

LEGAL DESCRIPTION

(PER QUIT CLAIM DEED REC. NO. 20190731000807)

LOT 6, BLOCK 3, LUCAS HEIGHTS, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 17 OF PLATS, PAGE 5, IN KING COUNTY, WASHINGTON;

TOGETHER WITH THE EAST HALF OF THAT PORTION OF VACATED ALLEY ADJOINING ON THE WEST, WHICH ATTACHED THERETO BY OPERATION OF LAWS AS THE VACATION WAS FILED ON MAY 26, 1960 UNDER VAULT FILE NO. 3808910.

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

BASIS OF BEARINGS

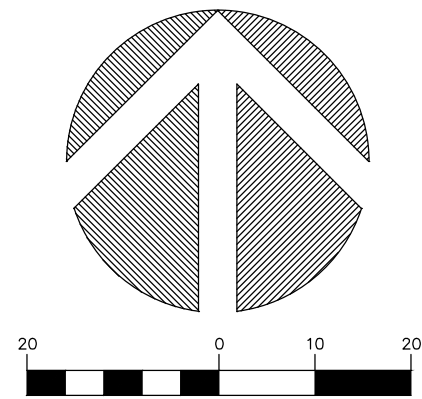
HELD A BEARING OF N 26°03'25" E BETWEEN FOUND MONUMENTS PER R1.

SURVEYOR'S NOTES

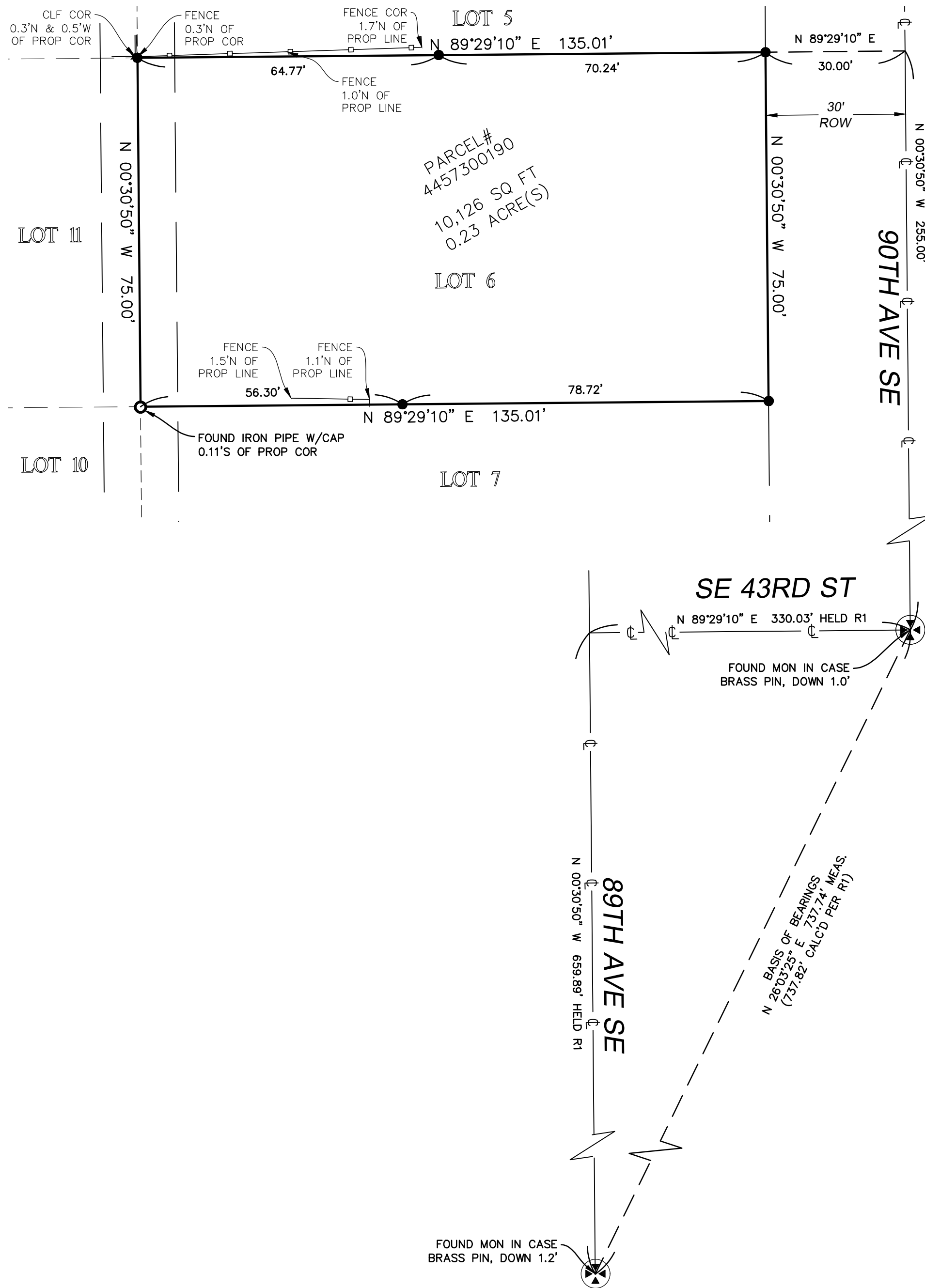
1. THE SURVEY SHOWN HEREON WAS PERFORMED IN MAY OF 2020. THE FIELD DATA WAS COLLECTED AND RECORDED ON MAGNETIC MEDIA THROUGH AN ELECTRONIC THEODOLITE. THE DATA FILE IS ARCHIVED ON DISC OR CD. WRITTEN FIELD NOTES MAY NOT EXIST. CONTOURS ARE SHOWN FOR CONVENIENCE ONLY. DESIGN SHOULD RELY ON SPOT ELEVATIONS.
2. ALL MONUMENTS SHOWN HEREON WERE LOCATED DURING THE COURSE OF THIS SURVEY UNLESS OTHERWISE NOTED.
3. SUBJECT PROPERTY TAX PARCEL NO. 4457300190
4. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT. EASEMENTS AND OTHER ENCUMBRANCES MAY EXIST THAT ARE NOT SHOWN HEREON.
5. FIELD DATA FOR THIS SURVEY WAS OBTAINED BY DIRECT FIELD MEASUREMENTS WITH A CALIBRATED ELECTRONIC 5-SECOND TOTAL STATION AND/OR SURVEY GRADE GPS OBSERVATIONS. ALL ANGULAR AND LINEAR RELATIONSHIPS ARE ACCURATE AND MEET THE STANDARDS SET BY WAC 332-130-090.

LEGEND

- BUILDING
- CENTERLINE ROW
- FENCE LINE (CHAIN LINK)
- FENCE LINE (WOOD)
- IRON PIPE (FOUND)
- MONUMENT IN CASE (FOUND)
- REBAR AS NOTED (FOUND)
- REBAR & CAP (SET)



(IN FEET)
1 INCH = 20 FT.



RECORDER'S CERTIFICATE

FILED FOR RECORD THIS _____ DAY OF _____, 20__ AT _____ M.
IN BOOK _____ OF SURVEYS. AT PAGE _____ AT THE REQUEST
OF TERRANE, INC.

MANAGER _____ SUPT. OF RECORDS _____

SURVEYOR'S CERTIFICATE

THIS MAP CORRECTLY REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECTION IN CONFORMANCE WITH THE REQUIREMENTS OF THE SURVEY RECORDING ACT AT THE REQUEST OF AKIHIRO NAKAMURA.

Jacob S Miller 5/07/20
JACOB GOODMAN MILLER CERTIFICATE NO. 56654 DATE _____

REFERENCES

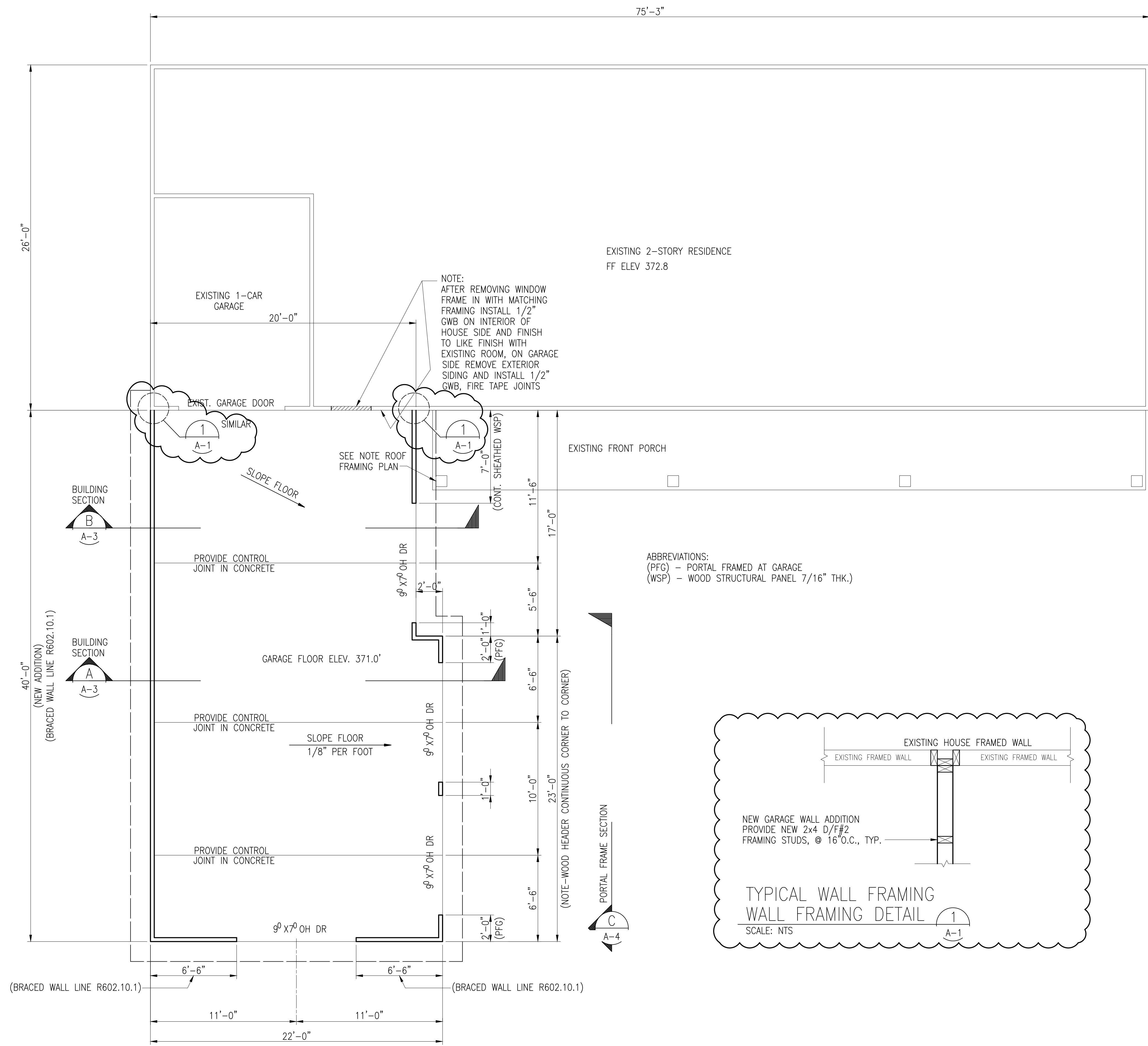
R1. UNRECORDED SURVEY BY M.W. MARSHALL, JOB NO. 1516-A, DATED 11-26-2012.

Terrane
10801 Main Street, Suite 102, Bellevue, WA 98004
phone 425.458.4488 support@terrane.net
www.terrane.net



BOUNDARY SURVEY
SE 1/4 OF NW 1/4, SEC. 18, T. 24 N., R. 05 E., W.M.
NAKAMURA RESIDENCE
PARCEL NO. 4457300190
MERCER ISLAND 4245 90TH AVE SE WA 98040

JOB NO.:	200606
DATE:	05/07/20
DRAFTED BY:	JPH
CHECKED BY:	JGM
SCALE:	1" = 20'
1 OF 1	



FLOOR PLAN 846 SQ.FT.
SCALE: 1/4"=1'-0"

LEGEND:
 NEW WALLS TO BE FRAMED
 NEW OVERHEAD SUPPORT BEAM OR HEADER

SCOPE OF WORK:
 GARAGE ADDITION, 22'x40'

GENERAL NOTES:

1. FIELD VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE STARTING CONSTRUCTION.
2. ALL DIMENSIONS ARE TO FRAMING POINTS. (FIELD VERIFY ALL DIMENSIONS).

FRAMING DATA:

1. ALL HEADERS #2 AND BETTER AS SHOWN UNLESS OTHERWISE NOTED.
2. ALL 2x MATERIAL #2 AND BETTER EXCEPT TREATED.
3. ANCHOR ROOF RAFTERS TO DOUBLE TOP PLATE BY INSTALLING SIMPSON H1 SEISMIC ANCHOR EACH RAFTER, OR EQUAL ANCHOR.
4. SIMPSON HANGERS ARE CALLED OUT IN THIS DESIGN, INSTALL PER MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS.
5. NAILING FOR SHEAR WALL AND ROOF SHEATHING:
 NAIL - 8d EDGE NAIL SPACING, 6" O.C., FILED NAIL SPACING, 12" O.C.
 STAGGER EDGE NAILING WITH ADJOINING PANEL.

STRUCTURAL NOTES:

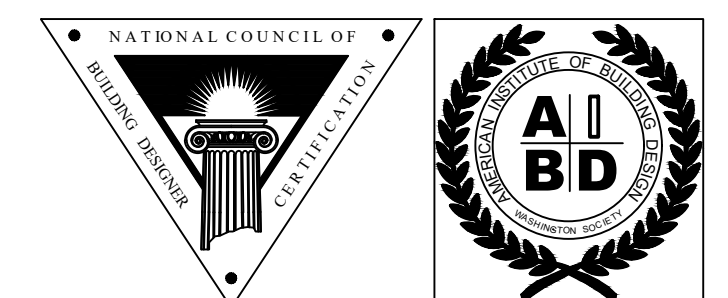
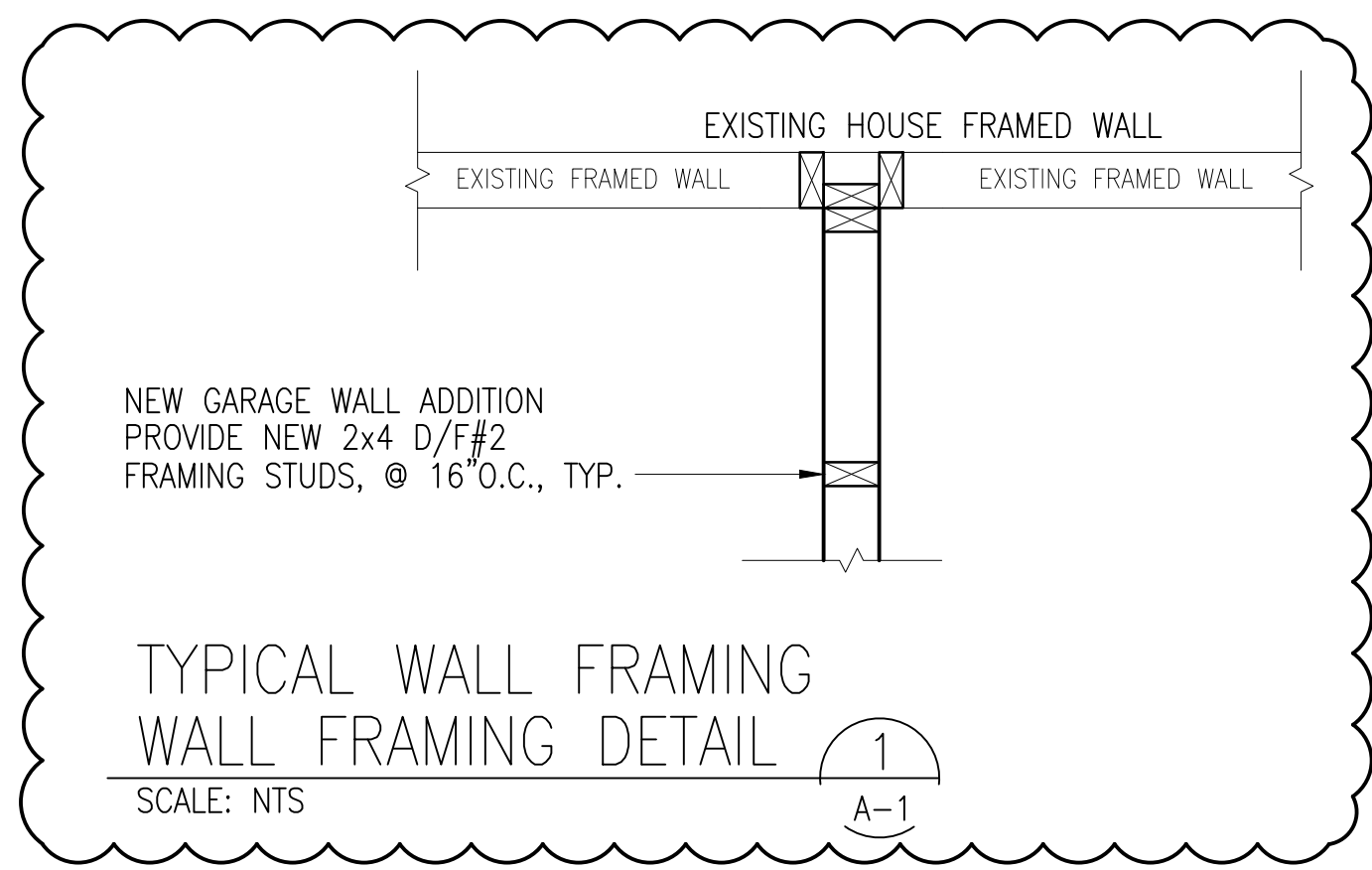
DESIGN CRITERIA:
 WIND LOAD - DL = 85 MPH
 ROOF LOAD - DL = 15PSF
 SL = 20PSF
 ATTIC FLOOR LOAD - DL = 12PSF
 LL = 40PSF

SEISMIC ZONE - D2

SOILS:
 2000PSF (ALLOWABLE BEARING PRESSURE)
 40PSF/FT (ACTIVE LATERAL PRESSURE OF RETAINED EARTH)
 60PSF/FT (AT-REST LATERAL PRESSURE OF RETAINED EARTH)

CONCRETE:
 2500PSI FOR SLABS AND WALLS. MINIMUM 5 1/2 SACKS OF CEMENT PER CUBIC YARD OF CONCRETE AND 6 3/4 GALLONS OF WATER PER 94LB. SACK OF CEMENT. MAXIMUM AGGREGATE SIZE IS 1 1/2". VIBRATE ALL CONCRETE WALLS WHEN POURING.

REINFORCING STEEL:
 CONCRETE REINFORCEMENT SHALL BE DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH ACI 318-02. REINFORCING STEEL SHALL BE DEFORMED BILLET STEEL CONFORMING TO ASTM A-615.

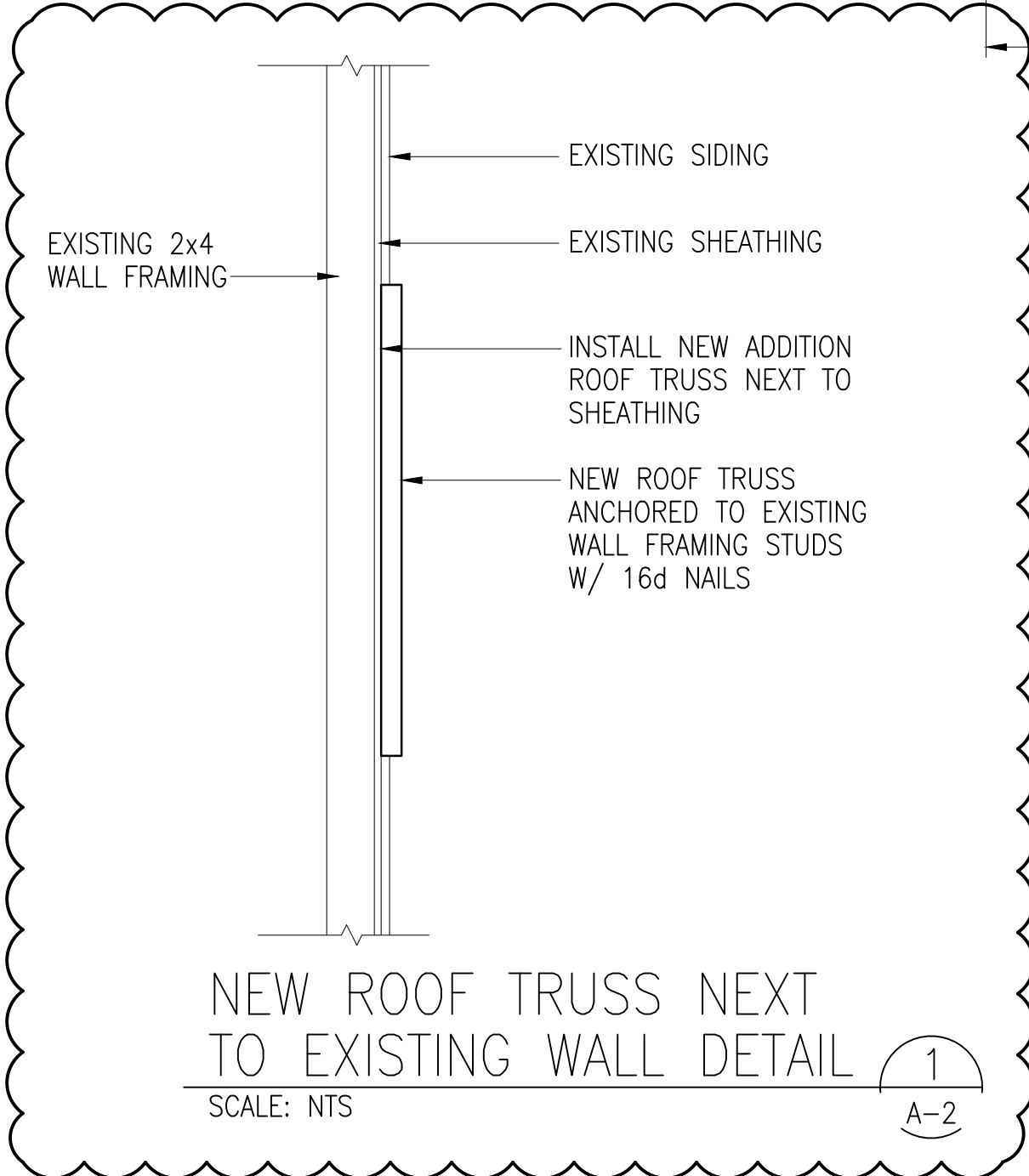


PARCEL NO. 4457300190
AKIHIRO NAKAMURA - GARAGE ADDITION PROJECT
 4245 90TH AVE SE MERCER ISLAND, WA. 98040
 BUILDING DESIGN BY: L. REYNOLDS - CPBD MAY 2020
 CUSTOM BUILDING DESIGN 253-630-9717
 MEMBER OF AMERICAN INSTITUTE OF BUILDING DESIGN

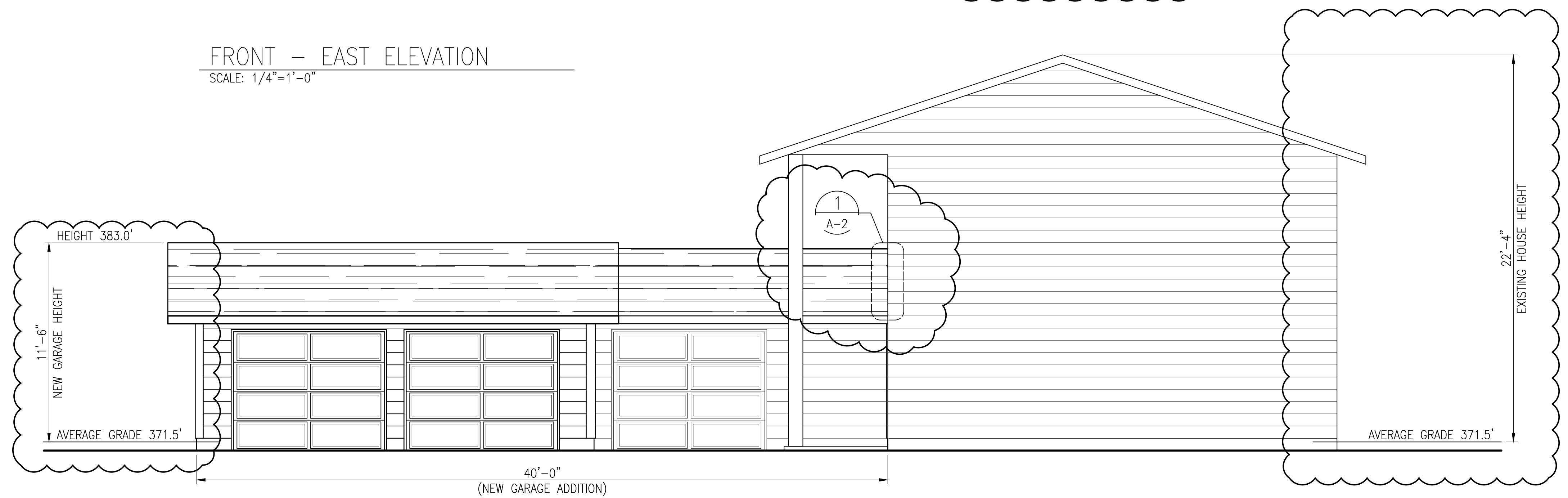
PROVIDE NEW 26 GAUGE 4" ANGLE METAL FLASHING AT INTERSECTION OF NEW ROOF AND EXISTING WALL. REMOVE EXISTING SIDING, INSTALL FLASHING ON EXISTING SHEATHING, REINSTALL SIDING AFTER ADDITION ROOFING IS INSTALLED.



FRONT - EAST ELEVATION
SCALE: 1/4"=1'-0"

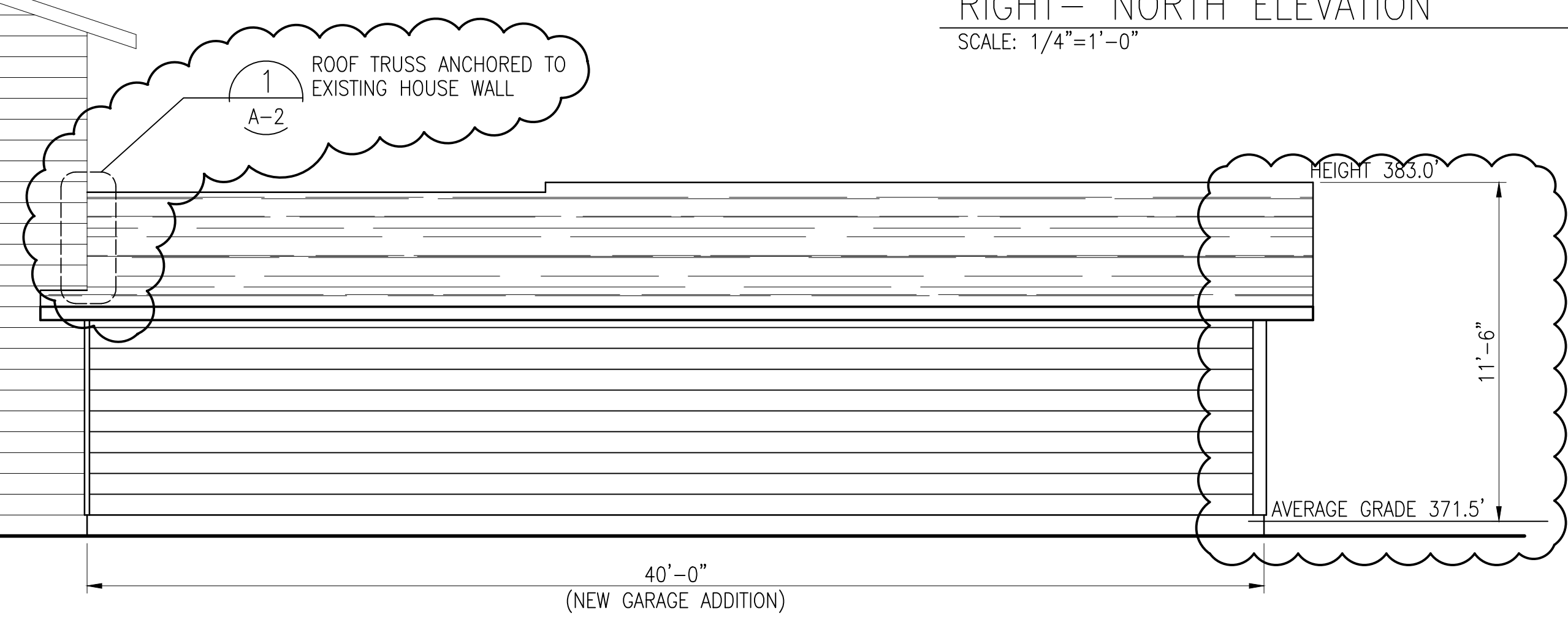


NEW ROOF TRUSS NEXT TO EXISTING WALL DETAIL
SCALE: NTS

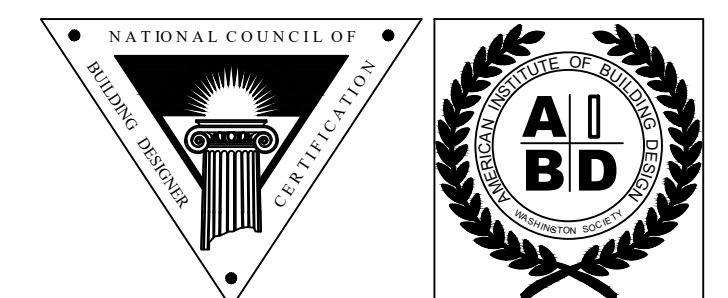


RIGHT - NORTH ELEVATION
SCALE: 1/4"=1'-0"

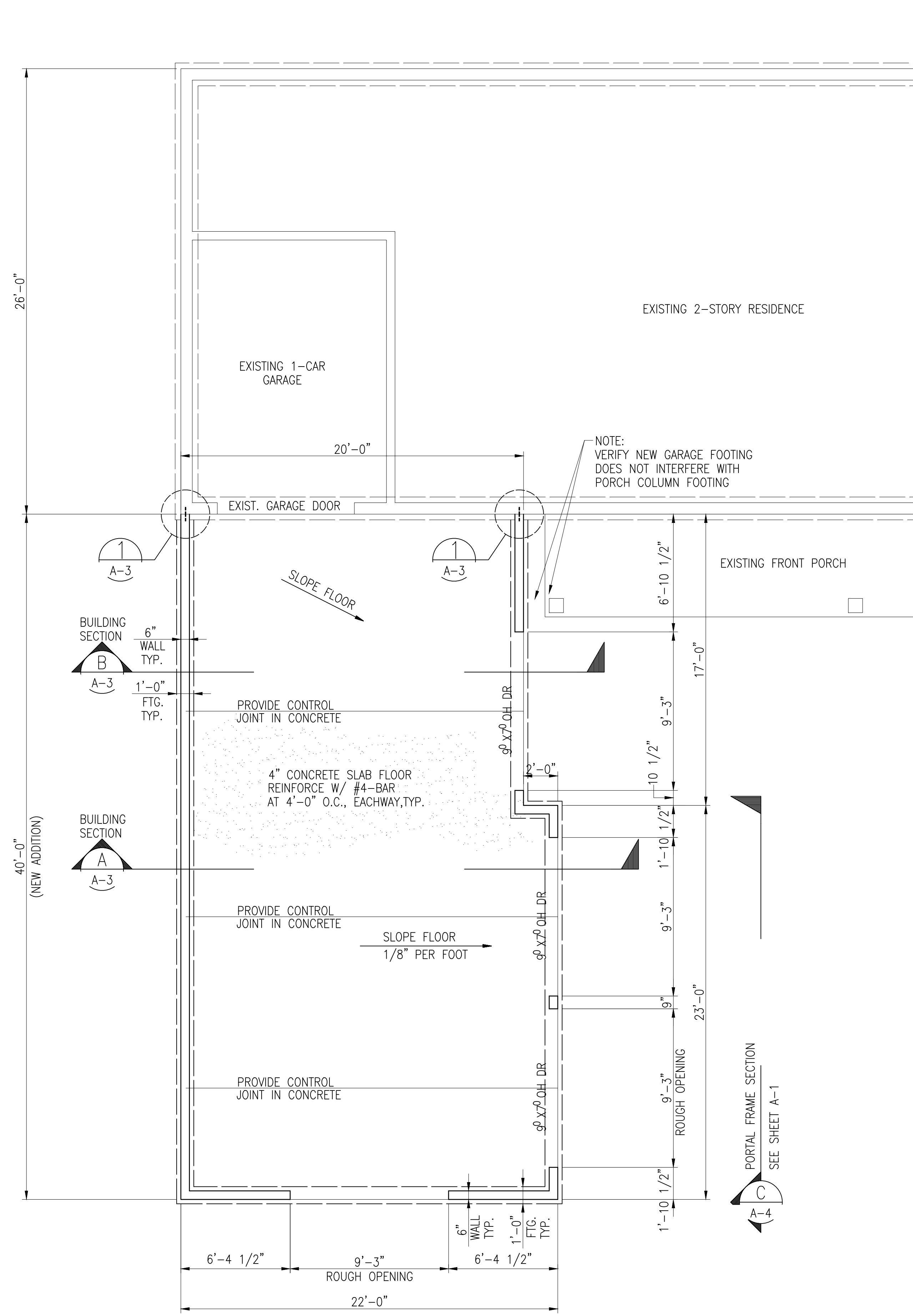
NOTE AVERAGE GRADE HEIGHT CALCULATION PER CALCULATION SHOWN ON SITE PLAN



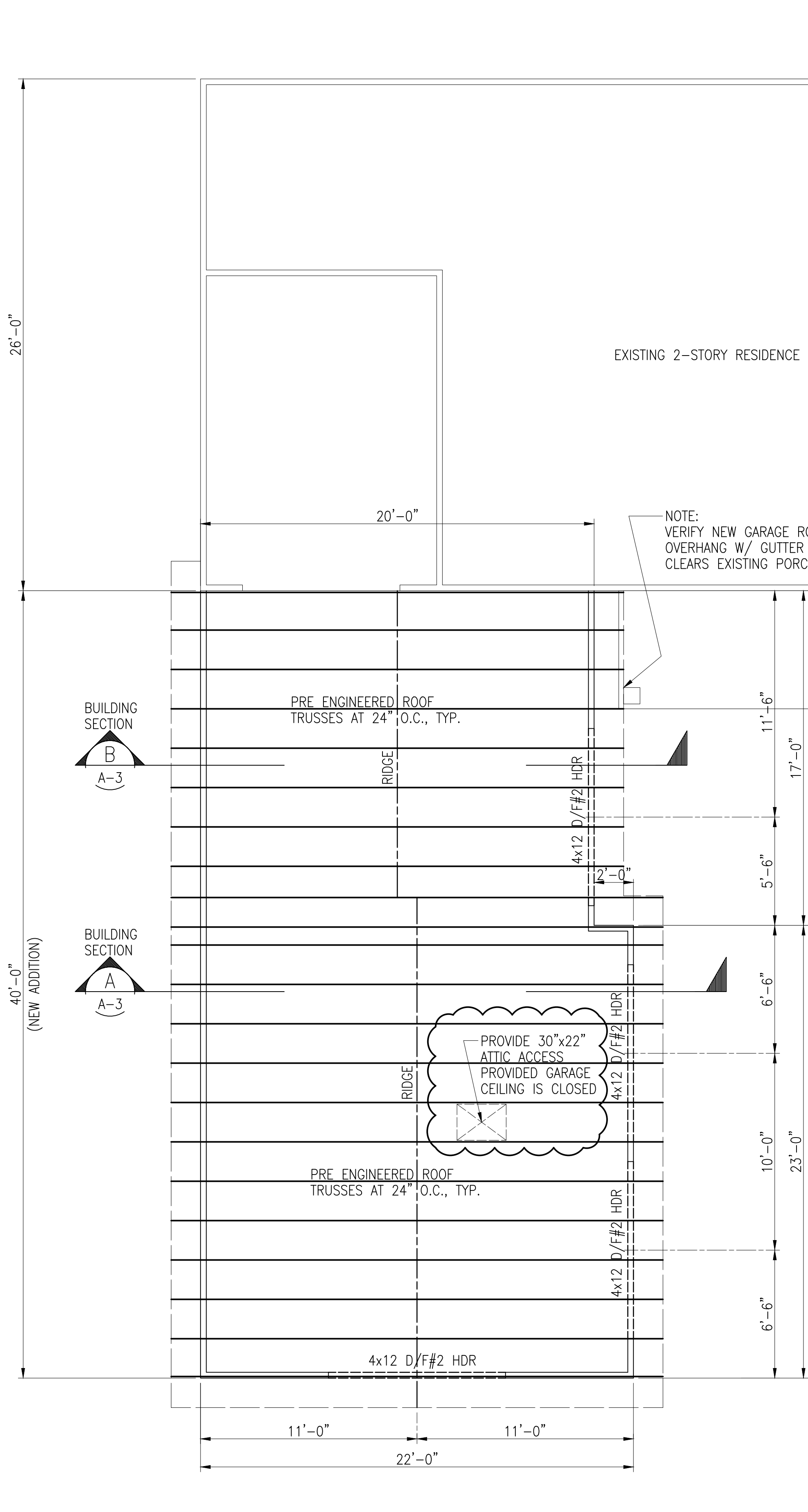
LEFT - SOUTH ELEVATION
SCALE: 1/4"=1'-0"



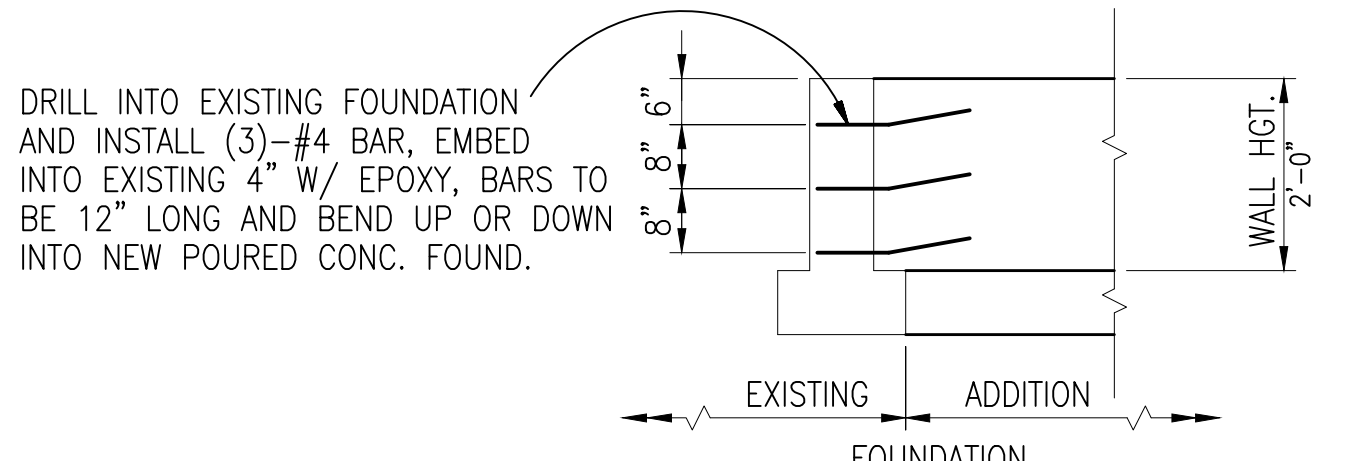
PARCEL NO. 4457300190
AKIHIRO NAKAMURA - GARAGE ADDITION PROJECT
 4245 90TH AVE SE MERCER ISLAND, WA. 98040
 BUILDING DESIGN BY: L. REYNOLDS - CPBD MAY 2020
 CUSTOM BUILDING DESIGN 253-630-9717
 MEMBER OF AMERICAN INSTITUTE OF BUILDING DESIGN



FOUNDATION PLAN
SCALE: 1/4"=1'-0"



ROOF FRAMING PLAN
SCALE: 1/4"=1'-0"



FOUNDATION ATTACHMENT DETAIL
SCALE: 1/2"=1'-0"

LEGEND:
 NEW WALLS TO BE FRAMED
 NEW OVERHEAD SUPPORT BEAM OR HEADER

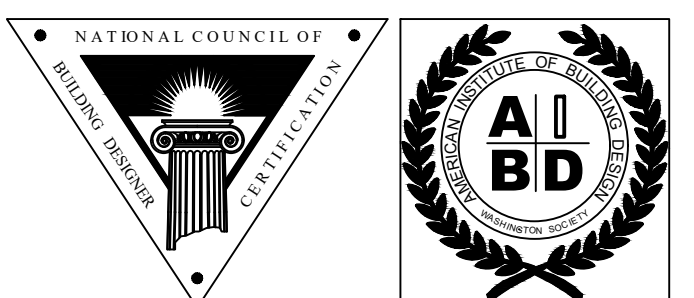
SCOPE OF WORK:
 GARAGE ADDITION, 22'x40'

- GENERAL NOTES:**
1. FIELD VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE STARTING CONSTRUCTION.
 2. ALL DIMENSIONS ARE TO FRAMING POINTS. (FIELD VERIFY ALL DIMENSIONS).

- FRAMING DATA:**
1. ALL HEADERS #2 AND BETTER AS SHOWN UNLESS OTHERWISE NOTED.
 2. ALL 2x MATERIAL #2 AND BETTER EXCEPT TREATED.
 3. ANCHOR ROOF RAFTERS TO DOUBLE TOP PLATE BY INSTALLING SIMPSON H1 SEISMIC ANCHOR EACH RAFTER, OR EQUAL ANCHOR.
 4. SIMPSON HANGERS ARE CALLED OUT IN THIS DESIGN. INSTALL PER MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS.
 5. NAILING FOR SHEAR WALL AND ROOF SHEALTHING:
 NAIL - 8d EDGE NAIL SPACING, 6" O.C., FILED NAIL SPACING, 12" O.C.
 STAGGER EDGE NAILING WITH ADJOINING PANEL.

- STRUCTURAL NOTES:**
- DESIGN CRITERIA:**
 WIND LOAD - 85 MPH
 ROOF LOAD - DL = 15PSF
 SL = 20PSF
 ATTIC FLOOR LOAD - DL = 12PSF
 LL = 40PSF
 SEISMIC ZONE - D2
- SOILS:**
 2000PSF (ALLOWABLE BEARING PRESSURE)
 40PSF/FT (ACTIVE LATERAL PRESSURE OF RETAINED EARTH)
 60PSF/FT (AT-REST LATERAL PRESSURE OF RETAINED EARTH)
- CONCRETE:**
 2500PSI FOR SLABS AND WALLS. MINIMUM 5 1/2 SACKS OF CEMENT PER CUBIC YARD OF CONCRETE AND 6 3/4 GALLONS OF WATER PER 94LB. SACK OF CEMENT. MAXIMUM AGGREGATE SIZE IS 1 1/2"
 VIBRATE ALL CONCRETE WALLS WHEN POURING.
- REINFORCING STEEL:**
 CONCRETE REINFORCEMENT SHALL BE DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH ACI 318-02.
 REINFORCING STEEL SHALL BE DEFORMED BILLET STEEL CONFORMING TO ASTM A-615.

PARCEL NO. 4457300190
AKIHIRO NAKAMURA - GARAGE ADDITION PROJECT
 4245 90TH AVE SE MERCER ISLAND, WA. 98040
 BUILDING DESIGN BY: L. REYNOLDS - CPBD MAY 2020
 CUSTOM BUILDING DESIGN 253-630-9717
 MEMBER OF AMERICAN INSTITUTE OF BUILDING DESIGN



GENERAL NOTES:

1. FIELD VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE STARTING CONSTRUCTION.
2. ALL DIMENSIONS ARE TO FRAMING POINTS. (FIELD VERIFY ALL DIMENSIONS).

FRAMING DATA:

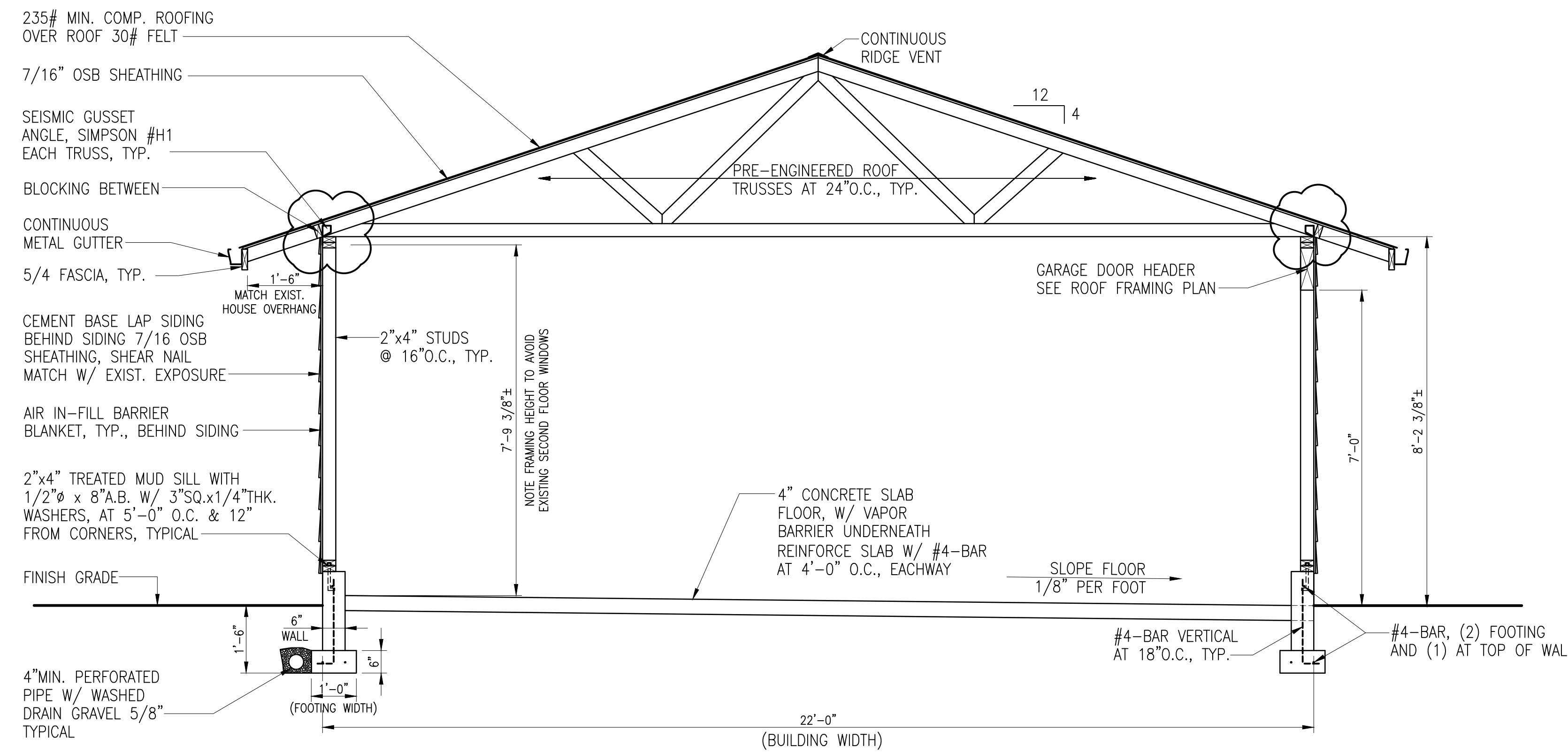
1. ALL HEADERS #2 AND BETTER AS SHOWN UNLESS OTHERWISE NOTED.
2. ALL 2x MATERIAL #2 AND BETTER EXCEPT TREATED.
3. ANCHOR ROOF RAFTERS TO DOUBLE TOP PLATE BY INSTALLING SIMPSON H1 SEISMIC ANCHOR EACH RAFTER, OR EQUAL ANCHOR.
4. SIMPSON HANGERS ARE CALLED OUT IN THIS DESIGN, INSTALL PER MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS.
5. NAILING FOR SHEAR WALL AND ROOF SHEATHING: NAIL - 8d EDGE NAIL SPACING, 6" O.C., FILED NAIL SPACING, 12" O.C. STAGGER EDGE NAILING WITH ADJOINING PANEL.

STRUCTURAL NOTES:

DESIGN CRITERIA:
 WIND LOAD - 85 MPH
 ROOF LOAD - DL = 15PSF
 SL = 20PSF
 ATTIC FLOOR LOAD - DL = 12PSF
 LL = 40PSF
 SEISMIC ZONE - D2
 SOILS:
 2000PSF (ALLOWABLE BEARING PRESSURE)
 40PSF/FT (ACTIVE LATERAL PRESSURE OF RETAINED EARTH)
 60PSF/FT (AT-REST LATERAL PRESSURE OF RETAINED EARTH)

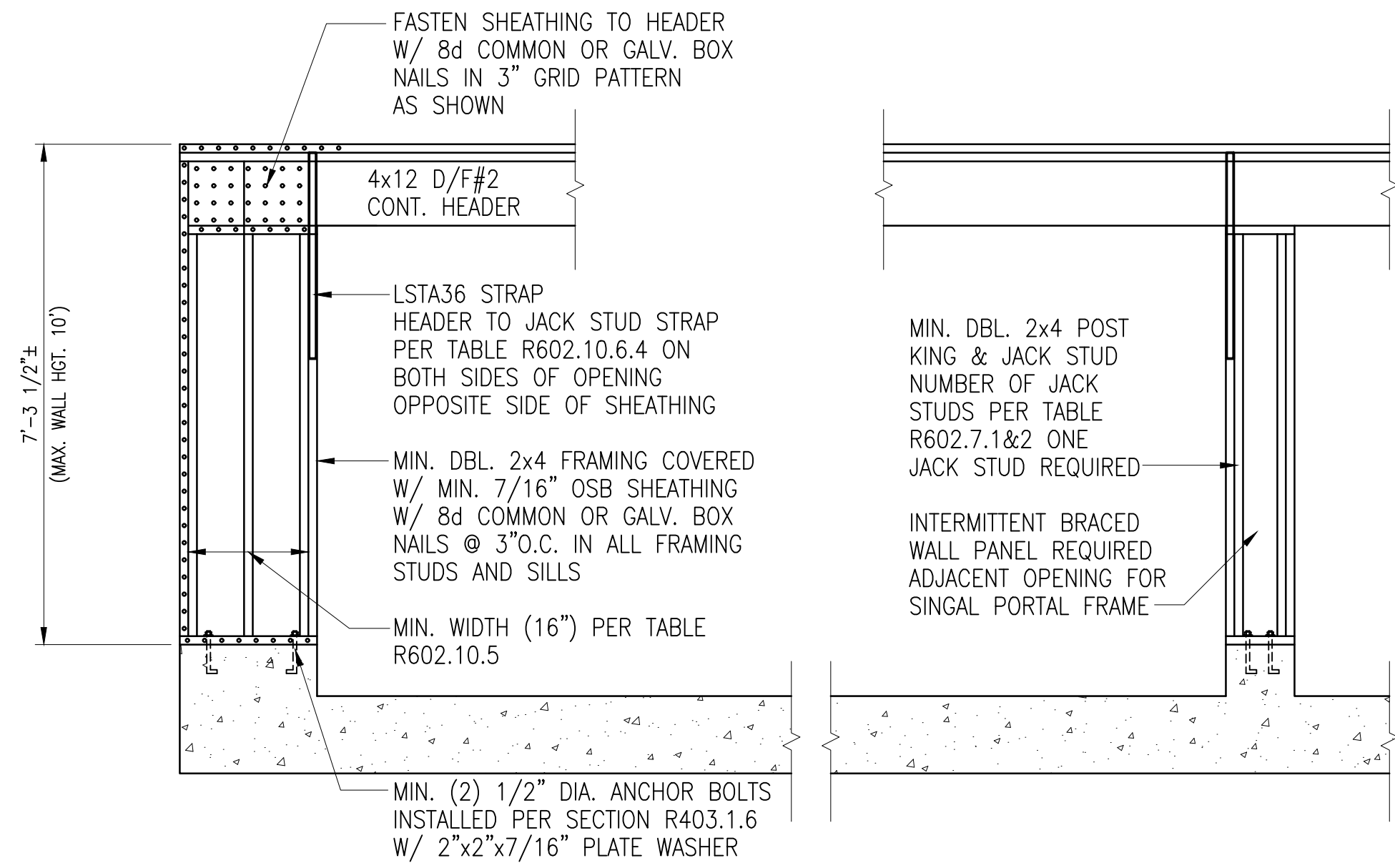
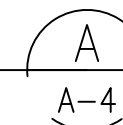
CONCRETE:
 2500PSI FOR SLABS AND WALLS. MINIMUM 5 1/2 SACKS OF CEMENT PER CUBIC YARD OF CONCRETE AND 6 3/4 GALLONS OF WATER PER 94LB. SACK OF CEMENT. MAXIMUM AGGREGATE SIZE IS 1 1/2" VIBRATE ALL CONCRETE WALLS WHEN POURING.

REINFORCING STEEL:
 CONCRETE REINFORCEMENT SHALL BE DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH ACI 318-02. REINFORCING STEEL SHALL BE DEFORMED BILLET STEEL CONFORMING TO ASTM A-615.



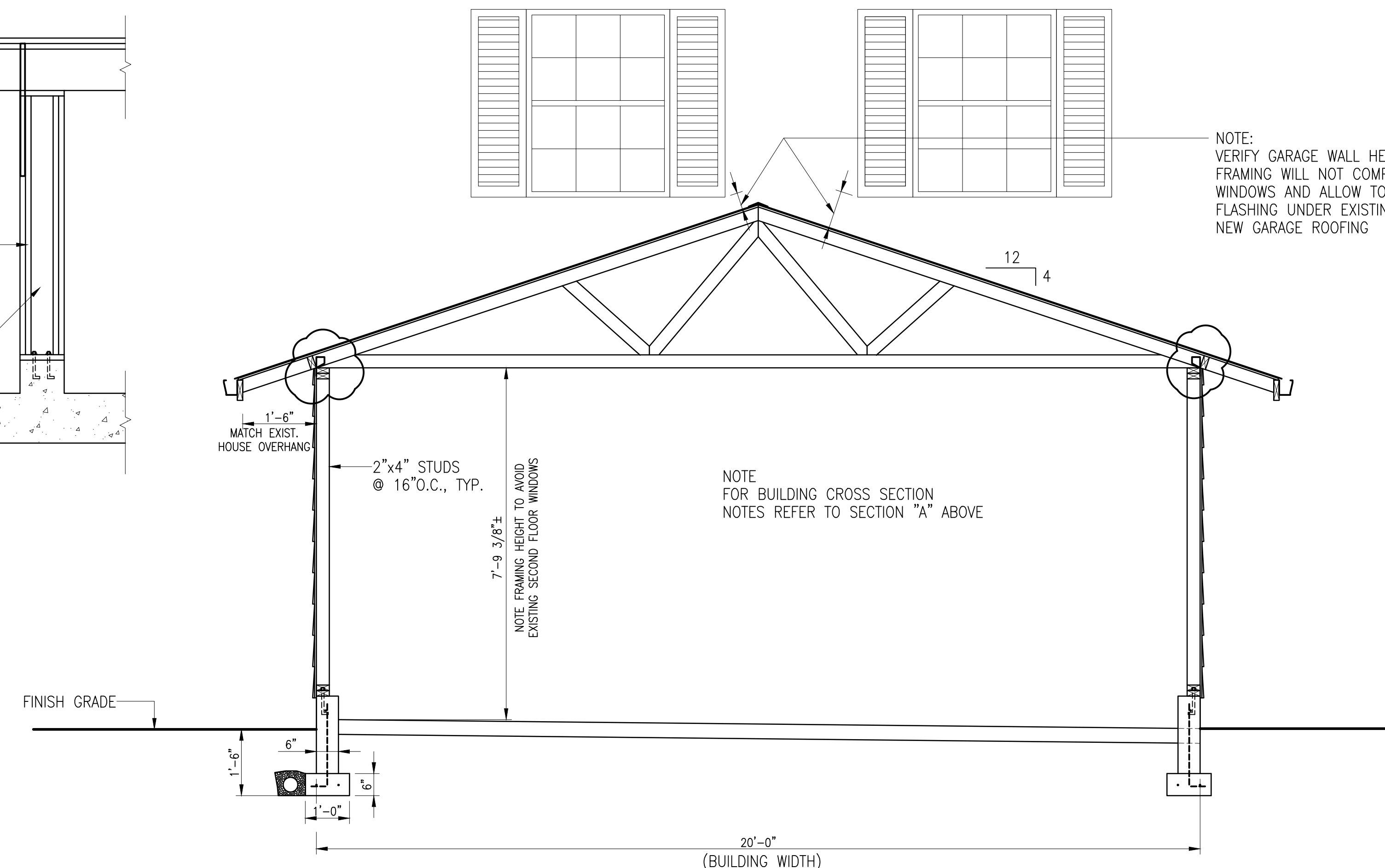
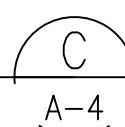
BUILDING CROSS SECTION

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



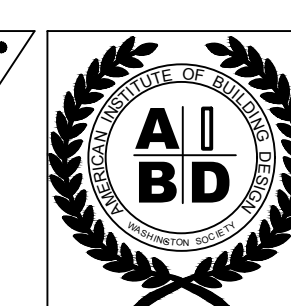
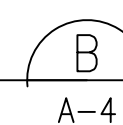
PORTAL FRAME AT GARAGE DOOR OPENING - SECTION VIEW

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



BUILDING CROSS SECTION

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



PARCEL NO. 4457300190

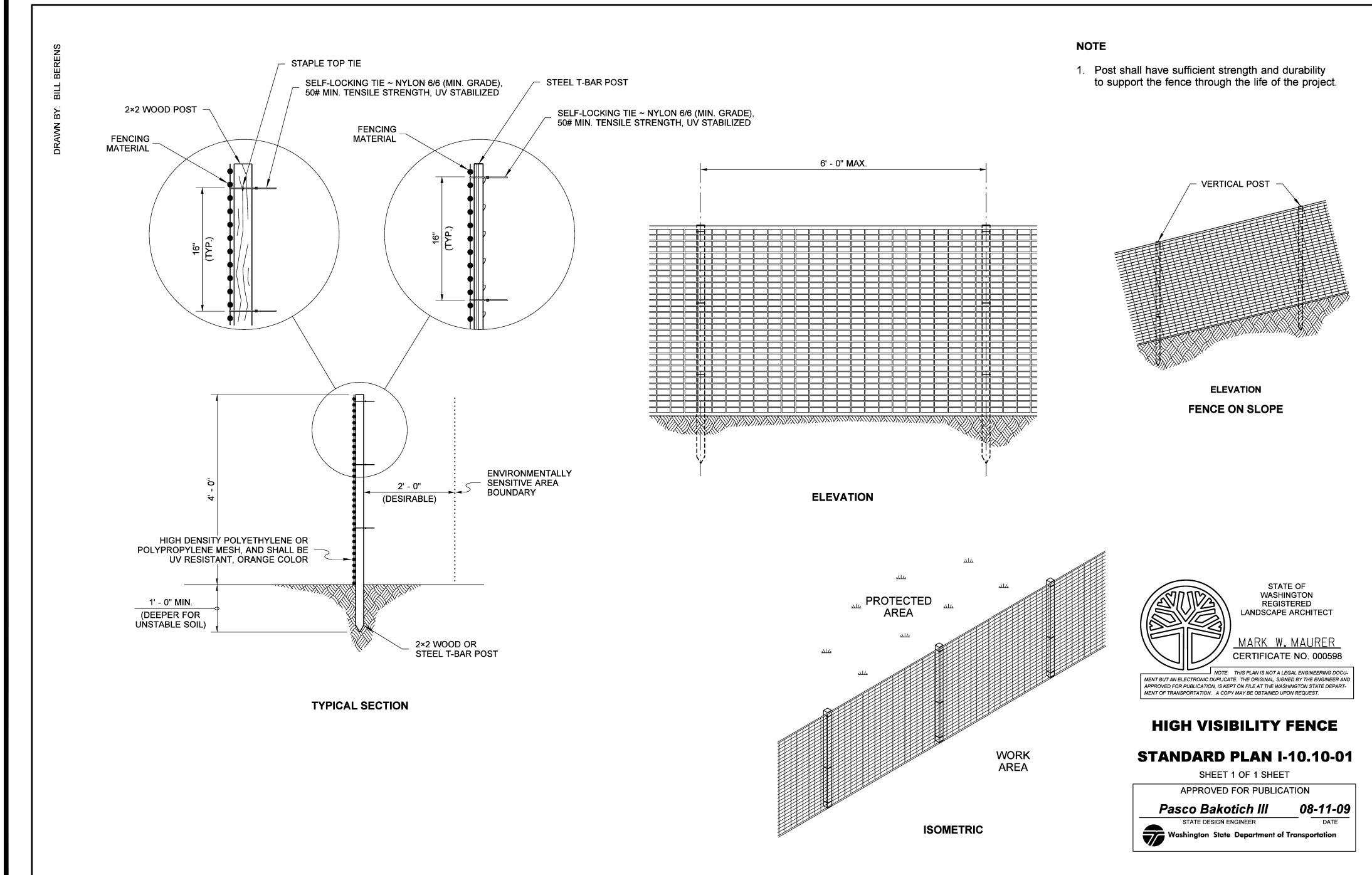
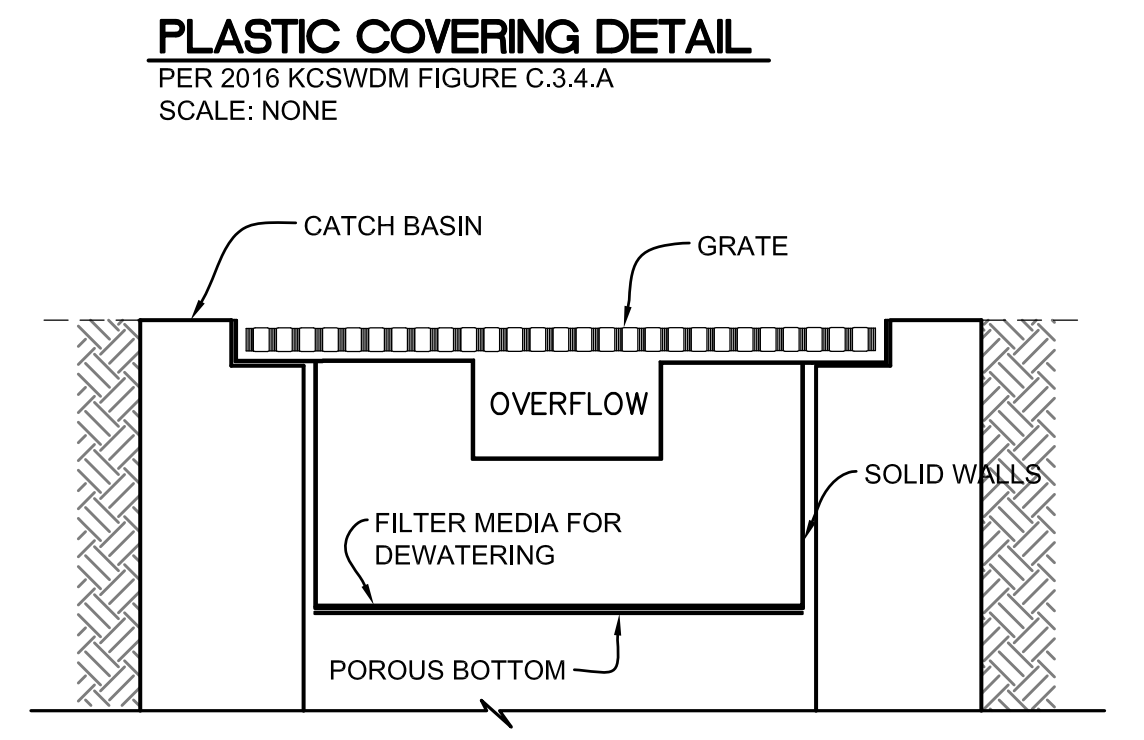
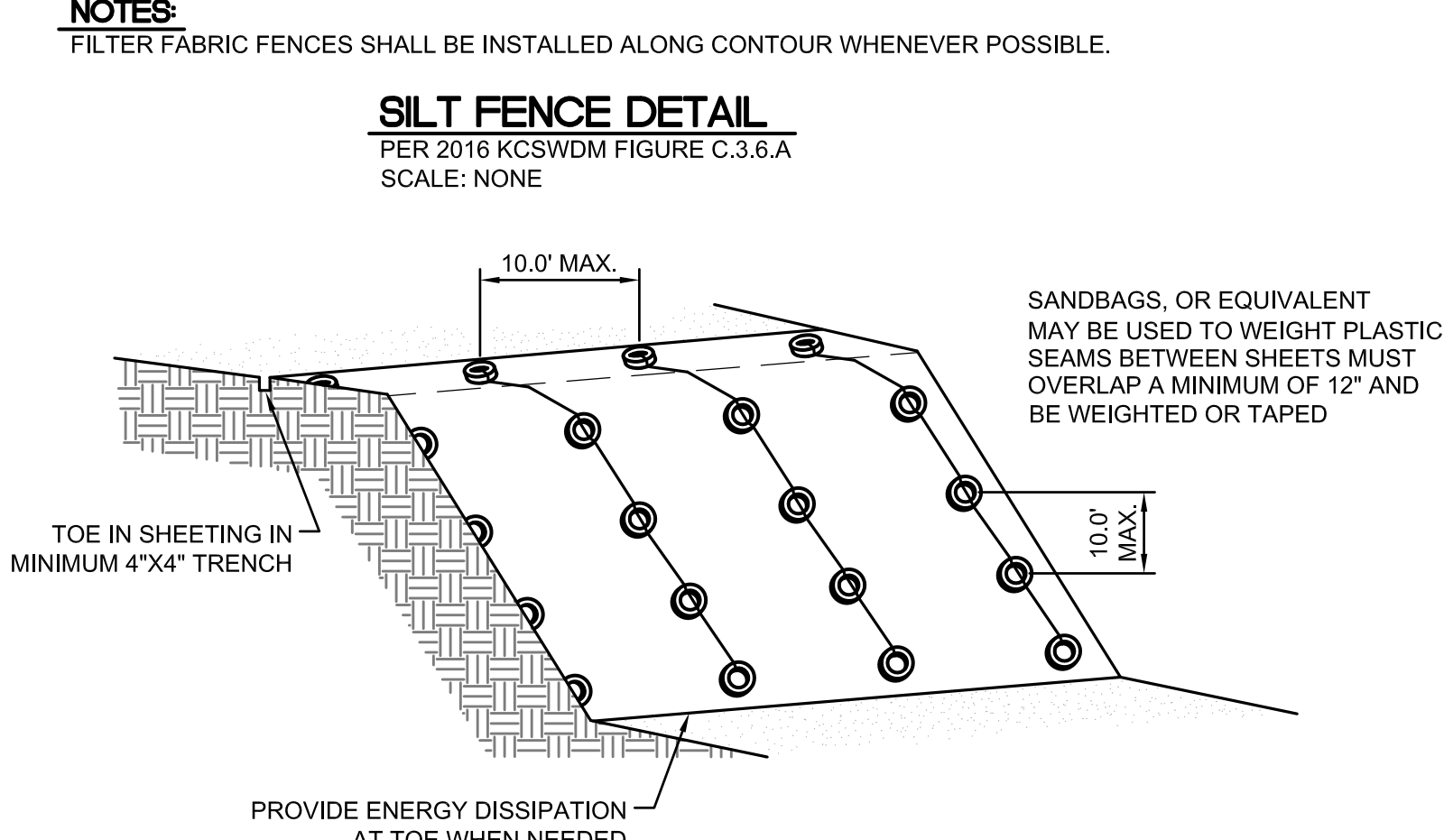
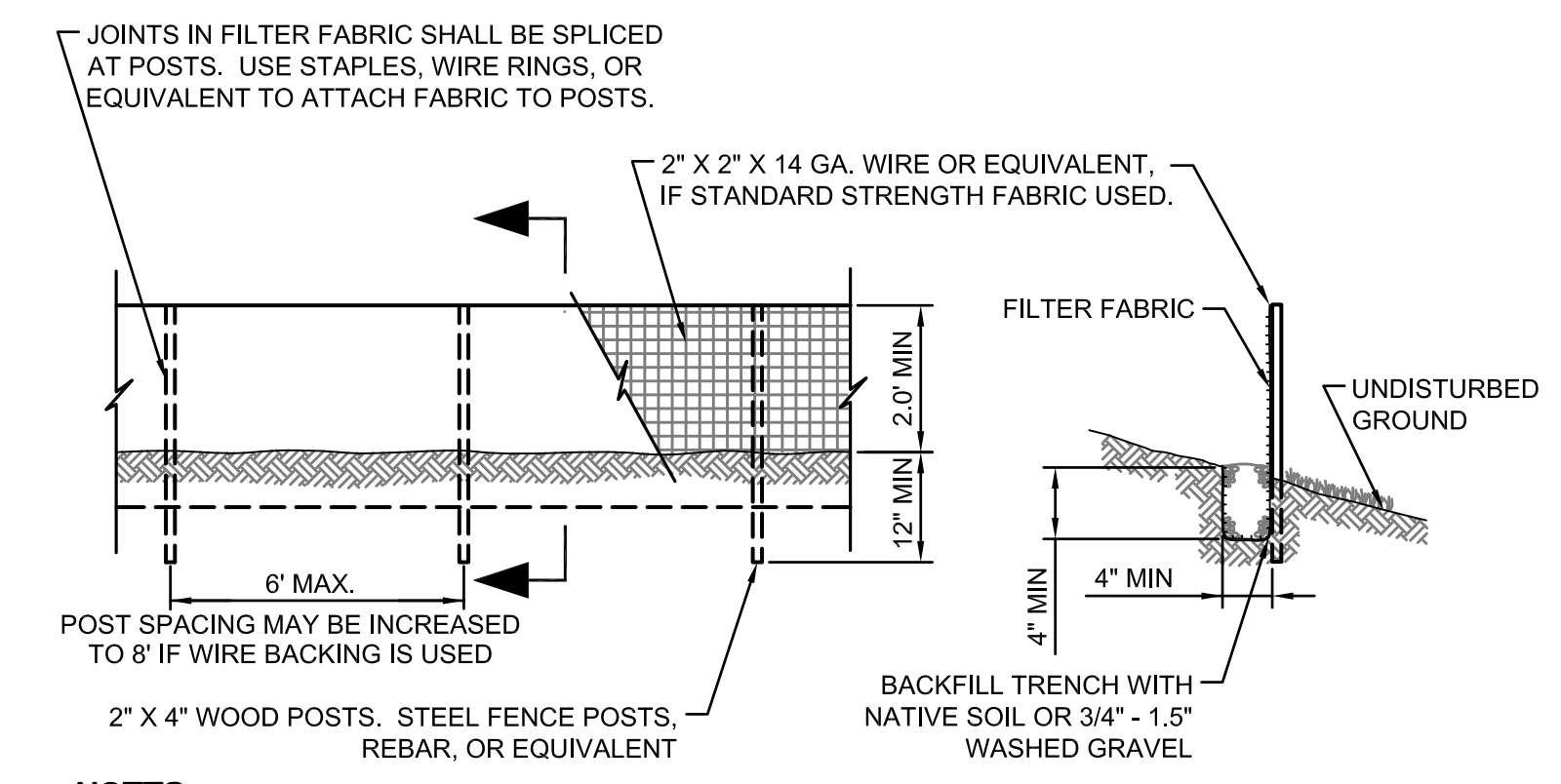
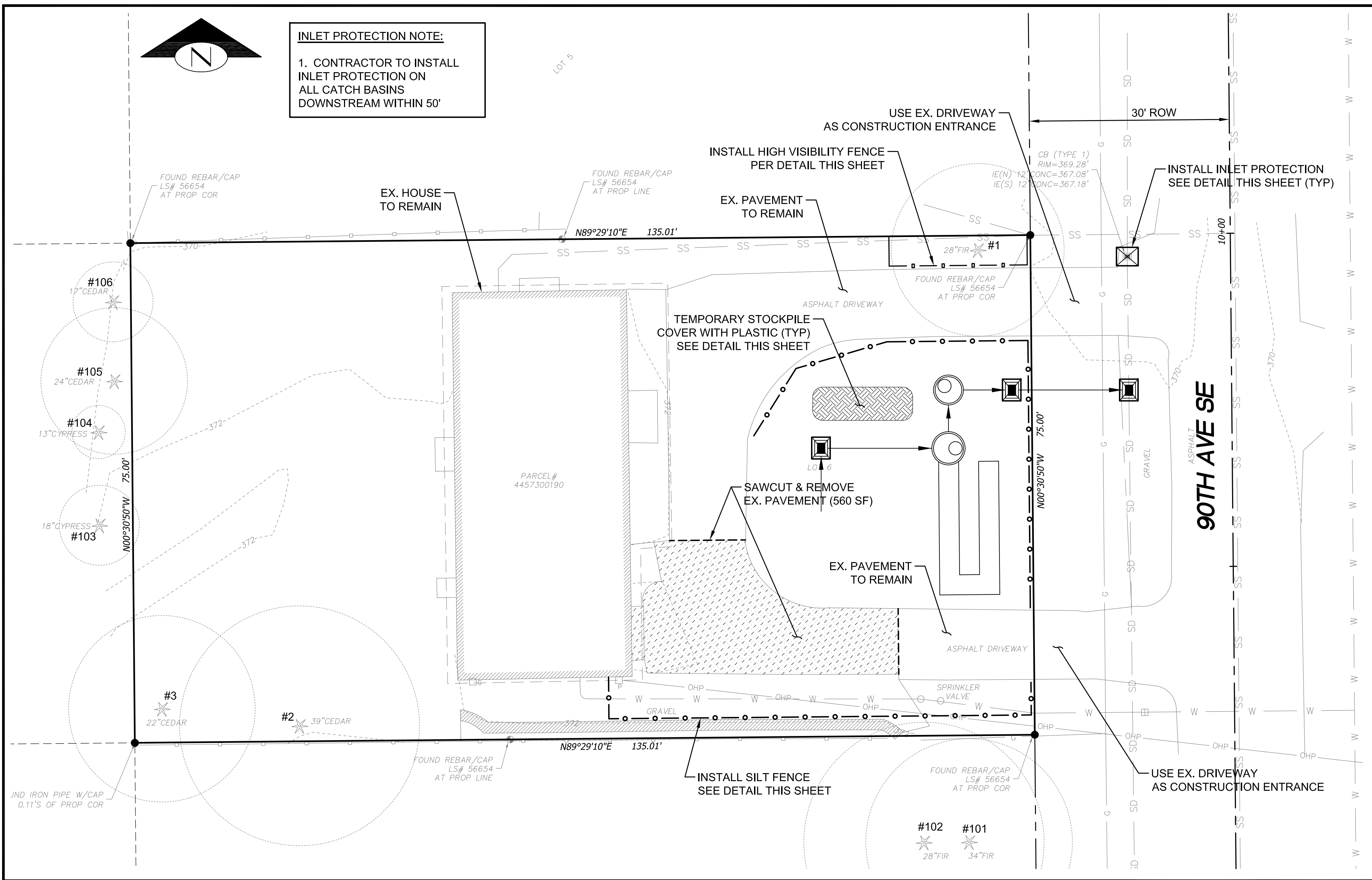
AKIHIRO NAKAMURA - GARAGE ADDITION PROJECT

4245 90TH AVE SE MERCER ISLAND, WA. 98040

BUILDING DESIGN BY: L. REYNOLDS - CPBD
 CUSTOM BUILDING DESIGN 253-630-9717
 MEMBER OF AMERICAN INSTITUTE OF BUILDING DESIGN

MAY 2020

Dec 22, 2020 - 3:18pm Hon Phan L:\Working\2020295 - 4245 90th Ave SE (Nakamura Residence)\CAD\Drawings\2020295-PS-C1.dwg Layout Name: Layout1



GENERAL NOTE:
 1. LAND CLEARING, GRADING, FILLING, AND FOUNDATION WORK ARE NOT PERMITTED BETWEEN OCTOBER 1ST AND APRIL 1ST. ANY WORK THAT IS PROPOSED DURING THE WET SEASON MUST SUBMIT A SEASONAL DEVELOPMENT LIMITATION WAIVER FOR APPROVAL BY THE BUILDING OFFICIAL

PROJECT ENGINEER'S CERTIFICATION:
 I HEREBY STATE THAT THIS CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN FOR NAKAMURA RESIDENCE HAS BEEN PREPARED BY ME OR UNDER MY SUPERVISION AND MEETS THE STANDARD OF CARE AND EXPERTISE WHICH IS USUAL AND CUSTOMARY IN THIS COMMUNITY OF PROFESSIONAL ENGINEERS. I UNDERSTAND THAT THE CITY OF MERCER ISLAND DOES NOT AND WILL NOT ASSUME LIABILITY FOR THE SUFFICIENCY, SUITABILITY, OR PERFORMANCE OF CONSTRUCTION SWPPP BMPs PREPARED BY ME.

TREE INVENTORY:

Tree ID	Tree Species	Regulation Status
#1 - 28"	FIR (PSEUDOTSUGA MENZIESII)	REGULATED-YES
#2 - 39"	CEDAR (THUJA PLICATA)	REGULATED-YES
#3 - 26"	CEDAR (CEDRUS DEODORA)	REGULATED-YES
#103 - 18"	CYPRESS (CHAMAECYPARIS LAWSONIANA)	REGULATED-YES
#104 - 13"	CYPRESS (CHAMAECYPARIS LAWSONIANA)	REGULATED-YES
#105 - 24"	CEDAR (THUJA PLICATA)	REGULATED-YES
#106 - 17"	CEDAR (THUJA PLICATA)	REGULATED-YES

LEGEND

- PROPERTY LINE
- - - ADJACENT PROPERTY LINE
- RIGHT OF WAY LINE
- - - RIGHT OF WAY CENTERLINE

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

HORIZONTAL GRAPHIC SCALE
 1 inch = 10 ft.

REFERENCE SHEET NO. **C** SHEET 1 OF 4 SHEETS

NAKAMURA RESIDENCE
 4245 90TH AVE SE
 MERCER ISLAND, WA 98040

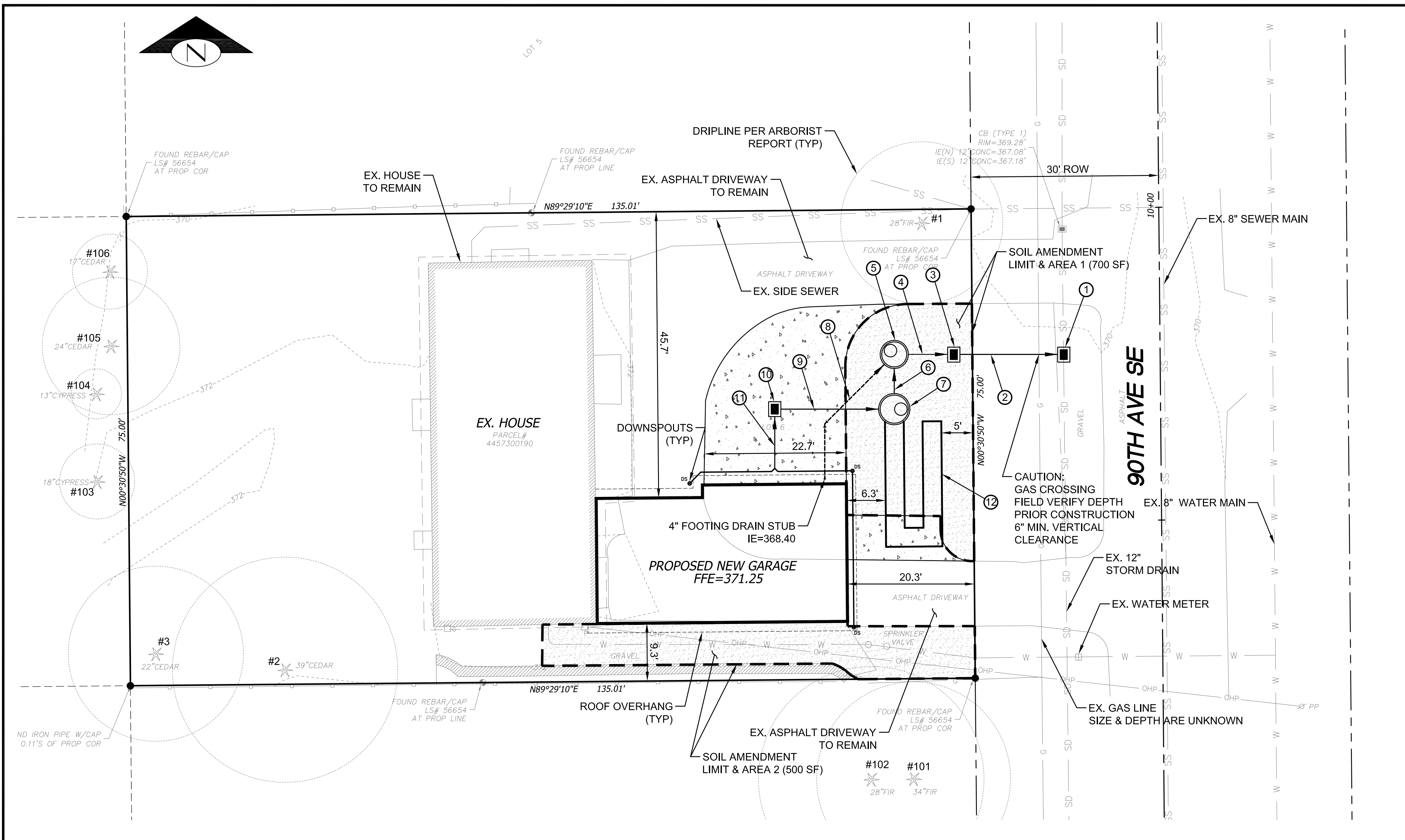
TREE PROTECTION PLAN
TESC PLAN AND DETAILS

PBC, LLC
 Land Development and Civil Engineering Consultants
 5130 South 166th Lane
 Seattle, WA 98188
 T (206) 229-6422

ISSUE DATE: 11-15-2020
 JOB NO.: R20295
 DESIGNED BY: K. TRAN
 DRAWN BY: K. TRAN
 CHECKED BY: H.H. PHAN
 PROJ. MNGR: H.H. PHAN

NO.	DATE	BY	REVISION DESCRIPTION

Dec 22, 2020 3:41pm Han Phan L:\Working\2020295 - 4245 90th Ave SE (Nakamura Residence)\CAD\Drawings\2020295-PS-C2.dwg Layout Name: Layout1



LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- RIGHT OF WAY LINE
- RIGHT OF WAY CENTERLINE
- OVERHANG / EAVE
- PROPOSED STRUCTURE
- SOIL AMENDMENT
- 4" CEMENT CONCRETE PAVEMENT

A BACKUP GENERATOR IS REQUIRED FOR THE PUMP SYSTEM

PRIVATE PROPERTY OWNER SHALL BE RESPONSIBLE FOR ANY AND ALL CLAIMS FOR INJURIES AND DAMAGE DUE TO THE OPERATION OR NON-OPERATION OF THE PUMP SYSTEM

REFERENCE SHEET NO. **Q2**

SHEET **2** OF **4** SHEETS

NAKAMURA RESIDENCE
4245 90TH AVE SE
MERCER ISLAND, WA 98040

STORMWATER / UTILITY PLAN AND DETAILS



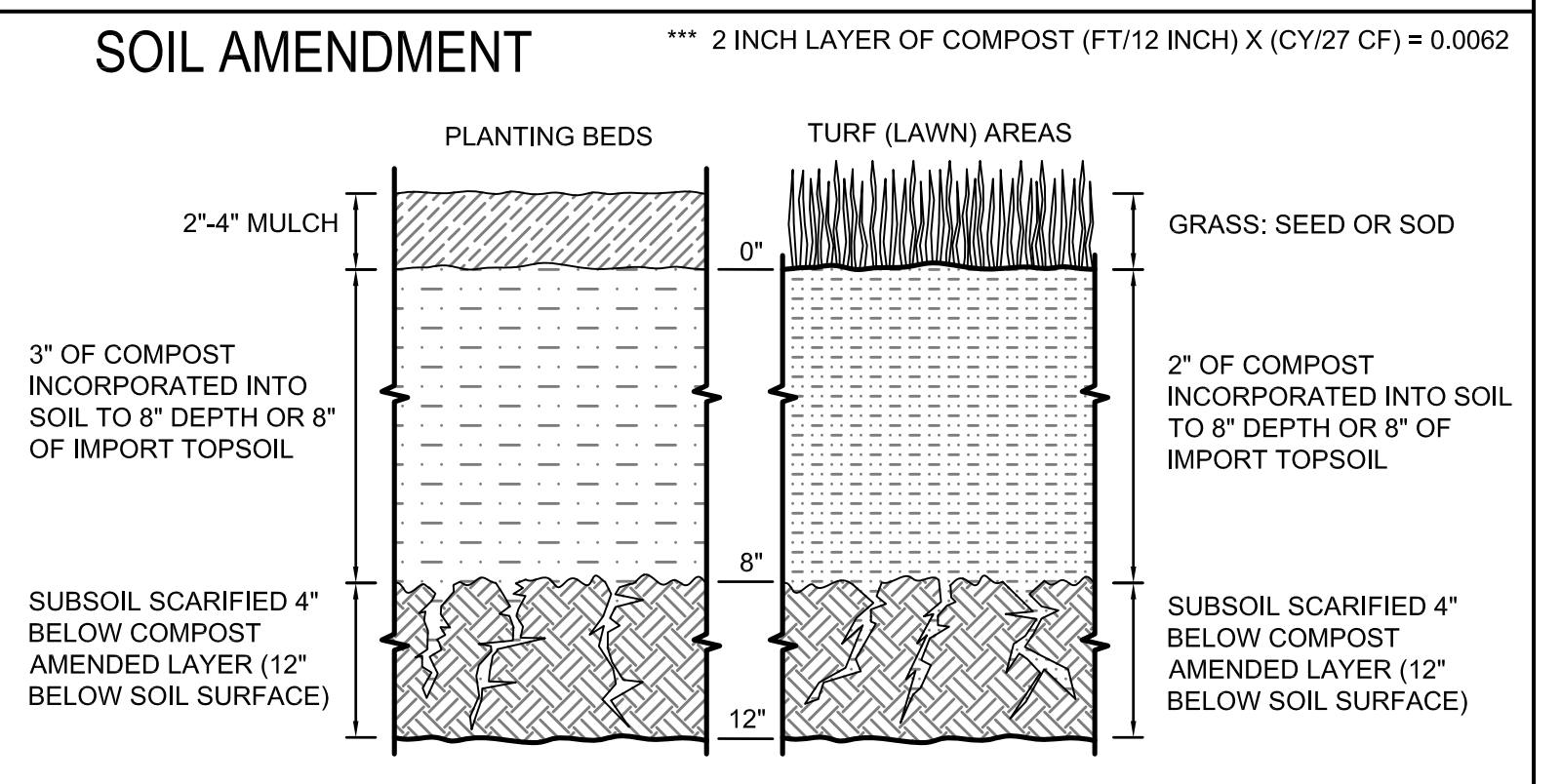
PBC, LLC
 Land Development and Civil Engineering Consultants
 5130 South 166th Lane
 SeaTac, WA 98188
 T (206) 229-6422

CONSTRUCTION NOTES:

- 1 INSTALL CB #1-TYPE 1 WITH VANED GRATE
RIM=370.11
EX. IE (N)=367.35
EX. IE (S)=367.45
IE (W)=367.94
- 2 INSTALL 16 LF 6" DI SD @ 2.00%
- 3 INSTALL CB #3-TYPE 1 WITH SOLID LID
RIM=370.50
IE (W)=368.76
IE (E)=368.26
- 4 INSTALL 6 LF 2" HPDE STORM DRAIN FORCE MAIN
- 5 INSTALL CB #3 TYPE 1 - 48" WITH SOLID LID & DUPLEX PUMP STATION PER DETAIL ON SHEET 4
RIM=370.85
IE (SW)=366.00
IE (S)=365.85
IE (E)=366.85
SUMP=362.85
- 6 INSTALL 4 LF 6" PVC SDR 35 @ 2.00%
- 7 INSTALL CB #4 TYPE 2 - 54" WITH FLOW CONTROL & SOLID LOCKING LID PER DETAIL ON SHEET C3
RIM=370.95
IE (W)=367.93
IE (S,N)=365.93
- 8 INSTALL 24 LF SOLID PVC SDR 35 FOOTING DRAIN COLLECTOR @ 10.00%
- 9 INSTALL 16 LF 6" PVC SDR 35 @ 2.00%
- 10 INSTALL CB #1-TYPE 40 WITH GRATE & OIL SEPARATOR (RISER TEE)
RIM=371.00
IE (S)=368.35
IE (E)=368.25
- 11 INSTALL 60 LF 4" PVC SDR 35 ROOF DRAIN COLLECTOR @ 2.00% MIN.
- 12 INSTALL 3' DIA. X 43' LONG CMP DETENTION TANK PER DETAIL ON SHEET C3

ESTIMATED COMPOST REQUIRED FOR SOIL AMENDMENT

1,728	(SQUARE FEET) X 0.0062 *** =	11	(CUBIC YARDS)
DISTURBED AREA REQUIRING AMENDMENT		REQUIRED COMPOST	



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

HORIZONTAL GRAPHIC SCALE
 10 5 0 5 10
 1 inch = 10 ft.

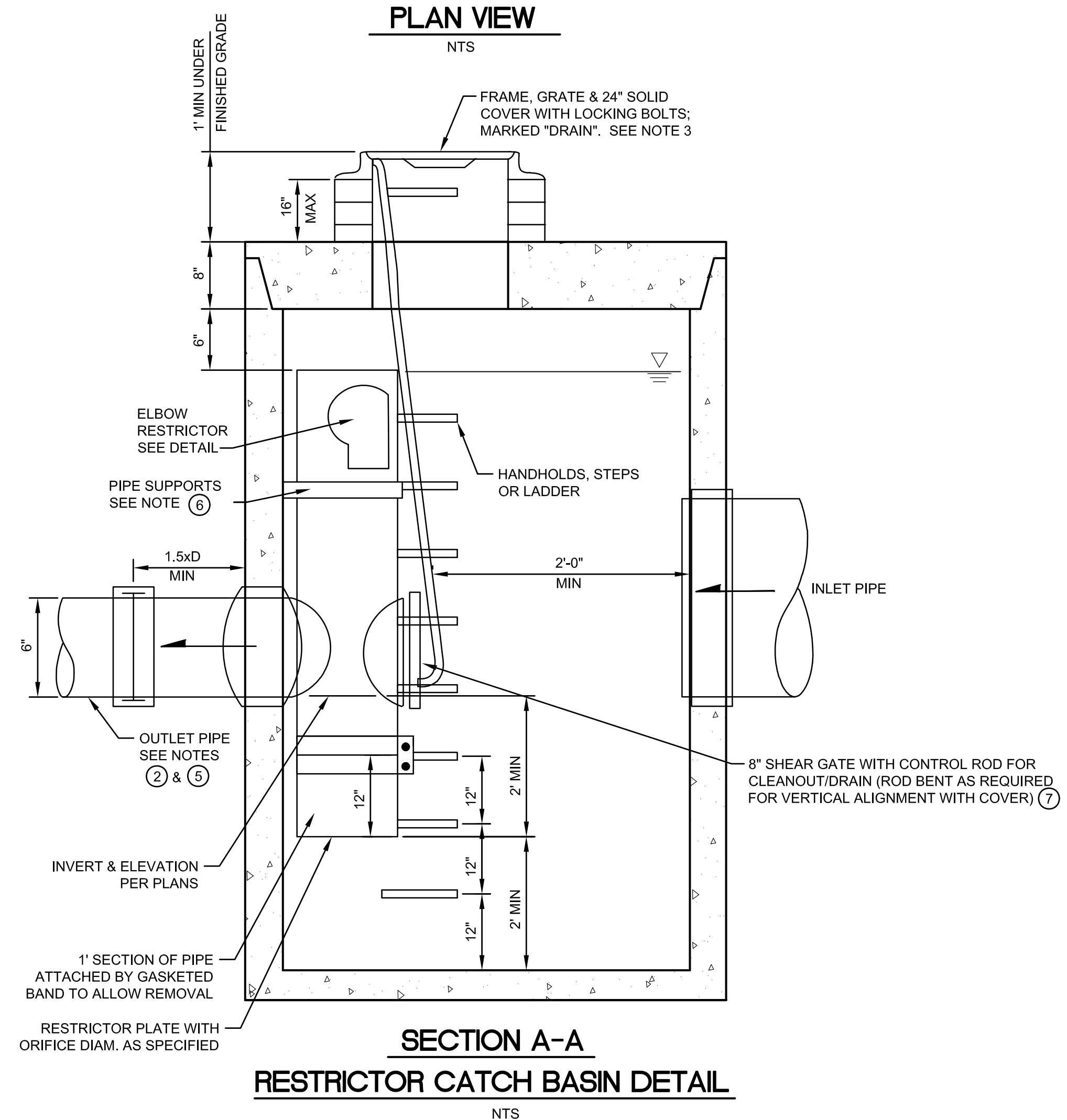
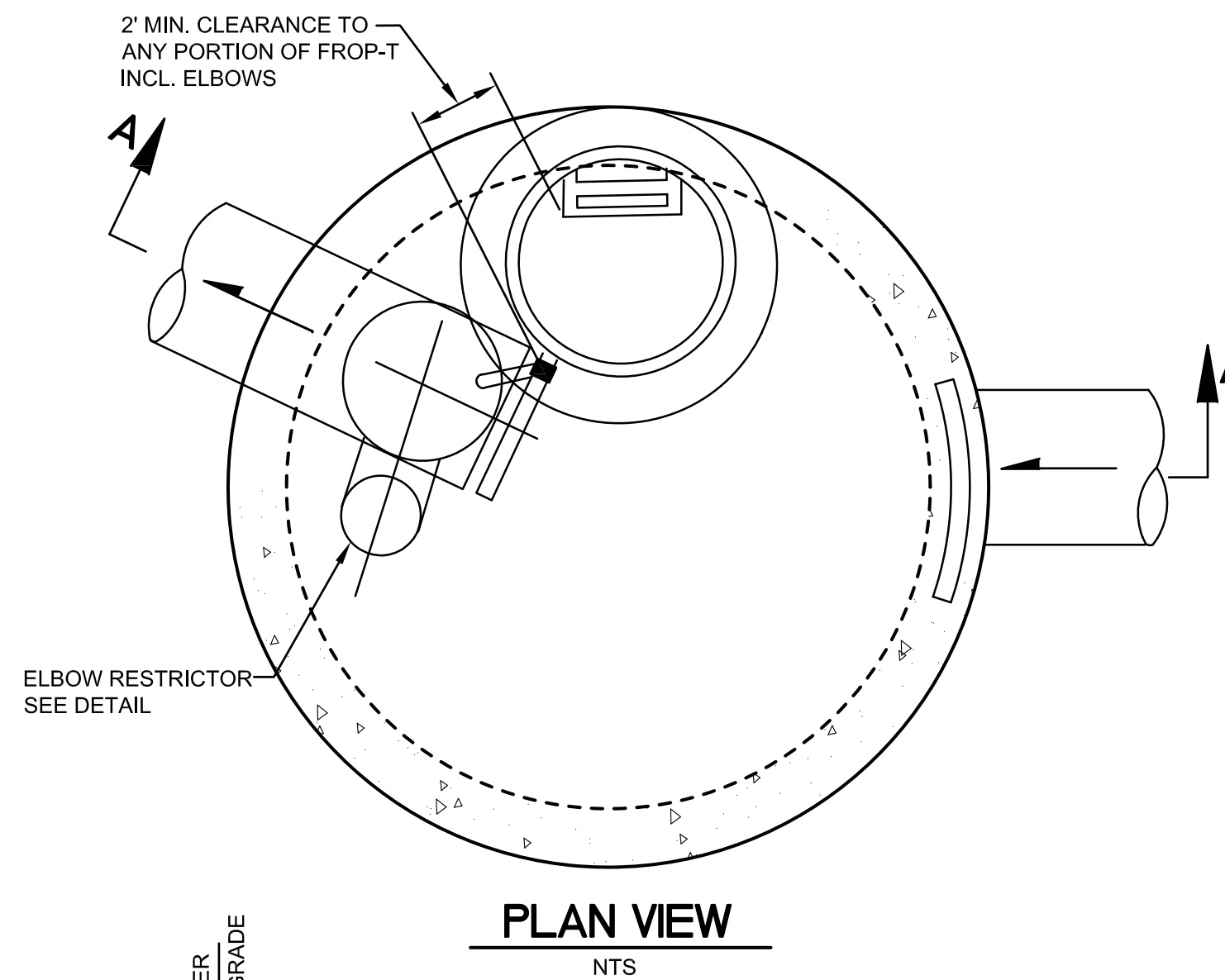
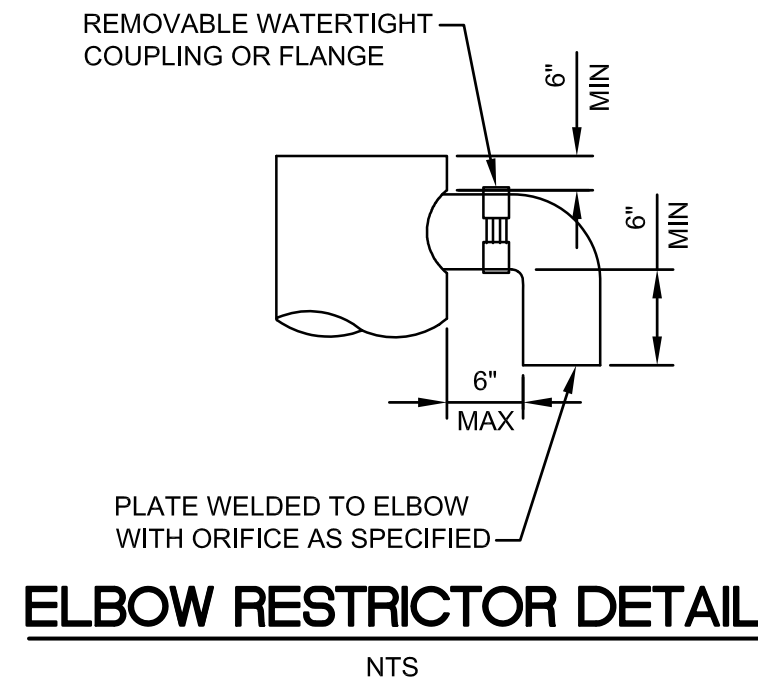
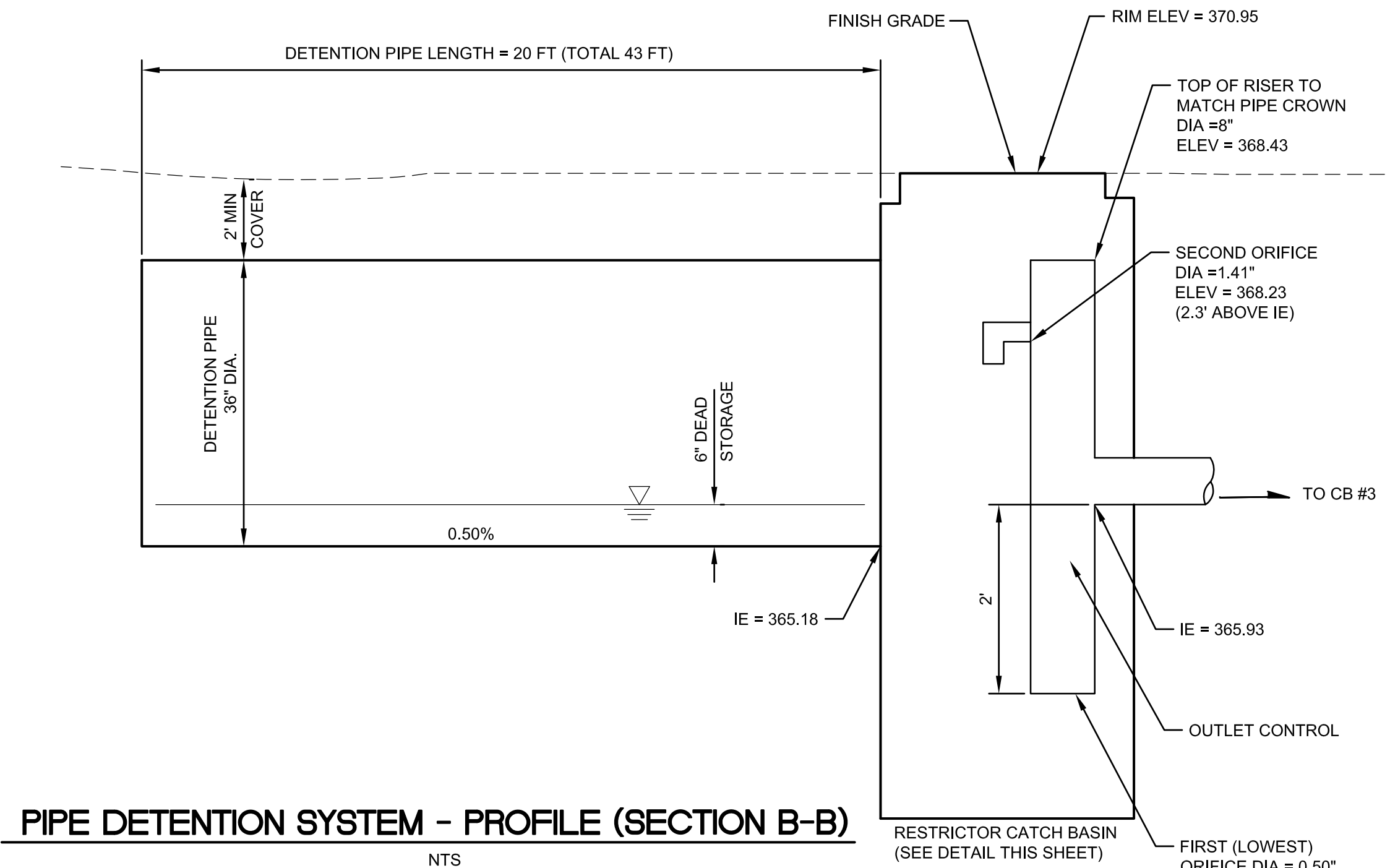
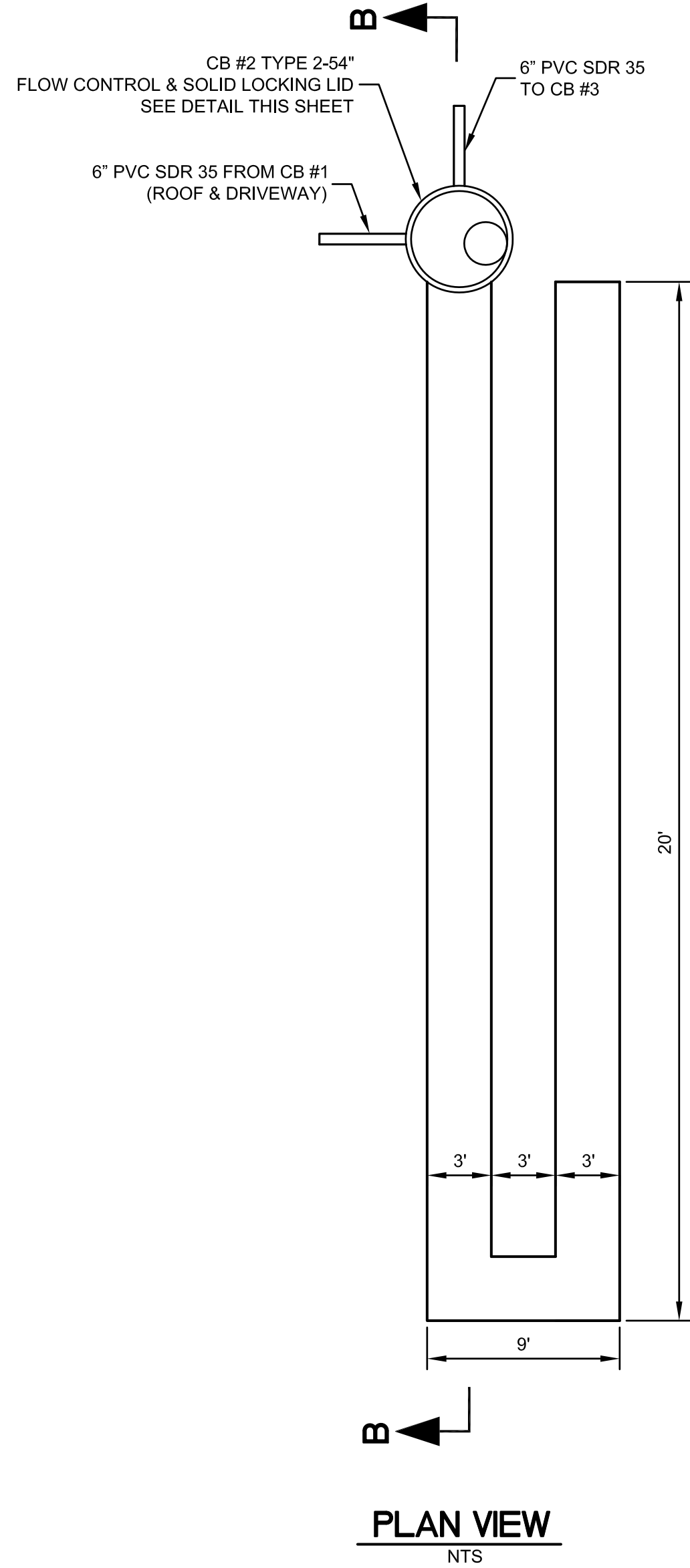
ISSUE DATE	11-15-2020		
JOB NO.	R20295		
DESIGNED BY:	K. TRAN		
DRAWN BY:	K. TRAN		
CHECKED BY:	H.H. PHAN		
PROJ. MGR:	H.H. PHAN		
NO.	DATE	BY	REVISION DESCRIPTION

STANDARD DETENTION SYSTEM NOTES:

- CALL DEVELOPMENT SERVICES (206-275-7605) 24 HOURS IN ADVANCE FOR A DETENTION SYSTEM INSPECTION BEFORE BACKFILLING AND FOR FINAL INSPECTIONS.
- RESPONSIBILITY FOR OPERATION AND MAINTANANCE OF DRAINAGE SYSTEMS ON PRIVATE PROPERTY IS REPOSIBILITY OF THE PROPERTY OWNER. MATERIAL ACCUMULATED IN THE STORAGE PIPE MUST BE REMOVED FROM CATCH BASINS TO ALLOW PROPER OPERATION. THE OUTLET CONTROL ORIFICE MUST BE KEPT OPEN AT ALL TIMES.
- PIPE MATERIAL, JOINT, AND PROTECTIVE TREATMENT SHALL BE IN ACCORDANCE WITH SECTION 7.04 AND 9.05 OF THE WSDOT STANDARD SPECIFICATION FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, LATEST VERSION. SUCH MATERIALS INCLUDE THE FOLLOWING: LINED CORRUGATED POLYETHYLENE PIPE (LCPE), ALUMINIZED TYPE 2 CORRUGATED STEEL PIPE AND PIPE ARCH (MEETS AASHTO DESIGNATIONS M274 AND M36), CORRUGATED OR SPIRAL RIB ALUMINUM PIPE, OR REINFORCED CONCRETE PIPE. CORRUGATED STEEL PIPE IS NOT ALLOWED.

OWNER: AKIHIRO NAKAMURA ADDRESS: 4245 90TH AVE SE PREPARED BY: HAN PHAN, PE
 PERMIT #: _____ MERCER ISLAND, WA 98040 PHONE: 206-229-6422
 DATE: 11-15-2020
 IMPERVIOUS SURFACE AREA (SF): 1,728 DETENTION PIPE DIA (INCH) 36 DETENTION PIPE LENGTH (FT): 43 ORIFICE #1 DIA = 0.50 INCH, ELEV = 363.93
 PIPE MATERIAL: CMP ORIFICE #2 DIA = 1.41 INCH, ELEV = 368.23

FOOTING DRAINS SHALL NOT BE CONNECTED TO DETENTION SYSTEM



RESTRICTOR CATCH BASIN NOTES:

- USE A MINIMUM OF A 72" DIA. TYPE 2 CATCH BASIN WHEN CONNECTING PIPE MATERIAL IS CONCRETE OR LCPE. A 54" DIA. TYPE 2 CATCH BASIN MAY BE USED FOR OTHER CIRCULAR SINGLE WALL PIPE (SUCH AS CORRUGATED ALUMINUM PIPE).
- OUTLET PIPE: MIN. 6".
- METAL PARTS: CORROSION RESISTANT. NON-GALVANIZED PARTS PREFERRED. GALVANIZE PIP PARTS TO HAVE ASPHALT TREATMENT 1.
- FRAME AND LADDER OR STEPS OFFSET SO:
 - CLEANOUT GATE IS VISIBLE FROM TOP;
 - CLIMB-DOWN SPACE IS CLEAR OF RISER AND CLEANOUT GATE;
 - FRAME IS CLEAR OF CURB.
- IF METAL OUTLET PIPE CONNECTS TO CEMENT CONCRETE PIPE, OUTLET PIPE TO HAVE SMOOTH O.D. EQUAL TO CONCRETE PIPE I.D. LESS 1/4 IN.
- PROVIDE AT LEAST ONE 3 X 0.090 GAUGE SUPPORT BRACKET ANCHORED TO CONCRETE WALL WITH 3/8 IN. STAINLESS STEEL EXPANSION BOLTS OR EMBEDDED SUPPORTS 2 IN. INTO CATCH BASIN WALL (MAXIMUM 3'-0" VERTICAL SPACING).
- THE SHEAR GATE SHALL BE MADE ON ALUMINUM ALLOY IN ACCORDANCE WITH ASTM B 26M AND ASTM B 275, DESIGNATION ZG32A; OR CAST IRON IN ACCORDANCE WITH ASTM A 48, CLASS 30B. THE LIFT HANDLE SHALL BE MADE OF A SIMILAR METAL TO THE GATE (TO PREVENT GALVANIC CORROSION). IT MAY BE OF SOLID ROD OR HOLLOW TUBING, WITH ADJUSTABLE HOOK AS REQUIRED. A NEOPRENE RUBBER GASKET IS REQUIRED BETWEEN THE RISER MOUNTING FLANGE AND THE GATE FLANGE. INSTALL THE GATE SO THAT THE LEVEL-LINE MARK IS LEVEL WHEN THE GATE IS CLOSED. THE MATING SURFACES OF THE LID AND THE BODY SHALL BE MACHINED FOR PROPER FIT. ALL SHEAR GATE BOLTS SHALL BE STAINLESS STEEL.

REFERENCE SHEET NO. **03**

SHEET 3 OF 4 SHEETS

NAKAMURA RESIDENCE
4245 90TH AVE SE
MERCER ISLAND, WA 98040

DETENTION PIPE SYSTEM DETAILS



PBC, LLC
Land Development and Civil Engineering Consultants
5130 South 166th Lane
Seattle, WA 98188
T (206) 229-6422

ISSUE DATE: 11-15-2020
 JOB NO.: R20295
 DESIGNED BY: K. TRAN
 DRAWN BY: K. TRAN
 CHECKED BY: H.H. PHAN
 PROJ. MNGR: H.H. PHAN

REVISION DESCRIPTION

NO. DATE BY

Nov 16, 2020 - 4:33pm Han Phan L:\Working\2020295 - 4245 90th Ave SE (Nakamura Residence)\CAD\Drawings\2020295-PS-C4.dwg Layout Name: Layout1

Soil Type*	New Impervious Area (sf)														
	500 to 1,000 sf			1,001 to 2,000 sf			2,001 to 3,000 sf			3,001 to 4,000 sf			4,001 to 5,000 sf		
	Detention Pipe Size (in.) and Length (ft)			Detention Pipe Size (in.) and Length (ft)			Detention Pipe Size (in.) and Length (ft)			Detention Pipe Size (in.) and Length (ft)			Detention Pipe Size (in.) and Length (ft)		
B	36"	48"	60"	36"	48"	60"	36"	48"	60"	36"	48"	60"	36"	48"	60"
C	30	18	11	66	34	22	90	48	30	120	62	42	186	90	48
	22	11	7	43	23	14	66	36	20	78	42	26	132	60	37

Outlet Orifice Size and Design Height for Type B Soils Only															
Detention Pipe Size (in)	Lowest Orifice Diameter (inches)	Distance from Outlet to Second Orifice (feet)	Second Orifice Diameter (inches)	Lowest Orifice Diameter (inches)	Distance from Outlet to Second Orifice (feet)	Second Orifice Diameter (inches)	Lowest Orifice Diameter (inches)	Distance from Outlet to Second Orifice (feet)	Second Orifice Diameter (inches)	Lowest Orifice Diameter (inches)	Distance from Outlet to Second Orifice (feet)	Second Orifice Diameter (inches)	Lowest Orifice Diameter (inches)	Distance from Outlet to Second Orifice (feet)	Second Orifice Diameter (inches)
36	0.5	2.2	0.5	0.5	2.2	0.94	0.5	2.2	0.94	0.5	2.4	1.4	0.5	2.44	1.4
48	0.5	3.3	0.94	0.5	3.2	0.9	0.5	3.1	0.9	0.5	2.8	0.8	0.5	2.7	0.75
60	0.5	4.15	0.47	0.5	4.3	0.94	0.5	4.2	0.94	0.5	3.8	0.94	0.5	4.14	0.9

Outlet Orifice Size and Design Height for Type C Soils Only															
Detention Pipe Size (in)	Lowest Orifice Diameter (inches)	Distance from Outlet to Second Orifice (feet)	Second Orifice Diameter (inches)	Lowest Orifice Diameter (inches)	Distance from Outlet to Second Orifice (feet)	Second Orifice Diameter (inches)	Lowest Orifice Diameter (inches)	Distance from Outlet to Second Orifice (feet)	Second Orifice Diameter (inches)	Lowest Orifice Diameter (inches)	Distance from Outlet to Second Orifice (feet)	Second Orifice Diameter (inches)	Lowest Orifice Diameter (inches)	Distance from Outlet to Second Orifice (feet)	Second Orifice Diameter (inches)
36	0.5	2	0.8	0.5	2.3	1.41	0.5	2.4	1.9	0.5	2.15	1.64	0.5	1.72	2.3
48	0.5	3.2	0.8	0.5	3.3	1.17	0.5	2.83	1.5	0.5	2.9	1.3	0.5	2.43	1.6
60	0.5	3.4	0.6	0.5	3.6	0.89	0.5	3.7	1.1	0.5	3.9	1.28	0.5	4.3	2.2

NEW IMPERVIOUS CALC.

ROOF AREA (INCLUDING OVERHANG): 1,026 SF
 DRIVEWAY: 702 SF
 TOTAL: 1,728 SF

REFERENCE SHEET NO. **C4**
 SHEET 4 OF 4 SHEETS

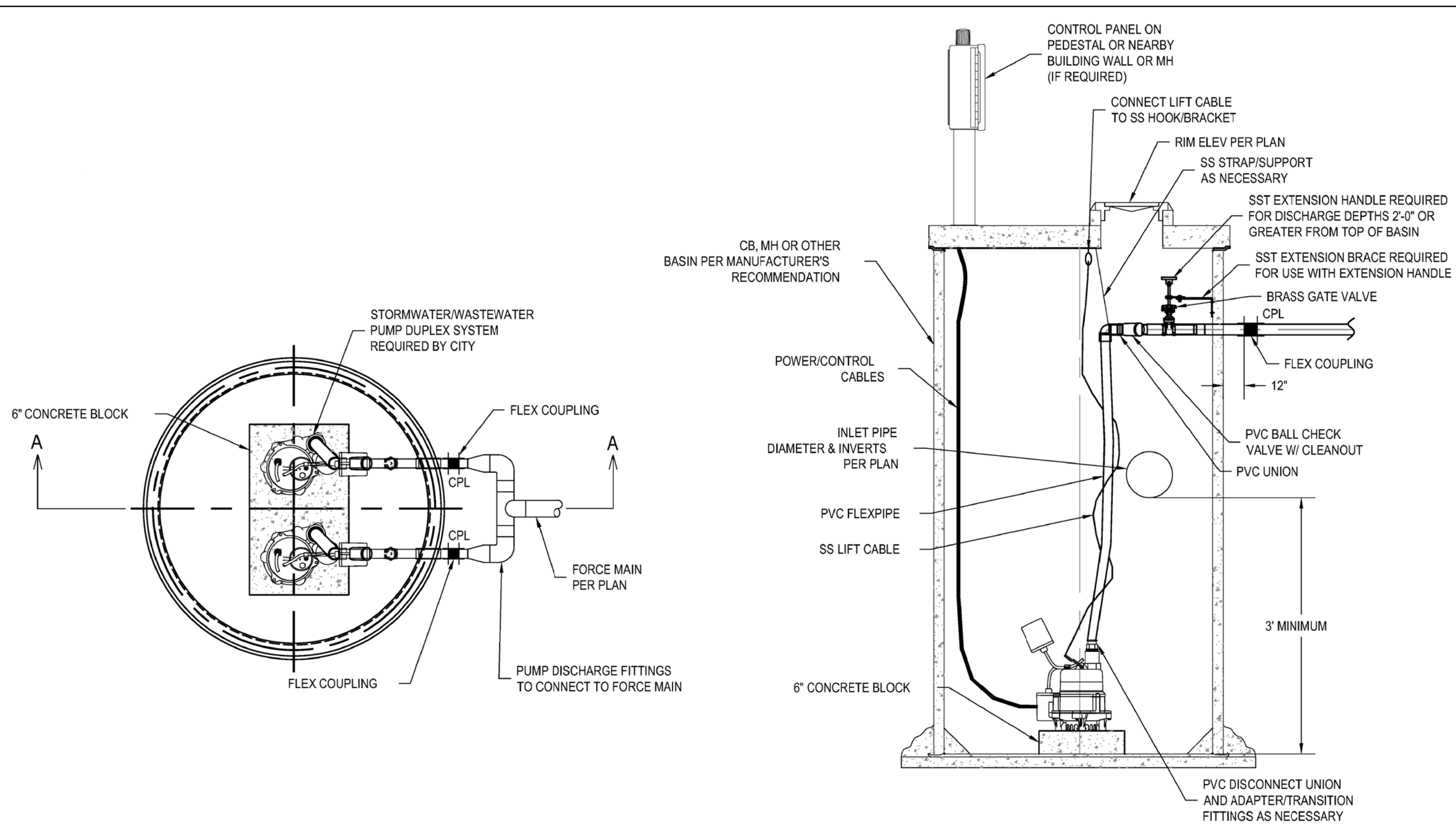
NAKAMURA RESIDENCE
 4245 90TH AVE SE
 MERCER ISLAND, WA 98040

DETAILS



PBC, LLC
 Land Development and Civil Engineering Consultants
 5130 South 166th Lane
 Seattle, WA 98188
 T (206) 229-6422

ISSUE DATE: 11-15-2020
 DESIGNED BY: K. TRAN
 DRAWN BY: K. TRAN
 CHECKED BY: H.H. PHAN
 PROJ. MGR: H.H. PHAN

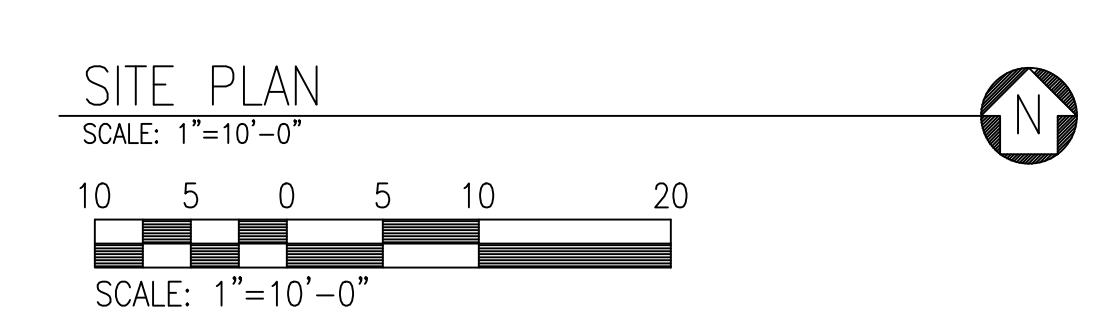
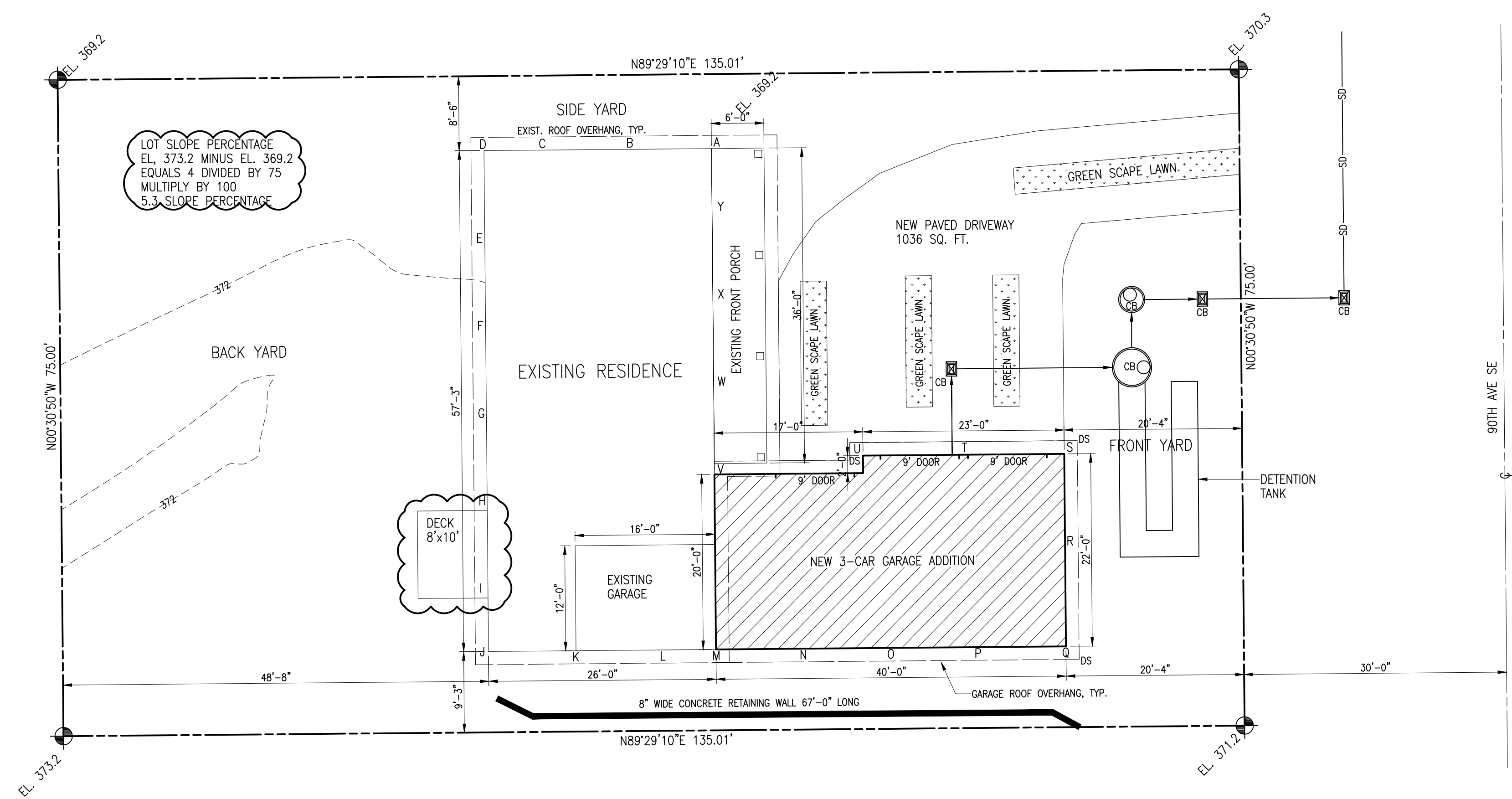


DUPLEX PUMP STATION
 SCALE: NONE

GENERAL DESCRIPTION	DUPLEX PARALLEL SUBMERSIBLE GRINDER PUMPS
DESIGN CALCULATIONS	FROM RATIONAL METHOD CALCULATION: PEAK INFLOWS: 25-YR = 13 GPM 100-YR = 15 GPM
DESIGN FLOW AND TDH	1 PUMP: 15 GPM @ 12' TDH 2 PUMP: 15 GPM @ 12' TDH
PUMP ELECTRICAL	1/3 HP, 1 PHASE, 115 V, GOULD WS_BHF SERIES (MODEL WS0311BHF OR EQ.)
PUMP CONTROLS	ALTERNATE PUMP STARTS, LOW AND HIGH LEVEL ALARM LIGHT
PUMP MOUNTING AND DISCHARGE	INCREASER TO 2" DISCHARGE WITH 2" UNION, CHECK VALVE, AND GATE VALVE FROM EACH PUMP
DISCHARGE MANIFOLD	2" x 2" DISCHARGE TO FORCE MAIN
FORCE MAIN & FITTINGS	2"
FLOAT SPECIFICATIONS	
REDUNDANT OFF AND LOW LEVEL ALARM	PER MANUFACTURE'S REQUIREMENTS
OFF	PER MANUFACTURE'S REQUIREMENTS
ON (1ST PUMP)	1.5' ABOVE OFF
ON (2ND PUMP)	2.5' ABOVE OFF
HIGH LEVEL ALARM	0.5' ABOVE 2ND PUMP ON
MIN. HEIGHT FROM HIGH LEVEL ALARM TO LOWEST INLET	0.5'
NOTES:	
1. THESE SPECIFICATIONS ARE SCHEMATIC IN NATURE AND SHALL BE CONFIRMED BY SUPPLIER AND CONTRACTOR.	
2. PUMP FLOATS/CONTROLS SHALL BE FIELD TESTED AND ADJUSTED TO ACHIEVE OPTIMUM PUMP CYCLE TIMES PER MANUFACTURE'S RECOMMENDATIONS.	
3. EXPLOSION PROOF PUMPS, CONTROLS, AND ELECTRICAL COMPONENTS SHALL BE INSTALLED IF REQUIRED BY CODE.	

STORM DRAIN DUPLEX PUMP STATION SPECIFICATIONS

NO. DATE BY REVISION DESCRIPTION



CALCULATION FOR AVERAGE GRADE HEIGHT

A	371.1
B	371.4
C	371.3
D	371.8
E	371.7
F	371.3
G	372.3
H	372.2
I	372.2
J	372.3
K	372.3
L	371.3
M	371.3
N	371.4
O	371.4
P	371.4
Q	370.8
R	370.8
S	371.3
T	371.2
U	371.3
V	371.4
W	371.8
X	371.8
Y	371.8

TOTAL A-Y TOTAL=9287.9
 DIVIDE BY 25 = 371.5
 (371.5 AVERAGE GRADE HEIGHT)

LOT COVERAGE: _____
 LOT SIZE: 10,125 SQ.FT.
 EXIST. HOUSE & FRONT PORCH & DECK 3007 SQ.FT.
 NEW GARAGE ADDITION WITH ROOF OVERHANG 1036 SQ.FT.
 NEW DRIVEWAY 1036 SQ.FT.

TOTAL STRUCTURE, ROOF OVERHANG, AND DRIVEWAY COVERAGE 4043 SQ.FT.
 39% LOT COVERAGE

PARCEL NO. 4457300190
AKIHIRO NAKAMURA – GARAGE ADDITION PROJECT
 4245 90TH AVE SE MERCER ISLAND, WA. 98040
 BUILDING DESIGN BY: L. REYNOLDS – CPBD MAY 2020
 CUSTOM BUILDING DESIGN 253-630-9717
 MEMBER OF AMERICAN INSTITUTE OF BUILDING DESIGN

