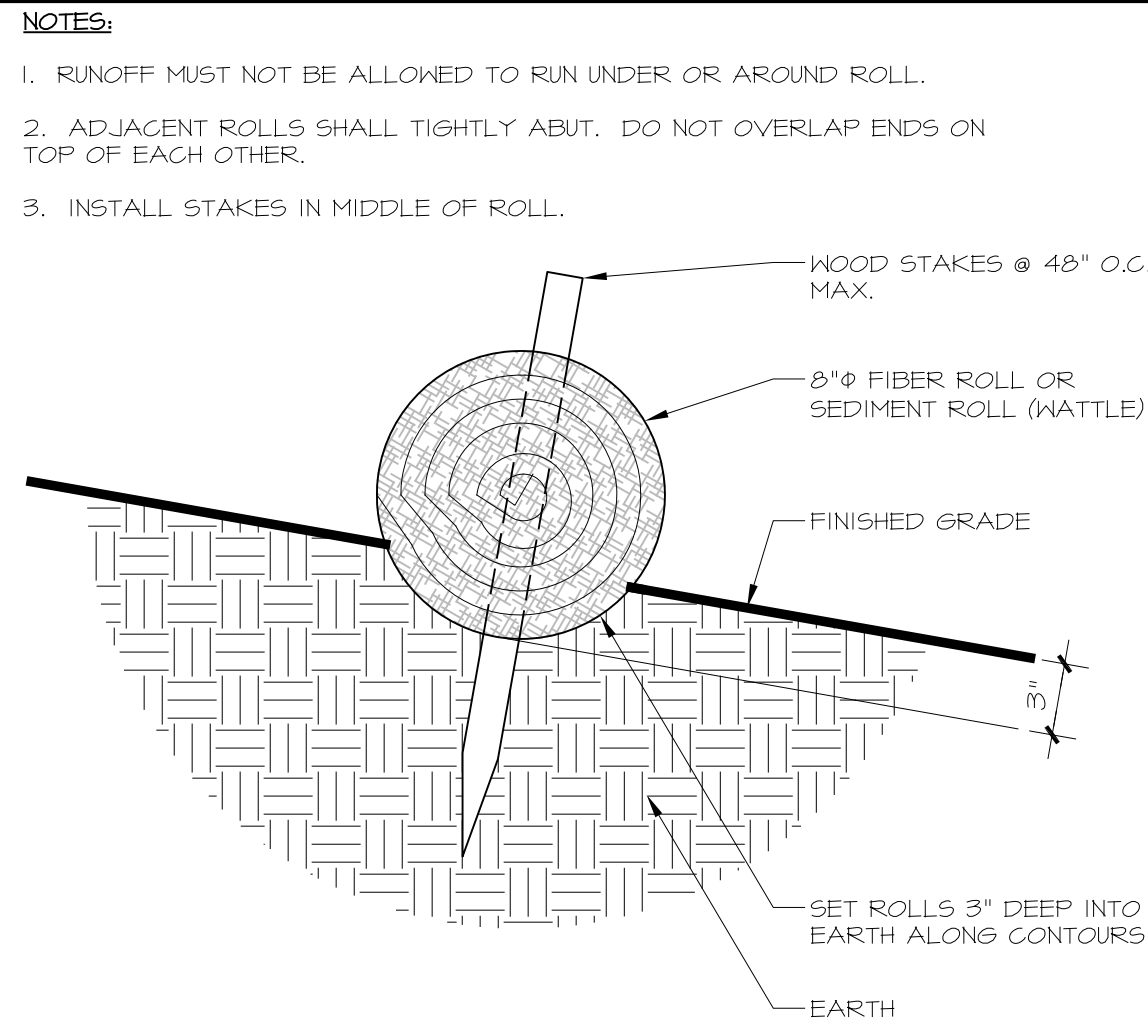


EROSION PREVENTION DETAILS



**FIBER ROLL BARRIER**  
SCALE: N.T.S.

1

**EROSION MEASURES:**

- TIME LINE**
- Before any digging fiber rolls shall Be installed.
  - After installation of the fiber rolls the piers shall be excavated.
  - Concrete shall be placed for the piers no more than 5 working days after excavation.
  - Piers shall be backfilled no more than 5 working days after pouring.
  - Gravel shall be placed no more than 5 working days after piers are backfilled.
  - Any dirt behind the fiber rolls shall be removed and placed against the existing building foundation.
  - The boundary fencing and fiber rolls my be removed .

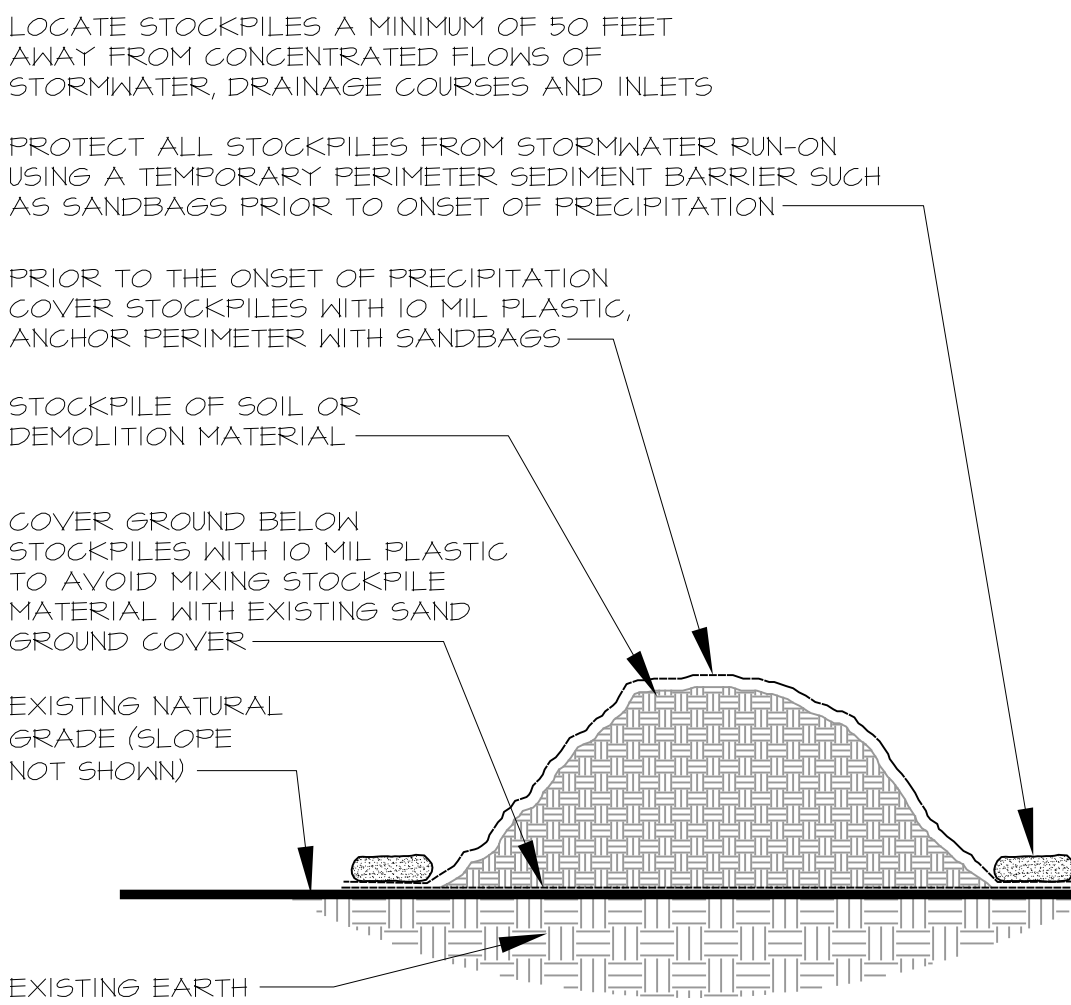
**DIRT STOCK PILE PROTECTION**  
Dirt stock piles shall be placed in the area of the new piers within the area protected by the fiber rolls. The piles shall be covered with plastic which is held in place by weights.

**PERMANENT EROSION PREVENTION MEASURES**

- Under the new deck add 2 inches of 3/4 inch gravel.

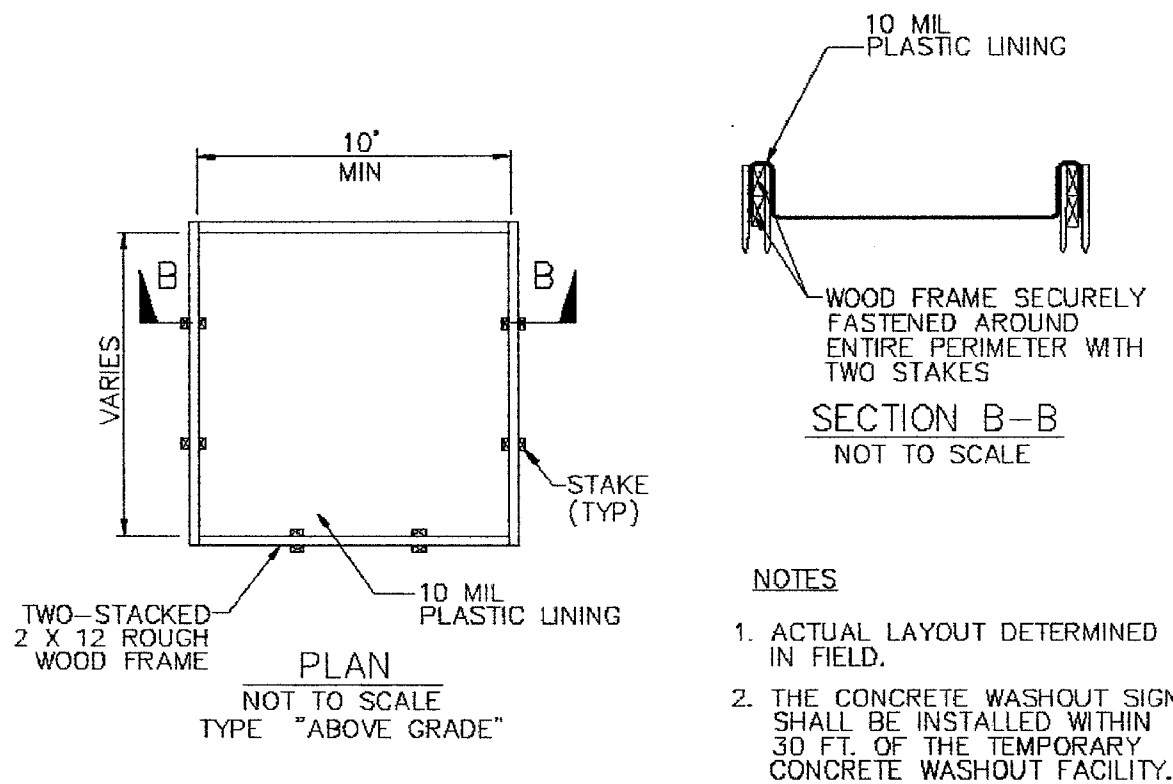
**EROSION MEASURES**  
SCALE: N.T.S.

2



**STOCKPILE COVERING**  
SCALE: N.T.S.

3



- NOTES**
1. ACTUAL LAYOUT DETERMINED IN FIELD.
  2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

6 of 7 California Stormwater BMP Handbook January 2003 Construction www.cabmphandbooks.com

**CONCRETE WASHOUT AREA**  
SCALE: N.T.S.

4

**SHEET INDEX**

No.	SHEET TITLE
C-0	COVER SHEET / GENERAL INFORMATION
C-1	SITE PLAN
A-1	DECK AND STAIR PLAN
A-2	DECK AND STAIR ELEVATIONS
SP1	SPECIFICATIONS
S-1	FOUNDATION AND FRAMING PLANS
S-2	DETAILS

**CONTACT INFORMATION**

**OWNERS:**

**GLENSHIRE / DEVONSHIRE RESIDENTS ASSOCIATION**  
**CONTACT: DAN WARREN**  
**15726 GLENSHIRE DRIVE**  
**TRUCKEE, CALIFORNIA 96161**  
**PHONE: (530) 587-6202**

**PROJECT ENGINEER:**

**F.N.W. ENGINEERS**  
**CONTACT: RICK FITZGERALD**  
**21459 DELTA DRIVE**  
**RENO, NEVADA 89521**  
**PHONE: (775) 848-0053**

This is to certify that RICHARD T. FITZGERALD, whose professional engineer's seal appears on this document, assumes responsibility for the validity of only the ARCHITECTURAL and STRUCURAL ELEMENTS SHOWN HEREON and NOT for any, site-planning, civil, mechanical, electrical, soils engineering or any other engineering or design aspect of the work.

**DRAFTSPERSON:**

**W DESIGN & DRAFTING**  
**CONTACT: BRET WIGHTMAN**  
**P.O. Box 9615**  
**TRUCKEE, CALIFORNIA 96162**  
**PHONE: (530) 230-7224**

**GENERAL SCOPE OF WORK**

IMPROVEMENTS AT EXISTING CLUBHOUSE LOCATION (APN: 40-110-01) LOCATED AT 15726 GLENSHIRE DRIVE, GLENSHIRE SUBDIVISION WITHIN THE TOWN OF TRUCKEE. IMPROVEMENTS CONSIST OF A NEW 246 SQ. FT. DECK AND STAIR TO REPLACE THE EXISTING 200 SQ. FT. DECK AND STAIR. NEW DECK AND STAIR TO MEET ADA ACCESS REQUIREMENTS AND SEC 1184B REQUIREMENTS THAT 20% OF THE COST OF THE PROJECT BE PUT INTO UPGRADING ACCESSIBILITY.

**APPLICABLE CODES**

2016 EDITION CALIFORNIA BUILDING CODE (C.B.C.)

**STATISTICAL INVENTORY OF SQUARE FOOTAGES**

REBUILD DECK AND STAIRS (UNCONDITIONED):	246 SQ. FT.
TOTAL (UNCONDITIONED):	246 SQ. FT.



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96162

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**REVISIONS:**



05/30/2017

**FNW** ENGINEERS  
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Reno, NV 89521  
(775) 848-0053  
fnwengineers.com

**-- PROJECT --**

**GLENSHIRE / DEVONSHIRE  
RESIDENTS ASSOCIATION  
CLUBHOUSE NORTH DECK REBUILD**  
15726 GLENSHIRE DRIVE  
GLENSHIRE UNIT No. 2 BLOCK 3 PAGE 41  
TRUCKEE, CA. NEVADA COUNTY A.P.N.: 40-110-01

**ISSUE DATE:**  
05-30-17

**DRAWN BY:**  
BW

**SCALE:**  
NO SCALE

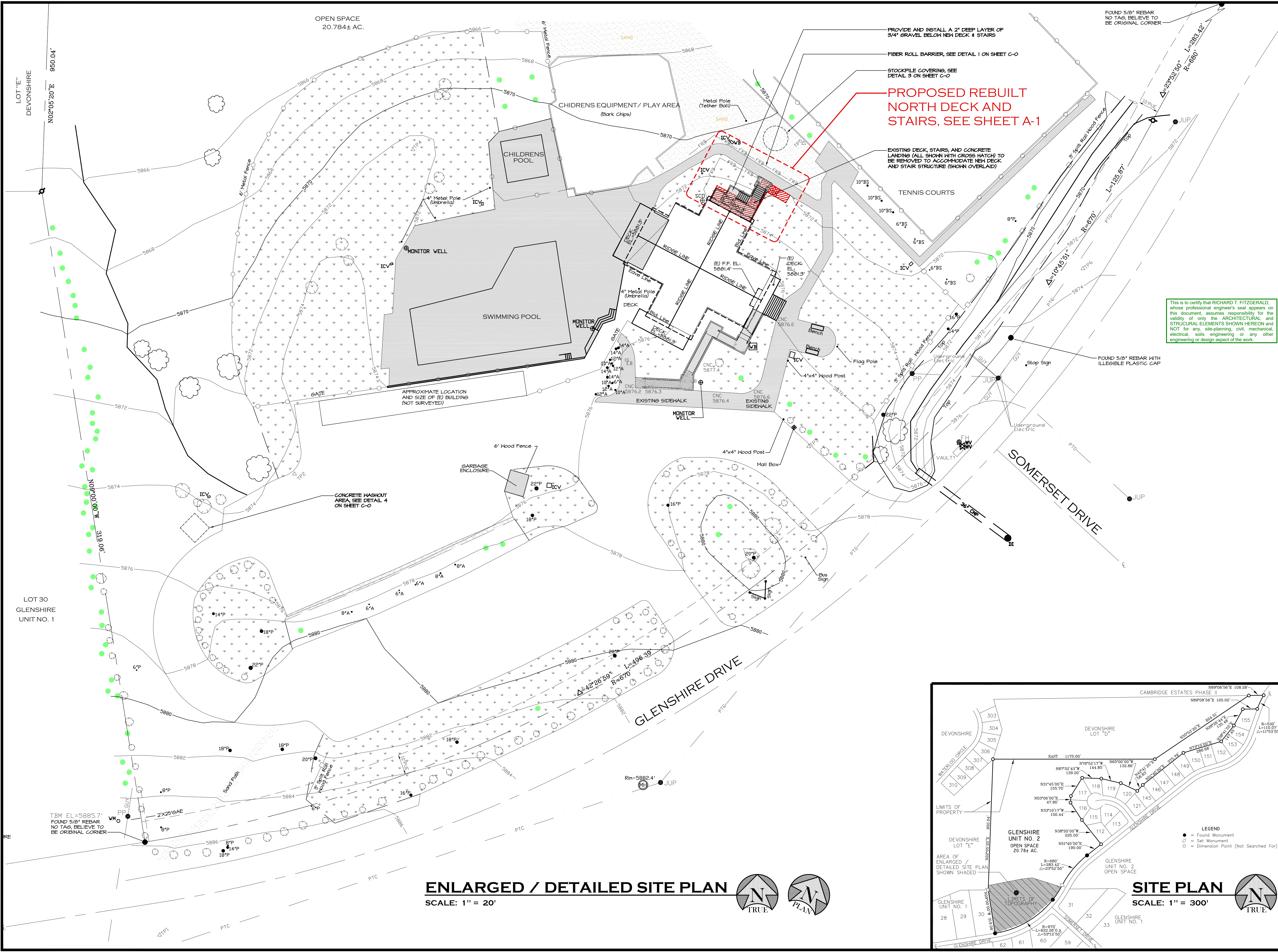
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**C-0**

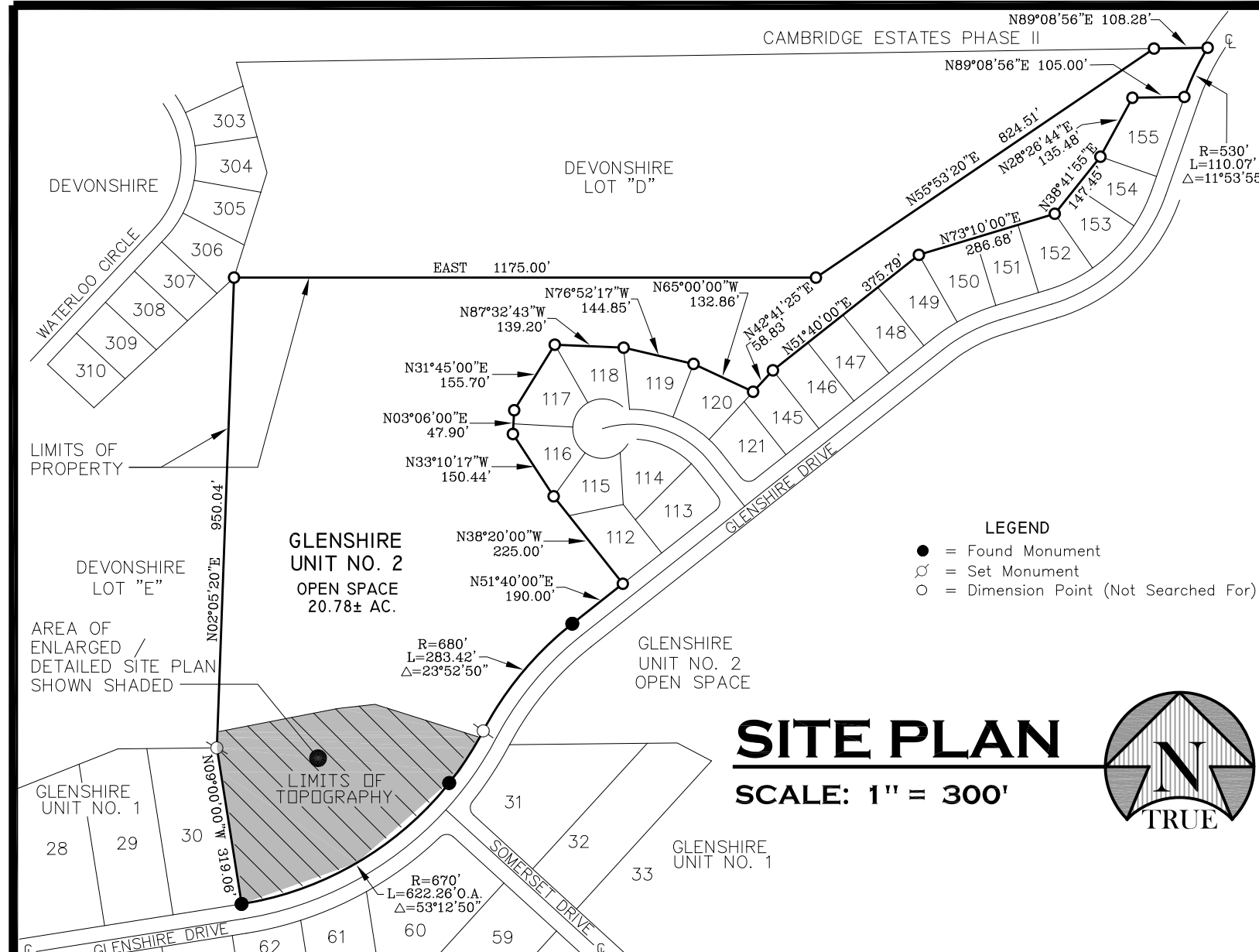
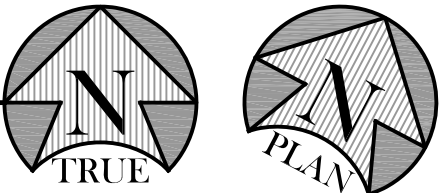
**COVER SHEET / GENERAL INFORMATION**

**SHEET C-0**

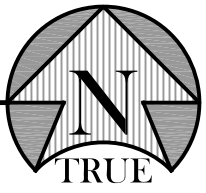




**ENLARGED / DETAILED SITE PLAN**  
SCALE: 1" = 20'



**SITE PLAN**  
SCALE: 1" = 300'



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REVISIONS:


05/30/2017

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Reno, NV 89521  
(775) 848-0053  
fnwengineers.com

PROJECT

**GLENSHIRE / DEVONSHIRE  
RESIDENTS ASSOCIATION  
CLUBHOUSE NORTH DECK REBUILD**  
15726 GLENSHIRE DRIVE  
GLENSHIRE UNIT NO. 2 BLOCK 3 PAGE 41  
TRUCKEE, CA. NEVADA COUNTY A.P.N.: 40-110-01

**SHEET C-1**  
TITLE SITE PLAN

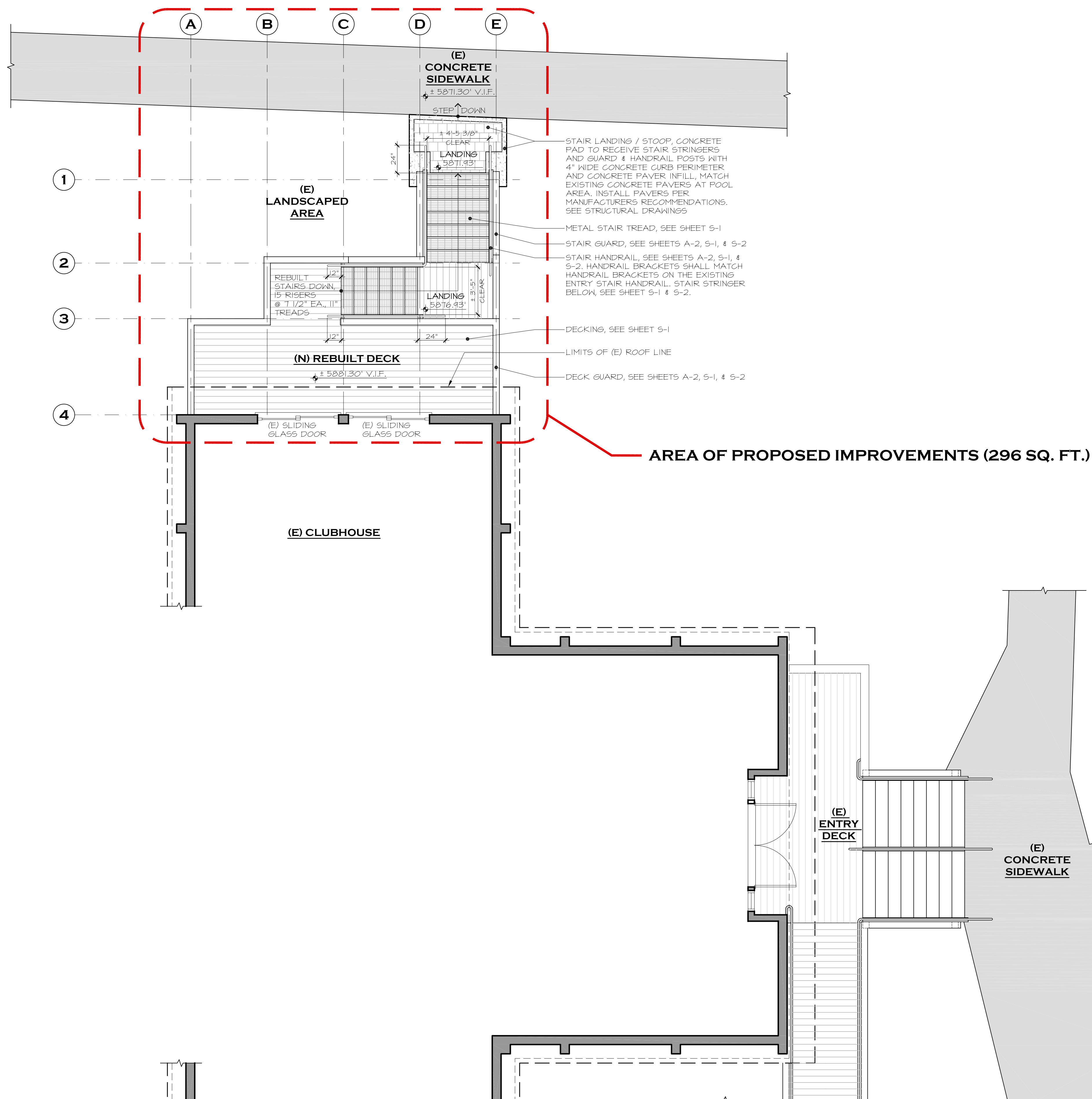
ISSUE DATE:  
05-30-17

DRAWN BY:  
BW

SCALE:  
AS NOTED

SHEET NO.  
**C-1**





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DESIGN & DRAFTING

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05/30/2017

PROJECT

**GLENSHIRE / DEVONSHIRE  
RESIDENTS ASSOCIATION  
CLUBHOUSE NORTH DECK REBUILD**

15726 GLENSHIRE DRIVE  
GLENSHIRE UNIT No. 2 BLOCK 3 PAGE 41  
TRUCKEE, CA. NEVADA COUNTY A.P.N.: 40-110-01

**DECK AND STAIR PLAN**

ISSUE DATE:  
05-30-17

DRAWN BY:  
BW

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

SHEET No.

**A-1**

REBUILT NORTH DECK AND STAIRS







**30) 230-7224**

**DD@ATT.NET**

REVISIONS:



**FINW** ENGINEERS  
(775) 848-0053  
finwengineers.com

PROJECT — **Z**

# DECK AND STAIR ELEVATIONS

ISSUE DATE:	
-------------	--

05-30-17 | el

DRAWN BY:  
BW

**SCALE:**  
1/4" = 1' - 0"

**SHEET No.**

**A-2**

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**A.39** Handrail height, measured vertically from the sloped plane adjoining the tread nosing, or finish surface of ramp slope, shall be not less than 34" and not more than 38". CRC R311.7.7.1. Handrails for stairways shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. Handrail ends shall be returned or shall terminate in newel posts or safety terminals. Handrails adjacent to a wall shall have a space of not less than 1.5" between the wall and the handrails. CRC R311.7.7.1 All required handrails shall be one of the following types or provide equivalent graspability: *Type I:* Handrails with a circular cross section shall have an outside diameter of at least 1.25" and not greater than 2". If the handrail is not circular, it shall have a perimeter dimension of at least 4" and not greater than 6.25" with a maximum cross section of dimension of 2.25". Edges shall have a minimum radius of 0.01 inch. *Type II:* Handrails with a perimeter greater than 6.25" shall have graspable edges on both sides of the profile. The finger recess shall begin within a distance of 3/4" measured vertically from the tallest portion of the profile and achieve a depth of at least 5/16" inch within 7/8" below the widest portion of the profile. This required depth shall continue for at least 3/8" to a level that is not less than 1.75" inches below the tallest portion of the profile. The minimum width of the handrail above the recess shall be 1.25" to a maximum of 2.75". Edges shall have a minimum radius of 0.01 inch. CRC 311.7.7.3. (See handout on Town website for additional clarification).





SPECIFICATIONS AND GENERAL NOTES FOR  
CONSTRUCTION AND FABRICATION

A. GENERAL NOTES

ver 15.1 1/1/2017

1. All construction shall be in accordance, with the minimum requirements of the 2016 edition of the California Building Code (CBC), 2016 edition of the California Residential Building Code (CRC), and local building codes, or as specifically noted on these plans and calculations, with the most stringent condition governing. It is the responsibility of the contractor to be familiar and comply with requirements as stated in the CBC, CRC and local building codes.

2. If any changes and/or substitutions are made from these plans and calculations, the engineer shall be notified prior to making such changes and/or substitutions in the field and the client shall obtain the necessary certified plans and calculations. If such changes are made without the written approval of the engineer, then the engineer will assume no responsibility for the entire structure or any portions thereof, and shall be held harmless from any resulting claims. The engineering required for these changes and/or substitutions will be viewed as additional services and billed accordingly.

3. The contractor shall verify all dimensions on these plans before starting work and the engineer shall be notified of any discrepancies found before work commences.

4. These calculations are based on a completed structure as per the plans and calculations. This engineer shall not be responsible for, and held harmless from, any damage resulting to an uncompleted structure subject to design loads unless first consulted for an interim design.

5. This structural design is based on loading conditions as determined by local building codes and by the CBC / CRC. This engineer is not responsible for damage resulting to a structure due to load conditions exceeding those for which the structure has been designed, or due to "Acts of God" (e.g., fire, flood, war, etc.).

6. Grades as shown on plot maps and elevation drawings are the responsibility of the client. The engineer takes no responsibility for damage to, or additional construction costs of, any structure for which the client, designer, architect, surveyor or any other party has misrepresented the relative position of the structure to the natural finish grades of the building site. Any engineering required to adjust for misrepresented information will be viewed as additional services and billed accordingly.

7. All rafters, trusses, and joists shall stack directly over and/or below wall studs unless otherwise noted.

8. The contractor is responsible for all temporary bracing and shoring. Construction and job safety procedures are the responsibility of the contractor.

9. The reproduction of structural contract documents for re-submittal as shop drawings is prohibited. Shop drawing reproduced in such a manner will be rejected and returned.

10. In case of conflict between plans, specifications, details, or notes, the most rigid requirement shall govern until the engineer issues a clarification in writing.

11. In areas where snow is to be considered, the structure is designed for snow loads as determined by the local jurisdiction. These snow loads are based on the assumption that the snow on the structure and the snow on the ground are not connected or "bridged". In some locations periodic maintenance may be required to eliminate any bridging between the snow on the structure and the snow on the ground.

12. No substitutions of material specifications, provided in the engineering, shall be allowed unless written approval from the engineer is obtained. It is the general contractor's responsibility to obtain the specified material. Material suppliers shall not make substitutions of materials unless prior approval of the engineer is obtained. Material suppliers shall not make judgement on whether a substituted material is adequate for its intended use.

13. Duties and responsibilities of the special inspector: 1) The special inspector shall furnish inspection reports to the building official and the engineer and architect of record. All discrepancies shall be brought to the immediate attention of the contractor for correction. Then, if uncorrected, to the proper design authority and to the building official. 2) The special inspector shall submit a final signed report stating whether the work requiring special inspection was, to the best of the inspector's knowledge, in conformance with the approved plans and specifications and the applicable workmanship provisions of the current building code.

14. Walls shall be balloon framed (continuous studs) between the top of the foundation or floor diaphragm to the bottom of an upper floor joist or roof rafters/trusses.

15. The contractor shall thoroughly review the plans and the engineering prior to the start of construction. Any question regarding the structural portion of the project shall be brought to the attention of the engineer prior to the start of construction. If the builder has no questions it is understood that he/she has a complete understanding of the framing and how the elements are to be installed. Any misinterpretation shall be the responsibility of the contractor. The contractor shall also be responsible to insure that his/her sub-contractors have a complete understanding of their portion of the project.

16. Framing members shall not be hung unless otherwise noted.

B. TIMBER

1. Foundation sill plates shall be pressure treated Douglas Fir. For special connection requirements see section C.12.

2. Studs shall be Douglas Fir stud grade or better. Studs shall be continuous between horizontal diaphragms, unless specifically noted on the drawings or in this engineering.

3. Framing shall be Douglas Fir, dry (19% Maximum moisture content).  
a. 2x Joist, Rafters, Plates, Headers ----- Douglas Fir #2, unless noted on the plans.  
b. 4x Joist, Rafters, Headers, Beams ----- Douglas Fir #2, unless noted on the plans.  
c. 6x,8x,10x,12x Beams, Posts, Timbers ----- Douglas Fir #1, unless noted on the plans.

4. Glu-Laminated members shall be classified as 24F-V4 with the following minimum design values, unless noted on the plans.

a. Horizontal shear stress (Fv) ----- 240 psi  
b. Bending stress - Positive (Fb) ----- 2400 psi  
Negative (Fb) ----- 1850 psi  
c. Modulus of Elasticity (E) ----- 1800000 psi  
d. Compression Perpendicular to grain (Fc) -- 650 psi  
e. Manufacture with wet use adhesives where exposed.

5. Laminated Veneer Lumber (LVL) shall be classified as 2.0E with the following minimum design values, unless noted on the plans:

a. Horizontal shear stress (Fv) ----- 285 psi  
b. Bending Stress (Fb) ----- 2600 psi  
c. Modulus of Elasticity (E) ----- 2000000 psi  
d. Compression Perpendicular to grain (Fc) -- 750 psi

6. Parallel Strand Lumber (PSL) shall be classified as 2.0E with the following minimum design values, unless noted on the plans:

a. Horizontal shear stress (Fv) ----- 290 psi  
b. Bending Stress (Fb) ----- 2900 psi  
c. Modulus of Elasticity (E) ----- 2000000 psi  
d. Compression Perpendicular to grain (Fc) -- 750 psi

7. Laminated Strand Lumber (LSL) shall be classified as 1.55E with the following design values, unless noted on the plans:

a. Horizontal shear stress (Fv) ----- 310 psi  
b. Bending Stress (Fb) ----- 2325 psi  
c. Modulus of Elasticity (E) ----- 1550000 psi  
d. Compression Perpendicular to grain (Fc) -- 800 psi  
e. Compression on Wide Face ----- 375 psi

8. High strength Glu-Laminated members shall meet the following minimum design values, unless noted on the plans:

Anthony Power Beam (APB)  
(EWS 30F-E2M1& 28F-E2M1)  
a. Horizontal shear stress (Fv) ----- 290 psi  
b. Bending Stress, 3.5" & 5.5" (Fb) ----- 3000 psi  
7" (Fb) ----- 2800 psi  
c. Modulus of Elasticity (E) ----- 2100000 psi  
d. Compression Perpendicular to grain (Fc) -- 740 psi

Rosboro Big Beam (RBB)  
(EWS 30F-E2M3)  
a. Horizontal shear stress (Fv) ----- 300 psi  
b. Bending stress (Fb) ----- 3000 psi

9. All stud walls are to have double top plates of the same dimension as the stud. Plates are to be lapped a minimum of 4'-0" between splices with at least eight 12d nails through both plates on each side of all the plate splices or as noted on framing plans or in the engineering. Where plates are discontinuous due to a post or other framing member, a MSTC28 strap shall be used to splice the plate line together or as noted on framing plans or in the engineering.

10. All partition walls shall have a minimum of a single joist or solid blocking directly below the partition, U.O.N.

11. All built-up, laminated double or multiple 2x joist and beams shall be nailed together with 12d nails at 12" O.C. at both the top and bottom, staggered with three 12d nails at ends unless otherwise noted.

12. All headers at exterior walls and at roof bearing walls shall be 6 x 12 DF #1, bearing on one stud trimmer each side, except where specifically noted.

13. In no instance shall a stud wall be used as a retaining wall, i.e., to resist lateral pressure due to earth backfill, or water or snow build-up against the wall. In the case of snow build-up against a stud wall, it shall be the responsibility of the owner to remove such snow or create a gap between the snow and wall (e.g., through heat loss from the structure). The engineer is not responsible for, and shall be held harmless from, damage and claims resulting from movement of or damage to the structure due to the lateral pressure of snow, water or earth against a stud-wall.

14. All trimmers shall have solid bearing to foundation with solid blocking provided in all joist bays below trimmers, continuous to the foundation.

15. On all seat cuts and similar notches there shall be no over cut at the inside corner of the notch.

16. On all seat cuts the bearing length shall not exceed the width of the supporting member and there shall be only one vertical cut, unless otherwise noted.

17. Nailing of members shall be in accordance with CBC table 2304.9.1 unless otherwise noted.

18. All floor joists shall have a minimum of double blocking at all roof bearing walls (double rim joist, rim and blocking or double blocking), unless specifically noted on the plans or in the engineering. Blocking and or rim joist shall be the same depth as the floor joist. All exterior walls, which run parallel with the floor joist, shall have a double rim joist.

19. Nail multiple plies of LVL's together with 2 rows of 12d nails at 12" on center into each member unless otherwise noted.

20. All rafters and joists shall be blocked solid at bearing points unless specifically noted.

21. Wall top plates shall be at the same elevation (no steps) along a wall line unless specifically addressed in the engineering.

22. Cripple wall studs shall be of the same size, quantity and spacing as the studs above unless specifically noted otherwise.

23. Camber has not been designed or specified unless specifically noted. Contact engineer if camber is desired.

C. CONNECTIONS

1. All posts and columns are to be installed with Simpson Strong Tie or USP (cross-referenced) post or column caps and bases, unless otherwise noted in the plans.

2. All hardware (i.e., column caps and bases, beams and joist hangers, straps, etc.) shall be Simpson Strong Tie, USP (cross referenced) or custom fabricated specifically as detailed on the plans or calculations, and shall be installed with nails or bolts exactly as called for by the manufacturer or as noted on the plans. The most stringent nail or bolt options as specified by the manufacturer shall be used unless otherwise noted. Other ICC approved hardware may be substituted for Simpson, however the builder shall submit a list of substituted hardware, prior to its use, to the engineer for approval.

3. All bolts in wood connections shall comply with ASTM A-307 standard or better, unless otherwise noted.

4. Posts used for beams or girder supports shall be either (1) solid, continuous members to the foundation, or (2) spliced at mid depth of floor joist, with full end grain bearing and using solid blocking or MSTC28 straps on all sides of post splice unless otherwise noted.

5. All ledgers for rafters, joists, etc., shall be let into bearing wall studs the width and depth of the member for a tight fit and nailed to wall studs with three 12d nails, unless specifically noted in the calculations or on the plans.

6. All nails specified in this engineering shall meet the requirements of ASTM F1667 and the minimum specifications as noted below:

For framing member connections:

Nail Designation	Minimum Diameter	Minimum Length
6d	0.113 in	2.00 in
8d	0.131 in	2.50 in
10d	0.148 in	3.00 in
12d	0.148 in	3.25 in
16d*	0.162 in	3.50 in
20d	0.192 in	4.00 in

For roof and floor diaphragms:

Nail Designation	Minimum Diameter	Minimum Length
6d	0.113 in	1.25 in + Sheathing thickness
8d	0.131 in	1.50 in + Sheathing thickness
10d	0.148 in	1.625 in + Sheathing thickness

For shear walls:

Nail Designation	Minimum Diameter	Minimum Length
6d	0.113 in or 0.099 in*	1.25 in + Sheathing thickness
8d	0.131 in or 0.113 in*	1.50 in + Sheathing thickness
10d	0.148 in or 0.128 in*	1.625 in + Sheathing thickness
16d	0.162 in or 0.148 in*	3.50 in

\* - Galvanized box nail, hot dipped or tumbled.

Any nail meeting the minimum diameter and minimum length may be used regardless of its designation, i.e. a 16d sinker with a minimum diameter of 0.148 in. and minimum length of 3.25 in. may be used in place of a 10d or 12d as specified in the engineering.

Hardware nails, see note C.2 above.

7. All hold-down hardware shall be installed per the manufacturer's recommendations. Hold-downs shall be secured to a minimum of double full-height studs at locations specified on the plans. Full height studs are those which run from the sole plate to the top plates. Window and door trimmers do NOT qualify as hold-down studs. Where "pony" walls exist below shearwalls, the hold-down shall extend through the pony wall to its intended wall fastening point. All hold-down studs shall have solid blocking and an equivalent stud bearing below, continuous to the foundation.

8. Larger hold-downs may be substituted for smaller hold-downs when installed in accordance with the manufacturer's recommendations.

9. Hold-down bolts shall not be counter sunk into the hold-down stud unless specifically noted.

10. Where #4 rebar pins are used to connect members together, use a 7/16" diameter lead hole for the pins. Embed the pins a minimum of 9" into the top of posts and a minimum of 6" into horizontal members, unless otherwise noted. Place the pin in the center of the members.

11. Lead holes for lag bolts shall be as follows: 3/8" lag - 1/4" lead hole, 1/2" lag - 5/16" lead hole, 5/8" lag - 3/8" lead hole, 3/4" lag - 1/2" lead hole.

12. Metal connectors (hangers, nails, anchor bolts, etc.) that come in contact with treated wood shall meet the following requirements: Wood treated with ACQ (alkaline copper quat), CBA-A & CBA-B (copper azole type a & b), SBX (sodium borate), CCA (chromated copper arsenate) and other NON-DOT borates shall use either hot dipped galvanized, Simpson Z-max or USP Triple Zinc connectors. Standard G90 connectors may be used with TruJoist timberstrand LSL zinc borate treated members. Stainless steel connectors may be used with any type of treated wood.

13. Except at cantilevered frames and unless specifically noted, the following options may be used in place of (E)PC or BC connections:)

1) Interior- EPC, BC, 2-LPC's, 2-AC(E)'s, 2x siders on each side with 5-12d nails into each member, or 1/2" thick or greater plywood or OSB gusset with 5-6d nails into each member.

2) Exterior- EPC, BC, 2-LPC's, 2-AC(E), 2x siders on each side with 5-#8 x 3" screws into each member or 2-1/2" diam. M. bolts or 2-1/2" diam x 4" lags into each member.

D. WOOD STRUCTURAL PANEL DIAPHRAGMS

1. Where the word plywood is used in notes 2 through 6 below, it shall be understood that any APA structural panel of the same thickness and span rating may be substituted.

2. Horizontal diaphragms: (1) Plywood shall be a minimum of 19/32" thick, APA 32/16 CDX (exterior glue) rated, with face grain perpendicular to the supports, in a staggered pattern unless otherwise noted; (2) Plywood is to be nailed with 8d common nails at a minimum of 6" O.C. at building perimeter and at all panel edges, at 12" O.C. at all intermediate supports or as noted on the framing plans or in the engineering. The sheathing shall not be less than 24" in width or length unless blocked on all edges.

3. Vertical diaphragms (shear walls): All exterior walls of a structure shall be covered with minimum 3/8" CDX or other structural plywood, nailed with 8d common nails or 8d galvanized box nails at 6" O.C. at all panel edges, and at 12" O.C. at all intermediate supports (studs) unless otherwise noted. One stud or plate shall be provided at all plywood edges. Check framing plans and engineering to see if more stringent conditions are called for. Plywood shall be span rated for the appropriate stud spacing.

4. Nail diaphragm sheathing to all rafters, trusses, joists, blocking, struts and foundation sills connected to shear walls with diaphragm boundary nailing (or edge nailing if boundary nailing is not given). Pneumatic driven fasteners shall not be driven below the surface of the sheathing.

5. Roof diaphragms shall be completely sheathed under all California framing and other overframing.

6. Plywood shall conform to the American Plywood Association's (APA) current product specification and shall be performance rated by the APA to the grade indicated on the drawings.

7. The top plates along a shear wall must form a continuous line along the length of the wall unless specifically addressed in the engineering.

E. PREFABRICATED TRUSSES

1. The manufacturer shall design trusses according to the loading conditions as called for in these calculations, namely: (1) live & dead loads; (2) unequal loading; (3) truss spacing; (4) spans and eave overhangs; (5) roof pitch; (6) bearing points. The manufacturer shall be responsible for any additional bearing requirements for the trusses. Any variation from the conditions as shown in these calculations shall first be approved by this engineer.

2. This engineer shall review the signed truss calculations prior to truss fabrication and building construction, for any manufactured trusses. Without the review, the plans are considered incomplete and this engineer will be held harmless from all resulting claims.

3. Continuous lateral bracing for webs in compression will not be accepted. The truss manufacturer shall use optional materials to minimize the need for additional support of the webs. If the truss manufacturer is not able to eliminate the buckling of the webs by using alternate materials, the design engineer shall provide a detail for web stiffening using "T" bracing, "L" bracing, "U" bracing or other type of bracing along with any other permanent bracing required by the truss manufacturer. This additional bracing design shall be considered additional services under the contract.

F. FOUNDATIONS

1. All footings shall be keyed into and bear on firm, undisturbed, non-organic soil, or on fill compacted to 95% of maximum density based on ASTM D 1557.

2. Fill material must meet the following requirements unless written approval from the engineer is obtained: 1) The material must not degrade more than 35% using the Los Angeles Rattler Abrasion test. 2) The material must have a minimum dry compacted density of 118 pcf.

3. All perimeter or exterior footings and piers shall be set to a depth of at least 18" below finished grade, or at a depth below the frostline, whichever is greater unless otherwise noted on the plans.

4. Unless otherwise noted, an assumed basic allowable soil bearing pressure of 2000 psf has been used. All footings are to be level or level stepped unless specifically noted. The top of foundation walls, footings and pilasters are to be level.

5. Waterproofing of foundations and retaining walls is the responsibility of the owner or contractor and in no way is the responsibility of this engineer.

6. The engineer is not responsible for the adaptability of these plans to the building site, unless a field inspection is specifically called for. If any questionable soil conditions are discovered, including fill, water, organic matter, loose or competent rock, etc. the contractor or owner shall obtain the services of an engineer specializing in soils to provide a soils report for the site. If this report is provided after the structural engineering has been completed, and modifications are required, they will be viewed as additional services and billed for accordingly.

7. Sill plates shall be pressure-treated Douglas Fir #2 and shall be attached to all stem walls with a minimum of 5/8" x 10" anchor bolts for 2x sills and 5/8" x 12" anchor bolts for 3x or 4x sills. The maximum anchor bolt spacing shall be 54 inches on center or as noted on the plans. Anchor bolt washer and nuts are not to be counter sunk into the foundation sill.

8. All footings shall be reinforced with a minimum of two #4 bars run continuous along the footing and placed 3.5 inches from the bottom of the footing. All stem walls shall be reinforced with one #4 bar run continuous in the stem wall, 3.5 inches from the top of the wall and shall be a minimum of 8 inches wide unless specifically noted on the plans. All stemwalls shall be reinforced with #4 bars vertical at 24 inches on center. The engineer shall design all stem walls over 36 inches tall.

9. All footings shall be a minimum of 10 inches in thickness and reinforced with a minimum of two #4 bars running in two perpendicular directions. See plans or calculations for additional reinforcing requirements. All reinforcing shall be placed uniformly in concrete. Bars shall have a minimum of 3" of concrete cover on the sides and bottom of the footing.

10. Exterior concrete isolated footings shall have concrete pier risers on which to bear the structural member. Pier risers shall be poured monolithically with the footing or cast in two pours if proper lapping of the reinforcing is carried out. The minimum pier riser width must be at least the size of the post & have 3 inches of side cover from the embedded portion of the post base. In any case, the pier riser width shall not be less than 8 inches. For most cases it will be 7 inches plus the width of the post. Pilasters which are 24 inches or less in height shall be reinforced with two #4 bars vertical which shall be lapped into the footing reinforcing. Pilasters which are greater than 24 inches in height to 48 inches in height shall be reinforced with four #4 bars vertical which shall be lapped into the footing reinforcing and have #3 ties at 12" on center around the vertical bars. The engineer shall design pilasters that are greater than 48 inches in height. See plans or calculations for more stringent requirements of the above criteria. The section of the pier riser outside the post shall have the top sloped away from the post to provide for drainage.

11. All foundations, including footings, stem walls, piers and pier risers, shall be poured concrete unless otherwise noted. Any foundation retaining more than 4 feet of earth (from top of grade to bottom of footing) shall be engineered as a retaining wall. It is the contractor's responsibility to recognize such conditions and bring them to the attention of the Engineer.

12. The exact placement of the hold-down anchors shall be the responsibility of the builder. Placement shall be made such that the hold-down can be installed to the hold-down stud at the edges of the shear wall. The builder shall consider the required hold-down stud and shear panel length when placing the anchor. DO NOT SCALE THE HOLD-DOWN LOCATIONS OFF THE FOUNDATION OR SHEAR PLANS.

G. CONCRETE AND MASONRY

1. All concrete foundations shall have a minimum compressive strength of 2500 psi at 28 days unless otherwise noted. Slabs shall use a minimum compressive strength of 3000 psi unless otherwise noted. Slabs and concrete exposed to severe freeze-thaw conditions shall have a minimum compressive strength of 3500 psi unless otherwise noted.

2. Grout and dry pack for steel base plates to be "Sonocrete-SonogROUT 10K" mixed and placed in accordance with the manufacturer's recommendations.

3. Place concrete using methods which avoid segregation. Mechanically vibrate all concrete to consolidate in forms.

4. Freshly deposited concrete shall be protected from premature drying and excessive hot or cold temperatures for a minimum of 5 days.

5. For cold weather, follow "Recommended Practice For Cold Weather Concrete", ACI 306. For hot weather, follow "Recommended Practice For Hot Weather Concrete", ACI 305.

6. Masonry units shall be ASTM C-90, Grade N-1 units made of lightweight aggregates. Masonry design strength is Fm = 1500 psi. Masonry units strength to be 1900 psi minimum based on net areas. Use open-end units where possible. Use bond beam units at horizontal reinforcing. See drawings for unit size and configurations required.

7. Mortar shall be type "S" made with clean sharp sand in conformance with ASTM C-270. Minimum mortar strength 1800 psi. Mortar materials shall be free of soluble salts to prevent efflorescence.

8. Grout shall be coarse grout. Grout shall be in accordance with ASTM C-476 with a minimum 28 day compressive strength of 2000 psi. Grout walls after mortar has cured 24 hours. Place grout in 5'-4" maximum vertical lifts. Mechanical vibrate all grout as it is placed to consolidate; revibrate just before set. Key grout pours by holding top of grout 1-1/2" below top of block.

9. Dry brush exposed masonry after mortar has set. Leave surrounding work clean and remove debris from the site.

10. Protect masonry work as required by specifications for cold weather or hot weather conditions; and moisture.

11. All reinforcing steel shall be ASTM A 615 deformed bars. For #4 bars and smaller use Grade 40 and For #5 Bars and larger use Grade 60, unless noted otherwise. Horizontal bars shall be continuous around corners. All splices for both concrete and masonry shall lap as follows: #3 bars - 23 inches, #4 bars - 31 inches, #5 bars - 39 inches, #6 bars - 47 inches.

12. Minimum concrete cover (see ACI 318 for additional cover requirements):  
a. Cast against and permanently exposed to earth ----- 3"  
b. Exposed to earth and weather - #6 and larger ----- 2"  
#5 and smaller ----- 1.5"  
c. Not exposed to weather or in contact with earth ----- 3/4"

Provide accessories necessary to properly support reinforcement.

13. Specified concrete strength is based on a 28-day cure time.

H. STEEL FABRICATION

1. All wide flange shapes shall conform to ASTM A992 or as noted on the plans; Steel tubing to ASTM A500, GR B, Fy=46 ksi; and Pipe to ASTM A501, Fy=36 ksi. All other structural steel shapes, plates, and rods, shall conform to ASTM A36.

2. All steel to steel bolts shall conform to ASTM A-325N unless otherwise noted. All steel to wood connections shall conform to ASTM A-307; Anchor bolts and threaded rods to ASTM A36.

3. All shop welding shall be by an approved fabricator as specified in the current addition of the CBC Sec. 1704.2.5.2. All field welding shall be by an AWS qualified welder possessing current qualification documents for each specific welding process and procedure.

4. All welds requiring "Special Inspection" shall be inspected by an AWS certified inspector. "Special Inspectors" must be notified and provided with structural steel plans and details prior to any welding.

5. All materials and procedures shall conform to current AWS, AISC, ASTM, and CBC requirements.

6. Shop drawings shall be submitted for approval.

7. All structural and miscellaneous steel work, except for steel to be embedded in concrete or field welded, shall be shop primed and touched up in the field after erection.

8. Holes in fabricated steel members shall be 1/16" larger in diameter than the bolt or lag specified at the connection, u.o.n.

9. ASTM A325 and A490 bolts shall be fully tensioned when used in any lateral resisting element, including but not limited to steel moment frames, braced frames, etc.

I. SKYLIGHTS

1. Skylight manufacturer must provide engineering on all skylights for design snow load.



05/30/2017

This is to certify that RICHARD T. FITZGERALD, whose professional engineer's seal appears on this document, assumes responsibility for the validity of only the ARCHITECTURAL and STRUCTURAL ELEMENTS SHOWN HEREON and NOT for any, site-planning, civil, mechanical, electrical, soils engineering or any other engineering or design aspect of the work.

GLENSHIRE / DEVONSHIRE  
RESIDENTS ASSOCIATION  
CLUBHOUSE NORTH DECK REBUILD  
15726 GLENSHIRE DRIVE  
GLENSHIRE UNIT No. 2 BLOCK 3 PAGE 41  
TRUCKEE, CA, NEVADA COUNTY A.P.N.: 40 - 110 - 01

SPECIFICATIONS

ENGINEERS  
FENW  
21459 Delta Dr.  
Reno, NV 89521  
(775) 848-0053  
fenwengineers.com

DATE

SHEET

S0.1  
OF SHEETS





## FRAMING PLAN



This is to certify that RICHARD T. FITZGERALD, whose professional engineer's seal appears on this document, assumes responsibility for the validity of only the ARCHITECTURAL and STRUCTURAL ELEMENTS SHOWN HEREON and NOT for any, site-planning, civil, mechanical, electrical, soils engineering or any other engineering or design aspect of the work.



REVISIONS:



ENGINEERS

# AND

21459 Delta Dr.  
Reno, NV 89521

21459 Delta Dr.  
Reno, NV 89521

SHEET  
TITLE

**SHEET S-1**  
**No.**

**ISSUE DATE**

05-30-17

DRAWN BY:

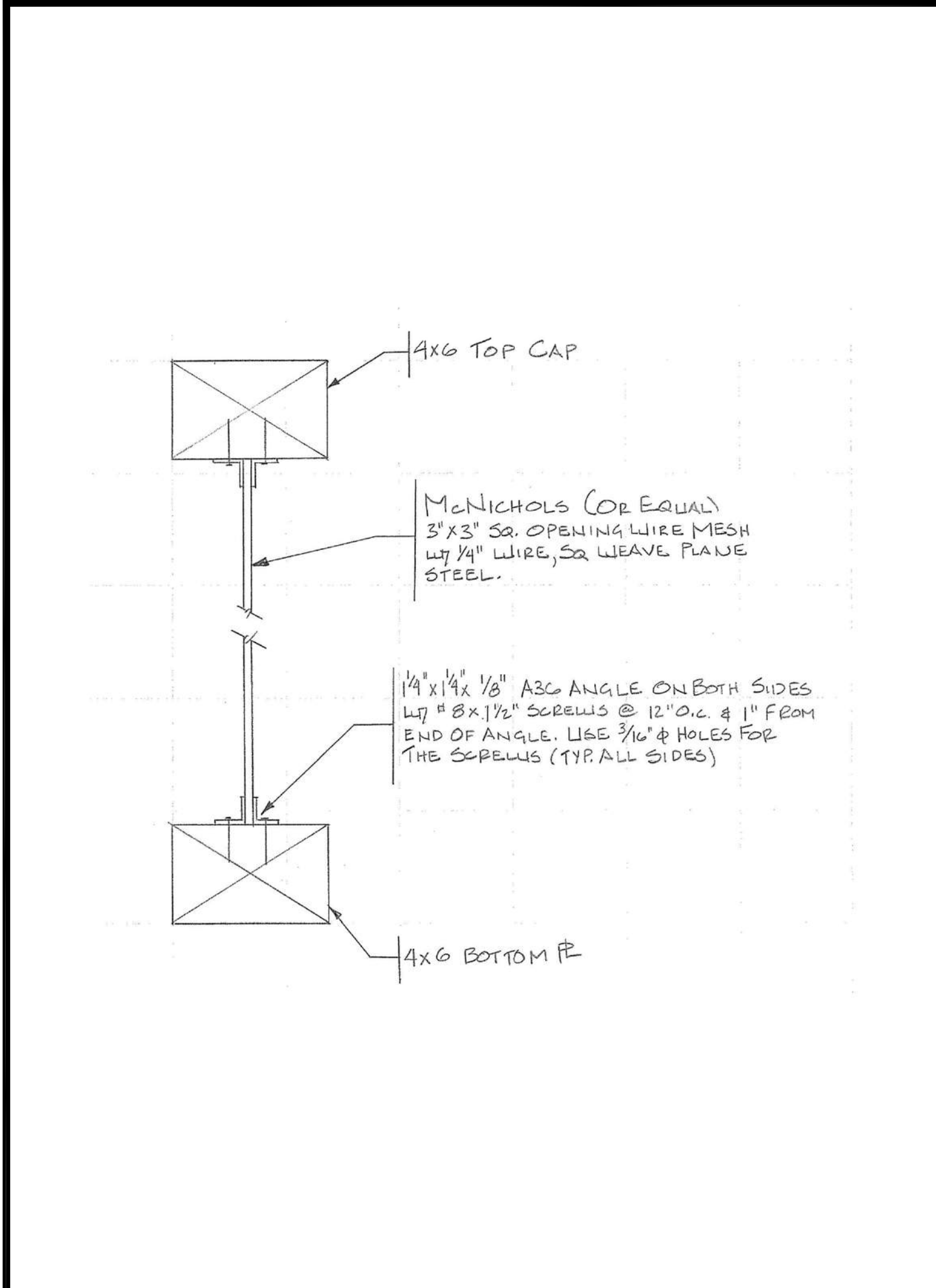
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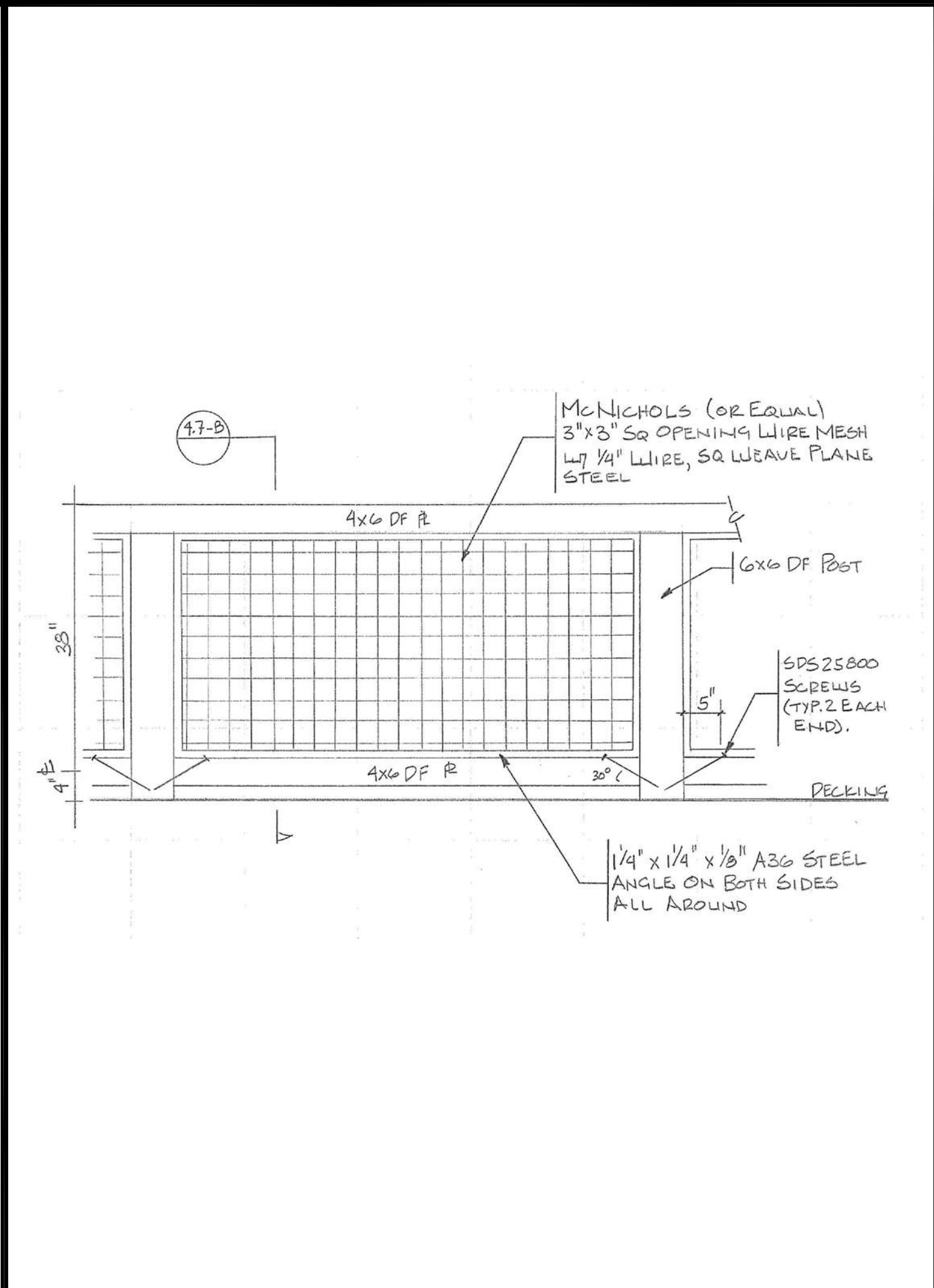
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**S-1**

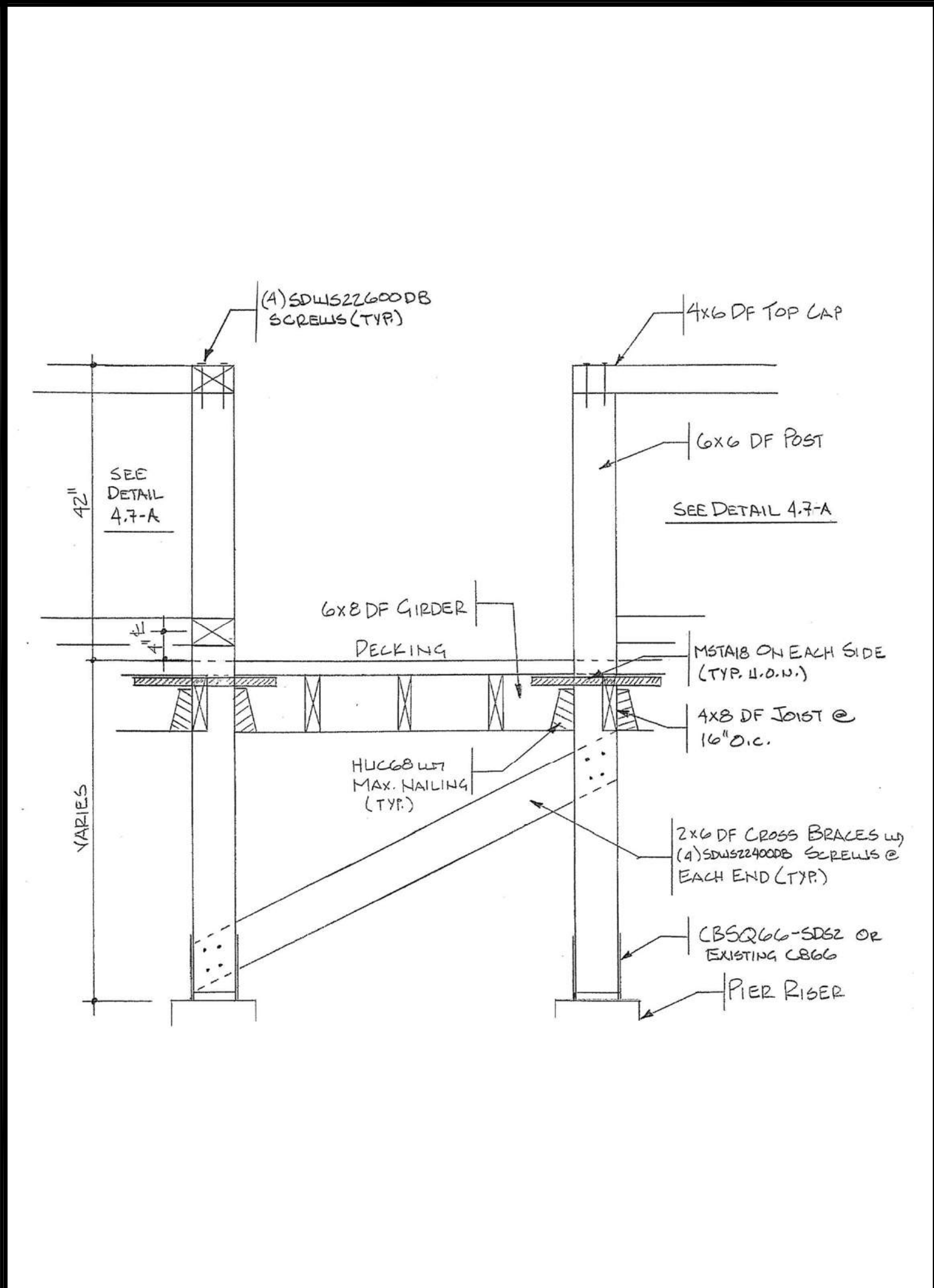




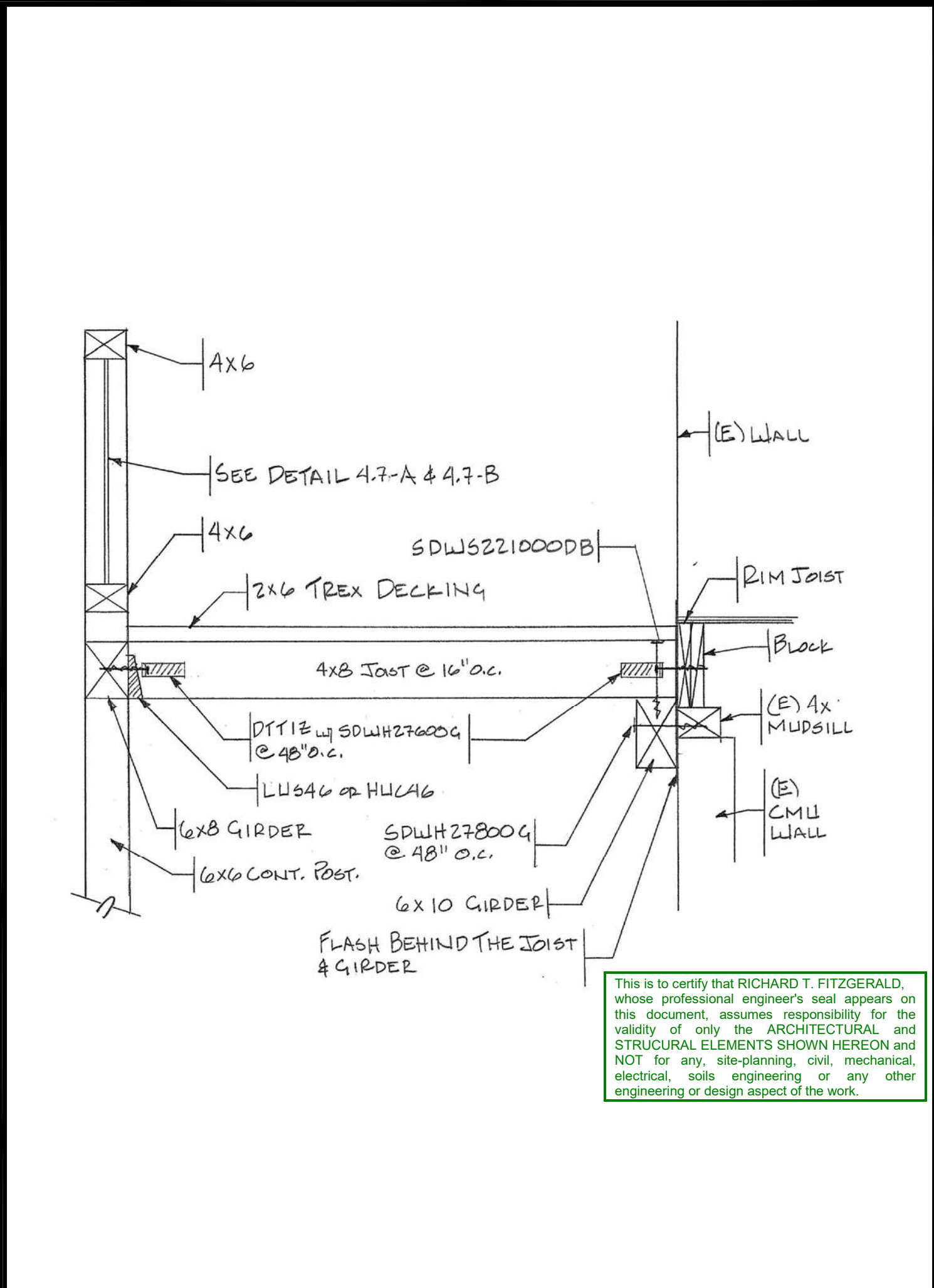
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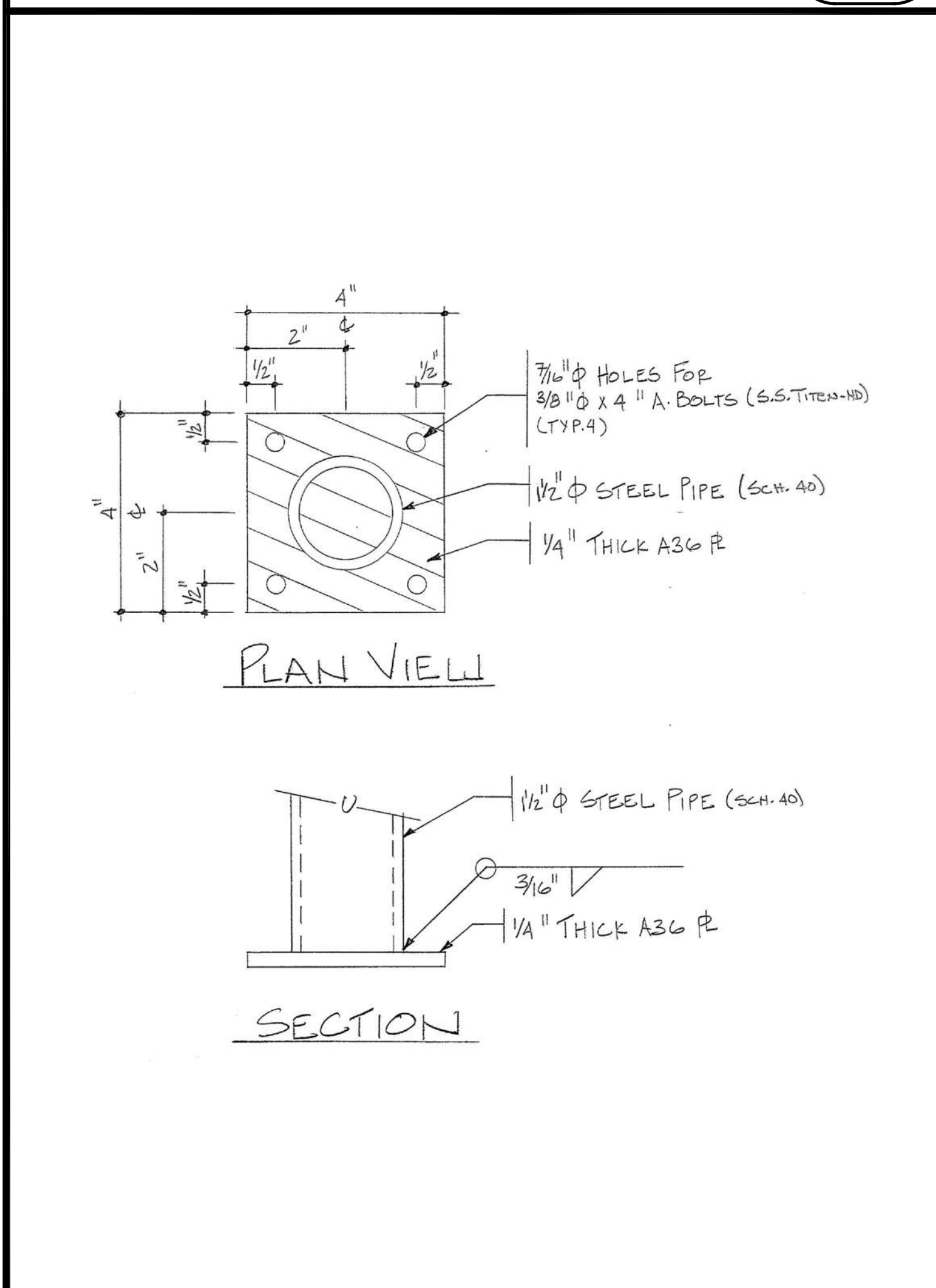
**GUARDRAIL ELEVATION VIEW**  
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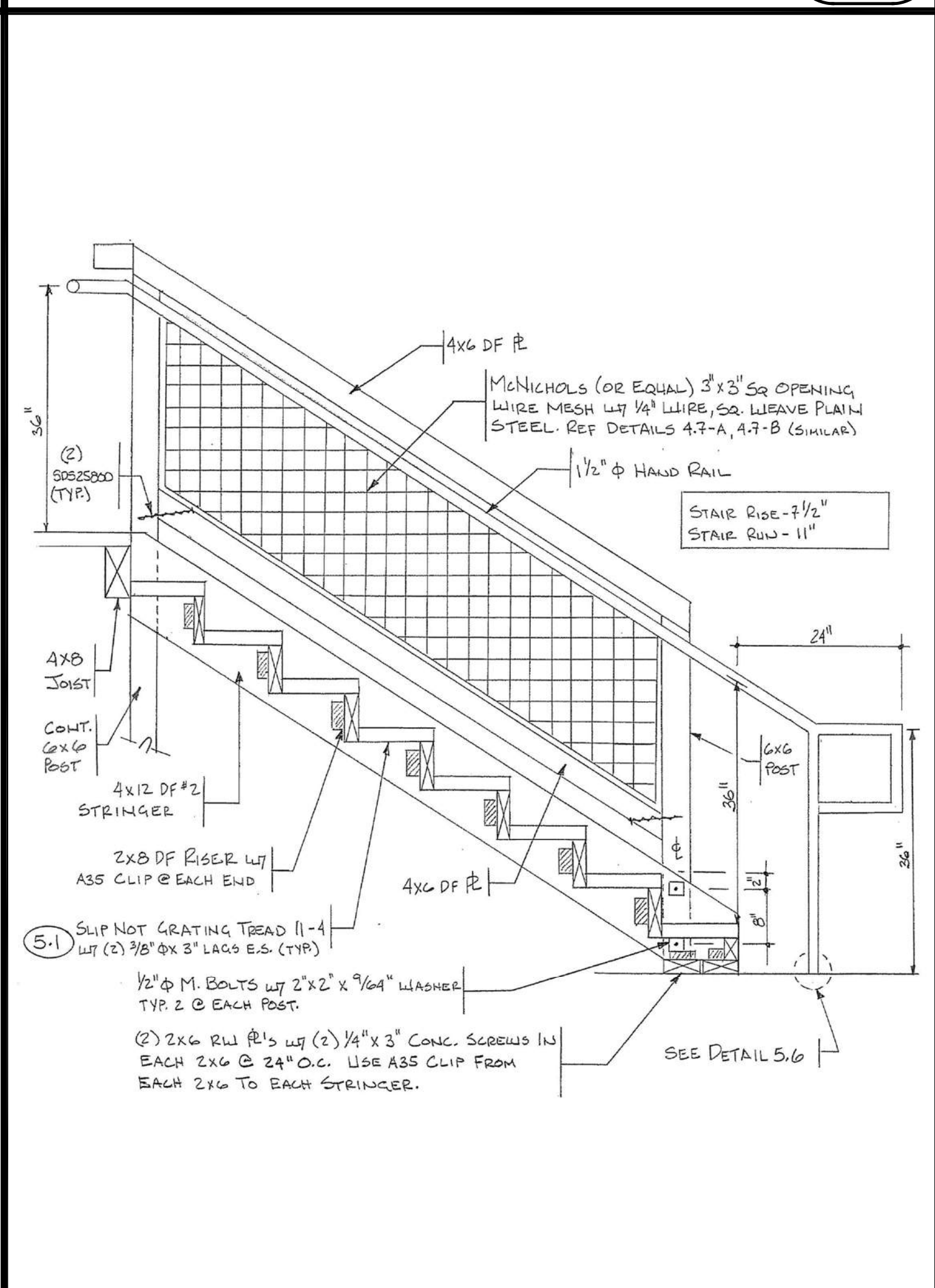
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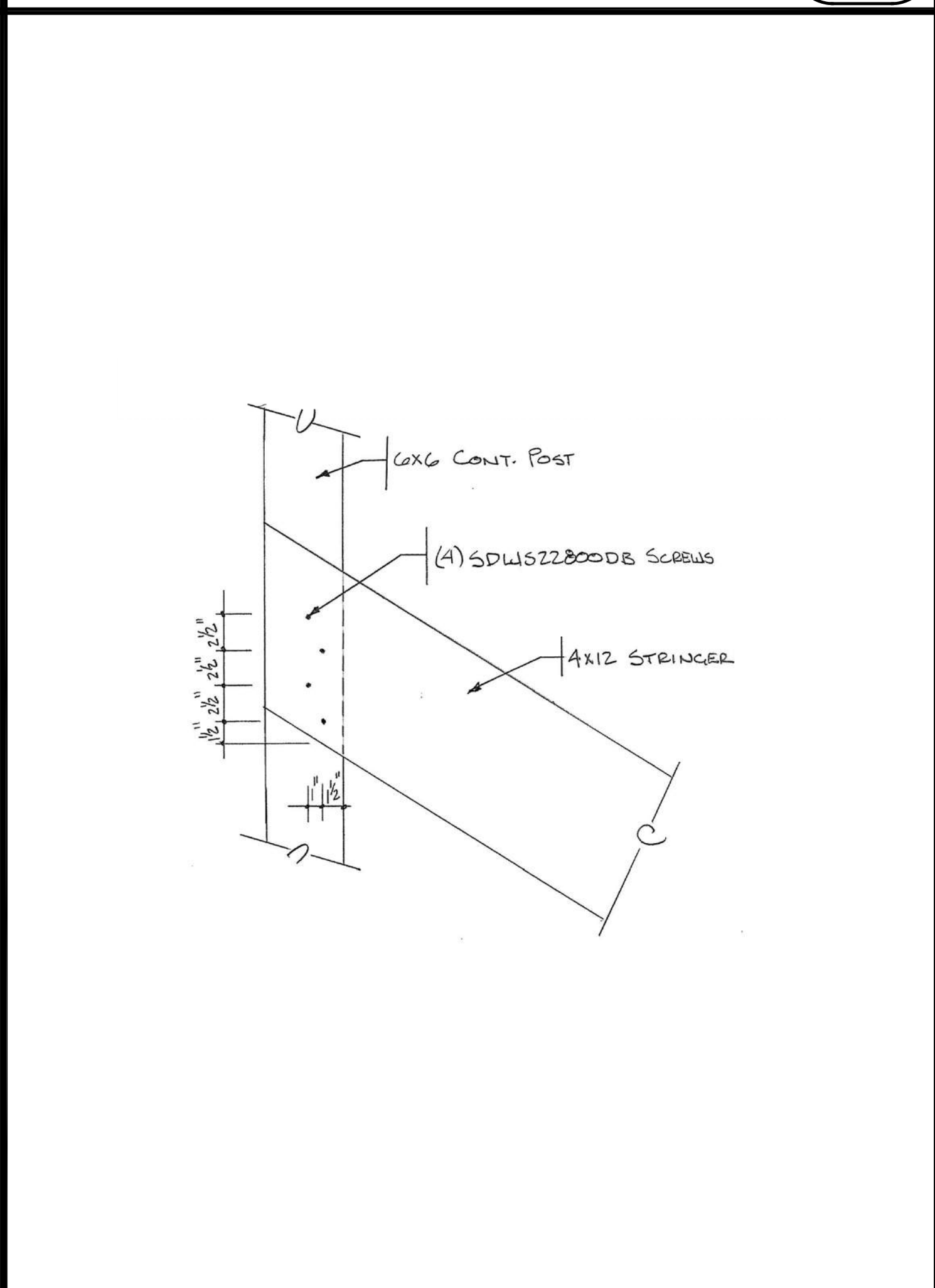
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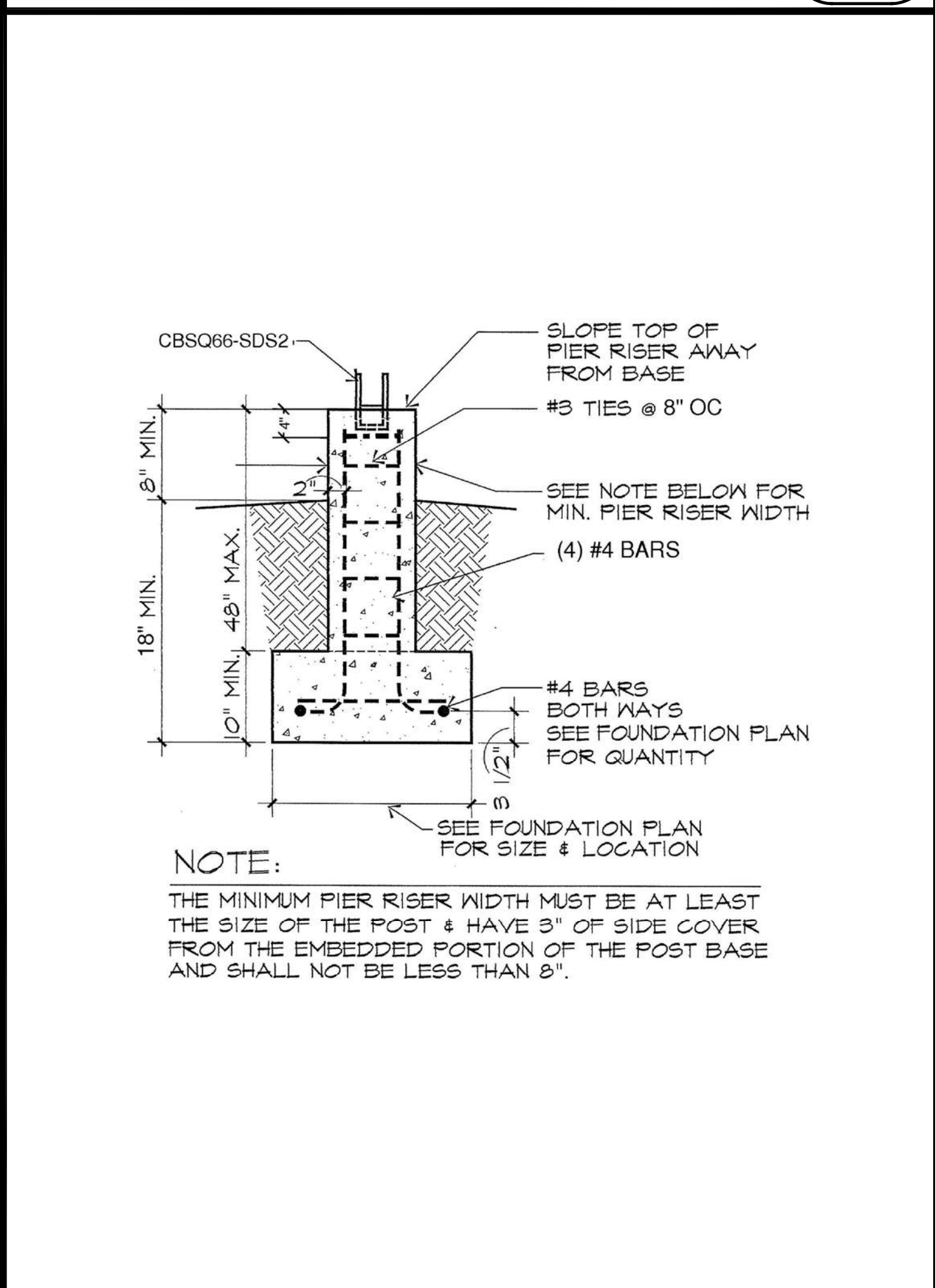
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**STAIR SECTION & GUARDRAIL**  
SCALE: N.T.S.



**STRINGER TO POST**  
SCALE: N.T.S.



**PIER SECTION**  
SCALE: N.T.S.

DESIGN & DRAFTING

P.O. Box 9615  
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96162

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REVISIONS:

NO.	DESCRIPTION

REGISTERED PROFESSIONAL ENGINEER  
RICHARD T. FITZGERALD  
No. C 45666  
Exp. 12-31-18  
CIVIL  
STATE OF CALIFORNIA

05/30/2017

ENGINEERS

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PROJECT

**GLENSHIRE / DEVONSHIRE  
RESIDENTS ASSOCIATION  
CLUBHOUSE NORTH DECK REBUILD**

15726 GLENSHIRE DRIVE  
GLENSHIRE UNIT NO. 2 BLOCK 3 PAGE 41  
TRUCKEE, CA, NEVADA COUNTY A.P.N.: 40-110-01

ISSUE DATE:  
05-30-17

DRAWN BY:  
R.T.F.

SCALE:  
NOT TO SCALE

SHEET NO.  
S-2

SHEET TITLE  
DETAILS

SHEET No.

**S-2**