

CITY OF KIRKLAND

CEDAR CREEK STORMWATER RETROFIT - SITE #3

APRIL 2023

FUNDED IN PART BY THE
WASHINGTON STATE
DEPARTMENT OF ECOLOGY

CITY OFFICIALS

CONTACT PERSONNEL

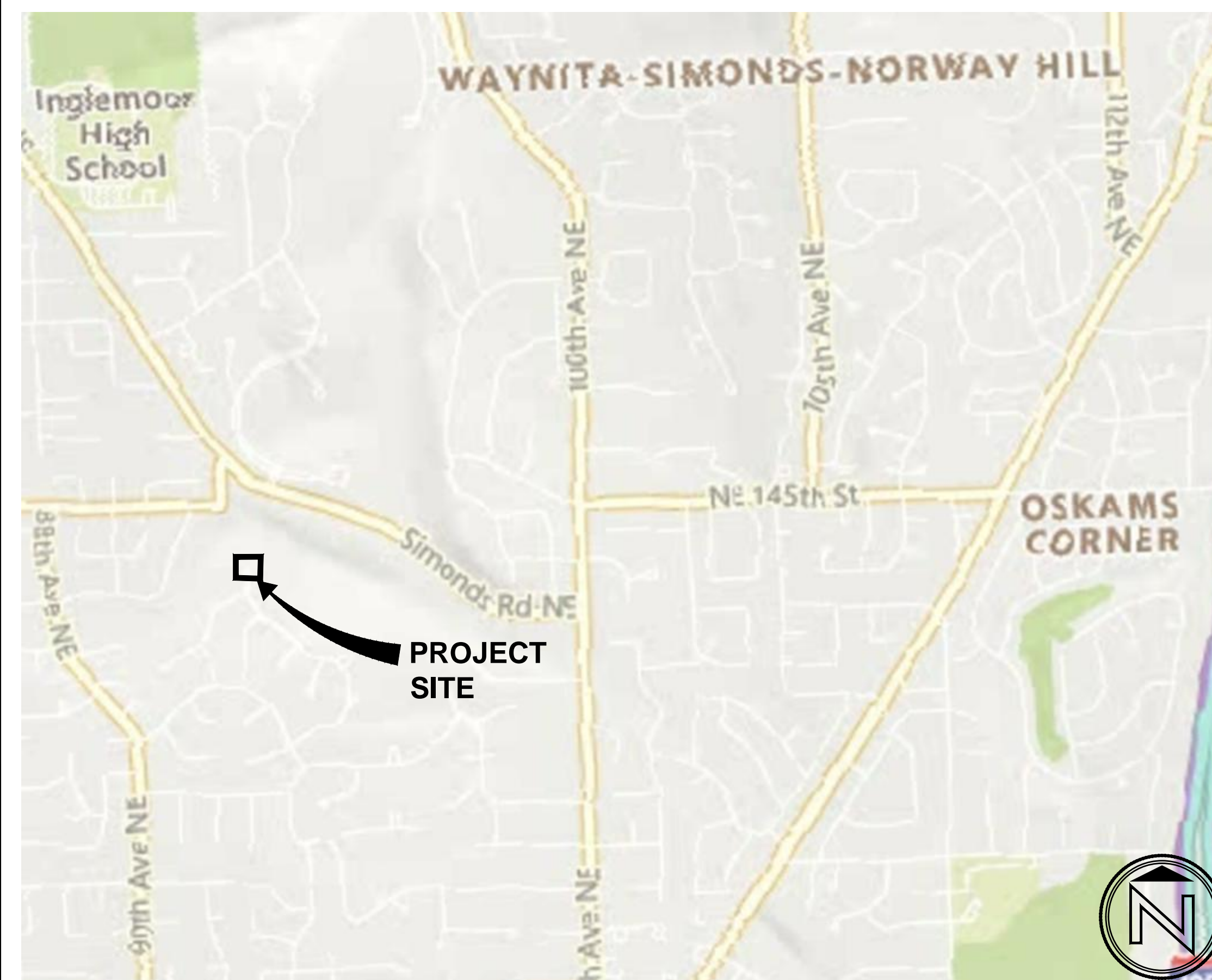
NAME	AGENCY	PHONE
	COK POLICE	425-587-3435
	COK FIRE	425-587-3722
	COK SPILL RESPONSE HOTLINE	425-587-3900
	EMERGENCY	911
	ONE CALL LOCATES	1-800-424-5555

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COK POLICE
COK FIRE
COK SPILL RESPONSE HOTLINE
EMERGENCY
ONE CALL LOCATES

425-587-3435
425-587-3722
425-587-3900
911
1-800-424-5555

VICINITY MAP



Know what's below.
Call before you dig.



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



SHEET

1

6

DWG. NO. **C1.00**

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C1.00	COVER SHEET
C1.10	SHEET INDEX, GENERAL NOTES, LEGEND AND ABBREVIATIONS
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LEGAL DESCRIPTION

A PORTION OF THE NW 1/4 OF THE NE 1/4 OF SEC. 19, TWN. 26N., RGE. 5 E. W.M.
CITY OF KIRKLAND, KING COUNTY, WASHINGTON.

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

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 FOR USE.

ABBREVIATIONS

APPROX	APPROXIMATE	MIN	MINIMUM
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

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. **TEMPORARY SIGNAGE:** 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. **EXISTING UTILITIES:** CONTRACTOR SHALL PROTECT AND MAINTAIN ACCESS TO ALL EXISTING UTILITIES WHETHER SHOWN ON THE PLANS OR NOT.
4. **RESTORATION:** CONTRACTOR SHALL REPAIR ALL AREAS DAMAGED TO THE SAME OR BETTER CONDITION PRIOR TO DISTURBANCE AT NO ADDITIONAL COST TO THE CONTRACTING AGENCY.
5. **ALLOWABLE WORKING HOURS:** WORK HOURS SHALL BE LIMITED TO 7AM-6PM, WEEKDAYS AND WEEKENDS, UNLESS APPROVED OR NOTED OTHERWISE. SEE SPECIAL PROVISIONS.
6. **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.
9. 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
	BOLLARD
	MAIL BOX
	SIGN
	SANITARY SEWER MANHOLE
	SANITARY SEWER CLEANOUT
	STORM CATCH BASIN
	STORM MANHOLE
	ROOF DRAIN
	GAS METER
	GAS VALVE
	TRAFFIC SIGNAL POLE
	TRAFFIC CABINET
	POWER TRANSFORMER
	GUY ANCHOR
	UTILITY POWER POLE
	ELECTRICAL VAULT
	JUNCTION BOX
	POWER METER
	LUMINAIRE
	TELEPHONE RISER
	TELEPHONE VAULT
	FIRE DEPARTMENT CONNECTION
	FIRE HYDRANT
	IRRIGATION CONTROL VALVE
	HOSE BIB
	WATER METER
	WATER VALVE
	WATER VAULT
	A=APPLE, B=BIRCH, F=FIR, P=PINE, HA=HAWTHORNE
	HO=HOLLY, M=MAPLE, O=OAK, U= UNKNOWN
	STORM LINE
	SANITARY SEWER LINE
	GAS LINE
	ELECTRICAL LINE
	COMMUNICATIONS LINE
	WATER LINE
	IRRIGATION PER RECORD DRAWING
	OVERHEAD UTILITIES
	STEAM LINE
	FENCE
	CONCRETE
	ASPHALT
	CONTOUR MAJOR INTERVAL
	CONTOUR MINOR INTERVAL
	PROPERTY/RIGHT-OF-WAY LINE

DWG. NO. **C1.10**



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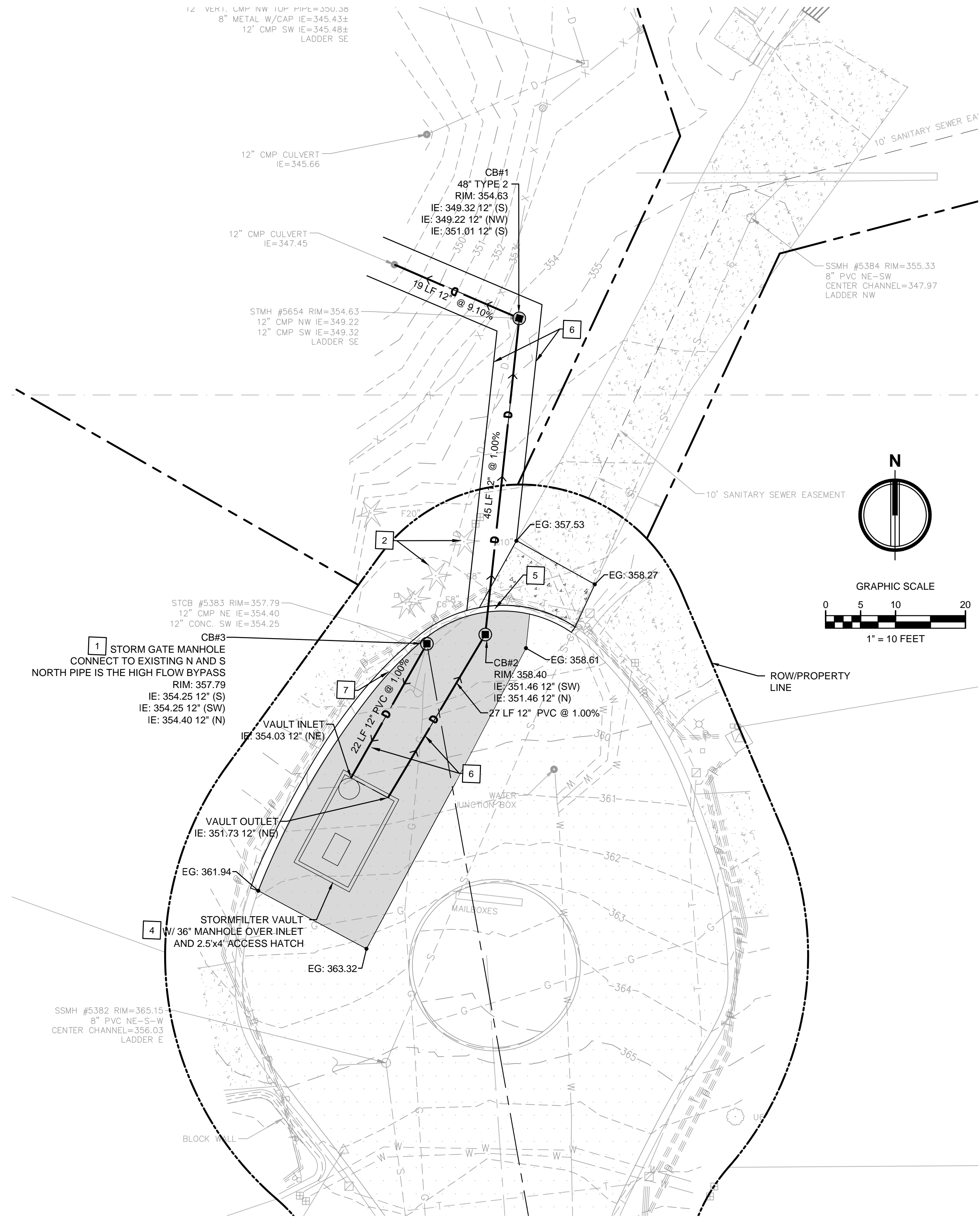
FILE	ENGR.	REVIEW	SCALE	DATE
2200538-SH-COVR				
NO.	REVISION		BY	REVIEW DATE



CITY OF KIRKLAND
PUBLIC WORKS DEPARTMENT
123 FIFTH AVENUE – KIRKLAND, WA 98033–6189 – (425)587–3800

**CEDAR CREEK STORMWATER
RETROFIT - SITE #3**
SHEET INDEX, GENERAL NOTES, LEGEND AND
ABBREVIATIONS

SHEET	
2	6



KEY NOTES

- 1

REPLACE EXISTING STORM DRAINAGE MANHOLE TO STORMGATE MANHOLE. CONTRACTOR TO MATCH CROWNS OF EXISTING DOWNSTREAM PIPE UNLESS NOTED OTHERWISE

2

C2.10
- 2

EXISTING TREES TO BE PROTECTED IN PLACE (TYP)
- 3

8' x 14' PEAK DIVERSION STORMFILTER WITH CITY OF KIRKLAND SPECIFIC ACCESS HATCH

1

C2.20
- 4

EX 12" STORM PIPE TO BE CUT, CAPPED, & ABANDONED
- 5

ROLLED CURB TO BE REPLACED IN-KIND

2

C2.20
- 6

UTILITY TRENCHING (TYP)

1

C2.10
- 7

EXISTING GAS TO BE PROTECTED IN PLACE

LEGEND

- RIGHT-OF-WAY / PROPERTY LINE
- 0

STORM DRAINAGE PIPING
- XXX

EXISTING MINOR CONTOUR
- XXX

EXISTING MAJOR CONTOUR
- 123

PROPOSED MINOR CONTOUR
- 123

PROPOSED MAJOR CONTOUR
- CPEP

CPEP STORM SEWER PIPE PER WSDOT 9-05.20
- 123.45

SPOT ELEVATION
- EG

EXISTING GRADE ELEVATION
- 1.0% OR 3:1

SLOPE
- STANDARD DUTY ASPHALT

CEMENT CONCRETE DRIVEWAY 6" CONCRETE / 6" CRUSHED SURFACING

3

C2.20

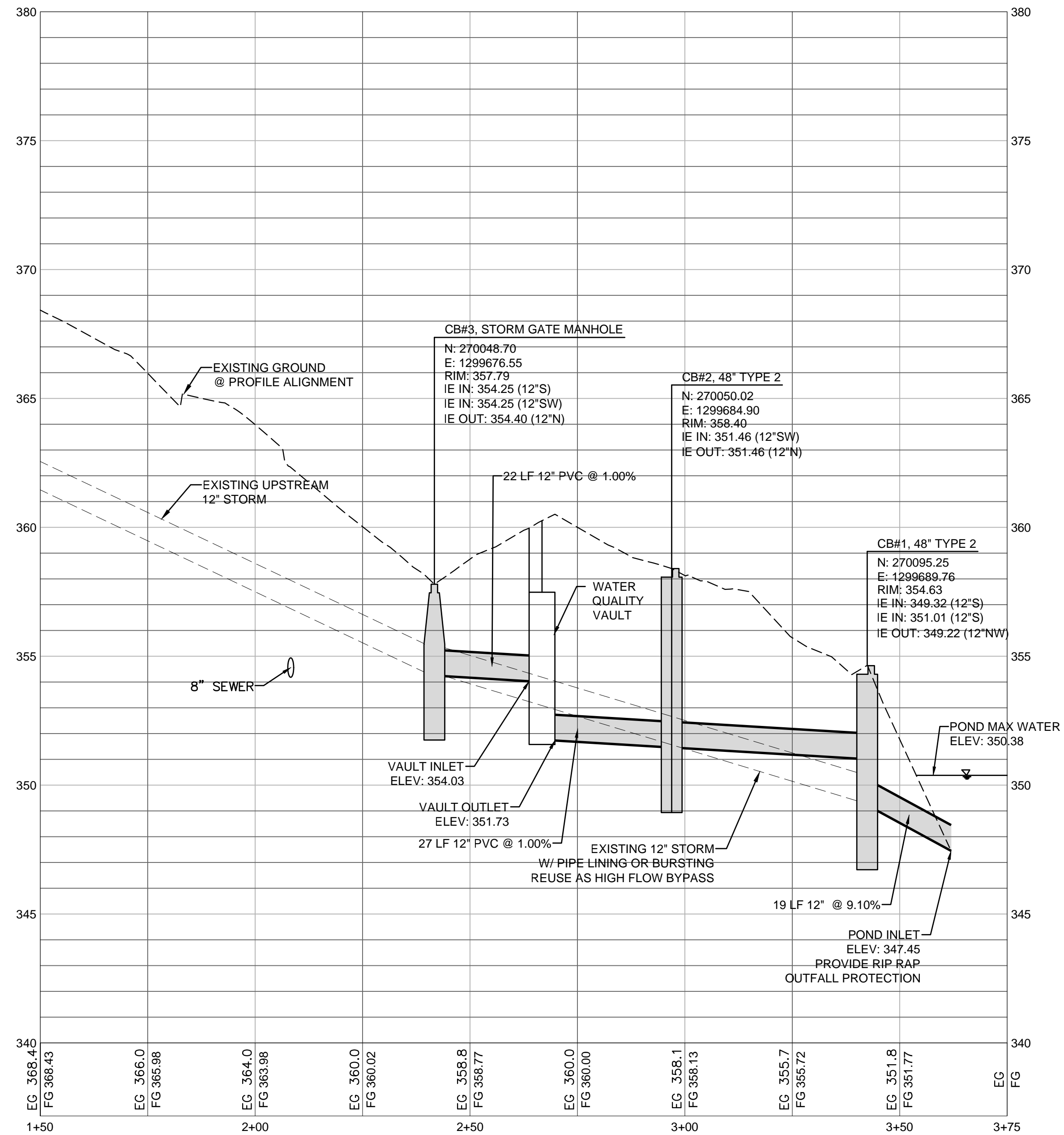
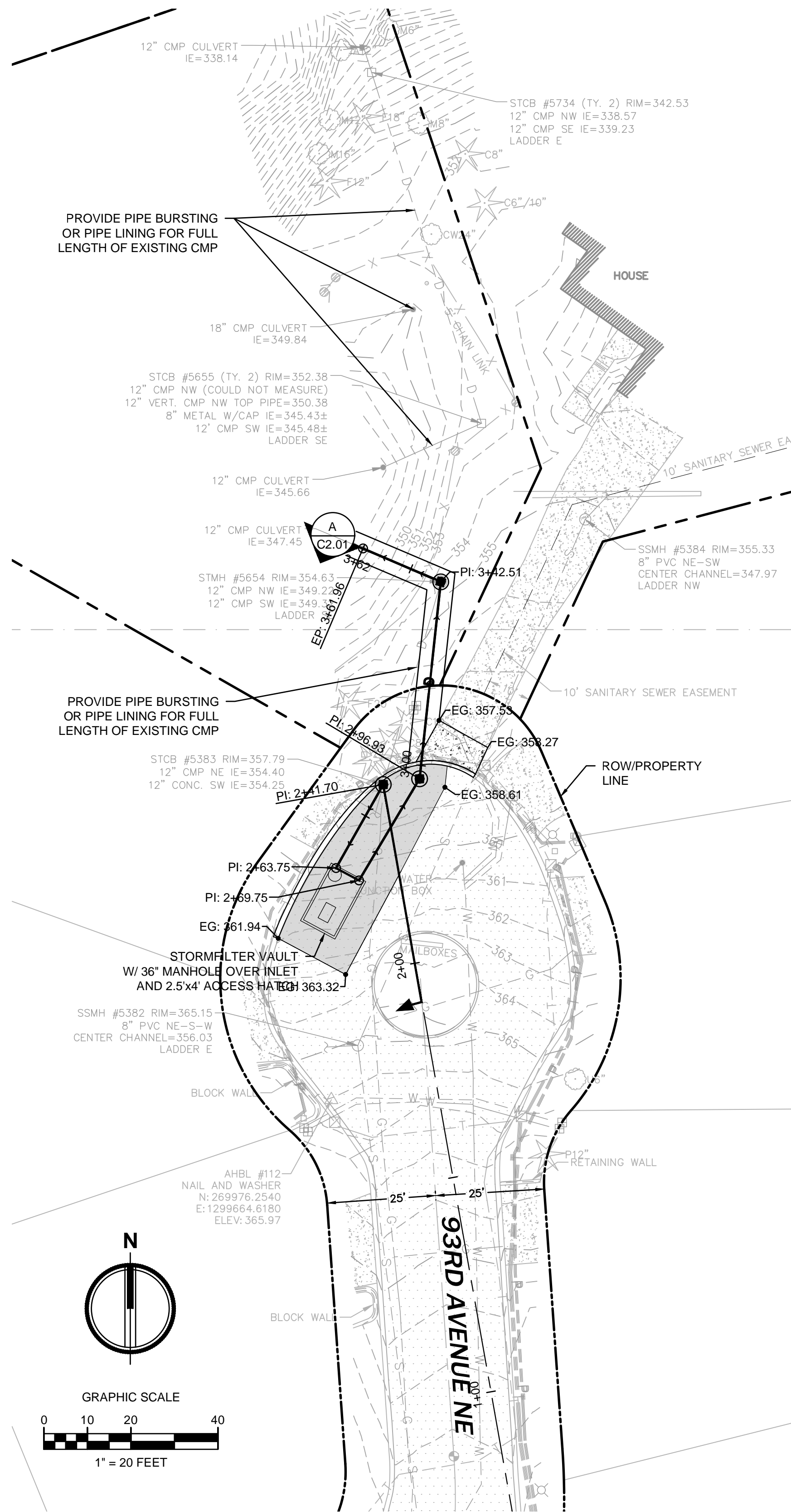
NOTES

1. 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. ALL STORMWATER PIPES, INCLUDING VENTILATION PIPE, SHALL BE PVC SDR35. FOR SHALLOW BURY APPLICATIONS, PIPE SHALL BE C900 OR DUCTILE IRON.
7. NORTHING AND EASTING COORDINATES ON STORM STRUCTURES IF SHOWN REFERENCE THE CENTER OF STRUCTURE.
8. 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.
9. 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.

DWG. NO.

FILE	ENGR.	REVIEW	SCALE	DATE
	CMS	BPS	AS SHOWN	JANUARY 2023
NO.	REVISION		BY	REVIEW DATE





A STORM PROFILE
1" = 20'

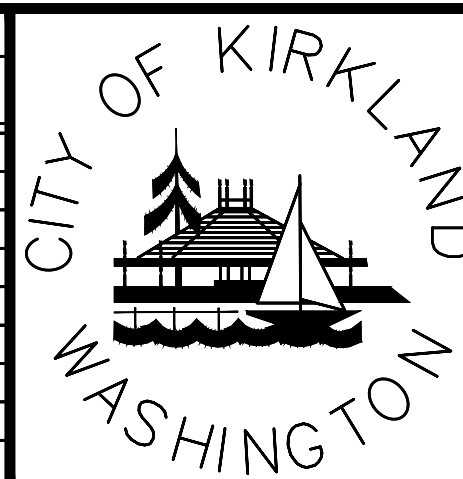
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CITY OF KIRKLAND
PUBLIC WORKS DEPARTMENT
123 FIFTH AVENUE - KIRKLAND, WA 98033-6189 - (425)587-3800
**CEDAR CREEK STORMWATER
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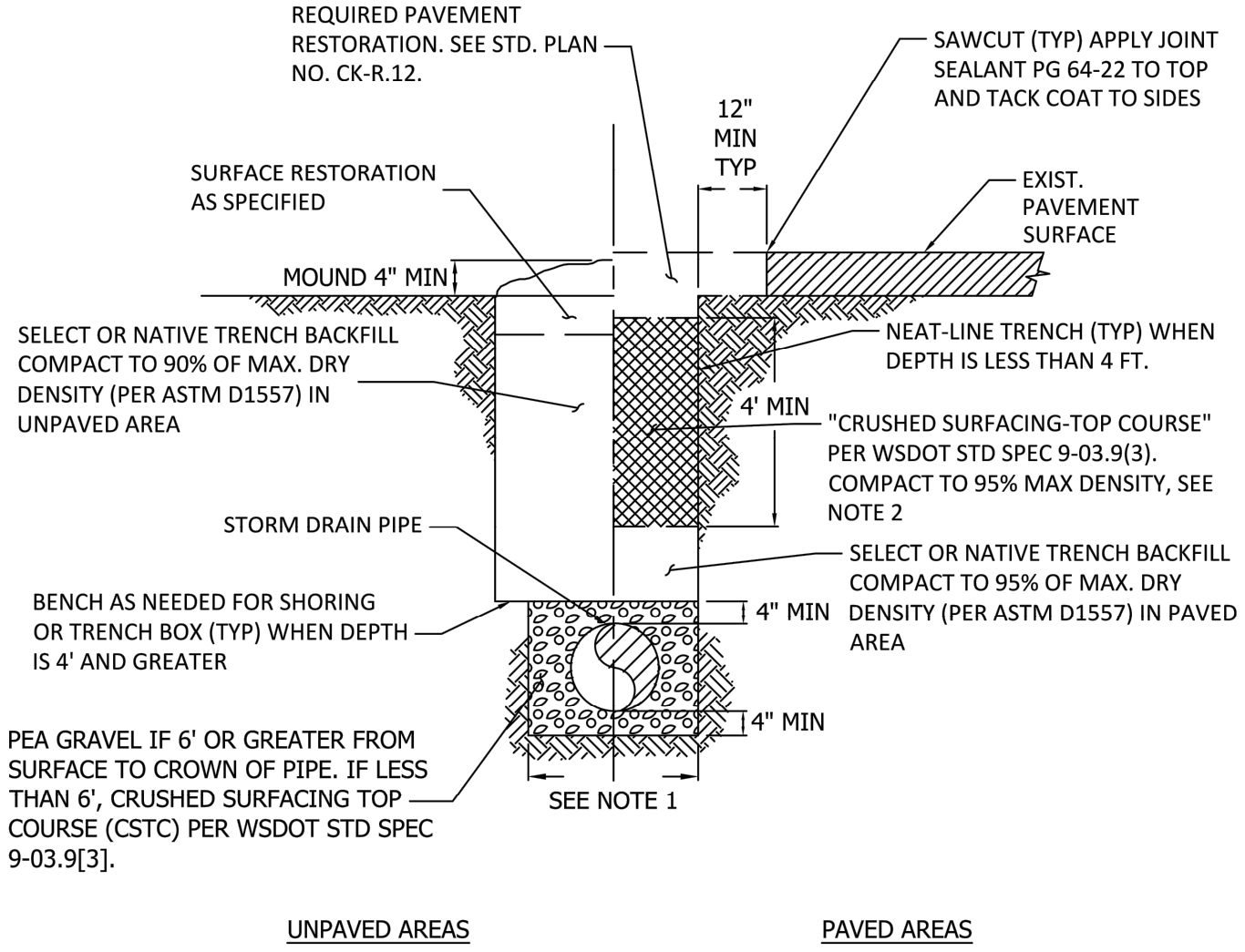
SHEET

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CITY OF KIRKLAND STORM DRAINAGE NOTES

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. 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.
7. 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 LOOSENEED, 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 25MTU, AND NOT CONSIDERED A PROHIBITED DISCHARGE (PER KIMC 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.




NOTES:

1. MAXIMUM WIDTH OF TRENCH AT TOP OF PIPE
* 30" FOR PIPE UP TO AND INCLUDING 12" NOMINAL DIAMETER.
* OD PLUS 16" FOR PIPE LARGER THAN 12" NOMINAL DIAMETER.
2. WHERE TRENCH IS PERPENDICULAR TO TRAVELED LANES, BACKFILL FULL DEPTH WITH CRUSHED SURFACING-TOP COURSE. WHERE TRENCH IS PARALLEL TO TRAVELED LANES, BACKFILL THE TOP 4' OF TRENCH TO SUBGRADE WITH CRUSHED SURFACING-TOP COURSE. SUITABLE EXCAVATED MATERIAL MAY BE USED PROVIDED 95% MAX. COMPACTION DENSITY (ASTM D1557) CAN BE ACHIEVED.
3. SEE OVERLAY POLICY R-7.
4. USE OF RECYCLED CONCRETE IS PROHIBITED, UNLESS APPROVED BY THE CITY. SEE POLICY D-16.

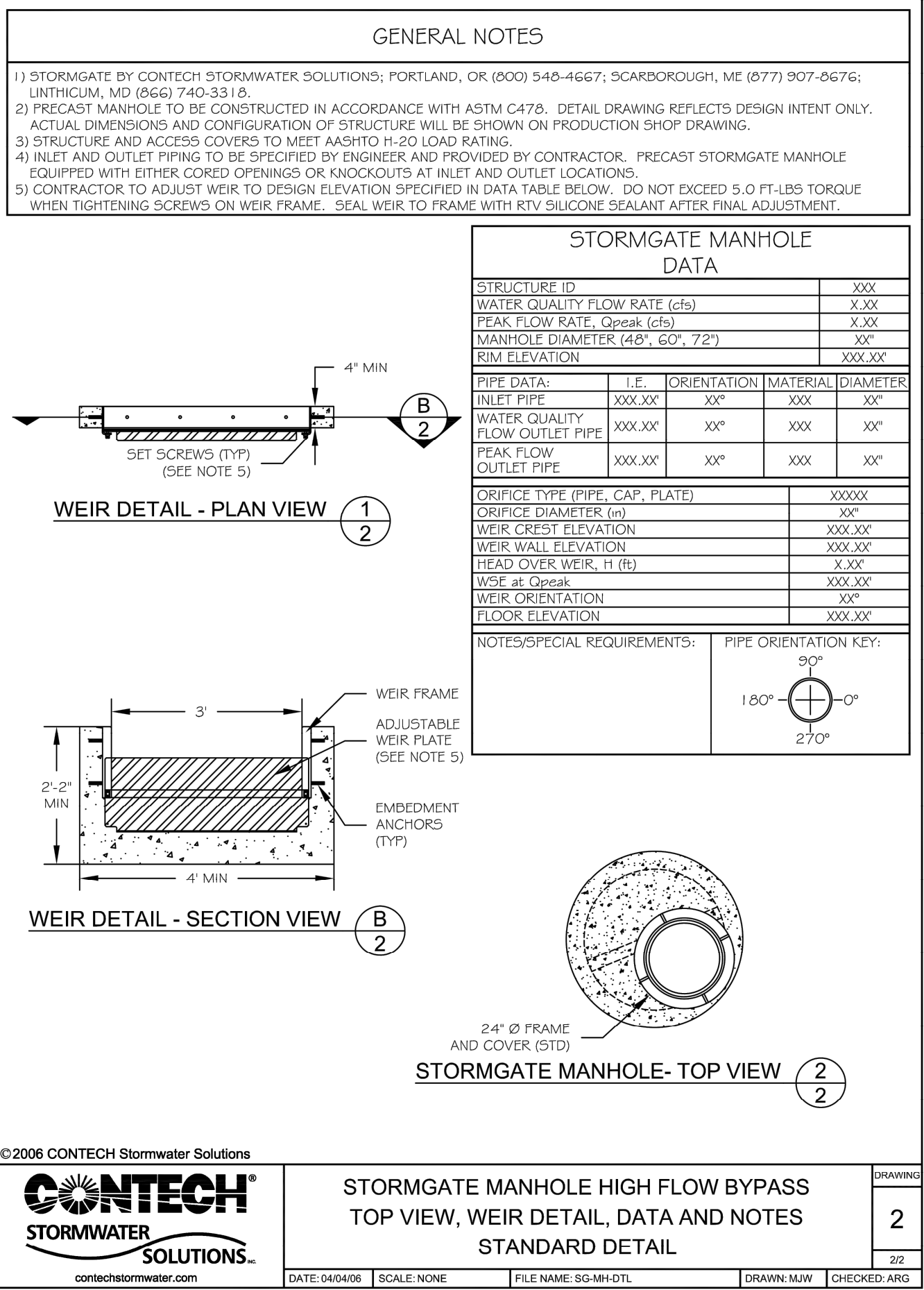
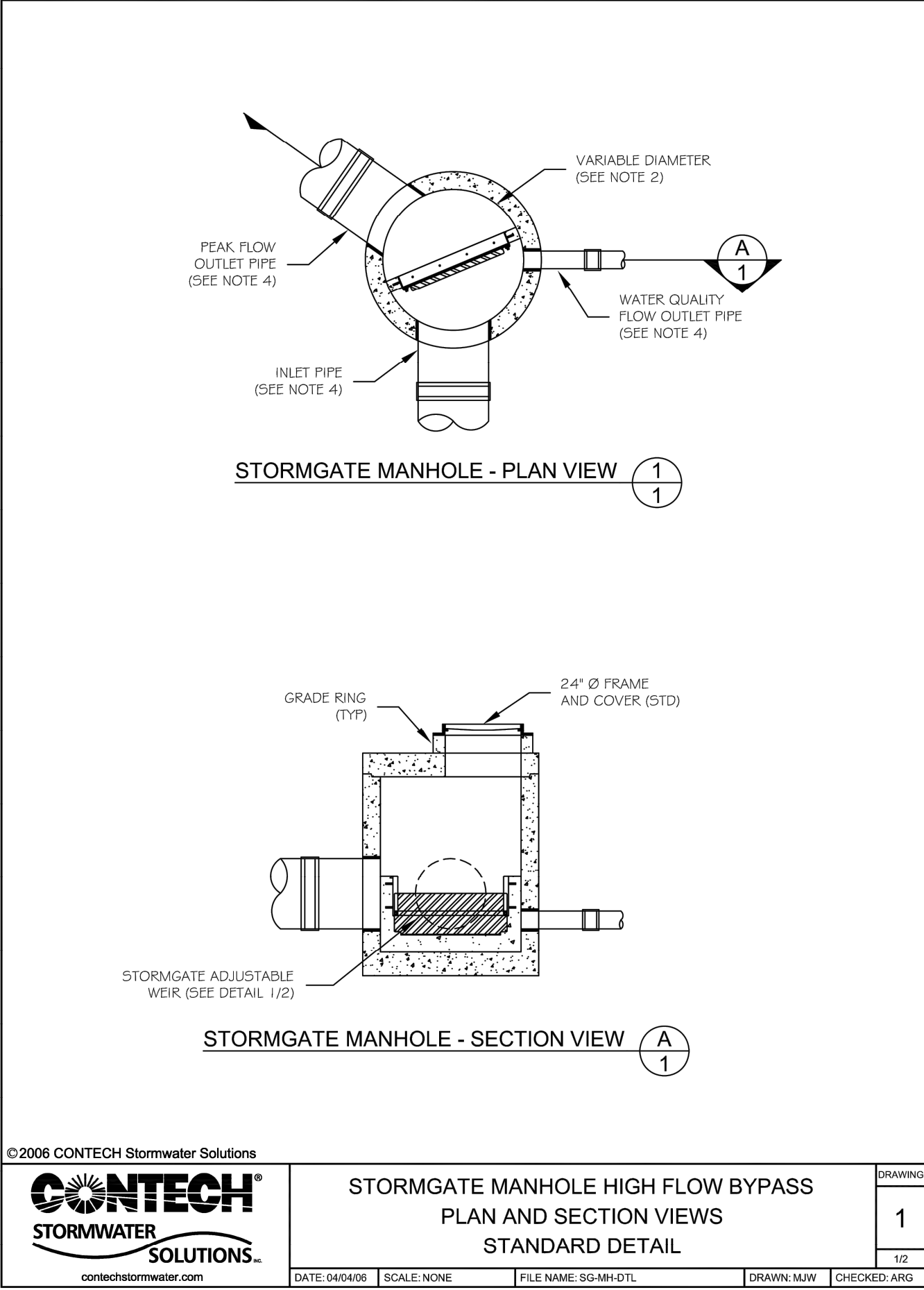
CITY OF KIRKLAND

PLAN NO. CK - D.02

STORM TRENCH
DETAIL

1 STORM TRENCH
NOT TO SCALE

2 STORMGATE MANHOLE
NOT TO SCALE



60% DESIGN SUBMITTAL
PRELIMINARY
NOT FOR CONSTRUCTION



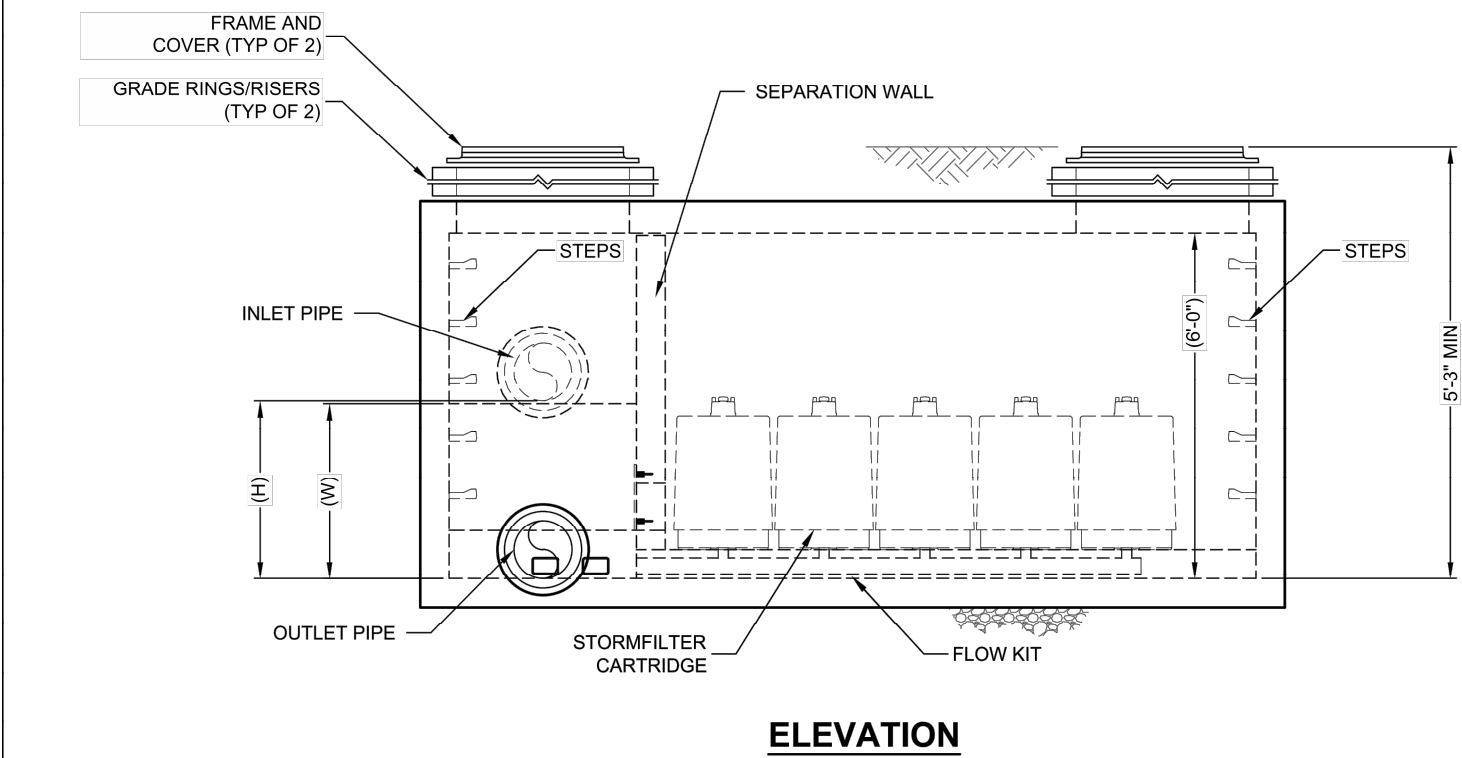
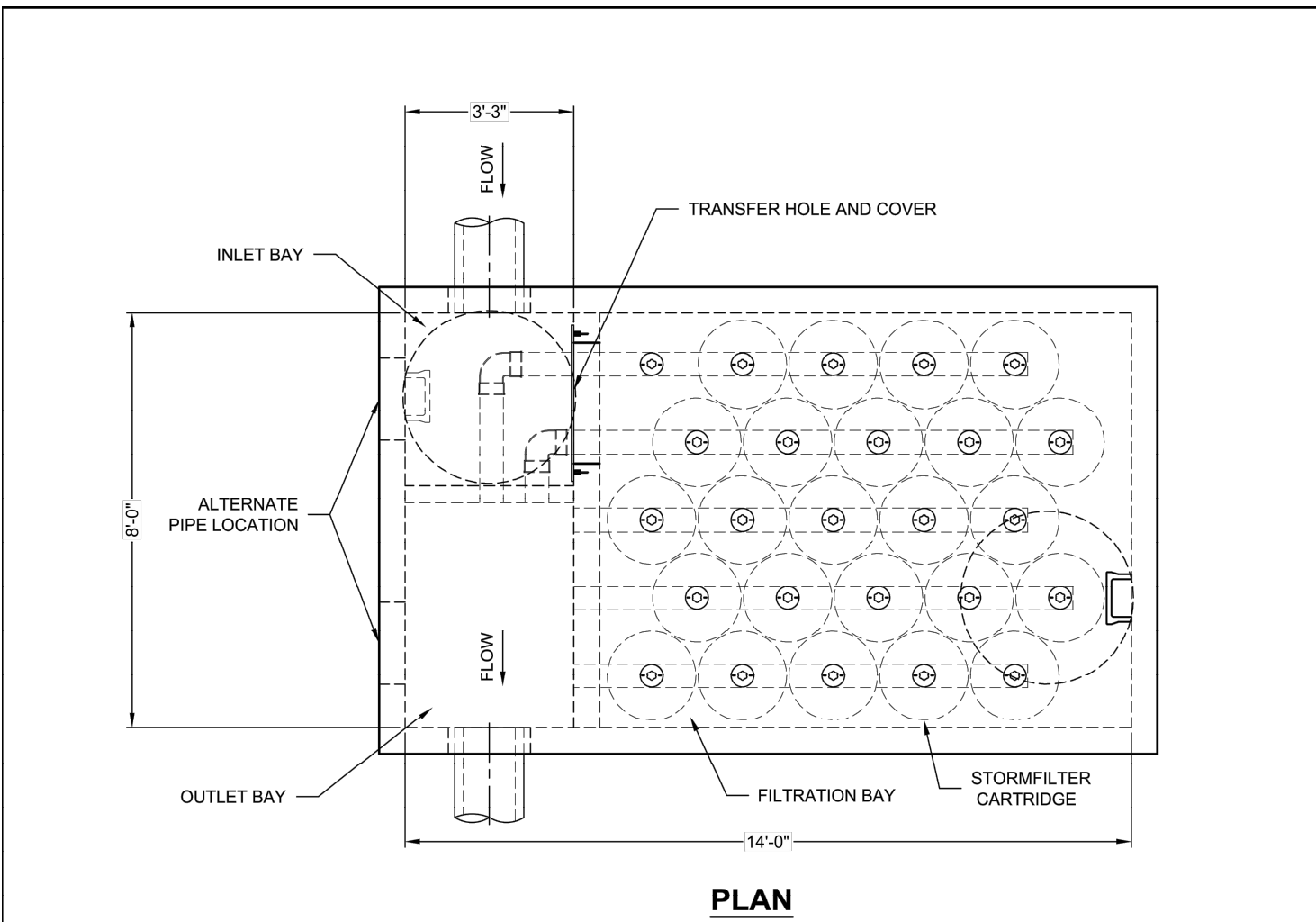
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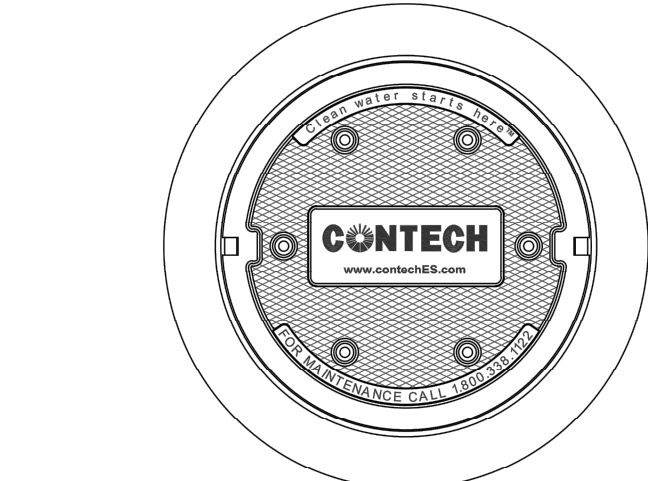
CITY OF KIRKLAND
PUBLIC WORKS DEPARTMENT
123 FIFTH AVENUE - KIRKLAND, WA 98033-6189 - (425)587-3800
CEDAR CREEK STORMWATER
RETROFIT - SITE #3

SHEET
5
6

DWG. NO.



STORMFILTER DESIGN NOTES									
• THE 8' x 14' PEAK DIVERSION STORMFILTER TREATMENT CAPACITY VARIES BY CARTRIDGE COUNT AND LOCALLY APPROVED SURFACE AREA SPECIFIC FLOW RATE. PEAK CONVEYANCE CAPACITY TO BE DETERMINED BY ENGINEER OF RECORD.									
• THE PEAK DIVERSION STORMFILTER IS AVAILABLE IN A LEFT INLET (AS SHOWN) OR RIGHT INLET CONFIGURATION.									
• ALL PARTS AND INTERNAL ASSEMBLY PROVIDED BY CONTECH UNLESS OTHERWISE NOTED.									
CARTRIDGE SELECTION									
CARTRIDGE HEIGHT	27"		18"		LOW DROP				
RECOMMENDED HYDRAULIC DROP (H)	3.05'		2.3'		1.8'				
HEIGHT OF WEIR (W)	3.00'		2.25'		1.75'				
SPECIFIC FLOW RATE (gpm/sf)	2 gpm/sf	1.67* gpm/sf	1 gpm/sf	2 gpm/sf	1.67* gpm/sf	1 gpm/sf	2 gpm/sf	1.67* gpm/sf	1 gpm/sf
CARTRIDGE FLOW RATE (gpm)	22.5	18.79	11.25	15	12.53	7.5	10	8.35	5



SITE SPECIFIC DATA REQUIREMENTS	
STRUCTURE ID	*
WATER QUALITY FLOW RATE (cfs)	0.41
PEAK FLOW RATE (cfs)	6.68
RETURN PERIOD OF PEAK FLOW (yrs)	18"
CARTRIDGE HEIGHT (27" 18" LOW DROP(LD))	18"
NUMBER OF CARTRIDGES REQUIRED	25
CARTRIDGE FLOW RATE	ZPG
MEDIA TYPE (PERLITE, ZPG, PSORB)	ZPG
PIPE DATA:	I.E. MATERIAL DIAMETER
INLET PIPE	* * *
OUTLET PIPE	* * *
UPSTREAM RIM ELEVATION	*
DOWNSTREAM RIM ELEVATION	*
ANTI-FLOTATION BALLAST	WIDTH * HEIGHT *
NOTES/SPECIAL REQUIREMENTS:	*
* PER ENGINEER OF RECORD	

PERFORMANCE SPECIFICATION
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.**
SPECIFIC FLOW RATE SHALL BE **2 GPM/SF (MAXIMUM).** SPECIFIC FLOW RATE IS THE MEASURE OF THE FLOW (GPM) DIVIDED BY THE MEDIA SURFACE CONTACT AREA (SF). MEDIA VOLUMETRIC FLOW RATE SHALL BE **6 GPM/CF OF MEDIA (MAXIMUM).**

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. DIMENSIONS MARKED WITH () ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
3. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH REPRESENTATIVE. www.contechES.com
4. STORMFILTER WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
5. STRUCTURE SHALL MEET AASHTO H2020 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 M306 AND BE CAST WITH THE CONTECH LOGO.

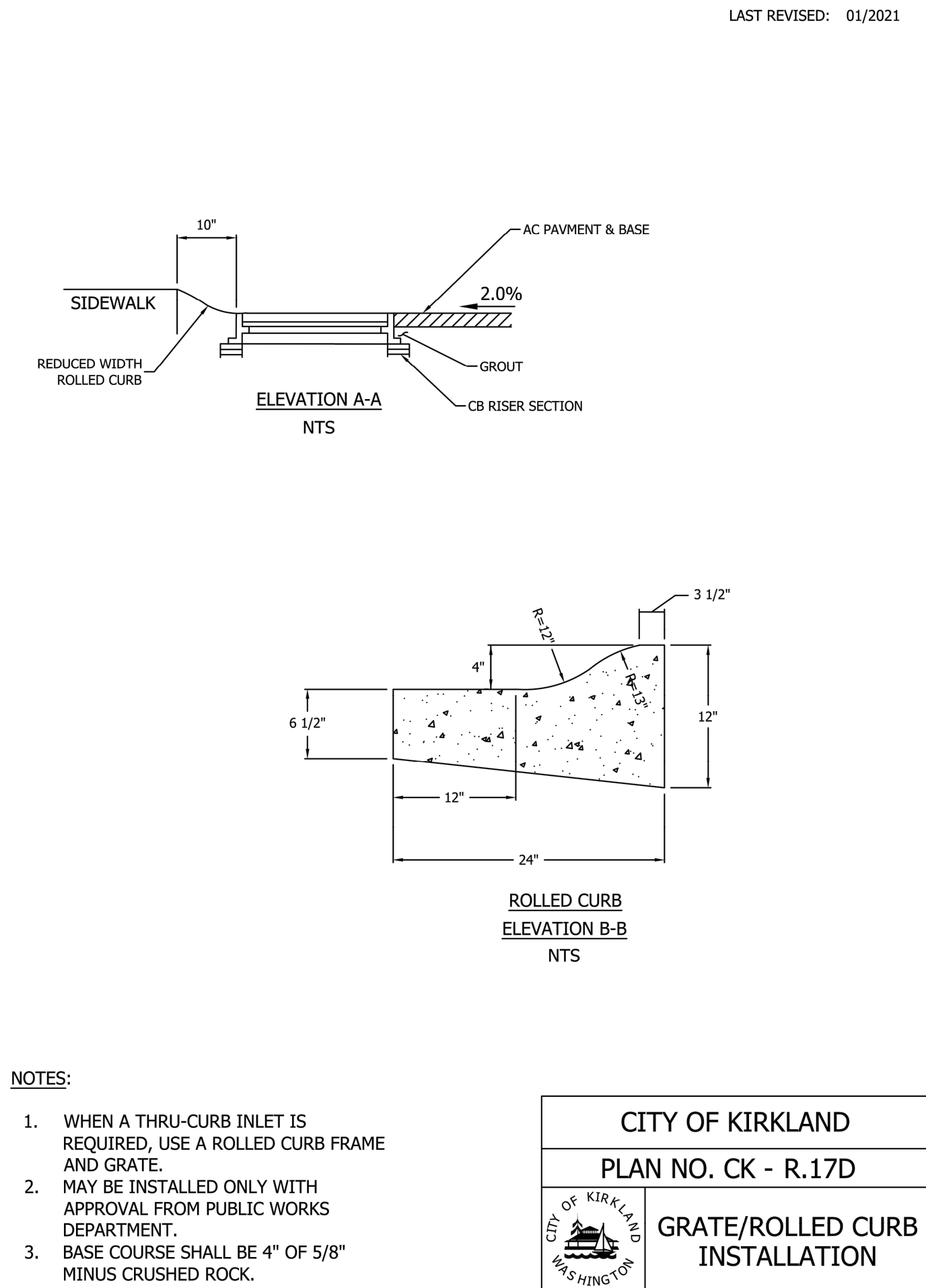
INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMFILTER STRUCTURE (LIFTING CLUTCHES PROVIDED).
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL SECTIONS AND ASSEMBLE STRUCTURE.
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.
F. CONTRACTOR TO REMOVE THE TRANSFER HOLE COVER WHEN THE SYSTEM IS BROUGHT ONLINE.



THE STORMWATER MANAGEMENT STORMFILTER
8' x 14' PEAK DIVERSION STORMFILTER
STANDARD DETAIL

1 STORMFILTER

NOT TO SCALE

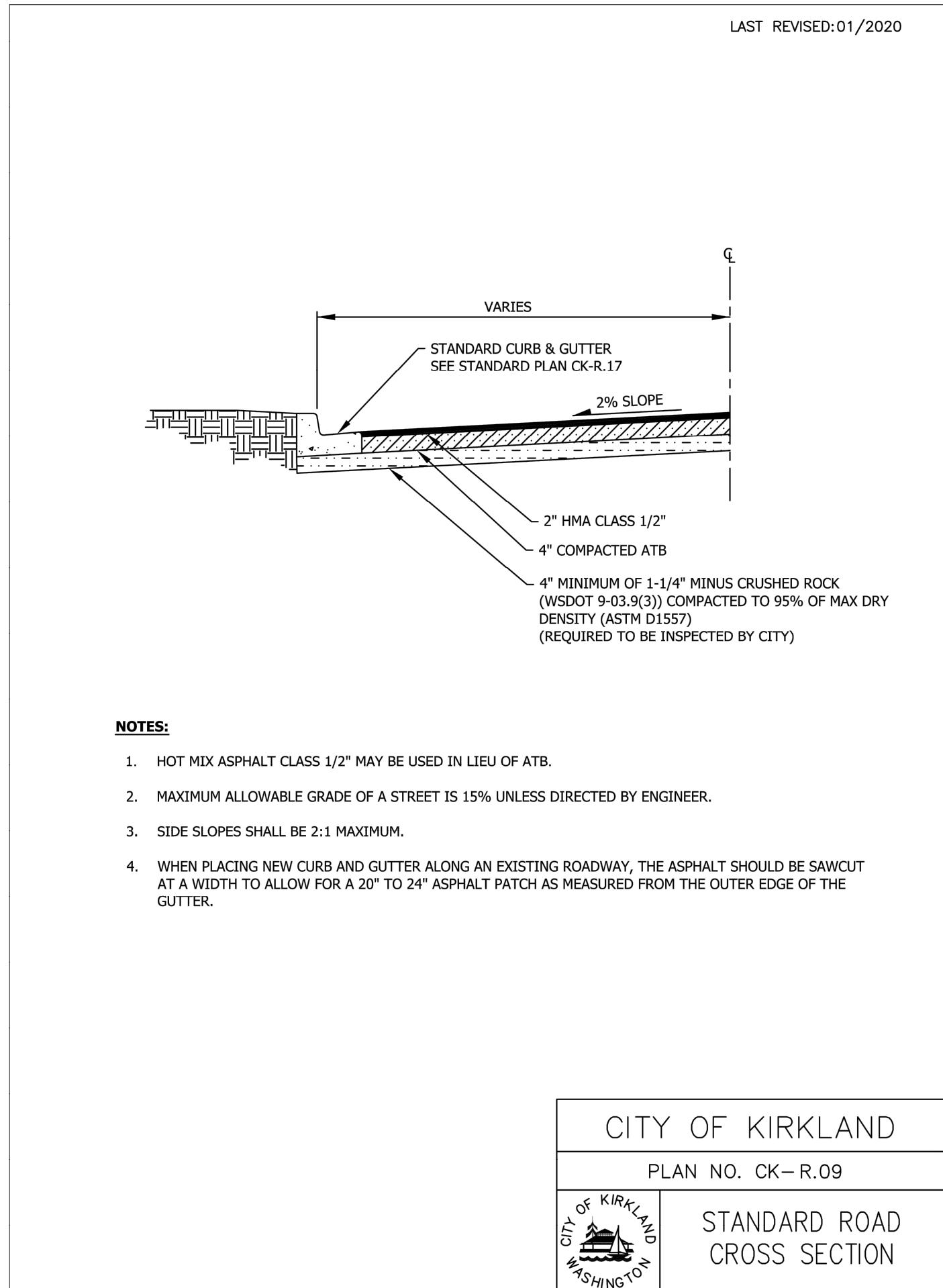


- NOTES:
- WHEN A THRU-CURB INLET IS REQUIRED, USE A ROLLED CURB FRAME AND GRATE.
 - MAY BE INSTALLED ONLY WITH APPROVAL FROM PUBLIC WORKS DEPARTMENT.
 - BASE COURSE SHALL BE 4" OF 5/8" MINUS CRUSHED ROCK.

CITY OF KIRKLAND	
PLAN NO. CK - R.17D	
	GRATE/ROLLED CURB INSTALLATION

2 ROLLED CURB

NOT TO SCALE



- NOTES:
- HOT MIX ASPHALT CLASS 1/2" MAY BE USED IN LIEU OF ATB.
 - MAXIMUM ALLOWABLE GRADE OF A STREET IS 15% UNLESS DIRECTED BY ENGINEER.
 - SIDE SLOPES SHALL BE 2:1 MAXIMUM.
 - WHEN PLACING NEW CURB AND GUTTER ALONG AN EXISTING ROADWAY, THE ASPHALT SHOULD BE SAWCUT AT A WIDTH TO ALLOW FOR A 20" TO 24" ASPHALT PATCH AS MEASURED FROM THE OUTER EDGE OF THE GUTTER.

CITY OF KIRKLAND	
PLAN NO. CK-R.09	
	STANDARD ROAD CROSS SECTION

3 STREET SECTION

NOT TO SCALE

DWG. NO.

FILE	ENGR.	REVIEW	SCALE	DATE
NO.	REVISION	BY	REVIEW	DATE

