

HORIZONTAL CONTROL:

ASSUMED.

VERTICAL CONTROL:

NAVD88 PER GPS OBSERVATIONS IN WASHINGTON STATE REFERENCE NETWORK.

SITE BENCH MARK
CENTERLINE MONUMENT IN INTERSECTION OF 78TH AVE SE AND SE 71ST STREET
ELEVATION 232.12

2' CONTOURS.

LEGAL DESCRIPTION

LOT D, MERCER ISLAND SHORT PLAT NUMBER 11-24, RECORDED UNDER RECORDING NUMBER 8301269005, IN KING COUNTY, WASHINGTON.

EQUIPMENT AND PROCEDURES:

METHOD OF SURVEY:

SURVEY PERFORMED BY FIELD TRAVERSE

INSTRUMENTATION:

TOPCON ELECTRONIC TOTAL STATION AND LEICA GPS RECEIVER.

PRECISION:

MEETS OR EXCEEDS STATE STANDARDS WAC 322-130-090

BASIS OF BEARING:

FOUND MONUMENTS ON 78TH AVENUE SE.

SURVEY NOTES:

1.) THIS SURVEY HAS BEEN PREPARED FOR THE EXCLUSIVE USE OF PARTIES WHOSE NAMES APPEAR HEREON ONLY, AND DOES NOT EXTEND TO ANY UNNAMED THIRD PARTIES WITHOUT EXPRESS RECERTIFICATION BY THE LAND SURVEYOR.

2.) BOUNDARY LINES SHOWN AND CORNERS SET REPRESENT DEED LOCATION; OWNERSHIP LINES MAY VARY. NO GUARANTEE OF OWNERSHIP IS EXPRESSED OR IMPLIED. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT AND DOES NOT PURPORT TO SHOW EASEMENTS, RESTRICTIONS, RESERVATIONS, AND OCCUPATION WHICH MAY ENCUMBER TITLE TO OR USE OF THE PROPERTY.

3.) FIELD WORK PERFORMED AND MONUMENT RECOVERED IN JUNE 2018.

4.) ADDED UTILITY INFORMATION ON JUNE 2019.

REFERENCIES

SHORT PLAT VOLUME 34, PAGE 260, RECORDING NUMBER 8301269005.

PARCEL NUMBER 252404-9294
PROPERTY ADDRESS: 71XX 78TH AVE SE, MERCER ISLAND, WA

LEGEND

- | | | | |
|--|-------------------------------|--|--|
| | ASPHAL NAIL | | EXISTING CONCRETE |
| | FOUND MONUMENT | | EDGE OF PAVEMENT |
| | MAILBOX | | BUILDINGS OF IMPORTANCE (MAIN BUILDINGS) |
| | CATCH BASIN (CB) | | PROPERTY LINE |
| | STORM DRAIN MANHOL(SDMH) | | INDEX CONTOURS |
| | SANITARY SEWER MANHOLE (SSMH) | | CONTOURS |
| | WATER VALVE | | ROCK RETAINING WALL |
| | WATER METER | | WIRE FENCE LINE |
| | FIRE HYDRANT | | WOOD FENCE LINE |
| | GAS VALVE | | CHAIN LINK FENCE LINE |
| | GAS METER | | |
| | POWER POLE | | |
| | UTILITY POLE ANCHOR | | |
| | SPOT ELEVATION | | |
| | CONIFEROUS TREE | | |
| | DECIDUOUS TREE | | |



ACREAGE
LAND
SURVEYING

206
326 9912

24225 107TH PLACE WEST EDMONDS 98020

7/8/2019

TOPOGRAPHIC SURVEY FOR HUGHES RESIDENCE		
IN THE SW1/4, NE1/4, SEC.25, T.24N., R.4.E, W.M. MERCER ISLAND, WASHINGTON		
DWN. BY: JP	DATE:	JOB NO. 18075
CHK. BY:	SCALE: 1" = 20'	SHEET: 1 OF 1

GENERAL NOTES

- STANDARD SPECIFICATIONS
 - All work to be performed and materials to be used shall be in accordance with the WSDOT/APWA Standard Specifications and Standard Plans for Road, Bridge and Municipal Construction, as applicable and as modified below, and unless otherwise noted, shall be subject to inspection and approval by the City of Mercer Island.
 - Local Amendments to the Standard Specifications, consisting of Standard Drawings and Special Technical Conditions are referenced in these notes. Copies of these documents are available at the office of the City Engineer, City of Mercer Island, 9611 SE 36th Street, Mercer Island, WA 98040.
 - These specifications shall be applicable for, but not limited to, public and private streets, driveways, parking lots, commercial and industrial developments, apartments, etc. Work in private developments shall conform to the same standards of workmanship and materials as are specified within the City right-of-way, except as indicated on the plans.
- PERMITS

Prior to construction, and in addition to any other permits required, a City of Mercer Island "Street Use Permit" MUST be obtained for any and all work within the City right-of-way.
- PLANS

It is a requirement of the City of Mercer Island Engineering Department, that an approved set of Construction Plans for all work be kept on the construction site at all times during the construction period.
- INSPECTION

The Engineering Department Construction Inspector 236-5300, or 236-3587. (24-hr taped inspection line) shall be notified 24-hours prior to starting any type of construction including clearing, sanitary sewers, water mains, storm drains, curb and gutters, sidewalks, driveways, street grading and paving.

STORM DRAINAGE CONSTRUCTION

- STORM DRAINAGE PIPE

Pipe shall be concrete, PVC, or ductile iron within the public right of way. Concrete pipe up to and including 24" diameter shall be unreinforced and shall conform to ASTM C-14, Table II, Extra Strength, rubber gasketed. Reinforced pipe shall conform to ASTM designation C-76 unless otherwise specified. Storm sewer detention pipe greater than 24" diameter shall be rubber gasketed, helical corrugated aluminum pipe. Bedding to be Class "C". Gauge of pipe will be as shown on the plans. Installation shall be in accordance with Section 7-04 of the Specifications and may be subject to exfiltration test. Corrugated polyethylene storm sewer pipe in accordance with WSDOT standard specification section 9-05.20 is also allowed.
- OTHER MATERIALS

Other materials for Storm Drainage Construction require written approval of the City Engineer.
- BACKFILL RESTRICTIONS
 - Bedding shall conform to Standard Plan B-11.
 - Minimum cover over storm drain shall be 18".
 - Trench backfill compacted to 95% of maximum density shall be required wherever trench excavation is made in paved roadway, sidewalk or any other area where minor settlement would be detrimental.
- CATCH BASINS
 - Type 1, catch basin inlet shall conform to Section 7-05 of the Standard Specifications and as shown on Standard Plan B-1. The maximum distance to invert is 5'0" with a maximum pipe diameter up to 12" for concrete pipe, 15" for CMP. The sump is a minimum of 15".
 - Type 2, catch basin inlet shall conform to Section 7-05 of the Standard Specifications and as shown on Standard Plan B-1e. Maximum pipe diameter of 24" for concrete pipe, 30" for CMP; a minimum of 8" between holes. The sump is a minimum of 24".
- INLETS

Curb inlets shall be approved by the City Engineer
- GRATE COVERS
 - Covers for catch basins and inlets shall conform to Olympic Foundry Co. #SM50G or equal for slopes less than 3%. Where slopes exceed 3%, use Olympic Foundry Co. #SM50VG. Grates shall be ductile iron and have the letters "DUCT" cast in the cover.
 - Solid covers for manholes, where permitted, shall be 24" diameter, with "DRAIN" cast in cover in 2" letters, conforming to Olympic Foundry Co. MH43, Inland Foundry No. 835, or approved equal.
 - Drainage structures not within public right-of-way shall have locking lids.
- FRAMES

Frames for catch basins and inlets shall be of cast iron or ductile iron conforming to Olympic Foundry Co. SM50 or equal. Vaned grates (SM50V) shall be installed where shown on the plans, except through-curb inlet frames which shall conform to Olympic Foundry Co. SM52 or equal.

SANITARY SEWER CONSTRUCTION

- SANITARY SEWER PIPE

Shall be ASTM C-14 (Extra Strength), rubber-gasketed concrete pipe, ductile iron pipe, or PVC ASTM D 3034, SDR per Standard Specifications. Tees shall be installed in the main where required for side and/or lateral sewers.
- SIDE SEWER PIPE

Shall be ASTM C-14 (Extra Strength), rubber gasketed concrete pipe, ductile iron pipe, or PVC ASTM D 3034, SDR 35. Minimum diameter shall be 6-inches.
- SPECIAL CONDITIONS

Ductile iron pipe will be required in areas of unstable soils, or where ground slopes exceed 20%.

- EXCAVATION AND BACKFILL

Trench backfill compacted to 95% of maximum density, shall be required wherever trench excavation is made in a paved roadway, sidewalk or any other area where minor settlement would be detrimental. Elsewhere, 85% density shall be achieved. Minimum cover shall be 4-feet.
- SIDE AND/OR LATERAL SEWERS

Shall be constructed not less than 5-feet past the property line. The minimum depth at property line is 2'6". The minimum slope is 2%. Each service requires a tee for testing. The ends shall be marked with not less than a No. 9 wire and secured to a 2" x 4" stake stenciled "SEWER" and painted white. The depth of the side and/or lateral sewer below ground is to be marked on the stake.
- MANHOLES

Shall be minimum 48" I.D. Type 1, as shown on the Standard Details. The manhole lid shall be WSDOT STND; PLAN B-25 or approved equal with "SEWER" cast on lid in 2" letters.
- BEDDING

Shall be as shown on the plans, or on Standard Plan B-11. Bedding for PVC pipe shall be 6" below and 6" above pipe, compacted to 95%. Pipe zone bedding shall be as set forth in Section 9-03.12(3).
- TESTING

Shall be done in the presence of and under the supervision of the City Engineer and/or his/her representative. The City has established the AIR TEST METHOD as the standard method for testing. The procedure as set forth in Section 7-17.3(2) of the Standard Specifications may be used for testing upon special request to the City Engineer.

CONTROL OF MATERIAL

The source of supply and a detailed list of each list of each of the materials furnished by the contractor shall be submitted to the City for approval prior to delivery. Only materials conforming to the requirements of the Standard Specifications and approved by the City shall be used in the work. Testing of materials may include tests of actual samples, manufacturer's certifications, approval of catalogue cuts, or field acceptance reports. Testing of materials for incorporation in private work shall be performed at other than City expense.

EROSION AND SEDIMENTATION CONTROL

- The implementation of these erosion sedimentation control (ESC) plans and the construction, maintenance, replacement, and upgrading of these ESC facilities is the responsibility of the permit holder/contractor until all construction is approved.
- The ESC facilities shown on this plan must be constructed in conjunction with all clearing and grading activities in such a manner as to insure that sediment-laden water does not enter the drainage system or violate applicable water standards, and must be completed prior to all other construction.
- The ESC facilities shown on this plan are the minimum requirements for anticipated site conditions. During the construction period, these ESC facilities shall be upgraded (e.g. additional sumps, relocation of ditches and silt fences) as needed for unexpected storm events. Additionally more ESC facilities may be required to ensure complete siltation control. Therefore, during the course of construction it shall be the obligation and responsibility of the contractor to address any new conditions that may be created by his activities and to provide additional facilities over and above the minimum requirements as may be needed.
- The ESC facilities shall be inspected daily during non-rainfall periods, every hour (daylight) during a rainfall event and at the end of every rainfall by the permit holder/contractor and maintained as necessary to ensure their continued functioning. In addition, temp. siltation ponds and all temp. siltation controls shall be maintained in a satisfactory condition until such time that clearing and or construction is completed, permanent drainage facilities are operational, and the potential for erosion has passed.
- Any area stripped of vegetation, including roadway embankments where no further work is anticipated for a period of seven (7) days, shall be immediately stabilized with the approved ESC methods (e.g. seeding, mulching, netting, erosion blankets, etc.).
- Any areas needing ESC measure, not requiring immediate attention, shall be addressed within seven (7) days.
- The ESC facilities on inactive sites shall be inspected and maintained a minimum of once a month or within the 48 hours following a storm event.
- At no time shall more than one foot of sediment be allowed to accumulate within a catch basin. All catch basins and conveyance lines shall be cleaned prior to paving. The cleaning operation shall not flush sediment laden water downstream system.
- Stabilized construction entrances and wash pads shall be installed at the beginning of construction and maintained for the duration of the project. Additional requirements may be required by the inspector to insure that all paved areas are kept clean of silt from construction vehicles.
- Where seeding for temporary erosion control is required, fast germinating grasses shall be applied at an appropriate rate. (e.g. annual or perennial rye applied at approximately 80 pounds per acre)
- Where straw mulch for temporary erosion control is required, it shall be applied at a minimum thickness of three inches.
- All work and materials shall be in accordance with the City of Mercer Island Standards and Specifications.
- Erosion/sedimentation controls shall be constructed in accordance with the details in the Department of Ecology Stormwater Management Manual, unless approved by the City Engineer.
- A copy of the approved erosion control plans must be on the jobsite whenever construction is in progress.
- Temporary erosion/sedimentation controls shall be installed and operating prior to any grading or land clearing.
- Wherever possible, maintain natural vegetation for silt control.
- All cut and fill slopes 5:1 (5 feet horizontal to 1 foot vertical) or steeper that will be left exposed for more than 7 days shall be protected by jute matting, plastic sheeting, mulching, or other approved stabilization methods and provide adequate runoff conveyance to intercept runoff and convey it to an approved storm drain. Exceptions as modified per the construction moratorium October 1st through April 1st.

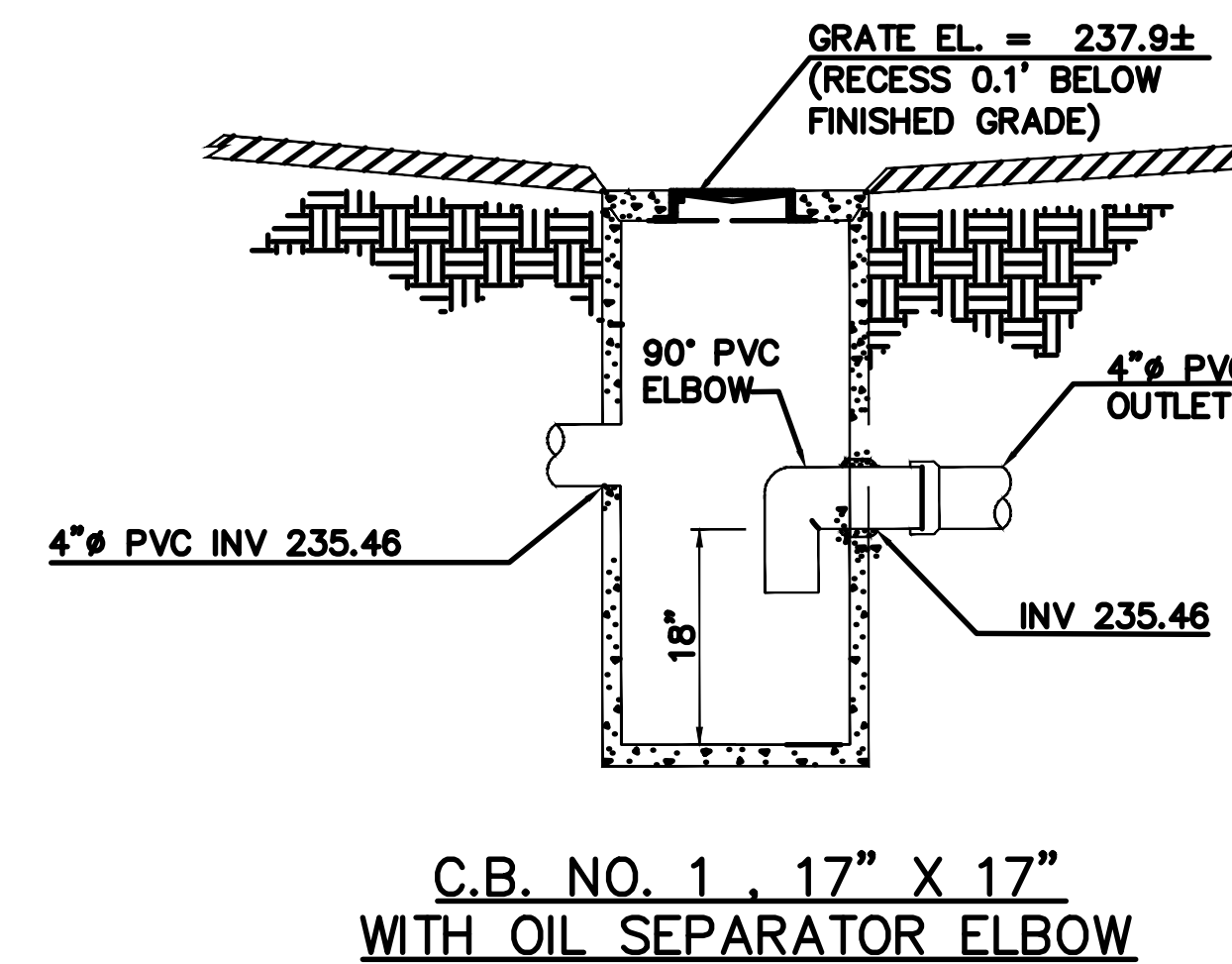
- Off-site streets must be clean at all times. If dirt is deposited on the public street, the street shall be cleaned. All vehicles shall leave the site by way of the construction vehicle entrances and shall be cleaned of mud prior to exiting onto the street. Silt shall be cleaned from all catch basins when the bottom half becomes filled with silt.
- Any catch basins collecting water from the site, whether they are on or off of the site, shall have their grates covered with filter fabric during construction.
- Washed gravel backfill adjacent to the filter fabric fences shall be replaced and the fabric cleaned if clogged by silt. All interceptor swales shall be cleaned if silt accumulation exceeds one-quarter depth.
- If any portion of the erosion/sedimentation control elements are damaged or not functioning, or if the clearing limit boundary becomes non-defined, it shall be repaired immediately.

WORK IN PUBLIC RIGHT OF WAY REQUIRES A RIGHT-OF-WAY USE PERMIT.

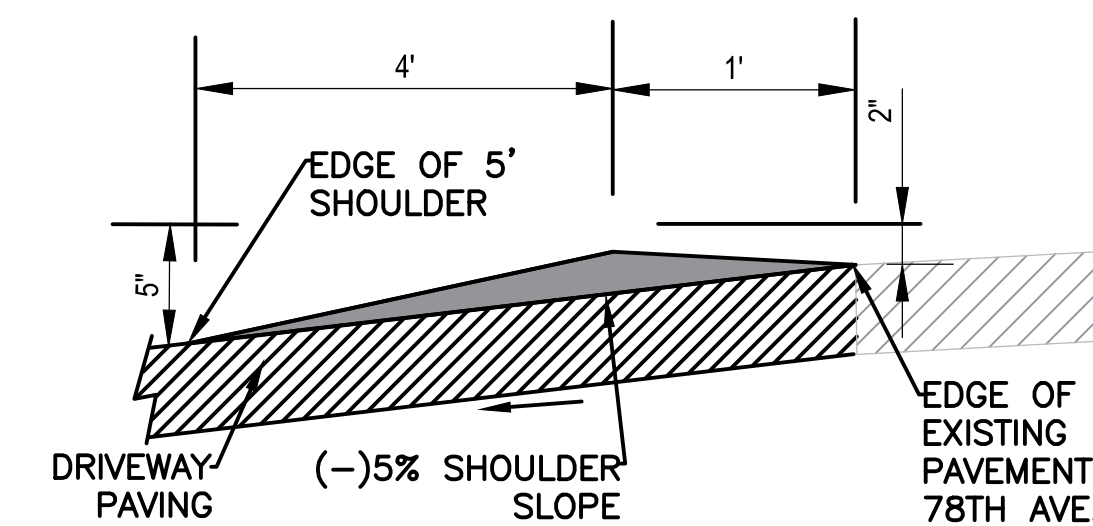
Installation of concrete driveways, trees, shrubs, irrigation, boulders, berms, walls, gates, and other improvements are NOT allowed in Public Right of Way without PRIOR approval, and an Encroachment Agreement and Right of Way permit from Senior Development Engineer.

CONTRACTOR SHALL VERIFY LOCATIONS AND DEPTHS OF UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION, CALL "ONE CALL" AT 1-800-424-5555.

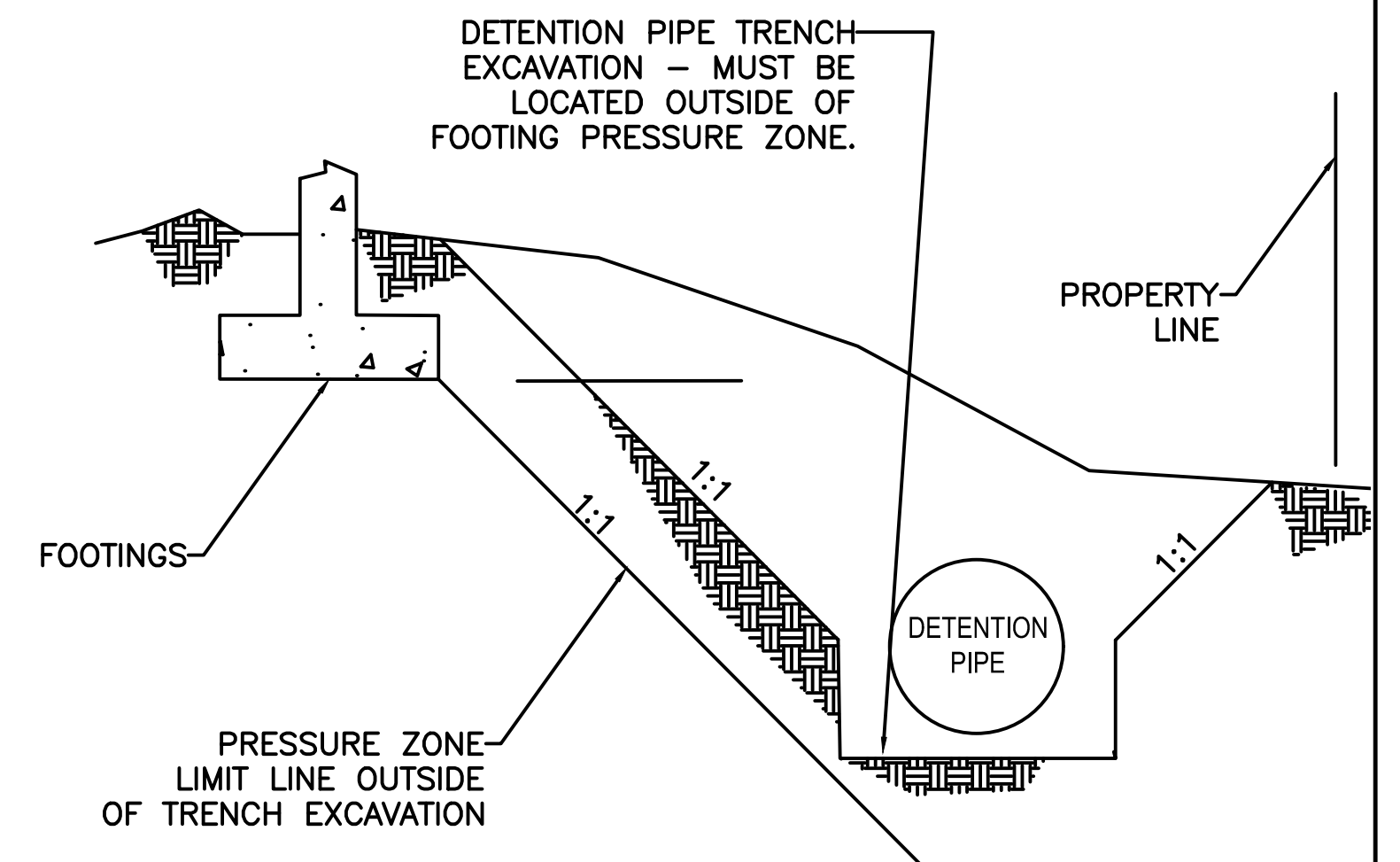
REMEMBER: Erosion control is your *FIRST* inspection.



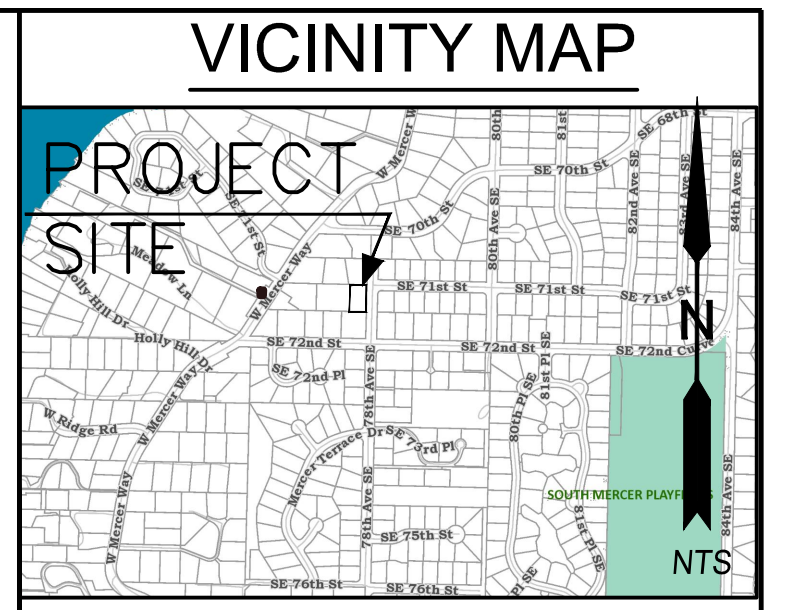
C.B. NO. 1, 17" X 17" WITH OIL SEPARATOR ELBOW



THICKENED EDGE DETAIL AT DRIVEWAY
NTS



DETENTION SYSTEM LOCATION DETAIL
NTS



HORIZONTAL CONTROL:
ASSUMED.

VERTICAL CONTROL:
NAVD88 PER GPS OBSERVATIONS IN WASHINGTON STATE REFERENCE NETWORK.

SITE BENCH MARK:
CENTERLINE MONUMENT IN INTERSECTION OF 78TH AVE SE AND SE 71ST STREET
ELEVATION 232.12

2' CONTOURS:

BASIS OF BEARING:
FOUND MONUMENTS ON 78TH AVENUE SE.

LEGAL DESCRIPTION:
LOT D, MERCER ISLAND SHORT PLAT NUMBER 11-24, RECORDED UNDER RECORDING NUMBER 8301269005, IN KING COUNTY, WASHINGTON.

REFERENCES:
SHORT PLAT VOLUME 34, PAGE 260, RECORDING NUMBER 8301269005.

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AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY!
Call before you Dig
1-800-424-5555
UNDERGROUND SERVICE UNIT

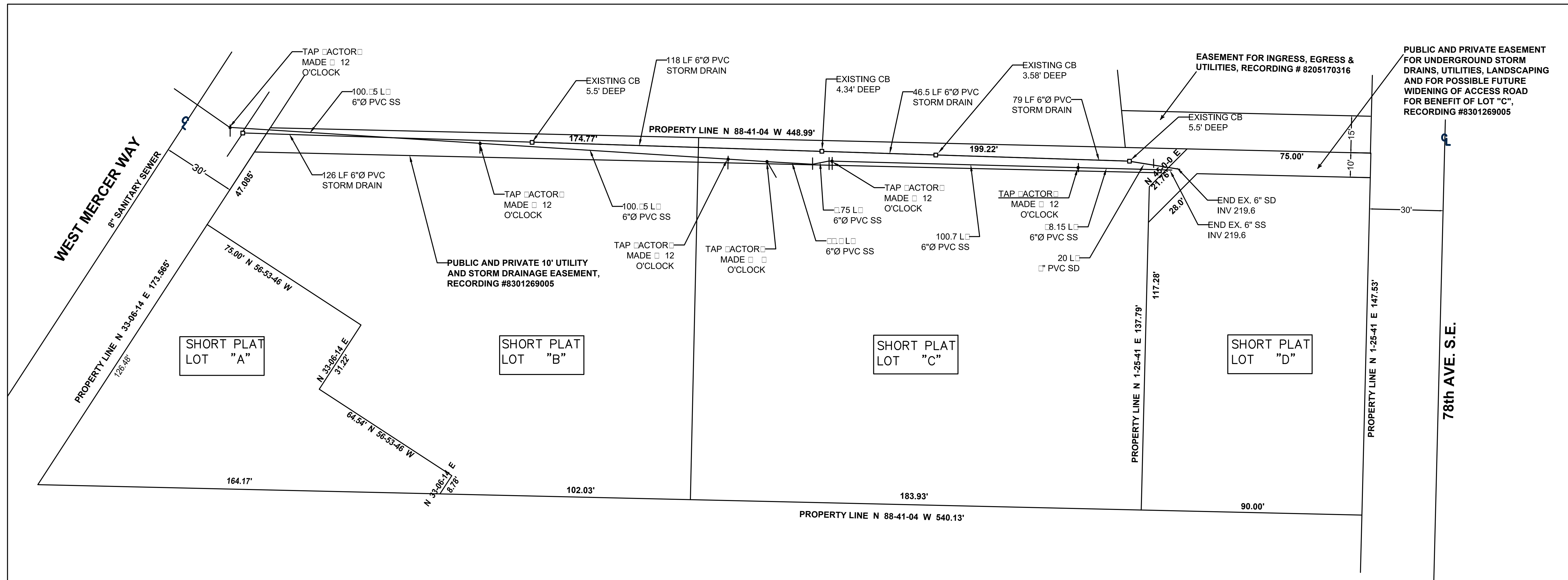
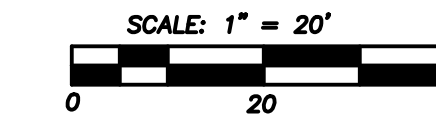
BY	DATE	APPR	DRN	REVISION

CONTACT: CINDY LARSEN, ARCHITECT BASSETT LARSEN DESIGN LLC 2704 34th AVE. SOUTH SEATTLE, WA 98144 TEL: 206-232-0602		
DRN	DSGN	CHKD

DEL ERICKSON, P.E.

15020 S.E. 46TH STREET
BELLEVUE, WA 98006
TEL: 425-747-5825

COVER SHEET PROPOSED RESIDENCE 7107 78th AVENUE S.E. MERCER ISLAND, WA		SHEET 1
DATE: JANUARY 2020	PROJECT:	OF 7
SCALE:	NA	



THIS PLAN SHEET PREPARED BY OTHERS FROM INFORMATION OBTAINED FROM VIDEO INSPECTION OF SANITARY SEWER AND STORM DRAIN AND INCLUDED HERE FOR INFORMATION ONLY.

AVOID CUTTING UNDERGROUND UTILITY LINES IT'S COSTLY
Call before you Dig
 1-800-424-5555
UNDERGROUND SERVICE USA

BY	DATE	APPR	DRN	REVISION

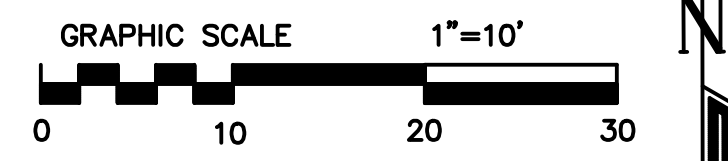
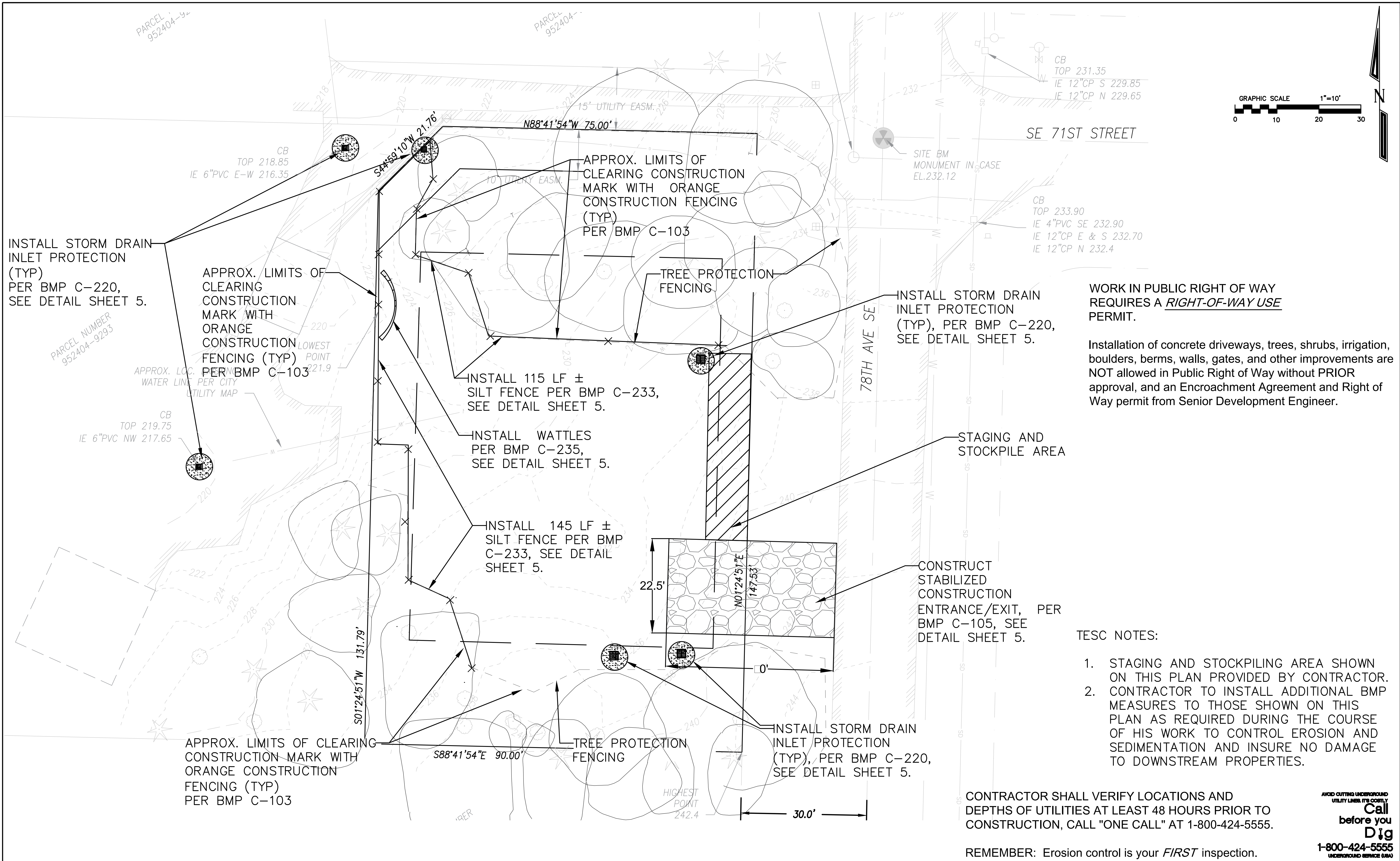
CONTACT: CINDY LARSEN, ARCHITECT
 BASSETT LARSEN DESIGN LLC
 2704 34th AVE. SOUTH
 SEATTLE, WA 98144
 TEL: 206-232-0602

DRN DSGN CHKD

UTILIT EASEMENT PLAN
 PROPOSED RESIDENCE
 7107 78th AVENUE S.E.
 MERCER ISLAND, WA

DATE: JANUARY 2020 PROJECT: SCALE: 1" = 20'

SHEET **3**
 OF **7**



WORK IN PUBLIC RIGHT OF WAY REQUIRES A RIGHT-OF-WAY USE PERMIT.

Installation of concrete driveways, trees, shrubs, irrigation, boulders, berms, walls, gates, and other improvements are NOT allowed in Public Right of Way without PRIOR approval, and an Encroachment Agreement and Right of Way permit from Senior Development Engineer.

TESC NOTES:

1. STAGING AND STOCKPILING AREA SHOWN ON THIS PLAN PROVIDED BY CONTRACTOR.
2. CONTRACTOR TO INSTALL ADDITIONAL BMP MEASURES TO THOSE SHOWN ON THIS PLAN AS REQUIRED DURING THE COURSE OF HIS WORK TO CONTROL EROSION AND SEDIMENTATION AND INSURE NO DAMAGE TO DOWNSTREAM PROPERTIES.

CONTRACTOR SHALL VERIFY LOCATIONS AND DEPTHS OF UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION, CALL "ONE CALL" AT 1-800-424-5555.

REMEMBER: Erosion control is your *FIRST* inspection.

AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.
Call before you Dig
 1-800-424-5555
UNDERGROUND SERVICE USA

BY	DATE	APPR	DRN	REVISION


CONTACT: CINDY LARSEN, ARCHITECT
 BASSETT LARSEN DESIGN LLC
 2704 34th AVE. SOUTH
 SEATTLE, WA 98144
 TEL: 206-232-0602

DEL ERICKSON, P.E.



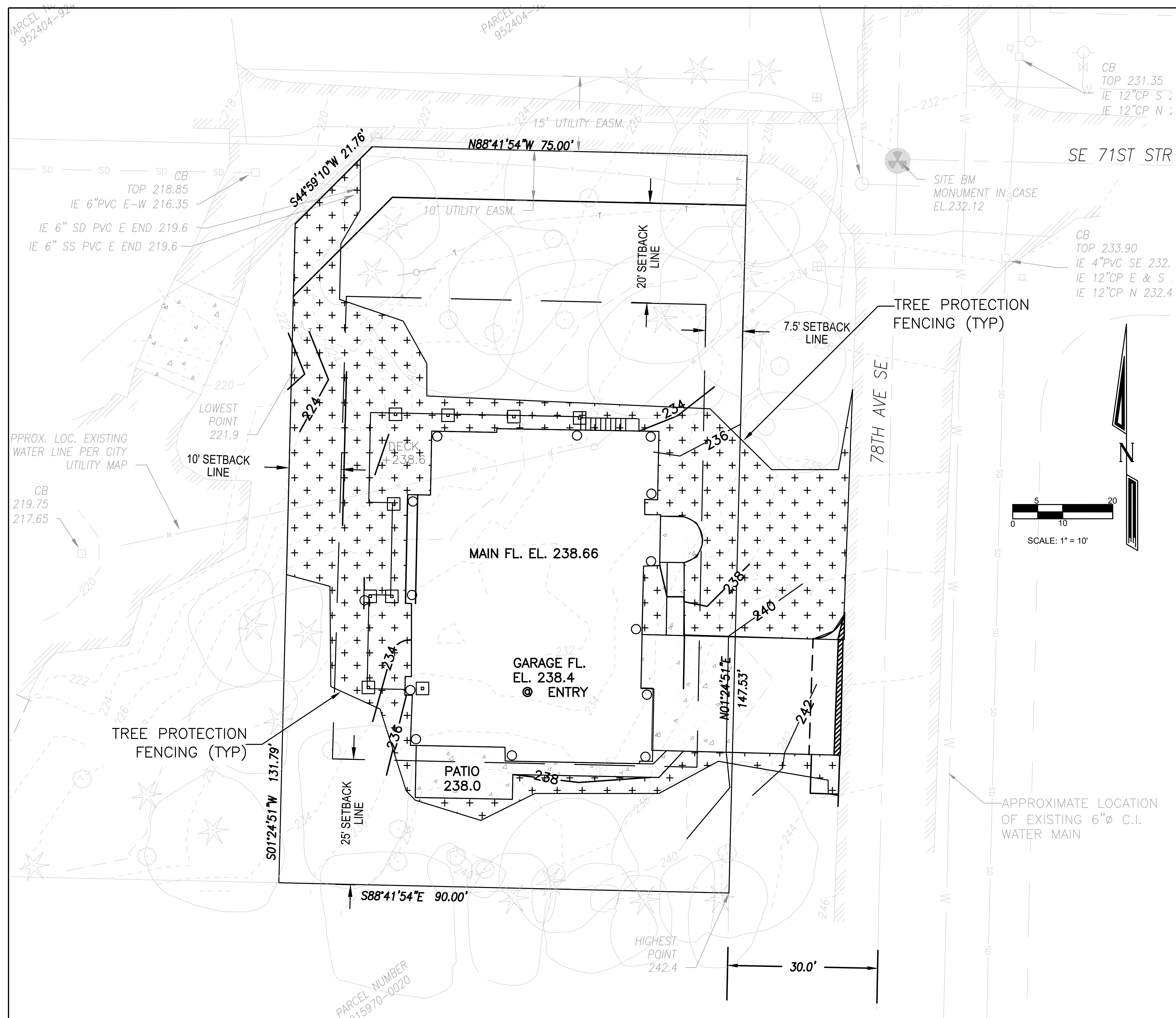
15020 S.E. 46TH STREET
 BELLEVUE, WA 98006
 TEL: 425-747-5825

TESC PLAN
PROPOSED RESIDENCE
 7107 78th AVE. S.E.
 MERCER ISLAND, WA



DATE: JANUARY 2020 PROJECT: SCALE: 1" = 10'

SHEET **4** OF **7**



NOTES:

- EXCAVATED SOIL MAY BE REUSED FOR SOIL AMENDMENT AND REDISTRIBUTED.
- WOOD CHIPS FROM TREE REMOVAL MAY BE USED TO COVER EXCAVATED AREAS DURING CONSTRUCTION, AND/OR POST CONSTRUCTION ON THE FOREST FLOOR (3" TO 4" THICK)

LEGEND	AREA
POST CONSTRUCTION SOIL AMENDMENT (8" LOOSE SOIL, 2" TO 4" MULCH)	3459 SF

AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY!
Call before you Dig
1-800-424-5555
UNDERGROUND SERVICE (USA)

BY	DATE	APPR	DRN	REVISION
1	JAN 2020	DE	DG	REVISED PER CITY REVIEW COMMENTS

CONTACT: CINDY LARSEN, ARCHITECT
BASSETT LARSEN DESIGN LLC
2704 34th AVE. SOUTH
SEATTLE, WA 98144
TEL: 206-232-0602

DRN DSGN CHKD

DEL ERICKSON, P.E.

15020 S.E. 46TH STREET
BELLEVUE, WA 98006
TEL: 425-747-5825

SOIL AMENDMENT PLAN
PROPOSED RESIDENCE
7107 78th AVENUE S.E.
MERCER ISLAND, WA

DATE: JANUARY 2020 PROJECT: SCALE: 1" = 10'

SHEET **7**
OF **7**

1
TREE INVENTORY, BY TOM QUIGLEY, CERTIFIED ARBORIST, SEPTEMBER 2019
ALSO SEE ARBORIST'S REPORT DATED 11-6-19, AND ADDENDUM DATED 1-30-20

Site address: 7107 78th Ave SE, Mercer Island

Tree #	Off-site	Species	DBH"	Dripline Radius'				Cndtn	Comments	Designation	Rmv	Rtn
				N	S	E	W					
414		Acer macrophyllum, Big leaf maple	18.7	24	12	24	20	Good		Large		X
415		Ilex, English holly	7.3	8	8	8	8	Good		Invasive	X	
416	ROW	Pseudotsuga menziesii, Douglas fir	32.1	18	15	18	18	Good	Right of way (ROW), Exceptional by size.	ROW		X
417	ROW	Crataegus Lavellii, Washington hawthorne	0.0	12	12	15	7	Good	ROW	ROW		X
418	ROW	Pseudotsuga menziesii, Douglas fir	11.1	12	15	12	12	Good	ROW	ROW		X
419	ROW	Quercus, Oregon White Oak	9.2	15	15	15	4	Good	ROW, Exceptional by size.	ROW		X
420	ROW	Cercidiphyllum japonica, Katsura	8.4	8	0	15	0	Good	ROW, diameter measured at 3.6" above grade; low branching.	ROW		X
421		Thuja Plicata, Western red cedar	6.9	8	8	8	8	Good		Non-reg	X	
422		Cupressocypress leylandii, Leyland cypress	9.9	10	10	10	10	Good		Non-reg	X	
423		Acer macrophyllum, Big leaf maple	13.4	6	15	15	15	Fair	12" from tree #424	Large	X	
424		Acer macrophyllum, Big leaf maple	14.1	15	6	15	15	Fair	12" from tree #423	Large	X	
425		Acer macrophyllum, Big leaf maple	7.3	12	12	0	18	Poor	Poor condition with dead wood and missing structure.	Non-reg	X	
426		Acer macrophyllum, Big leaf maple	13.8	15	18	4	20	Poor	Remove for construction	Large	X	
427		Cupressocypress leylandii, Leyland cypress	8.4	4	10	10	10	Good	Remove for construction	Non-reg	X	
428	ROW	Cupressocypress leylandii, Leyland cypress	8.8	4	10	10	10	Good	ROW, non-regulated, poor species selection for ROW tree.	ROW, non-reg	X	
429		Acer macrophyllum, Big leaf maple	12.2	15	0	15	15	Good	On the property line?	Large	X	
430		Acer macrophyllum, Big leaf maple	18.3	15	15	18	18	Good	12" from tree #431	Large	X	
431		Acer macrophyllum, Big leaf maple	12.2	0	24	18	0	Fair	12" from tree #430, remove for construction access	Large	X	
432		Acer macrophyllum, Big leaf maple	5.7	10	10	10	10	Fair	Remove for construction access	Non-reg	X	
433		Acer macrophyllum, Big leaf maple	15.7	15	24	18	20	fair	Remove for construction	Large	X	
434		Pseudotsuga menziesii, Douglas fir	12.0	12	12	12	0	Poor	25% Live Crown Ratio (LCR) estimated, remove for construction	Large	X	
435		Acer macrophyllum, Big leaf maple	15.7	24	24	10	24	Good	Remove for construction	Large	X	
436		Ilex, English holly	0.0	8	8	8	8	Good	2-stem at 4.5' above grade (1.0, 1.6), invasive species	Invasive	X	
437		Acer macrophyllum, Big leaf maple	8.4	18	12	0	18	good	Remove for driveway	Non-reg	X	
438		Acer macrophyllum, Big leaf maple	12.6	12	2	20	20	Good	Outcompeted by #437 located 2' away, remove for driveway	Large	X	
439	ROW	Pseudotsuga menziesii, Douglas fir	7.3	8	0	10	0	Poor	ROW, leans 20 degrees east, roots pulling from the ground	ROW, non-reg	X	
440		Acer macrophyllum, Big leaf maple	23.7	18	20	18	24	Fair	Buttress wood decay, deadwood in canopy	Large	X	
441	X	Thuja Plicata, Western red cedar	11.8	10	15	12	4	Fair	Off-site, dead top Less dense due to overhead canopy of #440	Offsite, large	X	
442	X	Pseudotsuga menziesii, Douglas fir	6.9	8	8	8	8	Good	Off-site, mis-shapen with crooked trunk	Off-site, non-reg	X	
443	X	Pseudotsuga menziesii, Douglas fir	12.2	6	15	8	8	Good	Off-site, leans south	Offsite, large	X	
444	X	Pseudotsuga menziesii, Douglas fir	24.1	12	18	18	18	Good	Off-site, will need root protection	Offsite, large	X	
445	X	Pseudotsuga menziesii, Douglas fir	7.3	4	4	4	4	Poor	Off-site, very little foliage	Off-site, non-reg	X	
446		Acer macrophyllum, Big leaf maple	14.5	18	15	18	18	Good		Large	X	
447		Pseudotsuga menziesii, Douglas fir	7.6	4	10	0	6	Poor	Appears to be on property line	Non-reg	X	
448	X	Pseudotsuga menziesii, Douglas fir	21.0	12	20	15	15	Good	Off-site, will need root protection	Offsite, large	X	
449		Acer macrophyllum, Big leaf maple	11.5	2	8	4	8	Poor	Dead top, leans SW away from subject site	Large	X	
450		Acer macrophyllum, Big leaf maple	18.3	0	10	0	15	Poor	No canopy North or East. Leans SW away from subject site	Large	X	
451		Acer macrophyllum, Big leaf maple	10.3	0	0	0	0	Dead	Dead, High probability of failure	Dead	X	
452		Acer macrophyllum, Big leaf maple	16.4	0	24	15	20	Poor	Dead-wood in canopy, tree leans SW away from subject site	Large	X	
453		Acer macrophyllum, Big leaf maple	12.2	15	12	12	6	Poor	Buttress wood decay, High likelihood of failure	Large	X	
454		Acer macrophyllum, Big leaf maple	9.2	0	0	0	0	Dead	Snagged at 30', remove for construction	Dead snag, Non-reg	X	
455		Acer macrophyllum, Big leaf maple	11.5	15	8	8	15	Good	Remove for construction	Large	X	
456		Acer macrophyllum, Big leaf maple	18.0	30	12	15	30	Good	Remove for construction	Large	X	
457		Acer macrophyllum, Big leaf maple	10.3	12	20	0	20	Good	Retain with tree protection	Large	X	
458		Acer macrophyllum, Big leaf maple	12.6	6	6	0	6	Poor	Remove for construction	Large	X	
459		Arbutus, Madrone	0.0	0	0	0	0	Dead	Dead, snagged at 20' height, remove for construction	Dead snag	X	
460		Acer macrophyllum, Big leaf maple	17.2	20	18	0	24	Good		Large	X	
461	X	Acer macrophyllum, Big leaf maple	12.2	8	12	0	18	Poor	Off-site	Offsite, large	X	
462	X	Sequoiadendron giganteum, Giant sequoia	21.8	12	12	4	12	Good	Off-site	Offsite, large	X	
463		Sequoiadendron giganteum, Giant sequoia	10.7	10	15	4	15	Good	Retain with tree protection	Large	X	
464		Sequoiadendron giganteum, Giant sequoia	10.3	8	6	4	10	Fair	Under canopy, less vigorous, less dense, remove for construction	Large	X	
465		Pseudotsuga menziesii, Douglas fir	19.5	12	12	12	12	Poor	Lean, self corrected, Live Crown Ratio (LCR) of 20%, dead lower limbs	Large	X	
466		Cedrus deodora, Deodar cedar	6.1	8	8	6	8	Fair	Too much shade for Cedrus genus	Non-reg	X	
467		Tsuga heterophylla	6.5	8	8	8	8	Fair	Non-regulated, remove for construction	Non-reg	X	
468		Tsuga heterophylla	0.0	8	8	8	8	Good	2-stem (1.7, 1.2) Co-joined at base, dead or defoliated tops.	Non-reg	X	
469		Acer macrophyllum, Big leaf maple	20.6	15	20	18	24	Good	Remove for construction	Large	X	
470		Thuja Plicata, Western red cedar	8.8	4	12	6	10	Good	Densely planted area, heavy shade, small canopy, less dense	Non-reg	X	
471		Acer macrophyllum, Big leaf maple	19.1	24	15	12	24	Good	Retain with tree protection, monitor soil disruption	Large	X	
472		Acer macrophyllum, Big leaf maple	13.0	18	24	15	15	Good	Shared canopy area.	Large	X	

473		Pseudotsuga menziesii, Douglas fir	12.2	10	12	0	18	Good	Under canopy of #471, Remove for storm water tank	Large	X	
474		Thuja Plicata, Western red cedar	11.1	12	12	6	1	Good	Under canopy of #473 and 475.	Large	X	
475		Pseudotsuga menziesii, Douglas fir	11.5	15	10	8	12	Good	Retain with tree protection, monitor soil disruption	Large	X	
477		Acer macrophyllum, Big leaf maple	14.1	0	15	10	24	Good	Retain	Large	X	
478		Acer macrophyllum, Big leaf maple	19.1	24	12	18	24	Good	Touches canopy of #414.	Large	X	
479		Thuja Plicata, Western red cedar	8.0	10	6	10	10	Fair		Non-reg	X	
480		Acer macrophyllum, Big leaf maple	13.4	15	18	15	18	Good	Dead-wood in canopy typical of species.	Large	X	
481		Acer macrophyllum, Big leaf maple	13.0	15	15	15	15	Good	Dead-wood in canopy typical of species.	Large	X	
482		Thuja Plicata, Western red cedar	5.7	0	0	0	0	Good	Defoliated top, very little foliage.	Non-reg	X	
483		Pseudotsuga menziesii, Douglas fir	6.5	4	0	0	4	Poor	Out-competed, very low vigor. Remove to make room for a new tree.	Non-reg	X	
484		Pseudotsuga menziesii, Douglas fir	19.9	15	15	10	15	Poor/Dead	Dead-wood in lower limbs, full top growth.	Large	X	
485	X	Sequoiadendron giganteum, Giant sequoia	9.6	8	8	8	8	Good	Located off-site.	Offsite, large	X	
Revised 11/7/2019:												
71 trees assessed												
16 trees off-site or in ROW												
3 dead trees on-site												
2 Invasive holly trees on-site, both non-regulated.												
55 assessed trees on-site, including dead and non-regulated												
Regulated Trees:												
37 trees 10.0 or larger on-site												
18 trees to be removed, 19 tree to be retained												
51% retained trees												
Right of Way (ROW):												
Two (2) unregulated trees to be removed: #428, #439												

REVISIONS

1	PLAN REVIEW
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LANIER - PFLEGER RESIDENCE
 7107 - 78TH AVE. S.E.
 MERCER ISLAND, WA 98040

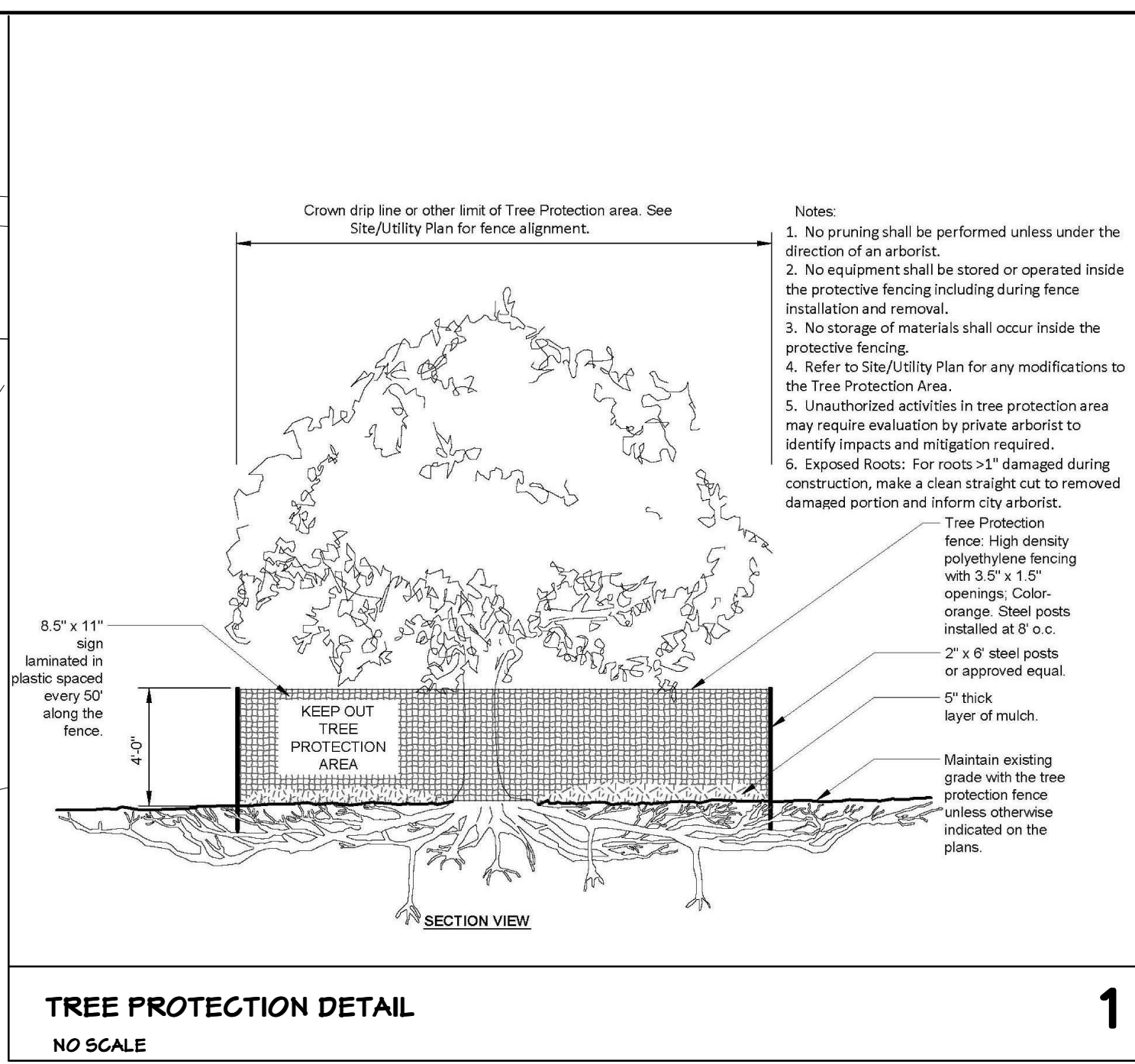
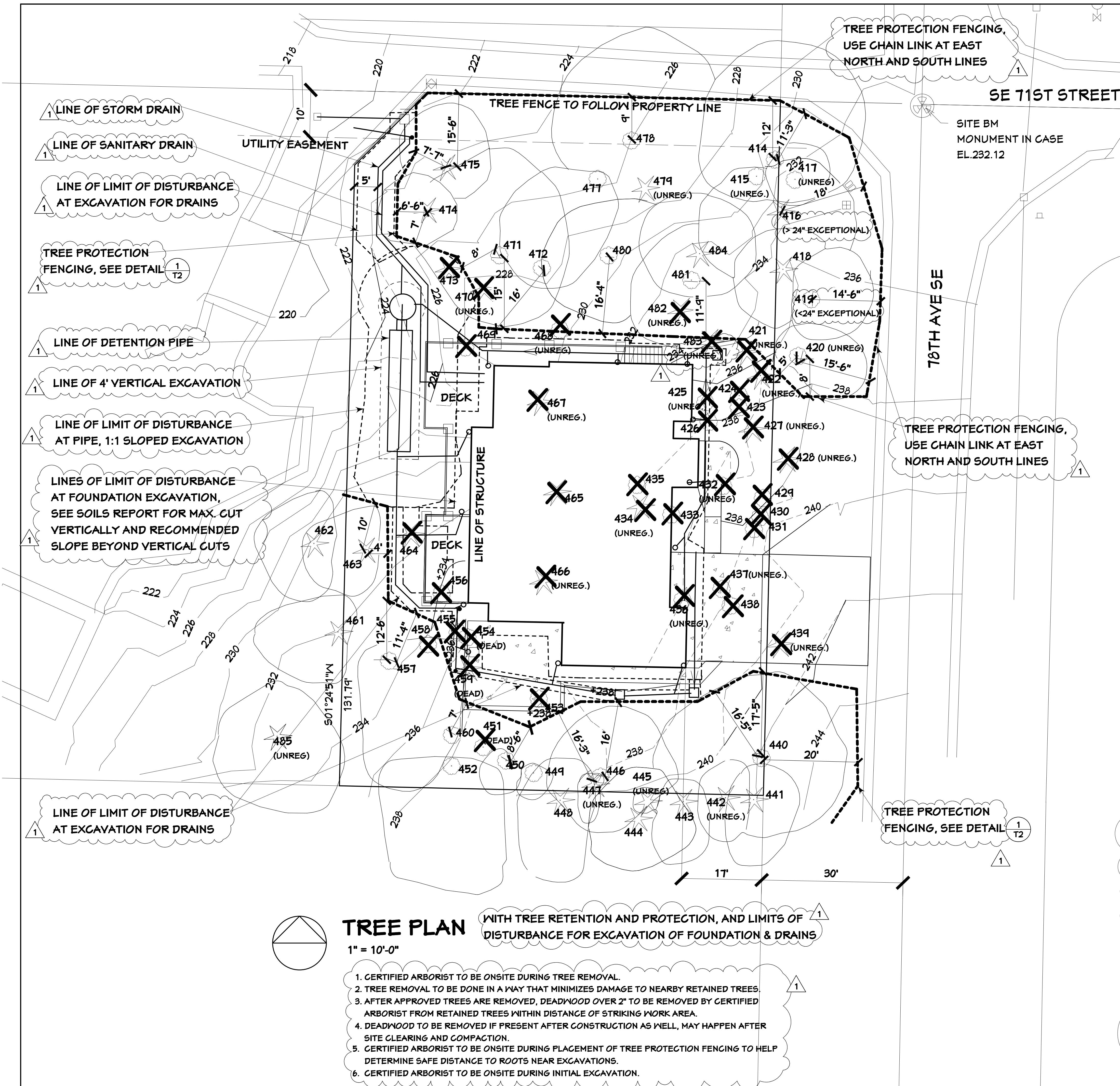
BASSETT LARSEN DESIGN LLC

2704 34TH AVENUE SOUTH, SEATTLE, WA 98144 . (206) 232-0602

SHEET TITLE
 TREE INVENTORY

SHEET **T1**
 OF 3 SHEETS

DATE 10-25-2019



REVISIONS

1	PLAN REVIEW
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Notes:

- No pruning shall be performed unless under the direction of an arborist.
- No equipment shall be stored or operated inside the protective fencing including during fence installation and removal.
- No storage of materials shall occur inside the protective fencing.
- Refer to Site/Utility Plan for any modifications to the Tree Protection Area.
- Unauthorized activities in tree protection area may require evaluation by private arborist to identify impacts and mitigation required.
- Exposed Roots: For roots > 1" diameter during construction, make a clean straight cut to removed damaged portion and inform city arborist.

Tree Protection Fence: High density polyethylene fencing with 3.5" x 1.5" openings. Colour: orange. Steel posts installed at 8' o.c. 2" x 8" steel posts or approved equal. 5" thick layer of mulch.

Maintain existing grade with the tree protection fence unless otherwise indicated on the plans.

TREE PROTECTION DETAIL 1
NO SCALE

ADDITIONAL TREE PRECAUTIONS AND REQUIREMENTS
 (REFER TO ARBORIST REPORT, 11-6-2019, AND ADDENDUM 1-30-2020, BY TOM GUILLEY)

THE FOLLOWING MEASURES SHOULD BE ADOPTED ALONG WITH OTHER STANDARD PRECAUTIONS:

- A certified arborist, not employed by the tree removal contractor, shall be on-site during all tree removal or pruning activity. Pruning shall include the removal of dead limbs or obvious 'hangers' throughout the site, with special attention to trees located immediately around the work zone. 'Hangers' are defined as limbs that have detached from the main structure but have become lodged in the tree, often referred to as 'widow-makers'.
- Tree Protection Fencing (TPF) should be installed after the removal of the trees designated for removal but before any soil disturbance or excavation work. The on-site arborist shall verify the proper location of the TPF, prior to, or in coordination with the fencing contractor.
- TPF should consist of 6' tall chain-link fencing panels placed in concrete blocks, installed to create a tree protection area as detailed in Mercer Island Tree Protection Fencing pdf. Signage should be placed every 20' along the fence-line stating that the area is a 'Tree Protection Area' and that 'No soils, Building Materials, or Equipment is to be Stored Inside the Protection Area'. Signage should be 8.5" x 11" and made to be weather-resistant.
- A certified arborist shall be on-site during initial excavation that approaches TPF or any excavation that will occur under the drip-line or canopy of any tree. When roots are exposed by excavation, care should be taken to cut or prune these exposed roots, using proper pruning equipment and practices. Pruning practices are as detailed in ANSI A300 (Part 1)-2011 Pruning and ANSI A300 (Parts)-2013 Root Management.
- Exposed roots and severed roots should be covered with moist soil or soil/compost mixture as soon as is reasonable following excavation and completion of the associated work in the excavated area.
- The tree protection detail provided by the City requires 5" of mulch inside tree protection areas. This would not be needed on this site, as the entire site is covered with years of organic debris build-up from the trees natural shedding processes. If practical, the chipped-up limb and tree chips could be spread on-site for further soil enhancement and carbon sequestration.
- Replacement trees should be planted per Mercer Island planting practices. The location of the replacement trees should mimic a natural planting. Planting should occur in the late fall or winter months in order to provide an initial period of cool, moist soil conditions for optimum planting conditions.
- If this work is undertaken in the summer months, additional hydration of impacted root systems would be beneficial to the impacted tree(s). Drip irrigation would be the best approach.

TREE PLAN WITH TREE RETENTION AND PROTECTION, AND LIMITS OF DISTURBANCE FOR EXCAVATION OF FOUNDATION & DRAINS

- 1" = 10'-0"
- CERTIFIED ARBORIST TO BE ONSITE DURING TREE REMOVAL.
 - TREE REMOVAL TO BE DONE IN A WAY THAT MINIMIZES DAMAGE TO NEARBY RETAINED TREES.
 - AFTER APPROVED TREES ARE REMOVED, DEADWOOD OVER 2" TO BE REMOVED BY CERTIFIED ARBORIST FROM RETAINED TREES WITHIN DISTANCE OF STRIKING WORK AREA.
 - DEADWOOD TO BE REMOVED IF PRESENT AFTER CONSTRUCTION AS WELL, MAY HAPPEN AFTER SITE CLEARING AND COMPACTION.
 - CERTIFIED ARBORIST TO BE ONSITE DURING PLACEMENT OF TREE PROTECTION FENCING TO HELP DETERMINE SAFE DISTANCE TO ROOTS NEAR EXCAVATIONS.
 - CERTIFIED ARBORIST TO BE ONSITE DURING INITIAL EXCAVATION.

REVISIONS

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PROJECT INFORMATION

LANIER - PFLEGER RESIDENCE
 1107 - 10TH AVE. S.E.
 MERCER ISLAND, WA 98040

BASSETT LARSEN DESIGN LLC
 2704 34TH AVENUE SOUTH, SEATTLE, WA 98144 . (206) 232-0602

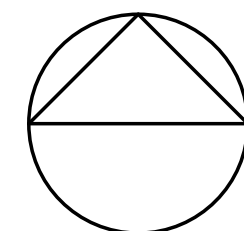
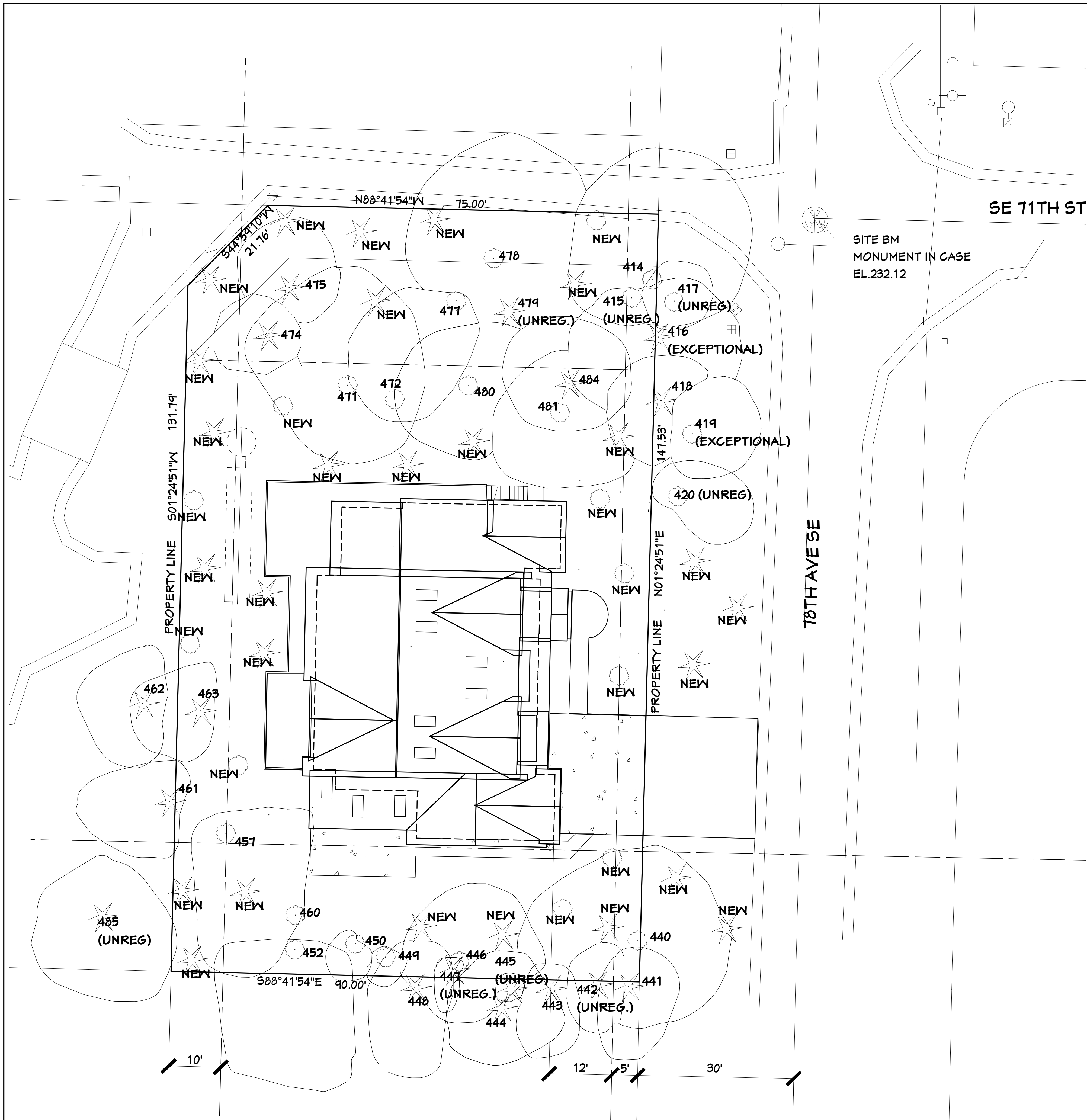
SHEET TITLE

REPLANTING PLAN

SHEET **T3**

OF **3** SHEETS

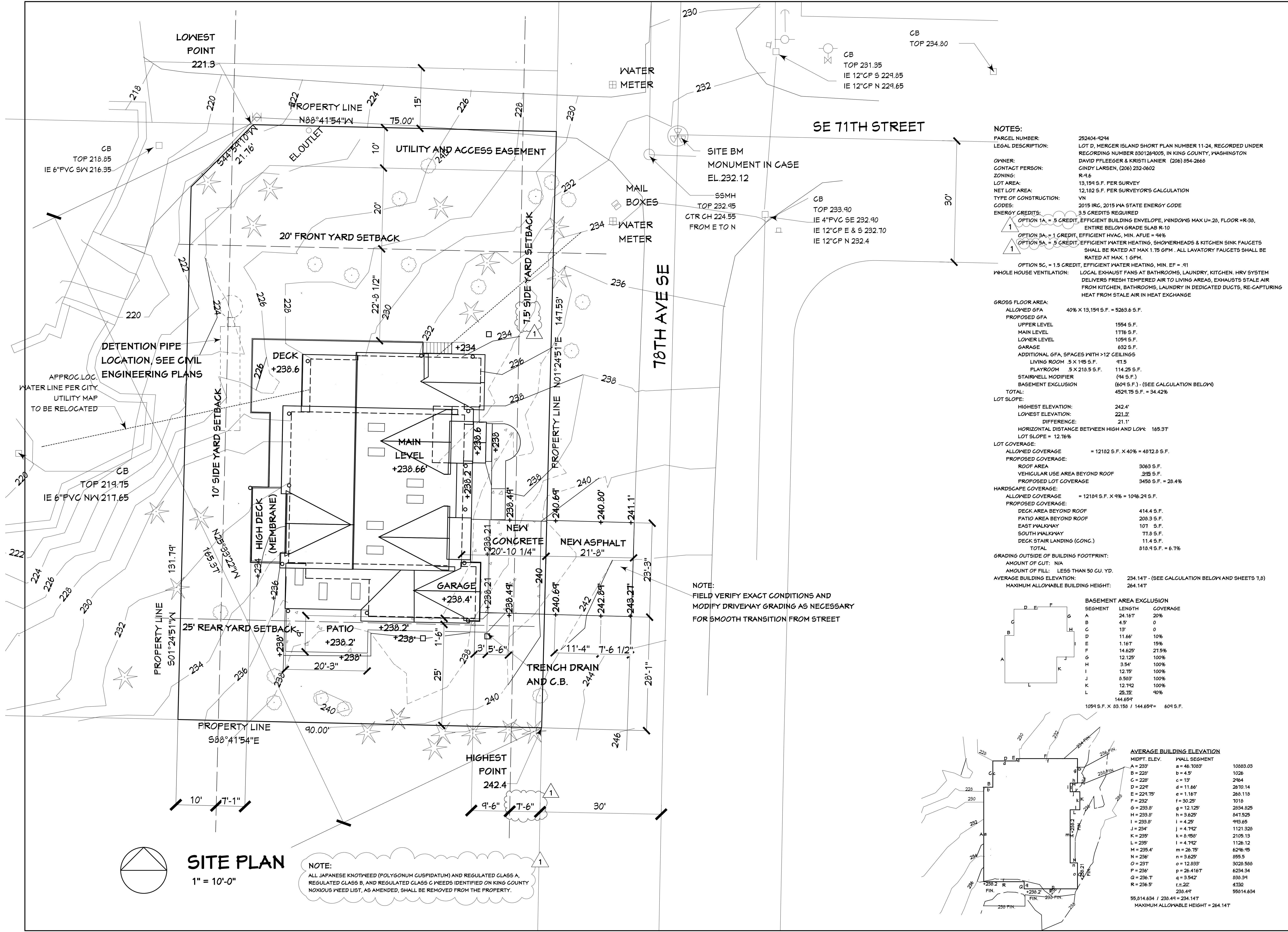
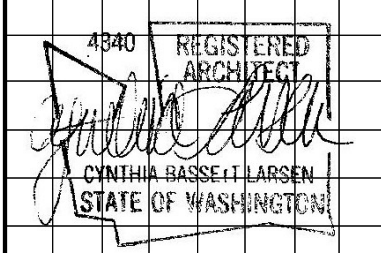
DATE 10-25-2019



REPLANTING PLAN

1" = 10'-0"

- NEW REPLACEMENT TREE, EVERGREEN - 26 TREES
- NEW REPLACEMENT TREE, DECIDUOUS - 10 TREES



NOTES:

PARGEL NUMBER: 252404-4294
LEGAL DESCRIPTION: LOT D, MERGER ISLAND SHORT PLAN NUMBER 11-24, RECORDED UNDER RECORDING NUMBER 8301269005, IN KING COUNTY, WASHINGTON
OWNER: DAVID PFLEEGER & KRISTI LANIER (206) 854-2668
CONTACT PERSON: CINDY LARSEN, (206) 232-0602
ZONING: R-9.6
LOT AREA: 13,159 S.F. PER SURVEY
NET LOT AREA: 12,182 S.F. PER SURVEYOR'S CALCULATION
TYPE OF CONSTRUCTION: VN
CODES: 2015 IRC, 2015 IWA STATE ENERGY CODE
ENERGY CREDITS: 3.5 CREDITS REQUIRED

OPTION 1A, = 5 CREDIT, EFFICIENT BUILDING ENVELOPE, WINDOWS MAX U=28, FLOOR = R-38, ENTIRE BELOW GRADE SLAB R-10
OPTION 3A, = 1 CREDIT, EFFICIENT HVAC, MIN. AFUE = 94%
OPTION 5A, = 5 CREDIT, EFFICIENT WATER HEATING, SHOWERHEADS & KITCHEN SINK FAUCETS SHALL BE RATED AT MAX 1.75 GPM. ALL LAVATORY FAUCETS SHALL BE RATED AT MAX. 1 GPM.
OPTION 5C, = 1.5 CREDIT, EFFICIENT WATER HEATING, MIN. EF = .91

WHOLE HOUSE VENTILATION: LOCAL EXHAUST FANS AT BATHROOMS, LAUNDRY, KITCHEN. HRV SYSTEM DELIVERS FRESH TEMPERED AIR TO LIVING AREAS, EXHAUSTS STALE AIR FROM KITCHEN, BATHROOMS, LAUNDRY IN DEDICATED DUCTS, RE-CAPTURING HEAT FROM STALE AIR IN HEAT EXCHANGE

GROSS FLOOR AREA:
ALLOWED GFA 40% X 13,159 S.F. = 5263.6 S.F.
PROPOSED GFA
UPPER LEVEL 1554 S.F.
MAIN LEVEL 1776 S.F.
LOWER LEVEL 1059 S.F.
GARAGE 632 S.F.
ADDITIONAL GFA, SPACES WITH >12' CEILINGS
LIVING ROOM 5 X 145 S.F. 47.5
PLAYROOM 5 X 218.5 S.F. 114.25 S.F.
STAIRWELL MODIFIER (94 S.F.) (94 S.F.)
BASEMENT EXCLUSION (604 S.F.) - (SEE CALCULATION BELOW)
TOTAL: 4524.75 S.F. = 34.42%

LOT SLOPE:
HIGHEST ELEVATION: 242.4'
LOWEST ELEVATION: 221.3'
DIFFERENCE: 21.1'
HORIZONTAL DISTANCE BETWEEN HIGH AND LOW: 165.37'
LOT SLOPE = 12.76%

LOT COVERAGE:
ALLOWED COVERAGE = 12182 S.F. X 40% = 4872.8 S.F.
PROPOSED COVERAGE:
ROOF AREA 3063 S.F.
VEHICULAR USE AREA BEYOND ROOF 345 S.F.
PROPOSED LOT COVERAGE 3458 S.F. = 28.4%

HARDSCAPE COVERAGE:
ALLOWED COVERAGE = 12184 S.F. X 4% = 1046.24 S.F.
PROPOSED COVERAGE:
DECK AREA BEYOND ROOF 414.4 S.F.
PATIO AREA BEYOND ROOF 208.3 S.F.
EAST WALKWAY 107 S.F.
SOUTH WALKWAY 77.8 S.F.
DECK STAIR LANDING (CONC.) 11.4 S.F.
TOTAL 818.9 S.F. = 6.7%

GRADING OUTSIDE OF BUILDING FOOTPRINT:
AMOUNT OF CUT: N/A
AMOUNT OF FILL: LESS THAN 50 CU. YD.
AVERAGE BUILDING ELEVATION: 234.147' - (SEE CALCULATION BELOW AND SHEETS 1,8)
MAXIMUM ALLOWABLE BUILDING HEIGHT: 264.147'

BASEMENT AREA EXCLUSION

SEGMENT	LENGTH	COVERAGE
A	24.167'	20%
B	4.5'	0
C	13'	0
D	11.66'	10%
E	1.167'	15%
F	14.625'	27.5%
G	12.125'	100%
H	3.54'	100%
I	12.75'	100%
J	8.533'	100%
K	12.712'	100%
L	25.12'	90%
	144.659'	

1059 S.F. X 83.158 / 144.659' = 604 S.F.

AVERAGE BUILDING ELEVATION

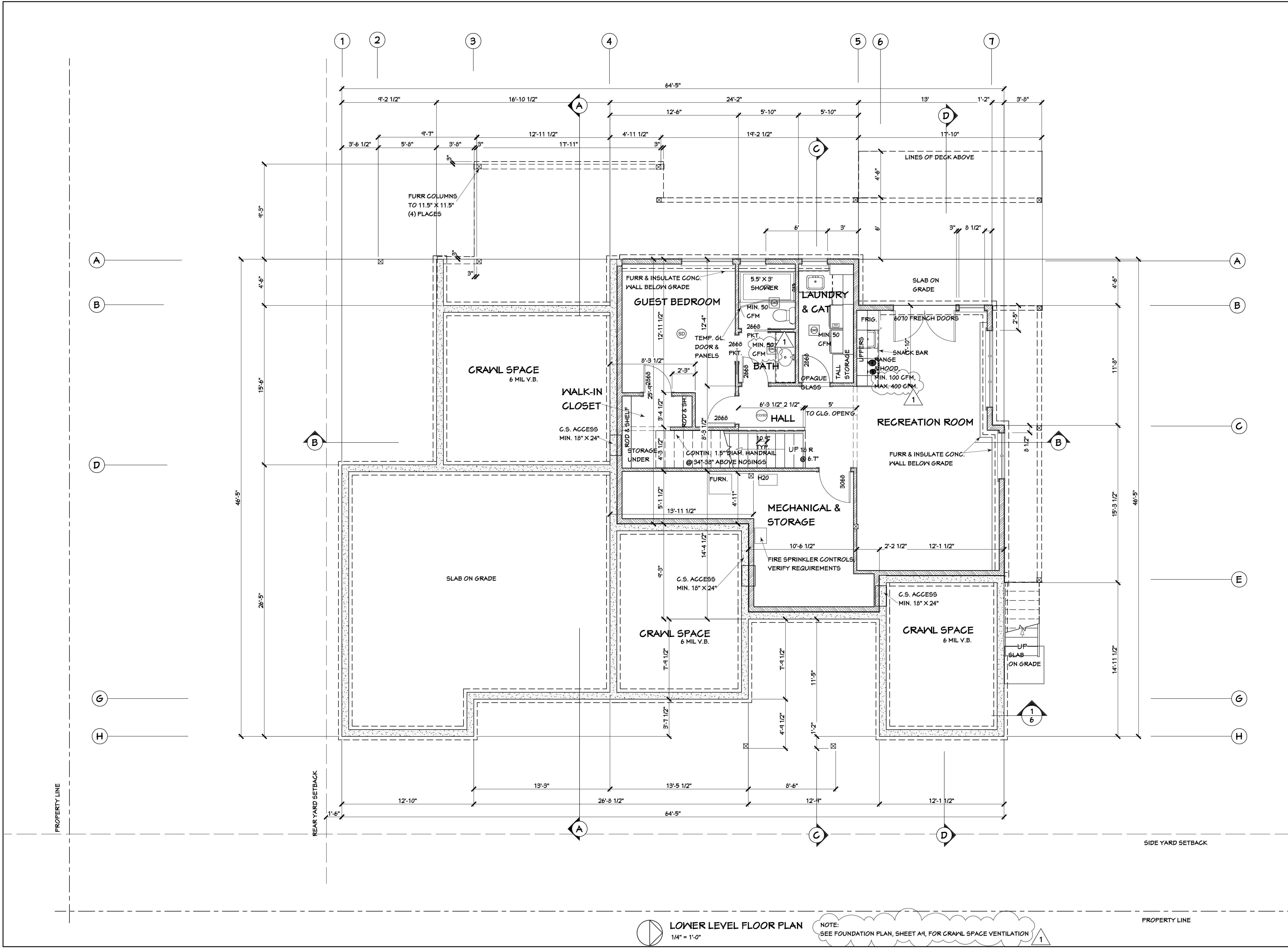
MIDPT. ELEV.	WALL SEGMENT	
A = 233'	a = 46.7083'	10883.03
B = 228'	b = 4.5'	1026
C = 228'	c = 13'	2984
D = 224'	d = 11.66'	2670.14
E = 224.75'	e = 1.167'	268.118
F = 232'	f = 30.25'	7018
G = 233.3'	g = 12.125'	2834.825
H = 233.8'	h = 3.625'	847.525
I = 233.8'	i = 4.25'	993.65
J = 234'	j = 4.742'	1121.328
K = 235'	k = 8.458'	2105.13
L = 235'	l = 4.742'	1126.12
M = 235.4'	m = 26.75'	6246.45
N = 236'	n = 3.625'	855.5
O = 237'	o = 12.833'	3028.588
P = 236'	p = 26.4167'	6234.34
Q = 236.7'	q = 3.542'	836.34
R = 236.5'	r = 20'	4730
		55014.634

55,814.634 / 238.41' = 234.147'
MAXIMUM ALLOWABLE HEIGHT = 264.147'

NOTE:
FIELD VERIFY EXACT CONDITIONS AND
MODIFY DRIVEWAY GRADING AS NECESSARY
FOR SMOOTH TRANSITION FROM STREET

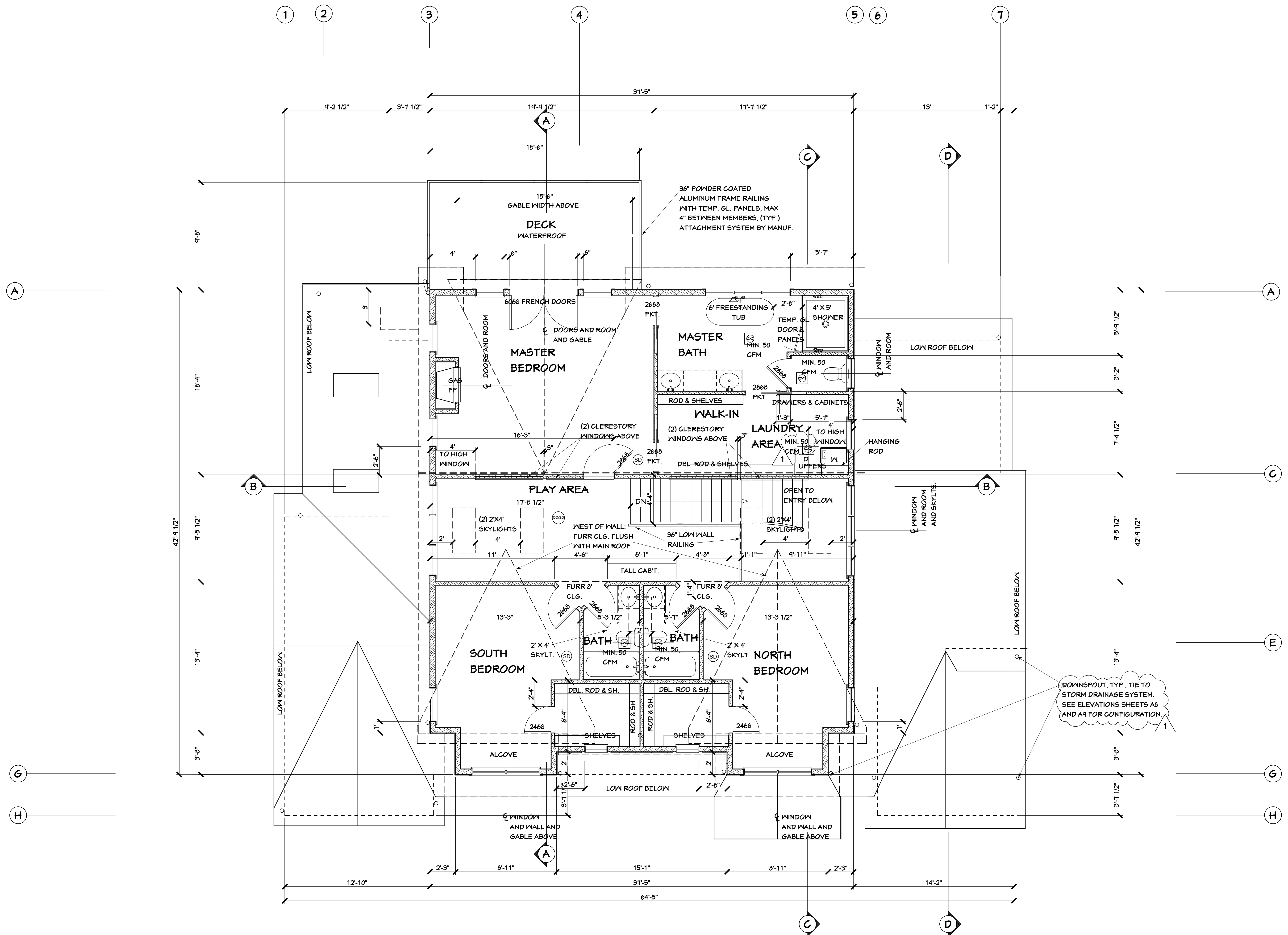
SITE PLAN
1" = 10'-0"

NOTE:
ALL JAPANESE KNOTWEED (POLYGONUM CUSPIDATUM) AND REGULATED CLASS A, REGULATED CLASS B, AND REGULATED CLASS C WEEDS IDENTIFIED ON KING COUNTY NOXIOUS WEED LIST, AS AMENDED, SHALL BE REMOVED FROM THE PROPERTY.

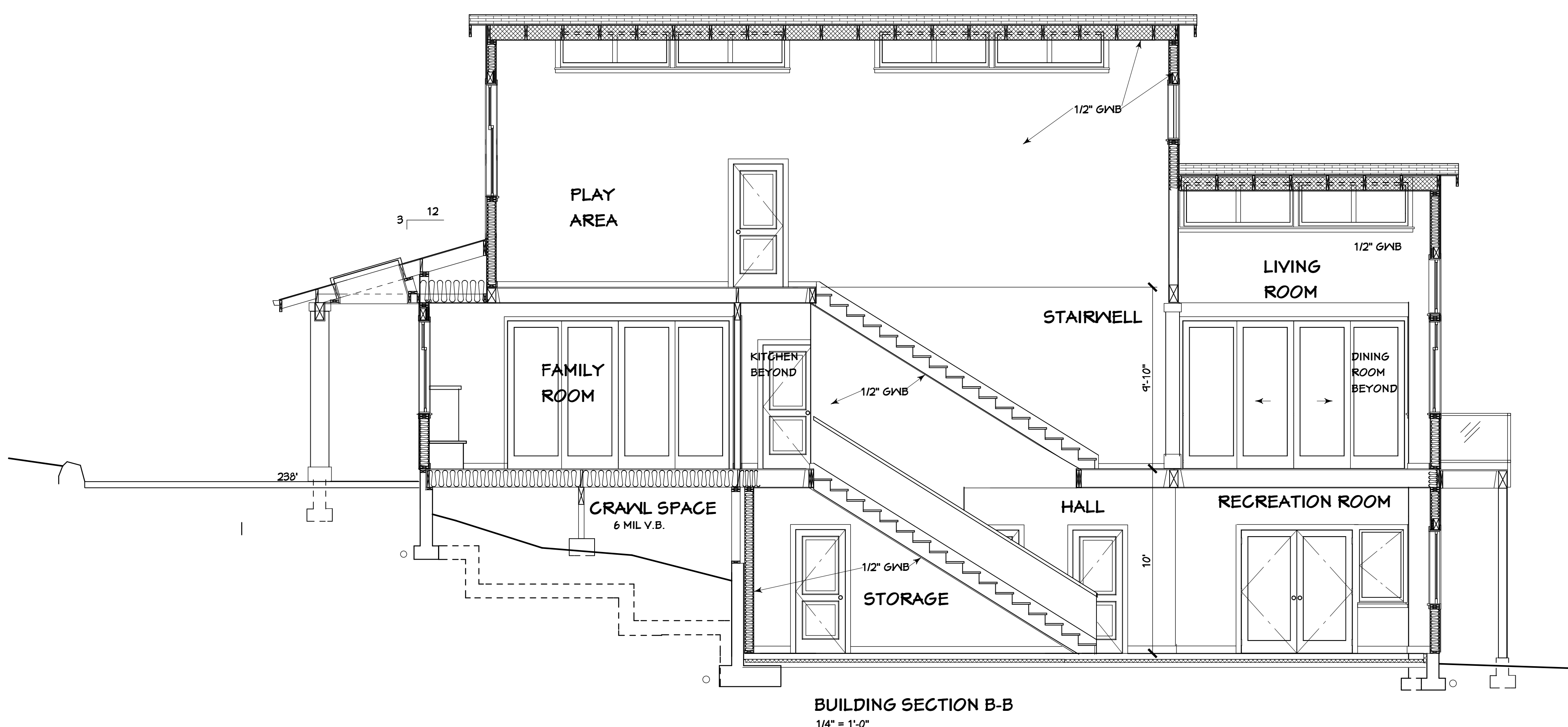
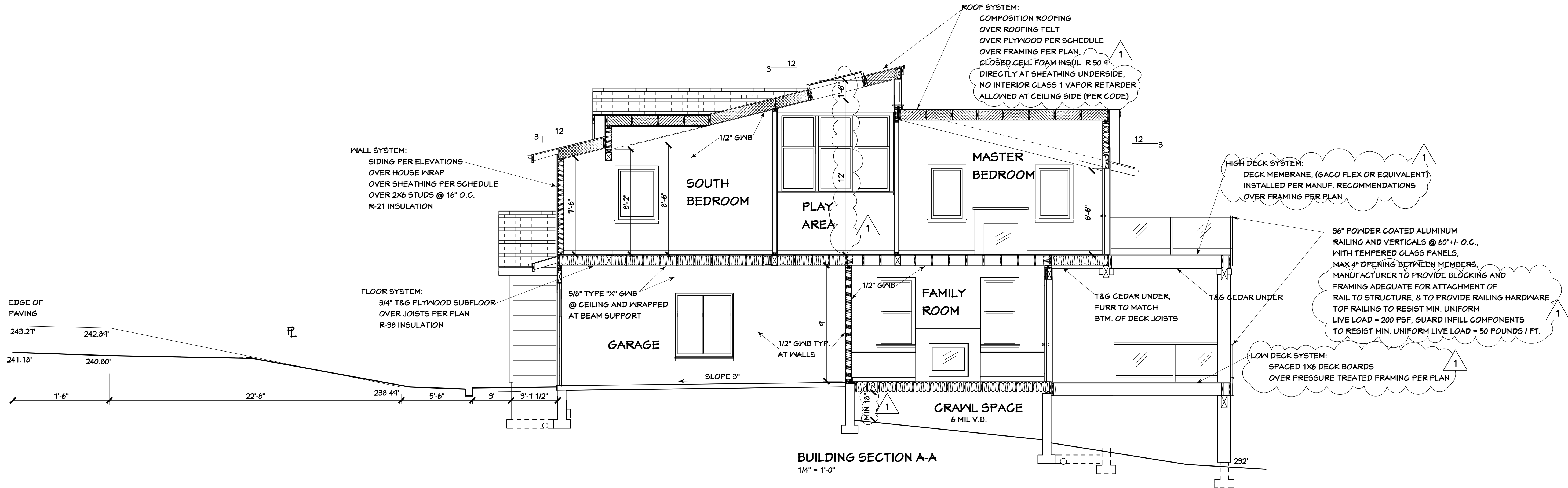


LOWER LEVEL FLOOR PLAN
1/4" = 1'-0"

NOTE:
SEE FOUNDATION PLAN, SHEET A9, FOR CRAWL SPACE VENTILATION

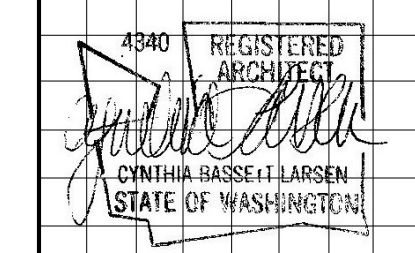


UPPER LEVEL FLOOR PLAN
1/4" = 1'-0"



REVISIONS	
1	PLAN REVIEW

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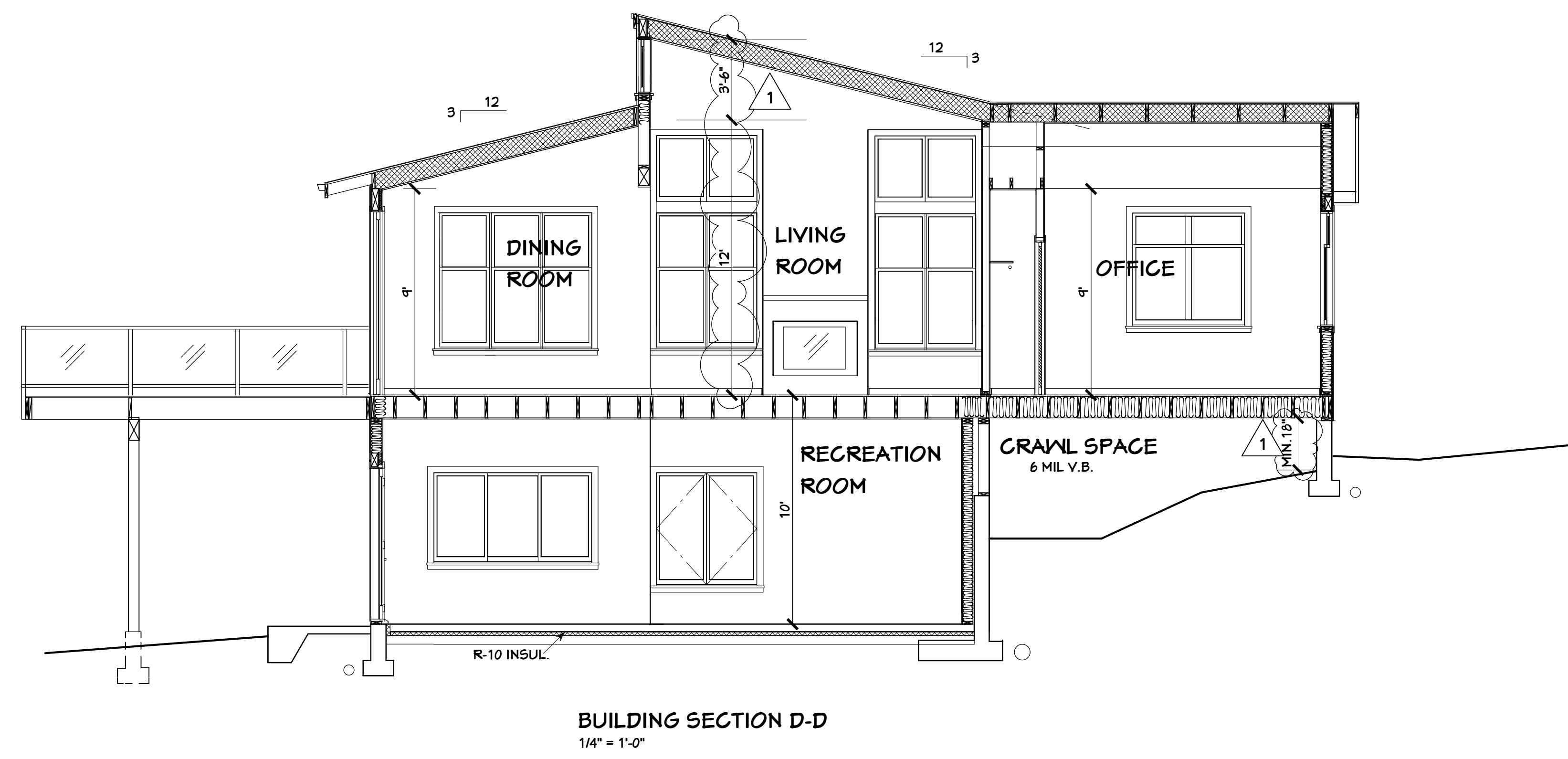
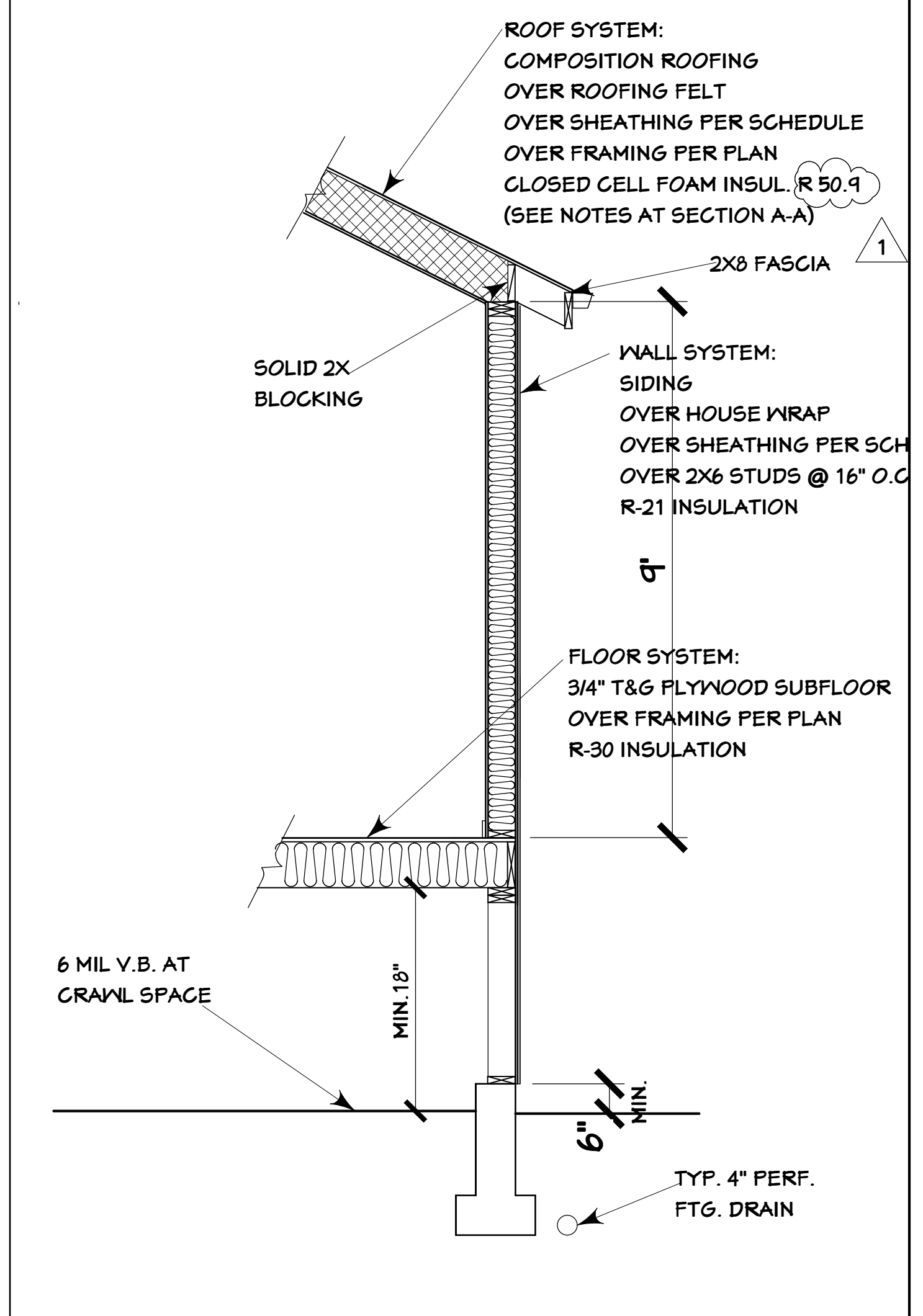
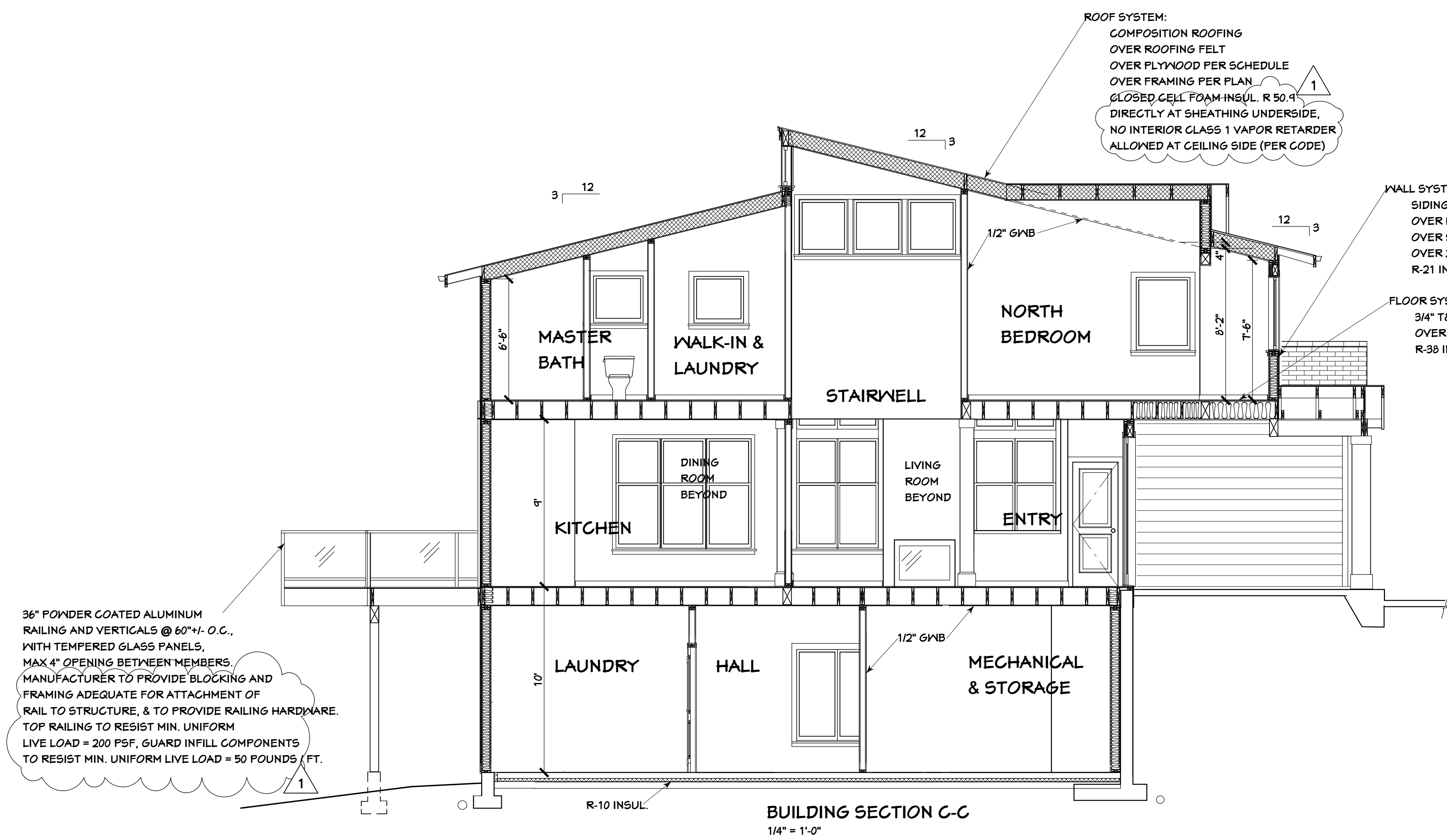
BASSETT LARSEN DESIGN LLC

LANIER - PFLEGER RESIDENCE
 1107 - 10TH AVE. S.E.
 MERCER ISLAND, WA 98040

SHEET TITLE
 BUILDING SECTION A-A
 BUILDING SECTION B-B

SHEET A-5
OF 17 SHEETS

DATE 6-19-19



REVISIONS	
1	PLAN REVIEW

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4340 REGISTERED ARCHITECT
 CYNTHIA BASSETT LARSEN
 STATE OF WASHINGTON

2704 34TH AVENUE SOUTH, SEATTLE, WA 98144 . (206) 232-0602

BASSETT LARSEN DESIGN LLC

LANIER - PFLEGER RESIDENCE
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 MERCER ISLAND, WA 98040

SHEET TITLE
 BUILDING SECTION C-C
 BUILDING SECTION D-D
 TYPICAL WALL SECTION

SHEET A-6
 OF 17 SHEETS

DATE 6-19-19

REVISIONS

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4340 REGISTERED ARCHITECT
 CYNTHIA BASSETT LARSEN
 STATE OF WASHINGTON

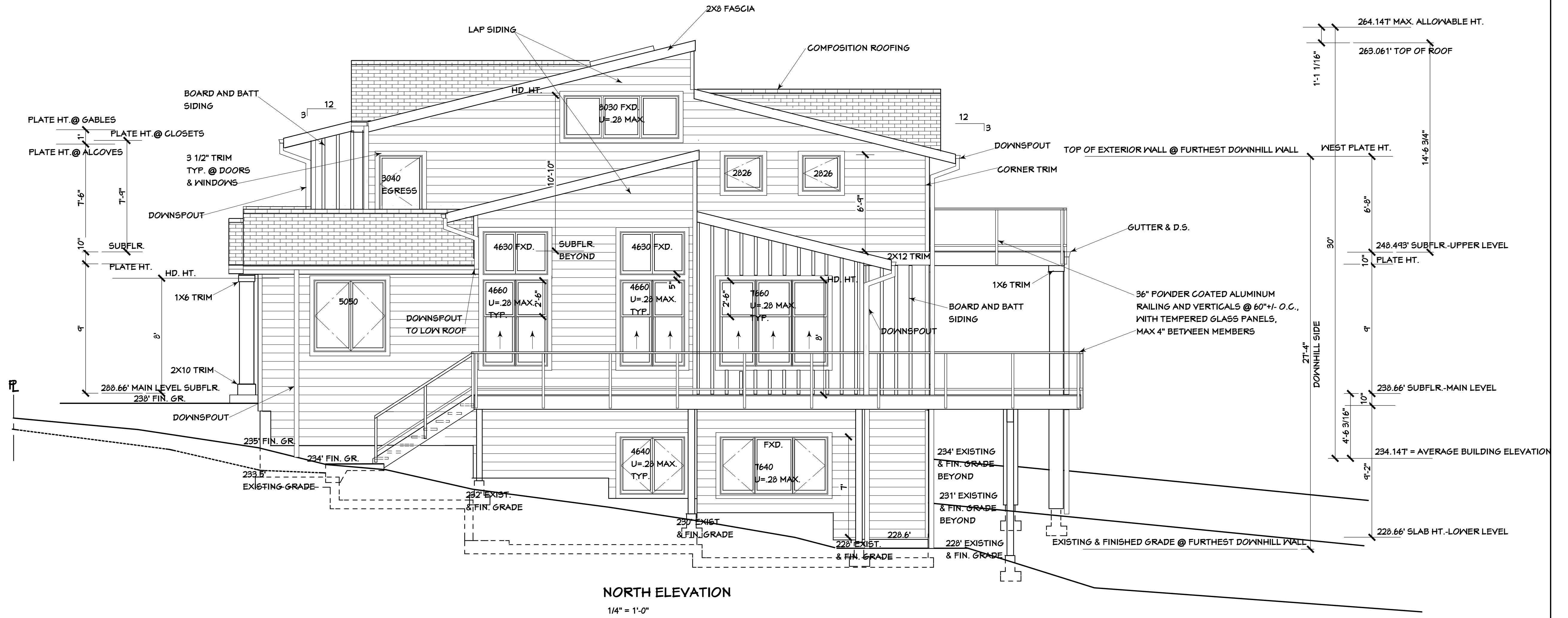
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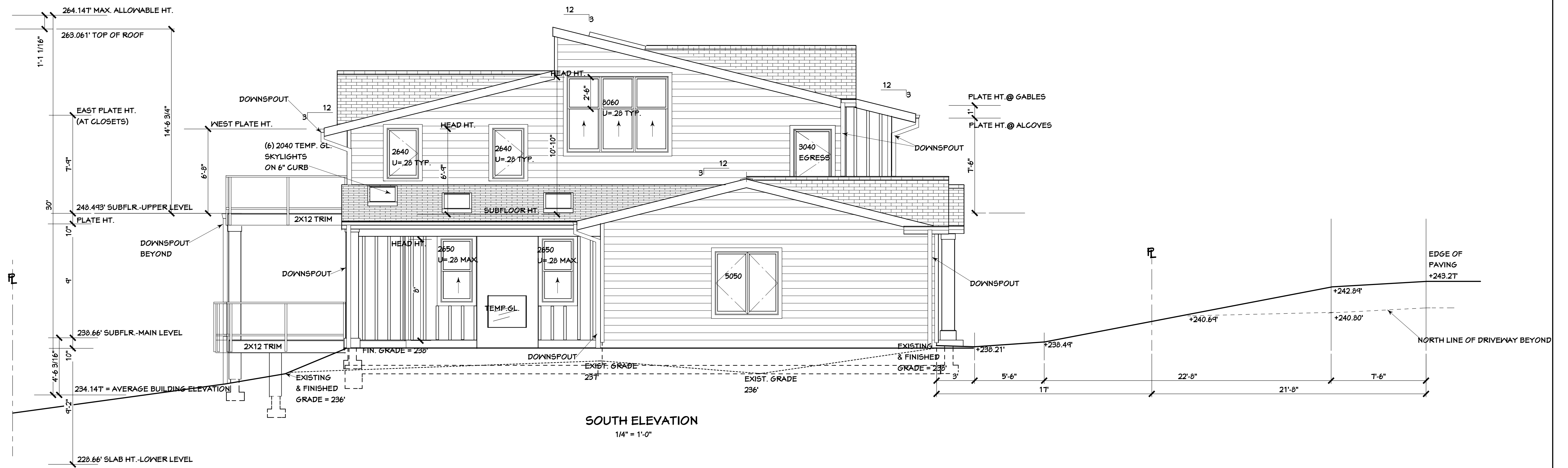
SHEET TITLE
 NORTH ELEVATION
 SOUTH ELEVATION

SHEET A-8
 OF 17 SHEETS

DATE 6-19-19



NORTH ELEVATION
 1/4" = 1'-0"



SOUTH ELEVATION
 1/4" = 1'-0"

REVISIONS

1	PLAN REVIEW
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BASSETT LARSEN DESIGN LLC

LANIER - PFLEGER RESIDENCE
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 MERCER ISLAND, WA 98040

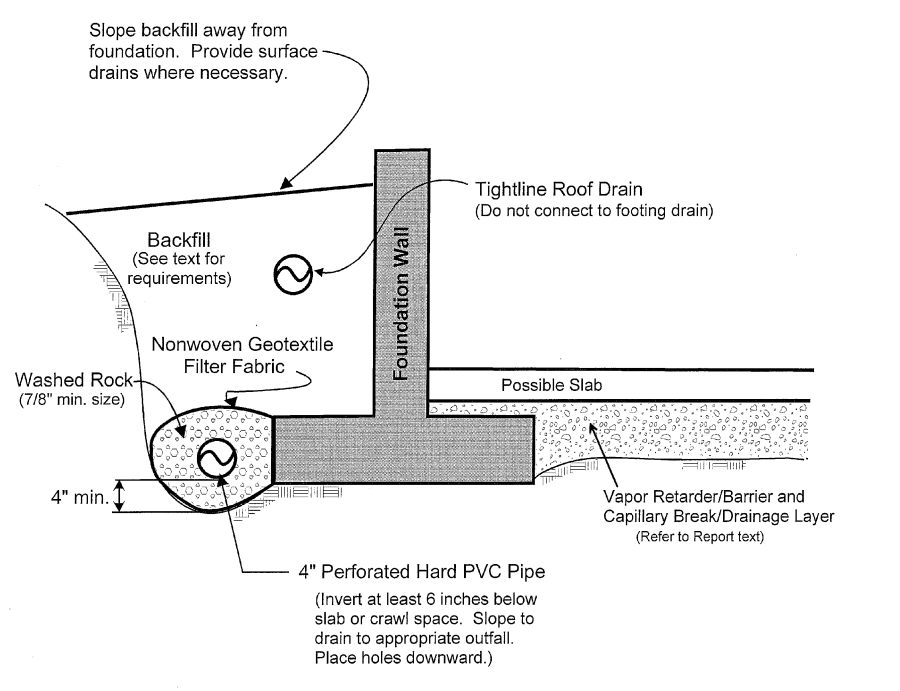
SHEET TITLE

FOUNDATION PLAN & NOTES
 FOOTING DRAIN DETAIL
 BY GEOTECH CONSULTANTS, INC.

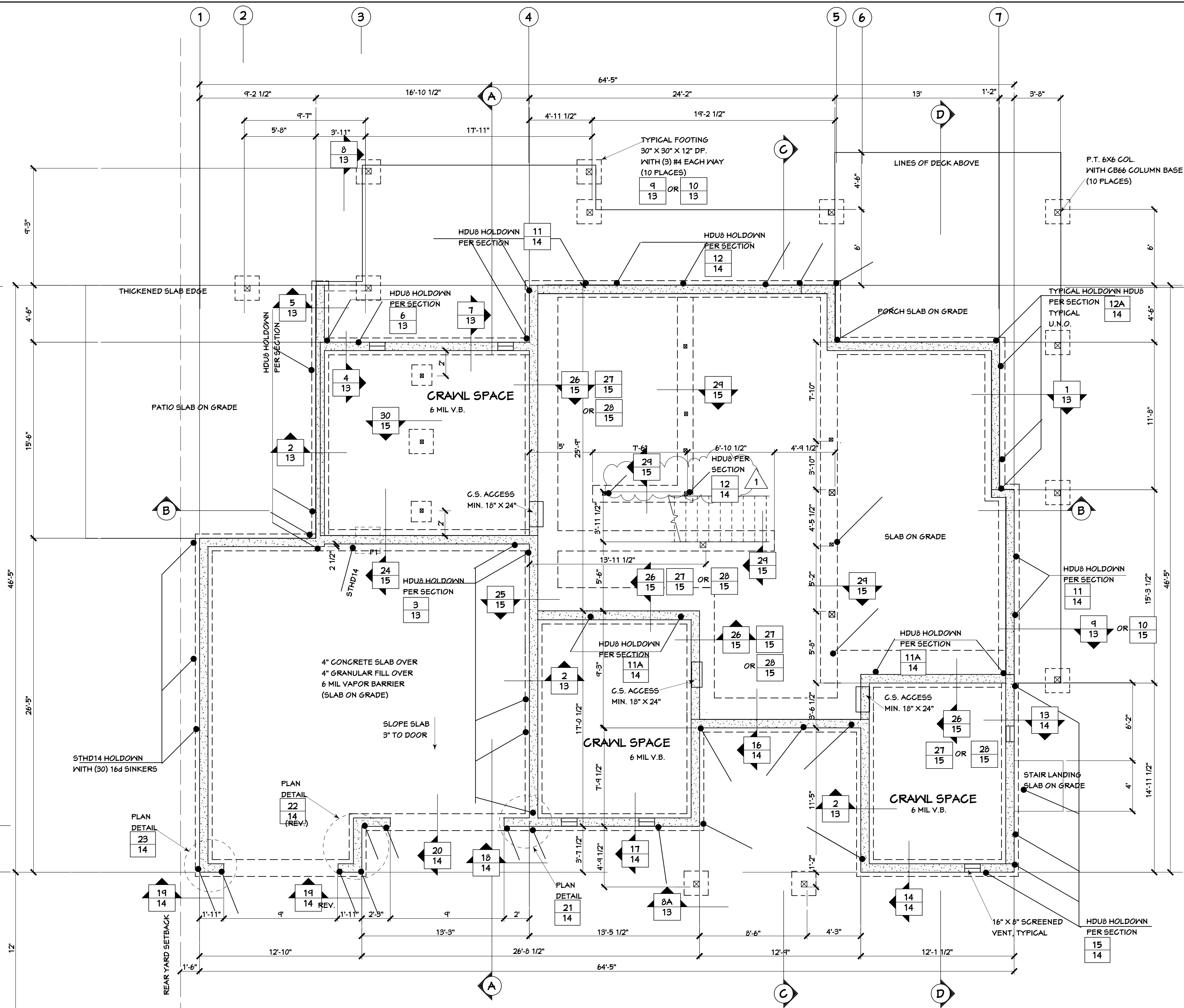
SHEET

A-9
 OF 17 SHEETS

DATE 6-19-19



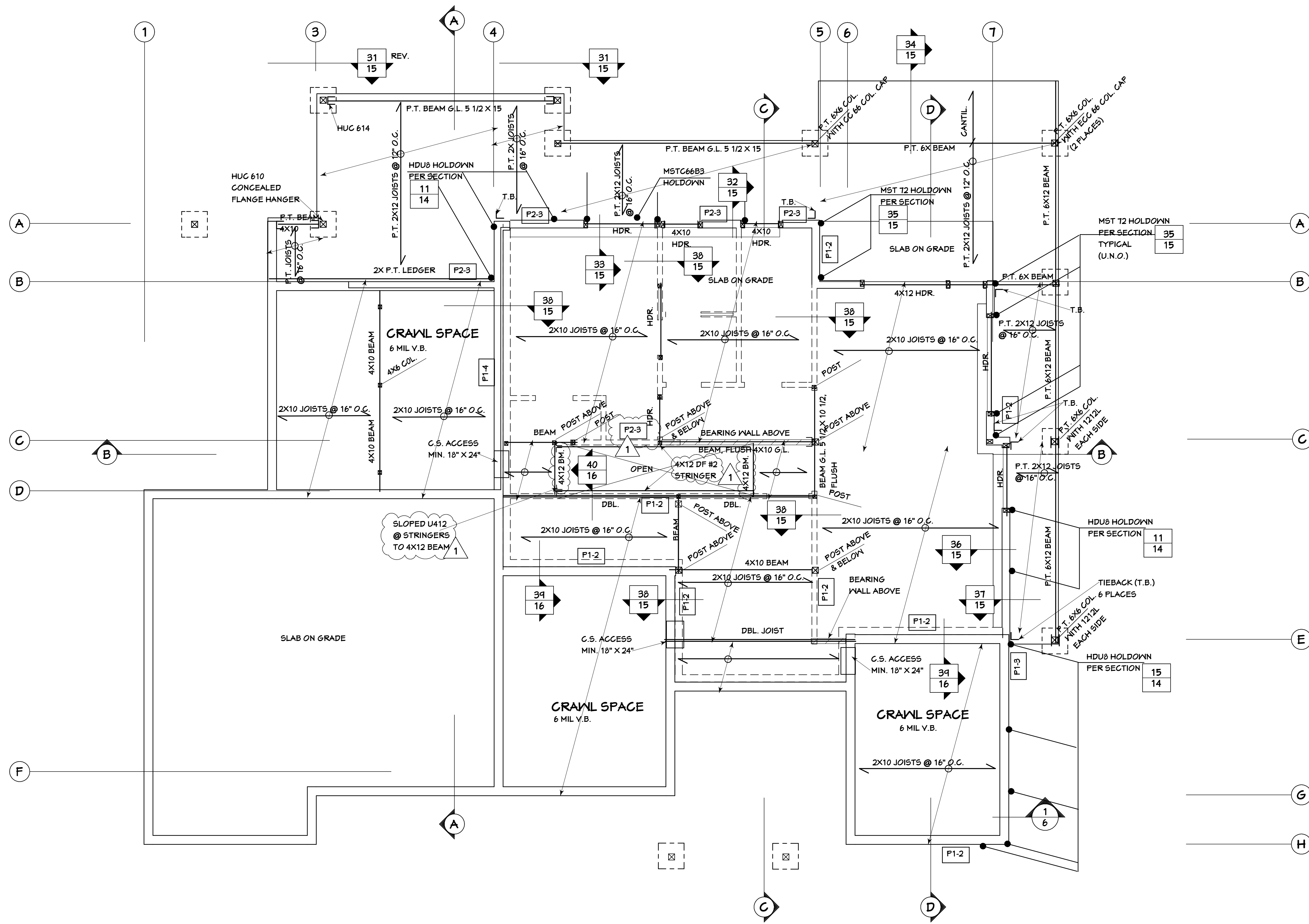
NOTES:
 (1) In crawl spaces, provide an outlet drain to prevent buildup of water that bypasses the perimeter footing drains.
 (2) Refer to report text for additional drainage, waterproofing, and slab considerations.



CRAWL SPACE VENTING:
 WEST C.S.
 VENTING REQUIRED: 240 S.F. / 150 = 1.6 S.F. = 230.4 SQ. IN.
 VENTING PROVIDED: 2 VENTS, 16" X 8" = 256 SQ. IN.
 EAST C.S.
 VENTING REQUIRED: 190.5 S.F. / 150 = 1.27 S.F. = 182.9 SQ. IN.
 VENTING PROVIDED: 2 VENTS, 16" X 8" = 256 SQ. IN.
 NORTHEAST C.S.
 VENTING REQUIRED: 154 S.F. / 150 = 1.02 S.F. = 147.8 SQ. IN.
 VENTING PROVIDED: 2 VENTS, 16" X 8" = 256 SQ. IN.

- NOTES:**
- REFER TO SOILS REPORT DATED 9-27-18 BY GEOTECH CONSULTANTS INC. FOR RECOMMENDATIONS REGARDING EXCAVATIONS, SIDE YARD SETBACK EROSION CONTROL METHODS, RETAINING WALL BACKFILL AND WATERPROOFING, SLAB-ON-GRADE PLACEMENT AND MOISTURE PROTECTION, TEMPORARY CUT SLOPES INCLINATION AND PROTECTION, FOOTING DRAINS, STRUCTURAL FILL COMPACTION, SURFACE WATER MANAGEMENT, ETC.
 - TYPICAL MUD-SILL P.T. 3X6 WITH 3/4" DIAM. X 12" ANCHOR BOLTS @ 24" O.C. WITH GALV. 3" X 3" X 1/4" PLATE WASHER.
 - WHERE JOISTS ARE HUNG FROM MUD-SILL P.T. 3X RIPPED TO STEM-WALL WIDTH WITH COUNTER-SUNK 3/4" DIAM X 12" ANCHOR BOLTS @ 24" O.C. WITH GALV. 3" X 3" X 1/4" PLATE WASHER
 - FOOTING SCHEDULE
 F1 = 3' X 3' X 12" DEEP WITH (3) #4 EACH WAY
 - FOR TYPICAL FOOTING DRAIN DETAIL FROM SOILS REPORT SEE

1
9



MAIN FLOOR FRAMING PLAN
1/4" = 1'-0"

- FACE MOUNT HANGERS
 2X10 U210
 4X10 U410
- TOP FLANGE HANGERS
 2X10 HU210TF
 4X10 HU410TF

REVISIONS	
1	PLAN REVIEW

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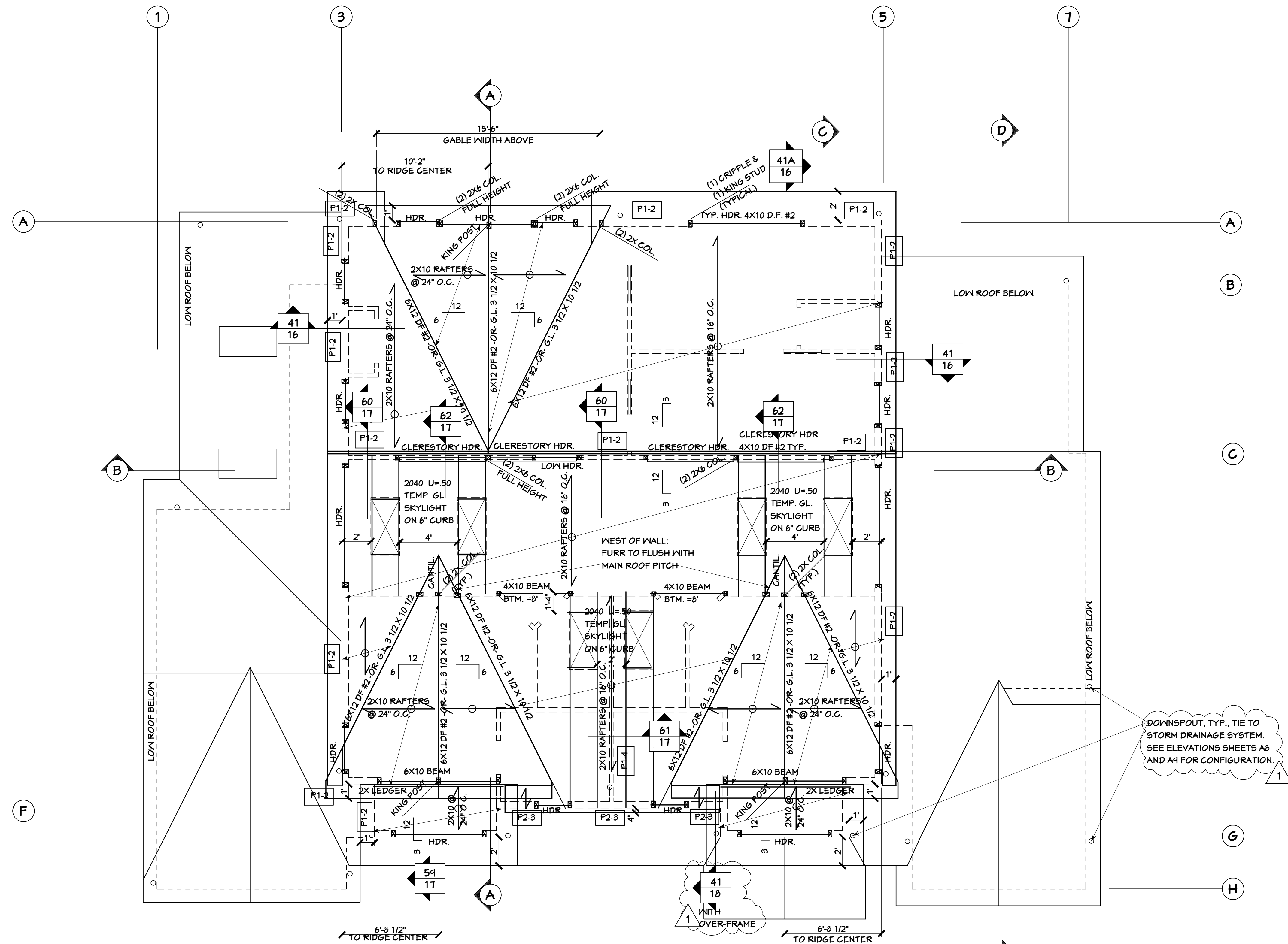
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BASSETT LARSEN DESIGN LLC
 LANIER - PFLEGER RESIDENCE
 1107 - 10TH AVE. S.E.
 MERCER ISLAND, WA 98040

SHEET TITLE
 MAIN FLOOR FRAMING PLAN

SHEET A-10
OF 17 SHEETS

DATE 6-19-19



HIGH ROOF FRAMING PLAN
 1/4" = 1'-0"

REVISIONS	
1	PLAN REVIEW

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SHEET TITLE
 HIGH ROOF FRAMING PLAN

SHEET A-12
OF 17 SHEETS

DATE 6-19-19

STRUCTURAL NOTES

CODE: DESIGN IS IN ACCORDANCE WITH THE 2015 INTERNATIONAL BUILDING CODE (I.B.C.) AS AMENDED BY THE LOCAL BUILDING DEPARTMENT.

LIVE LOADS:
 ROOF-----25PSF
 FLOOR-----40PSF
 DECK-----60PSF

LATERAL WIND-----EXPOSURE C, 85MPH(110MPH(ULT)/ WIND PER ASCE 7-10, SECTION 28.6.3 Kz=1.6
 SEISMIC-----SITE CLASS D, SEISMIC PER ASCE 7-10, SIMPLIFIED LATERAL FORCE SYSTEM, SECTION 12.14.8

FOUNDATIONS: EXTEND FOOTINGS TO FIRM UNDISTURBED SOIL, BEARING CAPACITY OF 3000PSF. ALL EXTERIOR FOOTINGS SHALL EXTEND A MINIMUM OF 1'-6" BELOW ADJACENT EXTERIOR GRADE. FOUNDATION DESIGN IS IN ACCORDANCE WITH THE GEOTECHNICAL REPORT PREPARED BY GEOTECH CONSULTANTS DATED SEPTEMBER 27, 2018.

CAST-IN-PLACE CONCRETE: Fc=3000 PSI @ 28 DAYS. MINIMUM 5-1/2 SACKS OF CEMENT PER CUBIC YARD OF CONCRETE AND MAXIMUM OF 6-3/4 GALLONS OF WATER PER 94# SACK OF CEMENT. NO SPECIAL INSPECTION REQUIRED. CONCRETE SHALL COMPLY WITH ACI 318-14 SECTION 26.4.2.1. MAXIMUM SLUMP IS 4 INCHES. ALL PHASES OF WORK PERTAINING TO THE CONCRETE CONSTRUCTION SHALL CONFORM TO BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE. ALL REINFORCING STEEL, DOWELS, ANCHOR BOLTS, AND OTHER INSERTS SHALL BE SECURED IN POSITION PRIOR TO POURING CONCRETE. ANCHOR BOLTS FOR PRESSURE TREATED SILL PLATES TO FOUNDATION WALLS TO BE 5/8" INCH DIAMETER WITH 7 INCH MINIMUM EMBEDMENT INTO CONCRETE AND MAXIMUM SPACING OF 2 FEET ON CENTER. MINIMUM 2 BOLTS PER SILL PLATE PIECE. ONE BOLT TO BE PLACED WITHIN 6 INCHES OF EACH END OF THE SILL PLATE. DIPPED GALVANIZED CONNECTORS SHALL CONFORM TO ASTM STANDARD 153 AND HOT DIPPED GALVANIZED CONNECTORS SHALL CONFORM TO ASTM A633M CLASS G-185. STAINLESS STEEL FASTENERS AND CONNECTORS SHALL BE TYPE 304 OR 316. SIMPSON PRODUCT FINISHES CORRESPONDING TO THESE REQUIREMENTS ARE ZMAX (HOT DIPPED GALVANIZED) AND SST 300 (STAINLESS STEEL). FASTENERS FOR PRESSURE TREATED AND FIRE-RETARDANT TREATED WOOD SHALL BE ZMAX HOT DIPPED GALVANIZED (G185).

REINFORCING STEEL: ALL REINFORCING STEEL SHALL BE PLACED IN CONFORMANCE WITH THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE AND THE MANUAL OF STANDARD PRACTICE FOR REINFORCED CONCRETE CONSTRUCTION BY CRSI. DEFORMED REINFORCING STEEL BARS SHALL CONFORM TO ASTM A-615 GRADE 40 FOR #5 AND SMALLER REINFORCEMENT AND GRADE 60 FOR #6 AND LARGER. ALL REINFORCING BAR BENDS SHALL BE MADE COLD WITH A MINIMUM RADIUS OF 6 BAR DIAMETERS (1'-7" MINIMUM). CORNER BARS (2'-0" BEND) SHALL BE PROVIDED FOR ALL HORIZONTAL REINFORCEMENT. LAP ALL BARS A MINIMUM OF 48 BAR DIAMETERS UNLESS NOTED OTHERWISE. UNLESS NOTE OTHERWISE ON THE DRAWINGS REINFORCING STEEL SHALL HAVE THE FOLLOWING MINIMUM COVER:

CONCRETE CAST AGAINST EARTH	3 INCHES
CONCRETE EXPOSED TO EARTH OR WEATHER:	
#6 THROUGH #18 BARS	2 INCHES
#5 BAR AND SMALLER	1-1/2 INCHES

STRUCTURAL TIMBER: ALL LUMBER SHALL CONFORM TO WPA GRADING RULES FOR WESTERN LUMBER, LATEST EDITION. PROVIDE CUT WASHERS UNDER ALL NUTS AND BOLTS BEARING AGAINST WOOD. ALL WOOD IN CONTACT WITH CONCRETE SHALL BE PRESSURE TREATED IN ACCORDANCE WITH AWPA U1 AND M4 STANDARDS. ALL STRUCTURAL LUMBER SHALL BE AS NOTED BELOW:

2X FLOOR JOIST	HEM-FIR#2-----Fb=850 PSI
2X ROOF RAFTERS	HEM-FIR#2-----Fb=850 PSI
4X BEAMS	DOUG-FIR/LARCH #2---Fb=850PSI
6X BEAMS	DOUG-FIR/LARCH #2---Fb=850PSI
LUMBER NOT NOTED	HEM-FIR #2-----Fb=850 PSI

MISCELLANEOUS HANGERS TO BE SIMPSON OR APPROVED EQUAL. ALL HANGERS SHALL BE FASTENED TO WOOD WITH PROPER NAILS. ALL HOLES SHALL BE NAILED. MACHINE BOLTS TO BE A-307. ANCHOR BOLTS INTO CONCRETE SHALL BE 5/8" INCH DIAMETER WITH 7 INCHES OF EMBEDMENT INTO CONCRETE UNLESS NOTED OTHERWISE ON THE PLANS. ALL NAILS SHALL BE COMMON WIRE NAILS. NAILING SHALL BE IN ACCORDANCE WITH THE CURRENT I.B.C. SCHEDULE.

FLOOR SHEATHING: SHEATHING SHALL BE 3/4" INCH TONGUE AND GROOVE A.P.A. RATED SHEATHING. SPAN RATING 48/24 WITH LONG DIMENSION PERPENDICULAR TO SUPPORTS. UNLESS NOTED OTHERWISE NAIL WITH 80 COMMON NAILS AT 6 INCHES ON CENTER AT SUPPORTED PANEL EDGES AND 10 INCHES ON CENTER AT INTERMEDIATE SUPPORTS. THE FLOOR SHEATHING SHALL BE GLUED TO THE JOIST AND THE TONGUE AND GROOVE JOINTS WITH AN APPROVED ADHESIVE.

WALL SHEATHING: SHEATHING SHALL BE 7/16" INCH A.P.A. RATED SHEATHING, SPAN RATING 24/0. PANEL END JOINTS SHALL OCCUR AT SUPPORTS. NAIL PANEL EDGES WITH 8d NAILS AT 6 INCHES ON CENTER AND 10 INCHES ON CENTER AT INTERMEDIATE SUPPORTS UNLESS NOTED OTHERWISE ON THE DRAWINGS.

GLU-LAMINATED TIMBER: LAMINATED TIMBER SHALL BE DOUGLAS-FIR/LARCH KILN DRIED. STRESS GRADE COMBINATION OF 24F-V4 FOR SIMPLE SPANS AND 24F-V8 FOR CANTILEVER AND CONTINUOUS BEAMS.

ROOF SHEATHING: SHEATHING SHALL BE 7/16" INCH A.P.A. RATED SHEATHING. SPAN RATING 32/16, INSTALLED WITH LONG DIMENSION ACROSS SUPPORT. PANEL END JOINTS SHALL OCCUR AT SUPPORTS. NAIL PANEL EDGES WITH 8d NAILS SPACED AT 4 INCHES ON CENTER AND 10 INCHES ON CENTER AT INTERMEDIATE SUPPORTS.

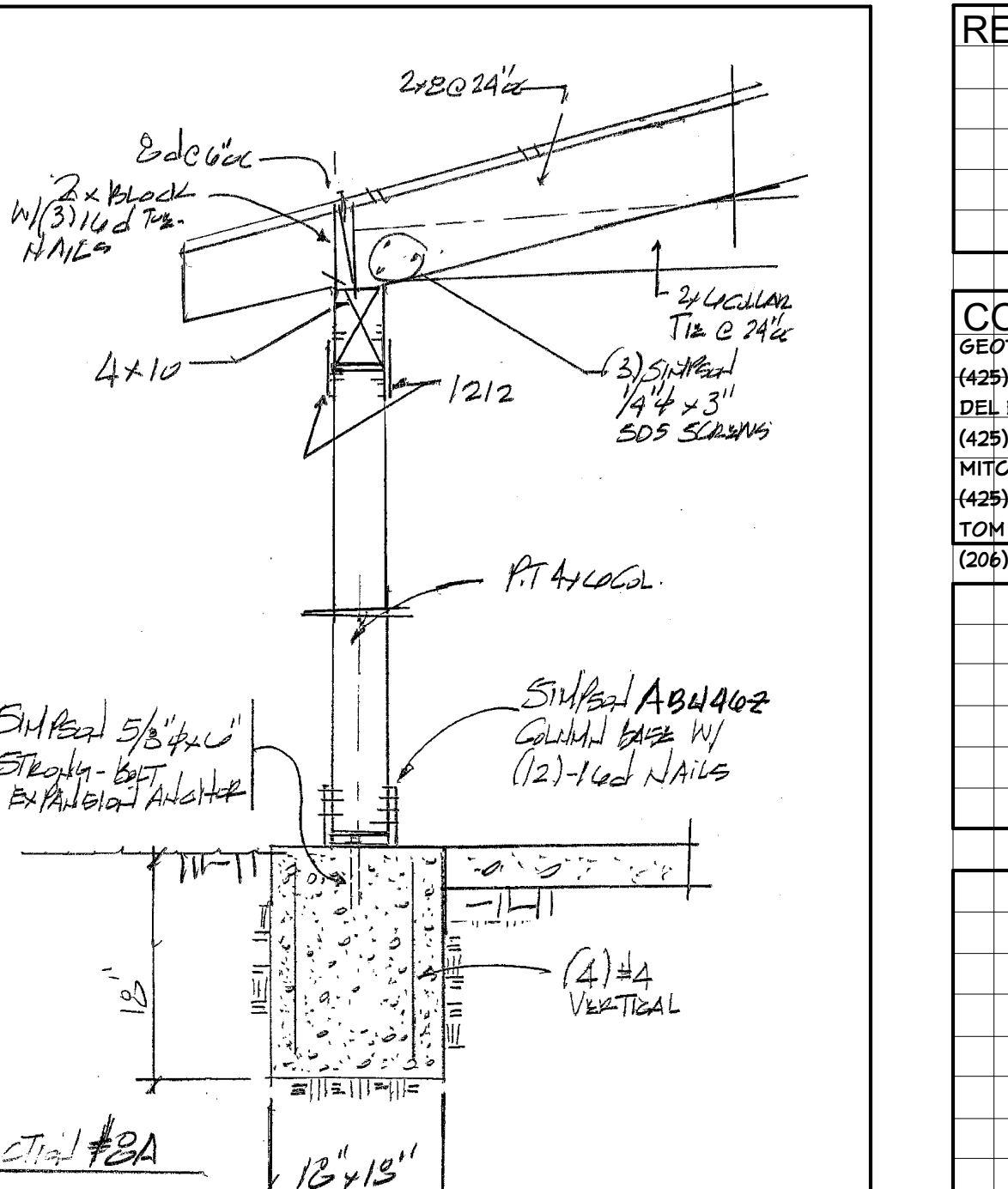
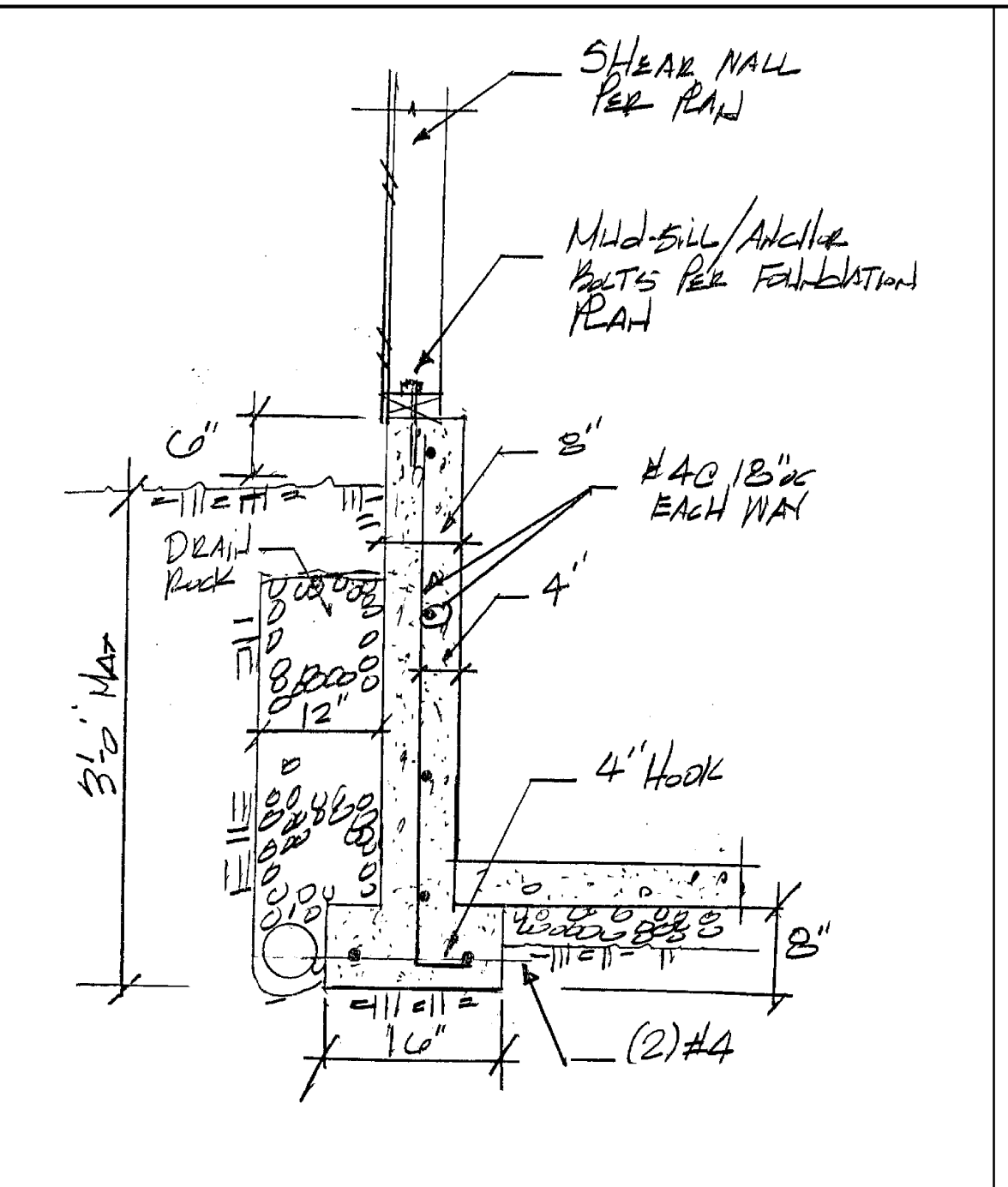
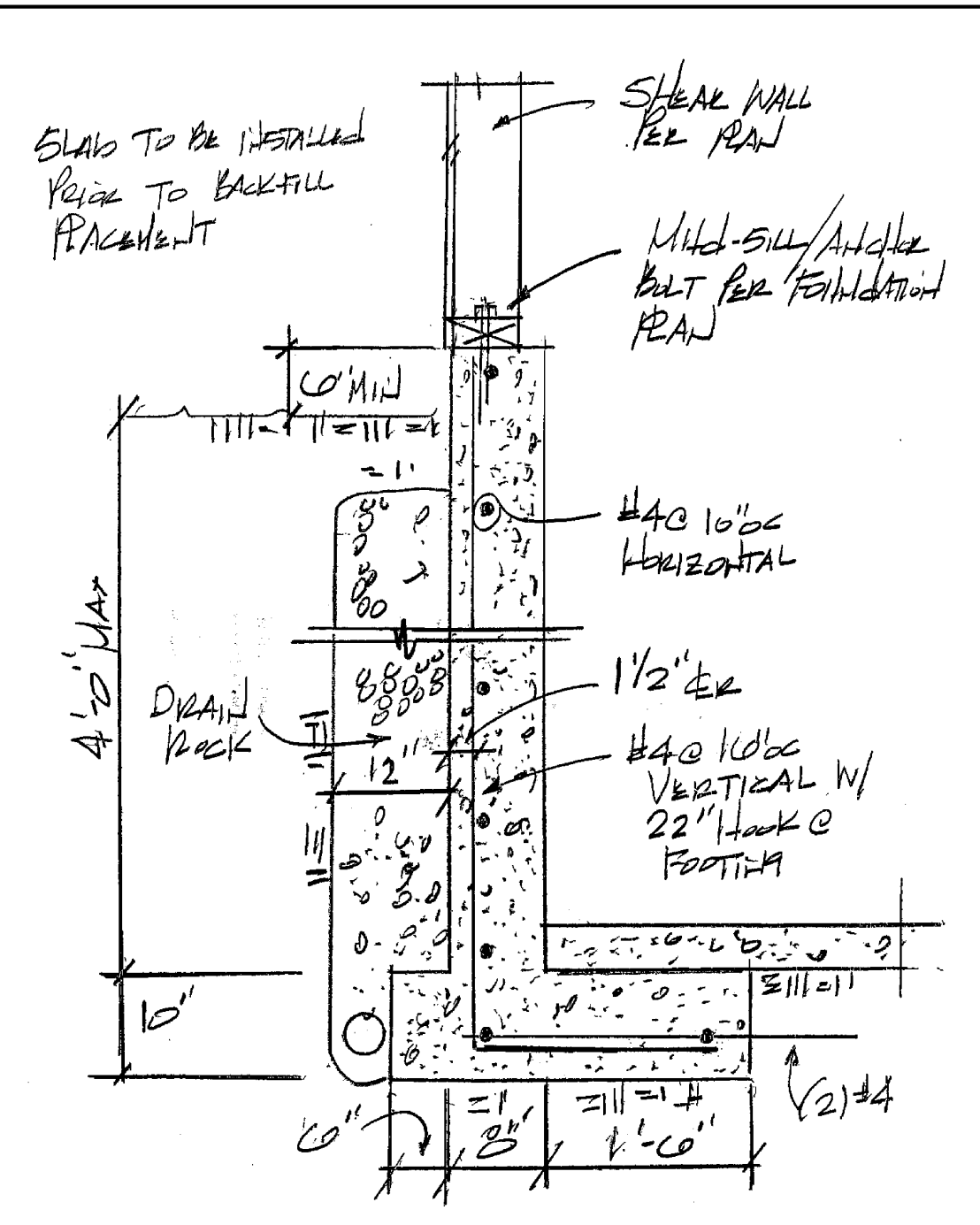
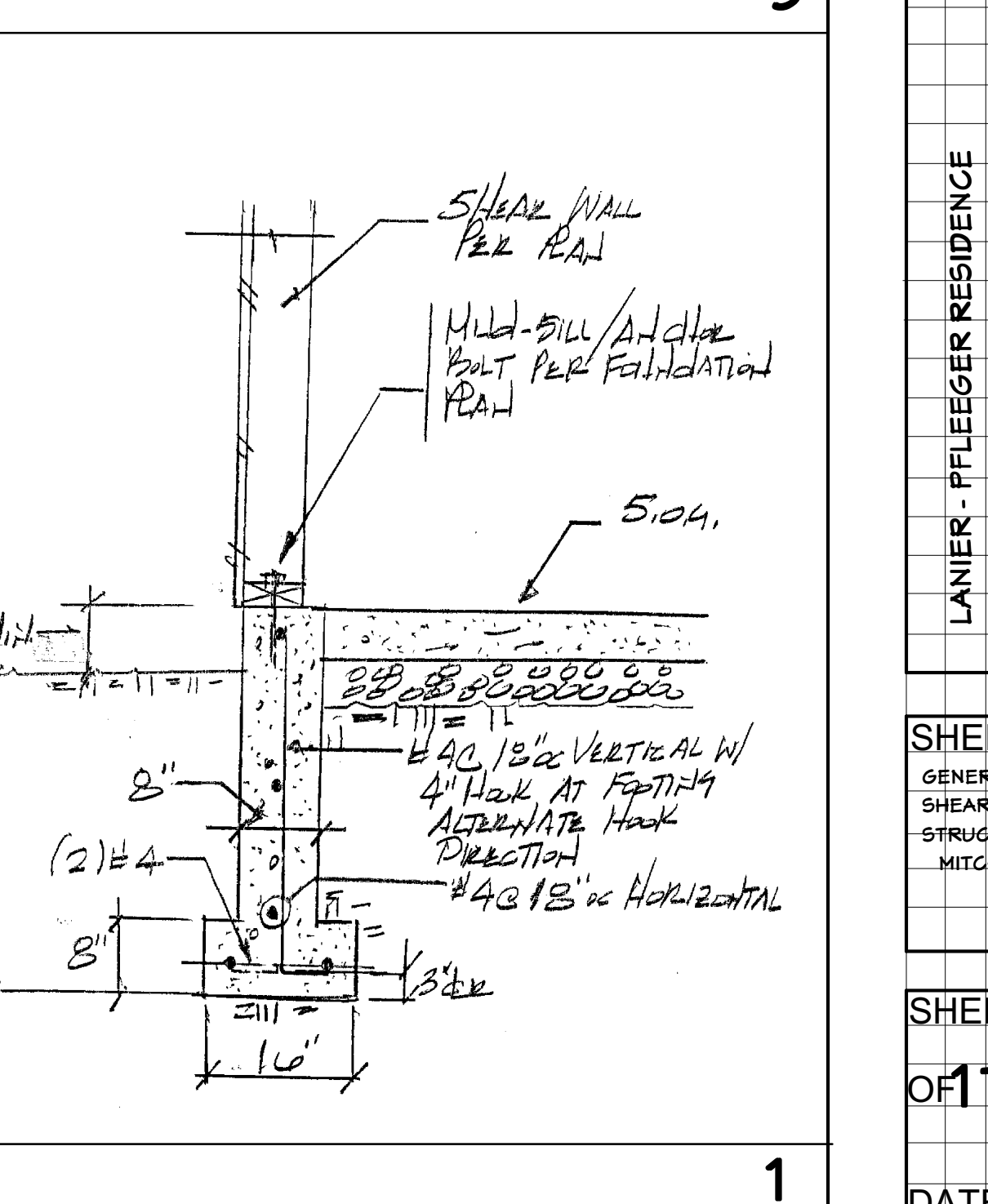
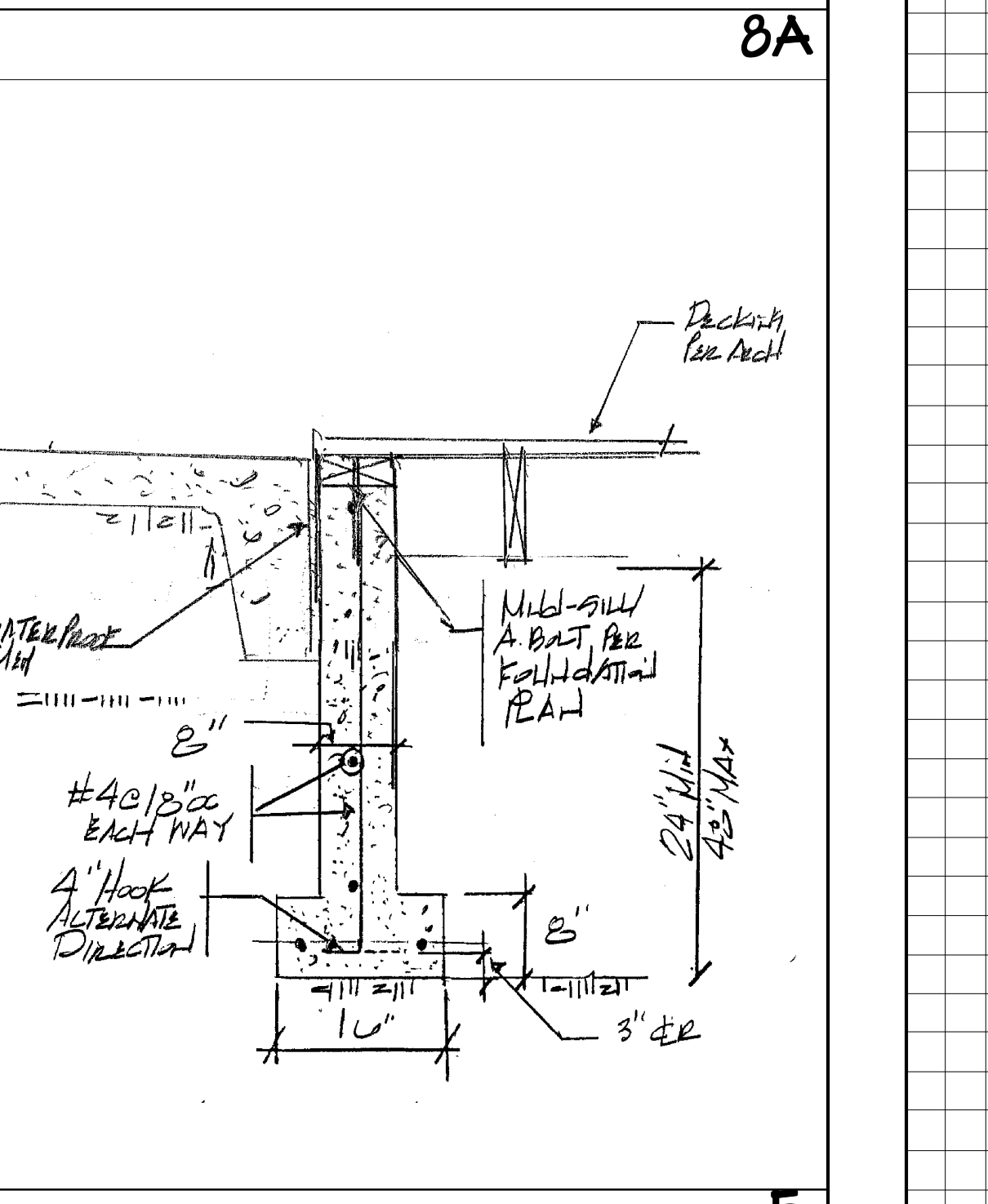
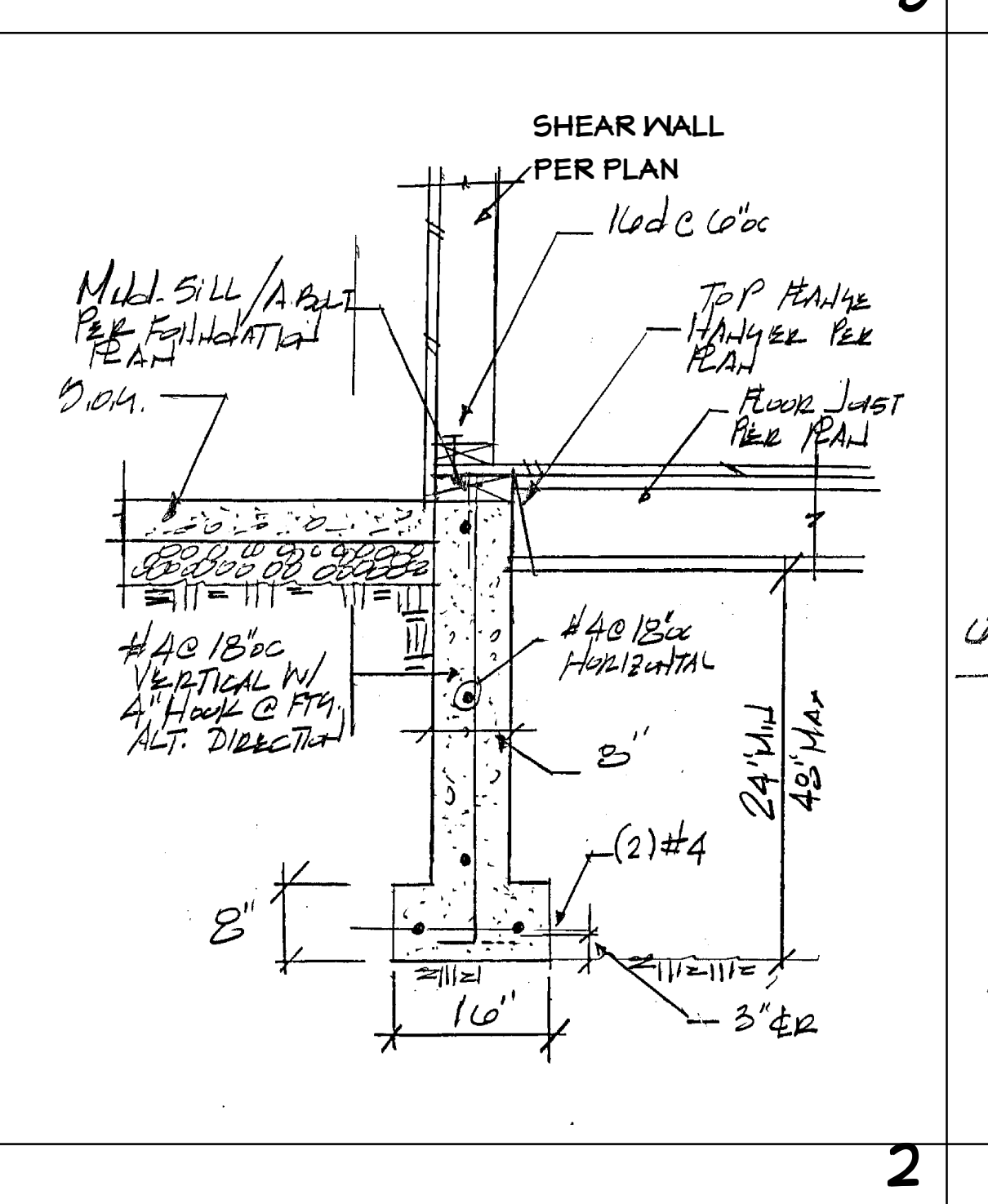
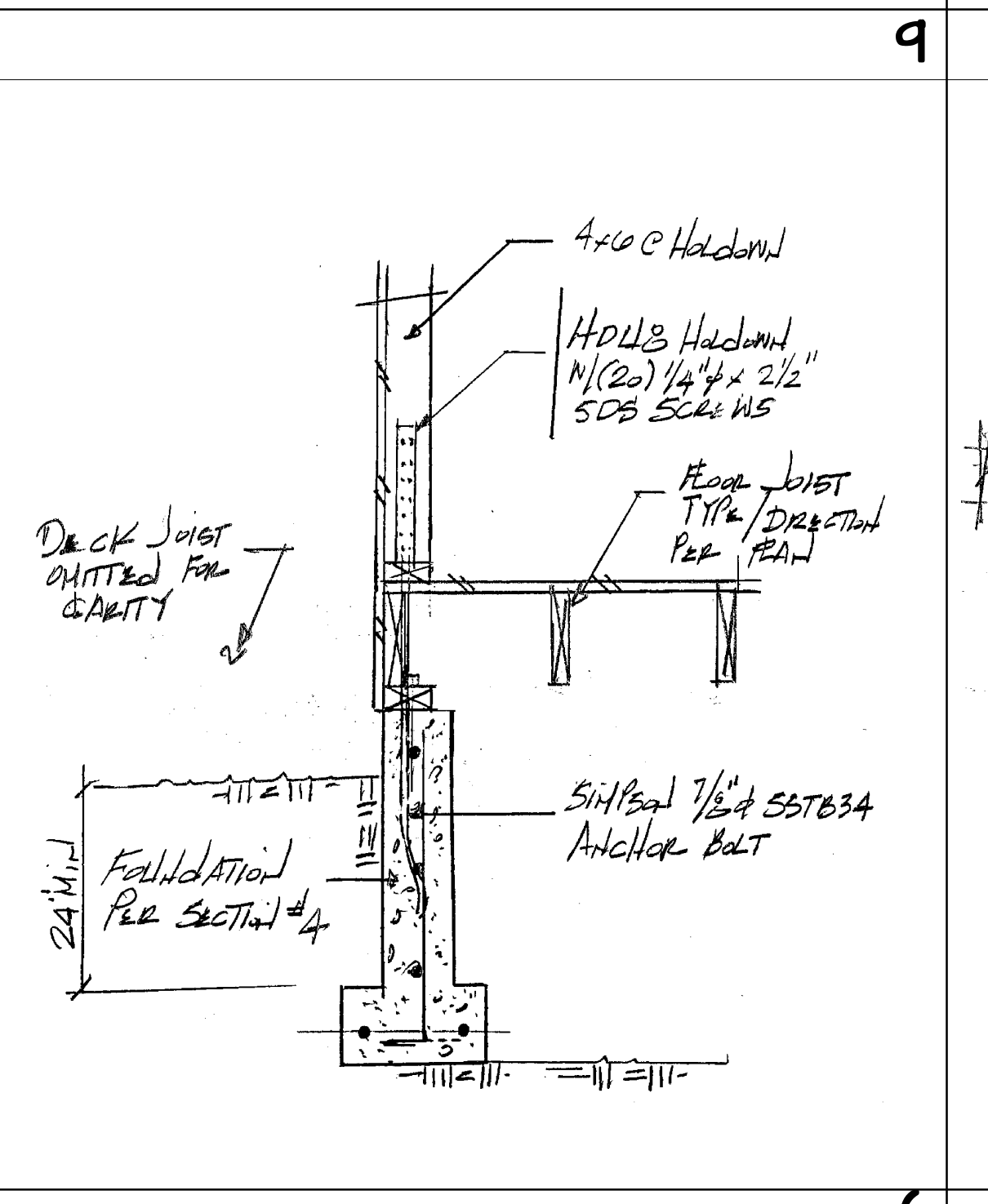
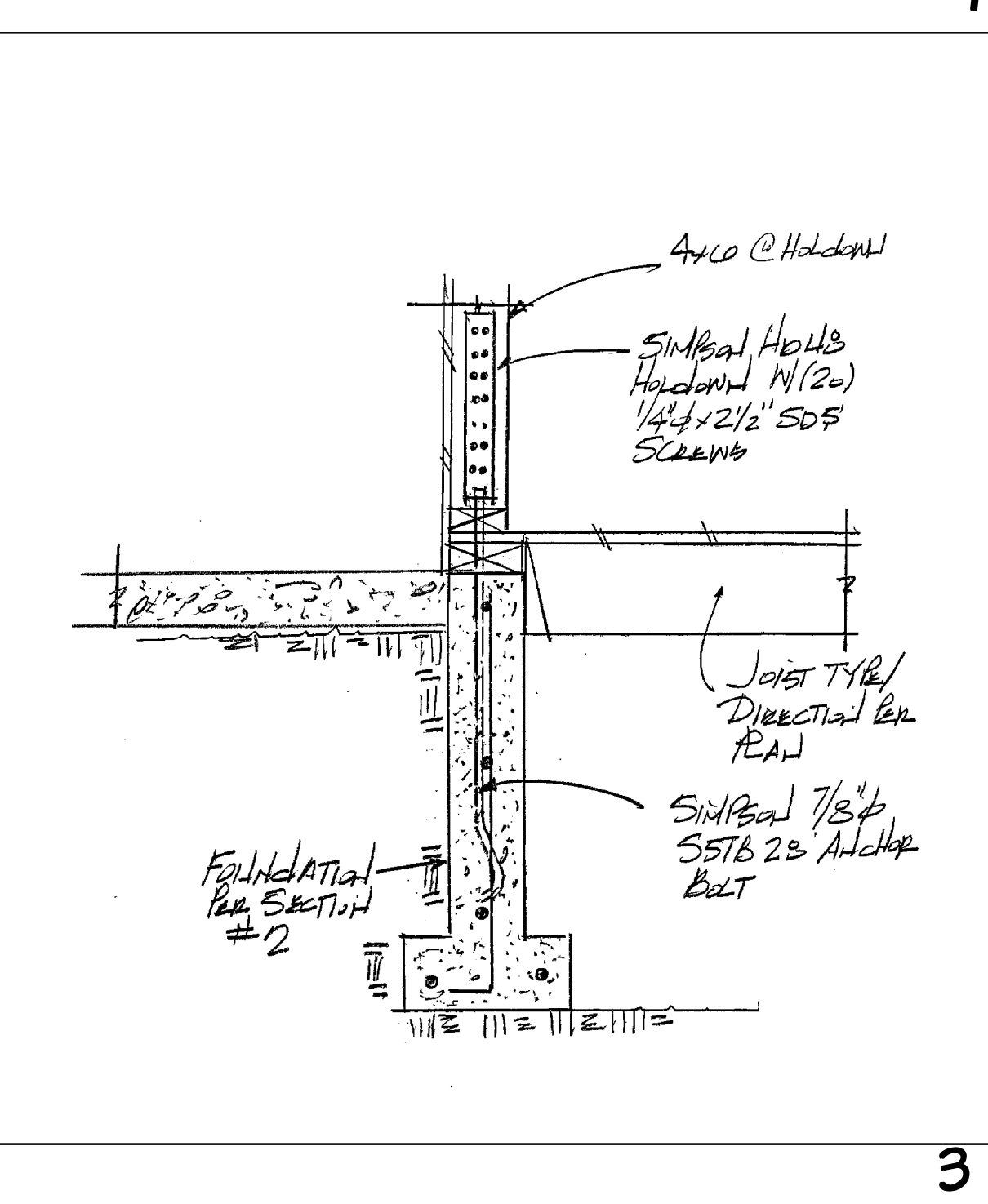
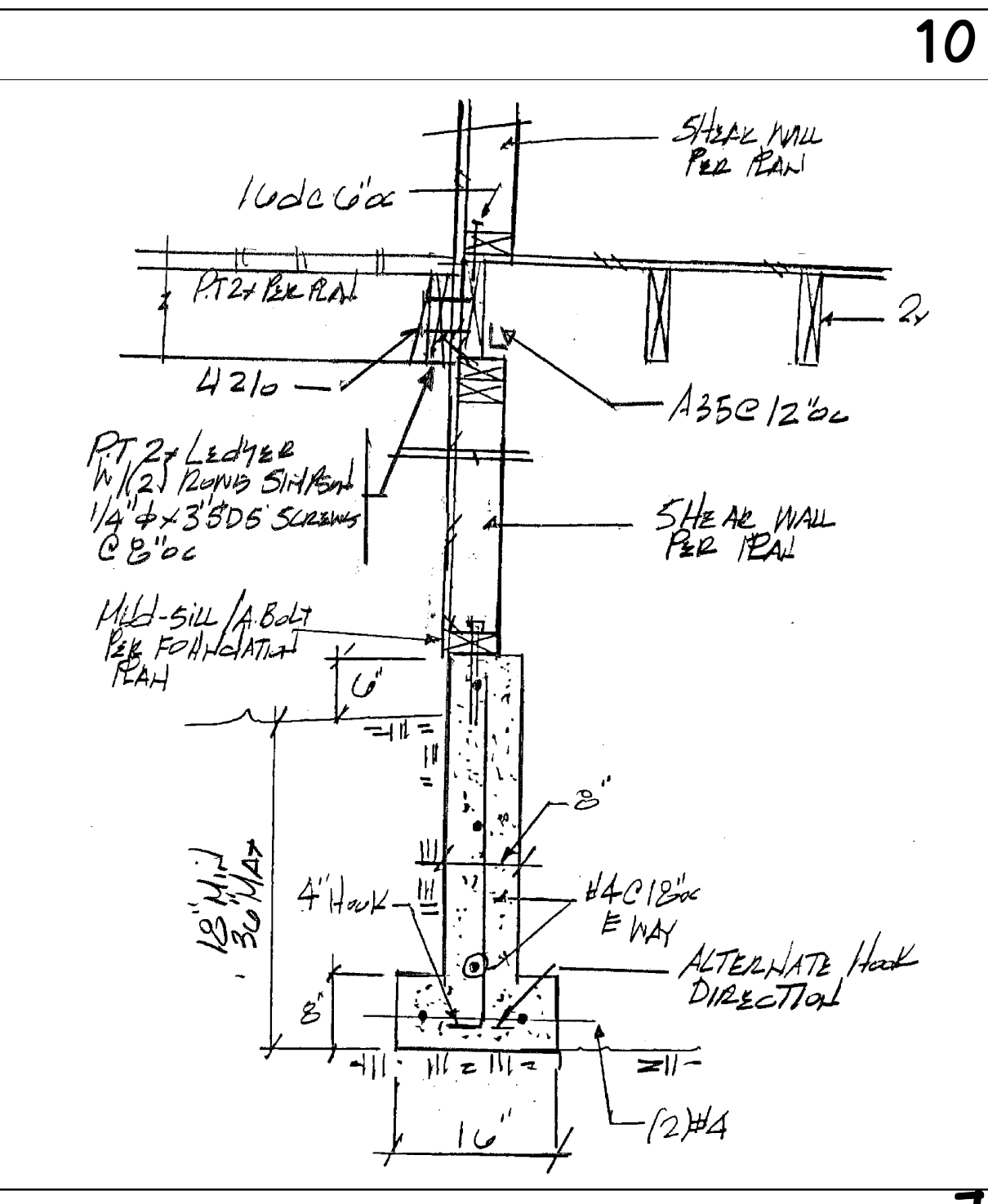
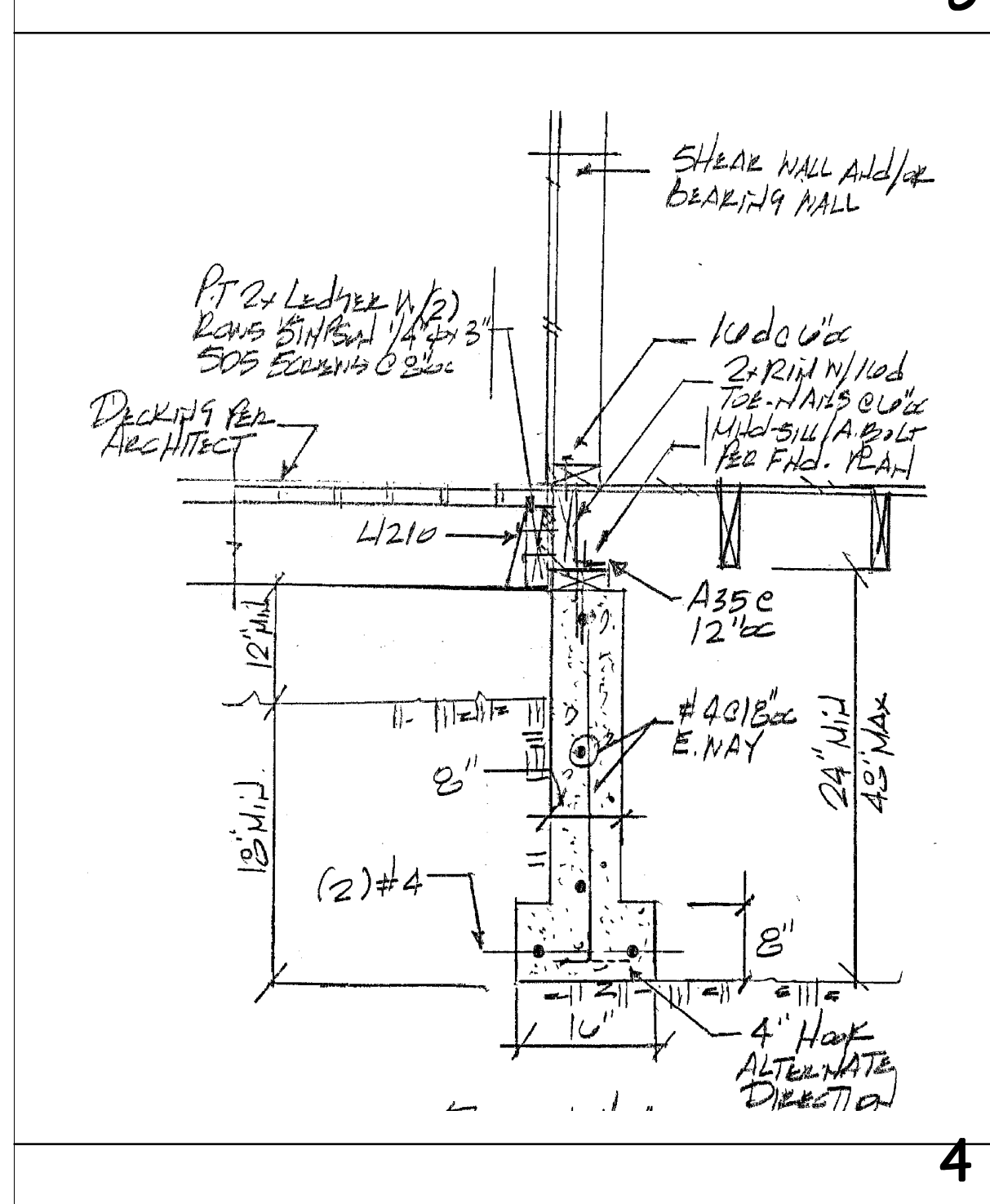
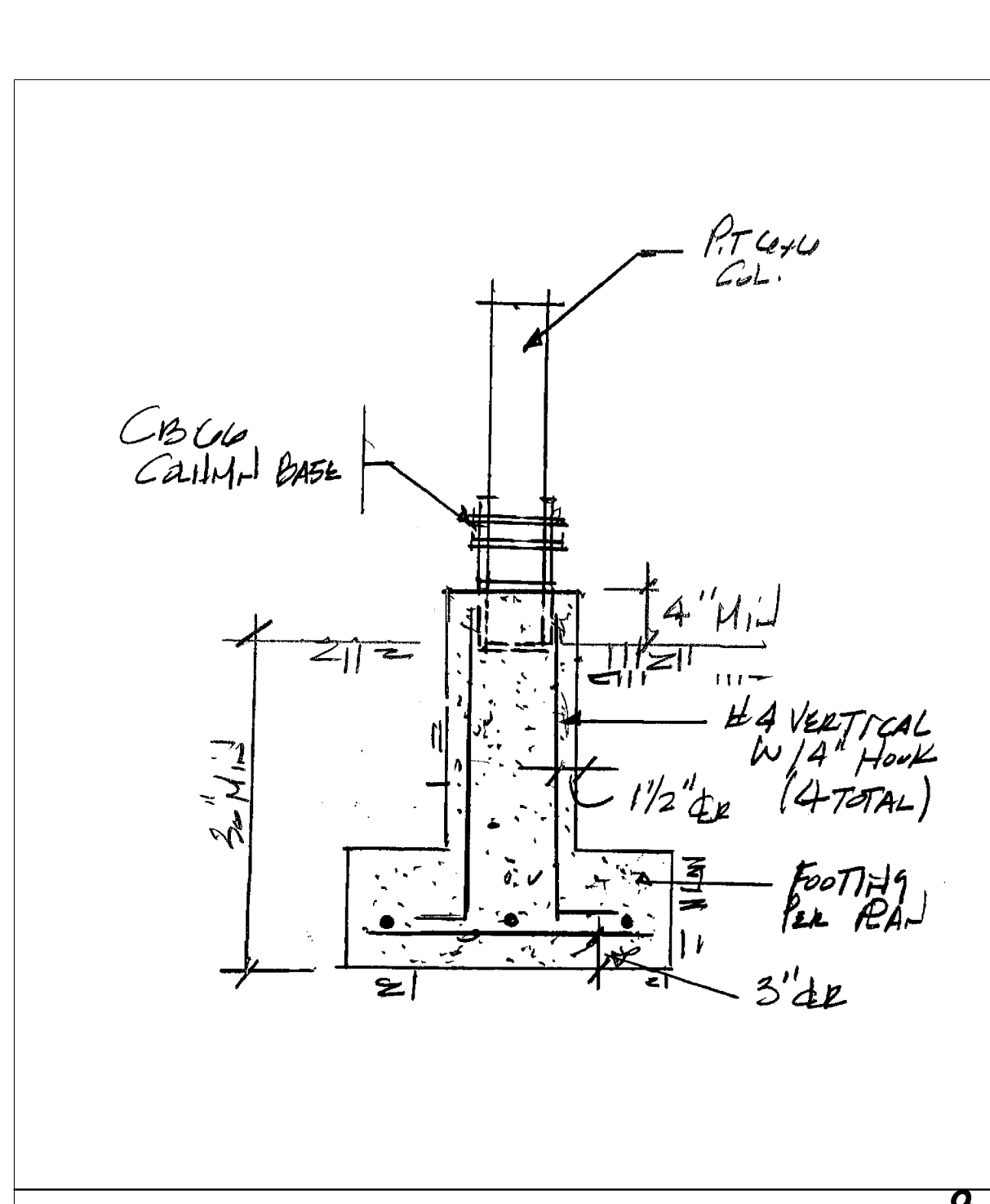
FLOOR FRAMING: PROVIDE FULL DEPTH BLOCKING FOR JOIST AT THE SUPPORTS. FLUSH BEAMS (FB) AND HEADERS NOT CALLED OUT ON THE PLANS SHALL BE (2)2X. ALL VERTICALLY LAMINATED COLUMNS AND HEADERS SHALL BE SPIKED TOGETHER WITH 16d NAILS SPACED AT 6 INCHES ON CENTER.

BEARING WALL FRAMING: ALL DOOR AND WINDOW HEADERS NOT CALLED OUT ON THE PLANS SHALL BE (2)2X3 HEM-FIR#2 WITH ONE CRIPPLE AND ONE STUD AT EACH END FOR OPENINGS 4 FEET WIDE OR LESS. ALL COLUMNS NOT CALLED OUT ON THE PLANS SHALL BE (2) STUDS SPIKED TOGETHER WITH 12d NAILS AT 12 INCHES ON CENTER. PROVIDE 2 LAYERS OF BUILDING PAPER BETWEEN WOOD AND CONCRETE. WALLS SHALL HAVE A SINGLE BOTTOM PLATE AND DOUBLE TOP PLATE. END NAIL TOP PLATES AND BOTTOM PLATES TO EACH STUD WITH 2-16d NAILS. FACE NAIL DOUBLE TOP PLATE WITH 16d NAILS AT 10 INCHES ON CENTER. LAP AND FACE NAIL PLATES WITH 2-16d NAILS AT EACH SPLICE, CORNER INTERSECTION. STAGGER SPLICES A MINIMUM OF 48 INCHES.

SHEAR WALL SCHEDULE

Shear Wall Designation	Nail Size	Nail Spacing				Blocking Req'd.	ALLOWABLE SHEAR #/Ft
		Edges	Studs	Top/Btm. Plate	Blocking		
P1-6	8d	6"	12"	6"	Yes	210	
P1-4	8d	4"	12"	4"	Yes	310	
P1-3	8d	3"	12"	3"	Yes	400	
P1-2	8d	2"	12"	2"	Yes	525	
P2-3	8d	3"	12"	3"	Yes	800	
P2-2	8d	2"	12"	2"	Yes	1050	

- Shear Wall Notes:
- P1 - 7/16" A.P.A. rated Plywood or Orientated Strand Board (O.S.B.) on one side of wall.
 - P2 - 7/16" A.P.A. rated Plywood or Orientated Strand Board (O.S.B.) on each side of wall.
 - For P1-3, P1-2, P2-3, & P2-2 shear walls use 3x studs at adjoining panel edges. Nailing shall be staggered.
 - Nails shall be 8d common. (d = .131 inch)
 - Where plywood is installed on both sides of wall plywood joints shall fall on separate studs each side.
 - All panel edges backed with 2-inch nominal framing for P1-6 & P1-4 shear wall. All panels edges backed with 3x framing at P1-3, P1-2, P2-3, & P2-2 shear walls. Install panels either horizontally or vertically. Space nails @ 10 inches on center @ intermediate supports.
 - All anchor bolts shall be installed with hot dipped galvanized plate washers.
 - Refer to foundation plan for anchor bolt size, spacing and mudsill/rim connections.



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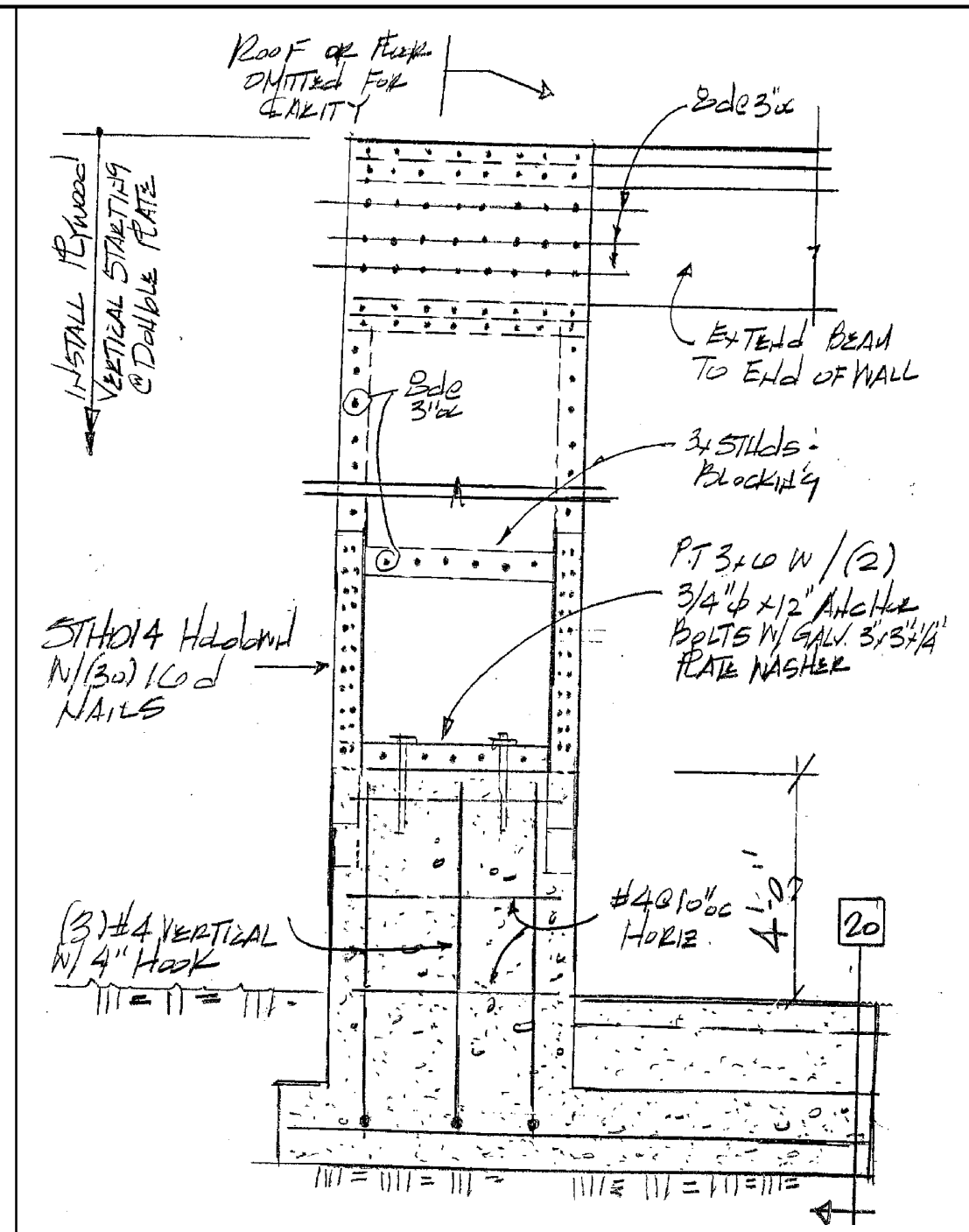
BASSETT LARSEN DESIGN LLC

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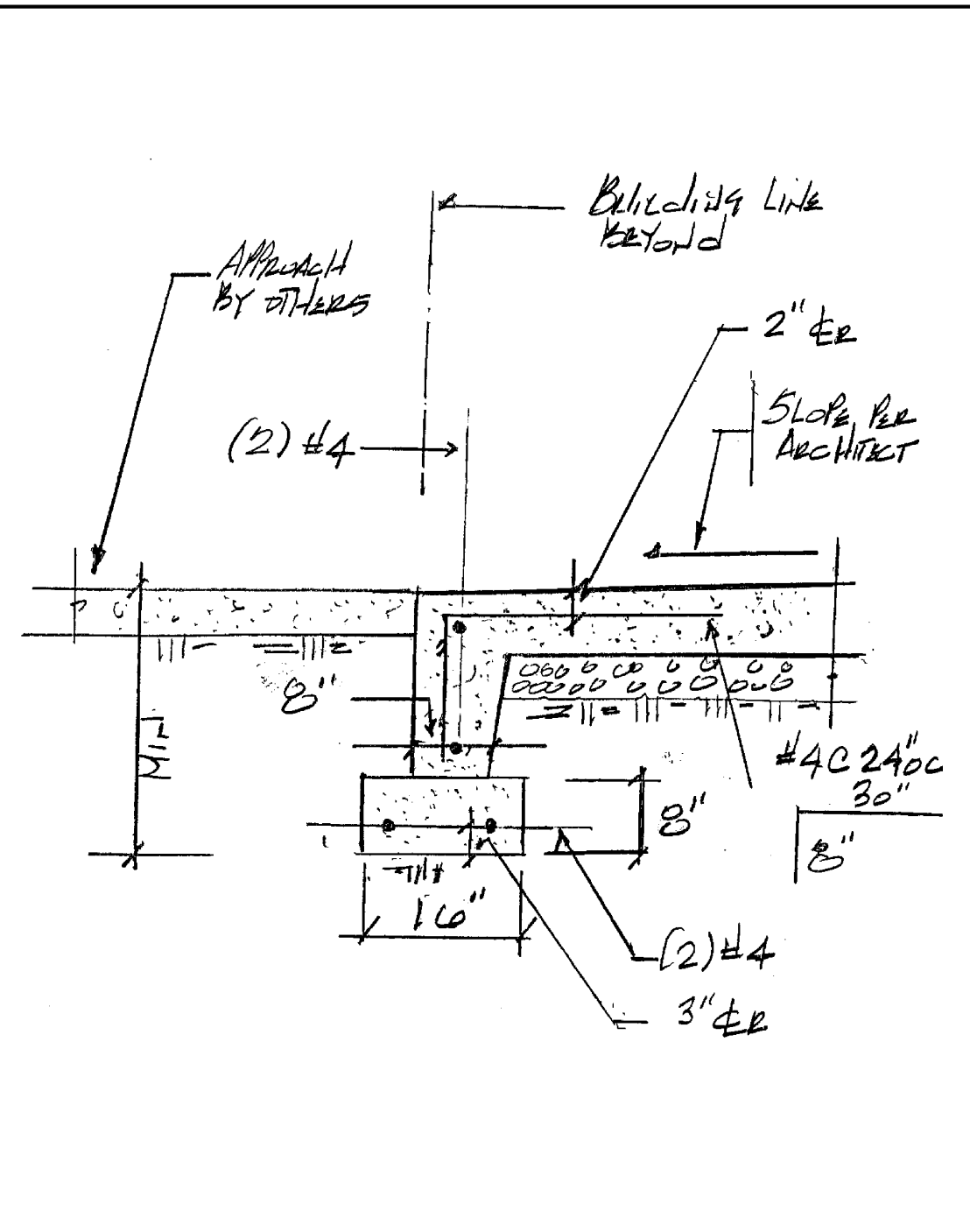
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 GENERAL STRUCTURAL NOTES
 SHEAR WALL SCHEDULE
 STRUCTURAL DETAILS BY
 MITCHELL ENGINEERING, INC.

SHEET 13
 OF 17 SHEETS

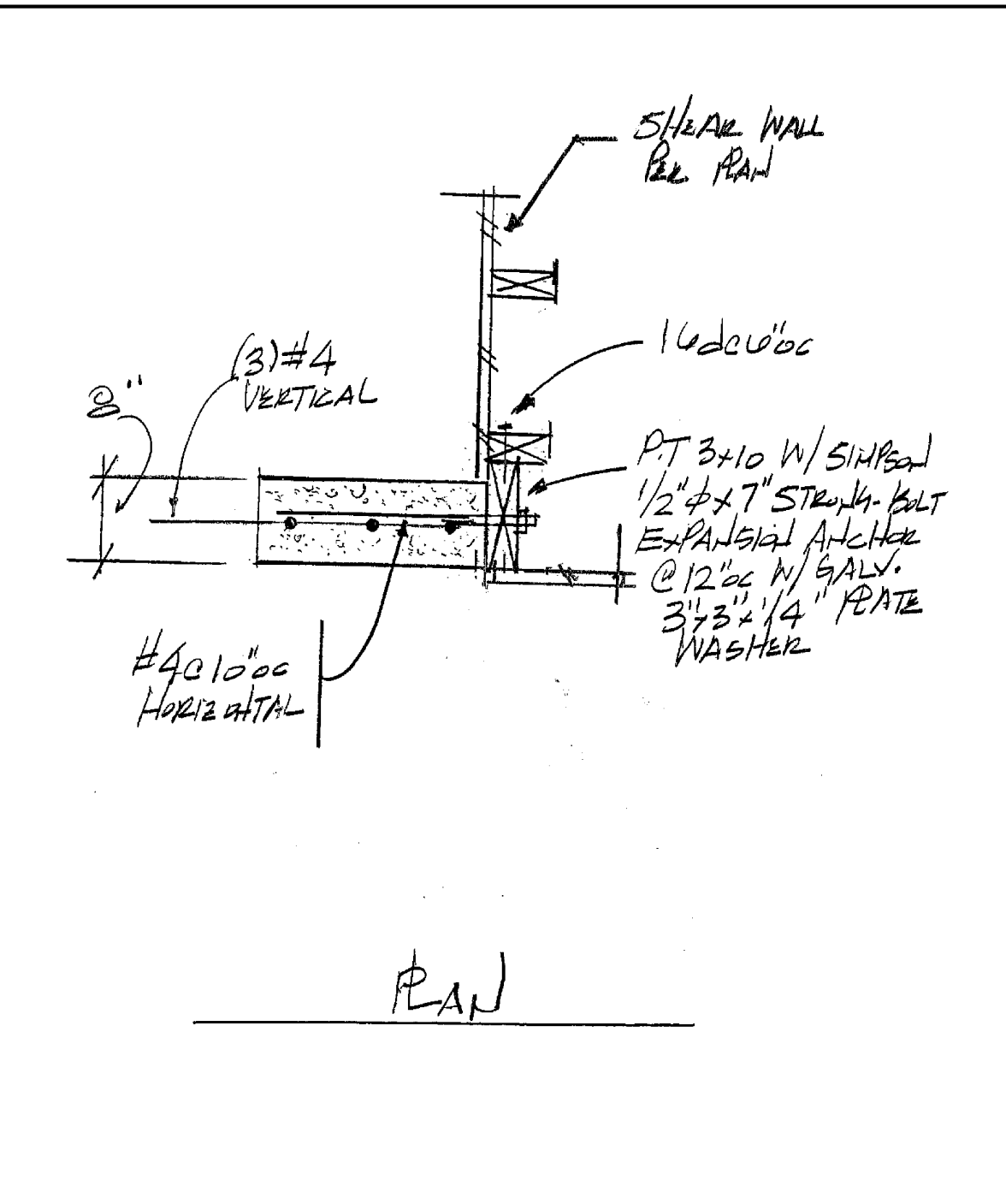
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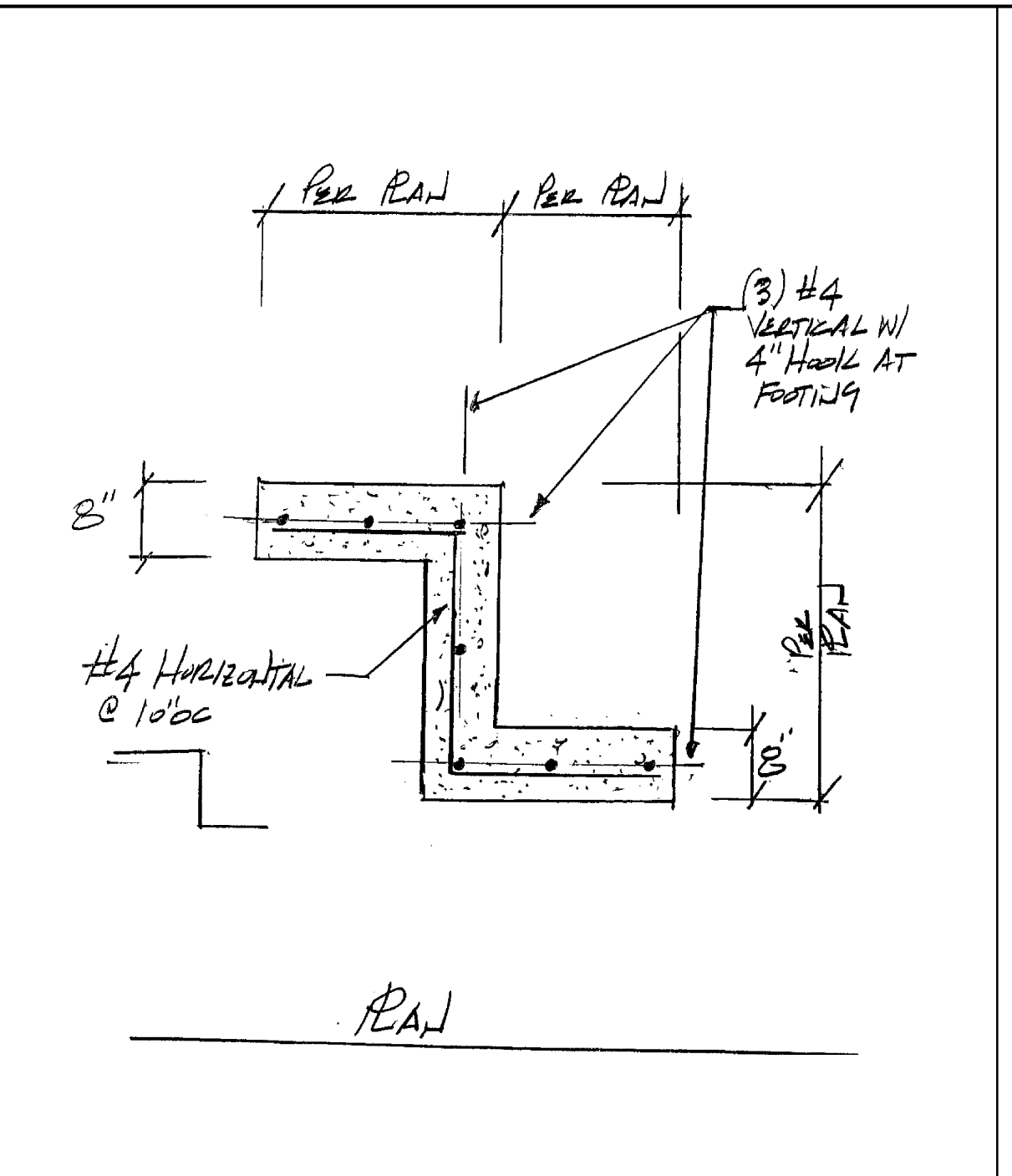
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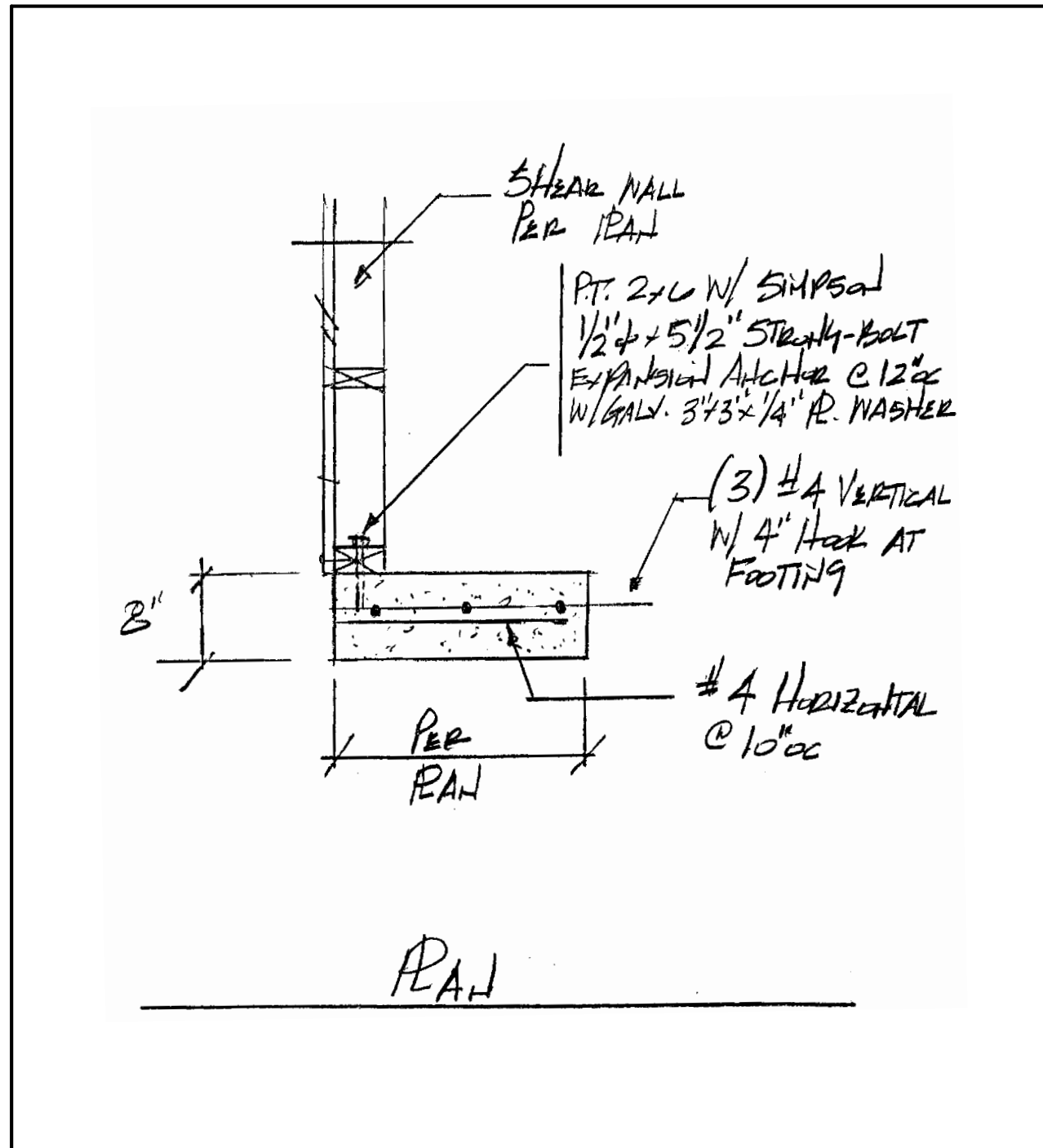
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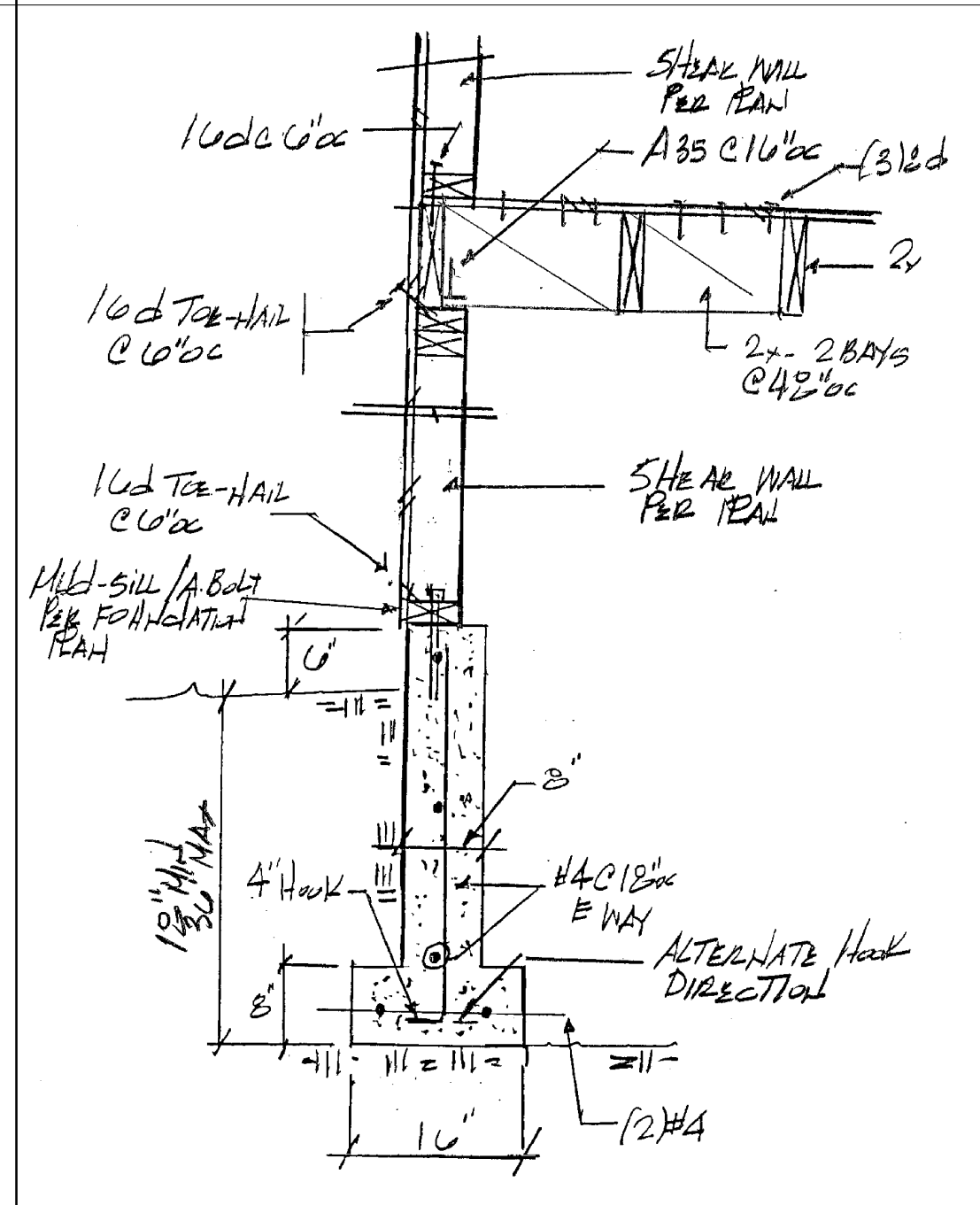
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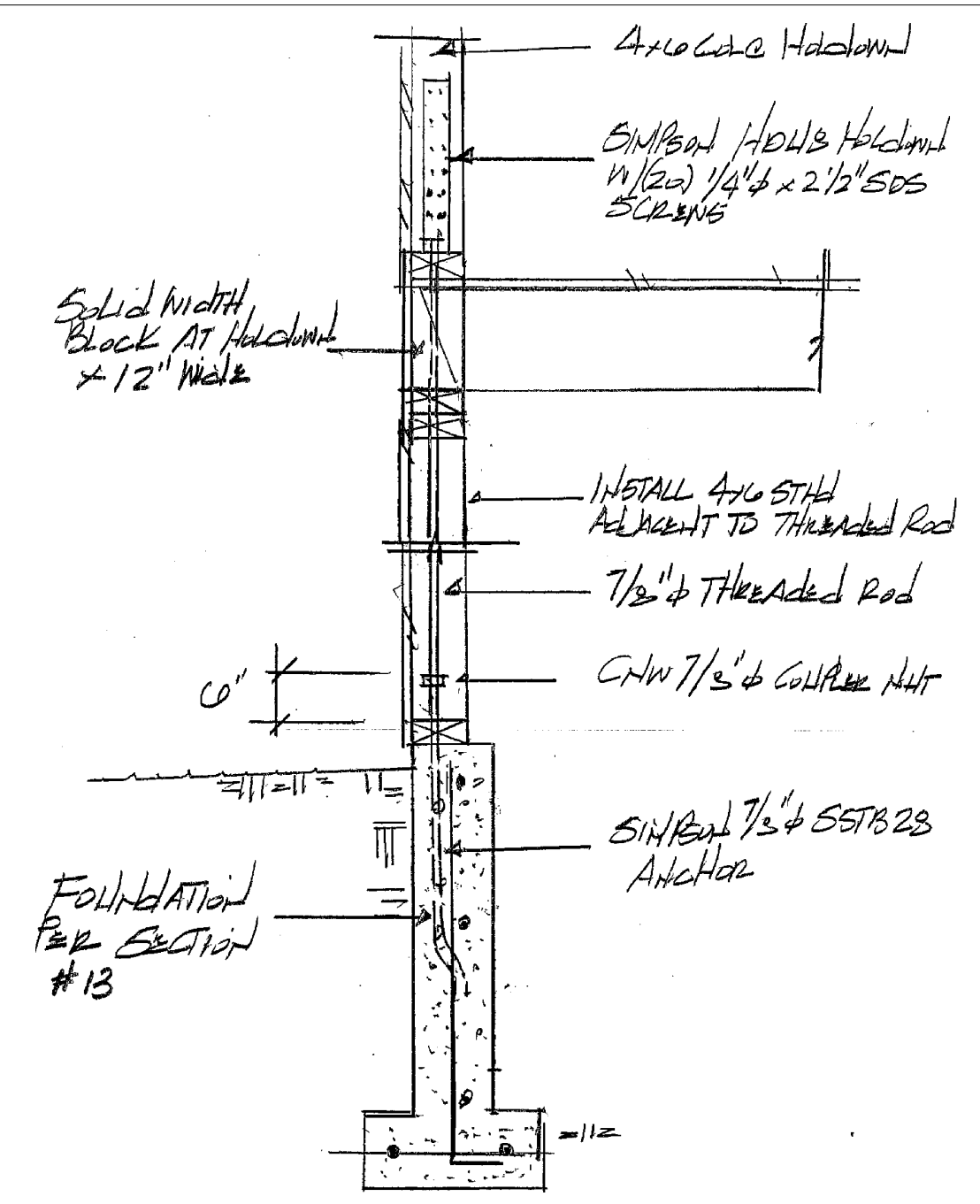
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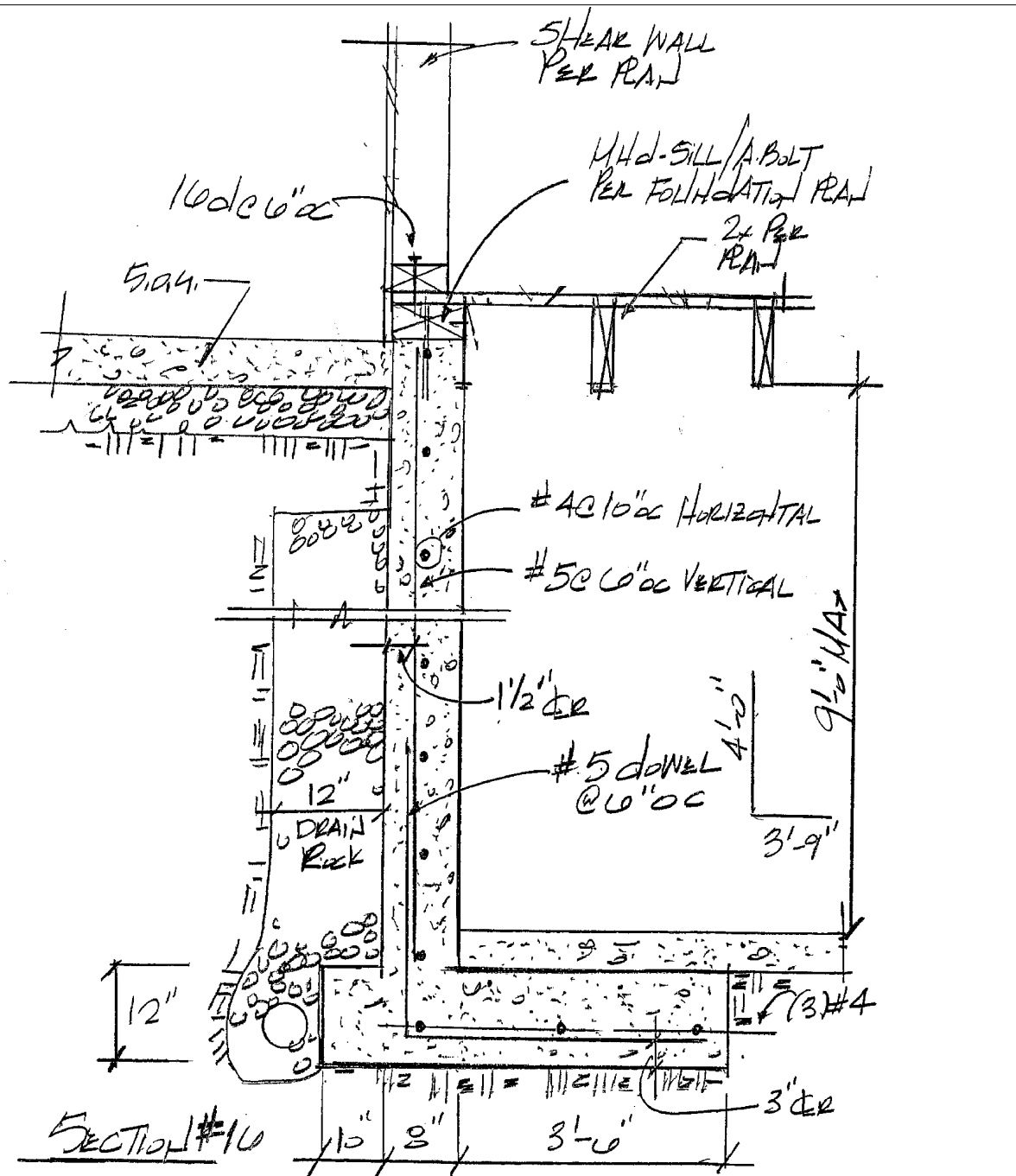
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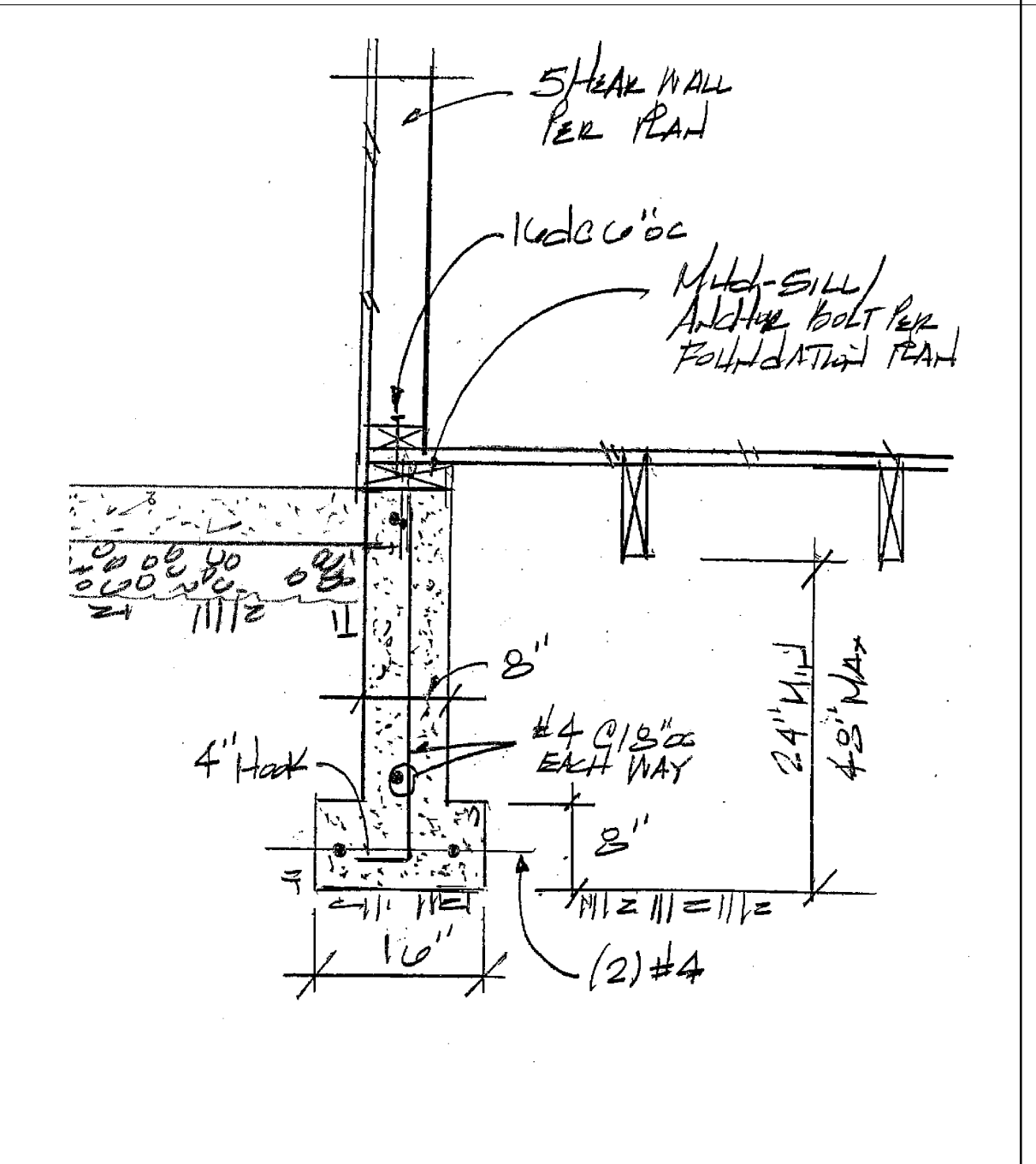
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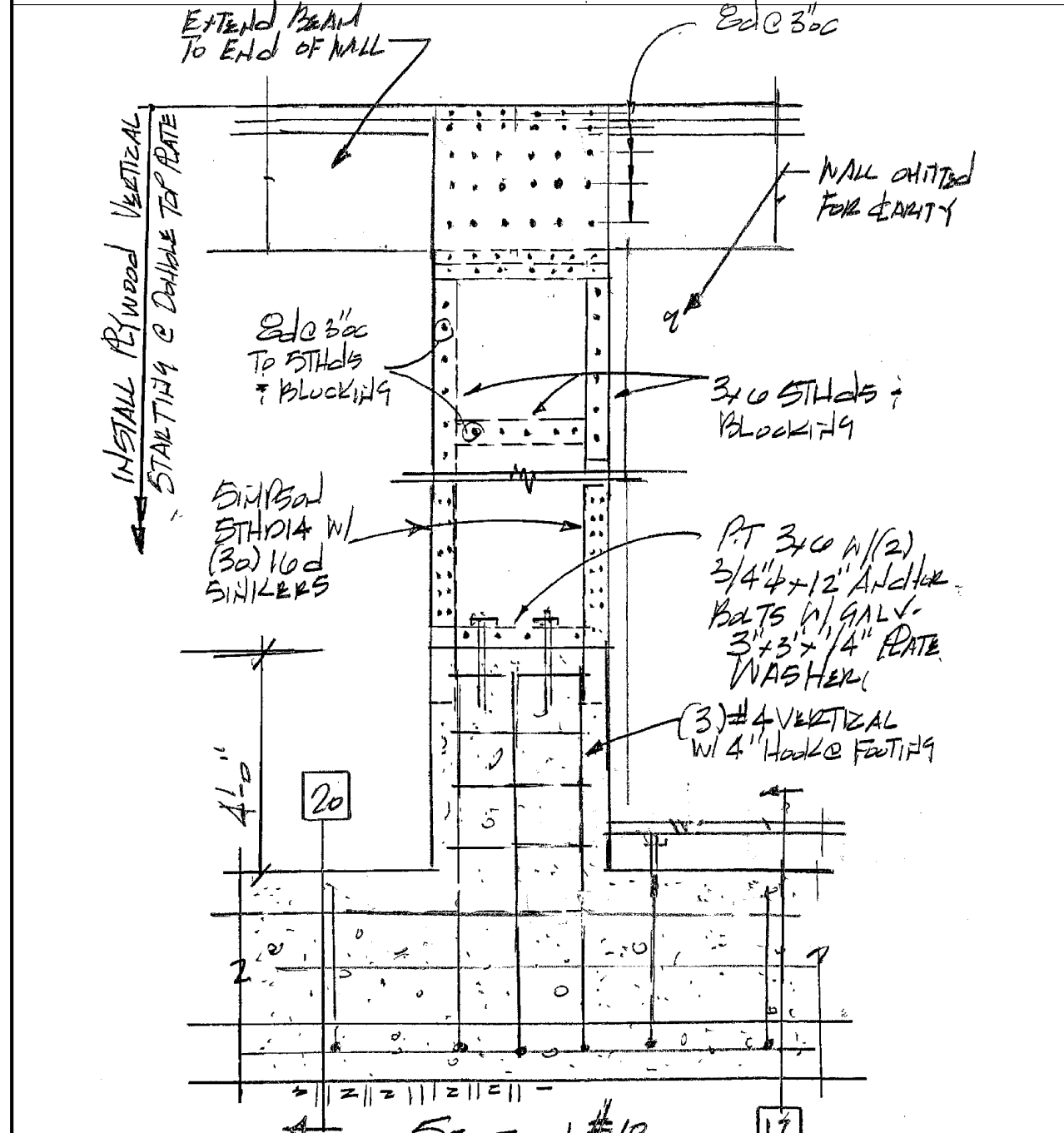
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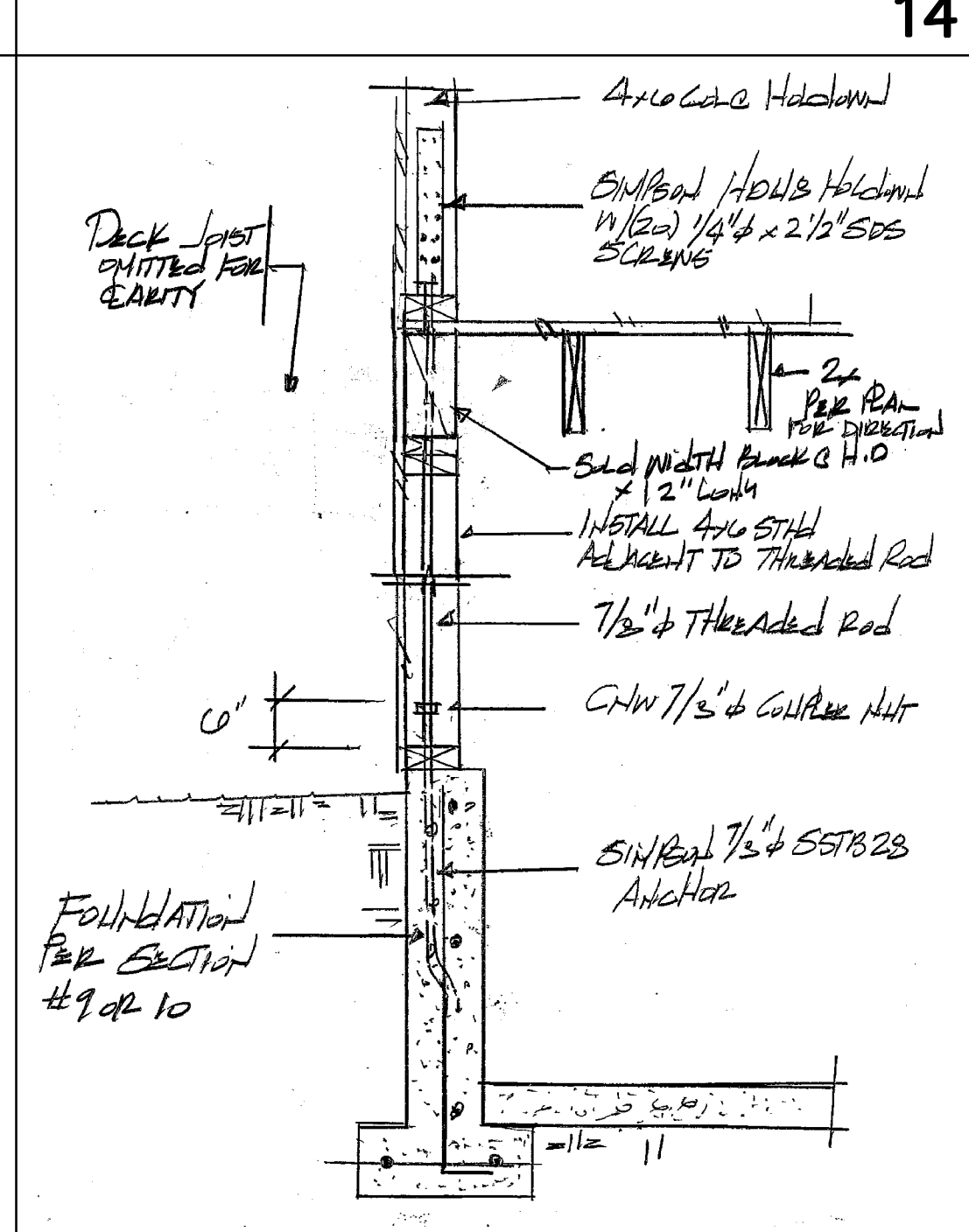
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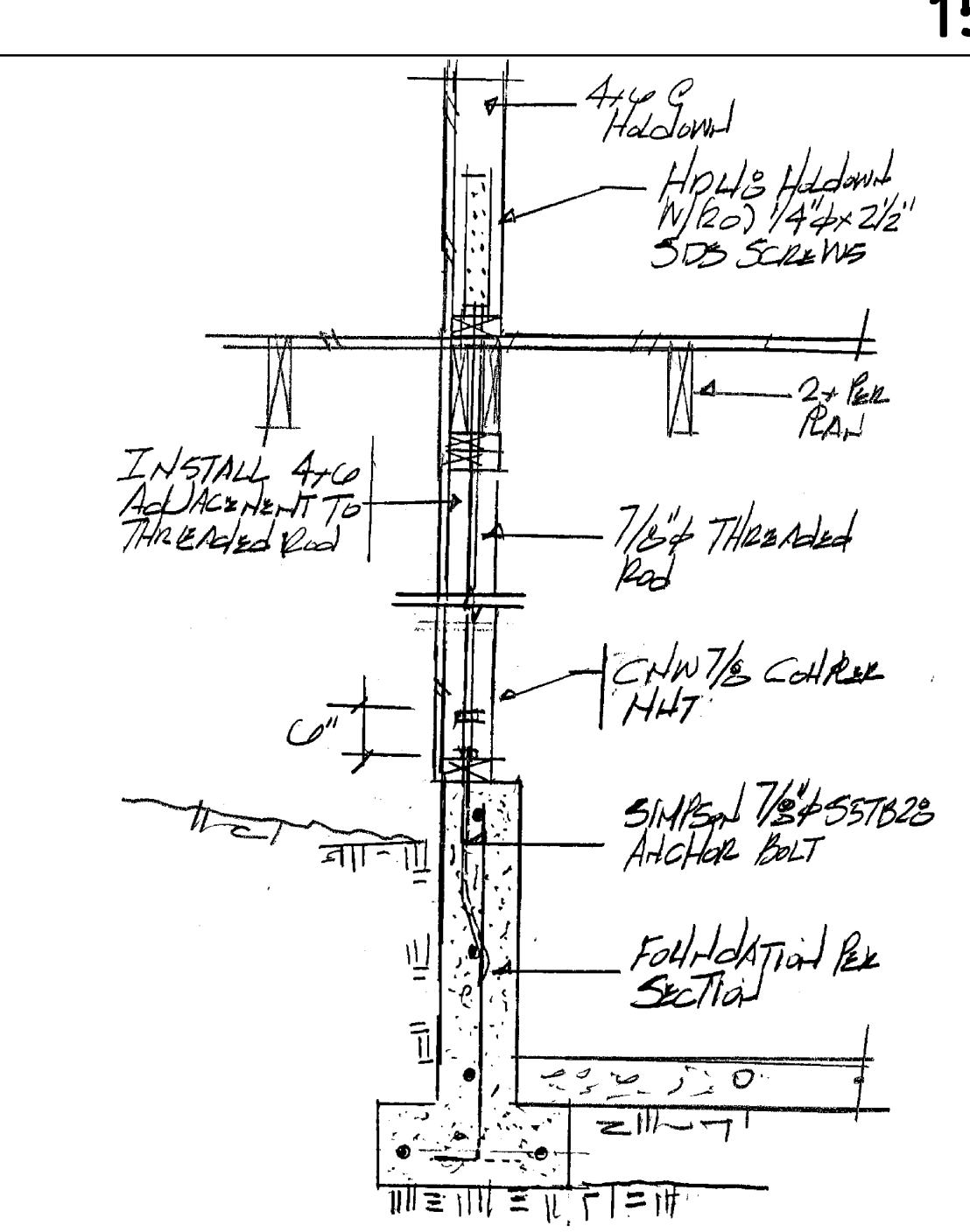
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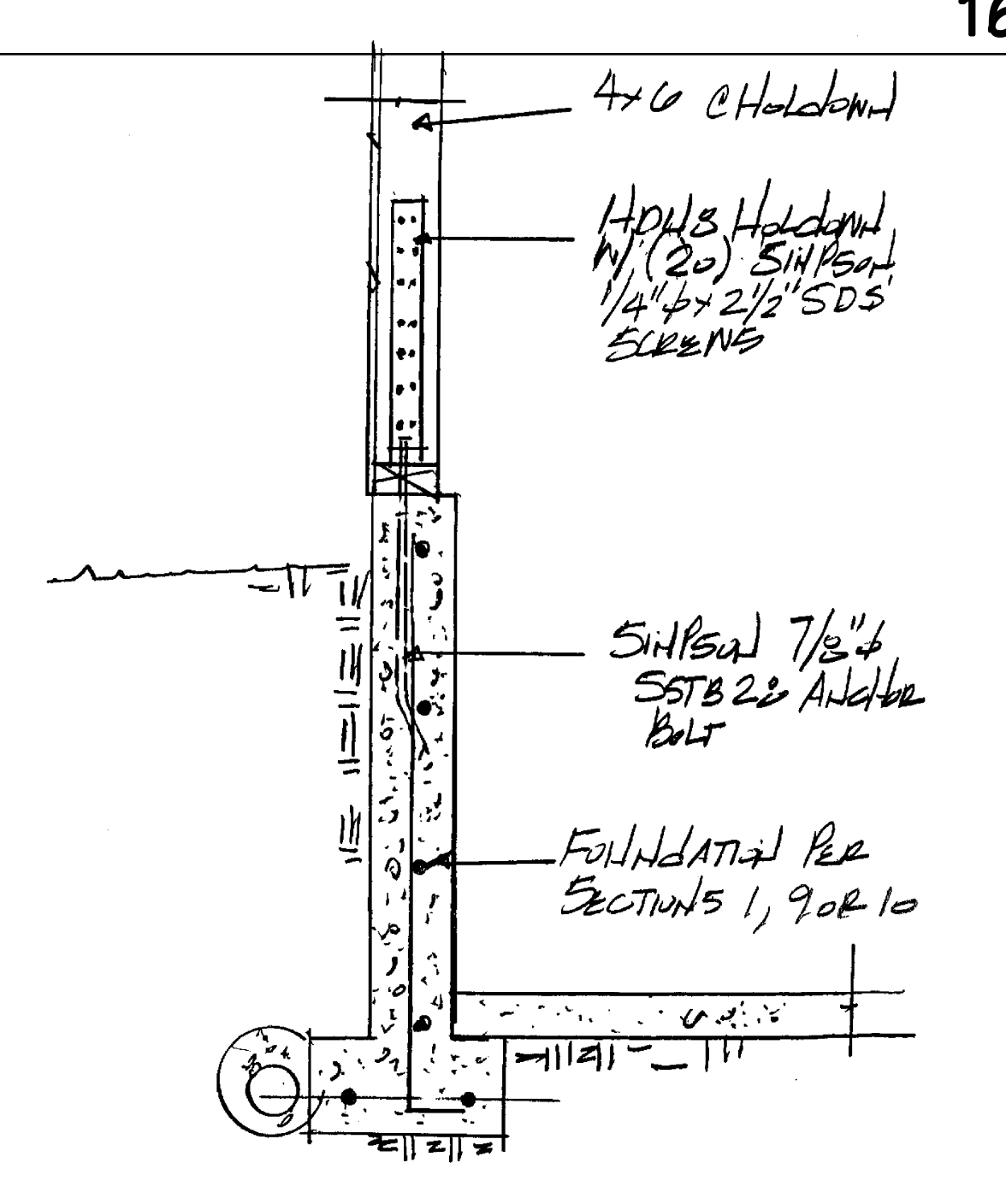
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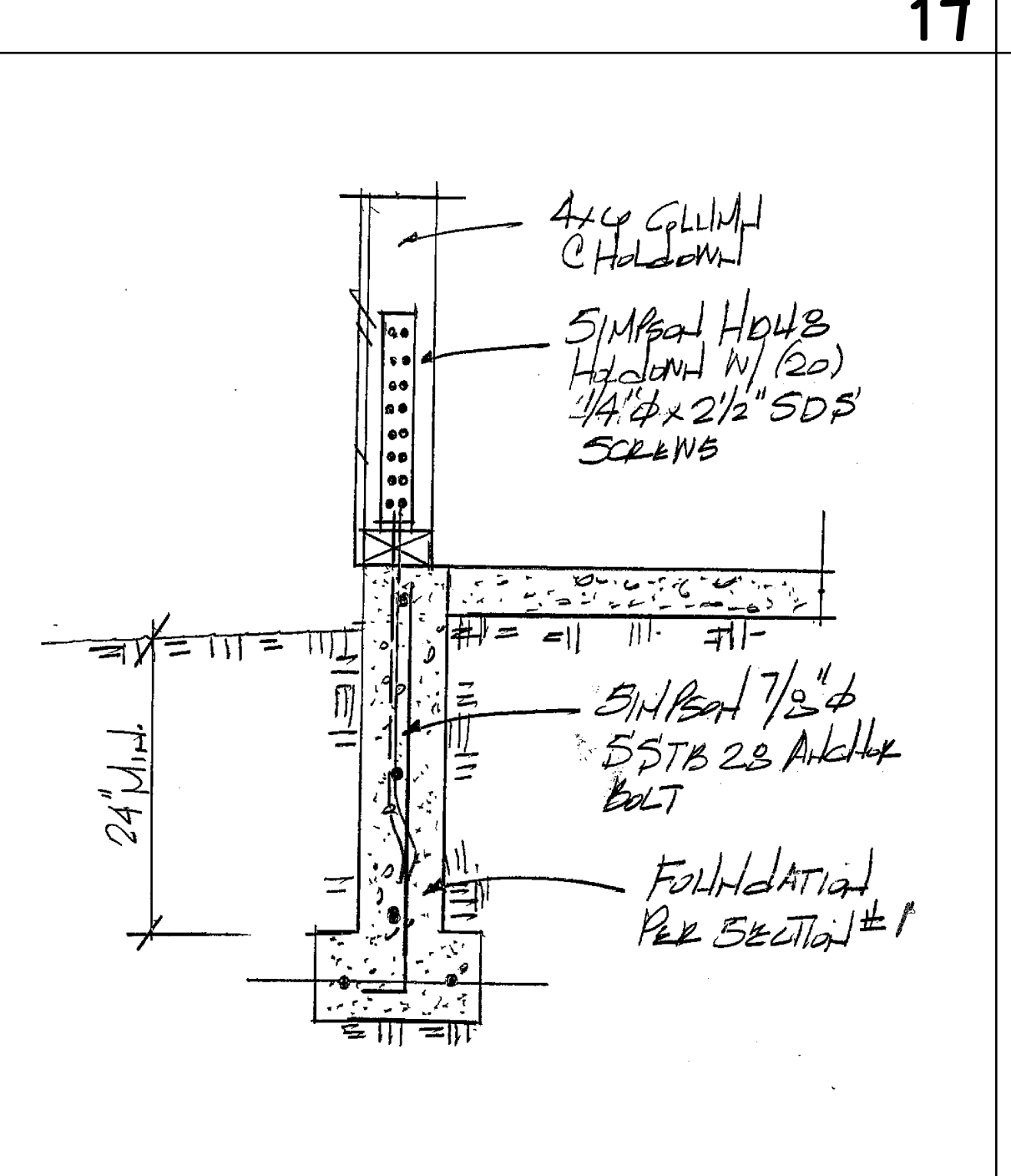
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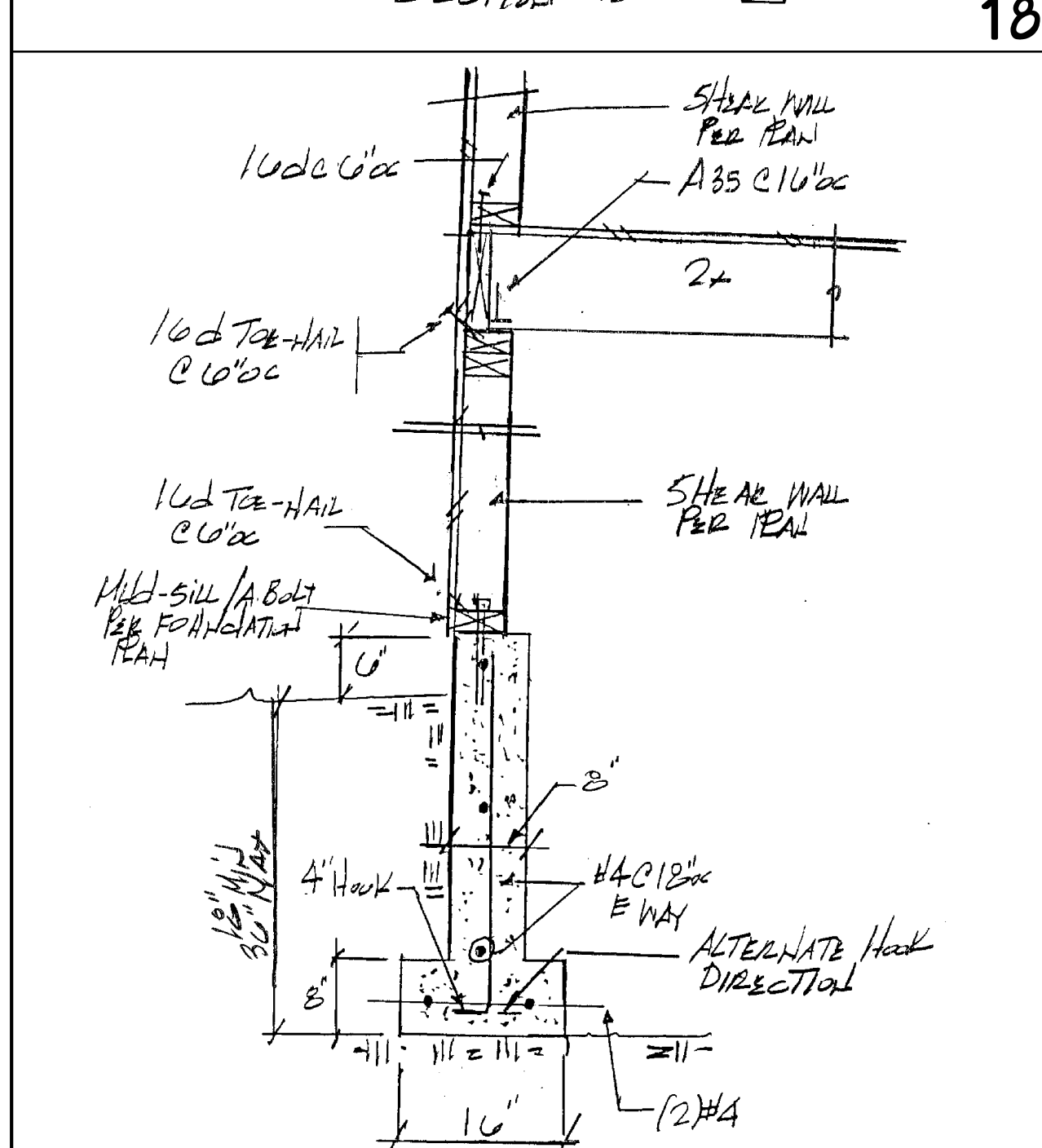
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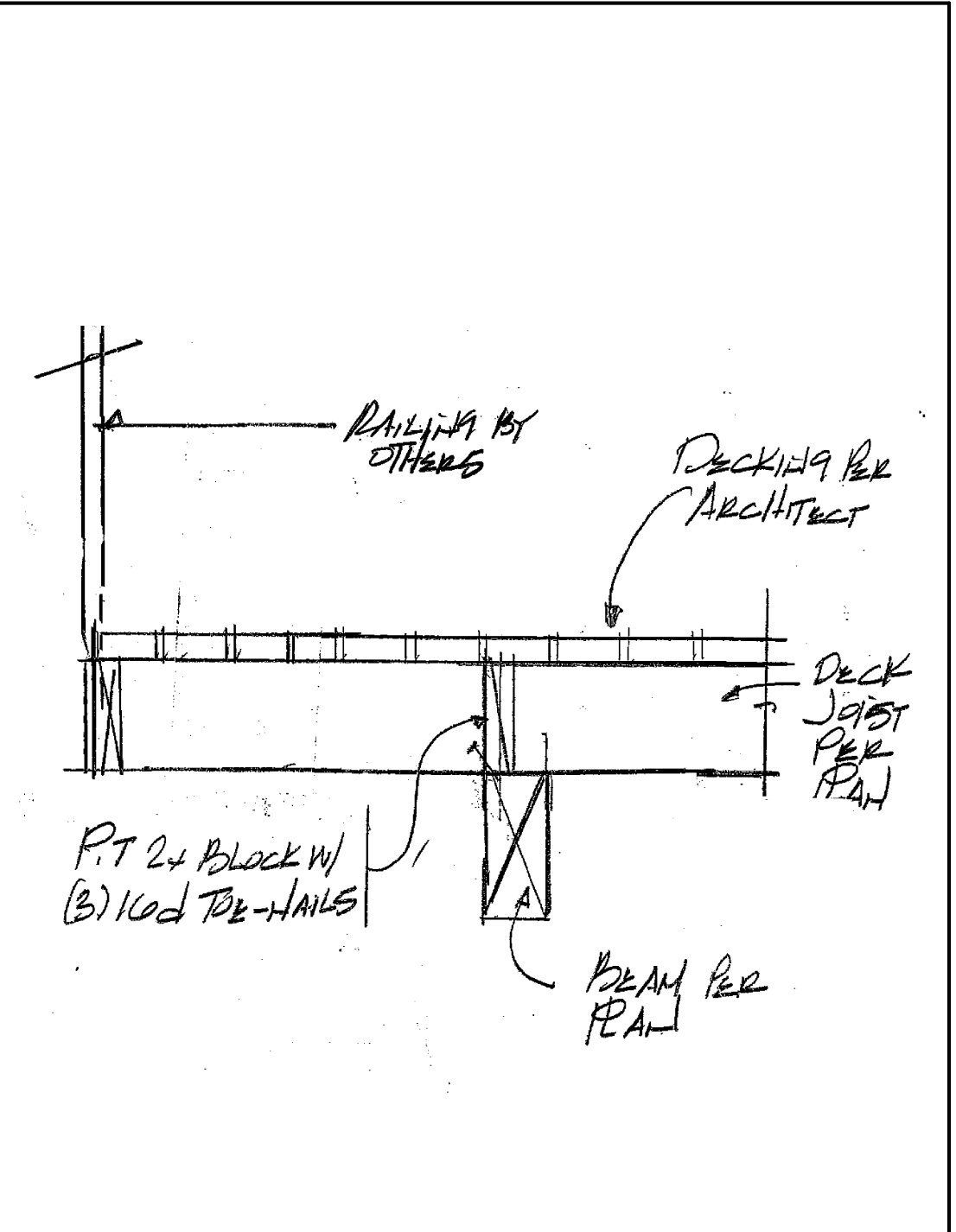
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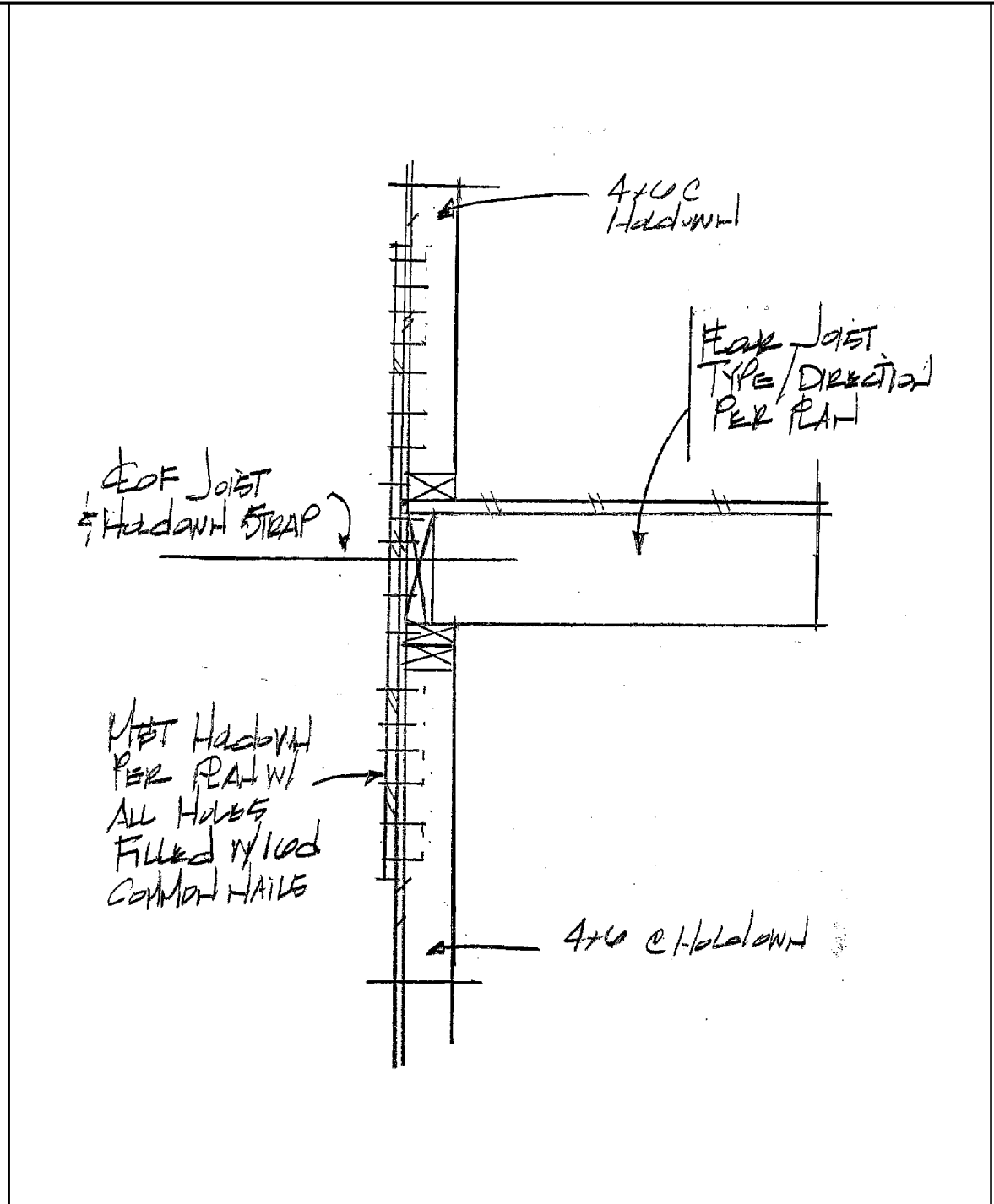
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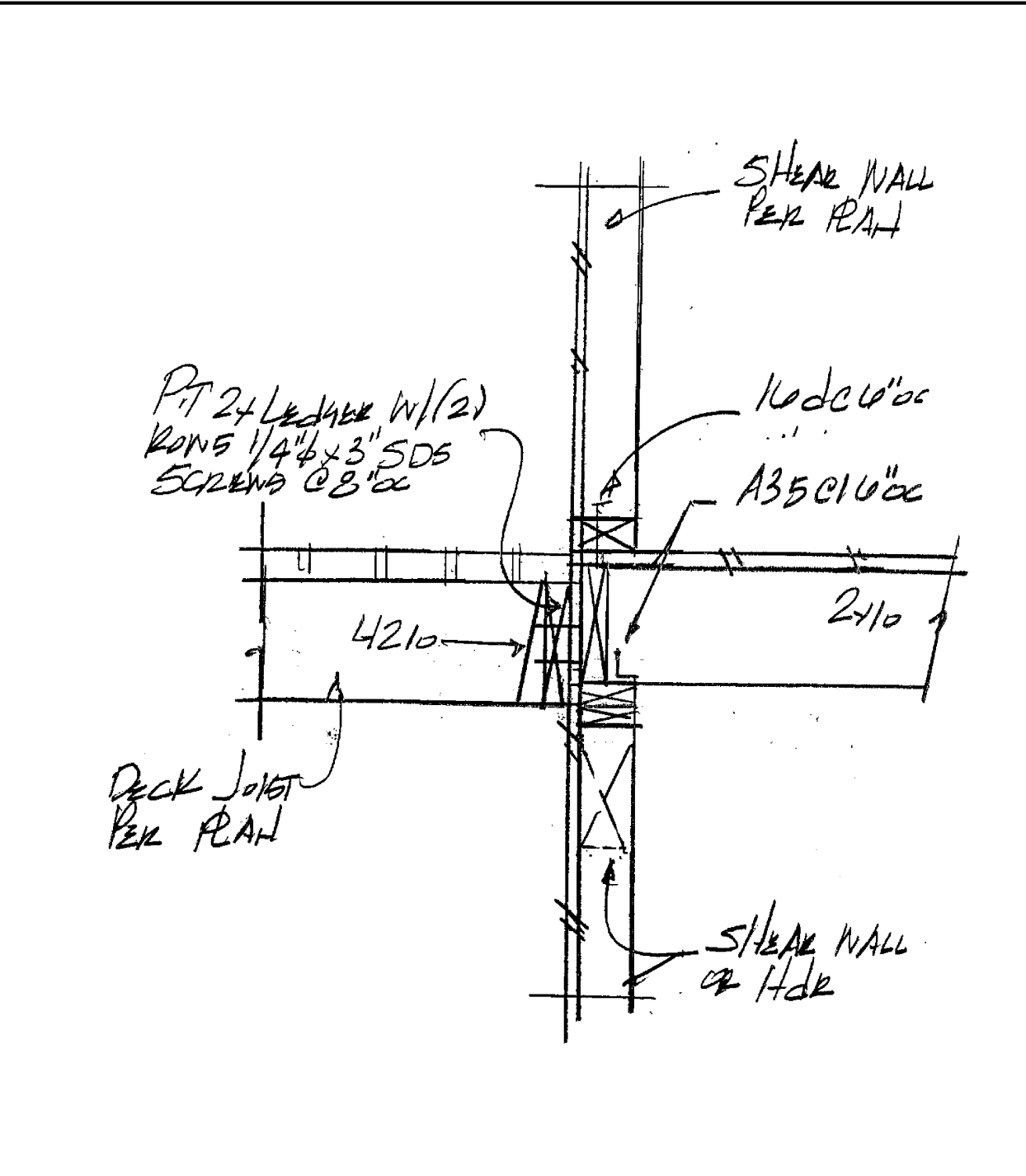
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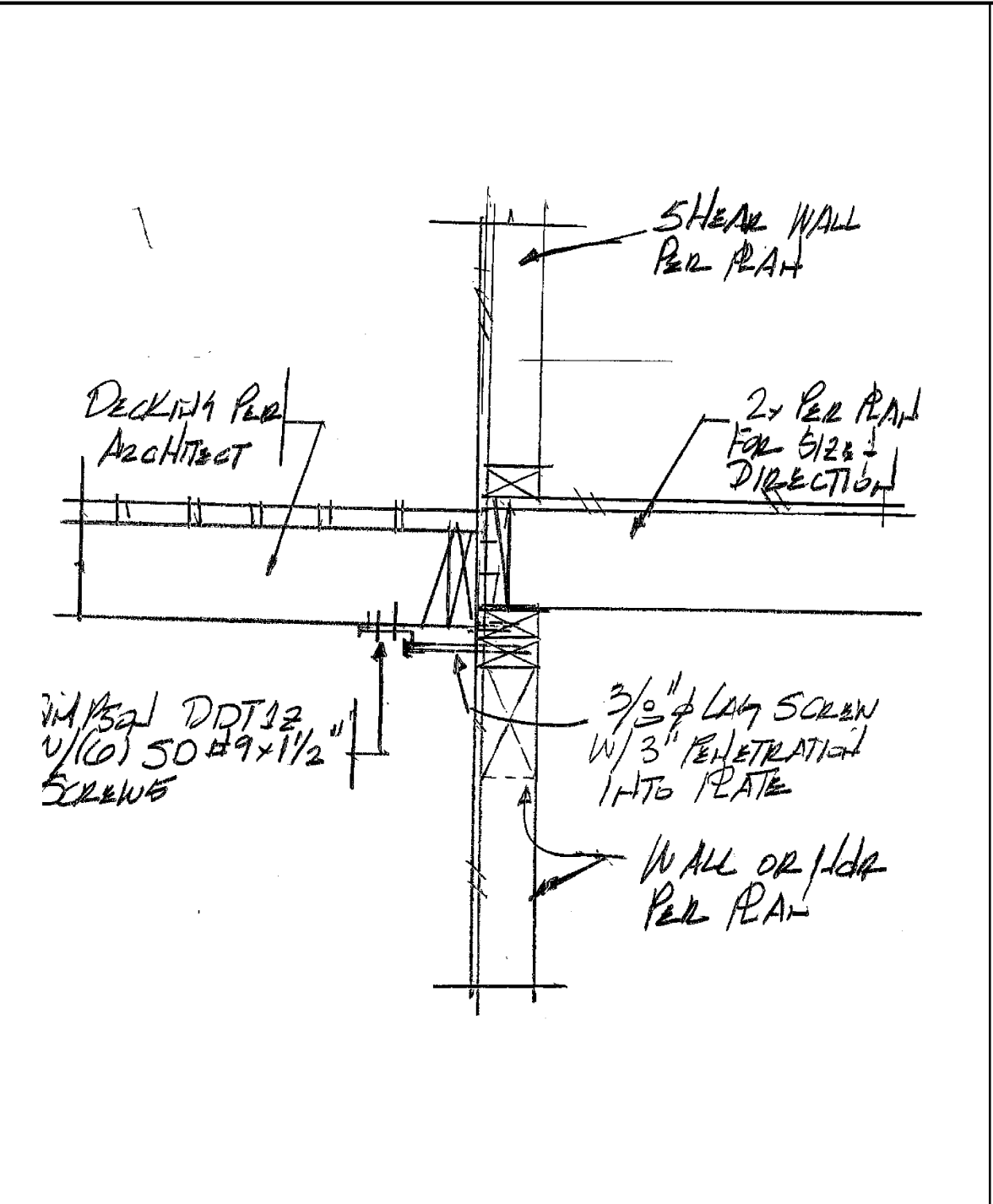
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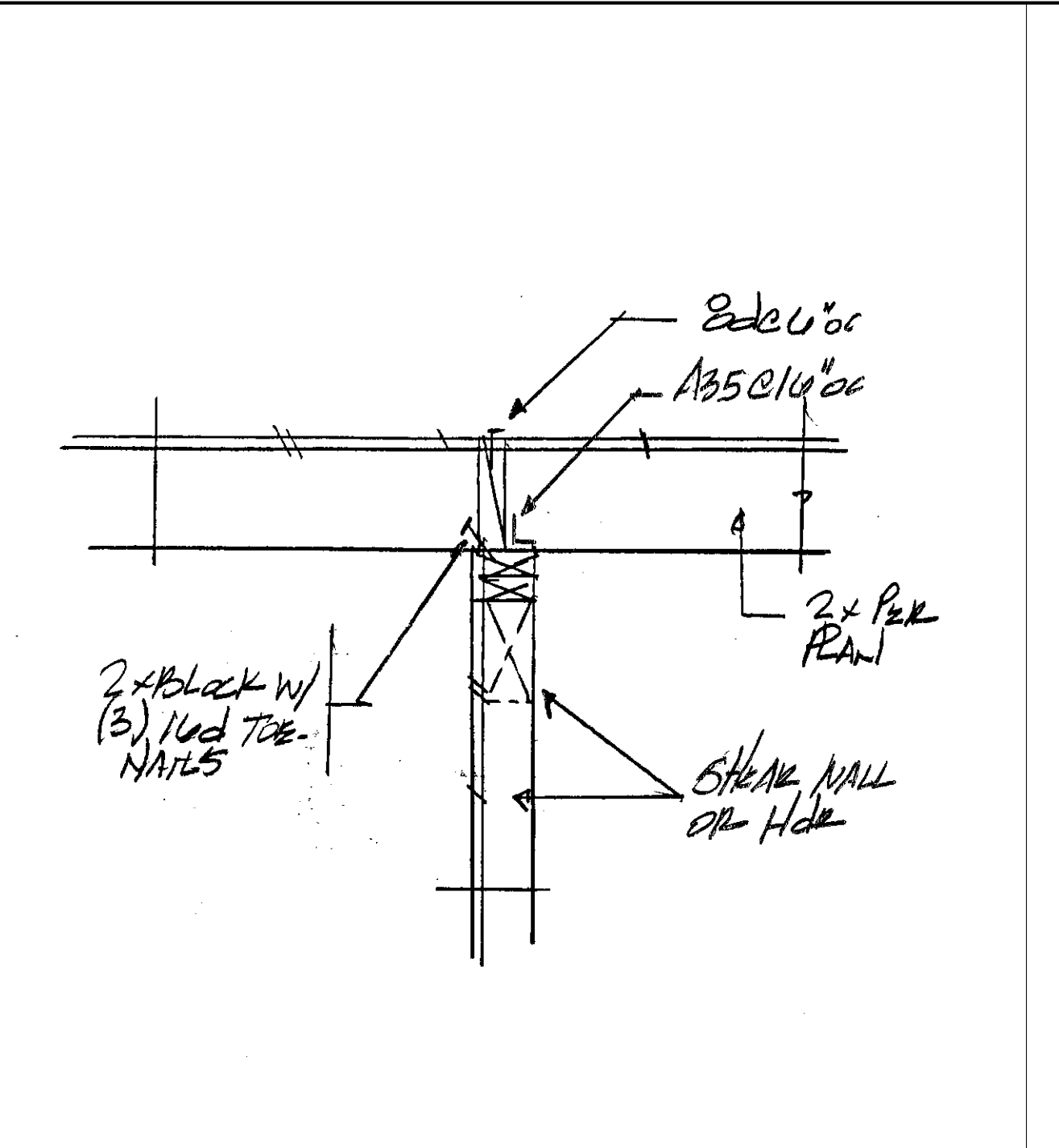
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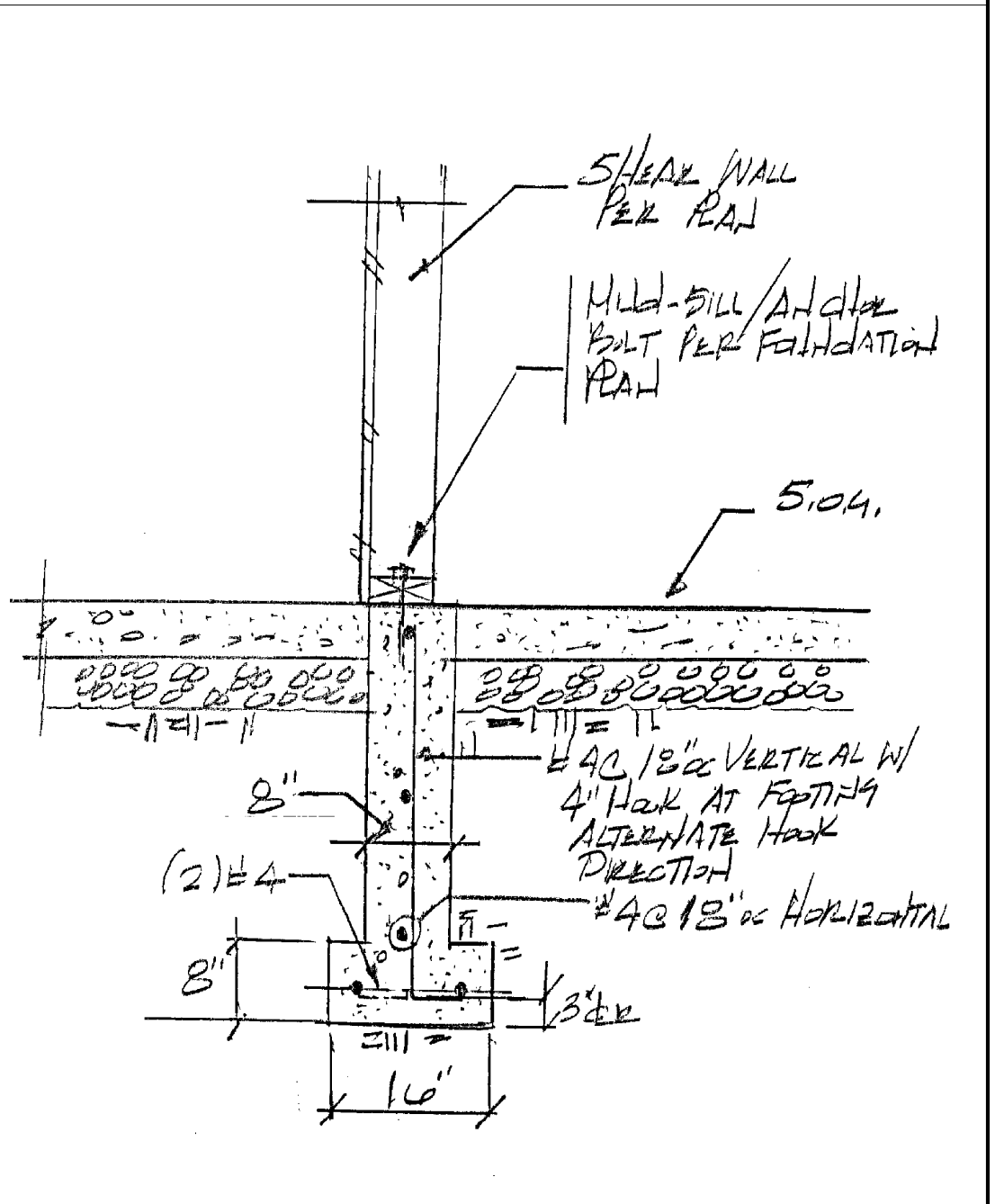
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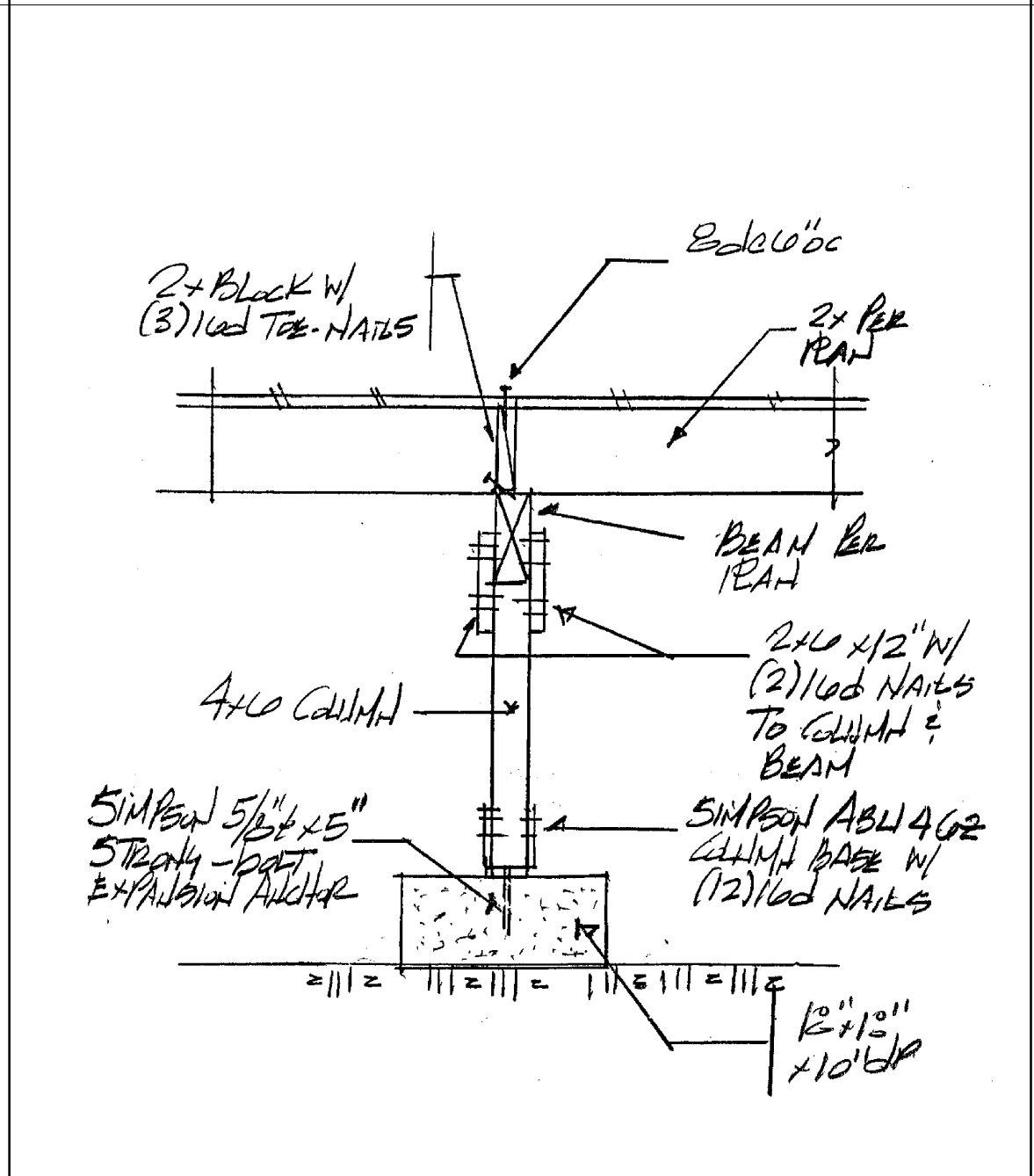
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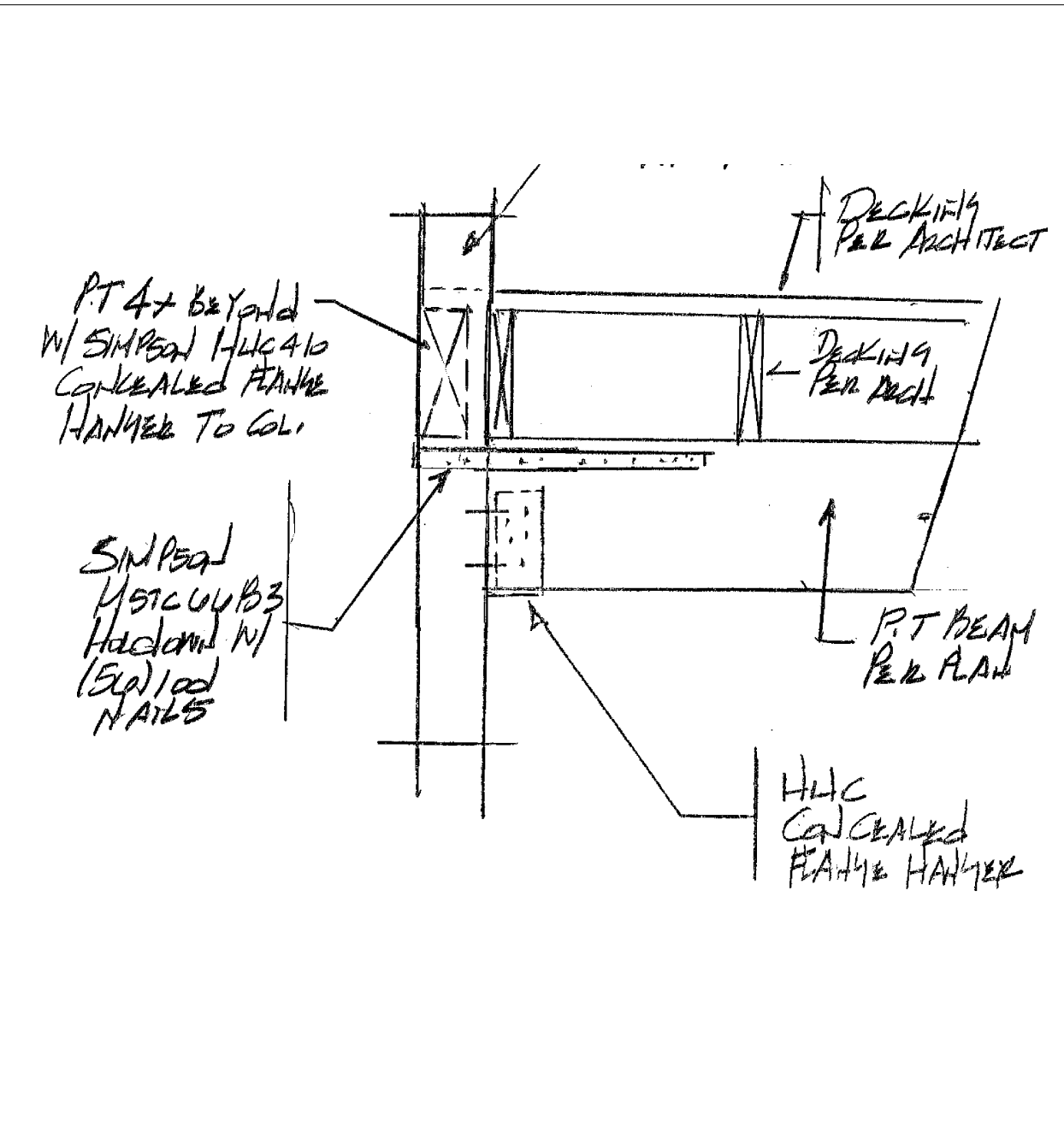
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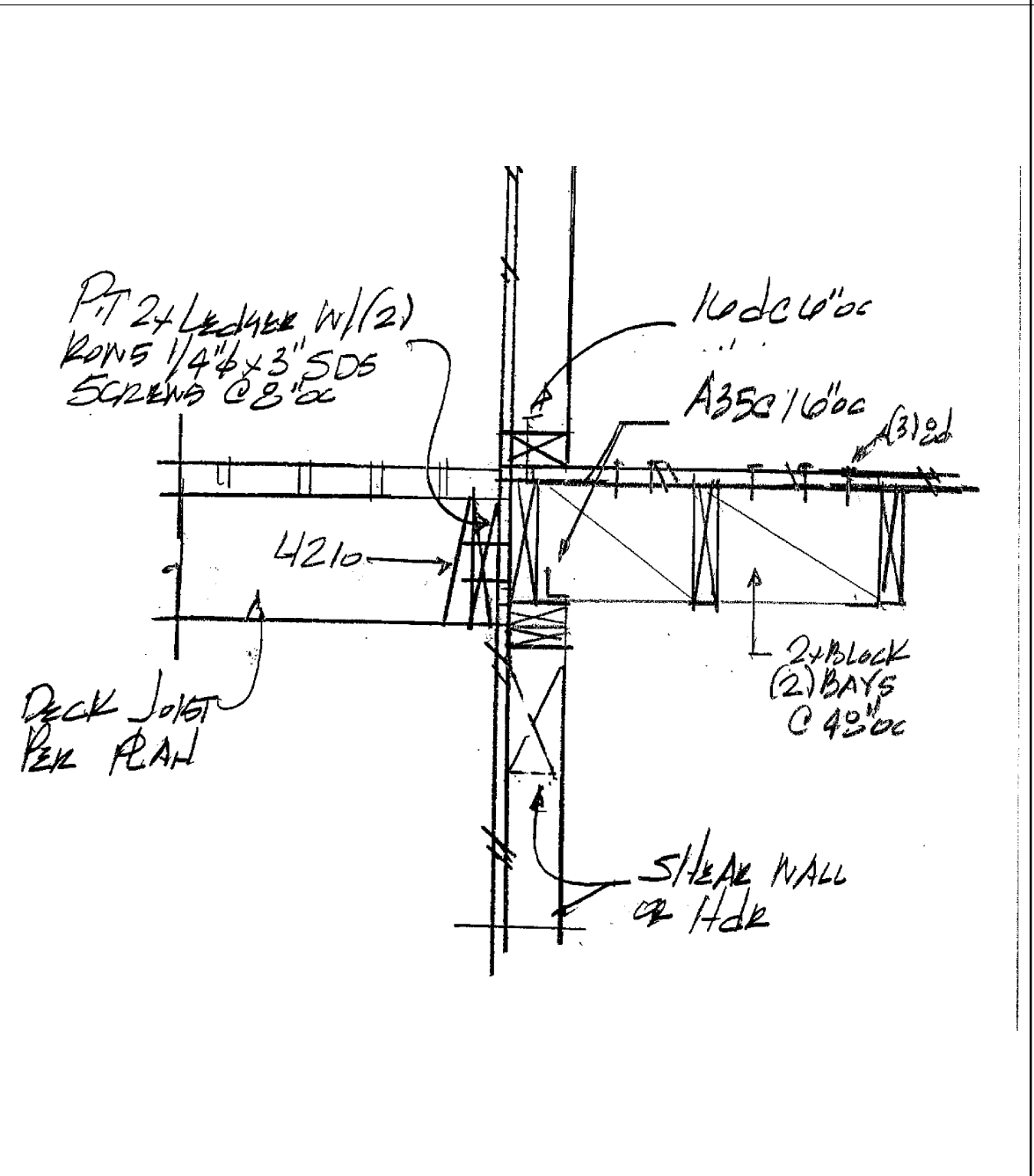
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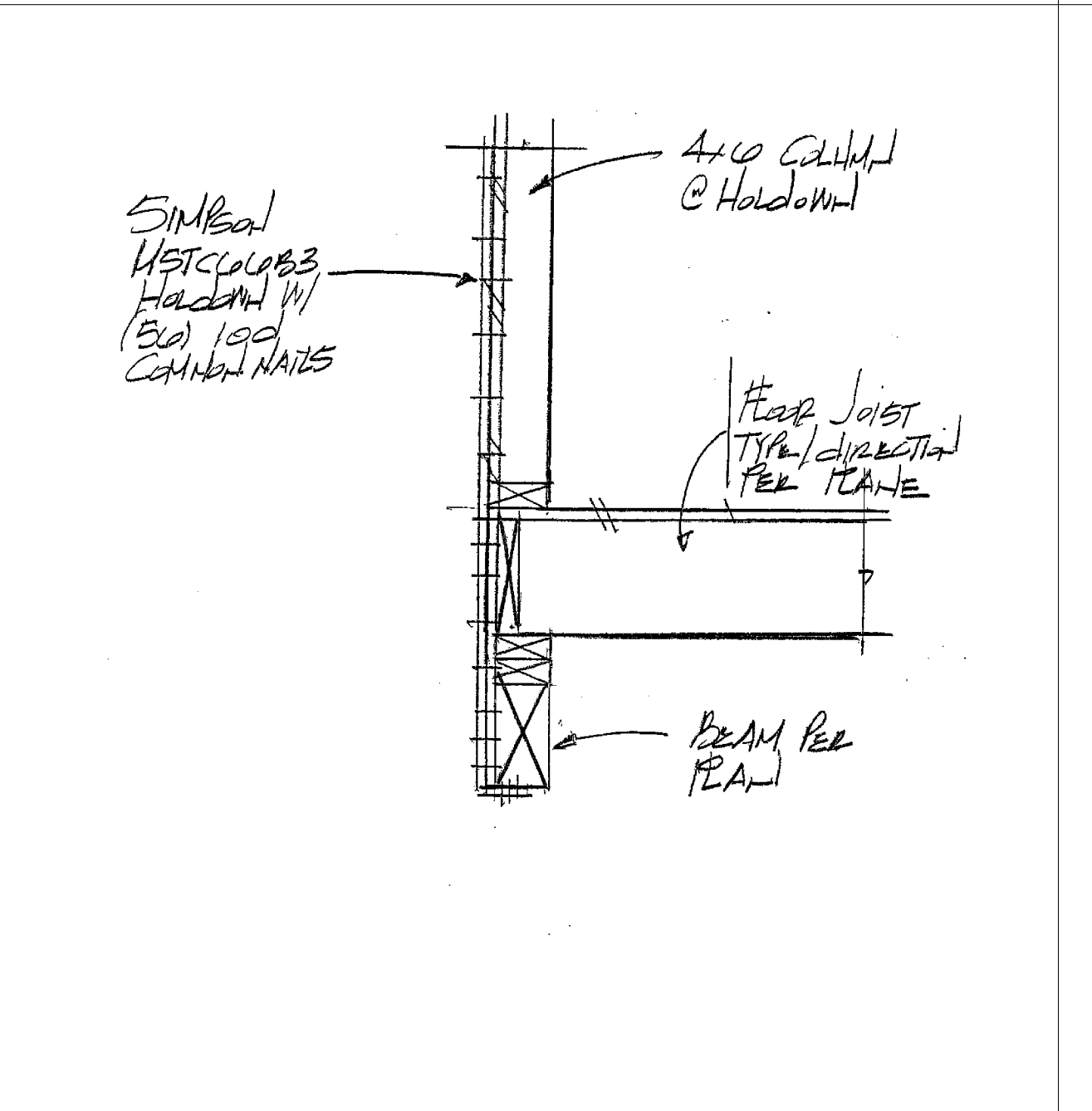
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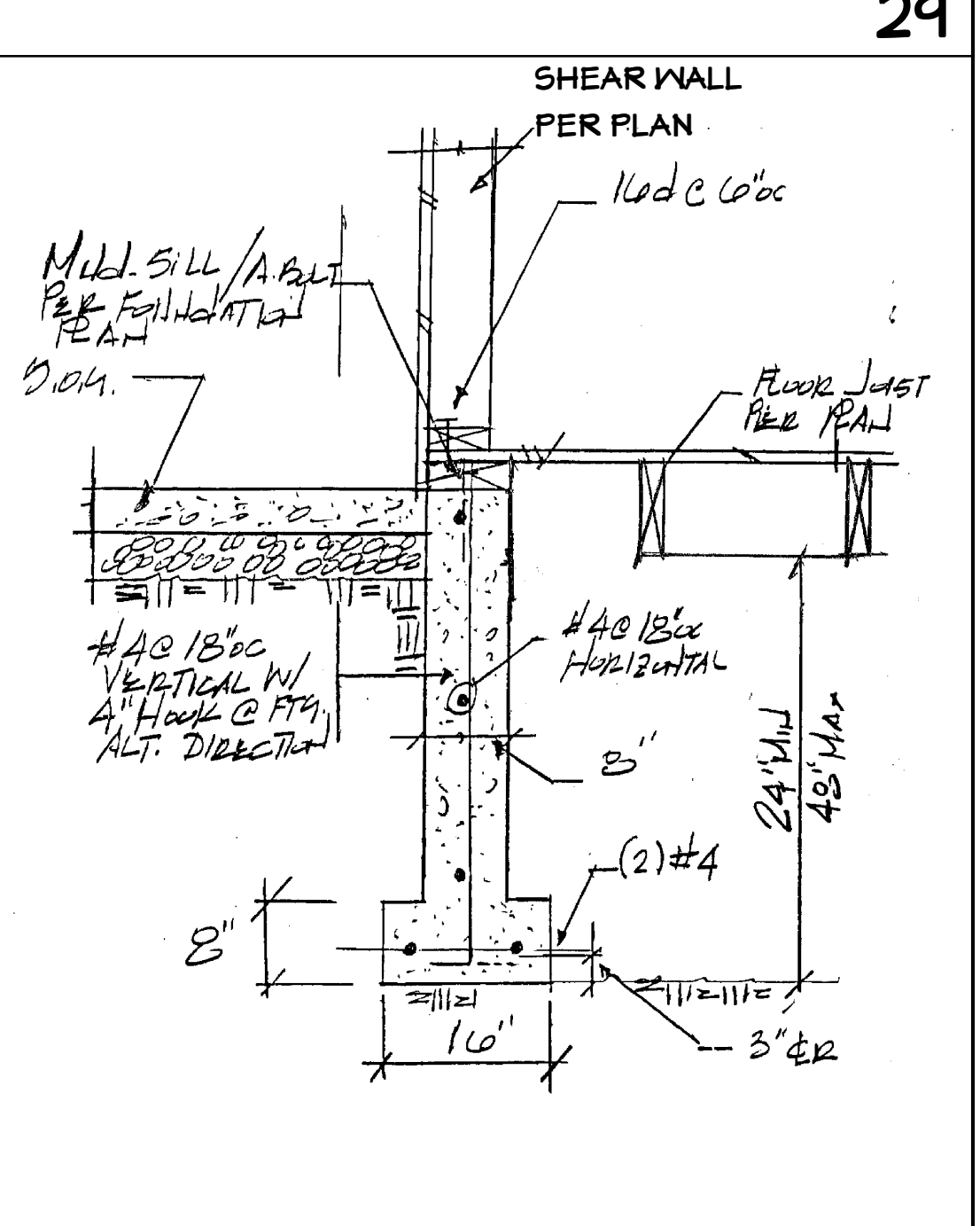
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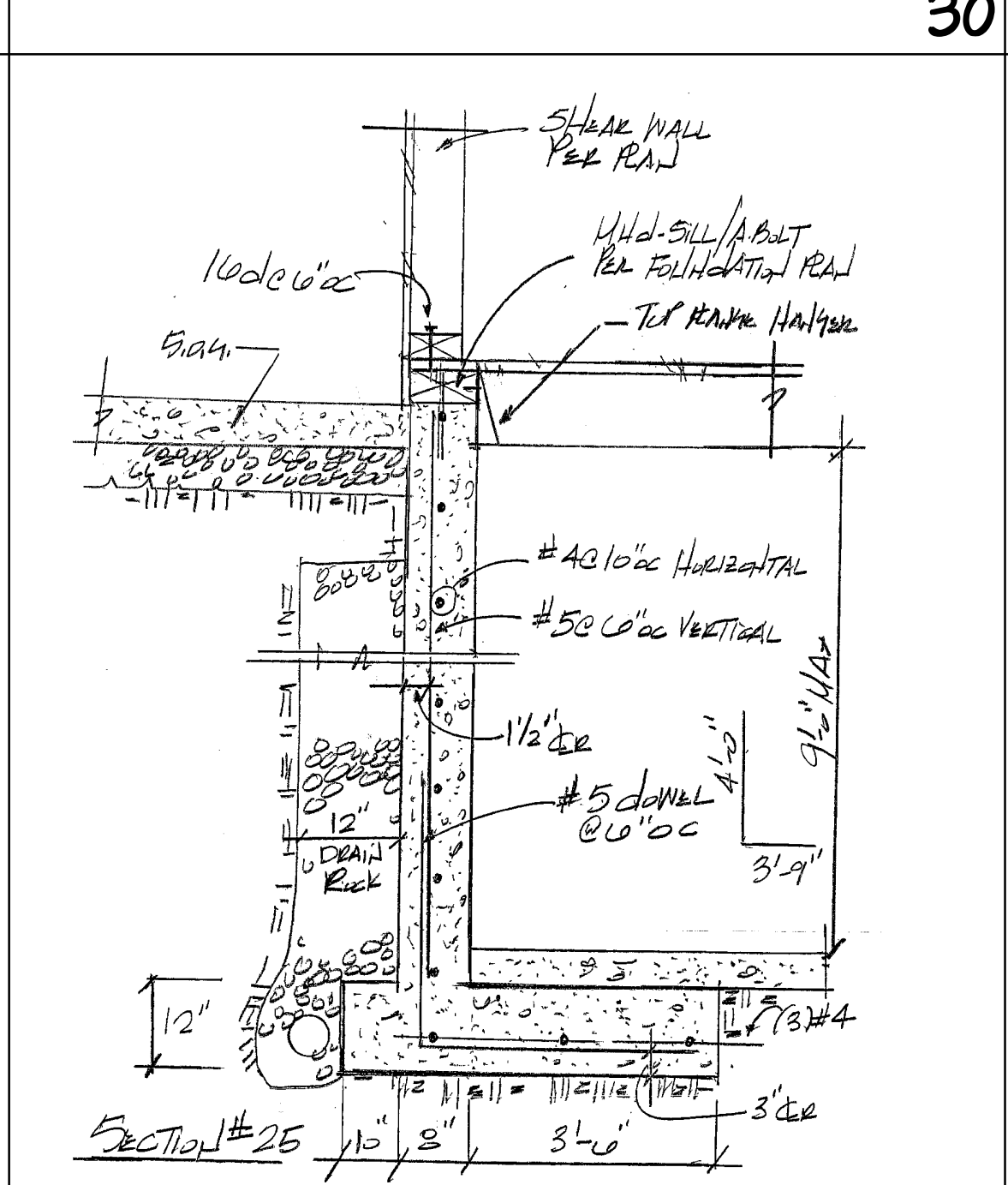
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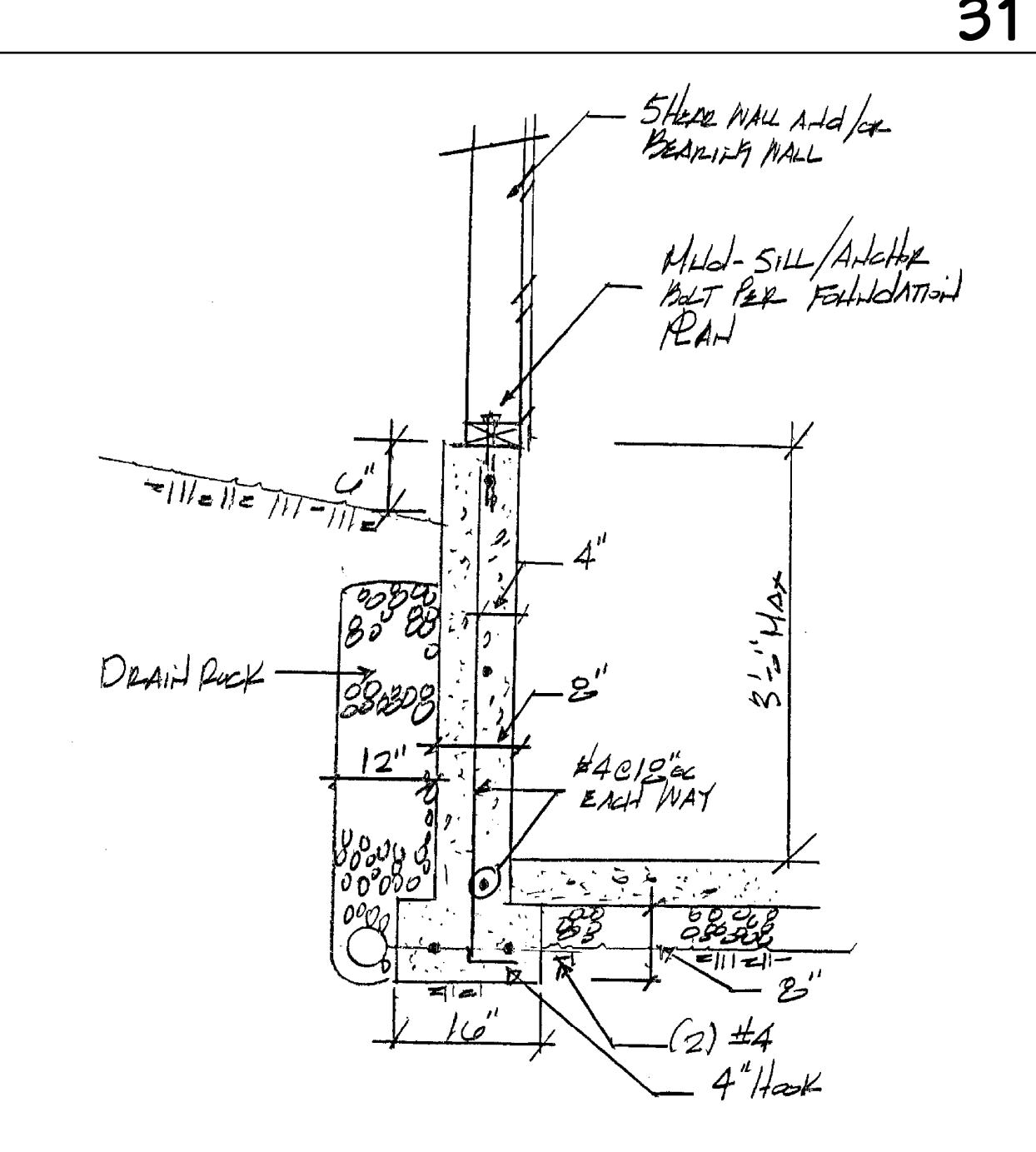
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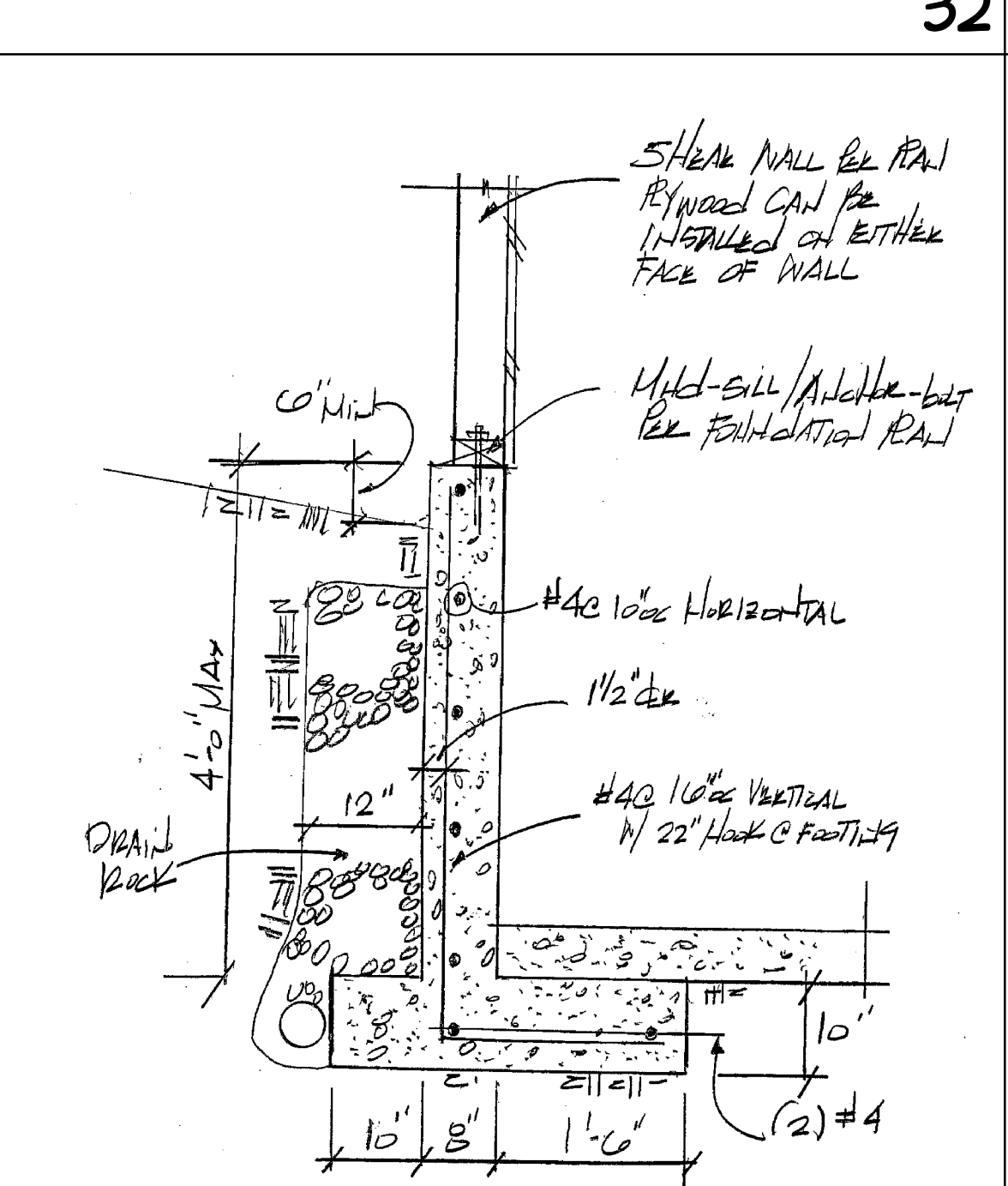
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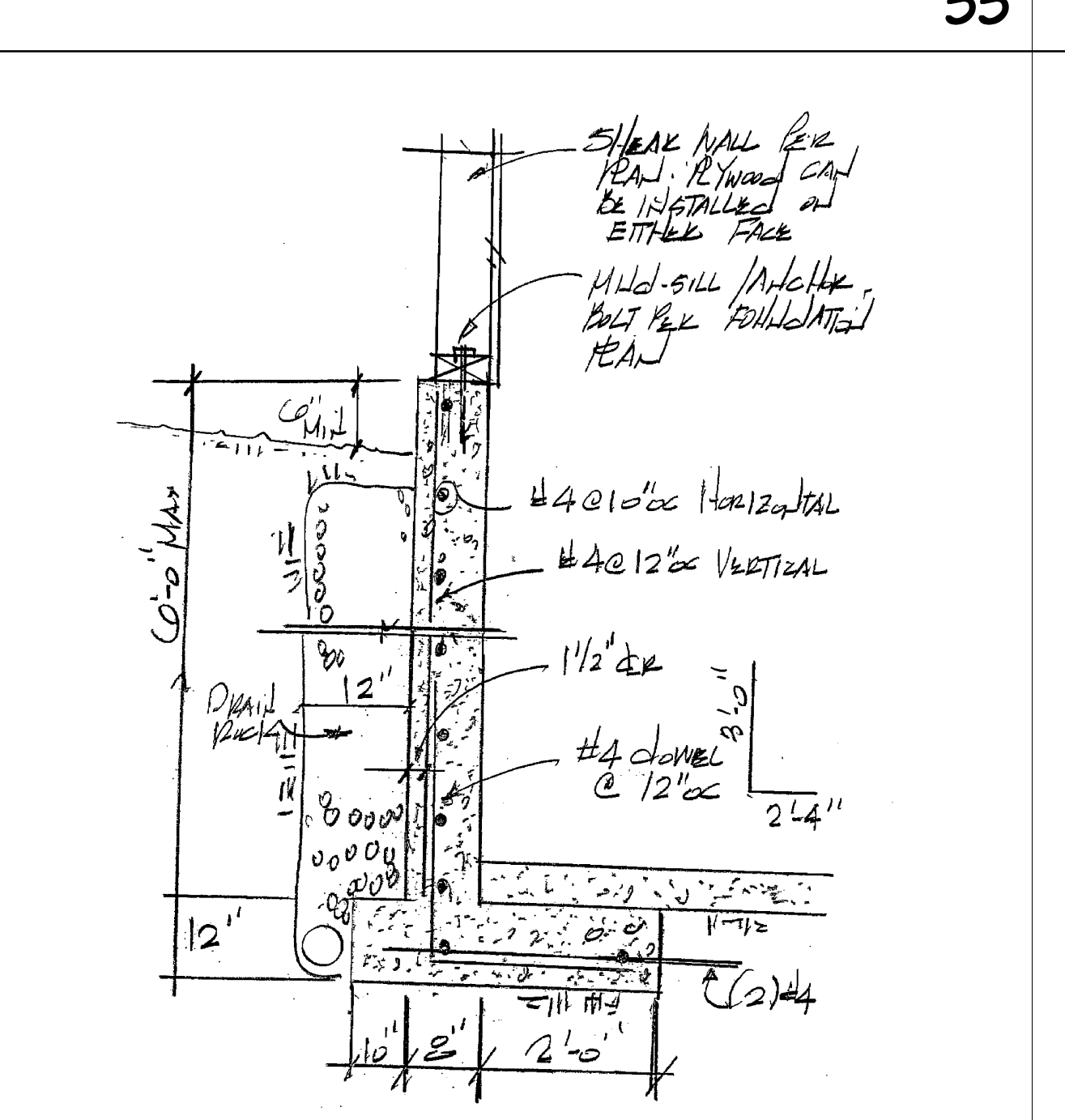
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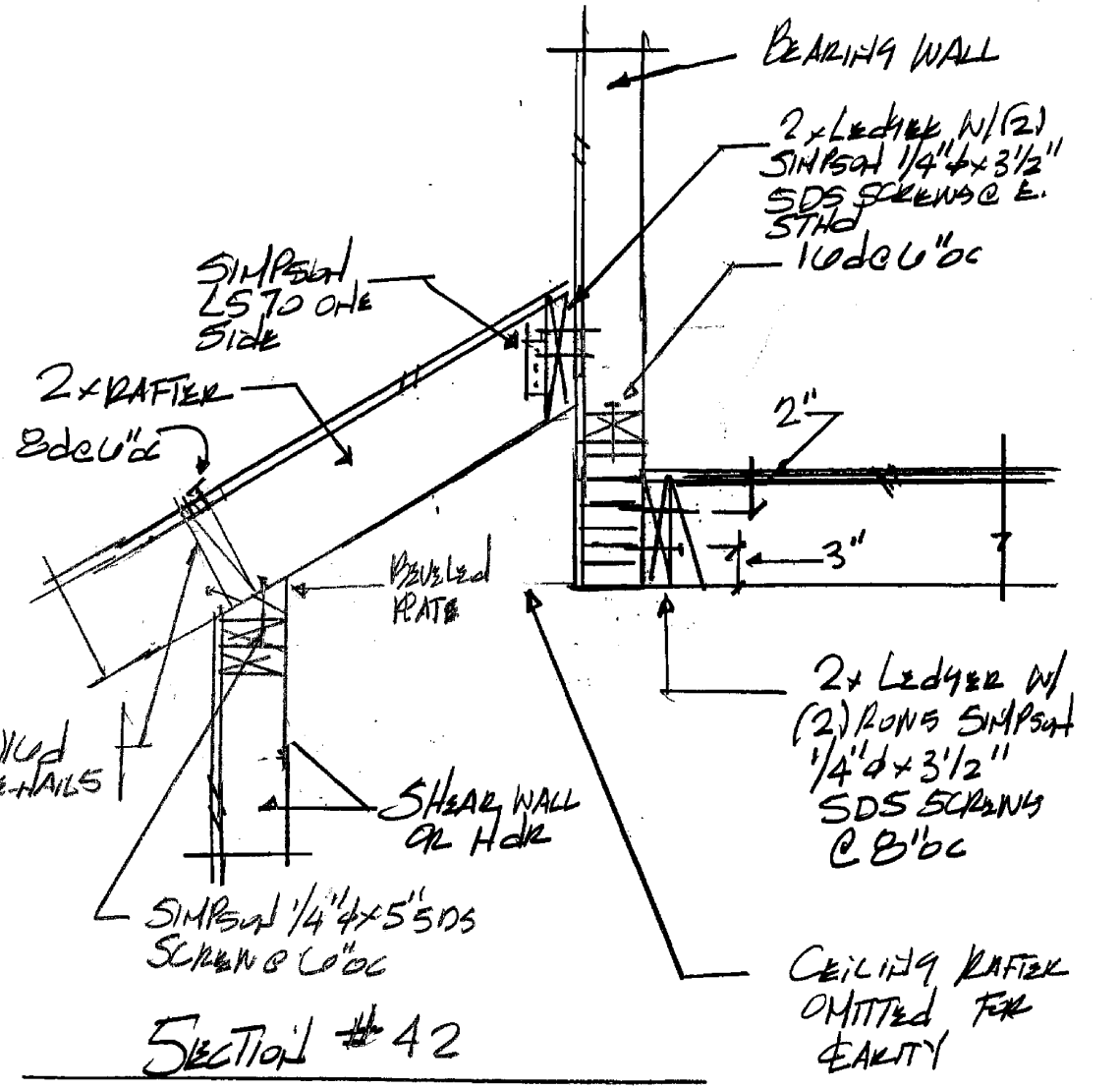
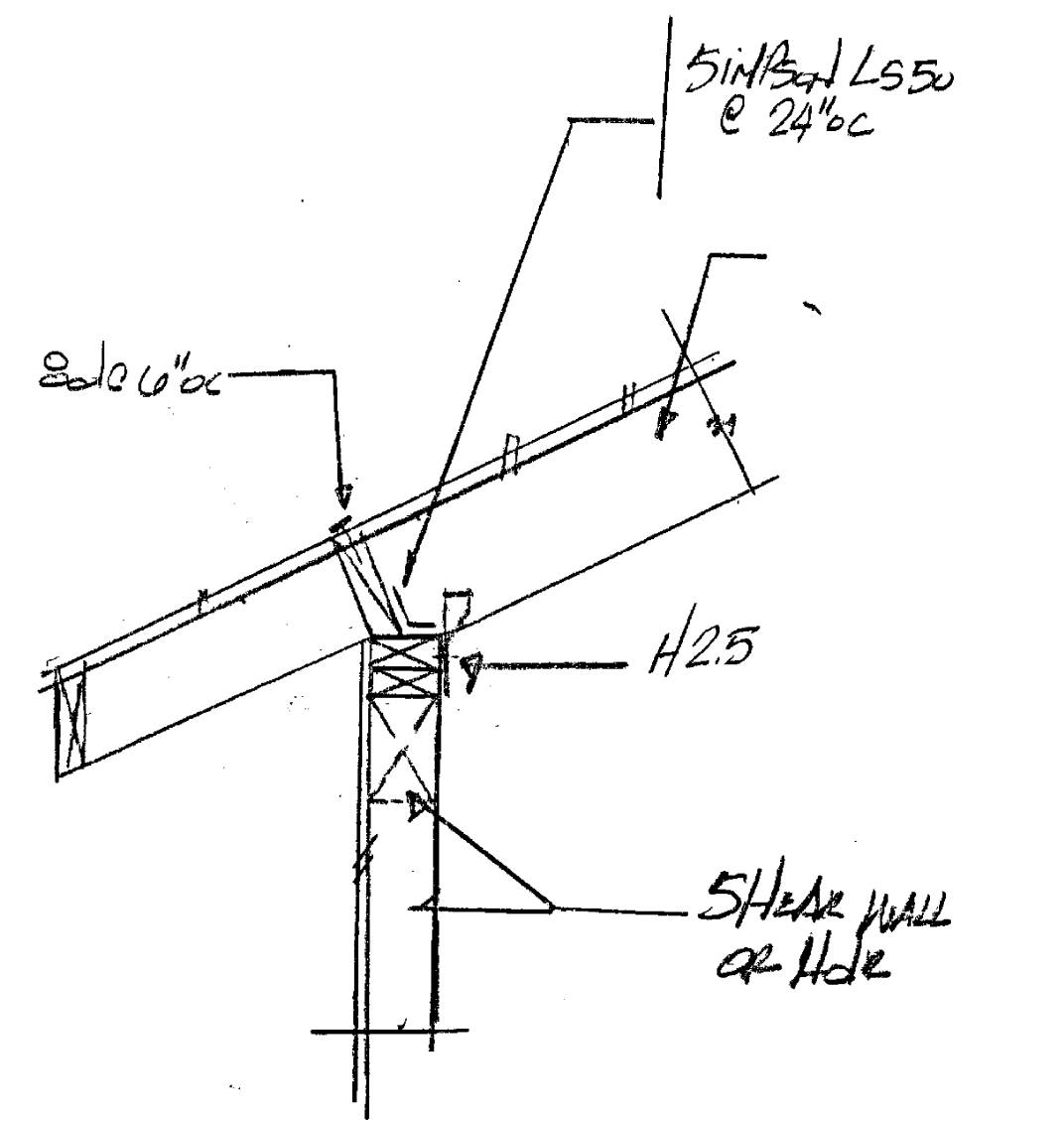
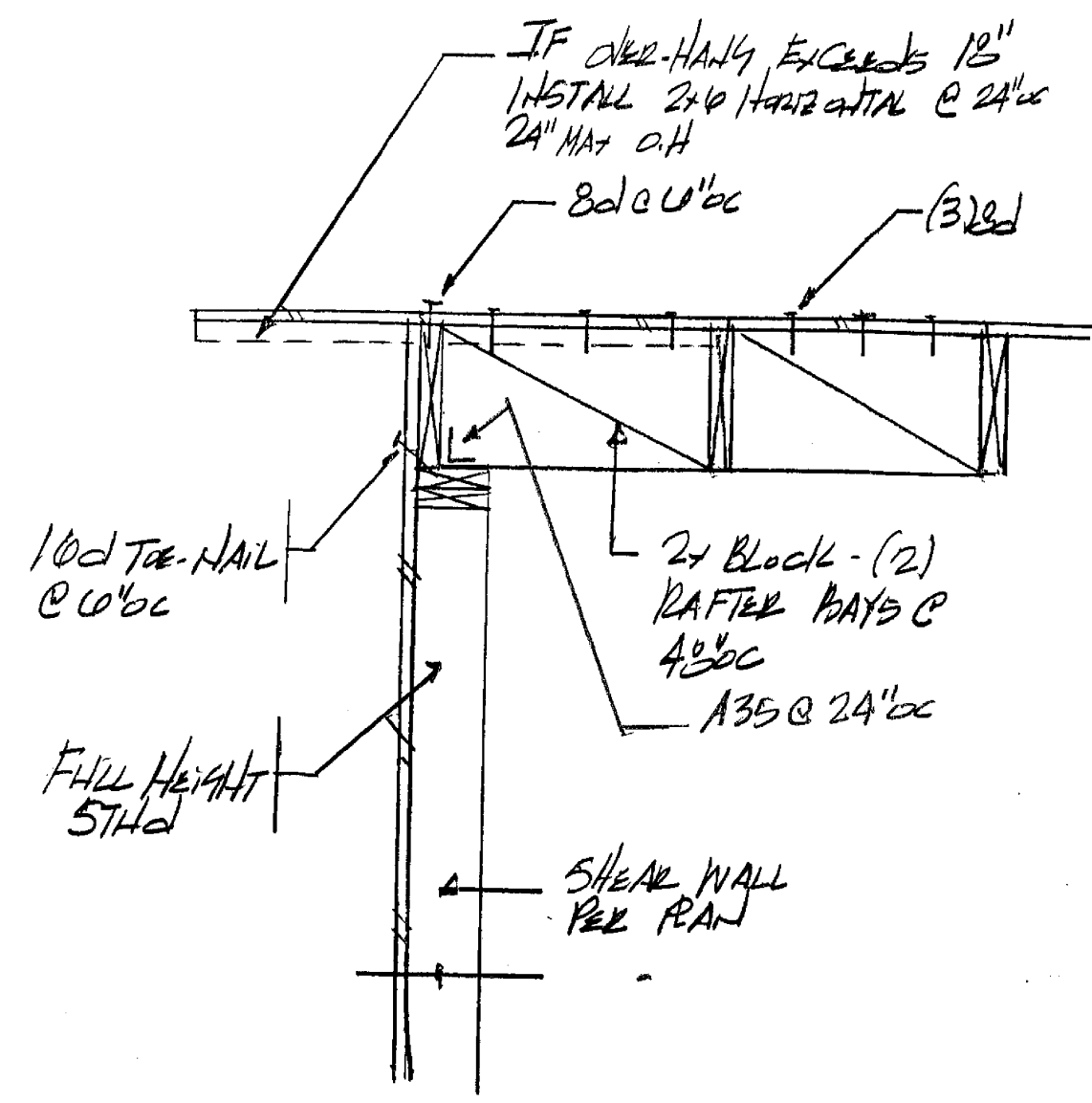
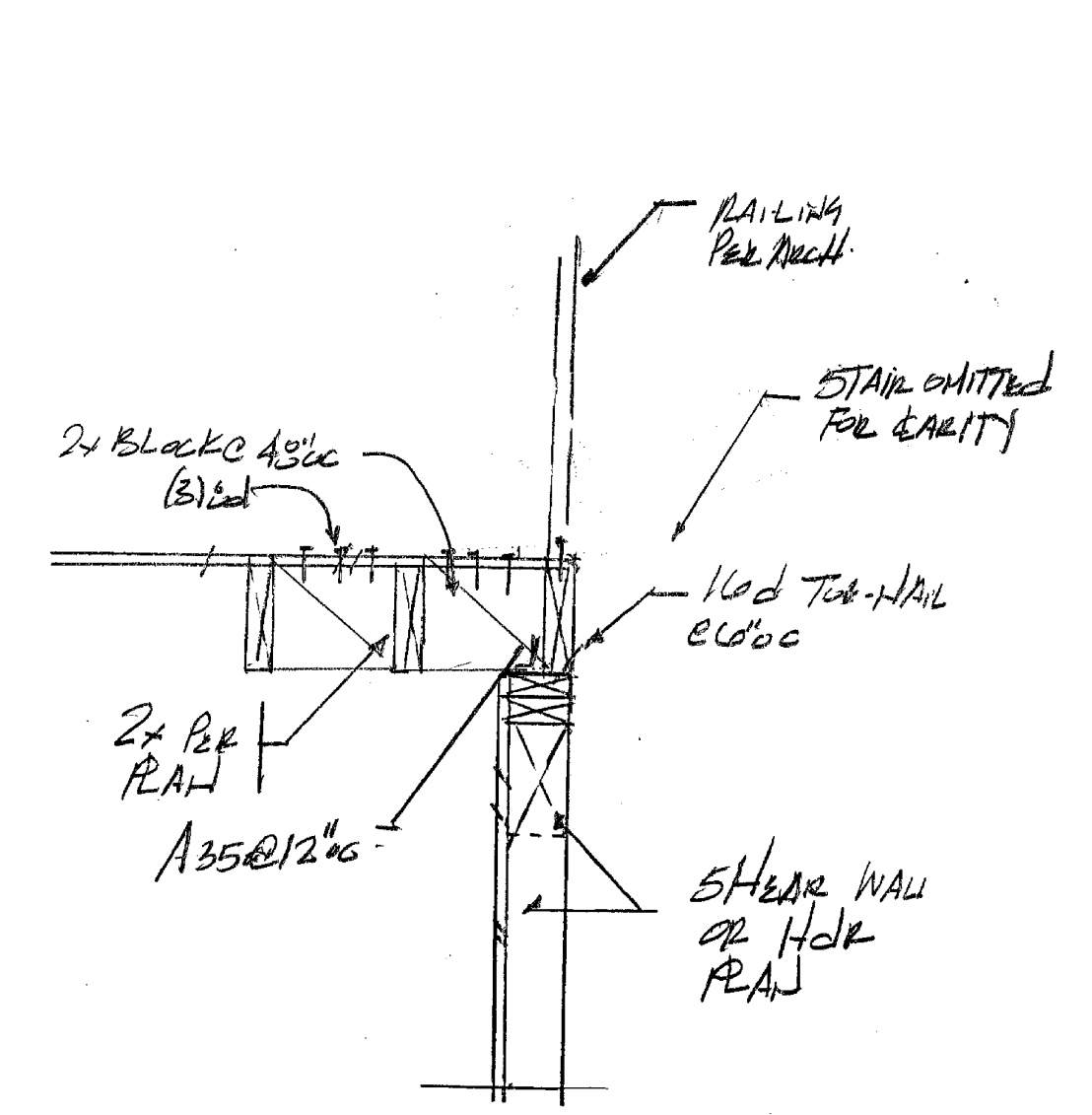
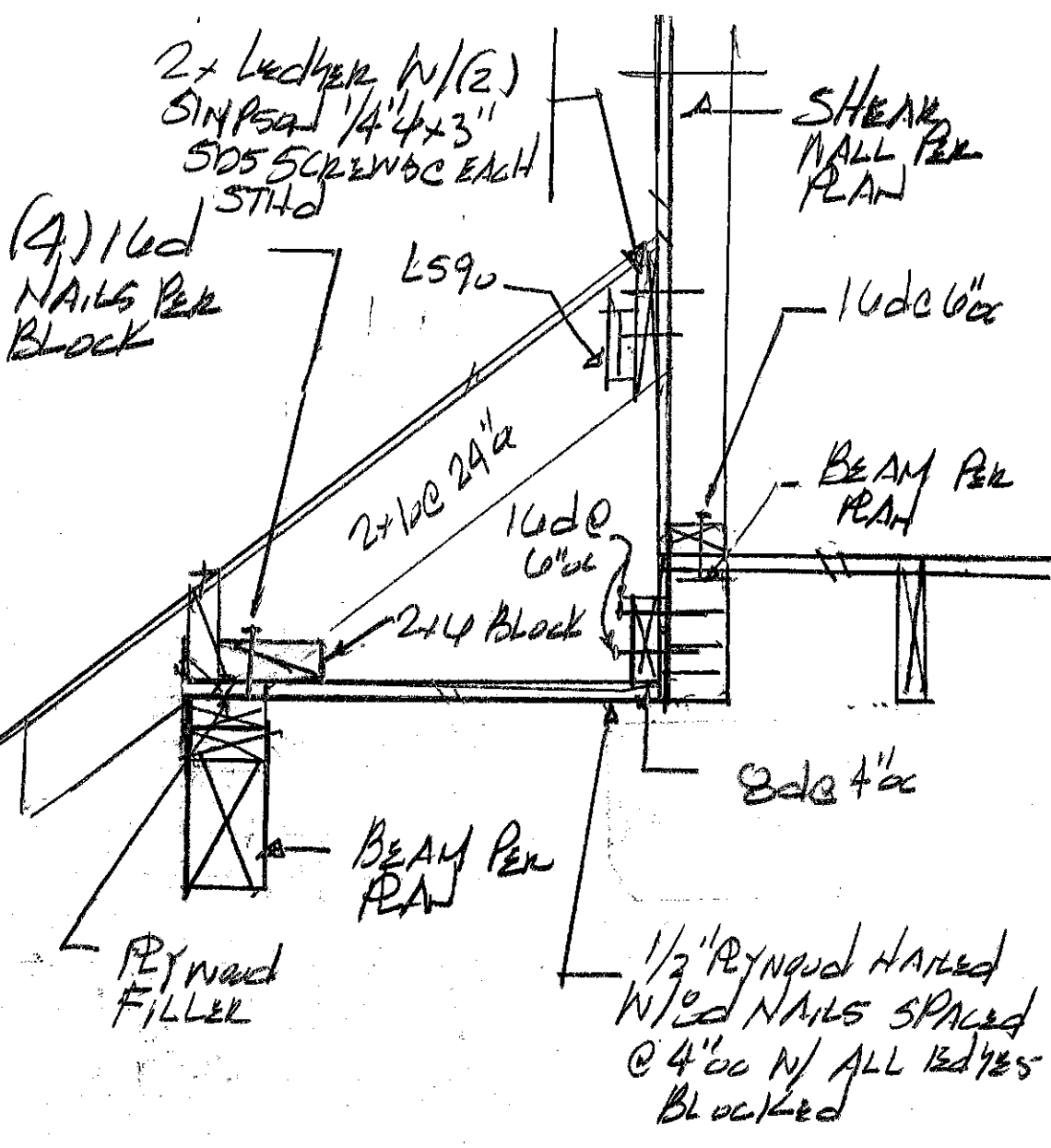
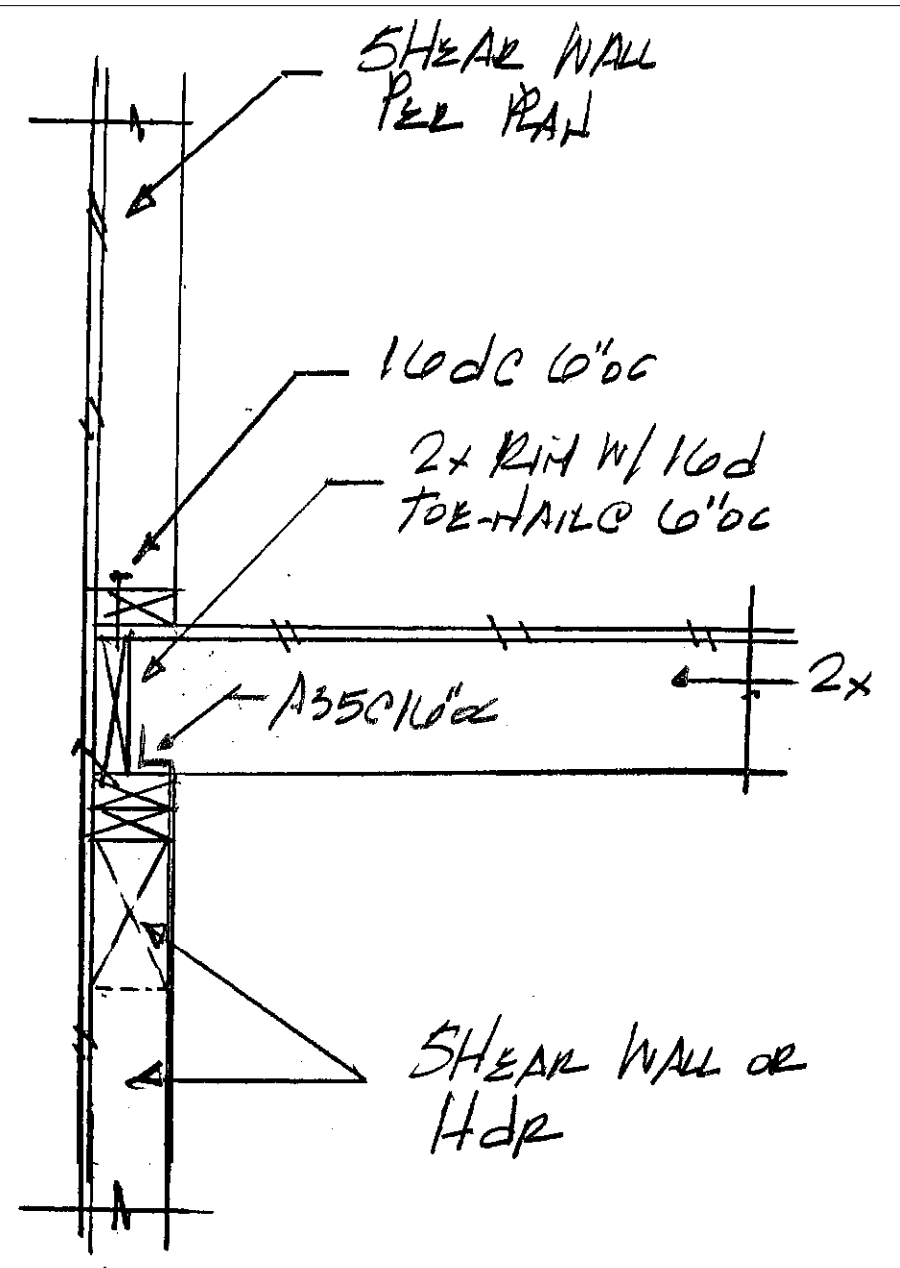
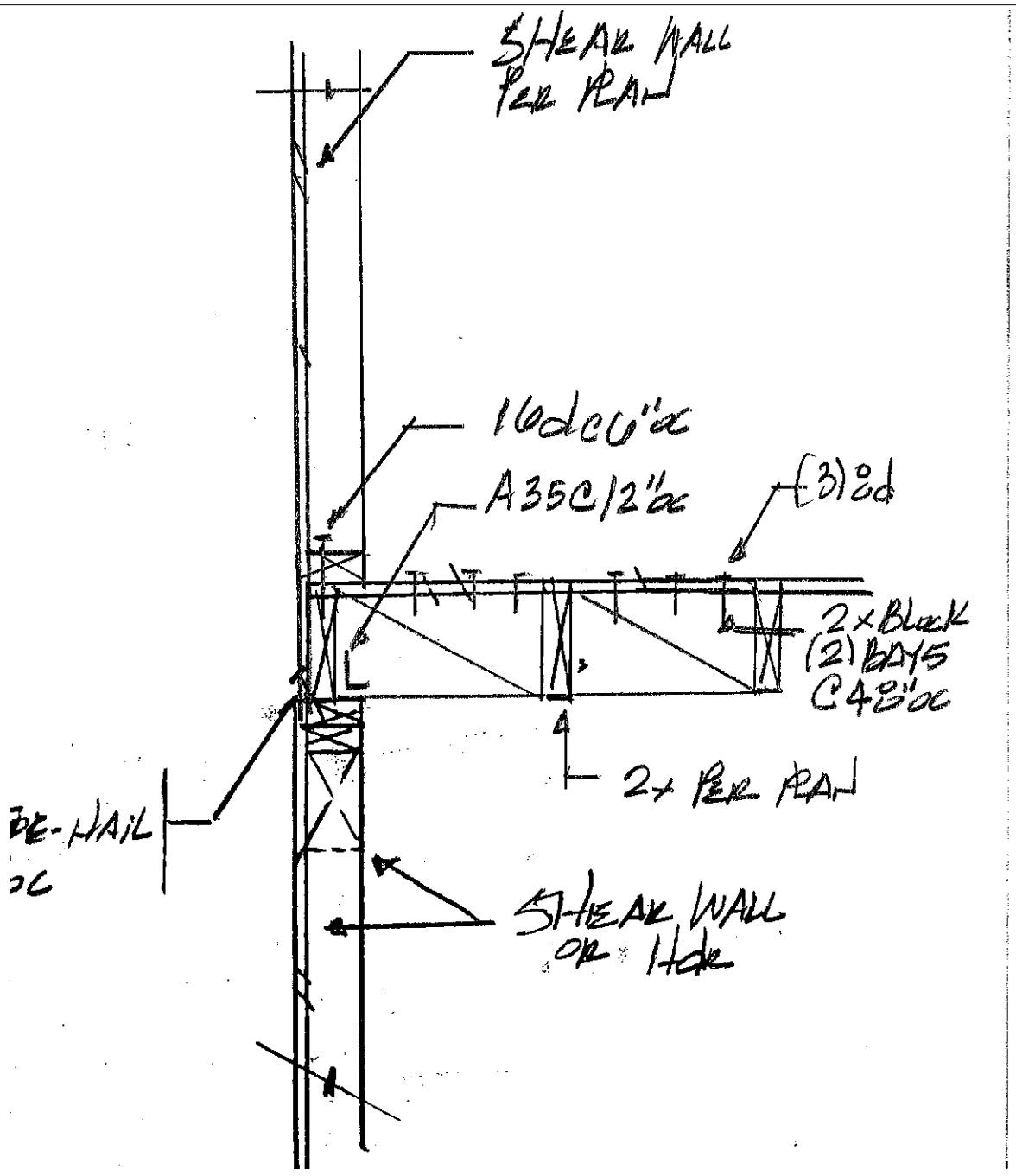
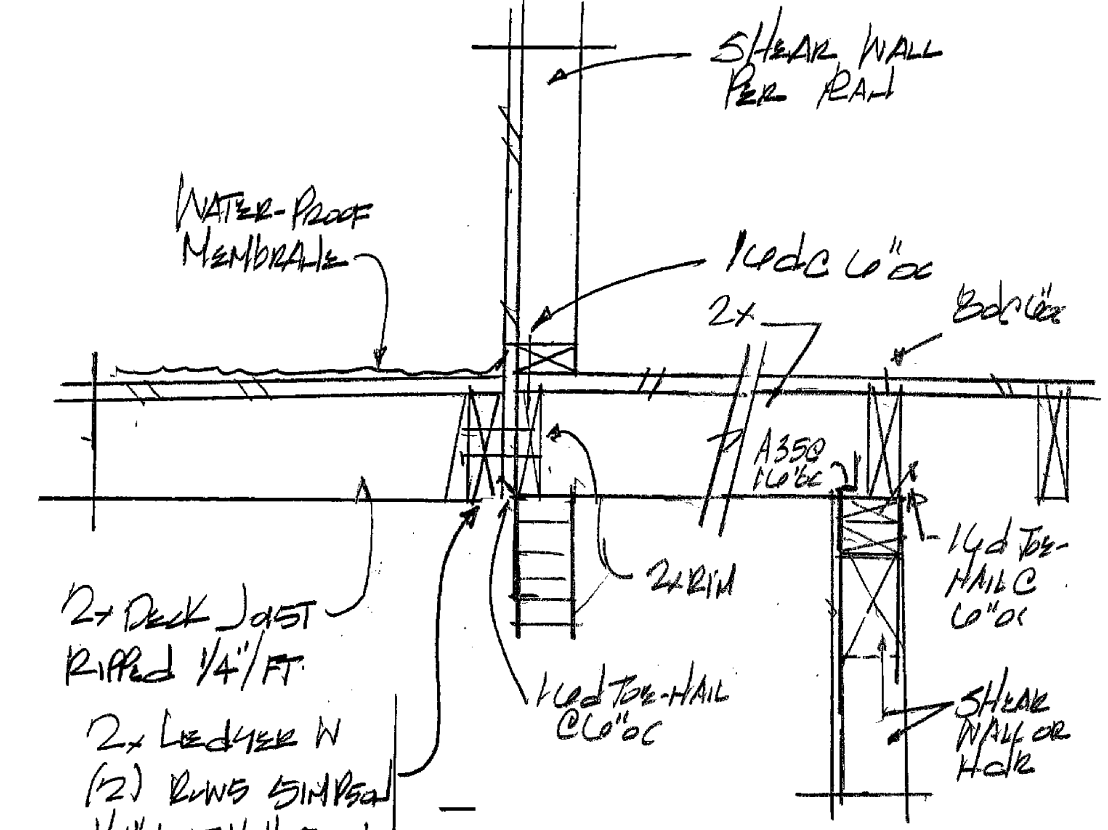
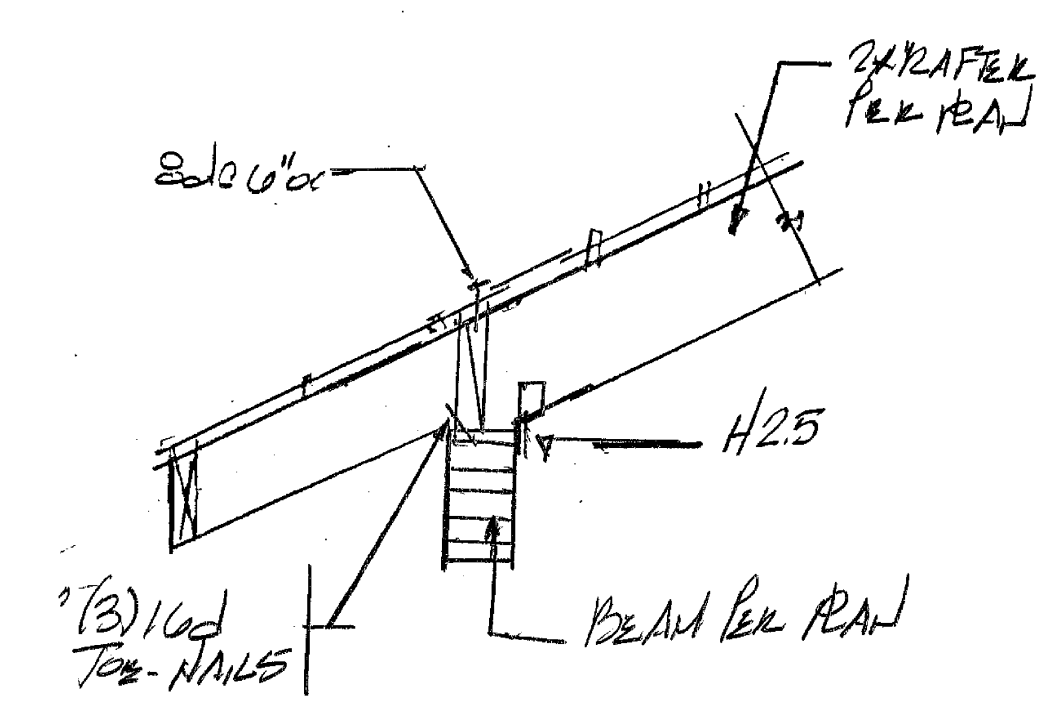
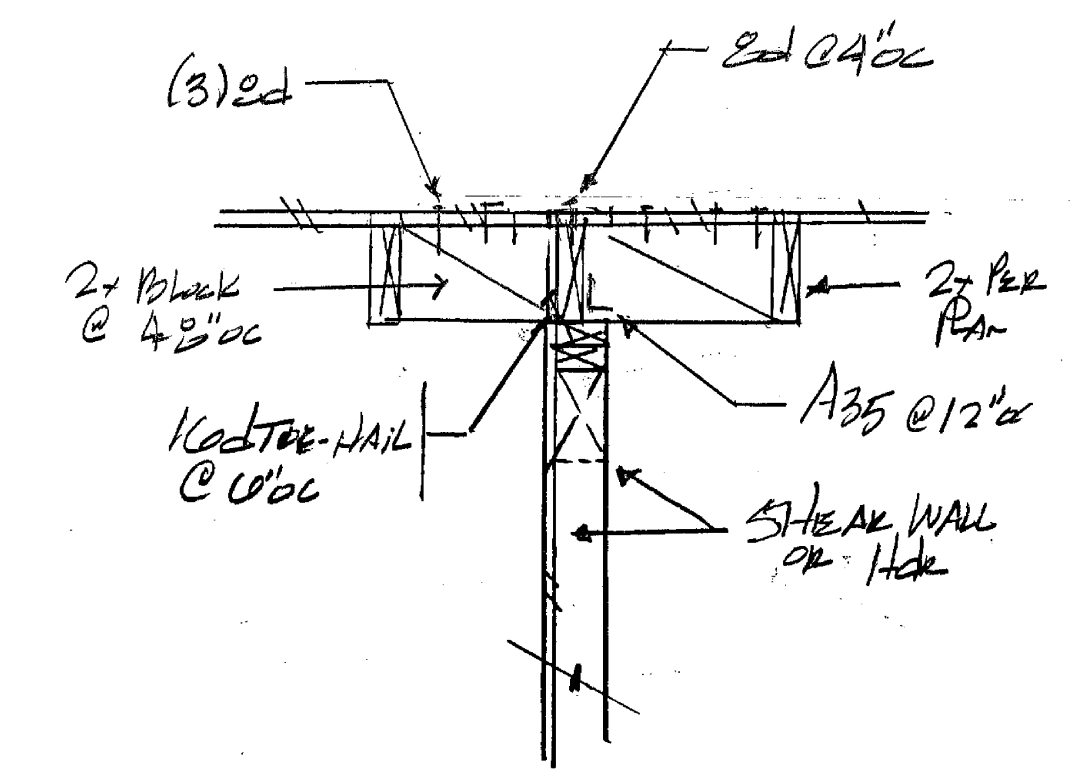
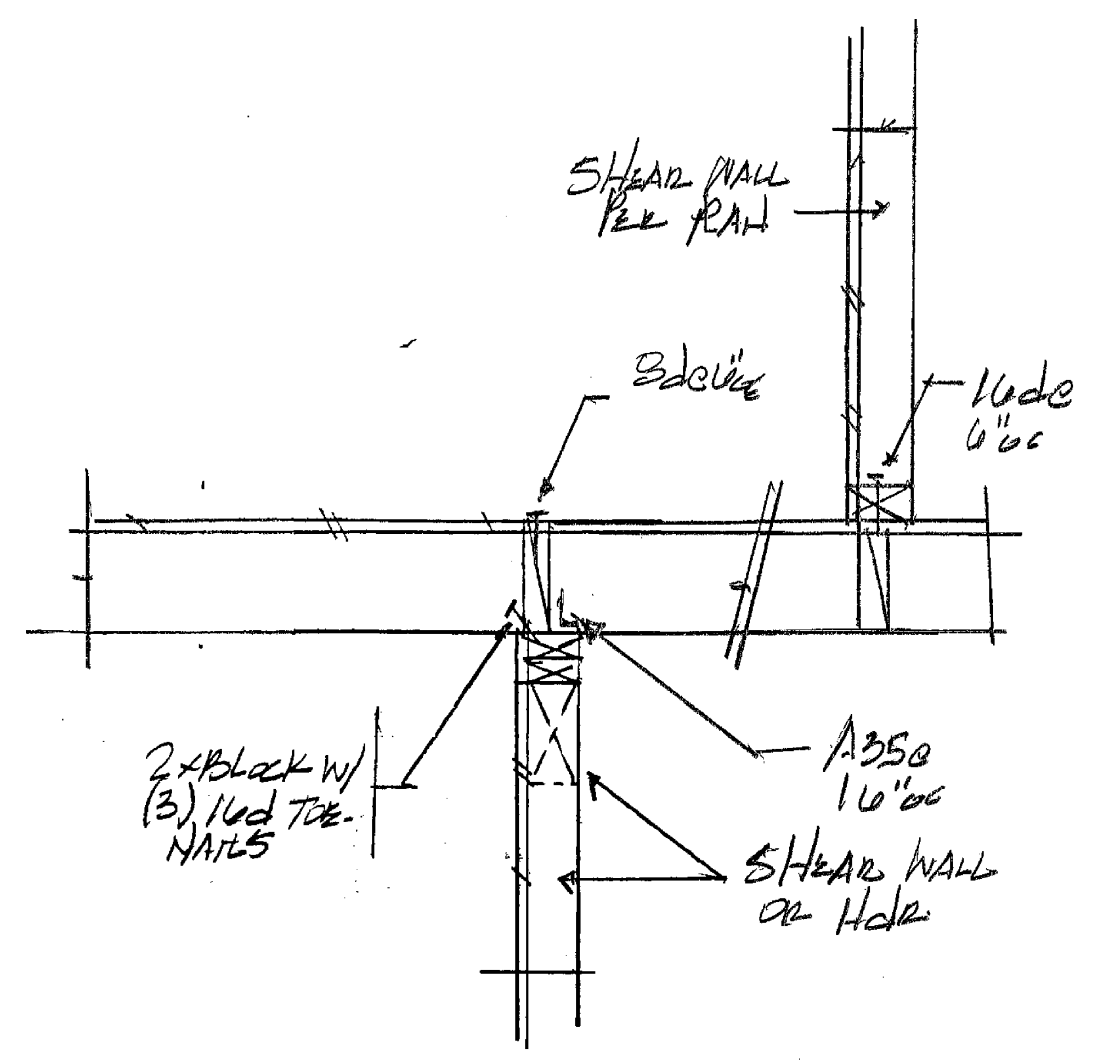
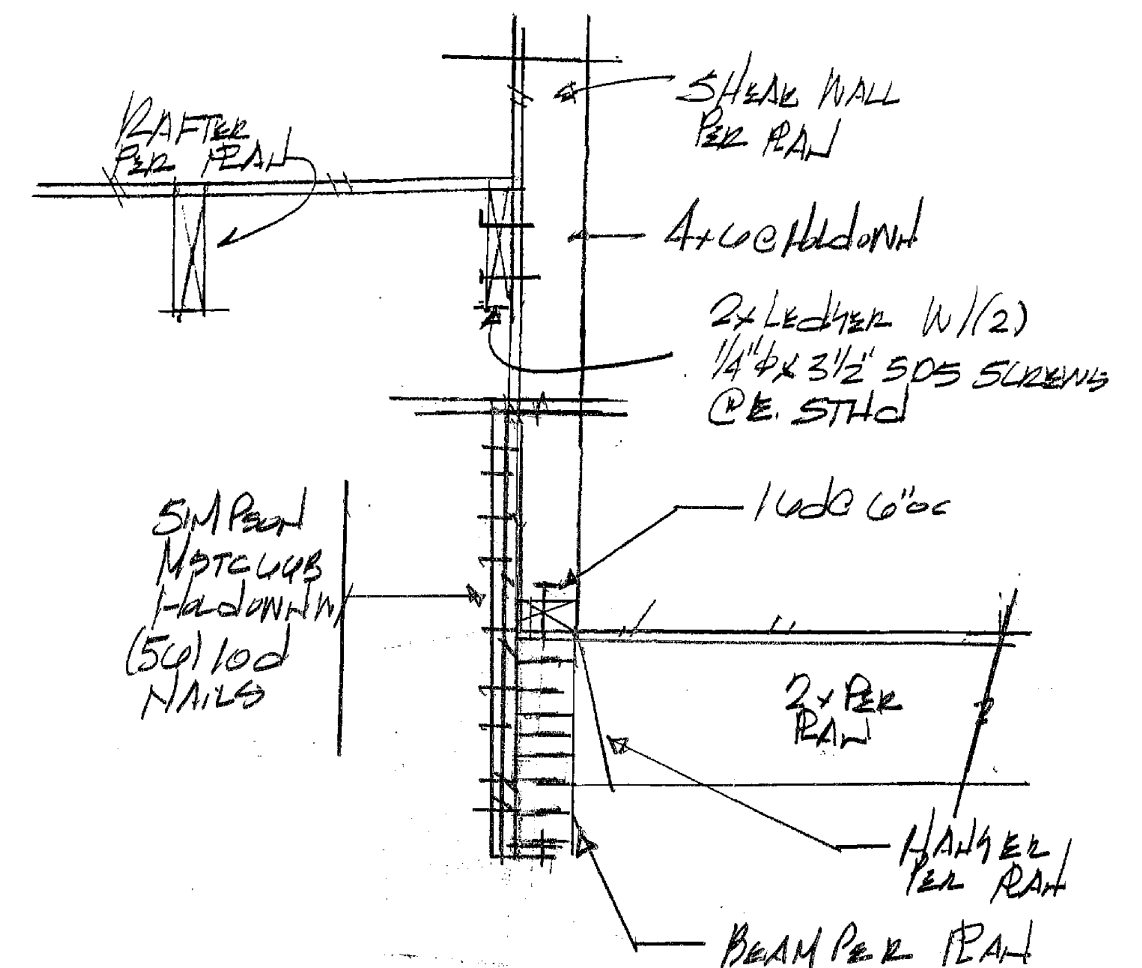
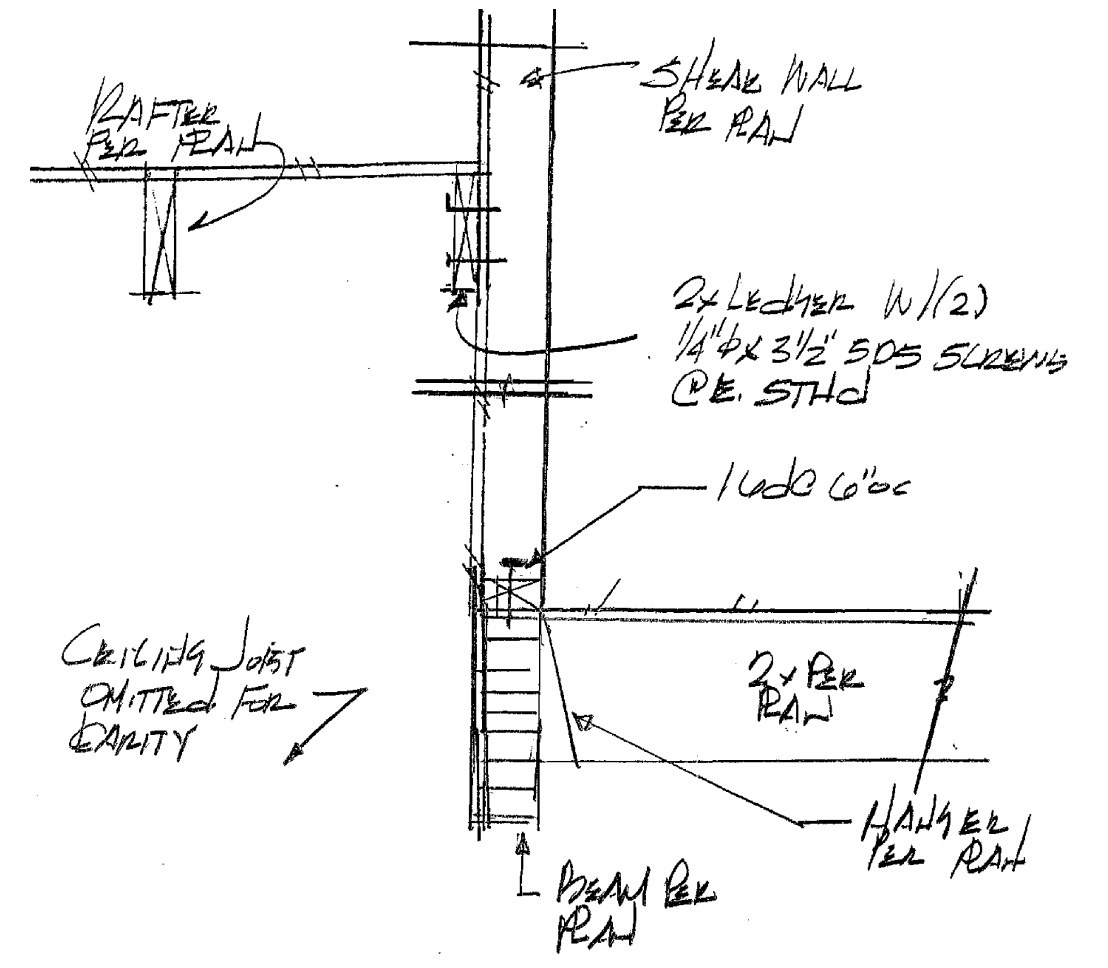
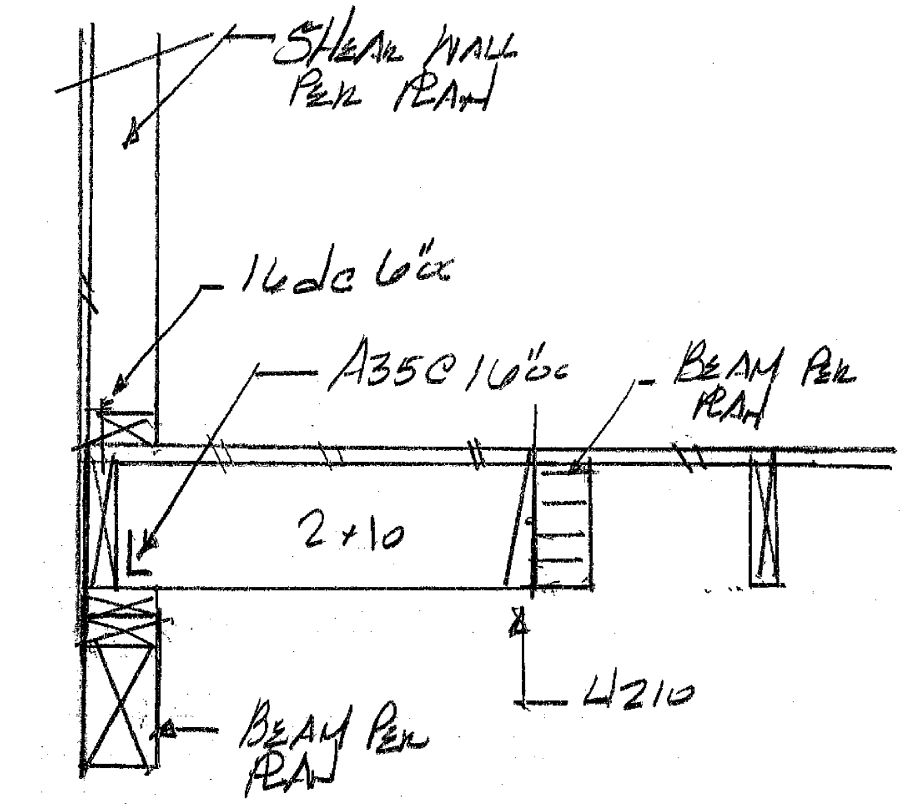
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SHEET TITLE
 STRUCTURAL DETAILS BY
 MITCHELL ENGINEERING, INC.

SHEET 16
 OF 17 SHEETS
 DATE 6-19-19



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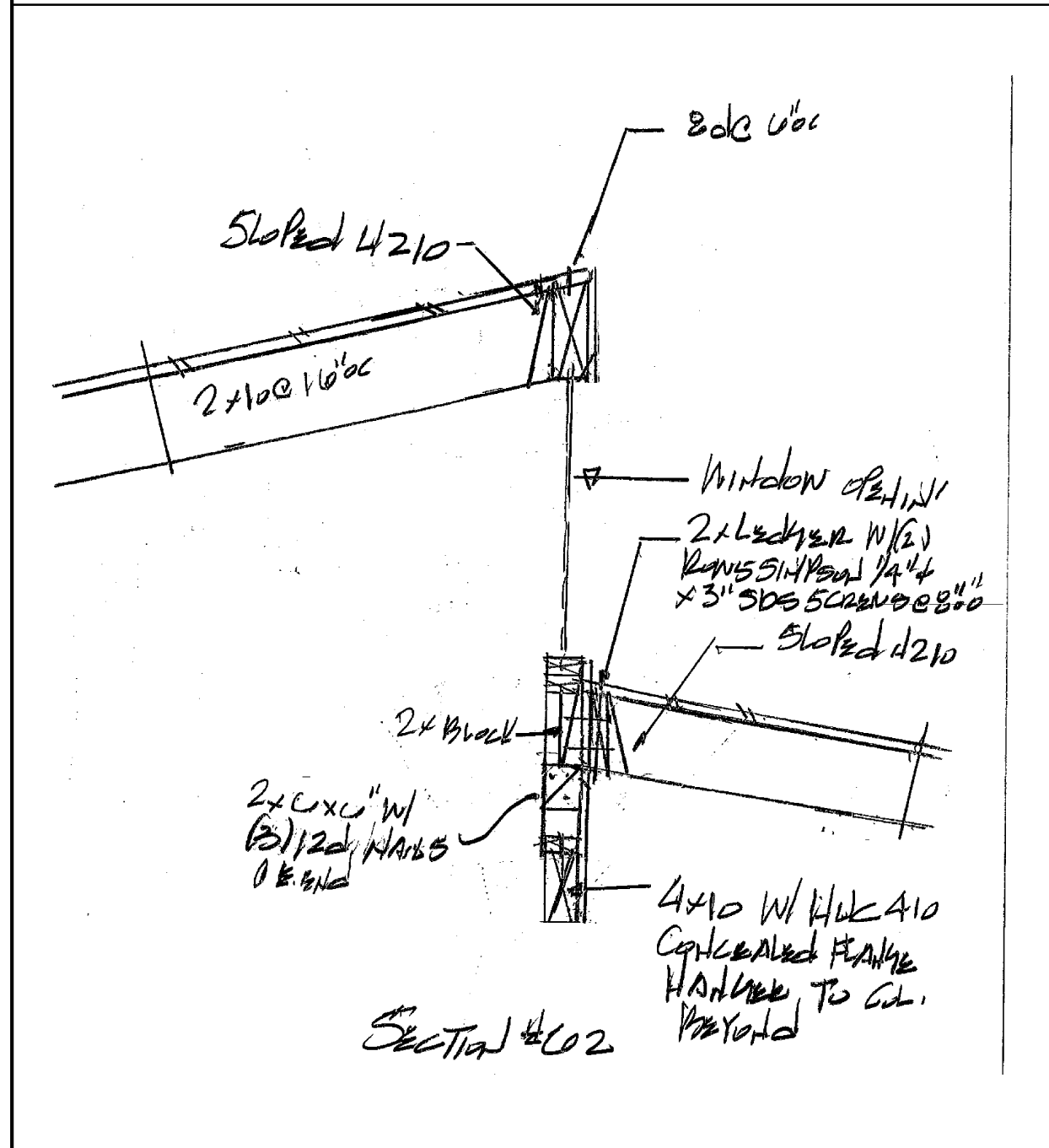
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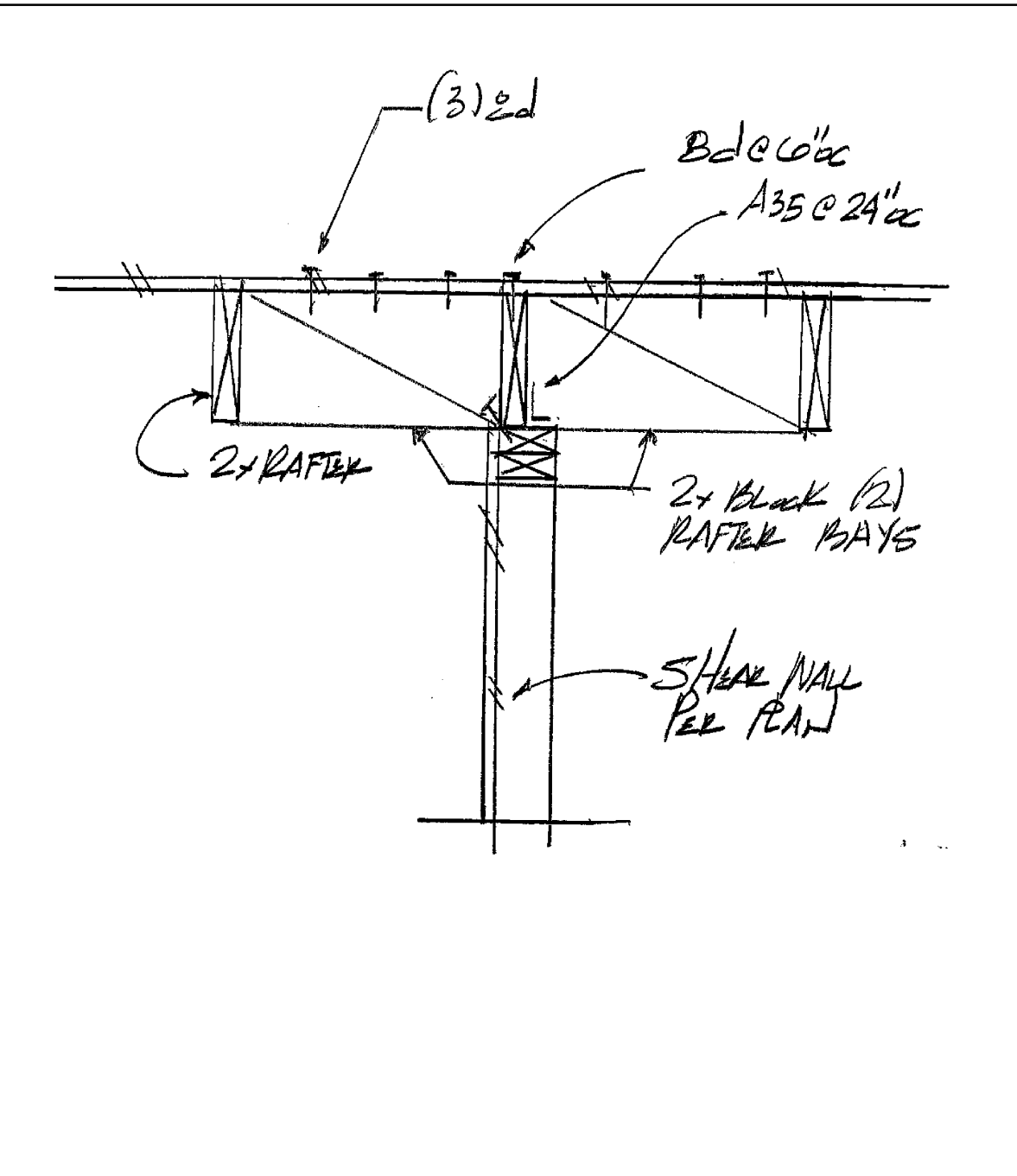
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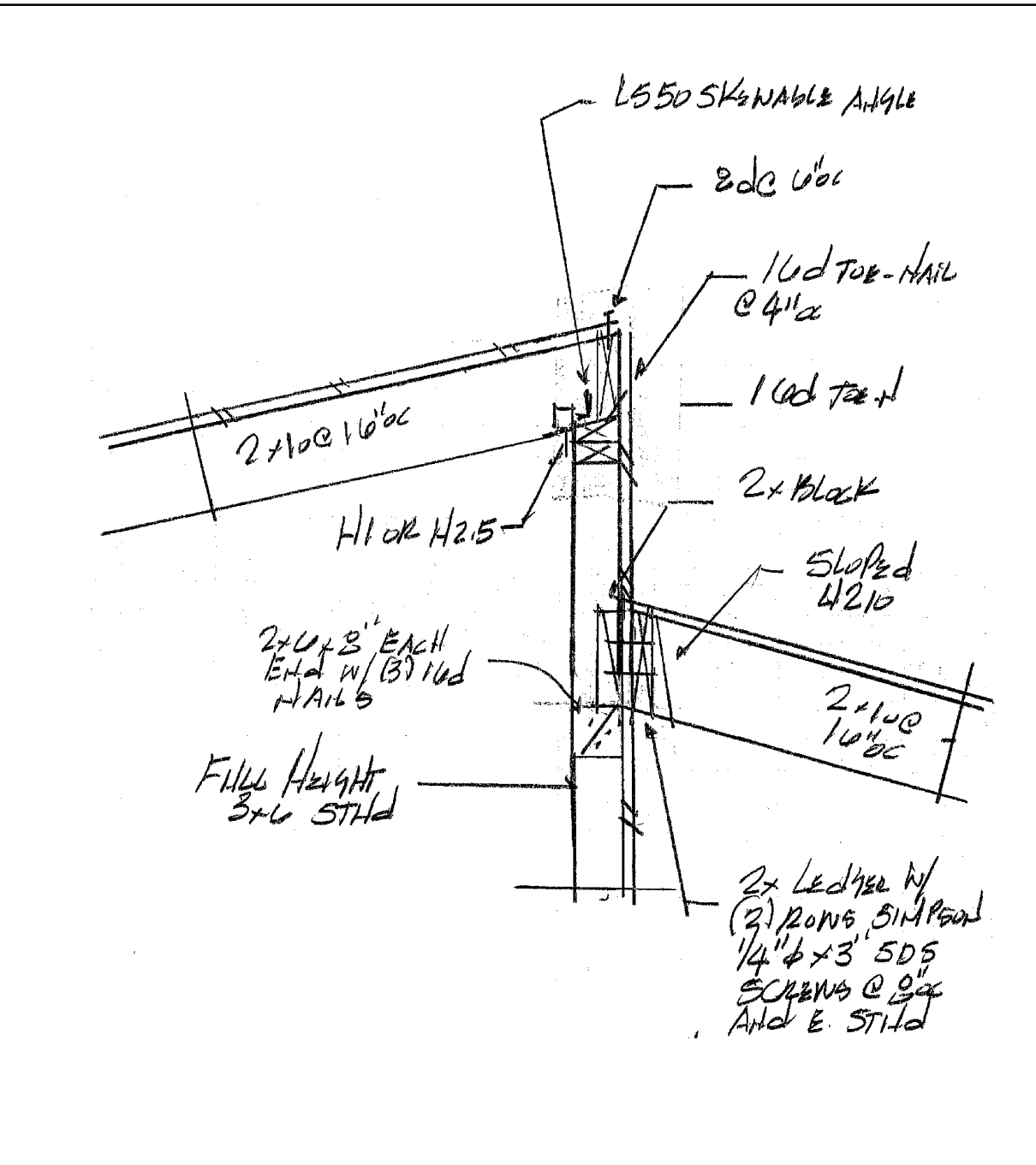
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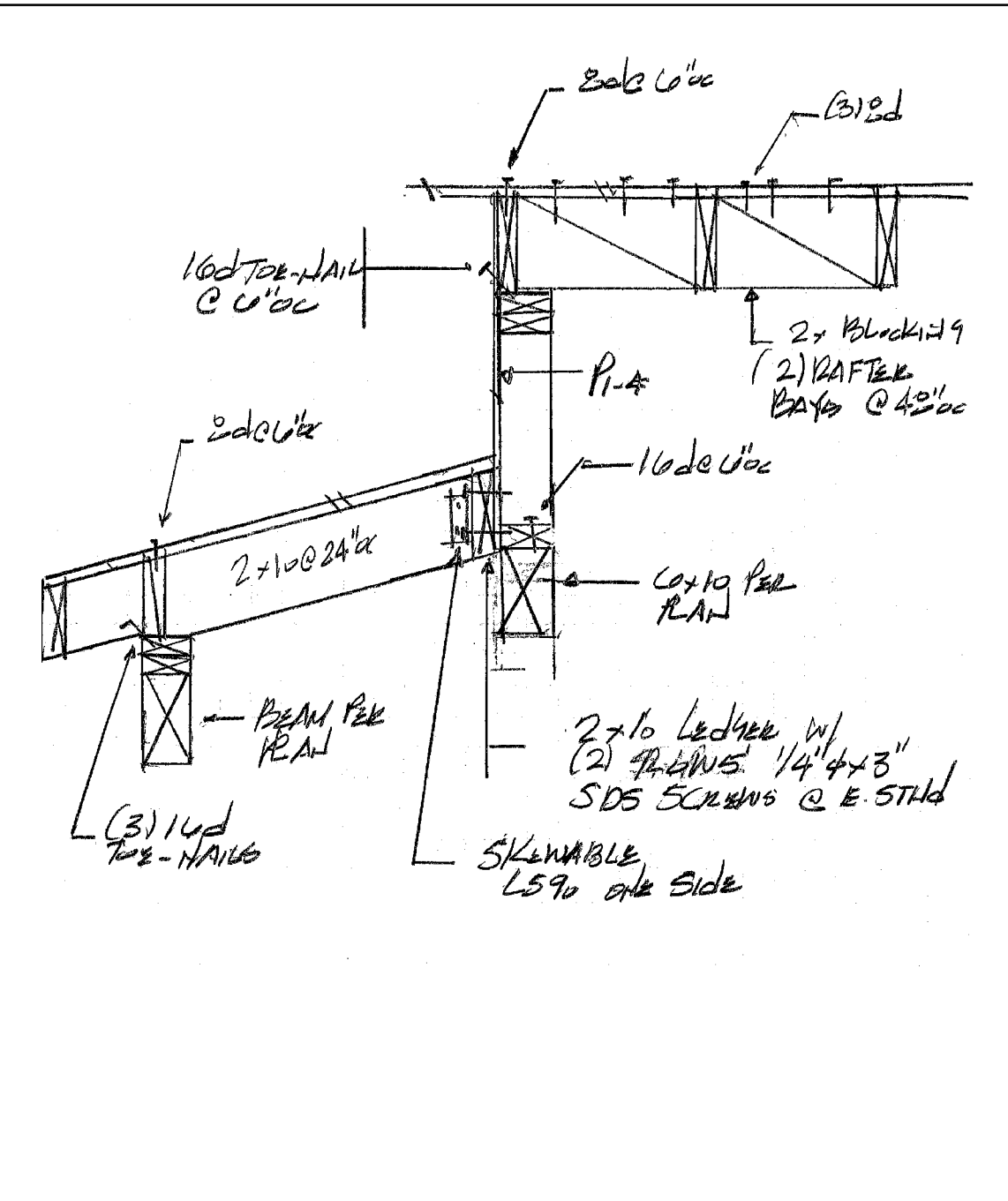
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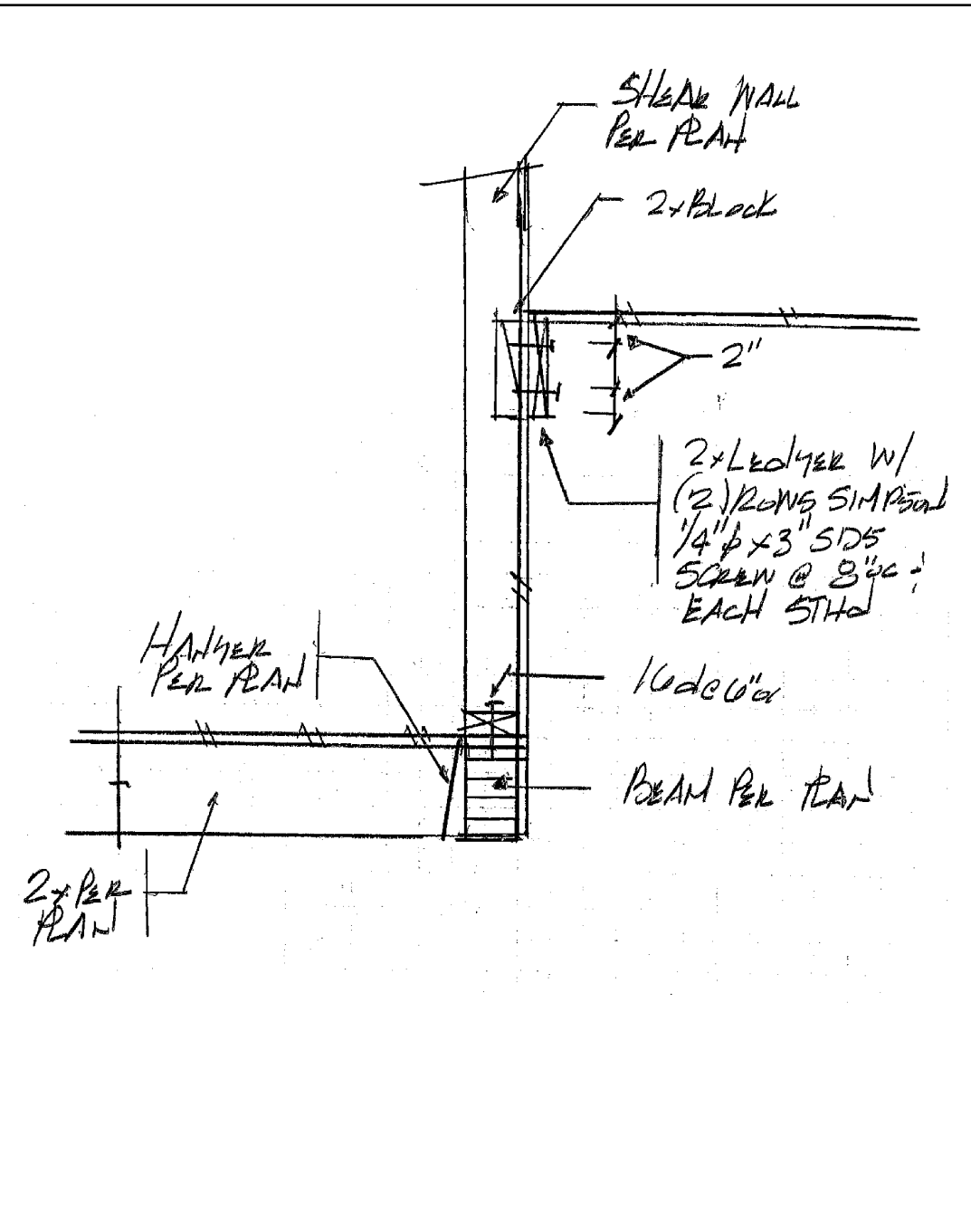
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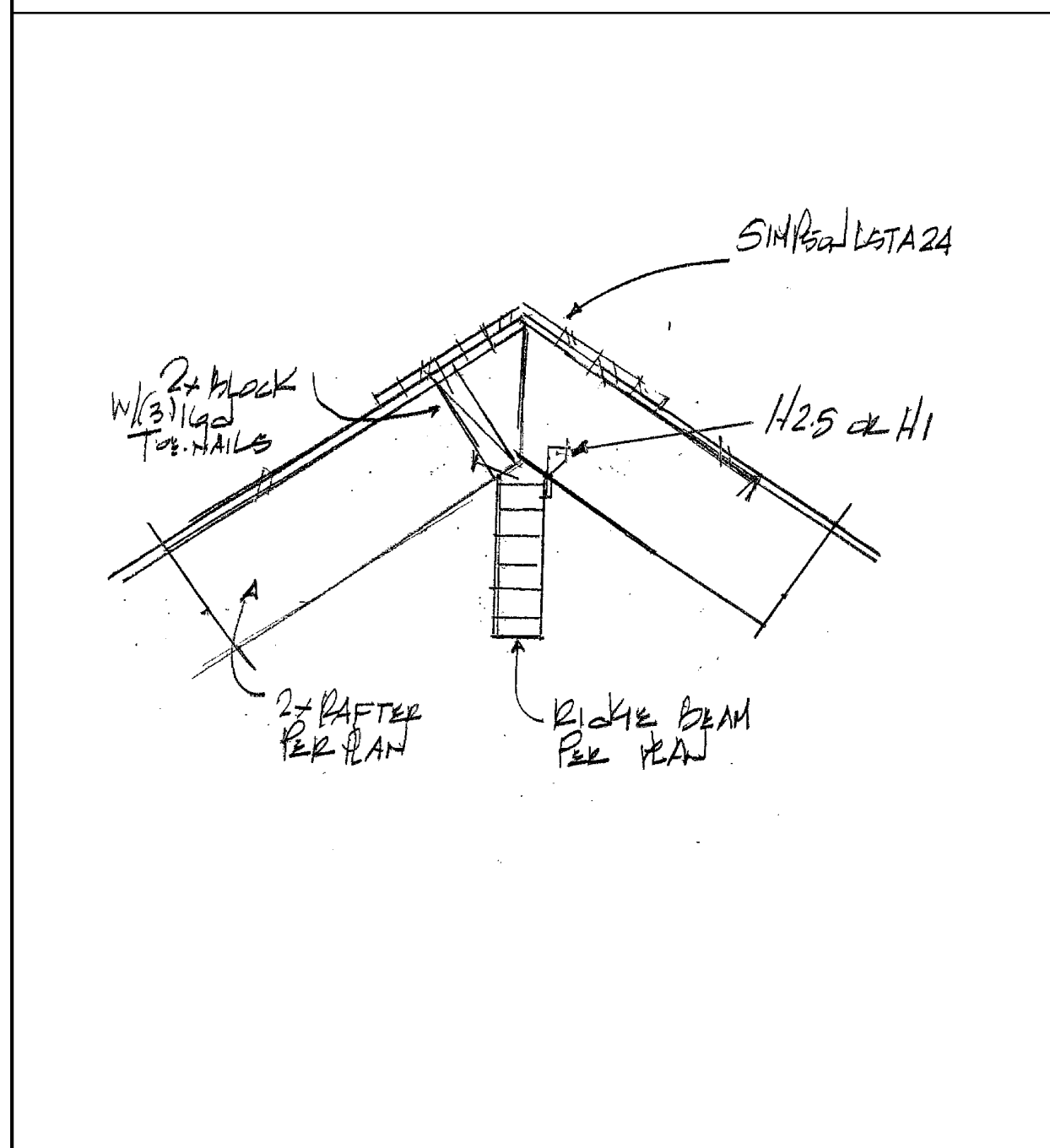
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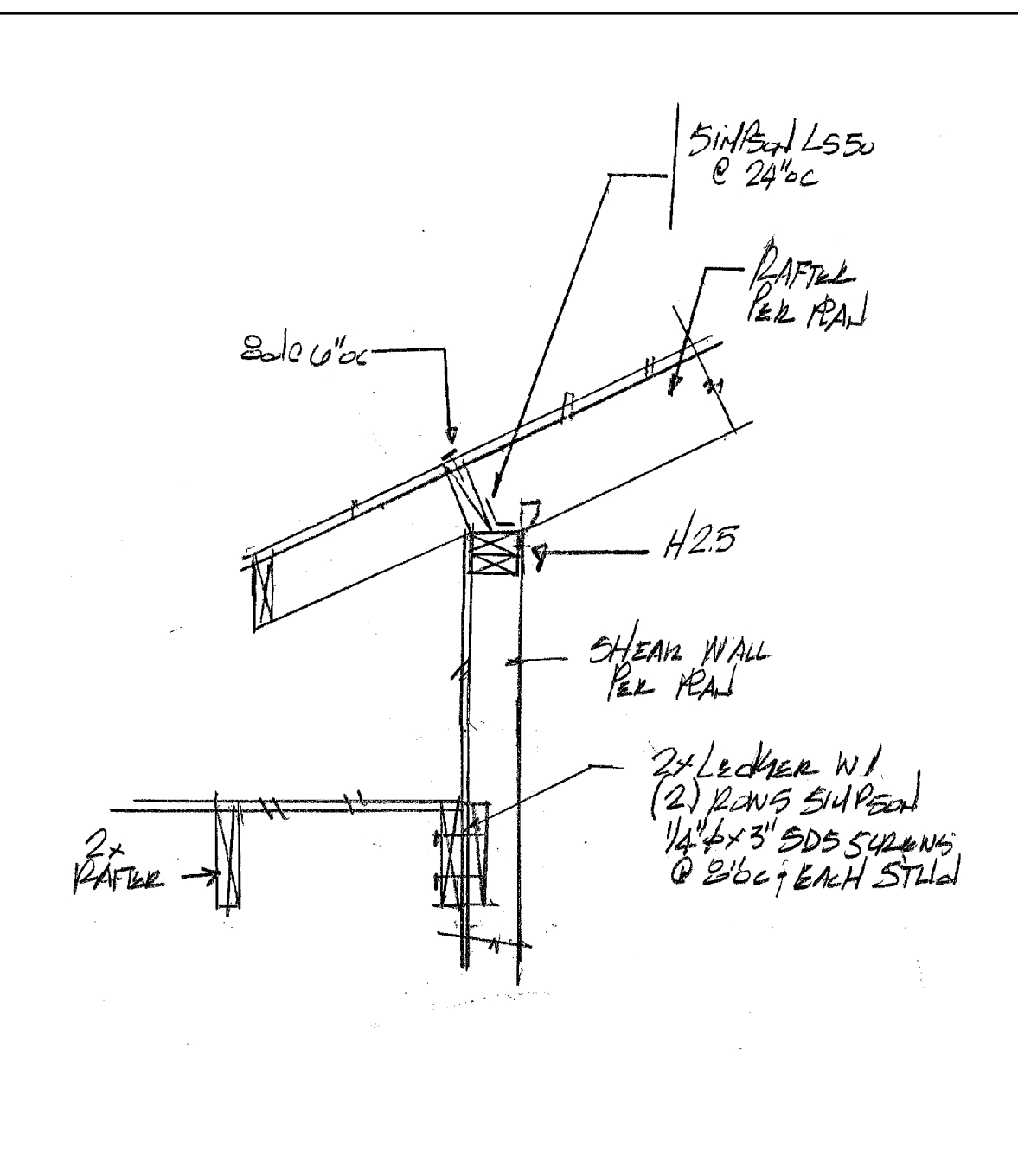
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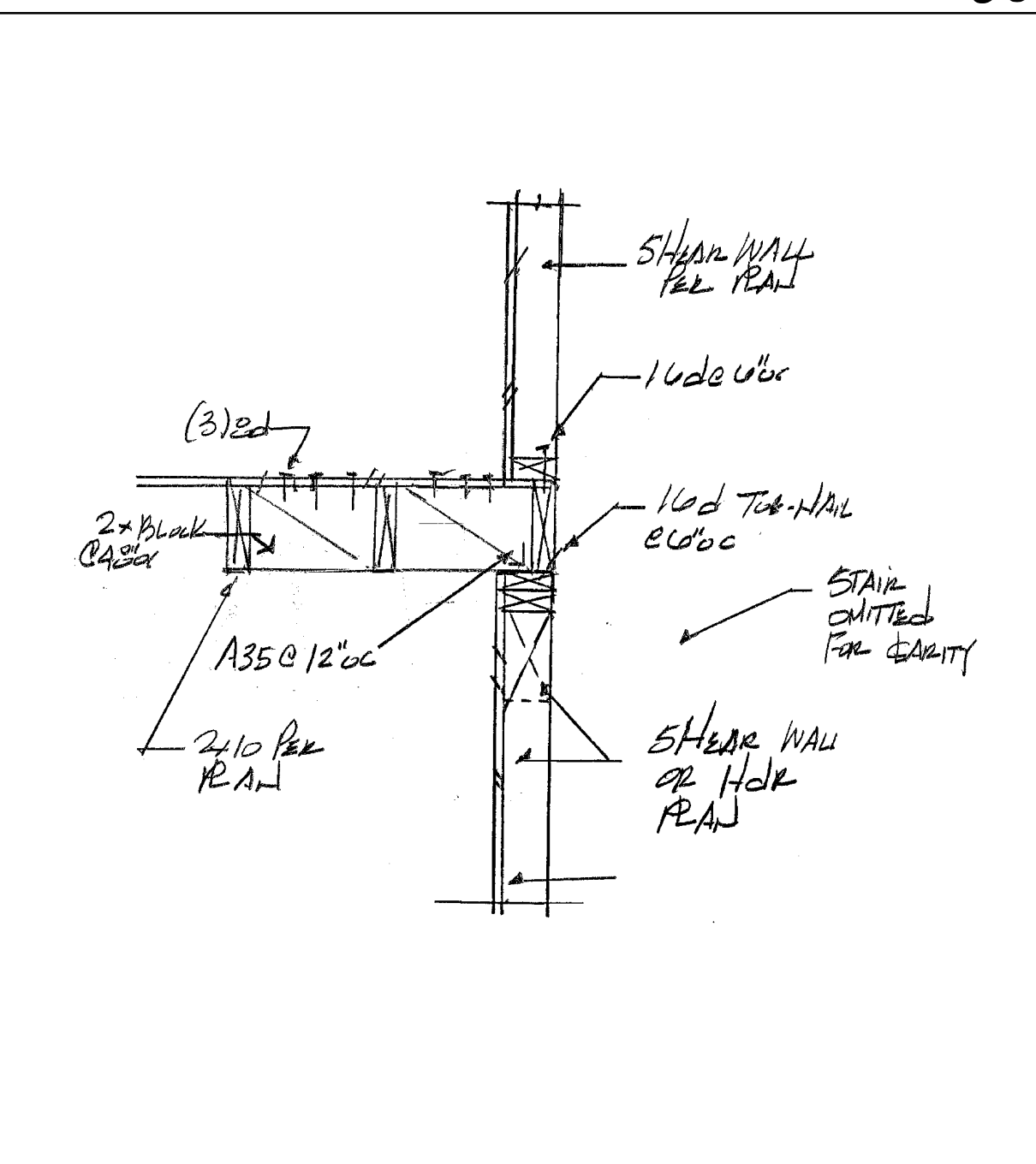
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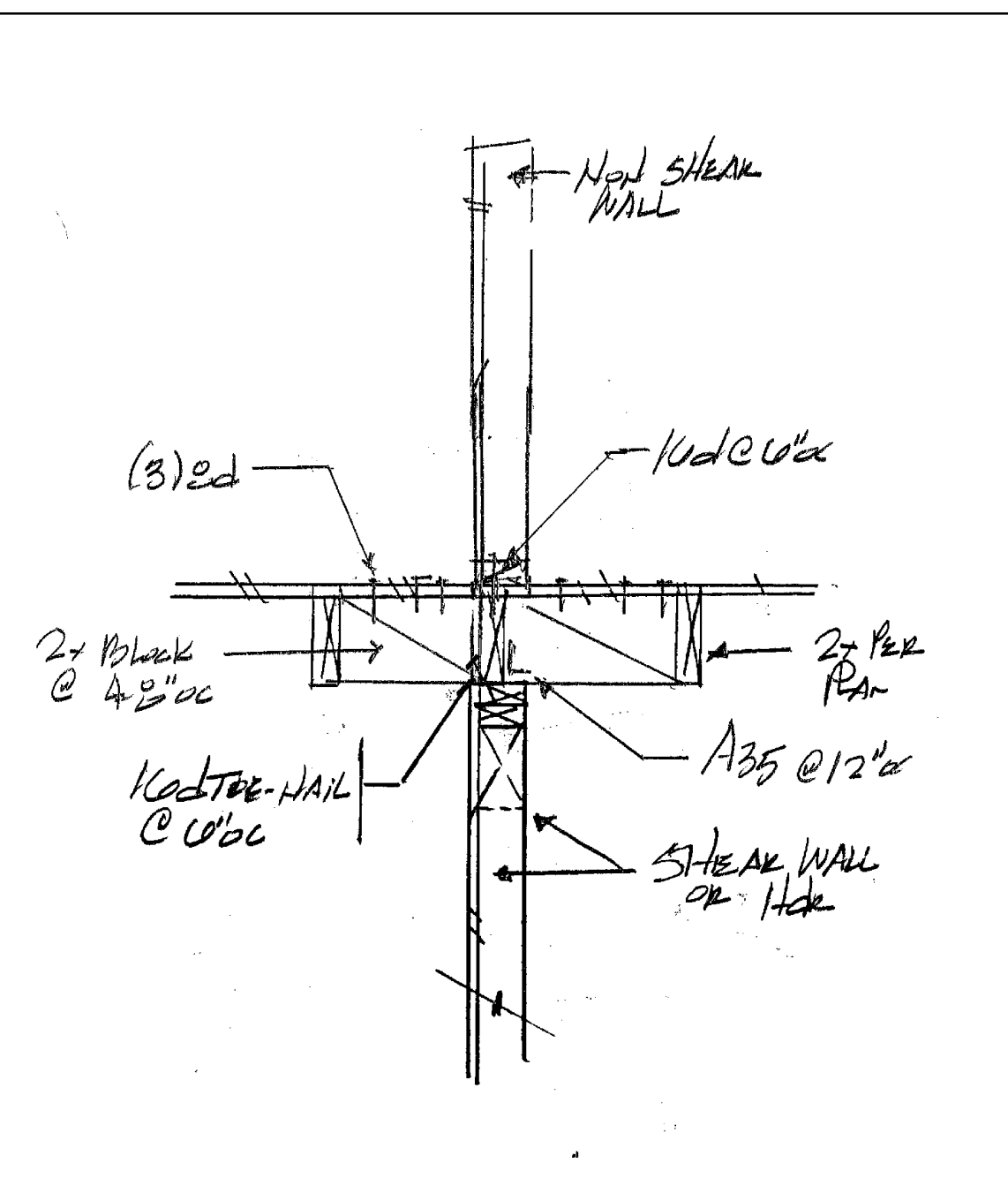
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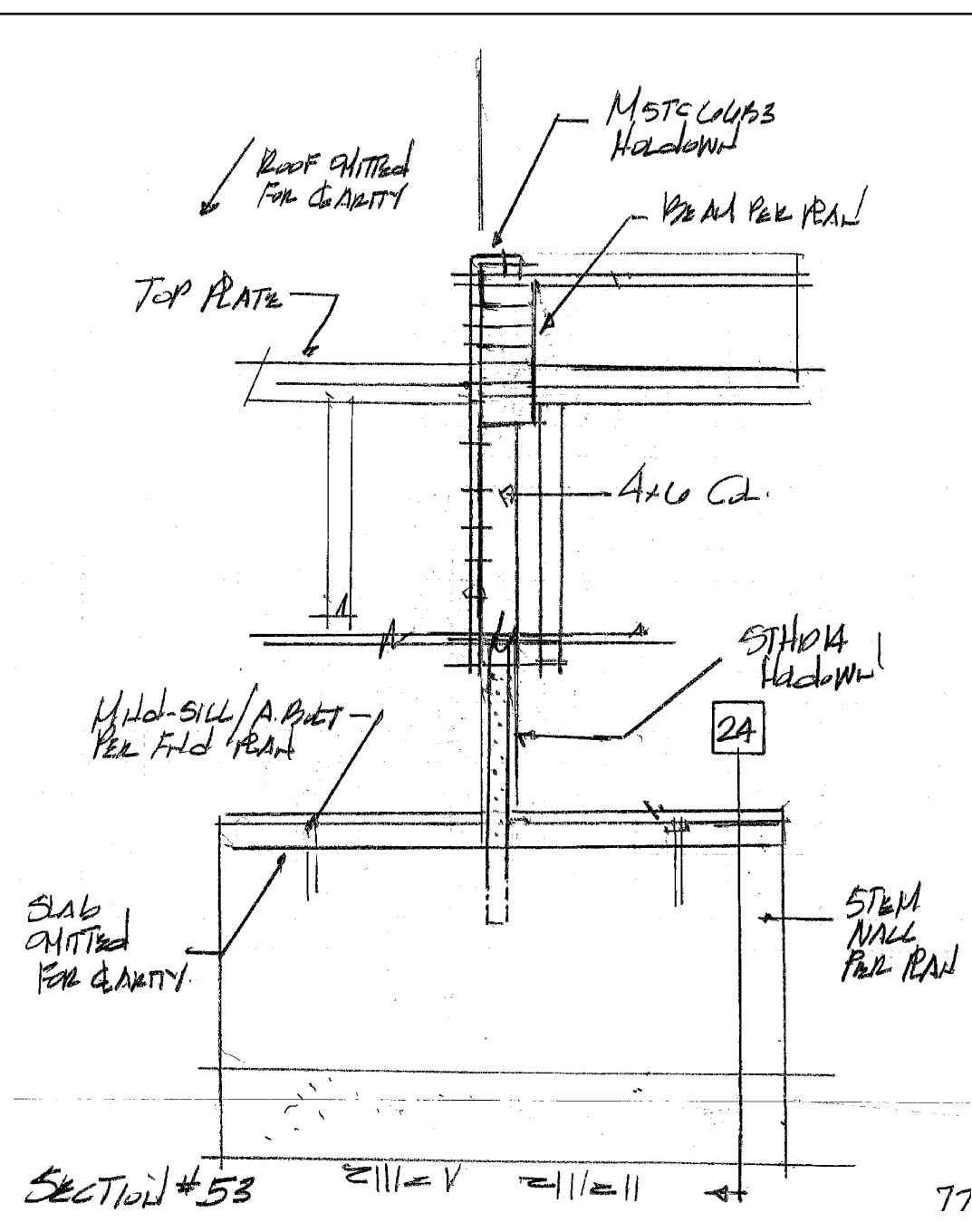
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