

CEDAR CREEK STORMWATER RETROFIT - SITE #1

JANUARY 2023

FUNDED IN PART BY THE WASHINGTON STATE DEPARTMENT OF ECOLOGY

CITY OFFICIALS

CONTACT PERSONNEL NAME AGENCY PHONE

COK SPILL RESPONSE HOTLINE

COK POLICE

EMERGENCY

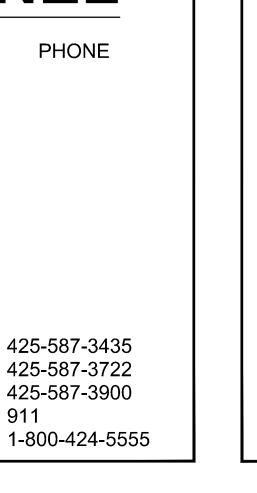
ONE CALL LOCATES

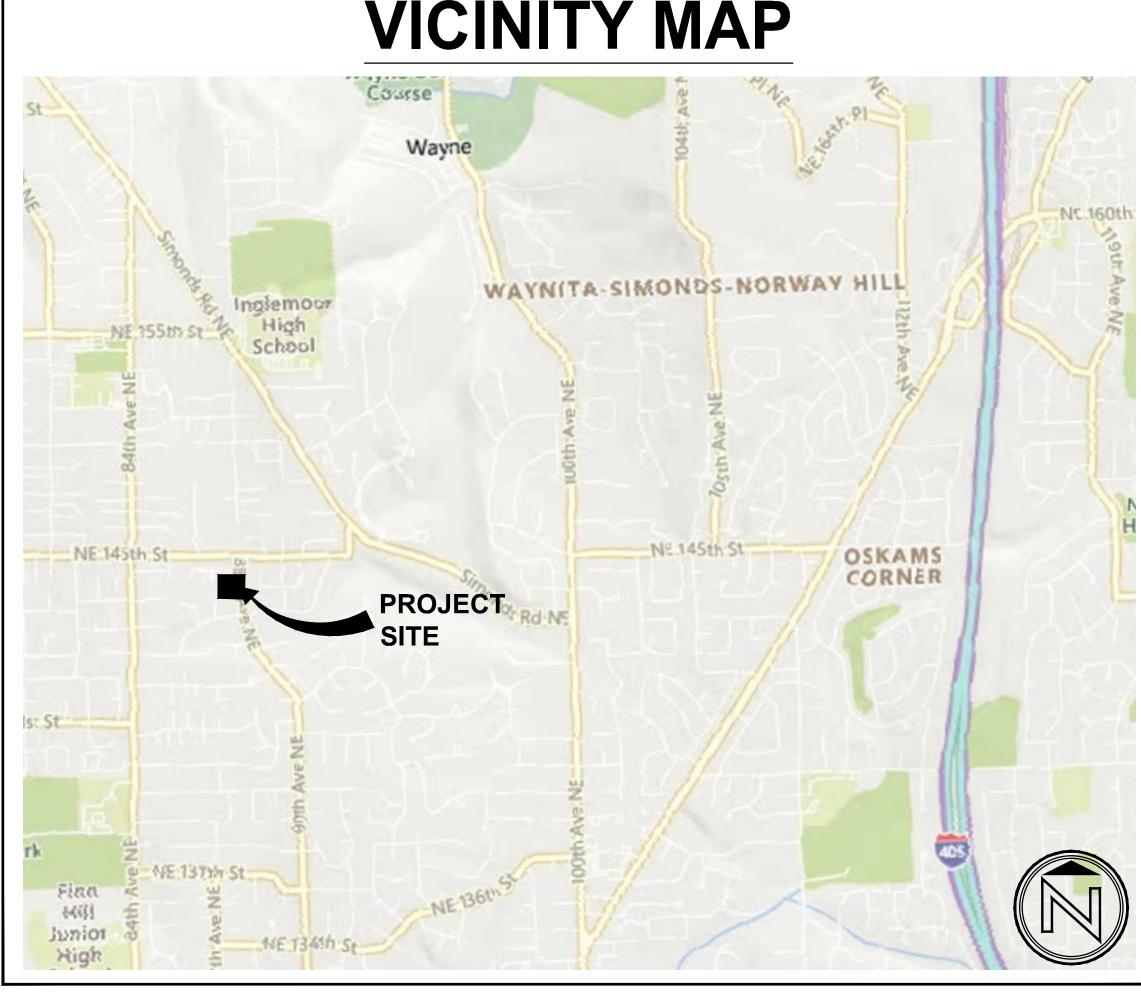
COK FIRE

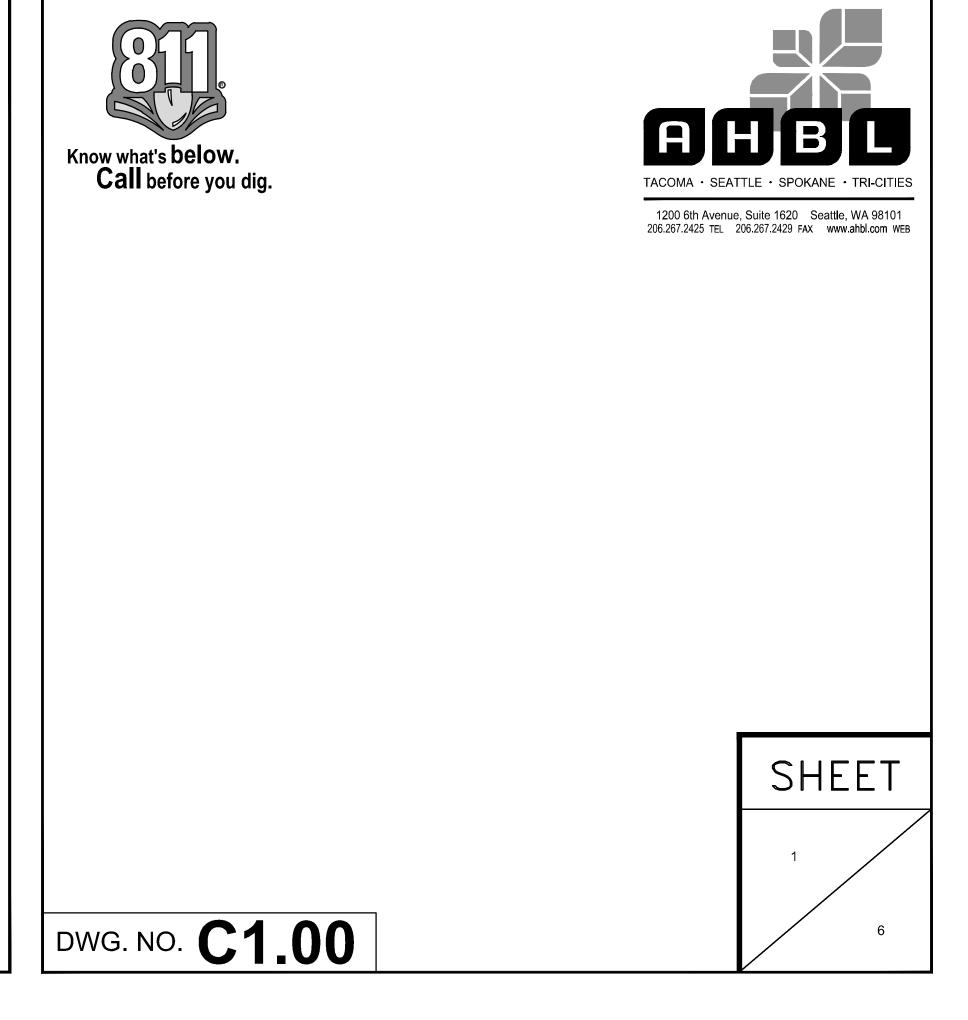
45% DESIGN SUBMITTAL

PRELIMINARY

NOT FOR CONSTRUCTION







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C2.00	STORM DRAINAGE AND GRADING PLAN
C2.01	POND SECTION AND STORM PROFILE PLAN
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C2 11	STORM DRAINAGE DETAILS

LEGAL DESCRIPTION

THE EAST 73.625 FEET IF THE 417.42 FEET OF GOVERNMENT LOT I, SECTION 19, TOWNSHIP 26 NORTH, RANGE 5 EAST, W.M., IN KING COUNTY, WASHINGTON, EXCEPT THE NORTH 30 FEET CONVEYED TO KING COUNTY FOR ROAD PURPOSES.

VERTICAL DATUM

NAVD 1988 VERTICAL DATUM ON ORTHOMETRICALLY CORRECTED GPS OBSERVATIONS USING WSRN AND GEOID 2012A.

BASIS OF BEARING

NAD 1983

WASHINGTON STATE PLANE NORTH PROJECTION, BASED ON GPS OBSERVATIONS USING WSRN AND GEOID 2012A. UNITS OF MEASUREMENT ARE US SURVEY FEET.

UTILITY NOTES

1. SURFACE UTILITY FACILITIES ARE SHOWN HEREON PER FIELD LOCATED VISIBLE EVIDENCE. THERE MAY BE UTILITIES THAT EXIST ON THIS SITE OTHER THAN THOSE GRAPHICALLY DEPICTED HEREON.

2. UNDERGROUND (BURIED) UTILITIES SHOWN HEREON ARE BASED ON COMBINATIONS OF VISIBLE SURFACE EVIDENCE, UTILITY LOCATOR MARKINGS AND RECORD DATA (SUCH AS AS-BUILT OR UTILITY DESIGN DRAWINGS). ALL UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND, IN SOME CASES ARE SHOWN AS STRAIGHT LINES BETWEEN FIELD LOCATED SURFACE UTILITY FACILITIES. UNDERGROUND UTILITIES MAY HAVE BENDS, CURVES OR CONNECTIONS WHICH ARE NOT SHOWN.

3. ALTHOUGH LOCATIONS OF UNDERGROUND UTILITIES BASED ON UTILITY LOCATOR MARKINGS AND RECORD DATA (SUCH AS AS-BUILT OR UTILITY DESIGN DRAWINGS) ARE DEEMED RELIABLE, AHBL, INC. ASSUMES NO LIABILITY FOR THE ACCURACY OF SAID DATA.

4. CALL 1-800-424-5555 BEFORE ANY CONSTRUCTION.

TRENCH NOTE

IF WORKERS ENTER ANY TRENCH OR OTHER EXCAVATION FOUR OR MORE FEET IN DEPTH THAT DOES NOT MEET THE OPEN PIT REQUIREMENTS OF WSDOT SECTION 2-09.3(3)B, IT SHALL BE SHORED AND CRIBBED. THE CONTRACTOR ALONE SHALL BE RESPONSIBLE FOR WORKER SAFETY AND AHBL ASSUMES NO RESPONSIBILITY. ALL TRENCH SAFETY SYSTEMS SHALL MEET THE REQUIREMENTS OF THE WASHINGTON INDUSTRIAL SAFETY AND HEALTH ACT, CHAPTER 49.17 RCW.

FILL SPECIFICATION

FILL MATERIAL SHALL NOT CONTAIN PETROLEUM PRODUCTS, OR SUBSTANCES WHICH ARE HAZARDOUS, DANGEROUS, TOXIC, OR WHICH OTHERWISE VIOLATE ANY STATE, FEDERAL, OR LOCAL LAW, ORDINANCE, CODE, REGULATION, RULE, ORDER, OR STANDARD.

AUTOCAD FILE

AN AUTOCAD DRAWING FILE IS AVAILABLE TO ASSIST WITH SITE LAYOUT. PLEASE NOTE THAT ELECTRONIC FILES ARE PROVIDED FOR CONTRACTOR'S CONVENIENCE AND SHALL NOT REPLACE NOR BE USED TO SUBSTITUTE THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR PROJECT LAYOUT ACCORDING TO CONTRACT DOCUMENTS AND COST FOR ELECTRONIC AUTOCAD FILES. PHONE: (206) 267-2425

FAX: (206) 267-2429 CONTACT: BETHANY STEADMAN, AHBL

ABBREVIATIONS

APPROX APPROXIMATE

/ II I I I I I I I	/ II I I I I I I I I I I I I I I I I I	14111.4	WIII WIIVIOWI
AVE/AV	AVENUE	MISC	MISCELLANEOUS
AVG	AVERAGE	MON	MONUMENT
BLVD	BOULEVARD	N	NORTH OR NORTHING
BOA	BEGINNING OF ASPHALT	NIC	NOT IN CONTRACT
CB	CATCH BASIN	NO	NUMBER
£	CENTERLINE	NTS	NOT TO SCALE
C.O.K.	CITY OF KIRKLAND	PERP	PERPENDICULAR
CONC	CONCRETE	R	RADIUS
DET	DETAIL	REQ'D	REQUIRED
DIA	DIAMETER	RT	RIGHT
DIM	DIMENSION	RR	RAILROAD
DI	DUCTILE IRON	ROW	RIGHT OF WAY
DR	DRIVE	S	SLOPE OR SOUTH
E	EAST OR EASTING	SHT	SHEET
EL/ELEV	ELEVATION	SPEC	SPECIFICATION
EOA	END OF ASPHALT	SR	STATE ROUTE
EOP	EDGE OF PAVEMENT	ST	STREET
ESC	EROSION & SEDIMENT	STA	STATION
CONTROL		STD	STANDARD
EX/EXIST	EXISTING	TCP	TRAFFIC CONTROL PLAN
HOR,HORZ	HORIZONTAL	TEMP	TEMPORARY
LAT	LATITUDE	TYP	TYPICAL
LONG	LONGITUDE	VER,VERT	VERTICAL
LT	LEFT	W	WEST
MAX	MAXIMUM	WSDOT	WASHINGTON STATE
MH	MANHOLE		DEPARTMENT OF
MIC	MONUMENT IN CASE		TRANSPORTATION

MINIMUM

GENERAL NOTES

- 1. TRAFFIC CONTROL: TEMPORARY TRAFFIC CONTROL SHALL BE IN PLACE PRIOR TO ANY CONSTRUCTION. CONTRACTOR SHALL PROVIDE A TRAFFIC CONTROL PLAN TO THE CITY FOR APPROVAL PRIOR TO ANY CONSTRUCTION.
- 2. <u>TEMPORARY SIGNAGE:</u> THE CONTRACTOR SHALL PROVIDE "NO PARKING" SIGNS TO BE INSTALLED ON TYPE 1 BARRICADES AT LOCATIONS APPROVED BY THE CITY. SIGNS SHALL BE IN PLACE 48 HOURS PRIOR TO WORK IN THAT AREA.
- 3. <u>EXISTING UTILITIES:</u> CONTRACTOR SHALL PROTECT AND MAINTAIN ACCESS TO ALL EXISTING UTILITIES WHETHER SHOWN ON THE PLANS OR NOT.
- 4. <u>RESTORATION: CONTRACTOR SHALL REPAIR ALL AREAS DAMAGED TO THE SAME OR BETTER CONDITION PRIOR TO DISTURBANCE AT NO ADDITIONAL COST TO THE CONTRACTING AGENCY.</u>
- ALLOWABLE WORKING HOURS: WORK HOURS SHALL BE LIMITED TO 7AM-6PM, WEEKDAYS AND WEEKENDS, UNLESS APPROVED OR NOTED OTHERWISE. SEE SPECIAL PROVISIONS.
- CONTRACTOR PARKING: EMPLOYEES OF THE CONTRACTOR SHALL PARK ONLY IN DESIGNATED CONSTRUCTION STAGING/STORAGE AREAS OR USE PUBLIC OFF-STREET PARKING. ON-STREET PARKING IN RESIDENTIAL AREAS WILL NOT BE ALLOWED.
- 7. THE GENERAL CONTRACTOR SHALL ARRANGE FOR A PRECONSTRUCTION MEETING WITH THE CITY OF KIRKLAND TO BE ATTENDED BY ALL MAJOR CONTRACTORS AND REPRESENTATIVES OF INVOLVED UTILITIES. SEE SECTION 1–07.17 OF THE SPECIAL PROVISIONS FOR UTILITY CONTACT INFORMATION.
- 8. AFTER COMPLETION OF ALL ITEMS SHOWN ON THESE PLANS AND BEFORE ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL OBTAIN A "PUNCH LIST" PREPARED BY THE CITY'S INSPECTOR DETAILING REMAINING ITEMS OF WORK TO BE COMPLETED. ALL ITEMS OF WORK SHOWN ON THESE PLANS SHALL BE COMPLETED TO THE SATISFACTION OF THE CITY PRIOR TO ACCEPTANCE OF THE PROJECT.
- ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE 2022 STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, PUBLISHED BY THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND THE AMERICAN PUBLIC WORKS ASSOCIATION, WASHINGTON STATE CHAPTER, UNLESS SUPERSEDED OR AMENDED BY THE PROJECT SPECIAL PROVISIONS OR CITY OF KIRKLAND STANDARD PLANS.
- 10. A FULL-SIZE COPY OF THESE APPROVED PLANS, PROJECT MANUAL, AND APPLICABLE CITY DEVELOPER SPECIFICATIONS AND DETAILS SHALL BE ON SITE DURING CONSTRUCTION.
- 11. ANY REVISIONS MADE TO THESE PLANS MUST BE REVIEWED AND APPROVED BY THE CITY PRIOR TO ANY IMPLEMENTATION IN THE FIELD.
- 12. THE CONTRACTOR SHALL HAVE ALL UTILITIES VERIFIED ON THE GROUND BEFORE WORK COMMENCES. CALL (1-800-424-5555) AT LEAST 2 WORKING DAYS PRIOR TO ANY CONSTRUCTION. THE ENGINEER SHALL BE CONTACTED IMMEDIATELY IF ANY CONFLICTS NOT NOTED ON THESE PLANS ARE FOUND.
- 13. PROTECTION OF THE ENVIRONMENT: NO CONSTRUCTION RELATED ACTIVITY SHALL CONTRIBUTE TO THE DEGRADATION OF THE ENVIRONMENT, ALLOW MATERIAL TO ENTER SURFACE OR GROUND WATERS, OR ALLOW PARTICULATE EMISSIONS TO THE ATMOSPHERE, WHICH EXCEED STATE OR FEDERAL STANDARDS. ANY ACTIONS THAT POTENTIALLY ALLOW A DISCHARGE TO STATE WATERS MUST HAVE PRIOR APPROVAL OF THE WASHINGTON STATE DEPARTMENT OF ECOLOGY.
- 14. RECYCLED CONCRETE AGGREGATE SHALL NOT BE USED ON THIS PROJECT UNLESS ENCASED IN FRESH CONCRETE.
- 15. ALL PVC CONNECTIONS TO CATCH BASINS SHALL HAVE A SAND COLLAR.

EXISTING LEGEND

△ •	SET NAIL AND WASHER FOUND MONUMENT AS NOTED
•	HUB AND TACK
•	SET REBAR AND CAP
0	BOLLARD
_	MAIL BOX
Ф	SIGN
0	SANITARY SEWER MANHOLE
0	SANITARY SEWER CLEANOUT
	STORM CATCH BASIN
	STORM MANHOLE
©	ROOF DRAIN
<u> </u>	GAS METER GAS VALVE
W	TRAFFIC SIGNAL POLE
\bowtie	TRAFFIC CABINET
	POWER TRANSFORMER
<u>△</u>	GUY ANCHOR
	UTILITY POWER POLE
- ◊ -	
LPJ Ø	ELECTRICAL VAULT
Ø	JUNCTION BOX POWER METER
~ ¤	LUMINAIRE
	TELEPHONE RISER
_ [T]	TELEPHONE VAULT
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	FIRE DEPARTMENT CONNECTION
Ω	FIRE HYDRANT
~ ⋈	IRRIGATION CONTROL VALVE
НВ	HOSE BIB
<b>=</b>	WATER METER
×	WATER VALVE
WV	WATER VAULT
	A=APPLE, B=BIRCH, F=FIR, P=PINE, HA=HAWTHORNE
$\odot$	HO=HOLLY, M=MAPLE, O=OAK, U= UNKNOWN
D	
——————————————————————————————————————	
— — — IR —	IRRIGATION PER RECORD DRAWING
	OVERHEAD UTILITIES
V	STEAM LINE
X — X — X — X — X — X — X	FENCE
	CONCRETE
	ASPHALT
— — XXX— — —	CONTOUR MAJOR INTERVAL
XXX	CONTOUR MINOR INTERVAL

DWG. NO. C1.01

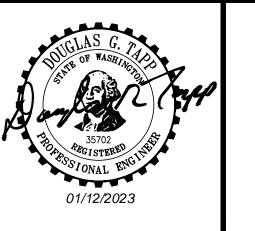
PROPERTY/RIGHT-OF-WAY LINE



206.267.2425 TEL 206.267.2429 FAX www.ahbl.com WEB







FILE	ENGR.	REVIEW	SC	CALE	D	ATE
2200538-SH-COVR						
ECOL	OGY REVISION	CYCLE 1		CS	1	1/12/2023
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NO.	REVI	SION		BY	REVIEW	DATE



CITY OF KIRKLAND

PUBLIC WORKS DEPARTMENT

123 FIFTH AVENUE - KIRKLAND, WA 98033-6189 - (425)587-3800

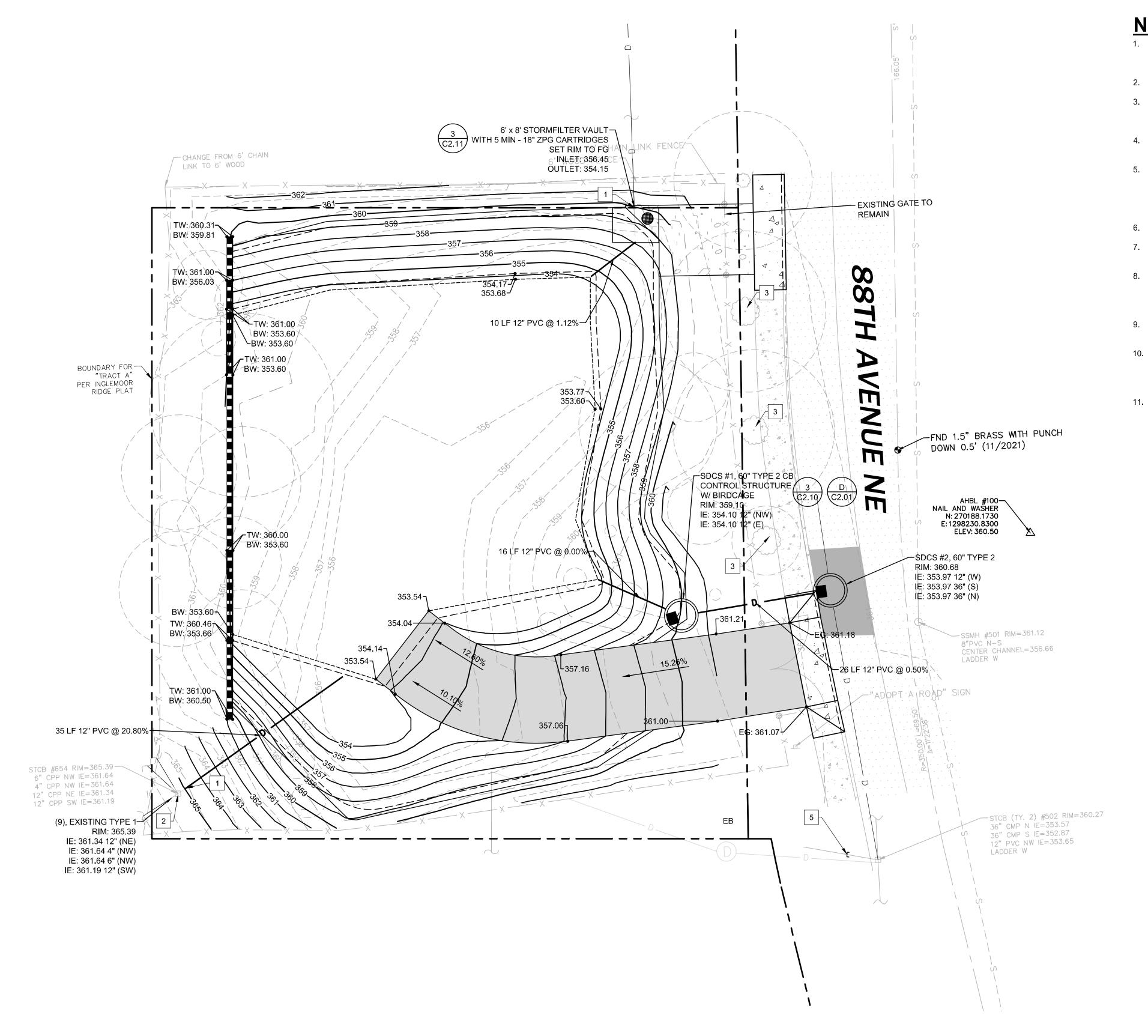
CEDAR CREEK STORMWATER
RETROFIT - SITE #1
SHEET INDEX, GENERAL NOTES, LEGEND AND

**ABBREVIATIONS** 

SHEET

2

THIS PROJECT HAS BEEN FUNDED WHOLLY OR IN PART BY THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY UNDER AN ASSISTANCE AGREEMENT TO THE WASHINGTON STATE DEPARTMENT OF ECOLOGY. THE CONTENTS OF THIS DOCUMENT DO NOT NECESSARILY REFLECT THE VIEWS AND POLICIES OF THE ENVIRONMENTAL PROTECTION AGENCY, NOR DOES THE MENTION OF TRADE NAMES OR COMMERCIAL PRODUCTS CONSTITUTE ENDORSEMENT OR RECOMMENDATION



### **NOTES**

- PROVIDE 1' OF MINIMUM COVER OVER STORM PIPES IN LANDSCAPE/PEDESTRAIN AREAS AND 3' OF MINIMUM COVER IN VEHICULAR TRAFFIC AREAS. PROVIDE CLEANOUTS AT ALL BENDS GREATER THAN 90° AND AT ENDS.
- 2. PROVIDE RECORD DRAWINGS OF THE SITE DRAINAGE PER SPECIFICATIONS.
- 3. VERIFY VERTICAL AND HORIZONTAL LOCATIONS OF ALL EXISTING UTILITIES AT CONNECTIONS WITH NEW UTILITIES PRIOR TO CONSTRUCTION. INFORM ENGINEERING IMMEDIATELY OF DISCREPANCIES FROM THIS PLAN.
- 4. ALL CATCH BASINS ARE TYPE 1 UNLESS OTHERWISE SPECIFIED. ALL LIDS SHALL BE LOCKING.
- 5. ALL STORM DRAINAGE STRUCTURES SHALL BE INSTALLED WITH A STANDARD FRAME AND VANED GRATE PER CITY OF KIRKLAND STANDARD PLAN CK-D.14, UNLESS OTHERWISE INDICATED ON PLANS. ALL SOLID LIDS SHALL CONFORM TO CITY OF KIRKLAND STANDARD PLAN CK-D.18A. ALL IRON SHALL BE FROM EAST JORDAN.
- 6. SEE STRUCTURAL PLANS FOR WALL DETAILS.
- 7. ALL STORMWATER PIPES, INCLUDING VENTILATION PIPE, SHALL BE PVC SDR35. FOR SHALLOW BURY APPLICATIONS, PIPE SHALL BE C900 OR DUCTILE IRON.
- 8. ALL FOOTING DRAIN PIPE MATERIAL SHALL BE 6" PERFORATED RIGID PVC PIPE. FOUNDATION DRAINS SHALL CONNECT TO A STORM CATCH BASIN WITH NON PERFORATED PVC. ALL WALLS OR ROCKERIES SHALL BE SUPPLIED WITH A FOOTING DRAIN AND SOLID PIPING TO CONNECT TO THE DRAINAGE SYSTEM.
- 9. NORTHING AND EASTING COORDINATES ON STORM STRUCTURES IF SHOWN REFERENCE THE CENTER OF STRUCTURE.
- 10. ALL LANDSCAPE RESTORATION AREAS SHALL BE PER ECOLOGY BMP C107 POST CONSTRUCTION SOIL QUALITY AND DEPTH. ALL AREAS SUBJECT TO CLEARING AND GRADING THAT HAVE NOT BEEN COVERED BY IMPERVIOUS SURFACE SHALL PROVIDE MINIMUM SOIL QUALITY AND DEPTH PER DETAIL.
- 11. ALL PVC CONNECTIONS TO CATCH BASINS SHALL INCLUDE A SAND COLLAR OR KORE-N-SEAL BOOT. STRUCTURES MUST USE NON-SHRINK GROUT. ALL SEAMS OF MANHOLE INSIDE AND OUTSIDE ARE TO BE GROUTED AS WELL AS ANY RISERS MUST BE "WET SET" IN NON SHRINK GROUT.

### **KEY NOTES**

- CONNECT TO EXISTING STORM. CONTRACTOR SHALL VERIFY
  LOCATION AND INVERT PRIOR TO CONSTRUCTION. CONTRACTOR TO
  MATCH CROWNS OF EXISTING DOWNSTREAM PIPE UNLESS NOTED
  OTHERWISE
- 2 ADJUST EXISTING RIM TO FINISHED GRADE

EXISTING TREE TO REMAIN. ARBORIST TO REVIEW CONDITION OF EXISTING TREE PRIOR TO CONSTRUCTION AND PROVIDE RECOMMENDATION ON TREE PRESERVATION. TREE SHALL BE REMOVED IF ARBORIST DETERMINES TREE TO BE IN POOR CONDITION

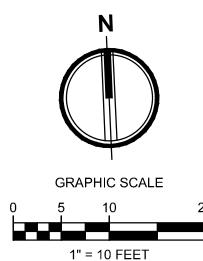
- DEMOLISH EX 8" STORM UP FENCE LINE. CUT AND CAP AND
  ABANDON IN PLACE. REMOVE TOP RINGS OF STRUCTURE, SEAL PIPE
  PENETRATIONS, FILL MANHOLE WITH BARROW AND BURY IN PLACE.
  PROVIDE RESTORATION TO MATCH EXISTING CONDITIONS.
- 5 EX 12" STORM TO BE CUT & CAPPED

### **LEGEND**

	RIGHT-OF-WAY / PROPERTY LINE
	CATCH BASIN - TYPE II PER CK-D.09
•	CATCH BASIN - TYPE I PER CK-D.07 WITH FRAME & COVER PER CK-D.18A
•	CLEANOUT
D	STORM DRAINAGE PIPING
	EXISTING MINOR CONTOUR
	EXISTING MAJOR CONTOUR
123 ———	PROPOSED MINOR CONTOUR
123 ———	PROPOSED MAJOR CONTOUR
CPEP	CPEP STORM SEWER PIPE PER WSDOT 9-05.20
BEEHIVE GRATE	USE BEEHIVE GRATE PER DETAIL
EB	GROUNDWATER MONITORING WELL
	CONCRETE CAST-IN-PLACE RETAINING WALL
123.45	SPOT ELEVATION
EG	EXISTING GRADE ELEVATION
FG	FINISHED GRADE ELEVATION
TW 123.45	TOP OF WALL
<b>→</b> BW 123.45	BOTTOM OF WALL

SLOPE

<u>_1.0%</u> OR <u>_3:1</u>



DWG. NO. **C2.00** 



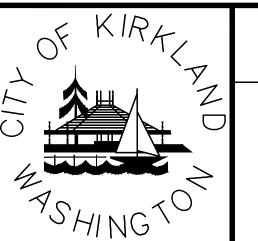
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CITY OF KIRKLAND

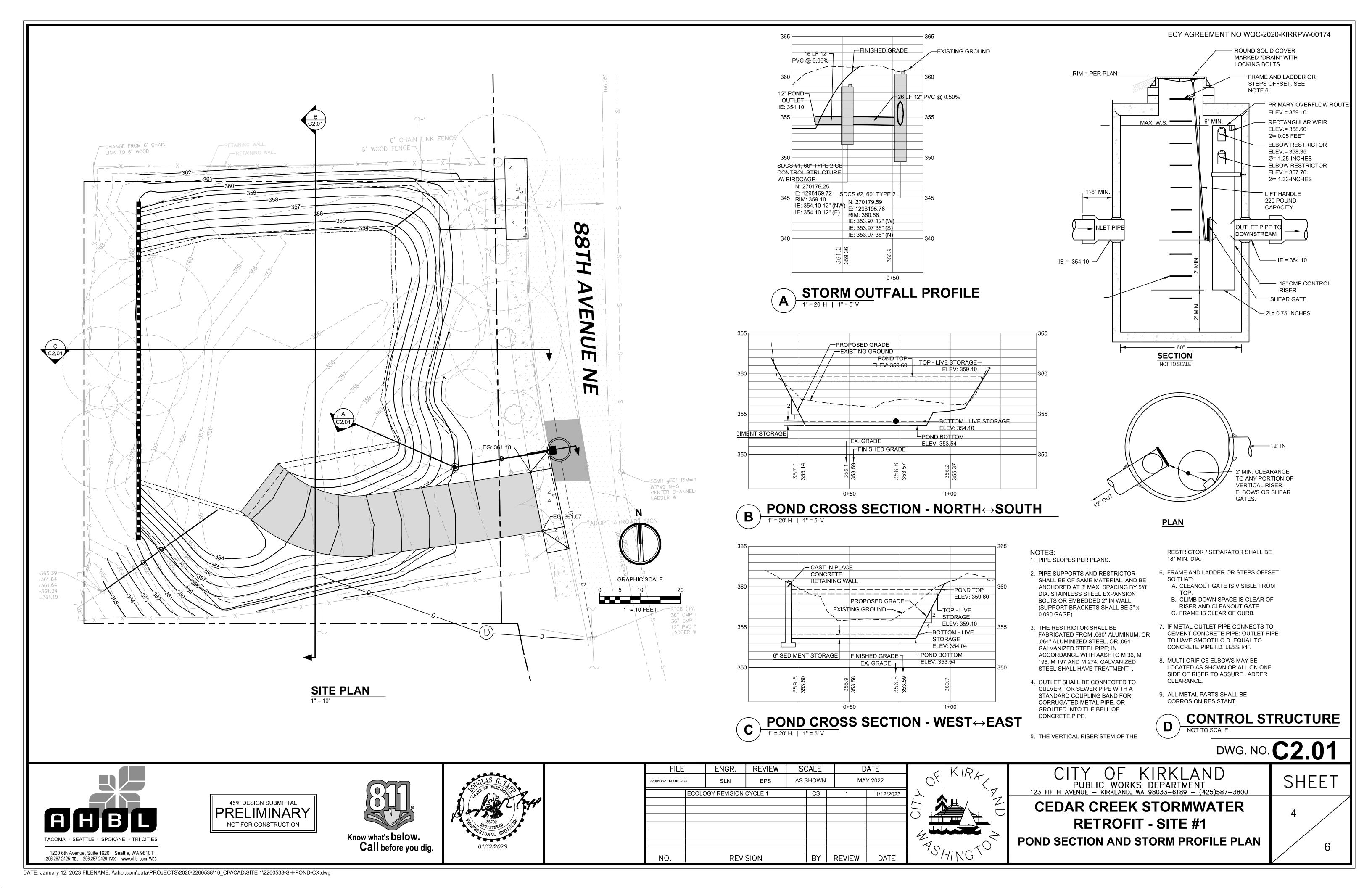
PUBLIC WORKS DEPARTMENT

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CEDAR CREEK STORMWATER
RETROFIT - SITE #1
STORM DRAINAGE AND GRADING PLAN

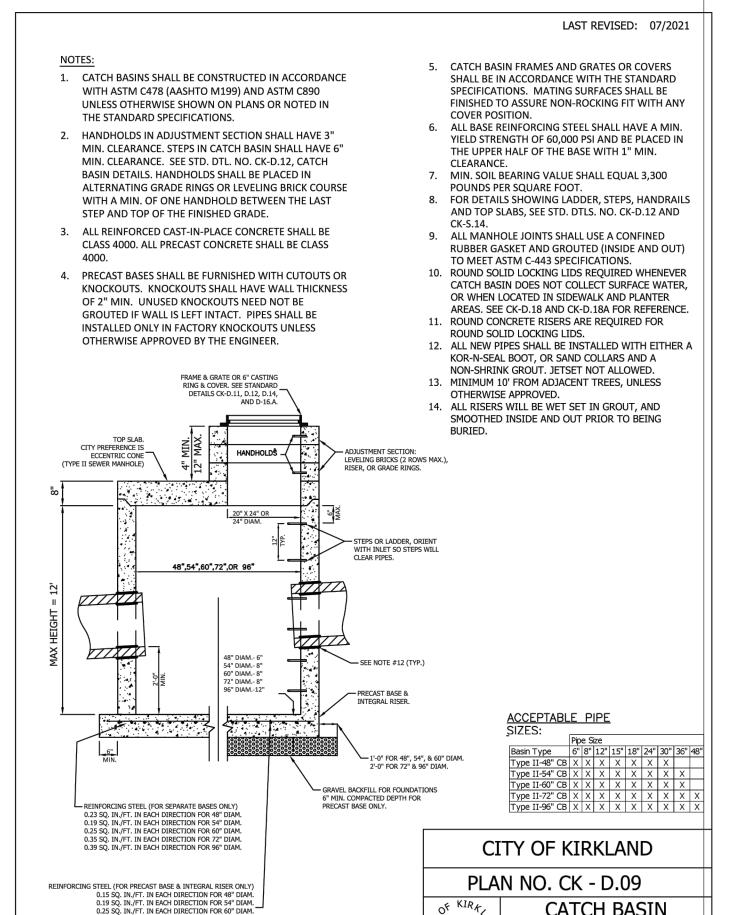
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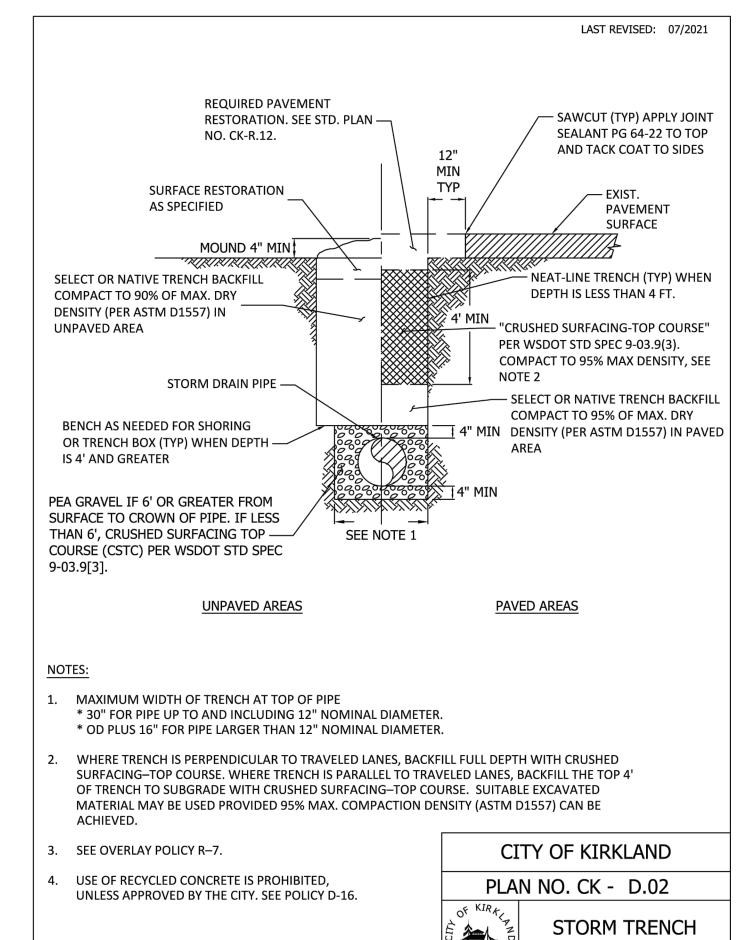
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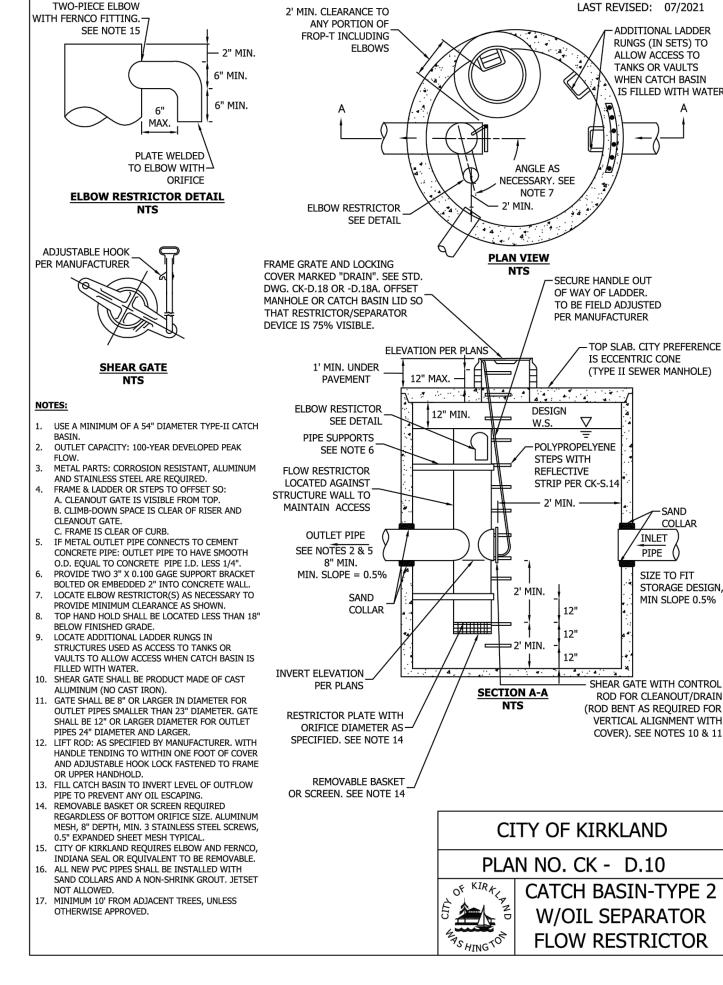
2. BEFORE ANY CONSTRUCTION MAY OCCUR, THE CONTRACTOR SHALL HAVE PLANS WHICH HAVE BEEN SIGNED AND APPROVED BY THE CITY OF KIRKLAND PUBLIC WORKS DEPARTMENT, OBTAINED ALL CITY, COUNTY, STATE, FEDERAL AND OTHER REQUIRED PERMITS, AND HAVE POSTED ALL REQUIRED BONDS.

- 3. ALL STORM DRAINAGE IMPROVEMENTS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE CITY OF KIRKLAND PUBLIC WORKS PRE-APPROVED PLANS AND POLICIES AND THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION, PREPARED BY WSDOT AND THE AMERICAN PUBLIC WORKS ASSOCIATION (APWA).
- 4. ANY DEVIATION FROM THE APPROVED PLANS WILL REQUIRE WRITTEN APPROVAL, ALL CHANGES SHALL BE SUBMITTED TO THE CITY.
- 5. A COPY OF THE APPROVED STORM WATER PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS
- 6. ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED OR SIMILARLY STABILIZED TO THE SATISFACTION OF THE CITY OF KIRKLAND DEPARTMENT OF PUBLIC WORKS FOR THE PREVENTION OF ON-SITE EROSION AFTER THE COMPLETION OF CONSTRUCTION.
- . MINIMUM COVER OVER STORM DRAINAGE PIPES IN ROW OR VEHICULAR PATH SHALL BE SUBJECT TO PRE-APPROVED PLAN CK-D.01, UNLESS OTHER DESIGN IS APPROVED.
- 8. STEEL PIPE SHALL HAVE ASPHALT TREATMENT #1 OR BETTER INSIDE AND OUTSIDE
- 9. ALL CATCH BASINS SHALL BE TYPE I UNLESS OTHERWISE NOTED. CATCH BASINS WITH A DEPTH OF OVER FIVE FEET (5') TO THE PIPE INVERT SHALL BE A TYPE II CATCH BASIN. TYPE II CATCH BASINS EXCEEDING FIVE FEET (5') IN DEPTH SHALL HAVE A STANDARD LADDER INSTALLED, UNLESS APPROVED BY CITY OF KIRKLAND ENGINEER
- 10. ALL STORM DRAINAGE MAIN EXTENSIONS WITHIN THE PUBLIC RIGHT-OF-WAY OR IN EASEMENTS MUST BE STAKED FOR LINE AND GRADE PRIOR TO STARTING CONSTRUCTION.
- 11. ROCK FOR EROSION PROTECTION OF ROADWAY DITCHES, WHERE REQUIRED, MUST BE OF SOUND QUARRY ROCK, PLACED TO A DEPTH OF ONE FOOT (1') AND MUST MEET THE FOLLOWING SPECIFICATIONS: 4"-8" ROCK/40%-70% PASSING; 2"-4" ROCK/30%-40% PASSING; 2"-MINUS ROCK/10%-20% PASSING. RECYCLED CONCRETE SHALL NOT BE USED FOR EROSION PROTECTION, INCLUDING FOR CONSTRUCTION ENTRANCE OR TEMPORARY STABILIZATION ELSEWHERE ON SITE.
- 12. ALL PIPE, MANHOLES, CATCH BASINS, AND APPURTENANCES SHALL BE LAID ON A PROPERLY PREPARED FOUNDATION IN ACCORDANCE WITH THE CURRENT STATE OF WASHINGTON STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (WSDOT). THIS SHALL INCLUDE NECESSARY LEVELING OF THE TRENCH BOTTOM OR THE TOP OF THE FOUNDATION MATERIAL AS WELL AS PLACEMENT AND COMPACTION OF REQUIRED BEDDING MATERIAL TO UNIFORM GRADE SO THAT THE ENTIRE LENGTH OF THE PIPE WILL BE SUPPORTED ON A UNIFORMLY DENSE, UNYIELDING BASE. IF THE NATIVE MATERIAL IN THE BOTTOM OF THE TRENCH MEETS THE REQUIREMENTS FOR "GRAVEL BACKFILL FOR PIPE BEDDING," THE FIRST LIFT OF PIPE BEDDING MAY BE OMITTED PROVIDED THE MATERIAL IN THE BOTTOM OF THE TRENCH IS LOOSENED, REGRADED, AND COMPACTED TO FORM A DENSE UNYIELDING BASE. ALL PIPE BEDDING SHALL BE APWA CLASS B, TYPE I, OR BETTER. PIPE SHALL NOT BE INSTALLED ON SOD, FROZEN EARTH, LARGE BOULDERS, OR ROCK. PIPE BEDDING FOR FLEXIBLE PIPES SHALL BE PEA GRAVEL TO THE SPRINGLINE OF THE PIPE.
- 13. CONSTRUCTION OF DEWATERING DISCHARGES SHALL ALWAYS MEET WATER QUALITY GUIDELINES LISTED IN COK POLICY E-1. SPECIFICALLY, DISCHARGES TO THE PUBLIC STORMWATER DRAINAGE SYSTEM MUST BE BELOW 25NTU, AND NOT CONSIDERED A PROHIBITED DISCHARGE (PER KMC 15.52.090). TEMPORARY DISCHARGES TO SANITARY SEWER REQUIRE PRIOR AUTHORIZATION AND PERMIT FROM KING COUNTY INDUSTRIAL WASTE PROGRAM (206-263-3000) AND NOTIFICATION TO THE PUBLIC WORKS CONSTRUCTION INSPECTOR
- 14. ISSUANCE OF A BUILDING OR LAND SURFACE MODIFICATION PERMIT BY THE CITY OF KIRKLAND DOES NOT RELIEVE THE OWNER OF THE CONTINUING LEGAL OBLIGATION AND/OR LIABILITY CONNECTED WITH STORM SURFACE WATER DISPOSITION FURTHER, THE CITY OF KIRKLAND DOES NOT ACCEPT ANY OBLIGATION FOR THE PROPER FUNCTIONING AND MAINTENANCE OF THE SYSTEM DURING OR FOLLOWING CONSTRUCTION EXCEPT AS OUTLINED IN THE CITY OF KIRKLAND PUBLIC WORKS STANDARDS.
- 15. ALL TRENCH BACKFILL SHALL BE COMPACTED TO 95 PERCENT DENSITY IN ROADWAYS, ROADWAY SHOULDERS, ROADWAY PRISM AND DRIVEWAYS, AND 85 PERCENT DENSITY IN UNPAVED AREAS. ALL PIPE ZONE COMPACTION SHALL BE 95 PERCENT
- 16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, CONFINED SPACE PROTECTION, FLAGGERS, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH. AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACT, ANY WORK WITHIN THE TRAVELED RIGHT-OF-WAY THAT MAY INTERRUPT NORMAL TRAFFIC FLOW SHALL REQUIRE A TRAFFIC CONTROL PLAN APPROVED BY THE CITY OF KIRKLAND. ALL SECTIONS OF THE WSDOT STANDARD SPECIFICATIONS, TRAFFIC CONTROL, AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) SHALL APPLY.
- 17. NO FINAL CUT OR FILL SLOPE SHALL EXCEED SLOPES OF TWO (2) HORIZONTAL TO ONE (1) VERTICAL WITHOUT STABILIZATION BY ROCKERY OR BY A STRUCTURAL RETAINING WALL
- 18. ALL MANHOLE LADDERS SHALL BE FIRMLY ATTACHED AND EXTEND TO WITHIN 1' OF THE BOTTOM OF THE STRUCTURE.
- 19. APPROXIMATE LOCATIONS OF EXISTING UTILITIES HAVE BEEN OBTAINED FROM AVAILABLE RECORDS AND ARE SHOWN FOR CONVENIENCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF EXISTING UTILITY LOCATIONS WHETHER OR NOT THESE UTILITIES ARE SHOWN ON THE PLANS. THE CONTRACTOR SHALL EXERCISE ALL CARE TO AVOID DAMAGE TO ANY UTILITY. IF CONFLICTS WITH EXISTING UTILITIES ARISE DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE CITY CONSTRUCTION INSPECTOR AND ANY CHANGES REQUIRED SHALL BE APPROVED BY THE DEVELOPMENT ENGINEER PRIOR TO COMMENCEMENT OF RELATED CONSTRUCTION ON THE PROJECT.
- 20. THE UNDERGROUND UTILITY LOCATION SERVICE SHALL BE CONTACTED FOR FIELD LOCATION OF EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION. THE OWNER OR HIS REPRESENTATIVE SHALL BE CONTACTED IF A UTILITY CONFLICT EXISTS. FOR UTILITY LOCATION IN KING COUNTY, CALL 1-800-424-5555. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT UTILITY LOCATES ARE MAINTAINED THROUGHOUT THE LIFE OF THE PROJECT.
- 21. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, WIDTHS, THICKNESSES, AND ELEVATIONS OF ALL EXISTING PAVEMENTS AND STRUCTURES THAT ARE TO INTERFACE WITH NEW WORK. PROVIDE ALL TRIMMING, CUTTING, SAW CUTTING, GRADING, LEVELING, SLOPING, COATING, AND OTHER WORK, INCLUDING MATERIALS AS NECESSARY, TO CAUSE THE INTERFACE WITH EXISTING WORKS TO BE PROPER, ACCEPTABLE TO THE ENGINEER AND THE CITY OF KIRKLAND, COMPLETE IN PLACE AND READY TO USE.
- 22. ALL INLET, MANHOLE, AND CATCH BASIN FRAMES AND GRATES SHALL NOT BE ADJUSTED TO GRADE UNTIL IMMEDIATELY PRIOR TO FINAL PAVING. ALL CATCH BASIN GRATES SHALL BE SET 0.10' BELOW PAVEMENT LEVEL.
- 23. OPEN CUT ROAD CROSSINGS FOR UTILITY TRENCHES ON EXISTING TRAVELED ROADWAY SHALL BE BACKFILLED ONLY WITH 5/8" MINUS CRUSHED ROCK AND MECHANICALLY COMPACTED (UNLESS OTHERWISE APPROVED BY THE CITY). FOR STREETS CLASSIFIED AS ARTERIALS OR COLLECTORS, BACKFILL FOR CROSSINGS SHALL BE CDF. CUTS INTO THE EXISTING ASPHALT SHALL BE NEAT LINE CUT WITH SAW OR JACKHAMMER IN A CONTINUOUS LINE. A TEMPORARY COLD MIX PATCH MUST BE PLACED IMMEDIATELY AFTER BACKFILL AND COMPACTION. A PERMANENT HOT MIX PATCH SHALL BE PLACED WITHIN 30 DAYS AND SHALL BE A MINIMUM OF 1" THICKER THAN THE ORIGINAL ASPHALT WITH A MINIMUM THICKNESS OF 2". SEE STANDARD D.02.
- 24. ALL DAMAGES INCURRED TO PUBLIC AND/OR PRIVATE PROPERTY BY THE CONTRACTOR DURING THE COURSE OF CONSTRUCTION SHALL BE PROMPTLY REPAIRED TO THE SATISFACTION OF THE CITY CONSTRUCTION INSPECTOR BEFORE PROJECT APPROVAL AND/OR THE RELEASE OF THE PROJECT'S PERFORMANCE BOND.
- 25. GROUT ALL SEAMS AND OPENINGS IN ALL INLETS, CATCH BASINS, AND MANHOLES. JETSET GROUT IS NOT ALLOWED.
- 26. WHEN WIDENING AN EXISTING ROADWAY WHERE AN EXISTING TYPE I CATCH BASIN WILL REMAIN IN THE TRAVEL LANE, THE EXISTING FRAME AND COVER SHALL BE REPLACED WITH A ROUND, LOCKING FRAME AND COVER.
- 27. FOR OTHER THAN SINGLE-FAMILY DWELLINGS, ALL EXPOSED OR READILY EXPOSED INDOOR STORM DRAINAGE PIPING/PLUMBING SHALL BE LABELED WITH THE WORDS "STORM DRAIN" WITH MINIMUM 2 INCH HIGH LETTERS.
- 28. RECYCLED CONCRETE SHALL NOT BE USED AROUND STORMWATER FACILITIES.
- 29. ALL FASTENERS (BOLTS, NUTS, WASHERS, ETC.) ON MANHOLE AND CATCH BASIN LIDS TO BE STANDARD SIZE. NO METRIC FASTENERS ALLOWED.





STORM TRENCH DETAIL



TWO-PIECE ELBOW

ECY AGREEMENT NO WQC-2020-KIRKPW-00174

TYPE 2 CONTROL STRUCTURE

**CATCH BASIN TYPE 2** 

CATCH BASIN

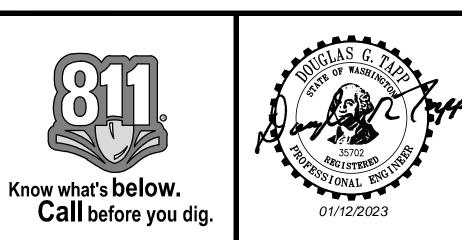
TYPE 2

48",54",60",72",96

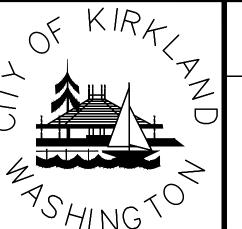


1200 6th Avenue, Suite 1620 Seattle, WA 98101 206.267.2425 TEL 206.267.2429 FAX www.ahbl.com WEB





FILE		ENGR.	REVIEW	SC	CALE	D	ATE	
2200538-SH-STRM-DET								
	ECOLO	GY REVISION	CYCLE 1		CS	1	1/12/2023	$\lambda$
								$\bigcirc$
								7
								$\gamma$
NO.		REVI	SION		BY	REVIEW	DATE	



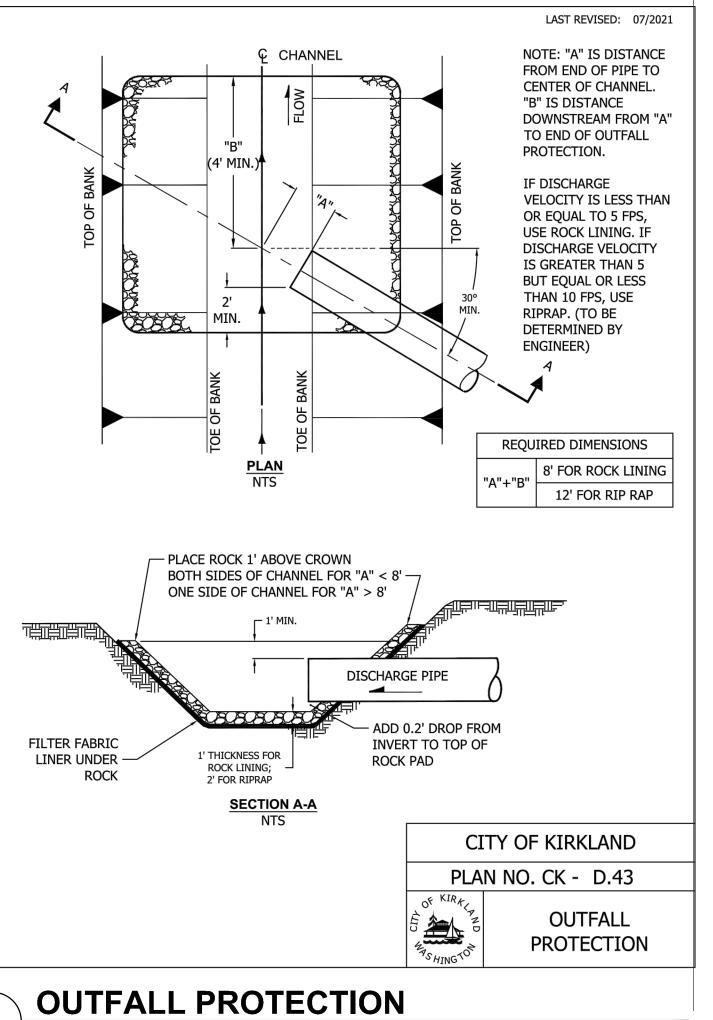
DETAIL

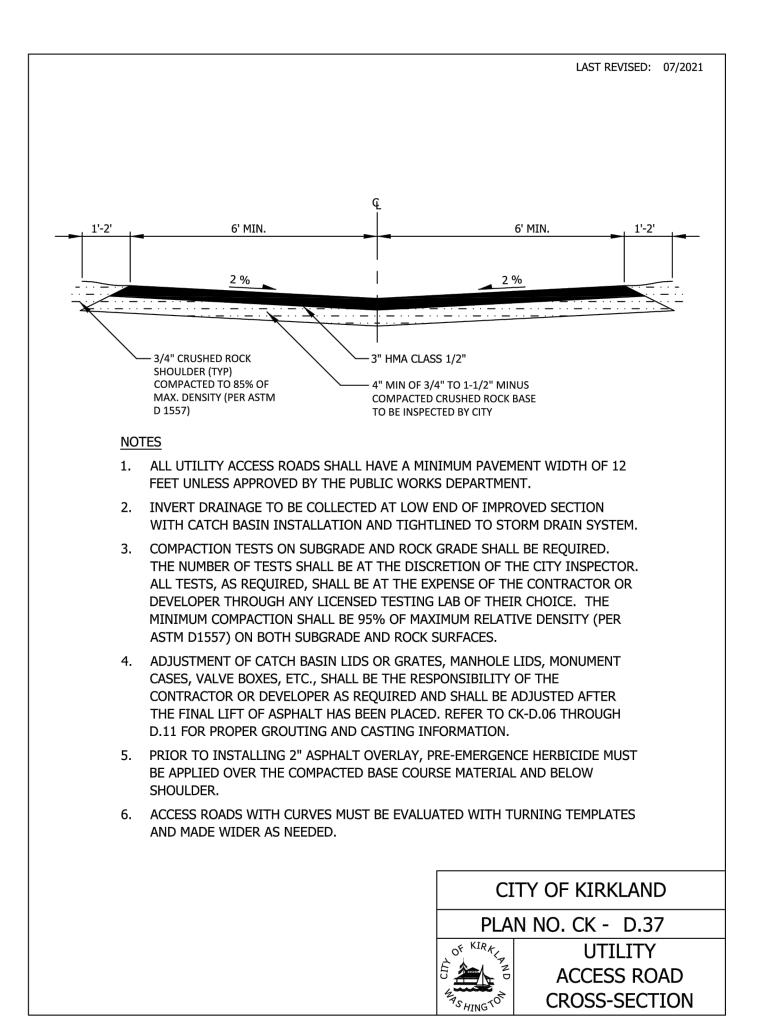
DWG. NO. **C2.10** 

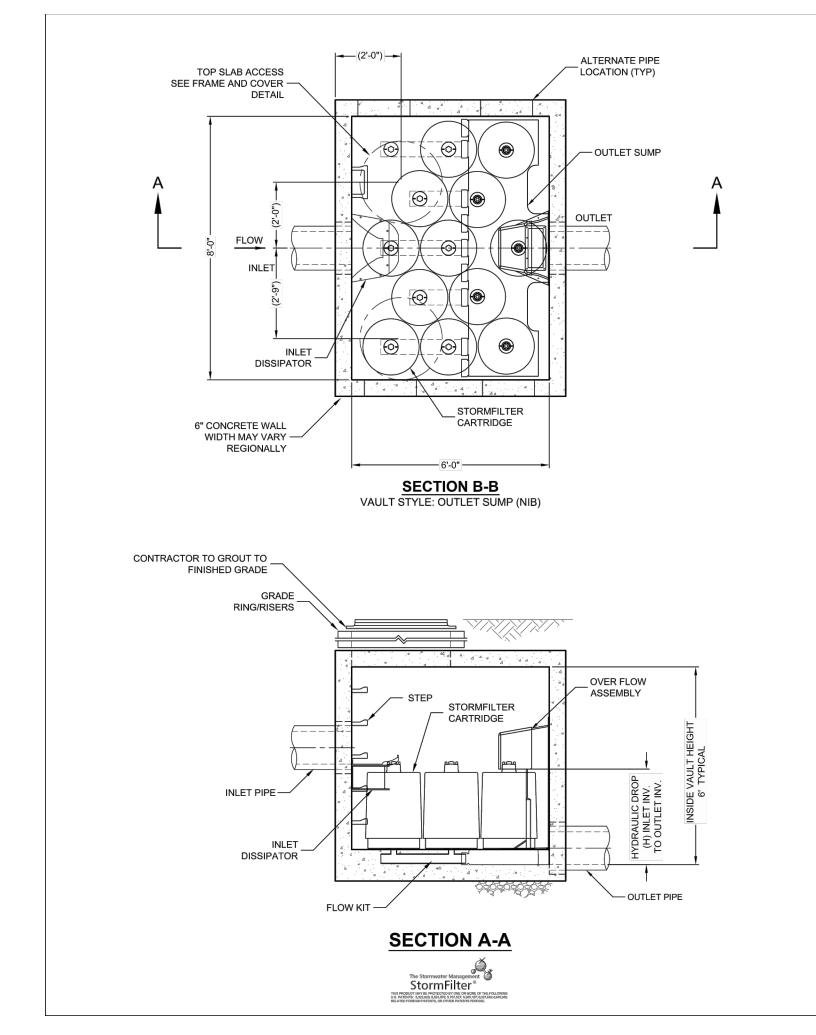
PUBLIC WORKS DEPARTMENT

123 FIFTH AVENUE - KIRKLAND, WA 98033-6189 - (425)587-3800 **CEDAR CREEK STORMWATER RETROFIT - SITE #1** STORM DRAINAGE DETAILS

SHEET

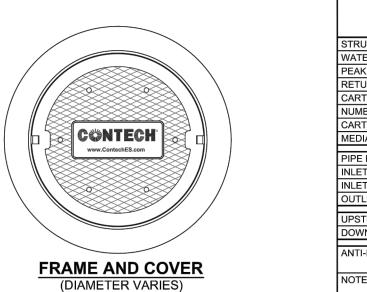






STORMFILTER DESIGN NOTES STORMFILTER TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE SELECTION AND THE NUMBER OF CARTRIDGES. THE STANDARD VAULT STYLE IS SHOWN WITH THE MAXIMUM NUMBER OF CARTRIDGES (12). VAULT STYLE OPTIONS INCLUDE OUTLET BAY (7). STORMFILTER 8X6 PEAK HYDRAULIC CAPACITY IS 1.8 CFS. IF THE SITE CONDITIONS EXCEED 1.8 CFS AN UPSTREAM BYPASS STRUCTURE IS REQUIRED CARTRIDGE SELECTION CARTRIDGE HEIGHT RECOMMENDED HYDRAULIC DROP 
 2 gpm/sf
 1.67* gpm/sf
 1 gpm/sf
 2 gpm/sf
 1.67* gpm/sf
 1 gpm/sf

 22.5
 18.79
 11.25
 15
 12.53
 7.5
 CARTRIDGE FLOW RATE (gpn 1.67 gpm/sf SPECIFIC FLOW RATE IS APPROVED WITH PHOSPHOSORB® (PSORB) MEDIA ONL





* PER ENGINEER OF RECORD

I. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.

N.T.S.

2. DIMENSIONS MARKED WITH () ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.

3. FOR SITE SPECIFIC DRAWINGS WITH DETAILED VAULT DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com 4. STORMFILTER WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS

5. STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 5' AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO

6. FILTER CARTRIDGES SHALL BE MEDIA-FILLED, PASSIVE, SIPHON ACTUATED, RADIAL FLOW, AND SELF CLEANING. RADIAL MEDIA DEPTH SHALL

BE 7-INCHES. FILTER MEDIA CONTACT TIME SHALL BE AT LEAST 38 SECONDS. 7. SPECIFIC FLOW RATE IS EQUAL TO THE FILTER TREATMENT CAPACITY (gpm) DIVIDED BY THE FILTER CONTACT SURFACE AREA (sq ft).
8. STORMFILTER STRUCTURE SHALL BE PRECAST CONFORMING TO ASTM C-857 AND AASHTO LOAD FACTOR DESIGN METHOD.

INSTALLATION NOTES

A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE

B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMFILTER VAULT (LIFTING CLUTCHES PROVIDED).

C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL VAULT SECTIONS AND ASSEMBLE VAULT. D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. MATCH OUTLET PIPE INVERT WITH OUTLET BAY FLOOR.

E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.



STORMFILTER STANDARD DETAIL

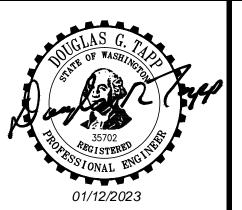






45% DESIGN SUBMITTAL **PRELIMINARY** NOT FOR CONSTRUCTION





FILE		ENGR. REVIEW SCALE		CALE	D	ATE		
2200538-SH-STRM-DET								
	ECOLO	OGY REVISION	CYCLE 1		CS	1	1/12/2023	7
								<i> </i> -
NO.		REVI	SION		BY	REVIEW	DATE	



DWG. NO. **C2.11** CITY OF KIRKLAND
PUBLIC WORKS DEPARTMENT
123 FIFTH AVENUE - KIRKLAND, WA 98033-6189 - (425)587-3800 SHEET

**CEDAR CREEK STORMWATER RETROFIT - SITE #1** 

**STORM DRAINAGE DETAILS** 

DATE: January 12, 2023 FILENAME: \\ahbl.com\data\PROJECTS\2020\2200538\10 CIV\CAD\SITE 1\2200538-SH-STRM-DET.dwg