

SITE DEVELOPMENT PERMIT 1709-007

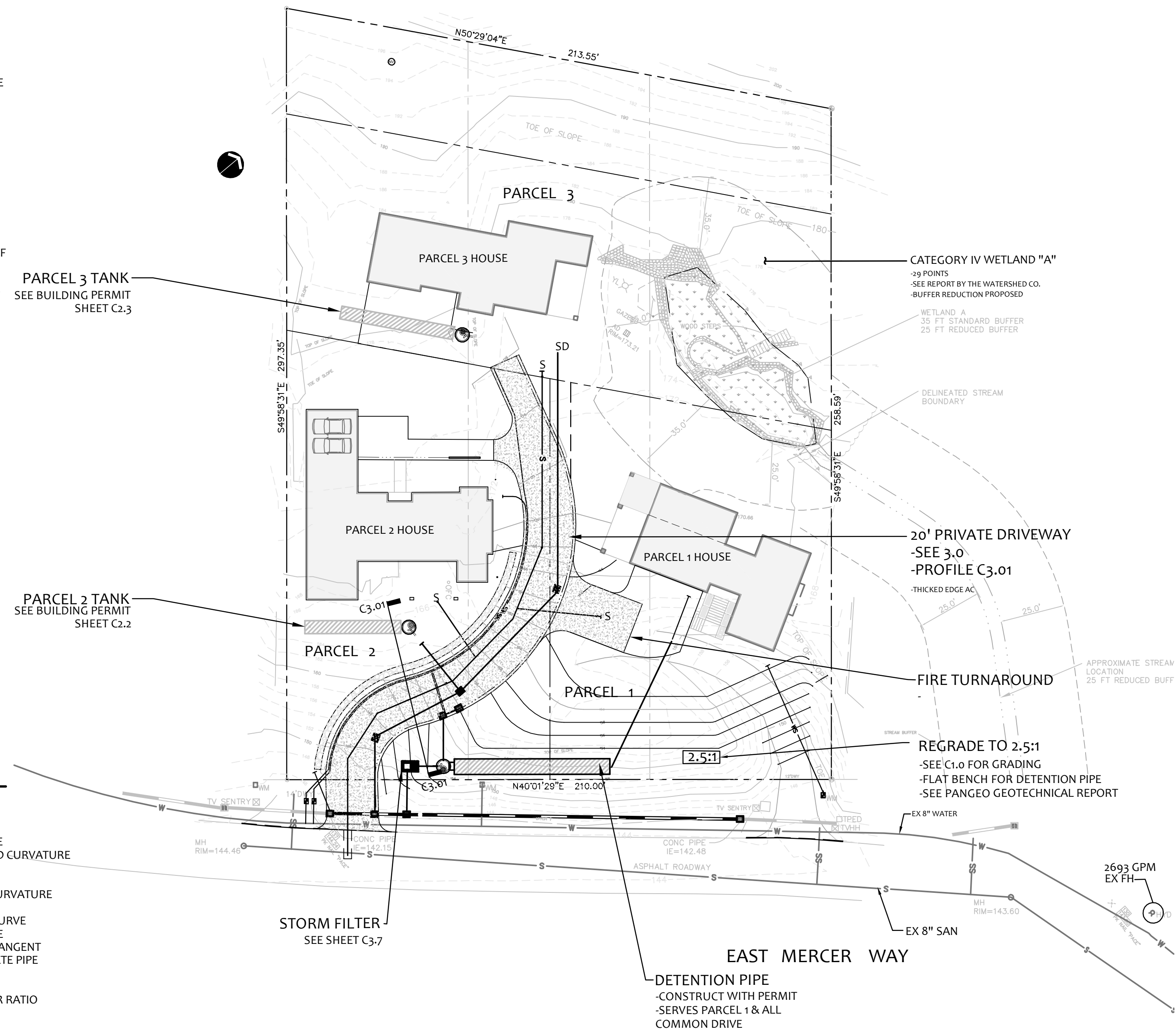
8375 / 8383 EAST MERCER WAY PROJECT

MERCER ISLAND, WASHINGTON 98040

CES GENERAL NOTES

- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH CITY OF MERCER ISLAND STANDARD PLANS AND THE MOST CURRENT COPY OF THE STATE OF WASHINGTON STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, INCLUDING APWA SUPPLEMENT TO DIVISION 1.
- PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL OBTAIN ALL NECESSARY LOCAL, STATE, AND FEDERAL APPROVALS AND PERMITS.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE A COPY OF THE APPROVED PLANS, SPECIFICATIONS, AND CONTRACT DOCUMENTS AT THE CONSTRUCTION SITE AT ALL TIMES.
- A PRE CONSTRUCTION MEETING SHALL BE HELD WITH THE CITY OF MERCER ISLAND PRIOR TO THE START OF CONSTRUCTION.
- EXISTING UTILITIES ARE SHOWN FOR REFERENCE ONLY. EXACT LOCATIONS SHALL BE FIELD VERIFIED BY CONTRACTOR PRIOR TO STARTING WORK.
- CONTRACTOR TO PROVIDE SLOPE PROTECTION FOR SLOPES OF 5:1 OR GREATER ACCORDING TO AGC STANDARD GUIDELINES AND THE CITY OF MERCER ISLAND EROSION AND SEDIMENT CONTROL STANDARDS. CONTRACTOR TO MAINTAIN EROSION CONTROL FACILITIES IN ACCORDANCE WITH CITY OF MERCER ISLAND EROSION CONTROL MANUAL, DEPARTMENT OF ECOLOGY STORM WATER MANUAL AND AGC WATER QUALITY MANUAL.
- ALL GOVERNMENTAL SAFETY REGULATIONS SHALL BE STRICTLY ADHERED TO INCLUDING BUT NOT LIMITED TO OSHA AND WISHA AND WASHINGTON DEPARTMENT OF LABOR AND INDUSTRY.
- CONSTRUCTION SIGNING AND TRAFFIC CONTROL SHALL BE PER THE 2000 MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- THE CONTRACTOR SHALL SAFELY MAINTAIN TRAFFIC AND CONTINUOUS ACCESS TO PRIVATE AND/OR PUBLIC PROPERTY.
- THE APPROVAL OF THESE PLANS BY THE CITY DOES NOT RELIEVE THE CONTRACTOR OR DEVELOPER OF THE RESPONSIBILITY TO COMPLY WITH THE REQUIREMENTS OF OTHER GOVERNING AGENCIES.

SITE MAP SCALE: 1"=30'



PRE-CONSTRUCTION REQUIREMENTS

- PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, INCLUDING CLEARING AND GRADING, THE FOLLOWING SHALL OCCUR:
- ALL REQUISITE PERMITS SHALL BE OBTAINED.
 - TRAFFIC CONTROL PLAN AND ROW PERMIT APPROVED BY THE CITY.
 - DEVELOPER SHALL PROVIDE A PERFORMANCE GUARANTEE IN ACCORDANCE WITH MICC 19.01.060 AND 19.08.040.
 - PRE-CONSTRUCTION CONFERENCE HELD WITH THE DEVELOPER/CONTRACTOR.
 - DEVELOPER/CONTRACTOR SHALL SUBMIT A DETAILED CONSTRUCTION SCHEDULE ITEMIZING ALL MAJOR ACTIVITIES.
 - PROVIDE VIDEOTAPES/PHOTOS OF EXISTING ROAD, ACCESS EASEMENTS AND RIGHT OF WAY WITHIN 1/4 MILE OF THE SITE TO THE CITY SHOWING PRE-CONSTRUCTION CONDITIONS. THE BURDEN OF PROOF RESTS WITH THE APPLICANT TO PROVE THAT ANY PUBLIC FACILITY DAMAGE WAS A PRE-EXISTING CONDITION OR WAS CAUSED BY ANOTHER PARTY. ANY DAMAGE TO PUBLIC FACILITIES DEEMED THE RESPONSIBILITY OF THE APPLICANT AS DETERMINED BY THE CITY ENGINEER SHALL BE RESTORED AT THE APPLICANT'S COST.
 - TREE PROTECTION MEASURES MUST BE IN PLACE AND INSPECTED BEFORE ANY WORK ON SITE IS STARTED. NO TREES SHALL BE CUT WITHOUT A TREE PERMIT.
 - DEVELOPER OR ASSIGNEE(S) SHALL PROVIDE TO THE CITY ENGINEER, A SIGNED AND NOTARIZED INDEMNIFICATION & HOLD HARMLESS AGREEMENT PREPARED BY THE CITY.
 - N/A

SURVEY

TOPOGRAPHIC SURVEY BY:
TERRANE LAND SURVEYING
10801 MAIN STREET, SUITE 102
BELLEVUE, WA 98004
PHONE 425-458.4488
WWW.TERRANE.NET

LEGAL DESCRIPTION

SEE SURVEY BY TERRANE

DRAWING INDEX

Co.0	COVER SHEET
Co.1	DEMO PLAN
Co.2	-
C1.0	TEMPORARY EROSION CONTROL PLAN
C1.2	EROSION & SEDIMENT CONTROL NOTES & DETAILS
C3.00	SITE ENGINEERING PLAN
C3.01	PRIVATE DRIVE PROFILE ROAD SECTION
C3.2	SANITARY SEWER DETAILS
C3.3	WATER DETAILS
C3.4	-
C3.6	DETENTION KEY MAP
C3.7	-STORMFILTER DETAIL
C4.1	-DETENTION PROFILE & DETAILS
C4.2	-PARCEL 2 DETENTION PROFILE & DETAILS

BASIS OF BEARINGS

SEE SURVEY BY TERRANE

VERTICAL DATUM & BENCHMARK

SEE SURVEY BY TERRANE

ABBREVIATIONS

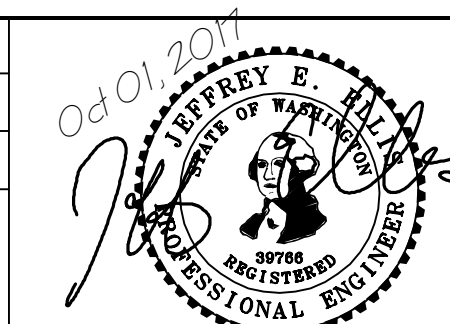
AC	ASPHALTIC CONCRETE	NTS	NOT TO SCALE
BCR	BEGIN CURB RETURN	OC	ON CENTER
BM	BENCHMARK	OD	OUTSIDE DIAMETER
CL	CENTERLINE	PC	POINT OF CURVATURE
CB	CATCH BASIN	PCC	POINT OF COMPOUND CURVATURE
DIP	DUCTILE IRON PIPE	PL	PROPERTY LINE
ECR	END CURB RETURN	PP	POWER POLE
EG	EXISTING GROUND	PRC	POINT OF REVERSE CURVATURE
EP	EDGE OF PAVEMENT	PT	POINT OF TANGENCY
EX	EXISTING	PVC	POINT OF VERTICAL CURVE
FES	FLARED END SECTION	PVC	POLY VINYL CHLORIDE
G	GAS	PVT	POINT OF VERTICAL TANGENT
GV	GATE VALVE	RCP	REINFORCED CONCRETE PIPE
HDPE	HIGH DENSITY POLYETHYLENE	ROW	RIGHT OF WAY
HMA	HOT MIX ASPHALT	SD	STORM DRAIN
IE	INVERT ELEVATION	SDR	STANDARD DIAMETER RATIO
JT	JOINT TRENCH	SF	SQUARE FEET
L	LENGTH	SS	SANITARY SEWER
LF	LINEAL FEET	STA	STATION
MH	MANHOLE	STD	STANDARD
MJ	MECHANICAL JOINT	TB	THRUST BLOCK
MON	MONUMENT	TYP	TYPICAL
		W	WATER
		WV	WATER VALVE

NO.	DATE	BY	REVISIONS

APPLICANT
New Horizon Real Estate
Development
8744 126th Ave NE
Kirkland, WA 98033



DATE: Oct 01, 2017
JOB# 1337
DRAFTED: CH DESIGN: DE
DIGITAL SIGNATURE



CIVIL ENGINEERING SOLUTIONS
102 NW CANAL STREET SEATTLE, WA 98107
PHONE: 206.930.0342 DUFFY@CESOLUTIONS.US

COVER SHEET
New Horizon Real Estate Development
8375 AND 8383 EAST MERCER WAY
MERCER ISLAND, WA 98040

DRAWING NO:
Co.0
APN 032110-0145
& 032110-0140

TREE TABLE BY AMERICAN FOREST MANAGEMENT

Tree Summary Table
For: 8383 E Mercer Way
American Forest Management, Inc.
Date: 8/29/14
Inspector: Wilkinson

Tree/Tag #	Species	DBH (inches)	Height (feet)	Drip-Line/Limits of Disturbance (feet)				Condition	Viability	Comments
				N	S	E	W			
8185	Douglas fir	25	85		7 / 12		5 / 12	good	via	driveway is 12' south of tree, good taper, was crown thinned in the past
101	deciduous ornamental	5.7	20	15 / 8	10 / 8	10 / 8	12 / 8	good	via	forks at Z, was topped
8538	western red cedar	19	95	13 / 12			8 / 12	fair-poor	borderline	was topped in the past, lots of new seedlings, pink ribbon - 507, was topped in the past, lots of new seedlings, pink ribbon - 422,
422	western red cedar	9.22	55	14 / 12			6 / 12	fair-poor	borderline	co-dominant stem forks at 1'
508	western hemlock	22	75	22 / 15			3 / 15	fair	via	hemlock woolly adelgid
518	deciduous	5						good	via	
8467	silka spruce	17	75	6 / 10	6 / 10	20 / 10	4 / 10	fair	via	foliage dieback, co dominant stems fork at 40', minor bleeding on trunk
521	Washington hawthorne	9	52	12 / 6			12 / 6	fair	via	suppressed
519	Douglas fir	22	125		4 / 12	11 / 12	6 / 12	good	via	no concerns
520	European mountain ash	7	25	15 / 6	10 / 6	13 / 6		good	via	co-dominant forks at 10'
8099	western hemlock	20	80	15 / 12	2 / 12	14 / 12	8 / 12	fair	via	was crown thinned, poor form, spike knot
510	western white pine	22	95	12 / 12	8 / 12	15 / 10	2 / 12	fair	via	was pruned
8510	western red cedar	17	75	11 / 10	2 / 10	5 / 10	1 / 10	fair	via	ribbon - 841, 15 deg lean NW, lean self correcting
8464	western hemlock	12	88		10 / 8		2 / 8	fair	via	ribbon - 535, covered in ivy, crown thinned
561	big leaf maple	19	90			12 / 10		fair	via	ivy covering the trunk
8462	big leaf maple	18	80	5 / 10			8 / 10	fair	via	ribbon - 560, forks at 1', dead co-dominant stem
540	big leaf maple	22	90	25 / 15	25 / 15	17 / 15	10 / 15	good	via	some past branch failure, good form
328	deciduous	6.6	12	8			5	fair	via	
8280	red alder	25	95					poor	non-viable	ribbon - 548
Neighboring Trees										
543	big leaf maple	26				20 / 15		good	via	good form, full crown, no concerns

Tree/Tag #	Species	DBH (inches)	Height (feet)	Drip-Line/Limits of Disturbance (feet)				Condition	Viability	Comments
				N	S	E	W			
8471	western red cedar	11	50	10 / 8	10 / 8	12 / 8	9 / 8	good	via	ribbon - 542
8432	big leaf maple	58	100		38 / 20	55 / 20		fair	via	ribbon - 837, leans SE, some dead branches
839	Pyramidalis arbutifolia	5	25					fair	via	
8497	Pyramidalis arbutifolia	10	15					fair-poor	borderline	topped, co dominant stems, ribbon - 840
841	Pyramidalis arbutifolia	6	28					fair	via	
842	Pyramidalis arbutifolia	6	30					fair	via	
843	Pyramidalis arbutifolia	6	30					fair	via	
8498	Pyramidalis arbutifolia	7	30					fair	via	ribbon - 844
845	Pyramidalis arbutifolia	6	35					fair	via	
848	Pyramidalis arbutifolia	7	35					fair	via	
564	Douglas fir	13	22	7 / 8	10 / 8	4 / 8		good	via	good taper
8470	Douglas fir	18	55	12 / 8	12 / 8	6 / 8		good	via	ribbon - 563, good taper
562	western red cedar	18	55	11 / 10		15 / 12	5 / 10	good	via	no concerns
8401	big leaf maple	26	95	20 / 18	25 / 10	29 / 10	26 / 13	fair	via	ribbon - 845, some past branch failures, pond is adjacent and SE
787	cherry	13	18					poor	non-viable	growths
8100	deciduous	8	22	4 / 4	15 / 4	4 / 4		fair-poor	borderline	ribbon - 834, leans south, foliage discolorator
835	fruit	5.2	20	5 / 4	4 / 4	8 / 4		fair	via	
833	apple	6	18	5 / 4	2 / 4	4 / 4	4 / 4	fair	via	
819	fruit tree	5.3	15	4 / 4	10 / 4	5 / 4	5 / 4	fair	via	
818	cherry	5	22			12 / 8		fair	via	cherry gummosis, heavy pruning
820	fruit tree	5.2	12	2 / 4	8 / 4	4 / 4	8 / 4	fair	via	pruned
798	western red cedar	28	70	10 / 12	15 / 12			fair	via	growing on a stump, picture
Neighboring Trees										
847	big leaf maple	58, 22, 30, 25			39 / 20	51 / 20		fair	via	four co dominant stems, ivy covering the trunk, SE lean, tops swing
574	red alder	15, 32			38			fair-poor	borderline	past stem failure, included bark, pockets of decay, ivy on trunk
575	red alder	12, 8, 34						poor	non-viable	severe foliage dieback, broken top
8399	cherry	3, 11, 4				8 / 5		fair	via	ribbon - 807, pruned
201	Douglas fir	4				4 / 4		good	via	
202	Douglas fir	4				8 / 4		good	via	

Drip-Line and Limits of Disturbance measurements from face of trunk
Trees on neighboring properties - Drip-Line and Limits of Disturbance measurements from property lines

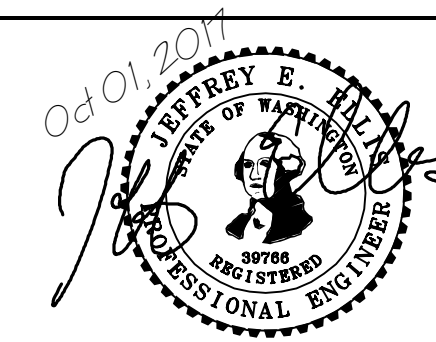


EAST MERCER WAY

NO.	DATE	BY	REVISIONS

APPLICANT
New Horizon Real Estate
Development
8744 126th Ave NE
Kirkland, WA 98033

DATE: Oct 01, 2017
JOB# 1337
DRAFTED: CH DESIGN: DE
DIGITAL SIGNATURE



CIVIL ENGINEERING SOLUTIONS
102 NW CANAL STREET SEATTLE, WA 98107
PHONE: 206.930.0342 DUFFY@CESOLUTIONS.WA

DEMO PLAN
New Horizon Real Estate Development
8735 AND 8383 EAST MERCER WAY
MERCER ISLAND, WA 98040

DRAWING NO:
Co.1
APN 032110-0145
& 032110-0140

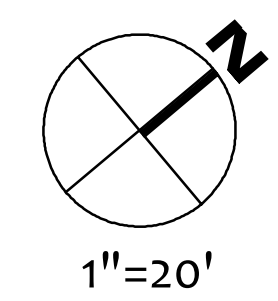
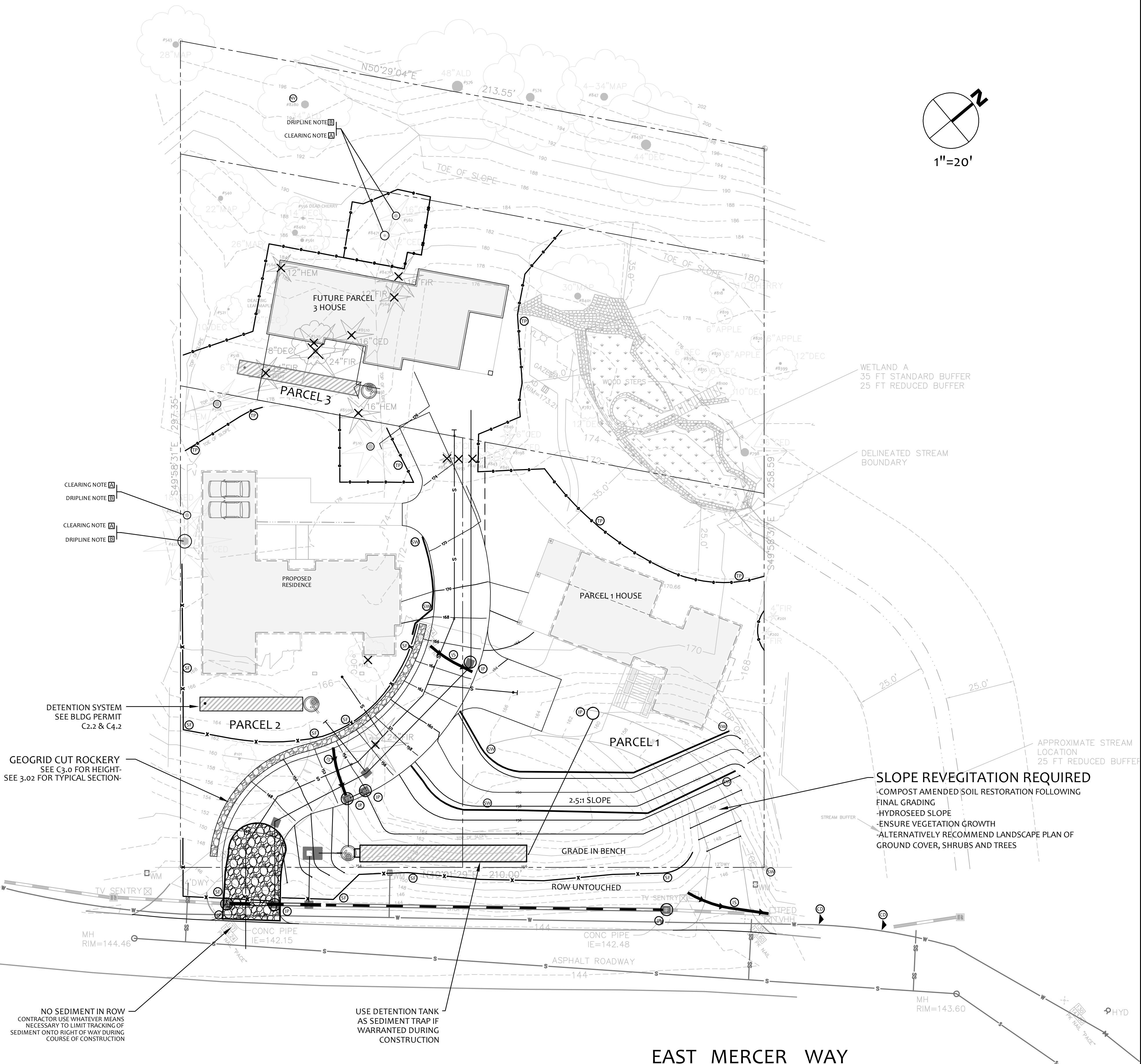
TREE TABLE BY AMERICAN FOREST MANAGEMENT

Tree Summary Table
 For: 8383 E Mercer Way
 Date: 8/29/14
 Inspector: Wilkinson
 American Forest Management, Inc.

Tree/ Tag #	Species	DBH (inches)	Height (feet)	Drip-Line/Limits of Disturbance (feet)			Condition	Viability	Comments	
				N	S	E				
8185	Douglas fir	26	85		17/12	15/12	good	viabile	driveway is 12' south of tree, good taper, was crown thinned in the past	
101	deciduous ornamental	5.7	20	15/8	10/8	12/8	good	viabile	forks at 2, was topped	
8538	western red cedar	19	55	13/12		18/12	fair-poor	borderline	was topped in the past, lots of new leaders, pink ribbon - 507	
422	western red cedar	9.22	55	14/12		16/12	fair-poor	borderline	was topped in the past, lots of new leaders, pink ribbon - 422, co-dominant stem forks at 1'	
508	western hemlock	22	75	22/15		13/15	fair	viabile	hemlock woolly adelgid	
518	deciduous	5			23/15		good	viabile		
8467	sika spruce	17	75	6/10	16/10	20/10	4/10	fair	viabile	foliage dieback, co dominant stems fork at 40', minor bleeding on trunk
521	Washington hawthorne	9	52	12/6				fair	viabile	suppressed
519	Douglas fir	22	125		14/12	11/12	6/12	good	viabile	no concerns
520	European mountain ash	7	25	15/6		13/6		good	viabile	co-dominant forks at 10'
8509	western hemlock	20	90	15/12	12/12	14/12	8/12	fair	viabile	was crown thinned, poor form, spike knot
510	western white pine	22	95	12/12	18/12	15/10	12/12	fair	viabile	was pruned
8510	western red cedar	17	75	11/10	12/10	5/10	11/10	fair	viabile	ribbon - 841, 15 deg lean NW, lean self correcting
8464	western hemlock	12	88		10/8		2/8	fair	viabile	ribbon - 535, covered in ivy, crown thinned
561	big leaf maple	19	90			12/10		fair	viabile	ivy covering the trunk
8462	big leaf maple	18	90	5/10			18/10	fair	viabile	ribbon - 560, forks at 1', dead co-dominant stem
540	big leaf maple	22	90	25/15	25/15	17/15	10/15	good	viabile	some past branch failure, good form
328	deciduous	6.6	12	8	10	5	5	fair	viabile	
8280	red alder	25	95					poor	non-viable	ribbon - 548
Neighboring Trees										
543	big leaf maple	26			20/15		16/15	good	viabile	good form, full crown, no concerns

Tree/ Tag #	Species	DBH (inches)	Height (feet)	Drip-Line/Limits of Disturbance (feet)			Condition	Viability	Comments	
				N	S	E				
8471	western red cedar	11	50	10/8	10/8	12/8	9/8	good	viabile	ribbon - 542
8432	big leaf maple	38	100	38/20	35/20			fair	viabile	ribbon - 837, leans SE, some dead branches
839	Pyramidalis arborvitae	5	25					fair	viabile	
8497	Pyramidalis arborvitae	10	15					fair-poor	borderline	topped, co dominant stems, ribbon - 840
841	Pyramidalis arborvitae	6	28					fair	viabile	
842	Pyramidalis arborvitae	6	30					fair	viabile	
843	Pyramidalis arborvitae	6	30					fair	viabile	
8498	Pyramidalis arborvitae	7	30					fair	viabile	ribbon - 844
845	Pyramidalis arborvitae	6	35					fair	viabile	
846	Pyramidalis arborvitae	7	35					fair	viabile	
564	Douglas-fir	13	92		7/8	10/8	4/8	good	viabile	good taper
8470	Douglas-fir	18	95		12/8	12/8	6/8	good	viabile	ribbon - 563, good taper
562	western red cedar	18	85	11/10		15/12	5/10	good	viabile	no concerns
8401	big leaf maple	36	95	20/18	25/10	29/10	26/18	fair	viabile	ribbon - 845, some past branch failures, pond is adjacent and SE
787	cherry	13	18					poor	non-viable	growths
8100	deciduous	8	22	4/4	15/4	4/4		fair-poor	borderline	ribbon - 834, leans south, foliage discoloration
835	fruit	5.2	20	5/4	4/4	8/4		fair	viabile	
833	apple	6	18	5/4	2/4	4/4	4/4	fair	viabile	
819	fruit tree	5.3	15	4/4	10/4	5/4	5/4	fair	viabile	
818	cherry	9	22			10/8		fair	viabile	cherry gummosis, heavy pruning
820	fruit tree	5.2	12	2/4	8/4	4/4	6/4	fair	viabile	pruned
798	western red cedar	26	70	10/12	15/12		18/12	fair	viabile	growing on a stump, picture
Neighboring Trees										
847	big leaf maple	38, 22, 30, 25		39/20	31/20			fair	viabile	four co dominant stems, ivy covering the trunk, SE lean, rope swing
574	red alder	15, 32		38				fair-poor	borderline	past stem failure, included bark, pockets of decay, ivy on trunk
576	red alder	12, 9, 34						poor	non-viable	severe foliage dieback, broken top
8399	cherry	3, 11, 4				8/5		fair	viabile	ribbon - 807, pruned
201	Douglas-fir	4				4/4		good	viabile	
202	Douglas-fir	4				8/4		good	viabile	

Drip-Line and Limits of Disturbance measurements from face of trunk
 Trees on neighboring properties - Drip-line and Limits of Disturbance measurements from property lines



NO.	DATE	BY	REVISIONS

APPLICANT
 New Horizon Real Estate
 Development
 8744 126th Ave NE
 Kirkland, WA 98033

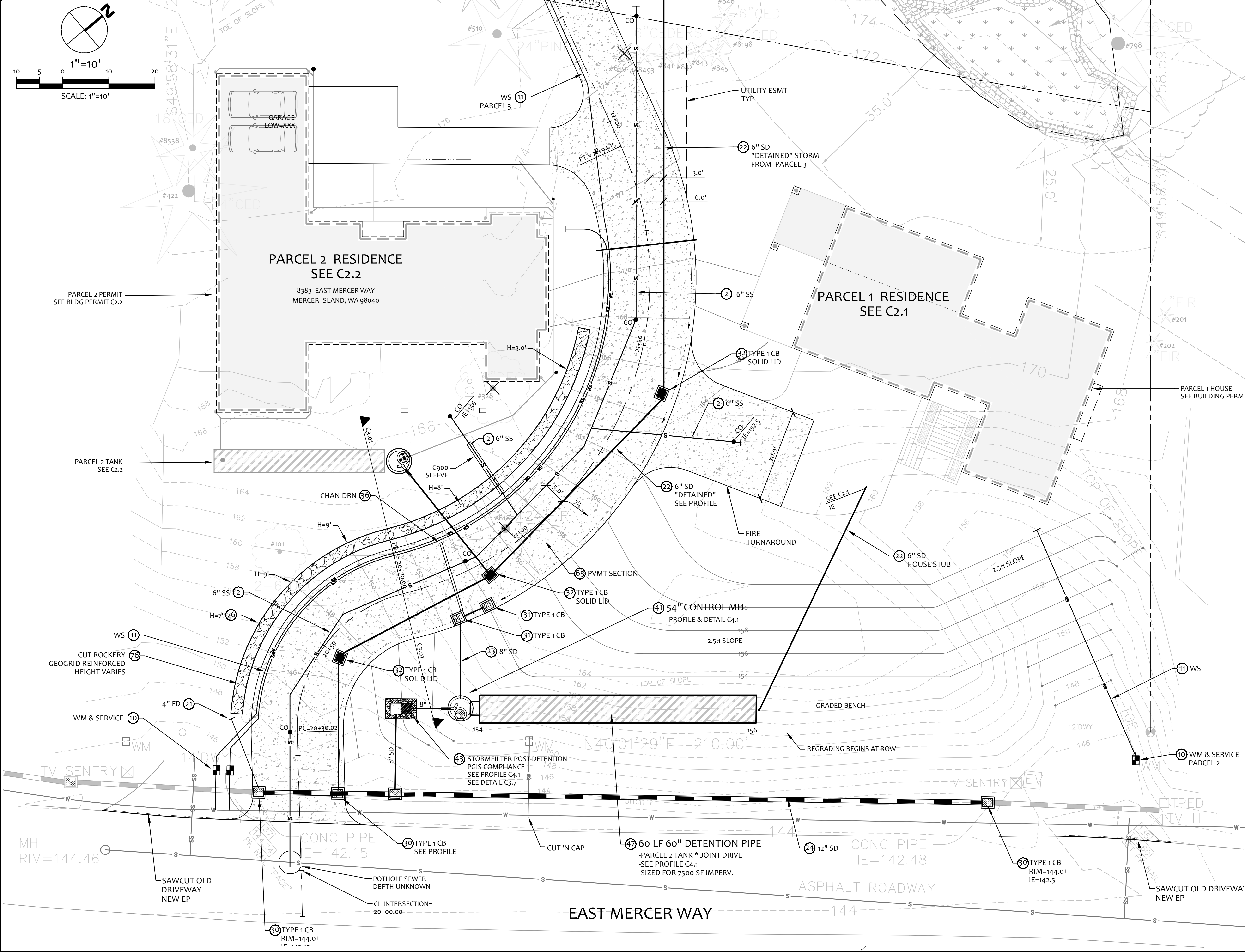
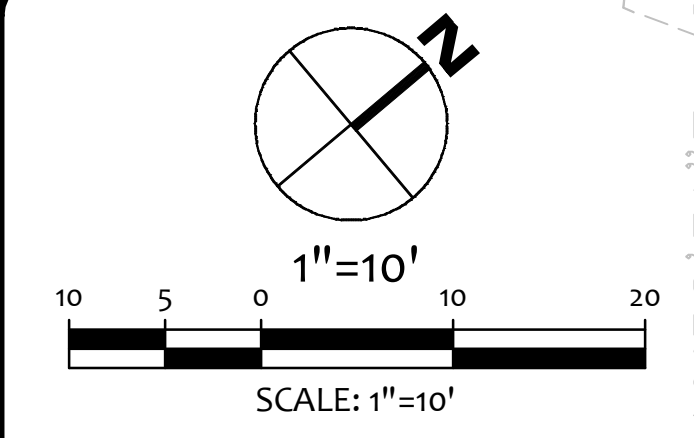
DATE: Sep 29, 2017
 JOB#: 1337
 DRAFTED: CH DESIGN: DE
 DIGITAL SIGNATURE



CIVIL ENGINEERING SOLUTIONS
 102 NW CANAL STREET SEATTLE, WA 98107
 PHONE: 206.930.0342 DUFFY@CESOLUTIONS.US

EROSION CONTROL PLAN
 SITE DEVELOPMENT & PARCELS 1-3
 New Horizon Real Estate Development
 8375 AND 8383 EAST MERCER WAY
 MERCER ISLAND, WA 98040

DRAWING NO:
C1.0
 APN 032110-0145
 & 032110-0140



- SANITARY SEWER IMPROVEMENTS**
- 1 -
 - 2 - 6" SDR 35 PVC SANITARY SEWER(SS) @ MIN 1.0%.
 - 3 -
 - 4 - 6" SEWER CLEANOUT PER MERCER ISLAND DETAIL S-19.
- WATER IMPROVEMENTS**
- 10 - NEW SF RESIDENTIAL WATER SERVICE & METER PIT. CONFIRM REQUIRED SIZE WITH BUILDING PERMIT REVIEW. INSTALL PER MERCER ISLAND DETAIL W-13, W-14, OR W-14A DEPENDING ON SIZE REQUIREMENT.
 - 11 - VERIFY REQUIRED WATER SERVICE FROM METER TO HOUSE TO MEET FIRE FLOW. TYPICAL MIN. IS 1.5" 250 PSI PRIVATE HDPE WATER (ASTM D2239) FROM METER TO HOUSE. RECOMMENDED DEPTH=36". COORDINATE HOUSE ENTRY WITH BUILDER/OWNER.
 - 12 -
 - 14 -
- STORM DRAIN**
- 20 -
 - 21 - 4" FOUNDATION DRAIN (3034 PVC) @ MIN 1% GRADE.
 - 22 - 6" STORM DRAIN (3034 PVC) @ MIN 1% GRADE.
 - 23 - 8" STORM DRAIN. (SDR 35 PVC OR EQUAL). SEE PROFILE FOR GRADE.
 - 24 - 12" STORM DRAIN @ MIN 1.0% GRADE.
 - 25 -
 - 29 - BED & TRENCH PIPE PER CITY DETAIL S-3. COMPACT TRENCH TO 95% STD PROCTOR UNDER PAVED AREAS.
- STORM DRAIN STRUCTURES**
- 30 - TYPE 1 CB WITH STANDARD GRATE. MAX 5' RIM TO FL DEPTH.
 - 31 - TYPE 1 CB WITH VANED LID. MAX 5' RIM TO FL DEPTH.
 - 32 - TYPE 1 CB WITH SOLID LID
 - 33 -
 - 34 -
 - 35 -
 - 36 - DURASLOPE CHANNEL / TRENCH DRAIN OR EQUAL: MIN 6" DEEP CHANNEL. SET LEVEL MIN 2" BELOW LOW GARAGE FF.
 - 39 -
 - 40 -
- STREET IMPROVEMENTS**
- 60 -
 - 61 -
 - 62 -
 - 63 - N/A
 - 64 -
 - 65 - PRIVATE DRIVE ASPHALT DRIVE SECTION: MIN 2.5" HOT MIX ASPHALT OVER 4" CRUSHED ROCK BASE. COMPACT SUBGRADE TO MIN 95% STD PROCTOR, PLUS/MINUS 2% OMC.
 - 66 -
 - 67 -
 - 70 -
 - 76 - GEOGRID REINFORCED ROCKERY (MSE GRAVITY WALL). DESIGN AND FIELD INSPECTION BY PANGO. SEE DETAIL C3.4. SEE TYPICAL STREET/ROCKERY SECTION C3.01.

NO.	DATE	BY	REVISIONS

APPLICANT
 New Horizon Real Estate
 Development
 8744 126th Ave NE
 Kirkland, WA 98033

DATE: Sep 29, 2017
 JOB#: 1337
 DRAFTED: DE DESIGN: DE
 DIGITAL SIGNATURE



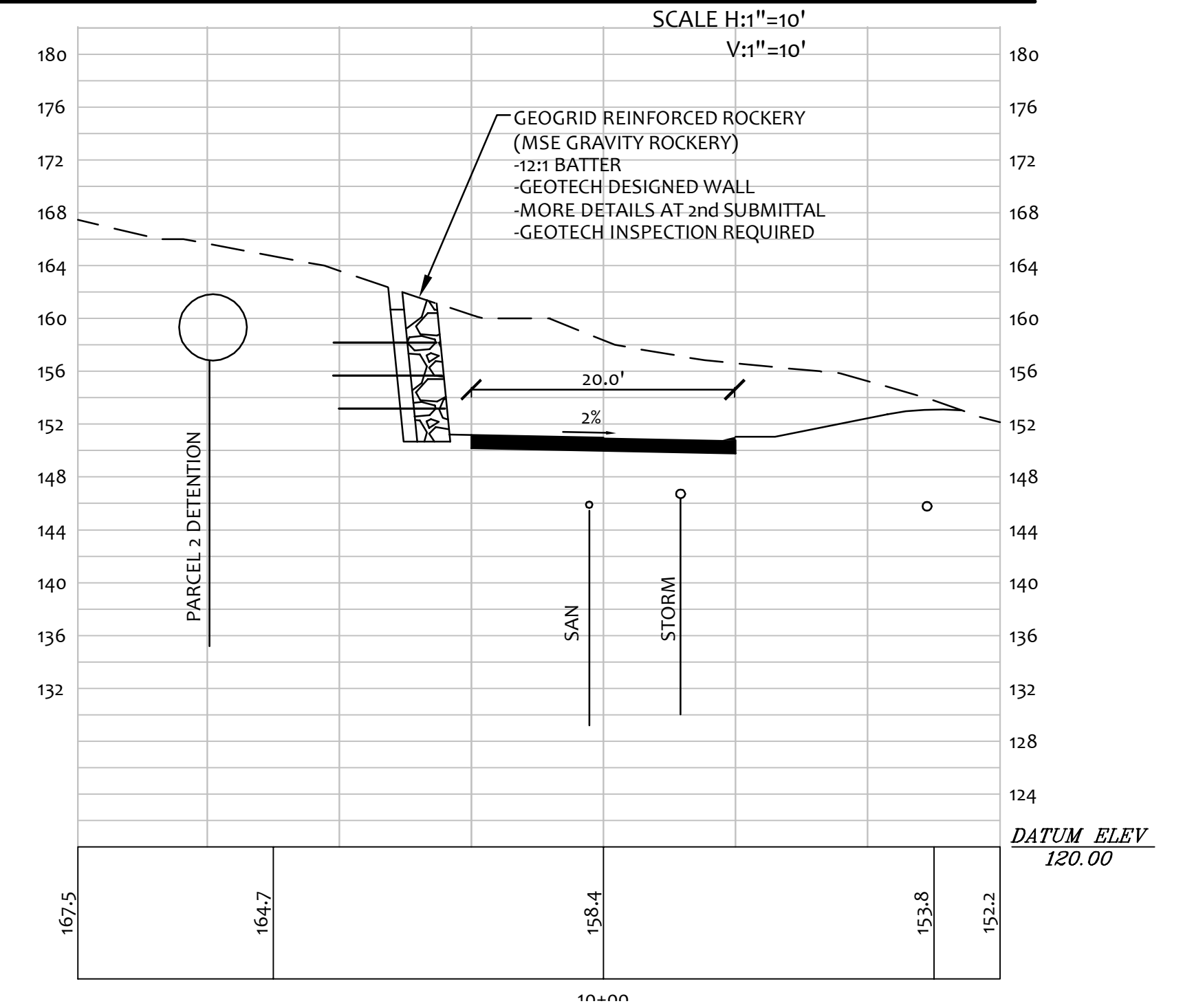
CIVIL ENGINEERING SOLUTIONS

102 NW CANAL STREET SEATTLE, WA 98107
 PHONE: 206.930.0342 DUFFY@CESOLUTIONS.US

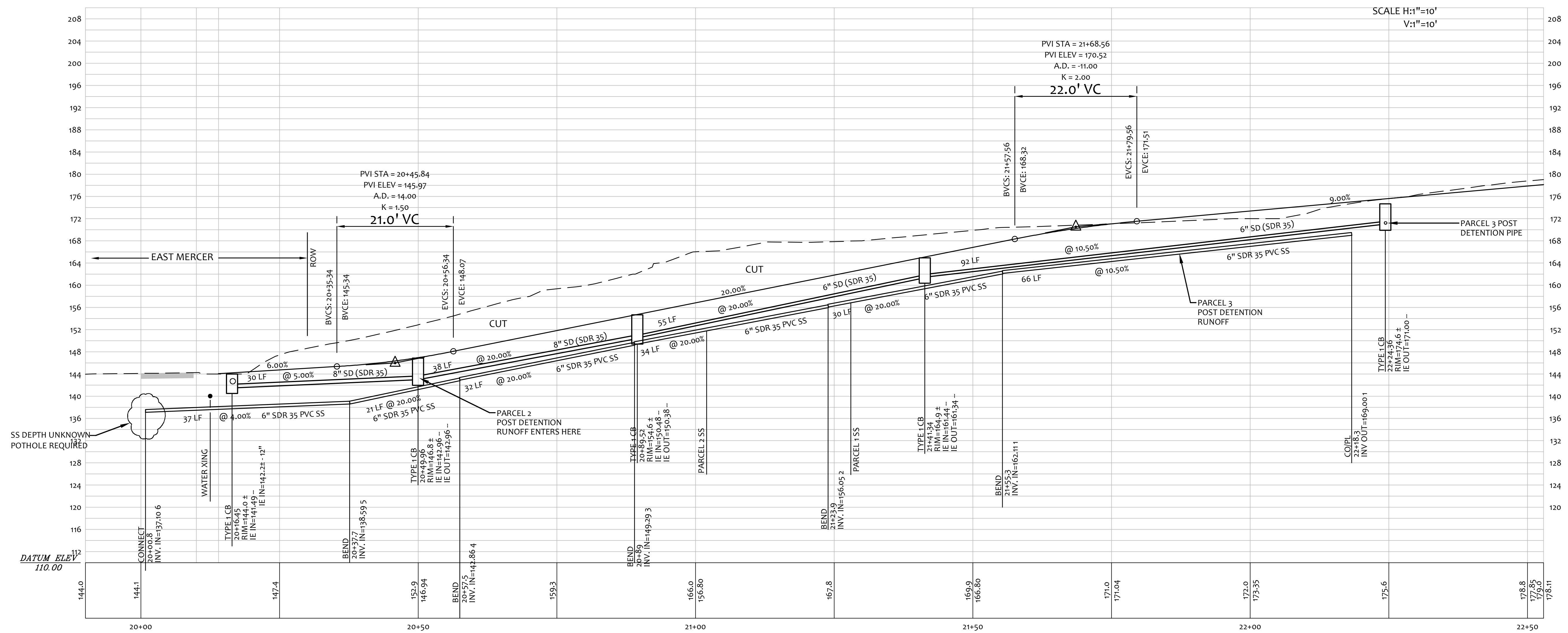
SITE ENGINEERING
EAST MERCER IMPROVEMENTS
 New Horizon Real Estate Development
 8375 AND 8383 EAST MERCER WAY
 MERCER ISLAND, WA 98040

DRAWING NO:
C3.0
 APN 032110-0145
 & 032110-0140

ROAD SECTION, STA 20+71 (PCC)



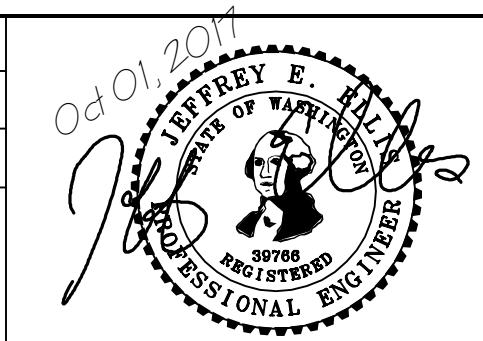
SHARED DRIVEWAY PROFILE



NO.	DATE	BY	REVISIONS

APPLICANT
 New Horizon Real Estate
 Development
 8744 126th Ave NE
 Kirkland, WA 98033

DATE: Oct 01, 2017
 JOB#: 1337
 DRAFTED: DE DESIGN: DE
 DIGITAL SIGNATURE



CIVIL ENGINEERING SOLUTIONS
 102 NW CANAL STREET SEATTLE, WA 98107
 PHONE: 206.930.0342 DUFFY@CESOLUTIONS.US

SHARED DRIVEWAY PROFILE ROAD SECTION
 New Horizon Real Estate Development
 8375 AND 8383 EAST MERCER WAY
 MERCER ISLAND, WA 98040

DRAWING NO:
C3.01
 APN 032110-0145
 & 032110-0140

TRENCH WIDTH

PIPE SIZE	PIPE ZONE MAX. TRENCH WIDTH	MAX. RESTORATION WIDTH AT SUBGRADE	MAX. RESTORATION WIDTH AT SURFACE
SIDE SEWER	2'-0"	2'-0"	6'-0"
4" OR 6"	2'-2"	3'-0"	8'-0"
8"	2'-4"	4'-0"	8'-0"
10"	2'-6"	4'-0"	8'-0"
12"	2'-8"	4'-6"	8'-6"

NOTES

- ALL TRENCH BACKFILL IN PUBLIC RIGHT-OF-WAY OR ROADWAY AREAS SHALL BE CRUSHED SURFACING PER WSDOT 9-09.9(3) OR BANK RUN GRAVEL PER WSDOT 9-03.19(3) COMPACTED IN 6" LIFTS.
- COF FOR BACKFILL MAY BE REQUIRED BY CITY ENGINEER WHEN PROPER COMPACTION AROUND EXISTING UTILITIES MAY NOT BE POSSIBLE. COF SHALL BE PER WSDOT 2-09.3(1)(E).
- SEE S-4 FOR PIPE BEDDING DETAILS.

CITY OF MERCER ISLAND STANDARD DETAILS SEWER TRENCH DETAIL

6-5-2009 NO SCALE S-3

BEDDING FOR RIGID PIPE MATERIAL

BEDDING FOR FLEXIBLE PIPE MATERIAL

NOTES

- EXCAVATE UNSTABLE MATERIAL DOWN TO FIRM SOIL. REPLACE WITH GRAVEL BACKFILL PER WSDOT 9-03.12(3) AS DIRECTED BY THE CITY ENGINEER.
- PROVIDE UNIFORM SUPPORT UNDER BARREL.
- HAND TAMP UNDER HAUNCHES.
- COMPACT BEDDING AND BACKFILL MATERIAL TO 95% MAX. DENSITY EXCEPT DIRECTLY OVER PIPE. HAND TAMP ONLY UNTIL MINIMUM 6" ABOVE TOP OF PIPE.
- 30" MAXIMUM TRENCH WIDTH FOR PIPE UP TO AND INCLUDING 12". FOR PIPE LARGER THAN 12", USE O.D. PLUS 18".

CITY OF MERCER ISLAND STANDARD DETAILS SEWER PIPE BEDDING

6-5-2009 NO SCALE S-4

CITY OF MERCER ISLAND STANDARD DETAIL SEWER TYPE 1 MANHOLE 48" - 60"

6-5-2009 NO SCALE S-5

CITY OF MERCER ISLAND STANDARD DETAILS SEWER SIDE SEWER CONNECTION AND STUB

6-5-2009 NO SCALE S-17

CITY OF MERCER ISLAND STANDARD DETAILS SEWER HOUSE SEWER CONNECTION

6-5-2009 NO SCALE S-18

CITY OF MERCER ISLAND STANDARD DETAILS SEWER CLEAN OUT DETAIL

6-5-2009 NO SCALE S-19

CITY OF MERCER ISLAND STANDARD DETAILS SEWER SIDE SEWER MARKER POST

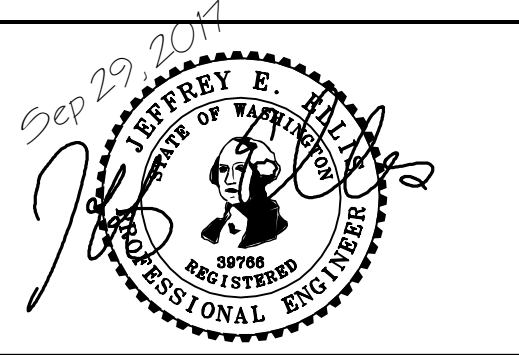
6-5-2009 NO SCALE S-20

NO.	DATE	BY	REVISIONS

APPLICANT
New Horizon Real Estate Development
8744 126th Ave NE
Kirkland, WA 98033

811
Know what's below.
Call before you dig.

DATE: Sep 29, 2017
JOB#: 1337
DRAFTED: DE DESIGN: DE
DIGITAL SIGNATURE



CIVIL ENGINEERING SOLUTIONS

2244 NW MARKET STREET, SUITE B SEATTLE, WA 98107
PHONE: 206.930.0342 DUFFY@CESOLUTIONS.US

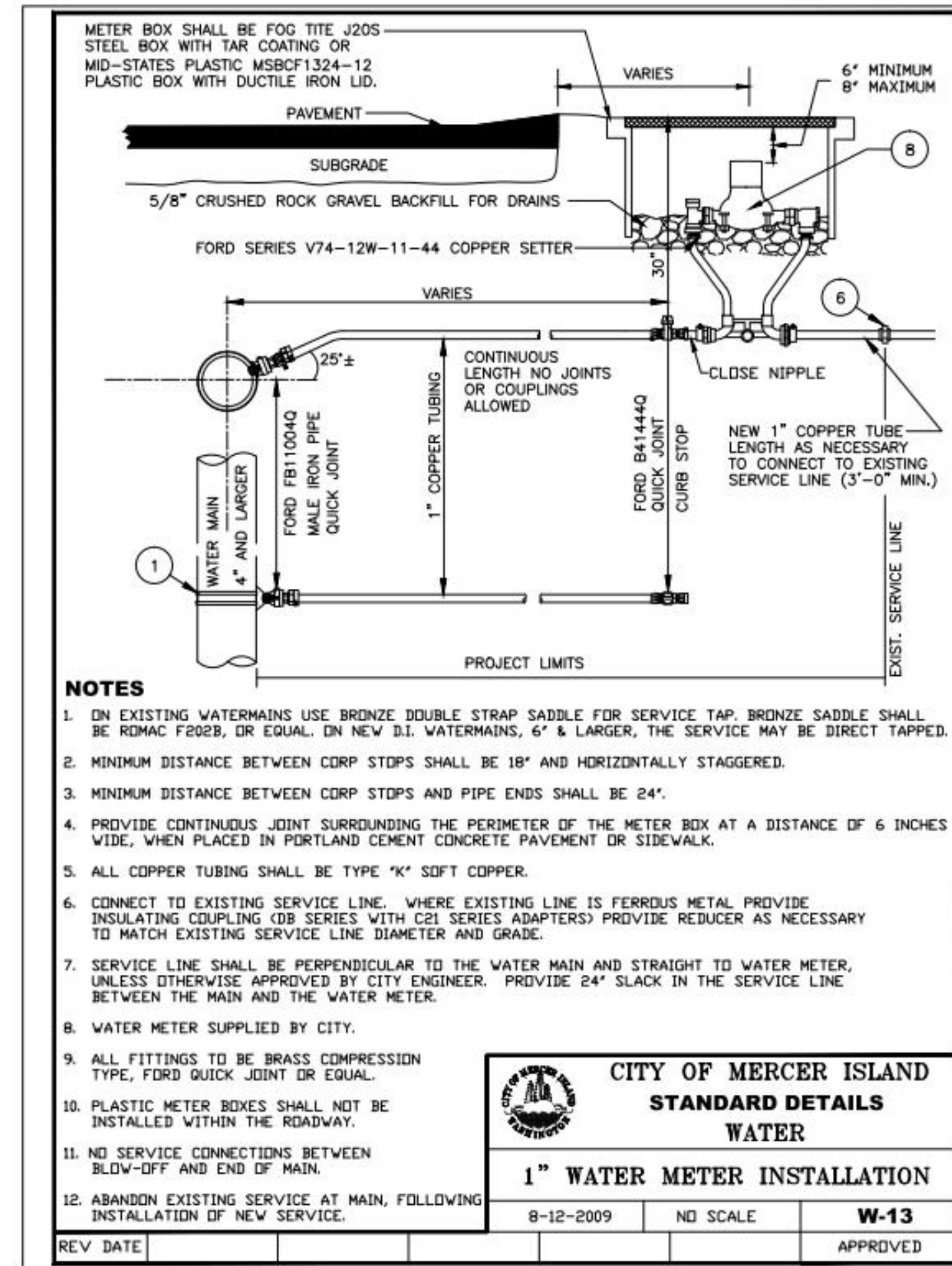
SAN. SEWER DETAILS
New Horizon Real Estate Development
8375 AND 8383 EAST MERCER WAY
MERCER ISLAND, WA 98040

DRAWING NO:
C3.2
APN 032110-0145 & 032110-0140

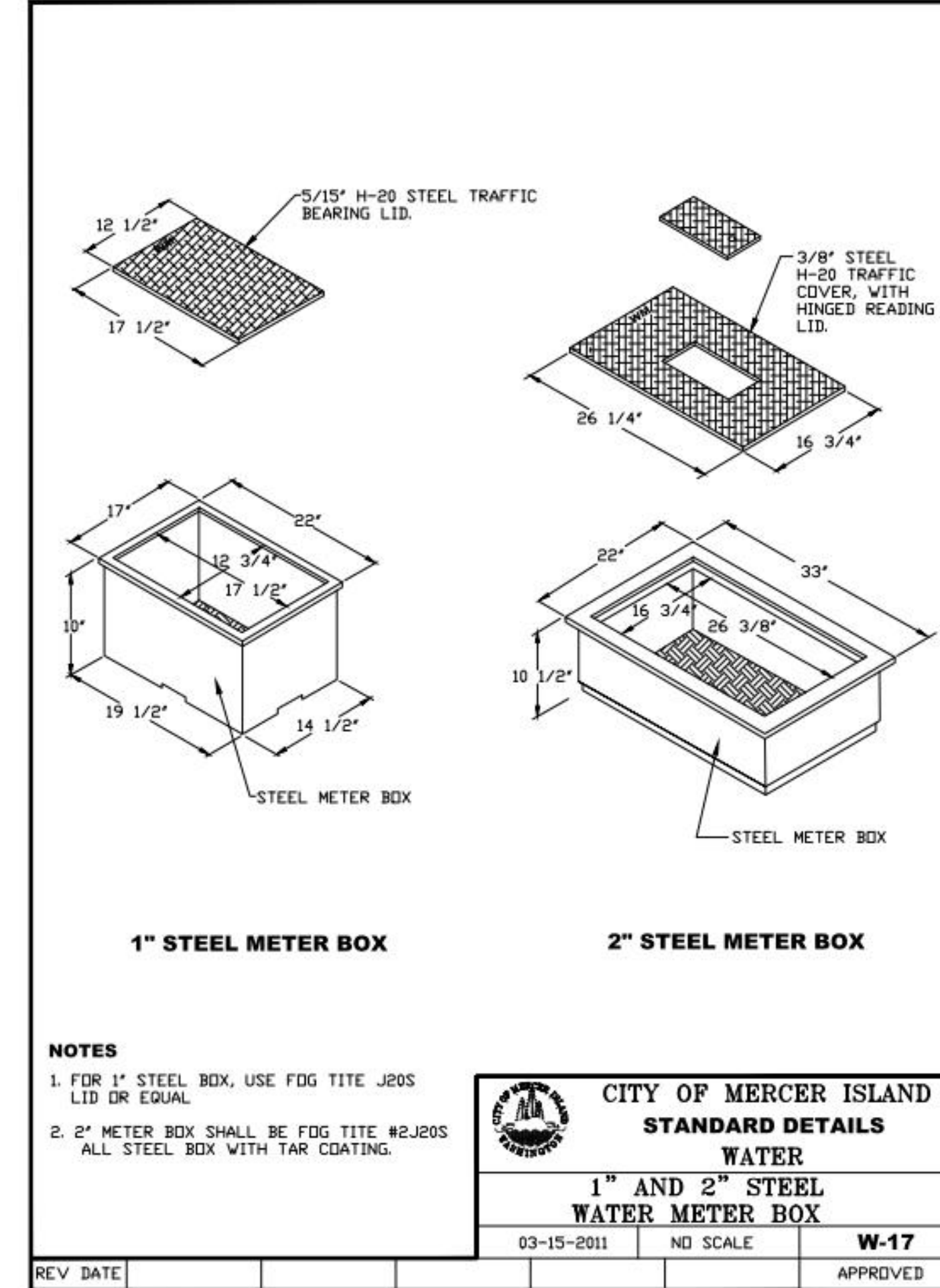
MERCER ISLAND CONSTRUCTION REQUIREMENTS

- ALL IMPROVEMENTS SHALL BE INSTALLED PURSUANT TO PLANS APPROVED BY THE CITY IN ACCORDANCE WITH THE APPROVED CONSTRUCTION SCHEDULE.
- ALL CONSTRUCTION SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE CITY OF MERCER ISLAND. CONDITIONS OF PERMITS ISSUED, THE GEOTECHNICAL EVALUATION RECOMMENDATIONS AND CONSTRUCTION PLANS ACCEPTED BY THE CITY. THE ENGINEER OF RECORD MAY BE REQUIRED TO MONITOR THE CONSTRUCTION, EROSION CONTROL, SITE STABILIZATION MEASURES AND PROVIDE INSPECTION REPORTS TO THE CITY ENGINEER THAT DOCUMENT ALL OF THE WORK PERFORMED.
- THE SEASON FOR CLEARING, GRADING, AND THE CONSTRUCTION OF UTILITIES, STORM DRAINAGE FACILITIES, ROADWAYS AND RETAINING WALLS SHALL NOT BEGIN UNTIL APRIL 1, AND SHALL END BY OCTOBER 1 OF ANY YEAR, UNLESS OTHERWISE APPROVED BY THE CODE OFFICIAL AND CITY ENGINEER.
- ALL IMPROVEMENTS SHALL BE CONSTRUCTED IN A MANNER THAT RETAINS AS MUCH NATURAL VEGETATION AS POSSIBLE.
- THE TYPE OF EQUIPMENT TO BE USED FOR LAND CLEARING AND ROADWAY AND UTILITIES CONSTRUCTION SHALL BE DEFINED AT THE PRE-CONSTRUCTION CONFERENCE WITH THE CITY. THE NECESSARY DEVELOPMENT AND ROW USE PERMITS SHALL BE OBTAINED PRIOR TO MOVING EQUIPMENT ONTO THE SITE.
- THE CITY ENGINEER MAY REQUIRE THAT CERTAIN IMPROVEMENTS BE HAND DUG.
- THE CITY MAY REQUIRE THAT SPECIFIC CLEARING, GRADING, EXCAVATION, OR SENSITIVE CONSTRUCTION WORK BE EVALUATED AND DETAILED BY A GEOTECHNICAL ENGINEER. AS A CONDITION FOR COMPLETION OF THE WORK, THE CITY MAY REQUIRE THAT THE ENGINEER BE PRESENT DURING THE WORK TO MONITOR AND REVIEW SITE CONDITIONS, AND TO RECOMMEND APPROPRIATE SPECIAL CONSTRUCTION TECHNIQUES OR MITIGATING MEASURES.
- ALL DAMAGE TO ADJACENT PROPERTIES OR PUBLIC RIGHTS-OF-WAY RESULTING FROM CONSTRUCTION (E.G., SILTATION, MUD, WATER, RUNOFF, ROADWAY DAMAGE CAUSED BY CONSTRUCTION EQUIPMENT OR HAULING) SHALL BE EXPEDITIOUSLY MITIGATED AND REPAIRED BY THE CONTRACTOR, AT THEIR EXPENSE. FAILURE TO MITIGATE AND REPAIR SAID DAMAGE, OR TO COMPLY WITH THE ACCEPTED CONSTRUCTION PLANS, THE PERMITS ISSUED BY THE CITY, OR THE CITY REQUIREMENT FOR CORRECTIVE ACTION SHALL BE CAUSE FOR THE ISSUANCE OF A "STOP WORK" ORDER, FORECLOSURE ON THE PLAT PERFORMANCE GUARANTEE, AND/OR OTHER MEASURES DEEMED APPROPRIATE BY THE CITY ENGINEER.
- FOLLOWING CONSTRUCTION, THE GEOTECHNICAL ENGINEER SHALL SUBMIT A LETTER TO THE CITY CONTAINING THE FOLLOWING STATEMENTS: THIS CONSTRUCTION HAS BEEN COMPLETED SUBSTANTIALLY IN ACCORDANCE WITH RECOMMENDATIONS CONTAINED WITHIN THE GEOTECHNICAL INVESTIGATION AND EVALUATION REPORT AND MADE IN CONNECTION WITH OUR ON-SITE MONITORING OF THE ACTIVITIES.
- FOLLOWING CONSTRUCTION, THE PROJECT CIVIL ENGINEER SHALL SUBMIT A LETTER TO THE CITY CONTAINING THE FOLLOWING STATEMENT: THIS CONSTRUCTION HAS BEEN COMPLETED SUBSTANTIALLY IN ACCORDANCE WITH RECOMMENDATIONS CONTAINED WITHIN THE STORM DRAINAGE TECHNICAL INFORMATION REPORT, APPROVED PLAN SET, AND OUR ON-SITE MONITORING OF THE ACTIVITIES.
- IF THE DEVELOPER WISHES TO DEFER CERTAIN ON-SITE OR OFF-SITE IMPROVEMENTS, (I.E. LANDSCAPING, CURBS OR SIDEWALKS), WRITTEN APPLICATION WITH FULL AND COMPLETE ENGINEERING DRAWINGS SHALL BE SUBMITTED TO THE CITY ENGINEER. THE APPLICANT SHALL STATE THE REASONS WHY SUCH DELAY IS NECESSARY. IF APPROVAL IS GRANTED, SECURITY IN THE FORM OF A BOND OR ASSIGNMENT OF FUNDS SHALL BE FURNISHED TO THE CITY OF MERCER ISLAND IN AN AMOUNT EQUAL TO A MINIMUM OF 150 PERCENT OF THE ESTIMATED COST OF THE REQUIRED IMPROVEMENTS. THE CITY ENGINEER MUST ACCEPT AND ESTABLISH THE BOND AMOUNT. SUCH SECURITY SHALL LIST THE EXACT WORK THAT SHALL BE PERFORMED BY THE APPLICANT AND SHALL SPECIFY THAT ALL OF THE DEFERRED IMPROVEMENTS SHALL BE COMPLETED WITHIN THE TIME SPECIFIED BY THE CITY ENGINEER, AND IF NO TIME IS SO SPECIFIED, THEN NOT LATER THAN ONE YEAR. ALL PLAT IMPROVEMENTS SHALL BE INSTALLED PRIOR TO THE ISSUANCE OF A BUILDING PERMIT FOR RESIDENTIAL CONSTRUCTION. REQUESTS TO CONCURRENTLY COMPLETE PLAT IMPROVEMENTS WITH BUILDING CONSTRUCTION PERMITS MUST BE MADE IN WRITING FOR REVIEW AND APPROVED BY THE CODE OFFICIAL IN CONSULTATION WITH CITY ENGINEER.
- THE DEVELOPER SHALL SUBMIT AS-BUILT DRAWINGS SURVEYED BY A WASHINGTON STATE LICENSED PROFESSIONAL LAND SURVEYOR OF ALL UTILITY LINES, STORM DRAIN STUBS, WATER SERVICE LINES, AND DETAILED SIDE SEWER STUBS OR CONNECTIONS TO THE MUNICIPAL SEWAGE COLLECTION SYSTEM FOR EACH LOT PRIOR TO FINAL INSPECTION. AS-BUILT PLAN SHOULD BE PROVIDED IN HARDCOPY, AUTOCAD, DXF, AND PDF FORMAT TO BE INCORPORATED INTO THE CITY'S GIS SYSTEM.
- A BILL OF SALE FOR ANY IMPROVEMENTS TO BE TRANSFERRED TO PUBLIC OWNERSHIP AND MAINTENANCE SHALL BE SUBMITTED TO THE CITY PRIOR TO FINAL INSPECTION OF PLAT IMPROVEMENT.

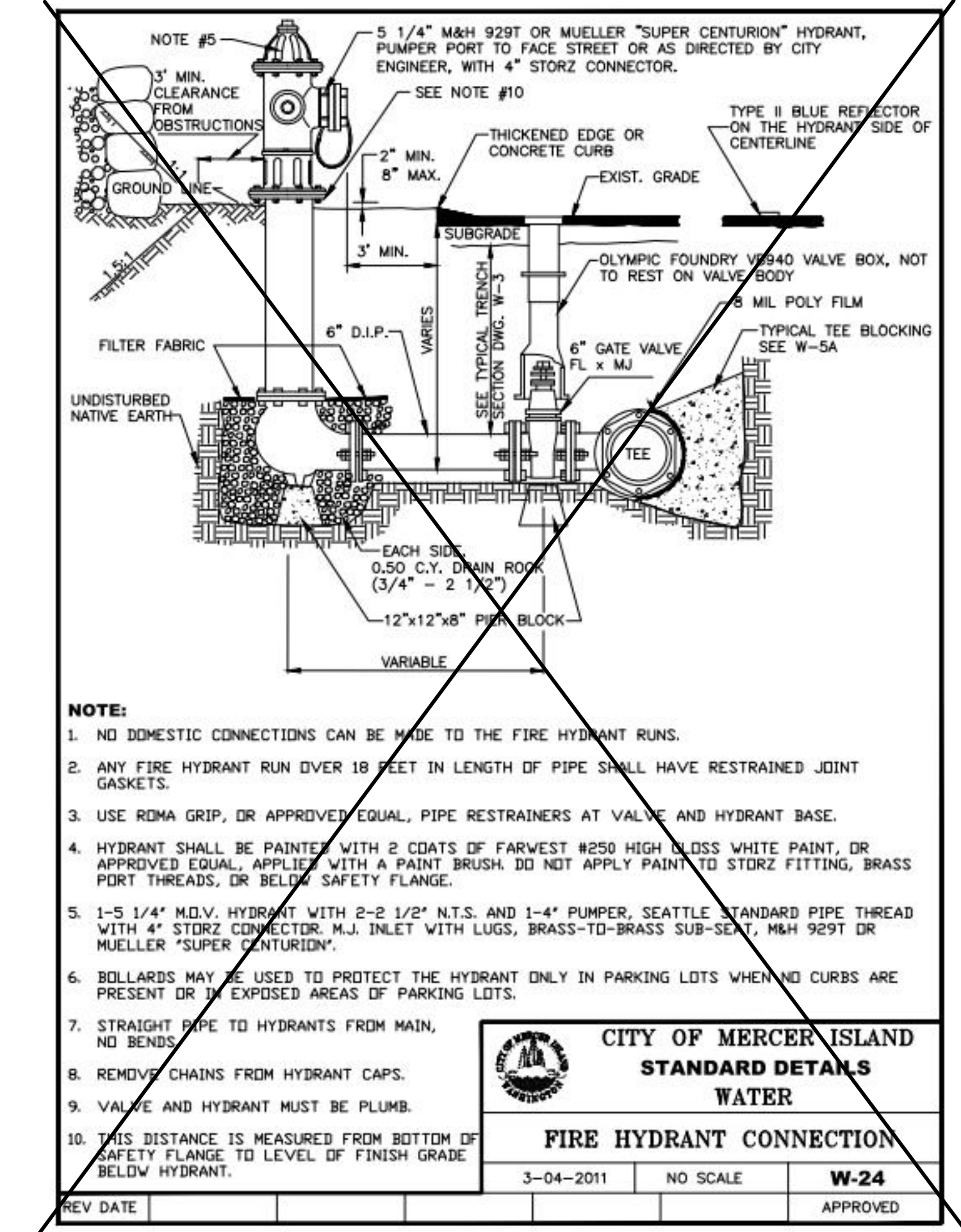
WATER METER



WATER METER BOX



FIRE HYDRANT

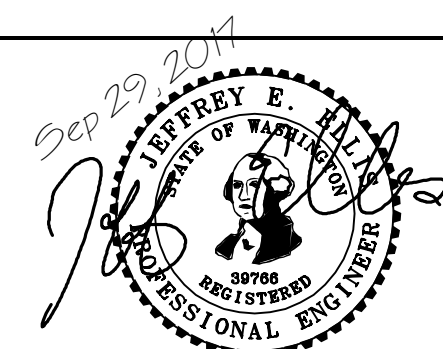


NO.	DATE	BY	REVISIONS

APPLICANT
New Horizon Real Estate
Development
8744 126th Ave NE
Kirkland, WA 98033



DATE: Sep 29, 2017
JOB#: 1337
DRAFTED: DE DESIGN: DE
DIGITAL SIGNATURE



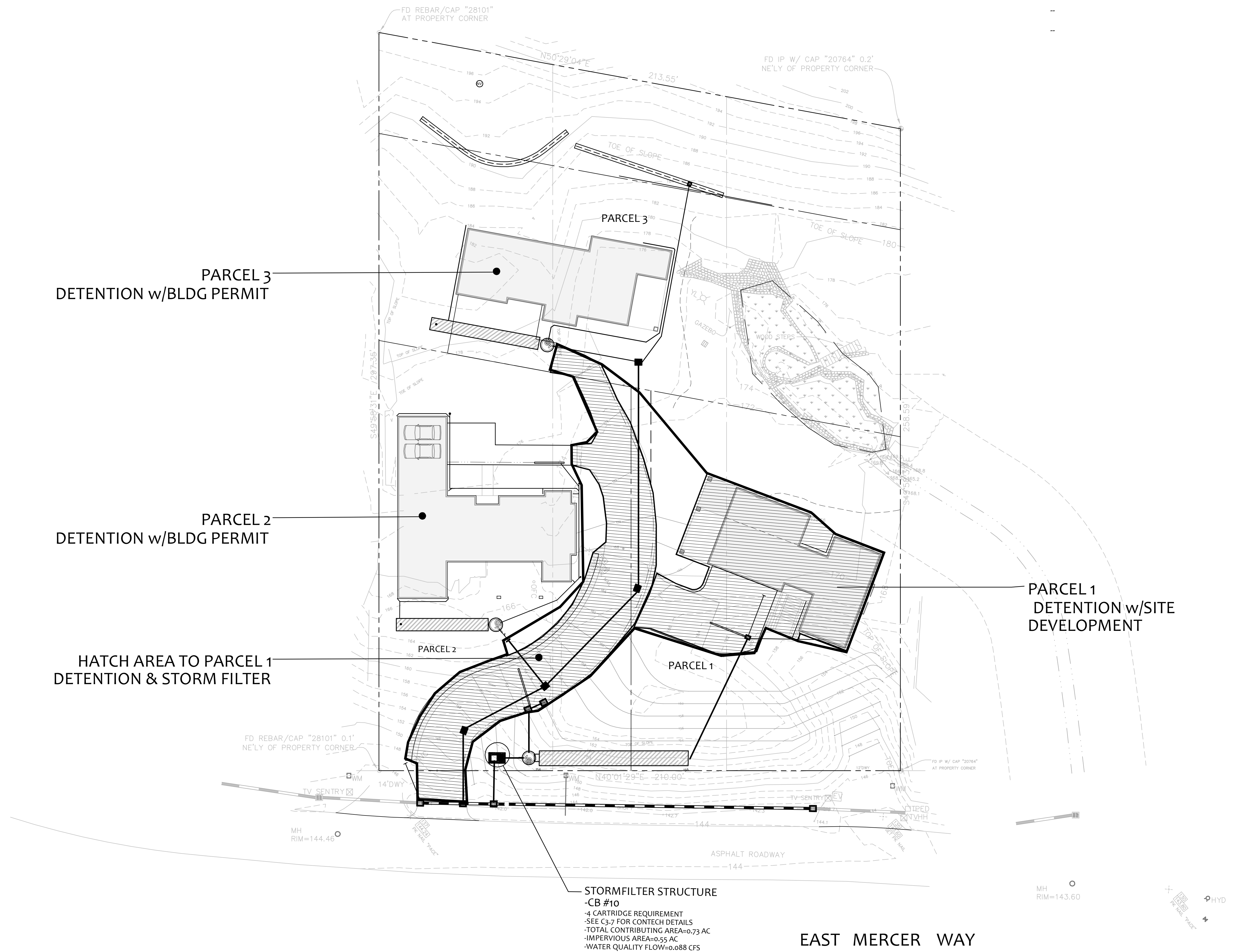
CIVIL ENGINEERING SOLUTIONS
2244 NW MARKET STREET, SUITE B SEATTLE, WA 98107
PHONE: 206.930.0342 DUFFY@CESOLUTIONS.US

NOTES & WATER DETAILS
New Horizon Real Estate Development
8375 AND 8383 EAST MERCER WAY
MERCER ISLAND, WA 98040

DRAWING NO:
C3.3
APN 032110-0145
& 032110-0140

NOTES

(1) -



PARCEL 3
DETENTION w/BLDG PERMIT

PARCEL 2
DETENTION w/BLDG PERMIT

HATCH AREA TO PARCEL 1
DETENTION & STORM FILTER

PARCEL 1
DETENTION w/SITE DEVELOPMENT

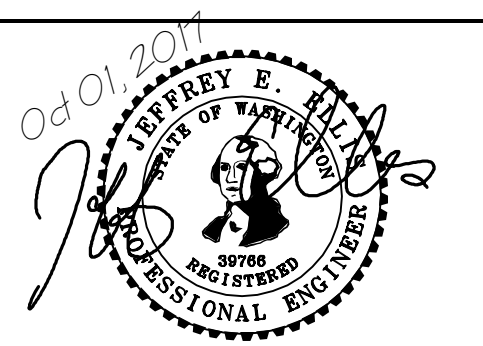
STORMFILTER STRUCTURE
-CB #10
4 CARTRIDGE REQUIREMENT
SEE C3.7 FOR CONTECH DETAILS
-TOTAL CONTRIBUTING AREA=0.73 AC
-IMPERVIOUS AREA=0.55 AC
-WATER QUALITY FLOW=0.088 CFS

EAST MERCER WAY

NO.	DATE	BY	REVISIONS

APPLICANT
New Horizon Real Estate
Development
8744 126th Ave NE
Kirkland, WA 98033

DATE: Oct 01, 2017
JOB# 1337
DRAFTED: DESIGN:
DIGITAL SIGNATURE



CIVIL ENGINEERING SOLUTIONS
102 NW CANAL STREET SEATTLE, WA 98107
PHONE: 206.930.0342 DUFFY@CESOLUTIONS.US

DETENTION KEY SHEET
New Horizon Real Estate Development
8375 AND 8383 EAST MERCER WAY
MERCER ISLAND, WA 98040

DRAWING NO:
C3.6
APN 032110-0145
& 032110-0140

STORMFILTER STEEL CATCHBASIN DESIGN NOTES

STORMFILTER TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE SELECTION AND THE NUMBER OF CARTRIDGES. 2 CARTRIDGE CATCHBASIN HAS A MAXIMUM OF TWO CARTRIDGES. SYSTEM IS SHOWN WITH A 27" CARTRIDGE, AND IS ALSO AVAILABLE WITH AN 18" CARTRIDGE. STORMFILTER CATCHBASIN CONFIGURATIONS ARE AVAILABLE WITH A DRY INLET BAY FOR VECTOR CONTROL. PEAK HYDRAULIC CAPACITY PER TABLE BELOW. IF THE SITE CONDITIONS EXCEED PEAK HYDRAULIC CAPACITY, AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.

CARTRIDGE SELECTION

CARTRIDGE HEIGHT	27"			18"			18" DEEP		
RECOMMENDED HYDRAULIC DROP (H)	3.05'			2.3'			3.3'		
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	15	12.53	7.5
PEAK HYDRAULIC CAPACITY	1.0			1.0			1.8		
INLET PERMANENT POOL LEVEL (A)	1'-0"			1'-0"			2'-0"		
OVERALL STRUCTURE HEIGHT (B)	4'-9"			3'-9"			4'-9"		

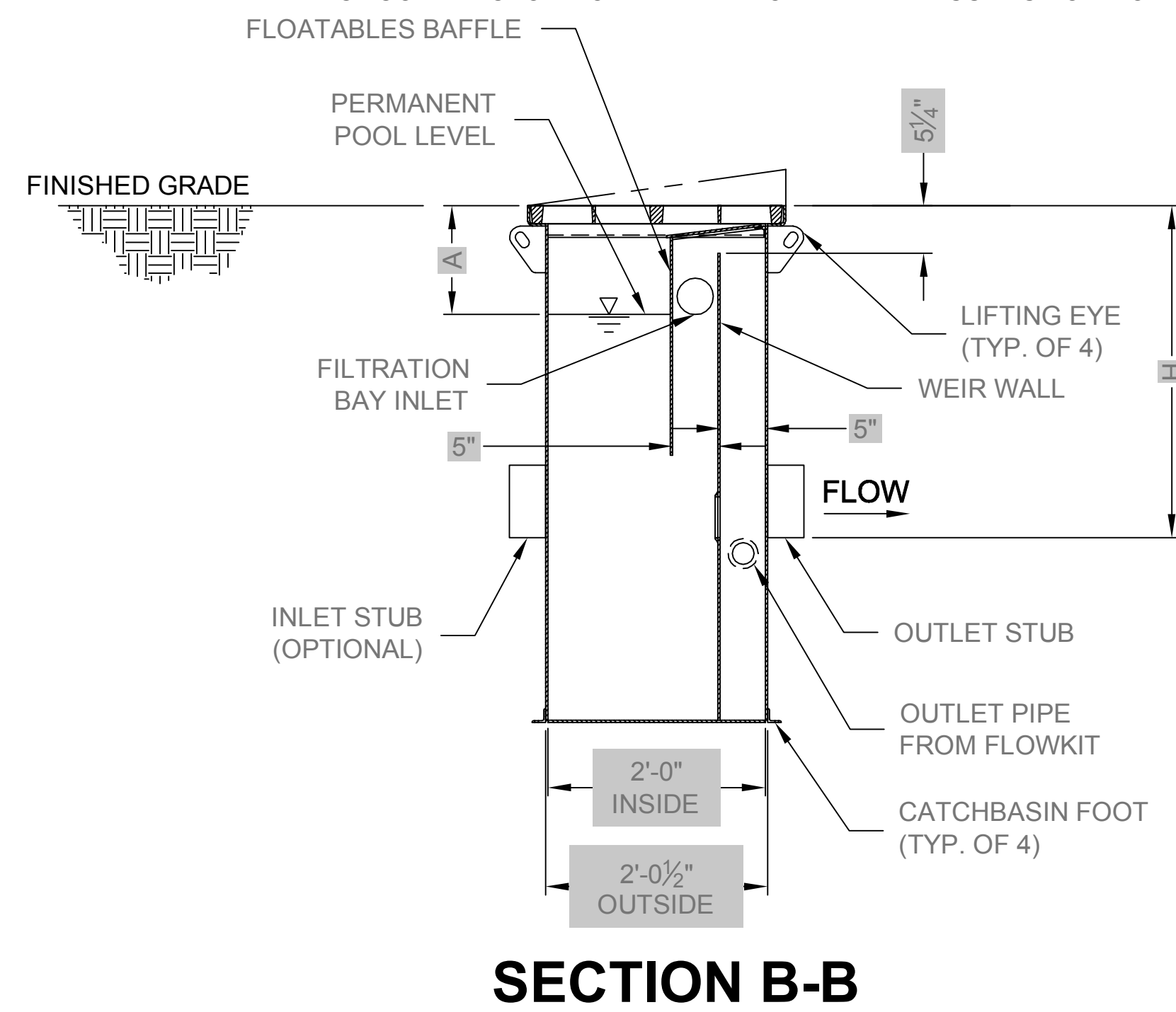
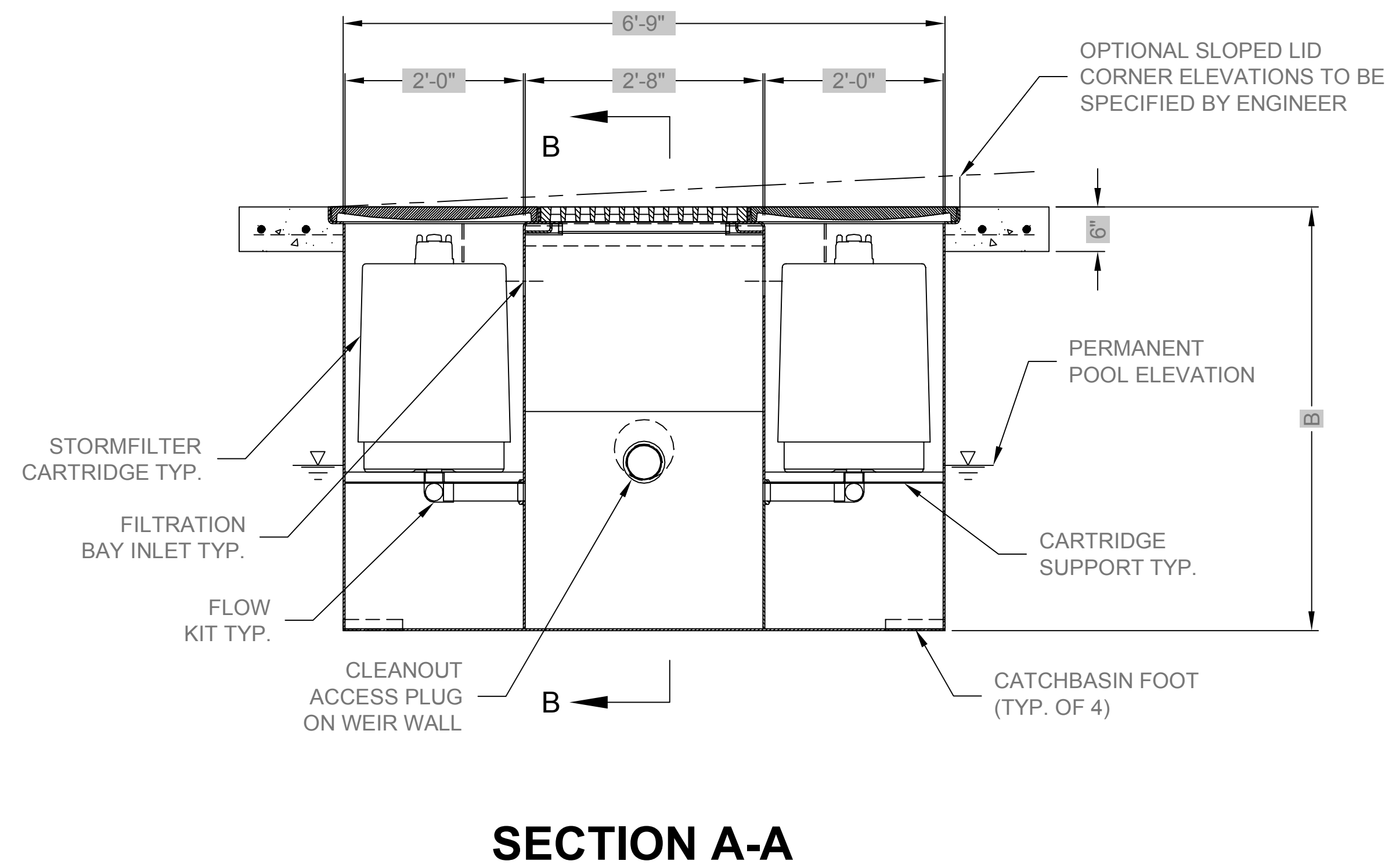
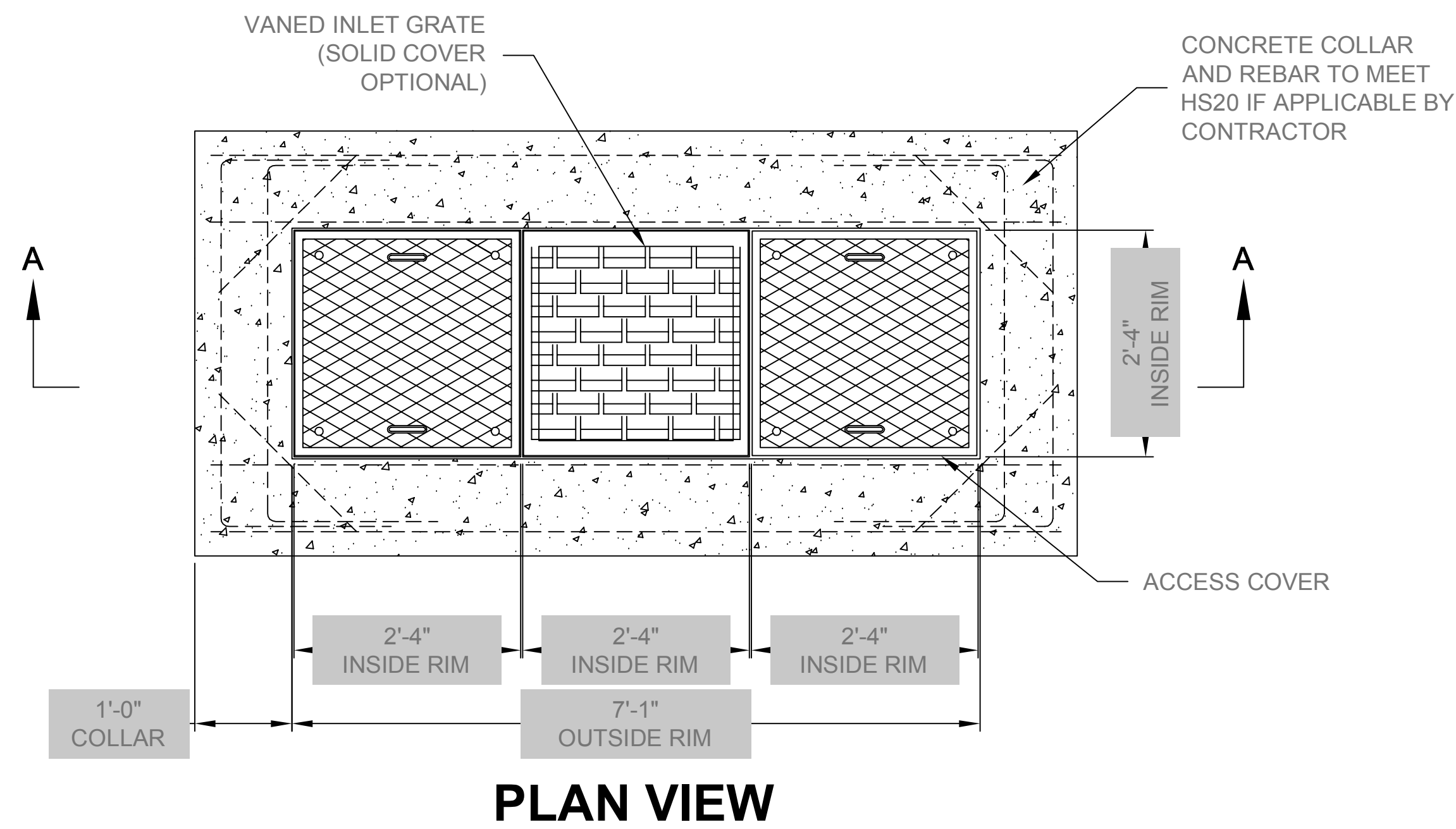
* 1.67 gpm/sf SPECIFIC FLOW RATE IS APPROVED WITH PHOSPHOSORB® (PSORB) MEDIA ONLY

GENERAL NOTES

- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
- FOR SITE SPECIFIC DRAWINGS WITH DETAILED STORMFILTER CATCHBASIN STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. WWW.CONTECHES.COM
- STORMFILTER CATCHBASIN WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
- INLET SHOULD NOT BE LOWER THAN OUTLET. INLET (IF APPLICABLE) AND OUTLET PIPING TO BE SPECIFIED BY ENGINEER AND PROVIDED BY CONTRACTOR.
- MANUFACTURER TO APPLY A SURFACE BEAD WELD IN THE SHAPE OF THE LETTER "O" ABOVE THE OUTLET PIPE STUB ON THE EXTERIOR SURFACE OF THE STEEL SFCB.
- STORMFILTER CATCHBASIN EQUIPPED WITH 4 INCH (APPROXIMATE) LONG STUBS FOR INLET (IF APPLICABLE) AND OUTLET PIPING. STANDARD OUTLET STUB IS 8 INCHES IN DIAMETER. MAXIMUM OUTLET STUB IS 15 INCHES IN DIAMETER. CONNECTION TO COLLECTION PIPING CAN BE MADE USING FLEXIBLE COUPLING BY CONTRACTOR.
- STEEL STRUCTURE TO BE MANUFACTURED OF 1/4 INCH STEEL PLATE. CASTINGS SHALL MEET AASHTO M306 LOAD RATING. TO MEET HS20 LOAD RATING ON STRUCTURE, A CONCRETE COLLAR IS REQUIRED. WHEN REQUIRED, CONCRETE COLLAR WITH #4 REINFORCING BARS TO BE PROVIDED BY CONTRACTOR.
- 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 IS EQUAL TO THE FILTER TREATMENT CAPACITY (gpm) DIVIDED BY THE FILTER CONTACT SURFACE AREA (sq ft).

INSTALLATION NOTES

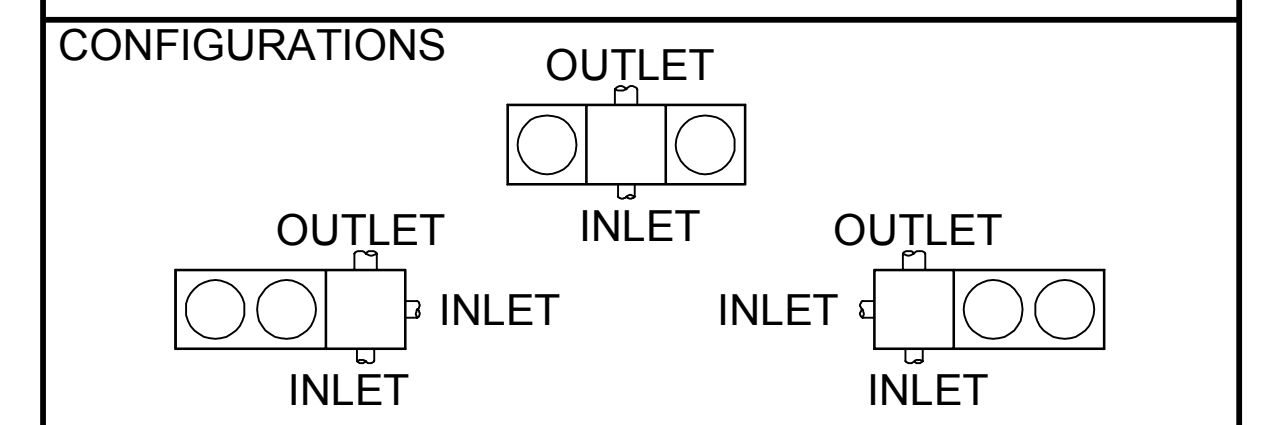
- ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
- CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CATCHBASIN (LIFTING CLUTCHES PROVIDED).
- CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.



2-CARTRIDGE DEEP CATCHBASIN STORMFILTER DATA

STRUCTURE ID	20
WATER QUALITY FLOW RATE (cfs)	0.026
PEAK FLOW RATE (<1.8 cfs)	0.17
RETURN PERIOD OF PEAK FLOW (yrs)	100
CARTRIDGE FLOW RATE (gpm)	7.5
MEDIA TYPE (PERLITE, ZPG, PSORB)	ZPG
RIM ELEVATION	309.1

PIPE DATA:	I.E.	DIAMETER
INLET STUB	307.0	8"
OUTLET STUB	304.7	8"



SLOPED LID	NO
SOLID COVER	NO
NOTES/SPECIAL REQUIREMENTS:	

I:\COMMON\CAD\TREATMENT\10 STORMFILTER\10 STANDARD DRAWINGS\SF\CB\SF\CB2-DTL.DWG 7/8/2016 2:45 PM



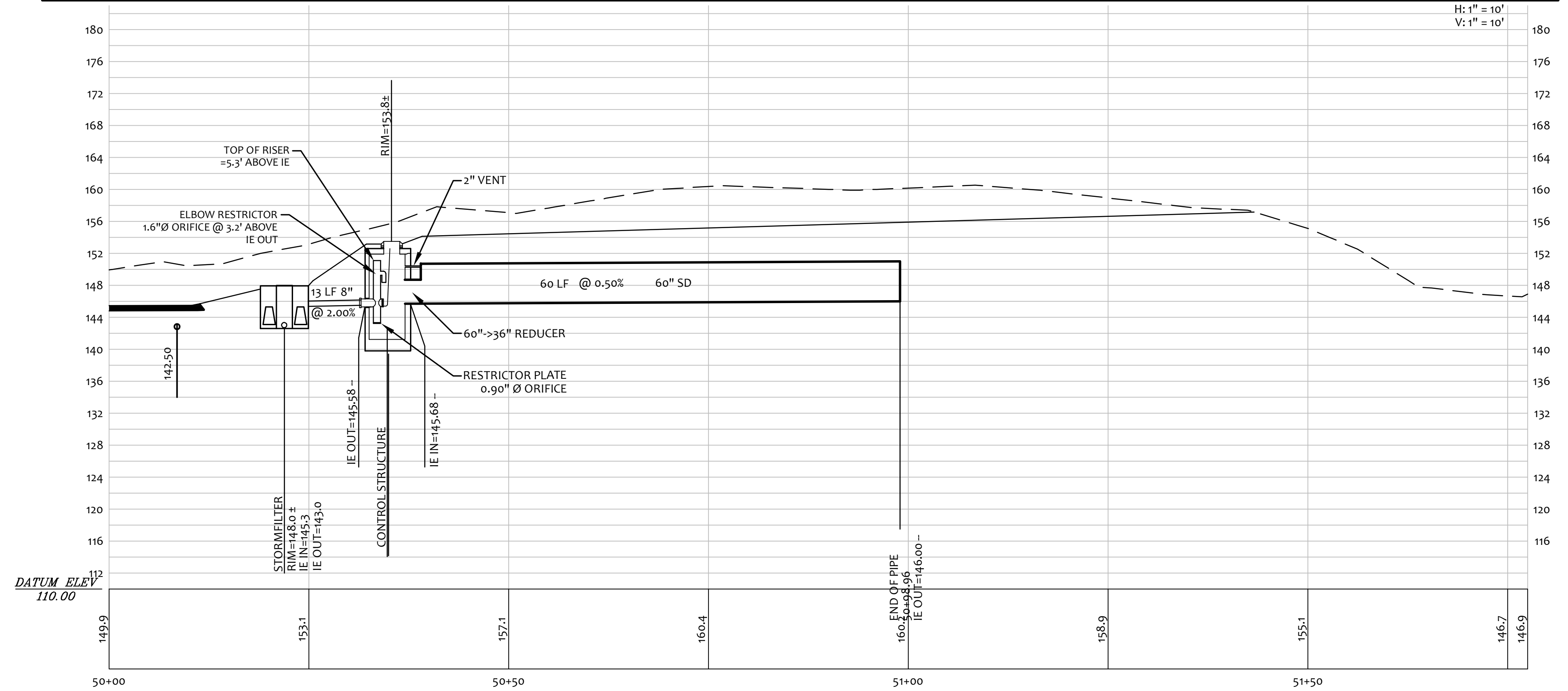
CONTECH
ENGINEERED SOLUTIONS LLC

www.contechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-526-3999 513-645-7000 513-645-7993 FAX

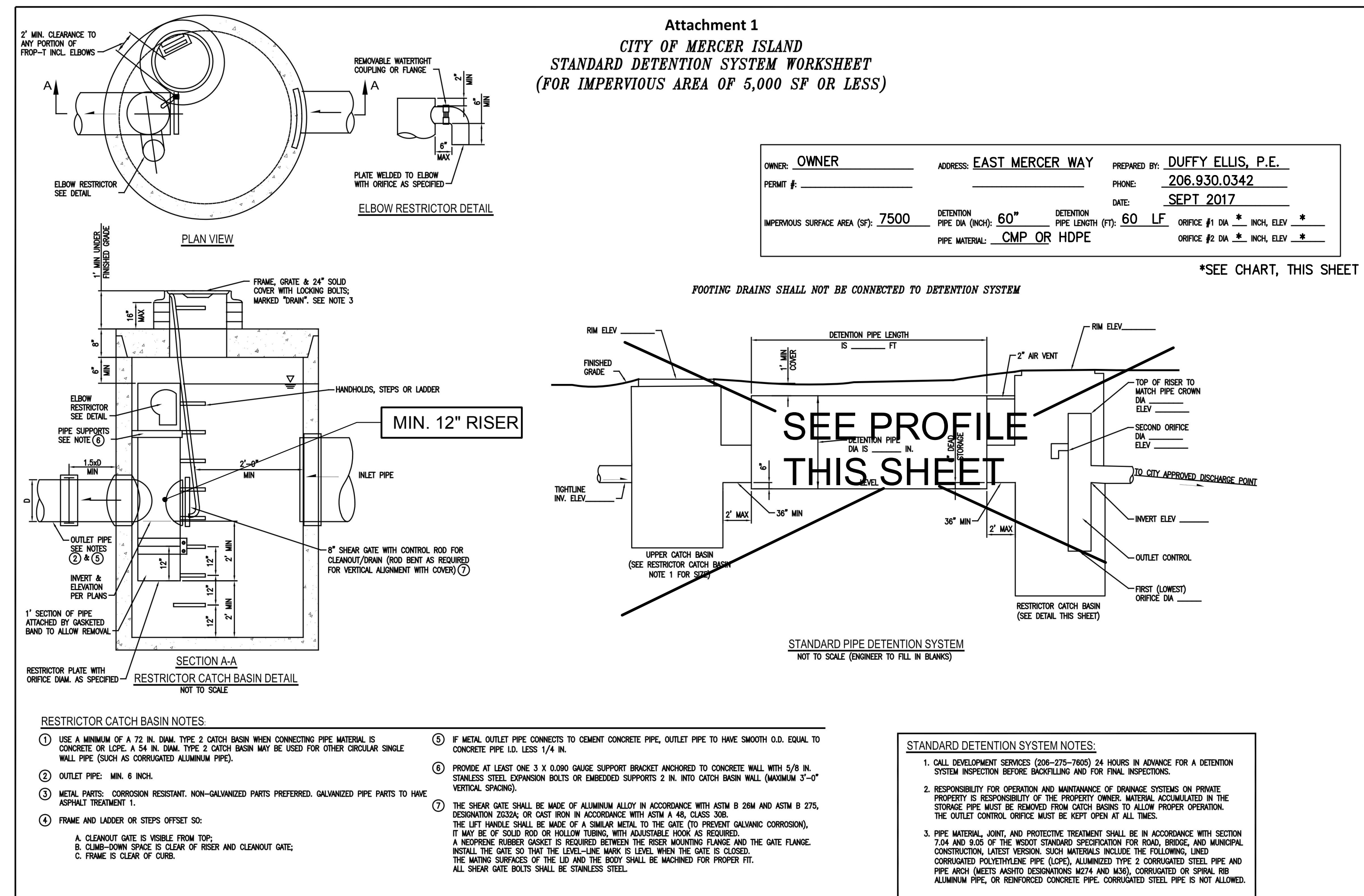
2 CARTRIDGE CATCHBASIN
STORMFILTER
STANDARD DETAIL

C3.7

DETENTION PROFILE - PARCEL 1



MERCER ISLAND DETENTION DETAIL



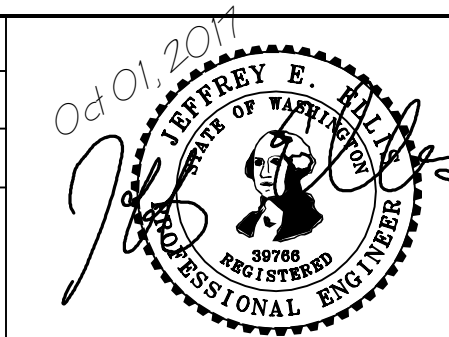
MERCER ISLAND DETENTION "TABLE 2"

CUSTOM DETENTION SIZING REQUIRED. SEE SEPARATE CALCULATIONS IN DRAINAGE REPORT

NO.	DATE	BY	REVISIONS

APPLICANT
New Horizon Real Estate
Development
8744 126th Ave NE
Kirkland, WA 98033

DATE: Oct 01, 2017
JOB#: 1337
DRAFTED: DE DESIGN: DE
DIGITAL SIGNATURE



CIVIL ENGINEERING SOLUTIONS
102 NW CANAL STREET SEATTLE, WA 98107
PHONE: 206.930.0342 DUFFY@CESOLUTIONS.US

DETENTION PROFILE AND DETAIL

New Horizon Real Estate Development
8375 AND 8383 EAST MERCER WAY
MERCER ISLAND, WA 98040

DRAWING NO:
C4.1
APN 032110-0145
& 032110-0140