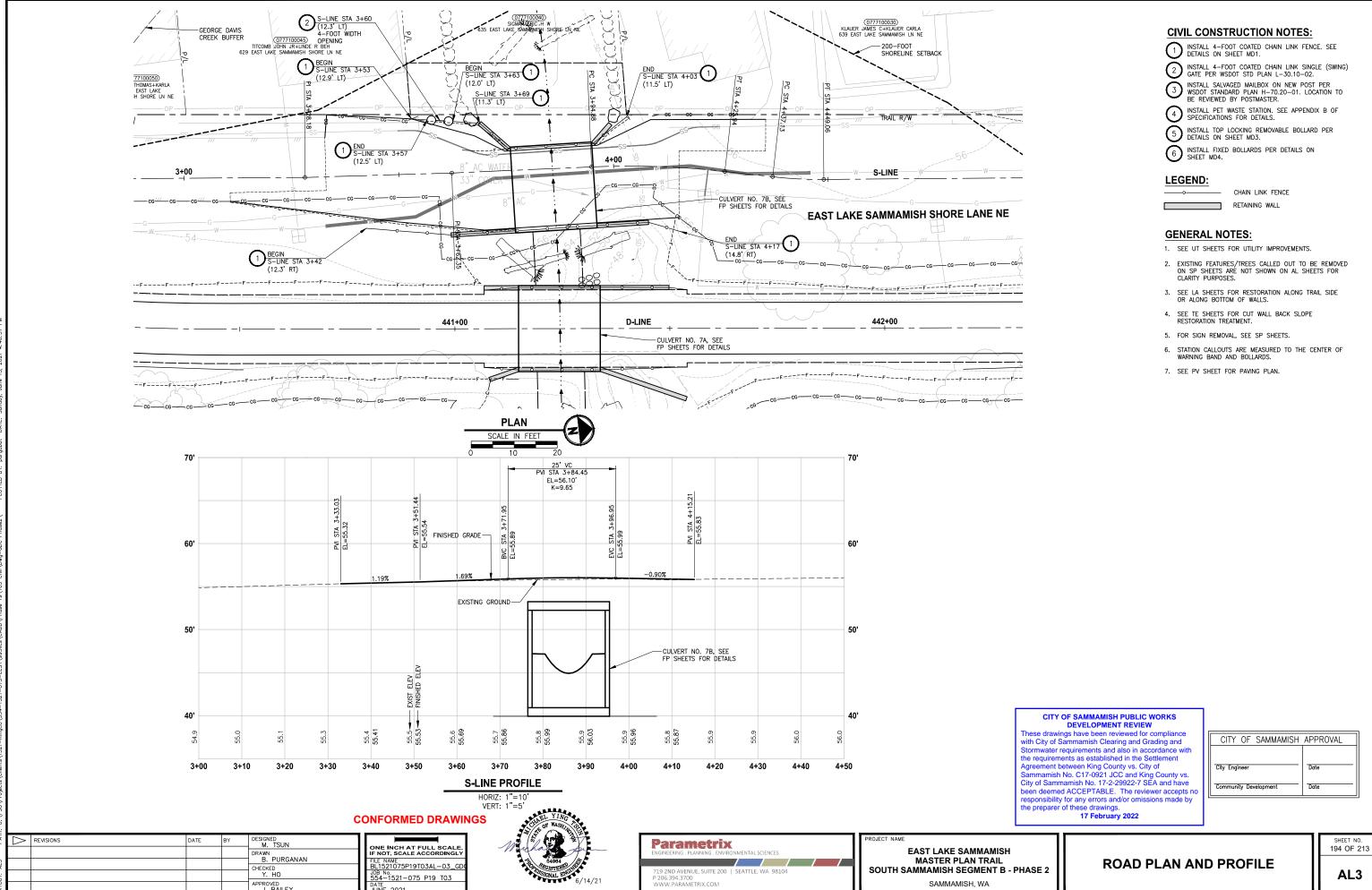
EAST LAKE SAMMAMISH MASTER PLAN TRAIL SOUTH SAMMAMISH SEGMENT B - PHASE 2

SAMMAMISH, WA

TRAIL PLAN AND PROFILE

SHEET NO. 193 OF 213

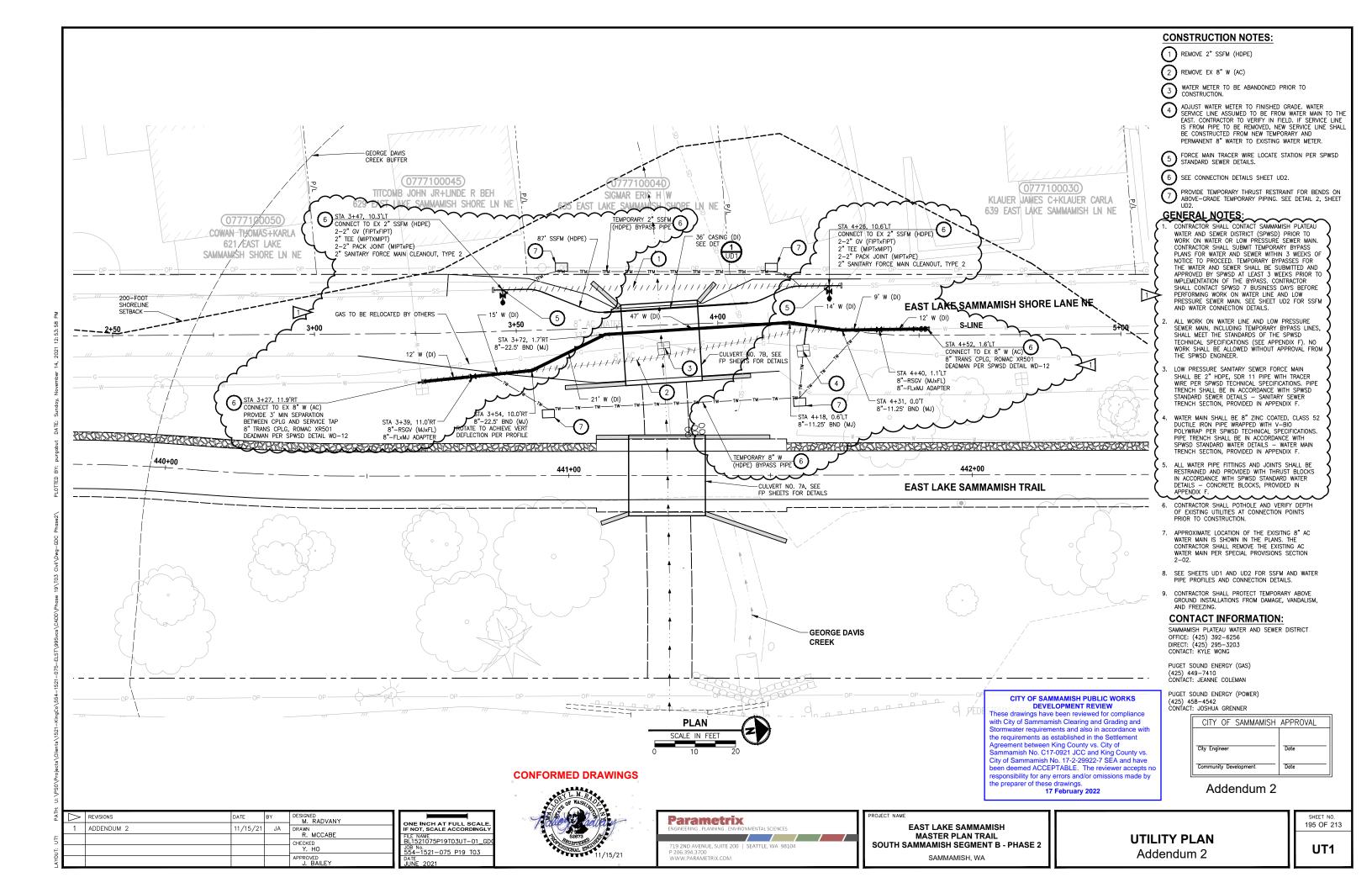
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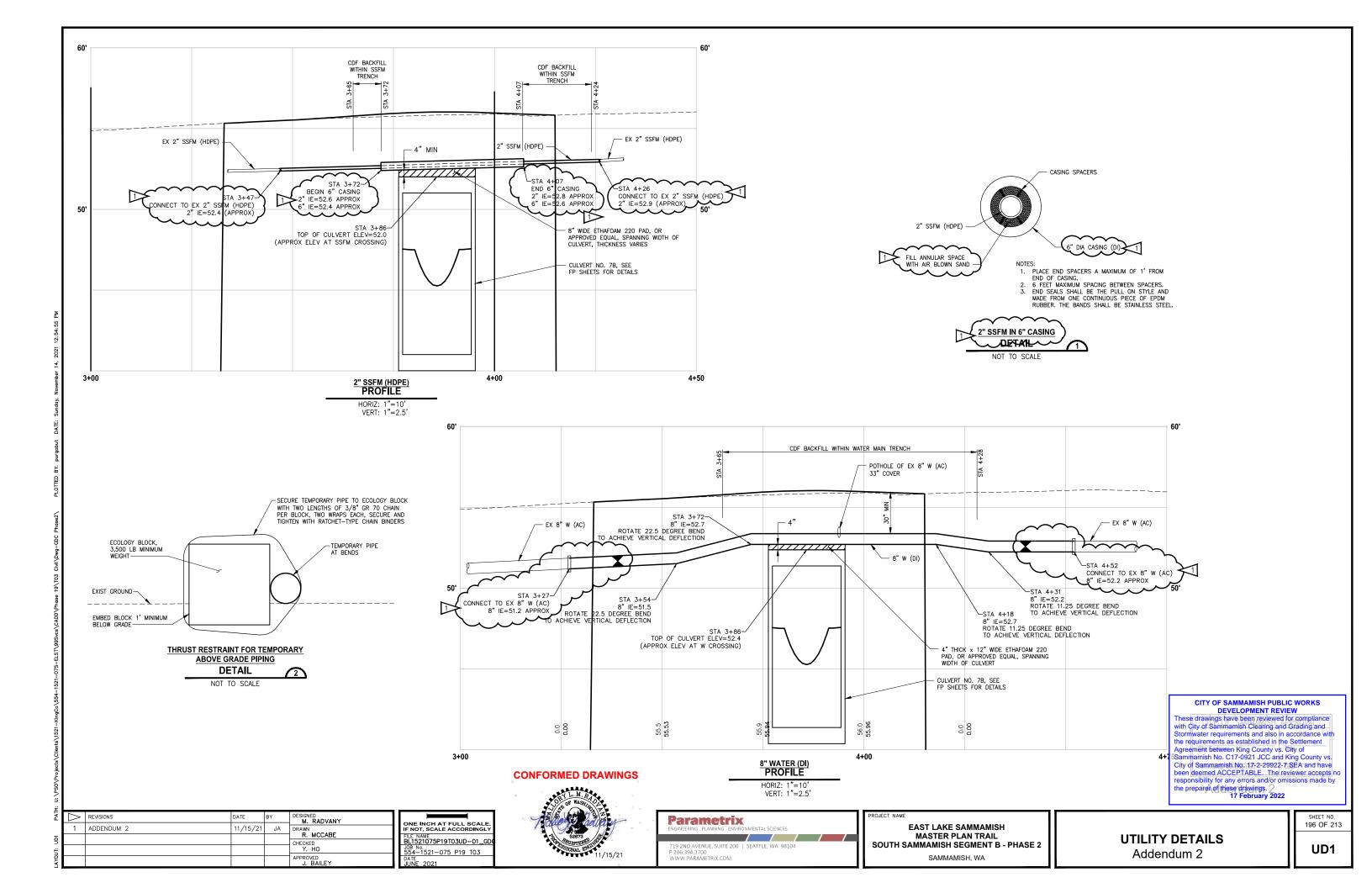


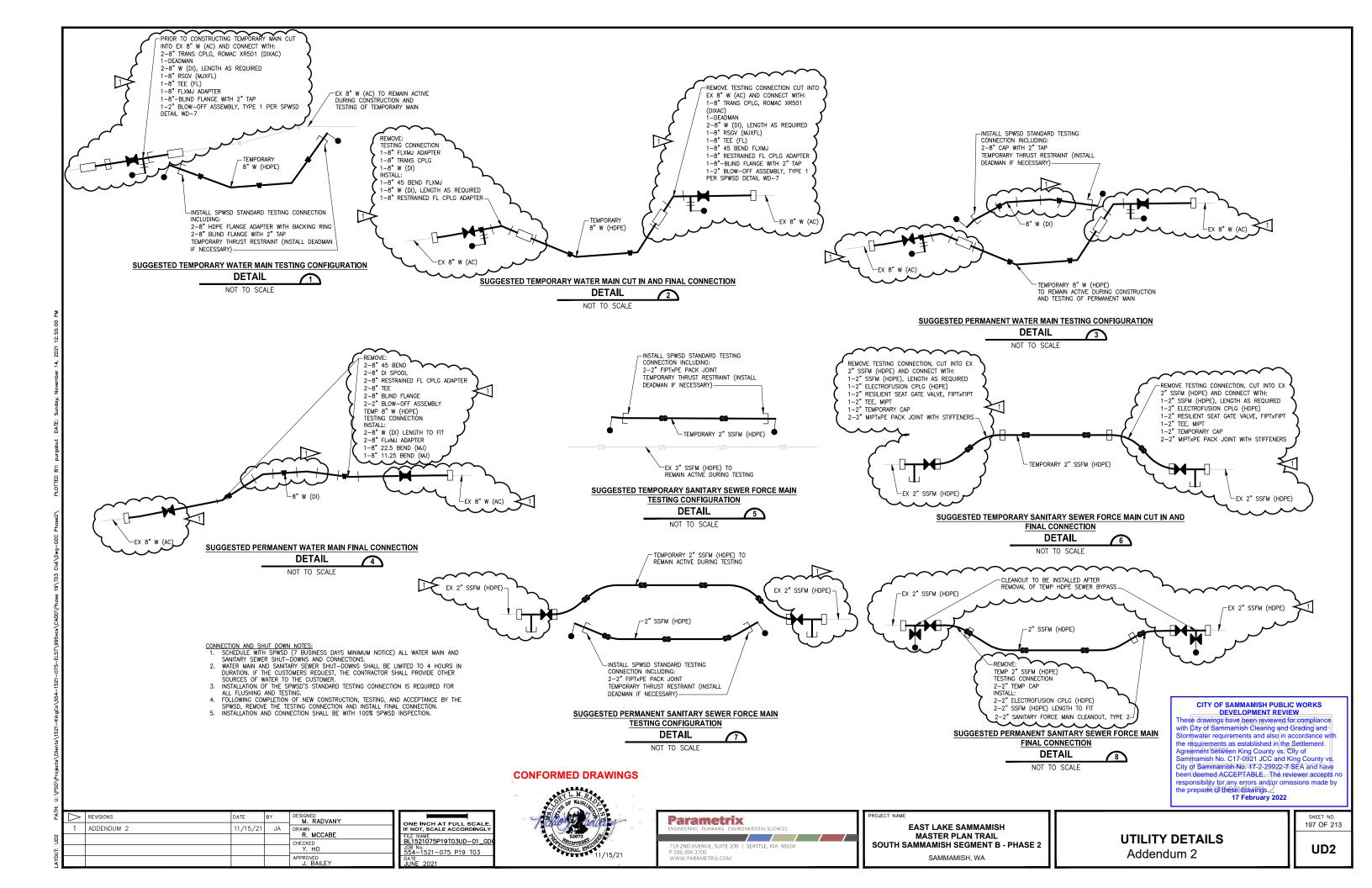
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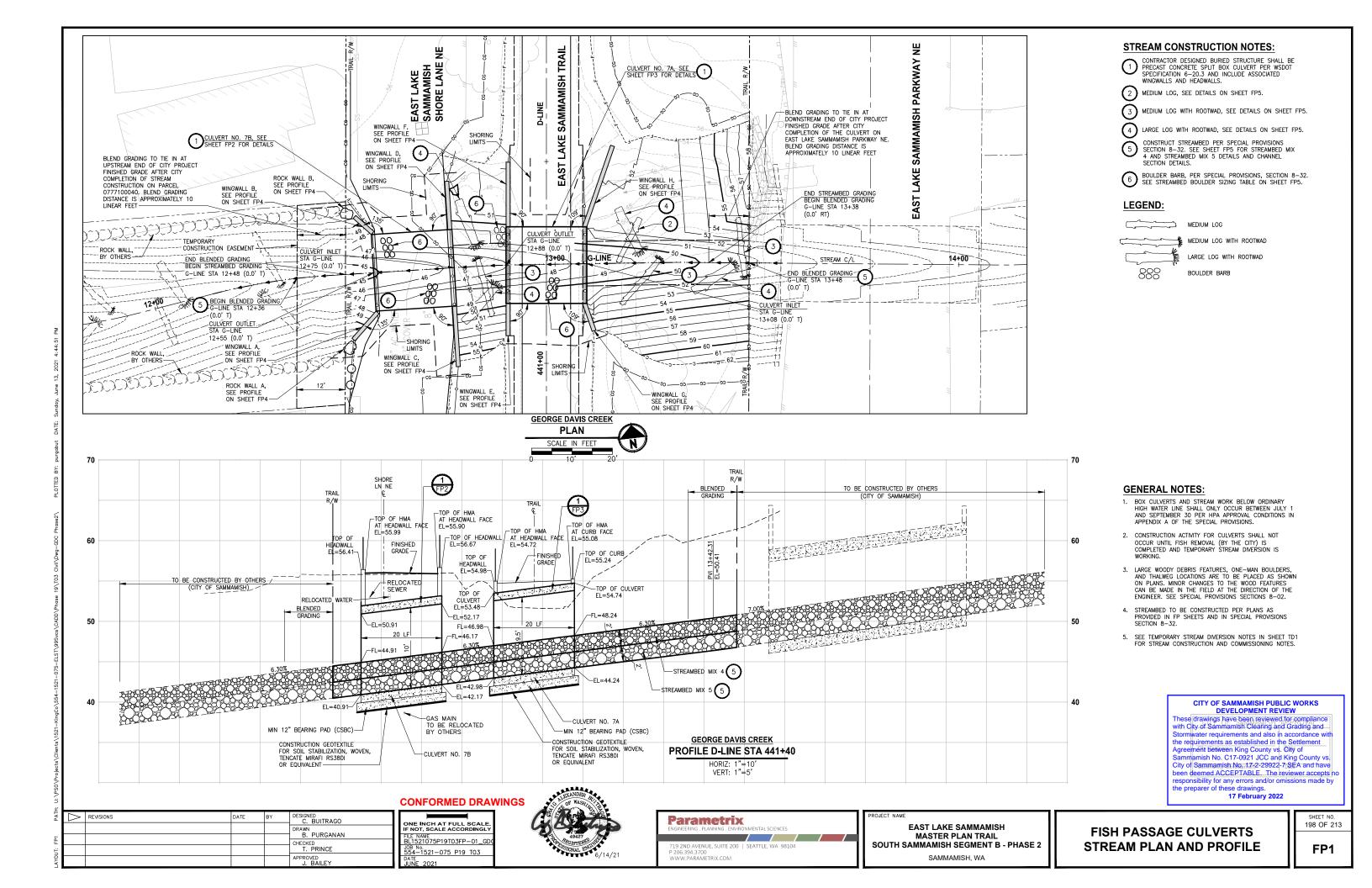
J. BAILEY

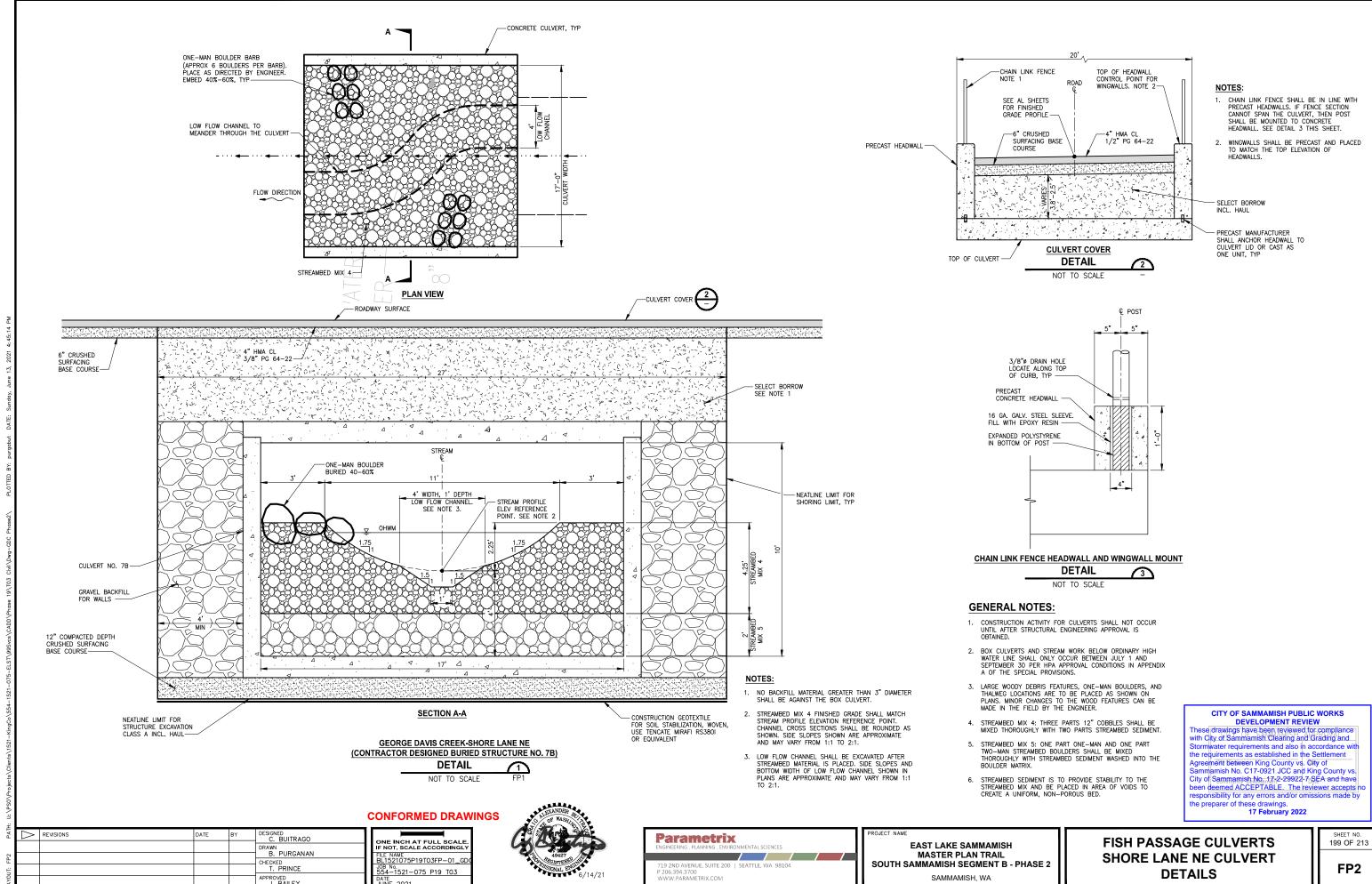
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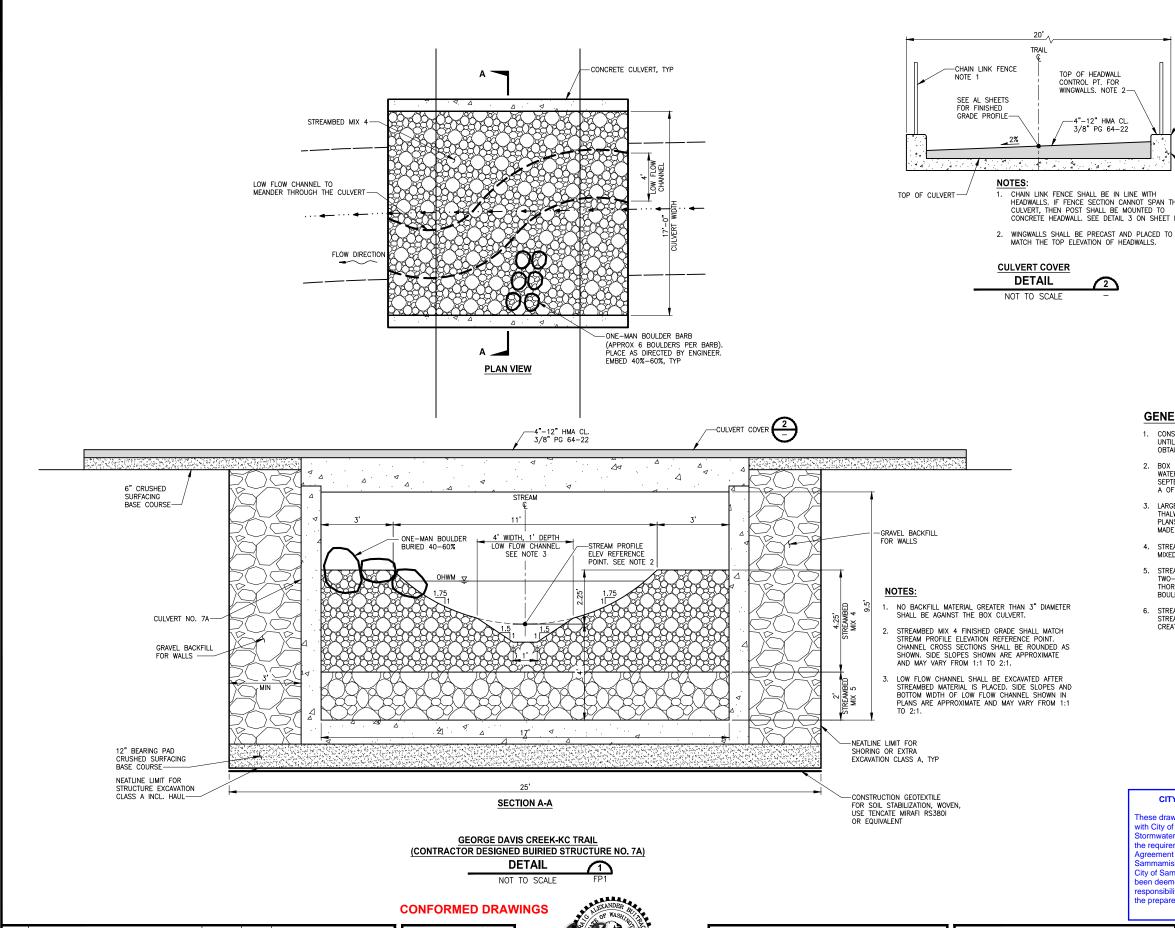


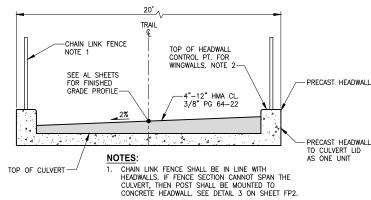




SAMMAMISH, WA

FP2





GENERAL NOTES:

- CONSTRUCTION ACTIVITY FOR CULVERTS SHALL NOT OCCUR UNTIL AFTER STRUCTURAL ENGINEERING APPROVAL IS
- 2. BOX CULVERTS AND STREAM WORK BELOW ORDINARY HIGH WATER LINE SHALL ONLY OCCUR BETWEEN JULY 1 AND SEPTEMBER 30 PER HPA APPROVAL CONDITIONS IN APPENDIX A OF THE SPECIAL PROVISIONS.
- 3. LARGE WOODY DEBRIS FEATURES, ONE—MAN BOULDERS, AND THALWEG LOCATIONS ARE TO BE PLACED AS SHOWN ON PLANS. MINOR CHANGES TO THE WOOD FEATURES CAN BE
- 4. STREAMBED MIX 4: THREE PARTS 12" COBBLES SHALL BE MIXED THOROUGHLY WITH TWO PARTS STREAMBED SEDIMENT.
- STREAMBED MIX 5: ONE PART ONE—MAN AND ONE PART TWO—MAN STREAMBED BOULDERS SHALL BE MIXED THOROUGHLY WITH STREAMBED SEDIMENT WASHED INTO THE BOULDER MATRIX.
- 6. STREAMBED SEDIMENT IS TO PROVIDE STABILITY TO THE STREAMBED MIX AND BE PLACED IN AREA OF VOIDS TO CREATE A UNIFORM, NON-POROUS BED.

CITY OF SAMMAMISH PUBLIC WORKS DEVELOPMENT REVIEW

These drawings have been reviewed for compliance Stormwater requirements and also in accordance with the requirements as established in the Settlement Agreement between King County vs. City of Sammamish No. C17-0921 JCC and King County vs. been deemed ACCEPTABLE. The reviewer accepts no responsibility for any errors and/or omissions made by the preparer of these drawings.

17 February 2022

CITY OF SAMMAMISH	APPROVAL
City Engineer	Date
Community Development	Date
Community Development	Date

C. BUITRAGO B. PURGANAN T. PRINCE

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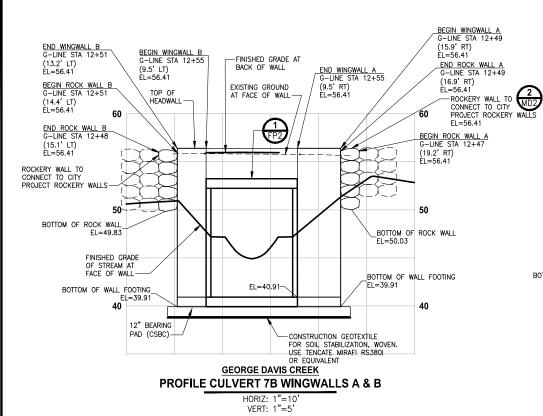


EAST LAKE SAMMAMISH **MASTER PLAN TRAIL** SOUTH SAMMAMISH SEGMENT B - PHASE 2

SAMMAMISH, WA

FISH PASSAGE CULVERTS ELST CULVERT DETAILS

200 OF 213



END WINGWALL C G-LINE STA 12+75 (9.5' RT) EL=56.67 BEGIN WINGWALL D G-LINE STA 12+75 (9.5' LT) EL=56.67 (T) FP2 60 FINISHED GRADE AT BACK OF WALL BEGIN WINGWALL C G-LINE STA 12+75 END WINGWALL D G-LINE STA 12+75 AT FACE OF WAL FINISHED GRADE OF STREAM AT FACE OF WALL— EL=42.17 _BOTTOM OF WALL FOOTING EL=41.17 BOTTOM OF WALL FOOTING EL=41.17 40 -CONSTRUCTION GEOTEXTILE FOR SOIL STABILIZATION, WOVEN. USE TENCATE MIRAFI RS3801 12" BEARING PAD (CSBC)-OR EQUIVALENT

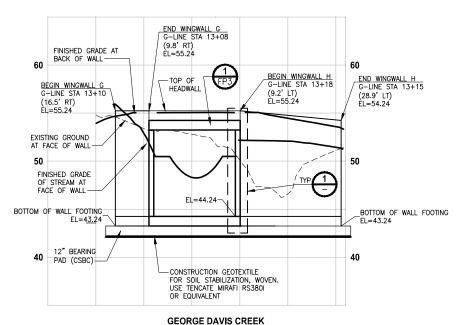
GEORGE DAVIS CREEK PROFILE CULVERT 7B WINGWALLS C & D

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

BEGIN WINGWALL F G-LINE STA 12+88 END WINGWALL E G-LINE STA 12+88 (9.5' RT) EL=54.98 FINISHED GRADE AT BEGIN WINGWALL E G-LINE STA 12+87 END WINGWALL F G-LINE STA 12+88 HEADWALL (17.5' RT) EL=54.98 FINISHED GRADE OF STREAM AT FACE OF WALL-EXISTING GROUND AT FACE OF WALL -EL=42.98 BOTTOM OF WALL FOOTING BOTTOM OF WALL FOOTING EL=41.98 EL=41.98 CONSTRUCTION GEOTEXTILE 12" BEARING FOR SOIL STABILIZATION, WOVEN. USE TENCATE MIRAFI RS380I OR EQUIVALENT PAD (CSBC)-

GEORGE DAVIS CREEK PROFILE CULVERT 7A WINGWALLS E & F

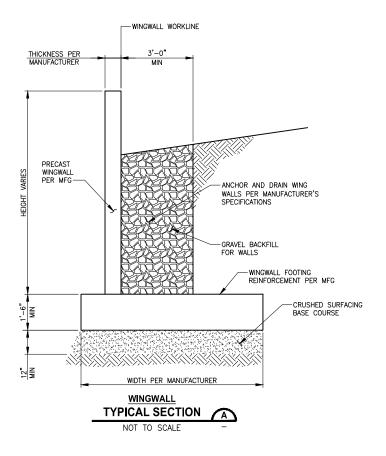
HORIZ: 1"=10'

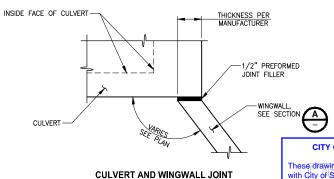


PROFILE CULVERT 7A WINGWALLS G & H

STRUCTURAL NOTES:

- 1. PRECAST WINGWALLS, HEADWALLS AND FOOTINGS SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS, SEE SPECIAL PROVISIONS SECTION 6-20.
- 2. CONCRETE FOR PRECAST UNITS AND FOOTINGS SHALL BE CLASS 4000 MIN.
- 3. DESIGN LOADING SHALL BE HL-93 AND DESIGN METHOD SHALL BE IN ACCORDANCE WITH THE WSDOT GEOTECHNICAL DESIGN MANUAL AND AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS (LATEST EDITIONS).
- 4. SEE PROJECT GEOTECHNICAL REPORT FOR ALLOWABLE BEARING PRESSURES.





DETAIL

NOT TO SCALE

CITY OF SAMMAMISH PUBLIC WORKS
DEVELOPMENT REVIEW
These drawings have been reviewed for compliance with City of Sammamish Clearing and Grading and Stormwater requirements and also in accor the requirements as established in the Settlement
Agreement between King County vs. City of
Sammamish No. C17-0921 JCC and King County vs. City of Sammamish No. 17-2-29922-7 SEA and have been deemed ACCEPTABLE. The reviewer accepts n the preparer of these drawings.

17 February 2022

CONFORMED DRAWINGS



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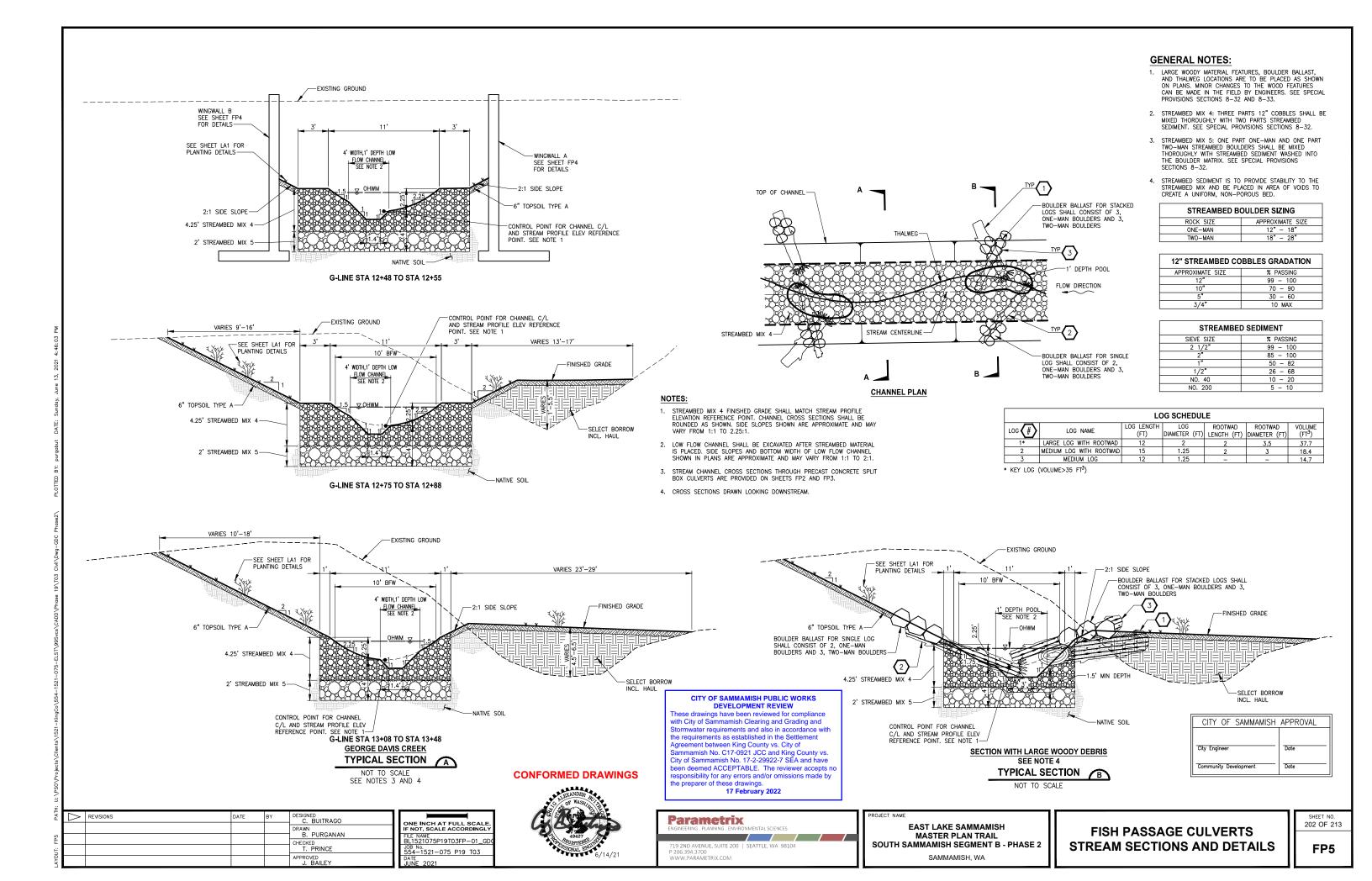
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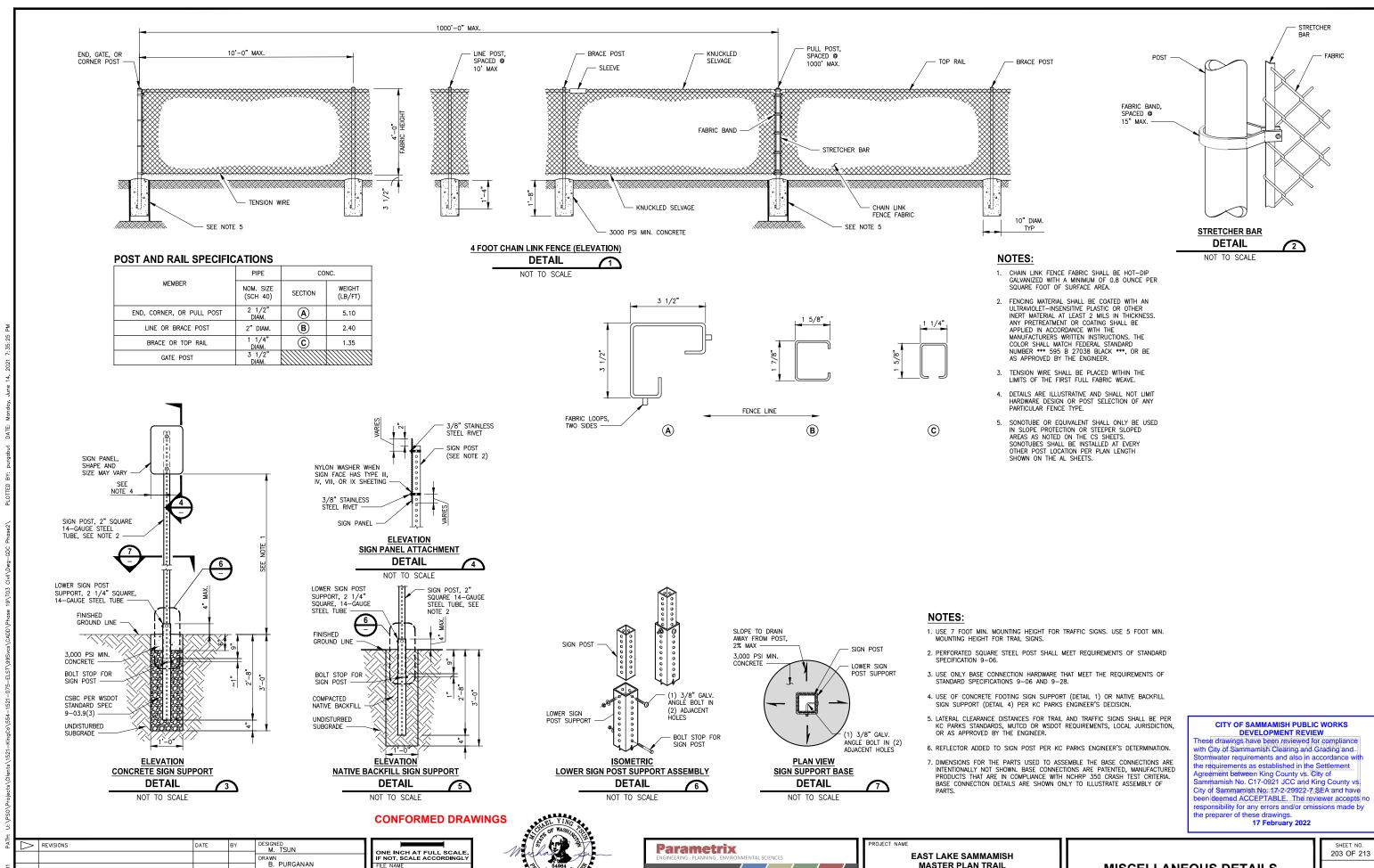
EAST LAKE SAMMAMISH **MASTER PLAN TRAIL** SOUTH SAMMAMISH SEGMENT B - PHASE 2 SAMMAMISH, WA

FISH PASSAGE CULVERTS WINGWALL PROFILES AND DETAILS

SHEET NO. 201 OF 213

FP4





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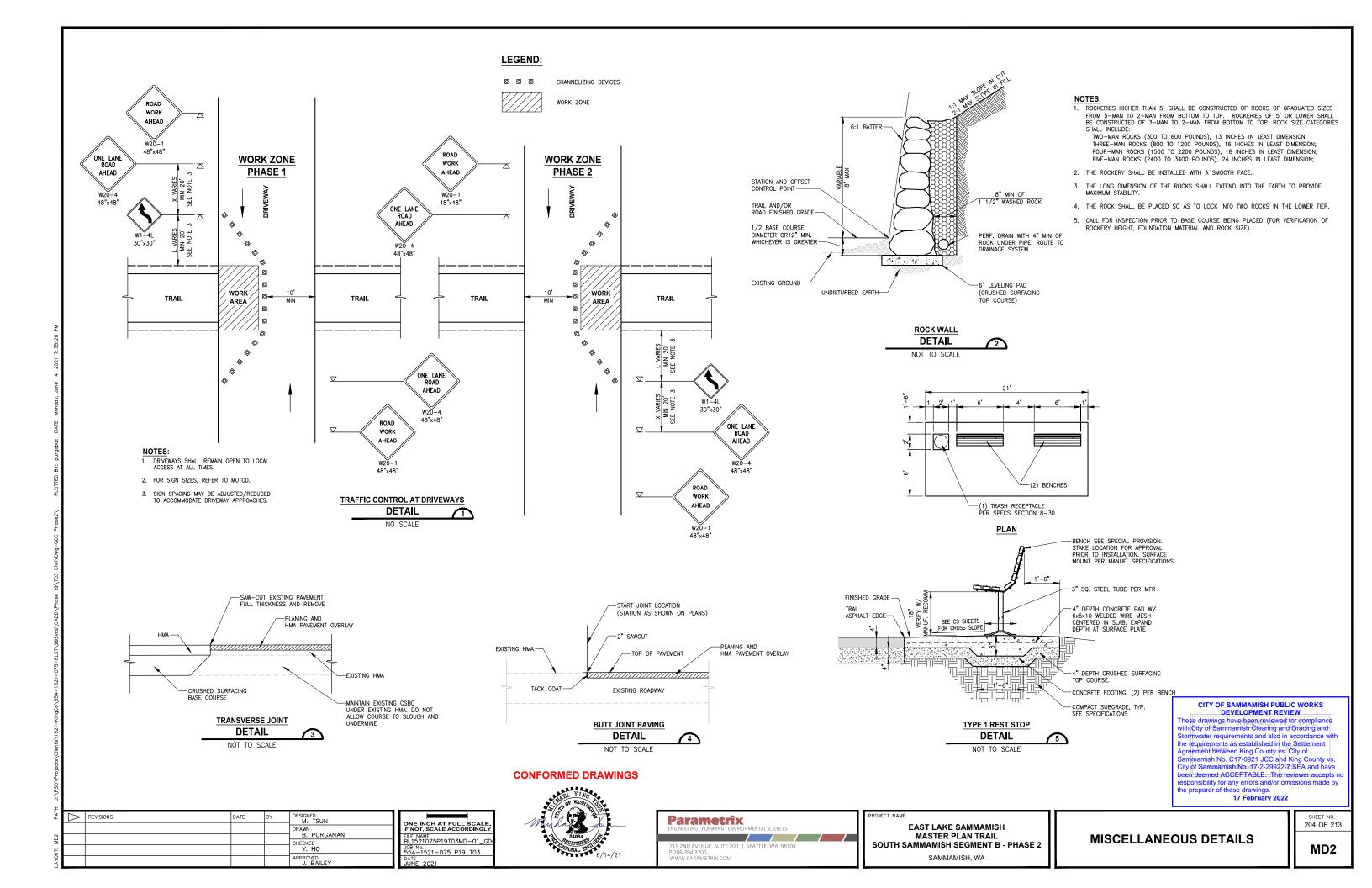
MASTER PLAN TRAIL

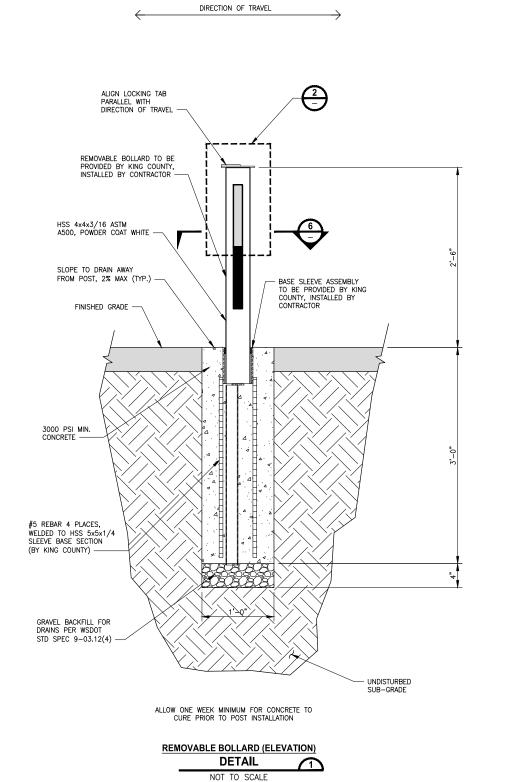
SOUTH SAMMAMISH SEGMENT B - PHASE 2

SAMMAMISH, WA

MISCELLANEOUS DETAILS

MD1

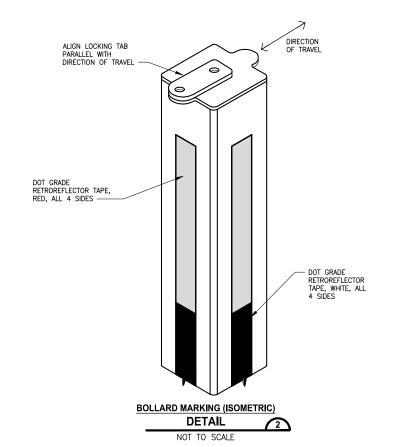


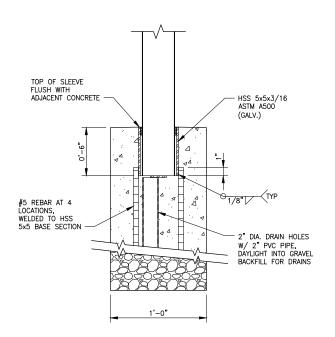


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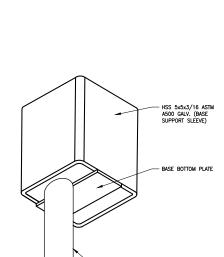
APPROVED
J. BAILEY

DRAWN B. PURGANAN









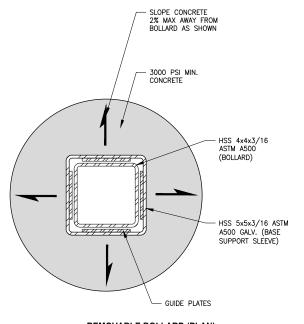
BOLLARD BASE DRAINS (ISOMETRIC) DETAIL NOT TO SCALE

NOTES:

- REMOVABLE BOLLARD ASSEMBLY AND BASE SLEEVE ASSEMBLY PARTS ARE DESIGNED, MANUFACTURED AND PROVIDED BY KING COUNTY PARKS
- PVC DRAIN PIPES ARE TO BE PROVIDED BY THE CONTRACTOR. INSTALLATION OF ALL PARTS SHALL BE PERFORMED BY THE CONTRACTOR.
- 3. GRAVEL BACKFILL FOR DRAINS SHALL CONFORM TO WSDOT STD. SPEC.
- 4. CONCRETE SHALL ACHIEVE A 28-DAY STRENGTH OF 3000 PSI MINIMUM.
- 5. ALL WELDS SHALL CONFORM TO THE REQUIREMENTS OF AWS DL.4. WLDING SHALL BE PERFORMED BY AWS/WABO CERTIFIED WELDERS QUALIFIED FOR WELDS USING THE APPROVED ELECTRODES.

CITY OF SAMMAMISH PUBLIC WORKS DEVELOPMENT REVIEW

DEVELOPMENT REVIEW
These drawings have been reviewed for compliance with City of Sammamish Clearing and Grading and Stormwater requirements and also in accordance with the requirements as established in the Settlement Agreement between King County vs. City of Sammamish No. C17-0921 JCC and King County vs. City of Sammamish No. 17-2-29922-7 SEA and have been depended ACCEPTRISE. been deemed ACCEPTABLE. The reviewer accepts r responsibility for any errors and/or omissions made by the preparer of these drawings. 17 February 2022



REMOVABLE BOLLARD (PLAN) **DETAIL**

NOT TO SCALE

SAMMAMISH APPROVAL	CITY OF
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CONFORMED DRAWINGS



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EAST LAKE SAMMAMISH MASTER PLAN TRAIL SOUTH SAMMAMISH SEGMENT B - PHASE 2

SAMMAMISH, WA

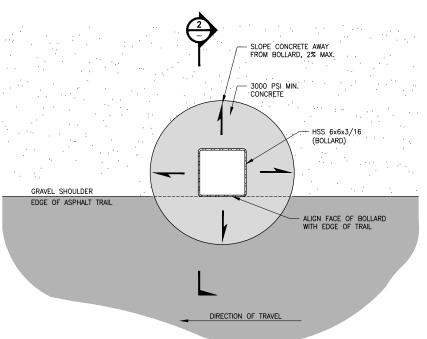
MISCELLANEOUS DETAILS

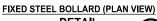
SHEET NO. 205 OF 213

MD3

NOTES:

- 1. BOLLARD ASSEMBLY SHALL BE POWDER COATED WHITE AFTER WELDING.
- 2. APPLY RETROREFLECTIVE TAPE PER PLAN AFTER POWDER COATING.
- 3. CONCRETE SHALL ACHIEVE A 28-DAY STRENGTH OF 3,000 PSI MINIMUM.
- 4. ALL WELDS SHALL CONFORM TO THE REQUIREMENTS OF AWS DL.4. WLDING SHALL BE PERFORMED BY AWS/WABO CERTIFIED WELDERS QUALIFIED FOR WELDS USING THE APPROVED ELECTRODES.





ESIGNED M. TSUN

DETAIL NOT TO SCALE





FIXED STEEL BOLLARD (ELEVATION)

DETAIL

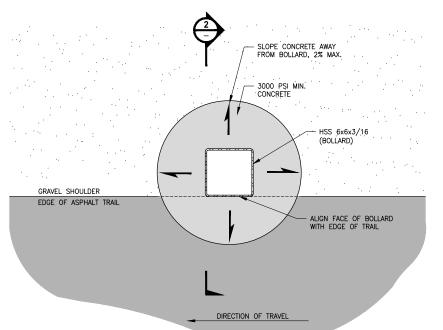
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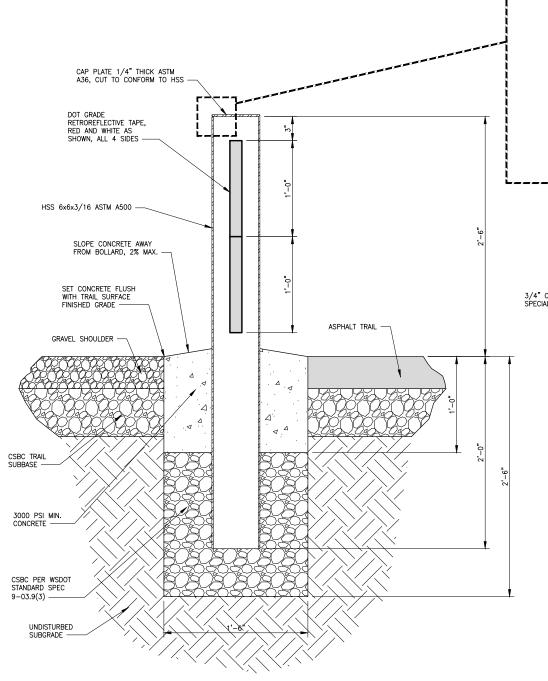
EAST LAKE SAMMAMISH MASTER PLAN TRAIL SOUTH SAMMAMISH SEGMENT B - PHASE 2

SAMMAMISH, WA

MISCELLANEOUS DETAILS

SHEET NO. 206 OF 213





OFFSET LOCATIONS SHOWN ON AL SHEETS SHOULDER FINISHED GRADE-3/4" CRUSHED CLEAN ROCK (SEE 1.07 NOTE 2 — SPECIAL PROVISION SECTION 4-04)-TRAIL EXISTING GROUND - GRAVEL BACKFILL FOR DRYWELL — CONSTRUCTION GEOTEXTILE FOR UNDERGROUND DRAINAGE MODERATE SURVIVABILITY, CLASS B (TOP, BOTTOM AND SIDES). 6" MIN OVERLAP AROUND GRAVEL 1. PROTECT INFILTRATION TRENCH AREAS. SEE SPECIAL PROVISIONS FOR DETAILS.

SECTION

INFILTRATION TRENCH DETAIL

NOT TO SCALE

2. SEE SHEET CS1 FOR TRAIL HMA AND CRUSHED ROCK BASE THICKNESS.

CITY OF SAMMAMISH PUBLIC WORKS
DEVELOPMENT REVIEW

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17 February 2022

Date Date

CITY OF SAMMAMISH APPROVAL

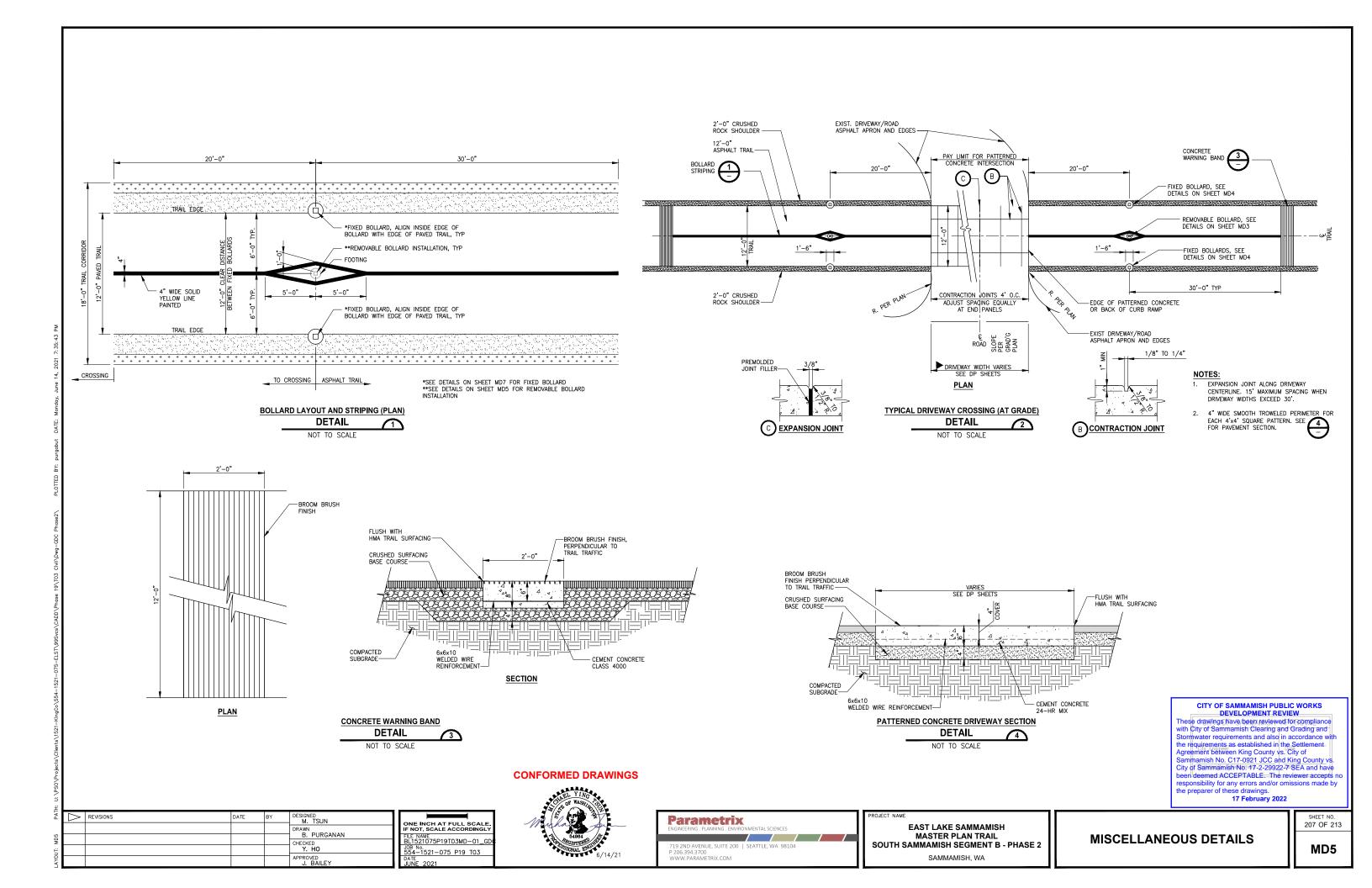
CONFORMED DRAWINGS

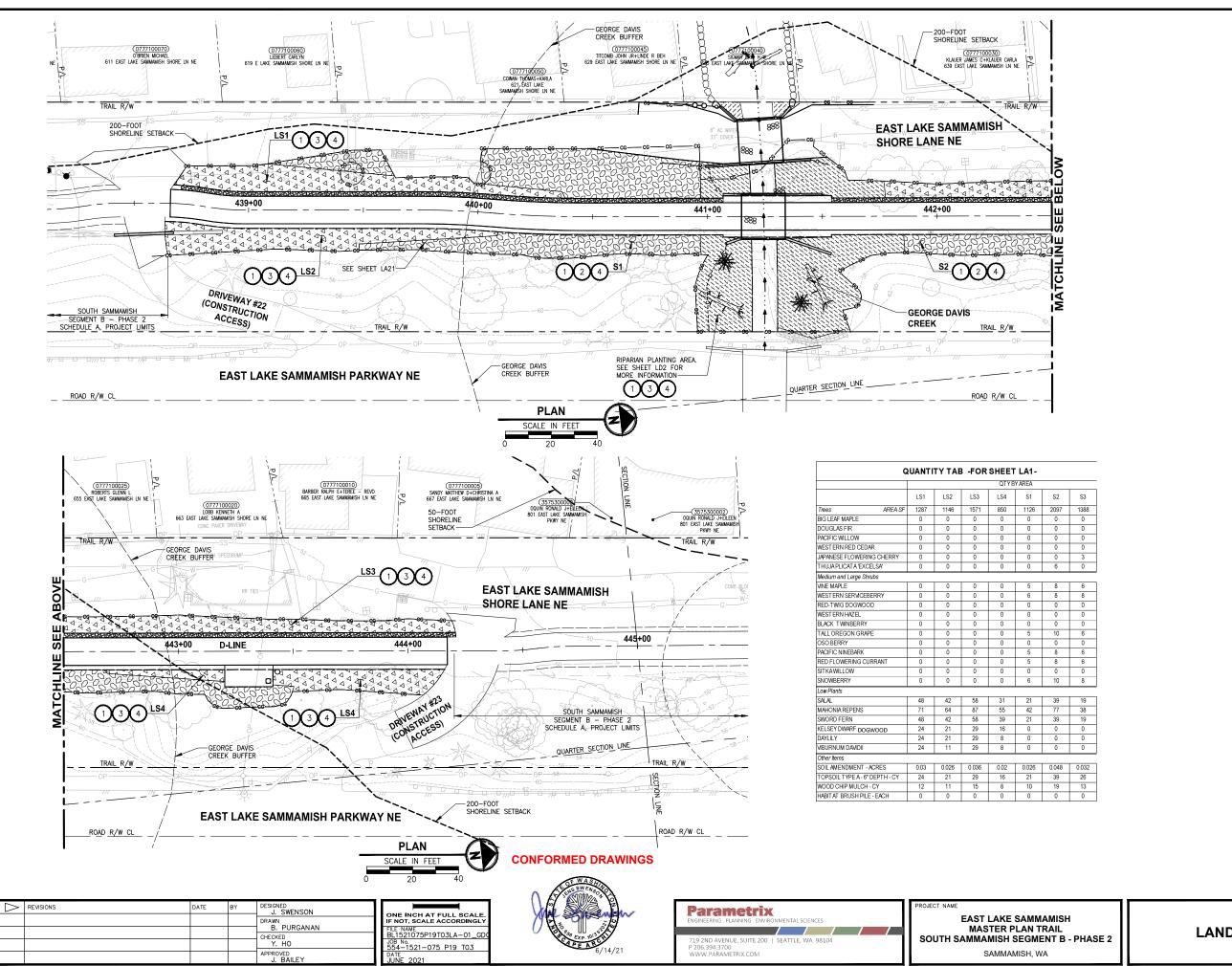
ROUND ALL SHARP EDGES, 1/8" RADIUS, TYP. ——

HSS PER

DRAWN B. PURGANAN FILE NAME BL1521075P19T03MD-01_G JÓB №. 554-1521-075 P19 T03 APPROVED
J. BAILEY

MD4





LANDSCAPE CONSTRUCTION NOTES:

SOIL AMENDMENT. PLACE 3" SOIL AMENDMENT AND TILL INTO SOIL TO A DEPTH OF 10" THROUGHOUT ENTIRE PLANTING AREA. SEE DETAIL 6 ON SHEET LD1.

TOPSOIL A. PLACE 12" LAYER TOPSOIL OVER THE ENTIRE SURFACE OF PLANTING AREA.

TOPSOIL A. PLACE 6" LAYER TOPSOIL OVER THE ENTIRE SURFACE OF PLANTING AREA.

WOOD CHIP MULCH. PLACE 3" LAYER WOOD CHIP MULCH OVER THE ENTIRE SURFACE OF THE AREA PLANTED.

GENERAL NOTES:

- SEE SHEETS LD1 FOR ADDITIONAL PLANTING NOTES, DETAILS AND REQUIREMENTS. SEE SHEETS LD2 AND LD3 FOR MITIGATION AREA REQUIREMENTS.
- 2. CONTRACTOR SHALL SETBACK PLANTINGS FROM OTHER OBJECTS AS PROVIDED IN THE PLANT MATERIAL SETBACK CHART ON SHEET LD1.
- 3. PLACE 4" TOPSOIL AND SEED ALL DISTURBED AREAS NOT OTHERWISE DESIGNATED FOR PLANTING AND OUTSIDE OF WETLANDS WITH WILDFLOWER SEED MIX. WETLAND AREAS WHICH ARE TEMPORARY DISTURBED SHALL BE RESTORED WITH WET NATIVE SEED OR AS DIRECTED BY OWNERS REPRESENTATIVE.

LEGEND:

LOW SHRUB PLANTING AREA



SHRUB PLANTING AREA RIPARIAN PLANTING AREA



HABITAT BRUSH PILE



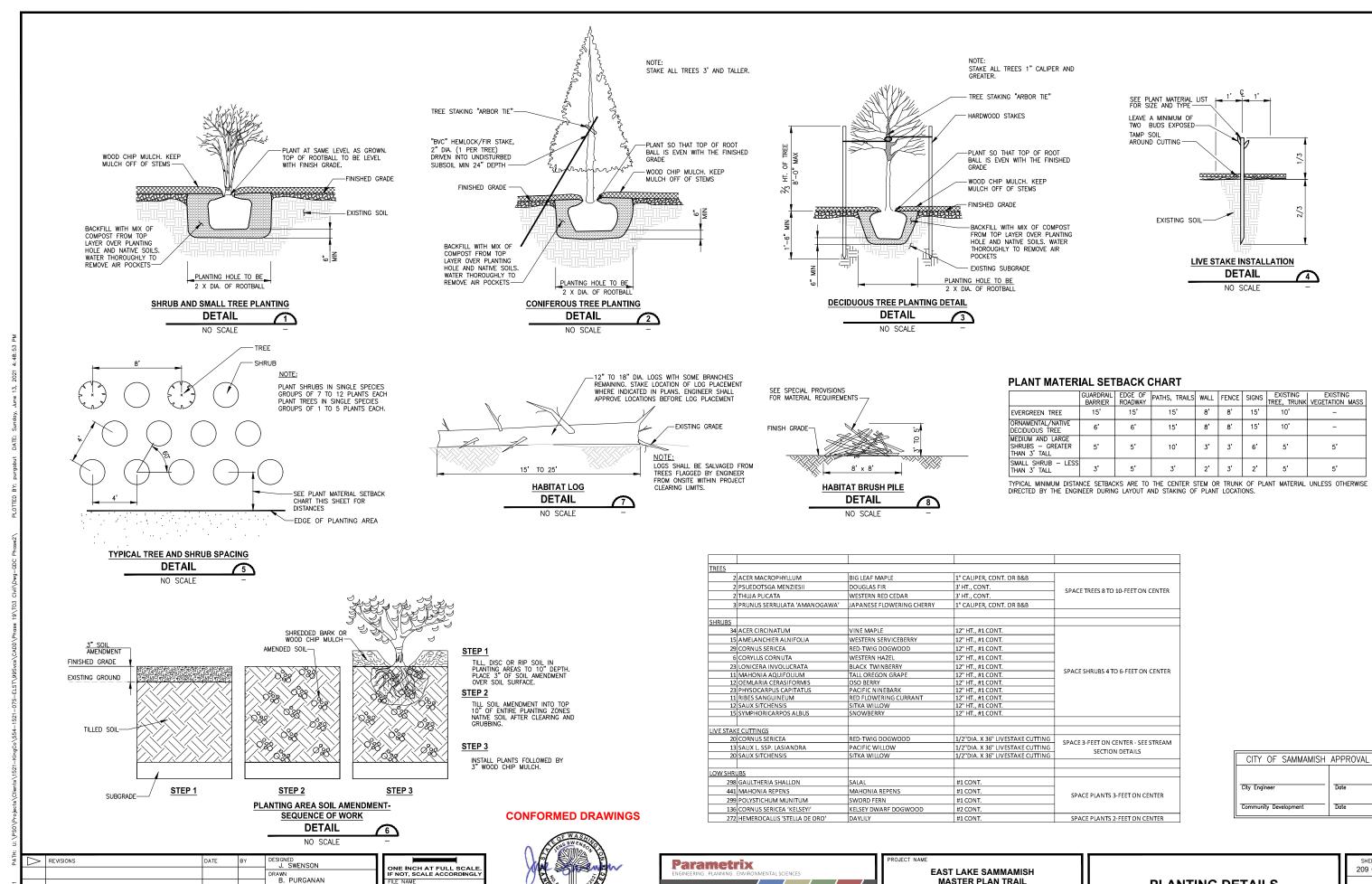
CITY OF SAMMAMISH APPROVAL

City Engineer Date Date

LANDSCAPE PLAN

208 OF 213

LA1



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JOB No. 554-1521-075 P19 T03

PPROVED
J. BAILEY

PLANTING DETAILS

MASTER PLAN TRAIL

SOUTH SAMMAMISH SEGMENT B - PHASE 2

SAMMAMISH, WA

LD1

209 OF 213

Date

Date

5'

1.1 Restoration Goals, Objectives, and Performance Standards

The overall goal for the George Davis Creek fish passage improvement project is to improve instream habitat and replace habitats and functions of riparian conditions lost as a result of the project. The proposed stream restoration of George Davis Creek (Type F stream) will occur both upstream and downstream of the trail by installing fish passable culverts, improving instream habitat through rerouting and regrading portions the stream to address steep topography, physical constraints around the stream, and sediment loads within the stream, and daylighting the stream in the trail right of way. The existing twin culverts beneath the trail will be replaced with a new 20-foot-long, 17-foot-span, 9.5-footrise concrete box culvert that is fish passable. The proposed new structure at the East Lake Sammamish Shore Lane NE crossing will be a 20-foot long, 17-foot span, 10-foot rise concrete box culvert. Restoration of the riparian stream buffer vegetation involves enhancement of 4,525 sf or 0.104 acre of buffer adjacent to George Davis Creek with native woody shrubs. Specific goals and objectives formulated to achieve this result are presented below.

The new crossings will be coordinated with two projects being conducted by the City of Sammamish including the replacement of the culvert beneath East Lake Sammamish Parkway and daylighting George Davis Creek downstream of East Lake Sammamish Shore Lane NE. The City will be responsible for monitoring their project areas; however, the existing alignment of George Davis Creek will need to be re-aligned so that both the King County's and the City of Sammamish fish passage improvement projects will align with one another. In effect the existing stream channel between East Lake Sammamish Trail and the Interim Use Trail will be filled and a new channel established just south of the existing channel.

1.1.1 Restoration Goals

The restoration goals are:

- Replace two fish barrier culverts on George Davis Creek with fish passable culverts.
- Establish/restore 0.104 acre of forested stream buffer. Achievement of these goals is expected to provide the following improvements to stream and stream buffer functions
- Provide additional fish habitat by removing fish barriers, increasing open stream channel, and opening up available upstream habitat.
- Increase the production of organic matter by planting trees and shrubs in the established/restored
- Increase fish and wildlife habitat and improve biological diversity by planting with a variety of native buffer plant species and by installing habitat features (habitat logs and brush piles).

1.1.2 Restoration Objectives and Performance Standards

1.1.2.1 Streams

Instream Habitat

Objective 1: Replace existing fish barrier culverts at the George Davis Creek trail crossing and East Lake Sammamish Shore Lane NE with fish passage culverts to open up available upstream habitat.

Performance Standards:

Constructed habitat elements including the new fish passable culverts, regraded channels, and streambed material will remain in place as constructed at the two culvert replacement sites. An individual culvert monitoring plans has been developed for the George Davis Creek culverts that will guide monitoring at these

1.1.2.2 Stream Buffers Areas

Objective 2: Establish/Restore a minimum of 0.104-acre of forested stream buffer.

Performance Standards:

- Year 1 Survival of planted woody species in increased/enhanced wetland buffer and enhanced stream buffer areas will be at least 80 percent.
- Record percent cover of native woody species in increased/enhanced Year 2 wetland buffer and enhanced stream buffer areas to establish a baseline for
- Year 3 Native woody species will achieve a minimum of 25 percent areal cover in the restored stream buffer area.
- Native woody species will achieve a minimum of 50 percent areal cover in the restored stream buffer area.

1.1.2.3 Invasive Species

Objective 4: Limit invasive non-native species throughout the restoration site planting areas.

Performance Standards

Himalayan blackberry, cutleaf blackberry, Scotch broom, English ivy, reed canarygrass, and hedge false bindweed will not exceed 20 percent areal cover in all planting areas.

1.1.2.4 Wildlife Habitat

Objective 5: Provide wildlife habitat.

Performance Standards:

Year 1, 2, 3, 5

Year 1, 2, 3, 5	Increase in areal cover of native woody species in all restoration areas, as measured in Objectives 1 and 2to be used as a surrogate to indicate increasing habitat functions.
Year 1, 3, 5	Increase in species richness of native species over preexisting conditions in all restoration areas, as measured in Objectives 1

Year 1, 2, 3, 5 Installed habitat features are present and functional.

1.1.2.5 Anthropogenic Disturbance

Objective 6: Protect the restoration site from anthropogenic disturbance.

Performance Standards:

Conduct qualitative monitoring to assess the status of the site Year 1 through 5 yearly during the 5-year monitoring period to monitor for human disturbance, including but not limited to filling, trash, and vandalism.

Year 1 through 5 Install and maintain fences and appropriate signs along the trail adjacent to each site to identify their protected status.

1.2 Record Drawings

Record drawings and/or a report documenting the as-built or installed conditions will be prepared after construction and plantings are complete. The report will include the following components: (1) drawings that clearly identify the boundaries of the restoration areas; (2) locations of the sampling and monitoring sites (including photo-point locations); (3) locations of hydrology monitoring stations; (4) photographs of the restoration sites; and (5) an analysis of any changes to the restoration plan that occurred during construction. A copy of the record drawing report will be sent to the City and USACE within 60 days of completion of construction and planting.

1.3 Monitoring

The restoration areas will be monitored during and after construction. During construction, monitoring will ensure that the BMPs are observed to minimize impacts, and the on-site construction work (including grading and planting) will be coordinated to ensure that the sites are constructed as designed.

After construction is completed, long-term monitoring will be performed annually to ensure that the goals and objectives of the restoration are being met. Monitoring of the restoration areas will be performed over a 5-year period by a qualified professional (SMC 21A.50.145). A combination of quantitative and qualitative monitoring activities will be used to assess the management objectives and associated performance standards described in the restoration plan. Activities will include site visits to monitor unnatural site disturbance, photographs to document site development, and data collection for the quantitative evaluation of performance standards. The results of the monitoring will be submitted to the permitting agencies.

Appropriate contingency measures will be developed, as needed, by a qualified professional to ensure that the sites develop healthy vegetation that meets the obligations described in this restoration plan and the associated permits.

1.3.1 Quantitative Monitoring

The following bulleted items describe the methods to be used for the quantitative monitoring, monitoring schedule, and report deadlines.

- The planting sites will be assessed by an appropriate quantitative vegetative field assessment methodology. The line intercept method will be used for determining percent areal cover for
- Quantitative vegetation assessments will follow the same method in each consecutive
- Quantitative vegetation assessments will be performed between June 15 and September 15 of
- Monitoring reports will be sent to agencies requiring monitoring reports by October 31 of each
- Permanent photographic stations will be established to monitor the development of the sites. Photographs will be taken along transect lines and from vantage points that capture the general restoration area. All photographs will be labeled to identify locations.

CITY OF SAMMAMISH APPROVAL City Engineer Date Date Community Developmen

CONFORMED DRAWINGS



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EAST LAKE SAMMAMISH MASTER PLAN TRAIL SOUTH SAMMAMISH SEGMENT B - PHASE 2 SAMMAMISH WA

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1.3.2 Qualitative Monitoring

Qualitative monitoring will be conducted as follows:

- A qualified professional will qualitatively assess the constructed habitat elements including the new fish passable culverts, regraded channels, and streambed material for the first 3 years
- Qualitative assessment will be performed yearly to visually assess the health of plants and identify areas that may need control of non-native invasive species or other maintenance activities
- During all qualitative monitoring years, photographic documentation of the site will occur from permanent photograph stations

1.4 Maintenance

The proposed restoration is intended to achieve the performance standards with minimal ongoing maintenance. However, King County will manage and maintain the site for 5 years, or until all performance standards are met and the site is closed with the approval of permitting agencies.

As mentioned previously, King County Parks has a formal maintenance program for its trail mitigation and restoration projects. The County understands that regular maintenance is necessary to achieve its mitigation and restoration commitments in public trail corridors.

Planted vegetation species are adapted to varying site conditions in the Puget Sound lowland, although supplemental irrigation may be needed during the first two growing seasons after installation to ensure the long-term survival of the plants. The need for irrigation will be evaluated based on the conditions observed during the establishment period.

To ensure rapid establishment of the plant community, trees and shrubs will be planted closer together than would generally occur in natural mature stands. Some natural mortality is expected to occur during the monitoring period. All dead and downed woody material will be left in place to provide microhabitats for wildlife. Plants will be replaced as needed to meet performance standards.

Maintenance to control nuisance species in the restoration areas will likely be necessary. During the monitoring period, if it becomes evident that invasive species are impeding establishment of desirable native plants, measures will be implemented to control nuisance species. A progressively aggressive approach will be used to control nuisance species. Control measures will first include hand cutting and/or grubbing and removal; if this fails, an environmentally sensitive herbicide (e.g., Rodeo or equivalent) may be applied.

A project specific Vegetation Management Plan (VMP) will identify the practices, policies, and procedures for addressing hazard trees, maintaining vegetation at intersections within sight distance triangles and along the trail corridor, addressing noxious weeds, and maintaining drainage features (ditches, pipes, culverts). King County is currently redesigning drainage to comply with the most current stormwater regulations. King County will provide a segment specific update to the Vegetation Management Plan, including a maintenance schedule.

There are some specific instances where care needs to be taken when conducting regularly scheduled maintenance activities. This is directly related to management activities within restoration sites as well as for the protection of existing critical area features such as streams that are adjacent to the alignment and are detailed further below.

1.4.1 Ditch Maintenance Activities

Care needs to be taken when conducting maintenance on ditches that drain to streams or those that are associated with wetlands. Activities such as removal of accumulated sediment can alter flow patterns, alter the hydroperiod of wetlands, and encourage growth of invasive and noxious plant species. It is recommended that accumulated sediment removal from ditches be limited only to that necessary to maintain flow within the ditch (top 1 to 2 inches of accumulated sediment). In addition, over-excavation can also result in removal of native vegetation and may interfere with the success of restoration areas in meeting their specific identified performance standards during regularly scheduled maintenance activities.

1.4.2 Vegetation Maintenance

Care should be taken when maintaining vegetation along the trail alignment, particularly within trailside wetlands, restoration areas and along streams. It is recommended that these areas be clearly marked and differentiated from landscaping areas so that each area specific maintenance needs are met. Vegetation in restoration areas should never be mowed. Instead vegetation should only be trimmed to the extent that the trail remains unobstructed and to maintain adequate flow conveyance through ditch systems along the trail. This will ensure that restoration areas meet their target performance standards during regularly scheduled monitoring.

1.5 Contingency Measures

Adaptive management is driven by the monitoring results and the performance standards. If the performance standards are not met, adaptive management activities will be implemented to achieve the desired condition. Management activities may include implementation of contingencies described in Table 5-5, or other appropriate measures. Site conditions will be evaluated to determine the cause of the problem and the most appropriate countermeasure.

Table 5-5. Contingency Measures for the Restoration Site

Problem	Contingency Measure	
Less than 80% of planted woody species survive in Year 1	King County biologists (or other qualified biologist) will assess the site to determine what conditions are preventing the plants from thriving. Appropriate measures will be taken to correct any conditions that are limiting growth. Plants will be replaced with appropriate native species to achieve the Year 1 standard. Additional measures (such as providing additional protection) will be considered if necessary.	
Percent cover for woody species not met during Years 3, 5	King County biologists (or other qualified biologist) will assess the site to determine what conditions are preventing the plants from thriving. Appropriate measures, such as increased weed control or extra plantings, will be taken to correct any conditions that are limiting growth.	
Invasive species exceed percent cover threshold	Implement/revise invasive species control plan.	
Performance standards not met at Year 5	Continue the monitoring regime for 1 additional year. The site will continue to be evaluated every year until each site has met the stated performance standards associated with management objectives. Other contingency measures may be implemented during this period.	

Information from the annual monitoring program will be used to identify any maintenance and/or corrective actions. If problems are identified in monitoring. King County biologists will determine the cause of the problem and implement proper maintenance or corrective activities. These activities will be discussed in the annual monitoring report.

1.6 Performance Security/Financial Assurance

This restoration project will be sponsored by King County. The County will implement a suitable mechanism to ensure that the project is implemented successfully and monitored for a minimum of 5 years, or until the project restoration is deemed a success by achieving its performance standards.

1.7 Site Protection

The County owns the property underlying the restoration site. They will protect the restoration site in perpetuity through a legal mechanism that permits maintenance and monitoring of the restoration area. This mechanism shall be retained by the County and may be submitted to the USACE after permit issuance, if required. In addition, permanent fencing and/or signs indicating that the area is a natural or sensitive or critical area to be protected from disturbance will be posted along the boundaries of each

1.8 Long-term Management Plan

The restoration site is located on King County property. After attainment of performance standards and acceptance of the restoration project by the USACE, the County will implement a long-term management plan for the sites as part of trail operations, if required.

Site management activities will include noxious weed control, damage repair from vandalism, trash removal, and signage maintenance.

Monitoring reports or technical memoranda will document annual management activities and identify key issues and actions needed for the following year. Reports are anticipated to be submitted every year to the USACE, by the end of the calendar year, for the first 5 years following attainment of performance standards

The County will issue a letter of assurance to cover long-term management costs of the restoration site to the USACE ensuring the County's compliance with the long-term management plan.

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CONFORMED DRAWINGS





EAST LAKE SAMMAMISH MASTER PLAN TRAIL SOUTH SAMMAMISH SEGMENT B - PHASE 2

MITIGATION NOTES

SHEET NO. 211 OF 213

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