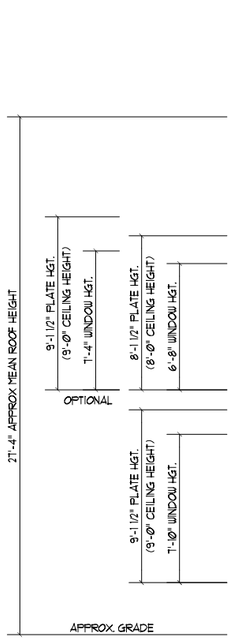
Crossings 64 -233 Timber Skip Drive, Spring Lake, 28390
Harnett County
Created: 4/8/2022

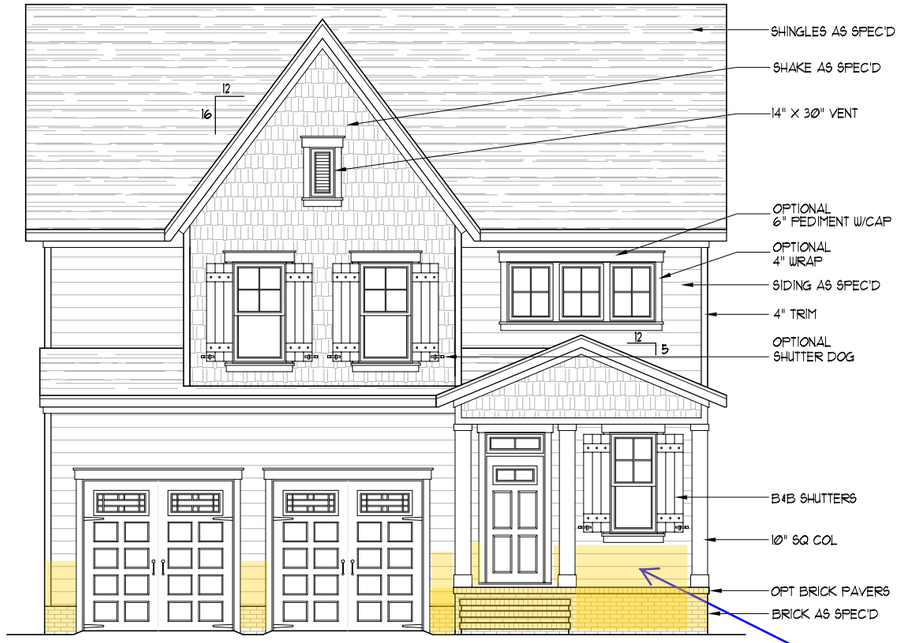
House Plan: Havenbrook
Elevation: B
Stone/Brick Option: #1
Foundation: Crawl
Foundation Finish: 3 Sides Parged
Garage Hand: Left
Garage: 2 Car Front
Garage Door:(2) 8x8
Front Porch: Concrete
Roof: Truss
Siding: Vinyl
Ceiling Height 1st Floor: 9'
Ceiling Height 2nd Floor: 9'
Door Frame Height 1st Floor: 83"
Door Frame Height 2nd Floor: 83"
Windows 1st Floor: 6/0 Front, 5/0 rear/sides
Windows 2nd Floor: 5/0

OPTIONS
Covered Porch
Tray Ceiling in Master Bedroom
Tray Ceiling in Dining Room

Total Heated Sq. Ft.: 2166
Total Unheated Sq. Ft.: 809
Total SQ FT: 2975

Bedrooms: 3 + Rec Room
Full Bathrooms: 2
Half Bathrooms: 1



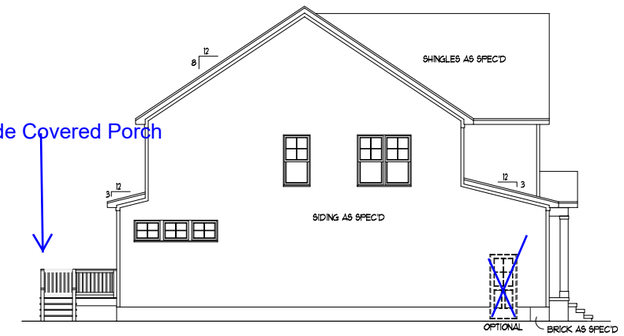


Brick/Stone Location
See MSS

FRONT ELEVATION "B"
SCALE: ----------1/8" = 1'-0"
HARDI FRONT

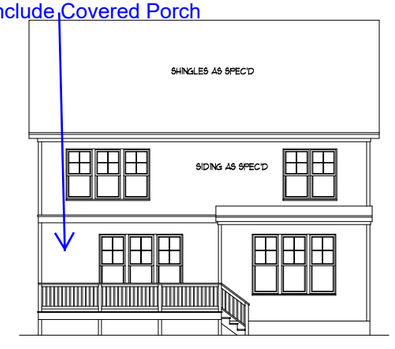
THIS PLAN CONFORMS TO THE 2018 EDITION OF THE I.R.C. / NORTH CAROLINA RESIDENTIAL CODE.

Include Covered Porch



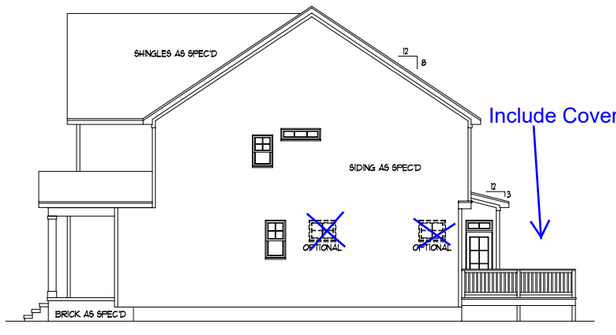
LEFT SIDE ELEVATION
SCALE: ----------1/16" = 1'-0"

Include Covered Porch



REAR ELEVATION
SCALE: ----------1/16" = 1'-0"

Include Covered Porch



RIGHT SIDE ELEVATION
SCALE: ----------1/16" = 1'-0"

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AMERICAN INSTITUTE OF BUILDING DESIGN

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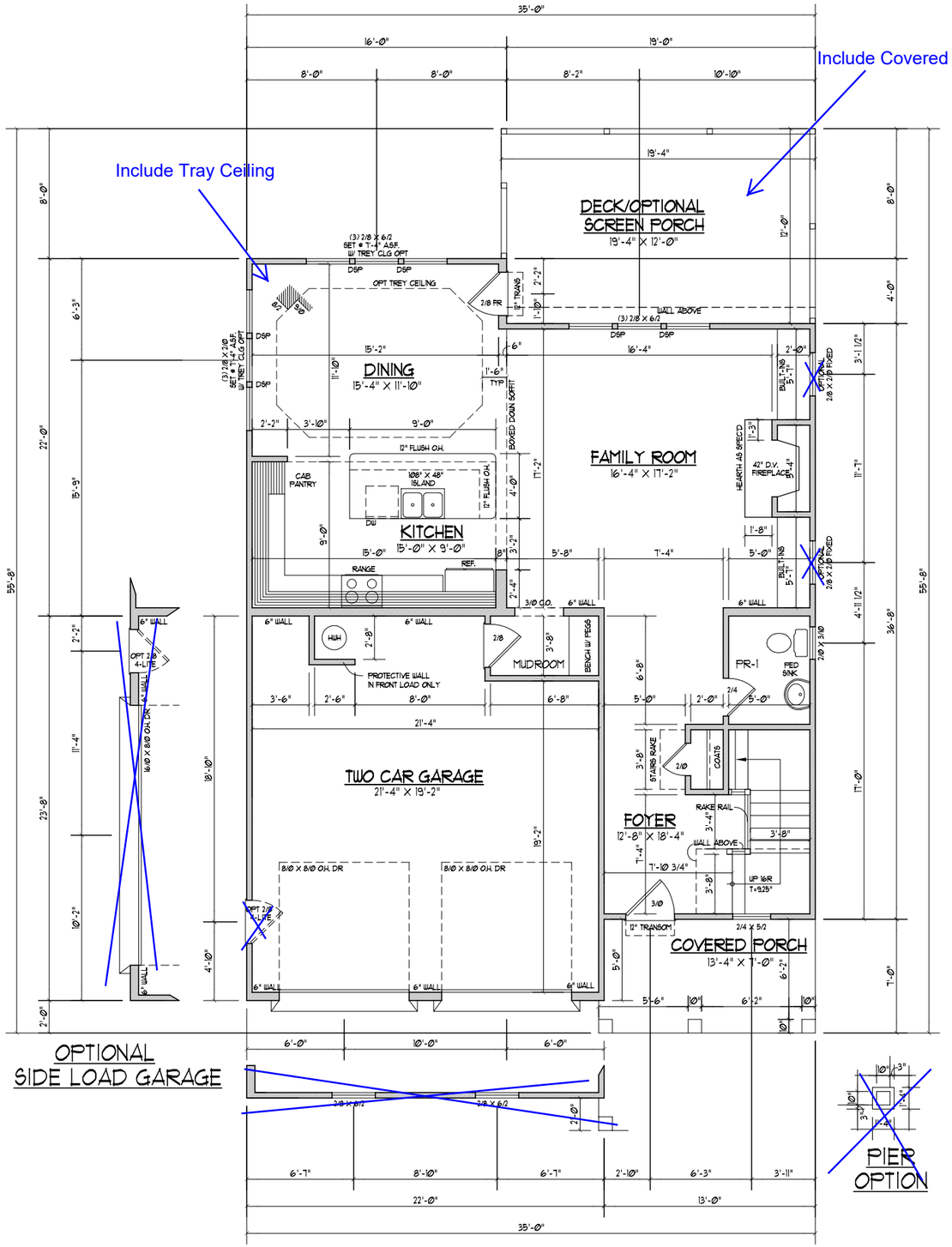
David D Grorud
(919) 601-1406
DynamicDesignGroup@gmail.com
www.DDGhomeplans.com

PROJECT FOR: CAPITOL CITY HOMES
LOCATION: MULTI
LOT: MULTI
SUBDIVISION: MULTI
COUNTY: MULTI

HAVENBROOKE
PLAN NAME
C-2190-35GL
PLAN I.D.
3-25-20
DATE

A-1B
SHEET



FIRST FLOOR PLAN

SCALE: ---------- 1/8" = 1'-Ø"

921 HEATED SQ. FT.
486 SQ. FT. GARAGE
92 SQ. FT. COVERED PORCH
231 SQ. FT. DECK/OPT. SCREEN PORCH
125 SQ. FT. OPTIONAL BBQ DECK

NOTES:

1) 9'-Ø" CLG. HGT. (9' - 1 1/2" PLT. HGT.) UNLESS OTHERWISE NOTED.
2) ALL WALLS FIGURED AT 4" WIDTHS
3) SET WINDOWS AT 7'-1Ø" A.S.F. UNLESS OTHERWISE NOTED.
4) DIMENSIONS ARE TO FRAMING UNLESS OTHERWISE NOTED.
5) CONSULT WINDOW MANUFACTURER'S SPECS. FOR EGRESS REQUIREMENTS, PRESSURE RATINGS, & ROUGH OPNG'S.

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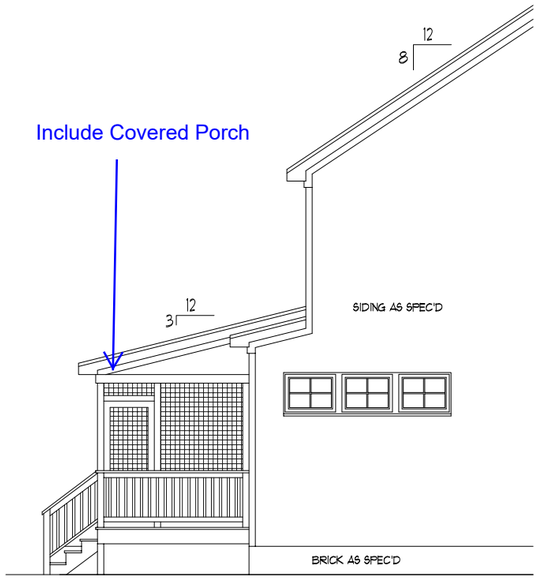
DATE: 3-25-20

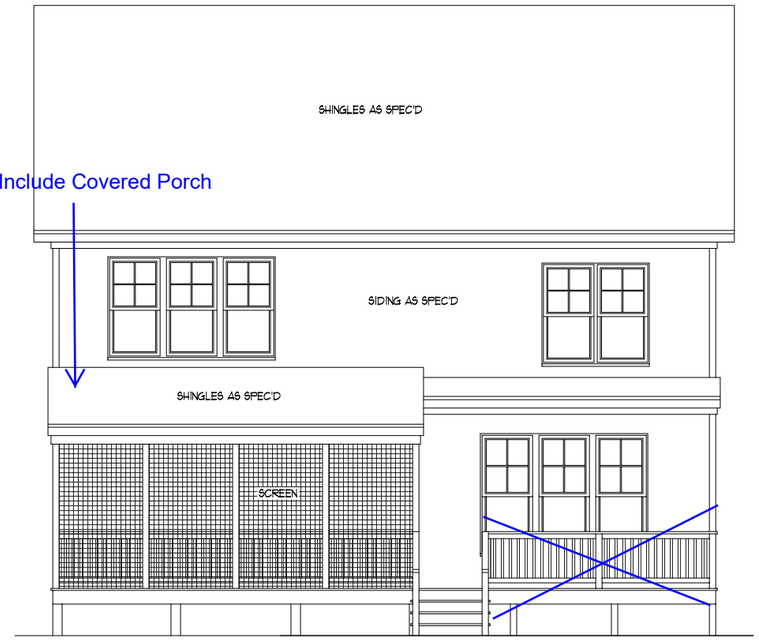
PLAN I.D.

A-2
SHEET

OPT SCREEN PORCH/BBQ DECK

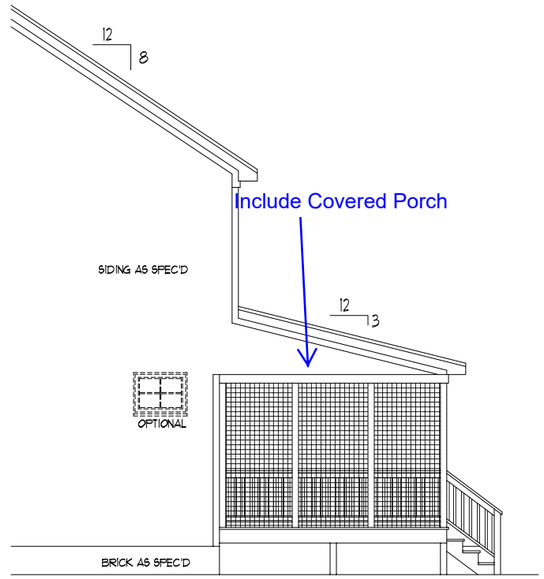


LEFT SIDE ELEVATION

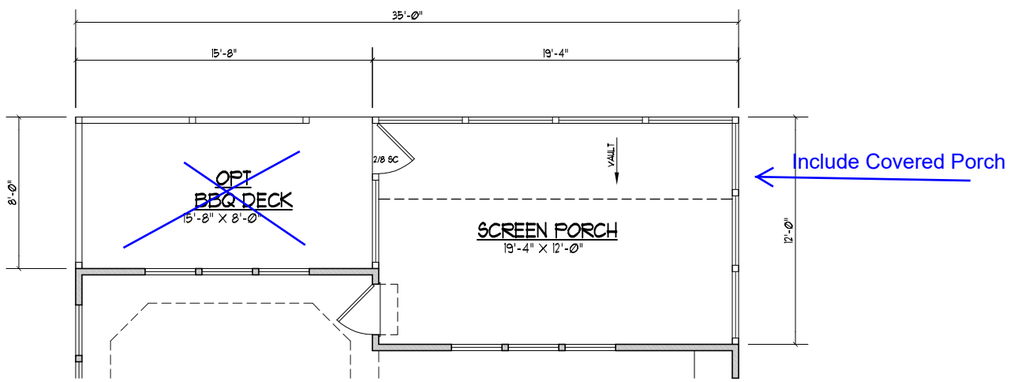


REAR ELEVATION

SCALE: ---------- 1/8" = 1'-Ø"



RIGHT SIDE ELEVATION



FLOOR PLAN

SCALE: ---- 1/8" = 1'-Ø"

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PLAN NAME C-2190-35GL

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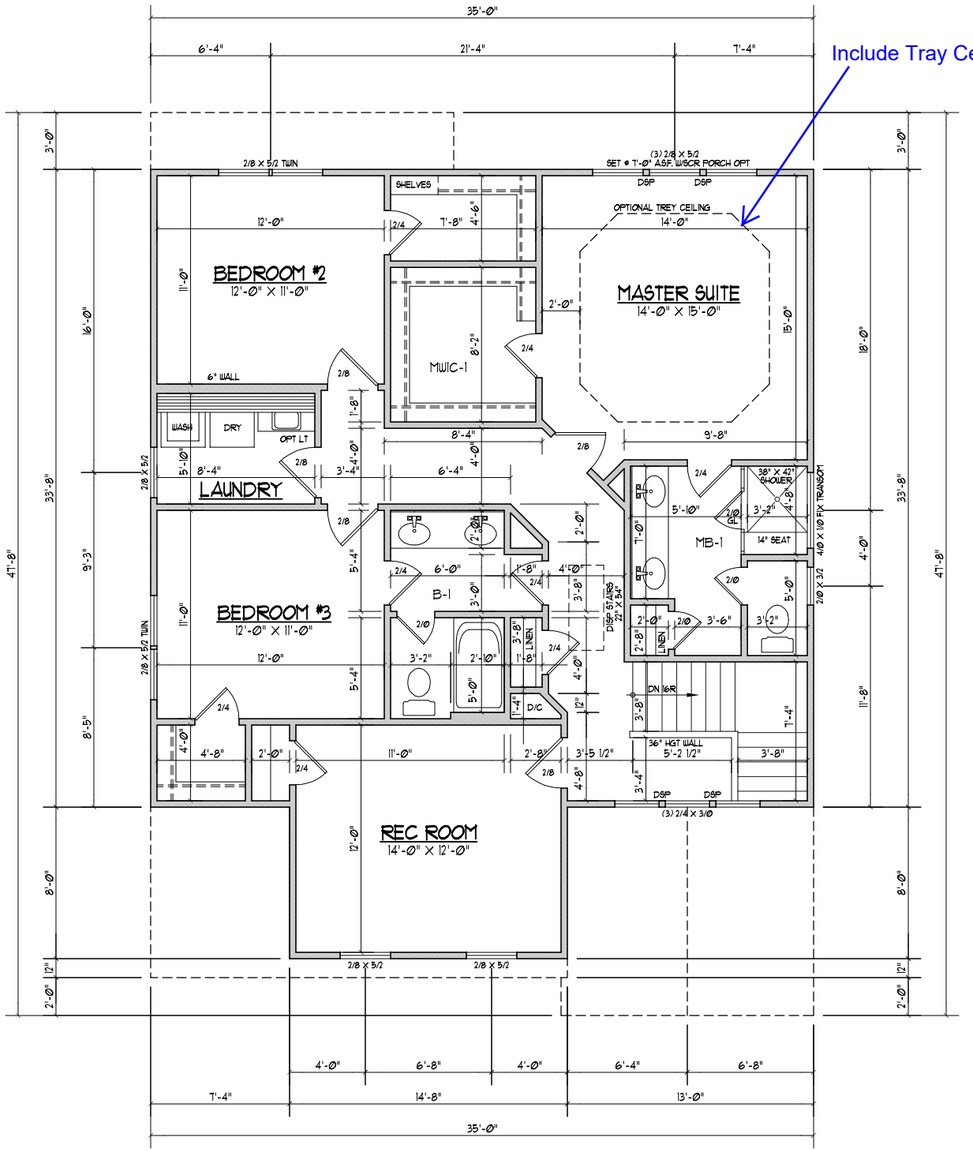
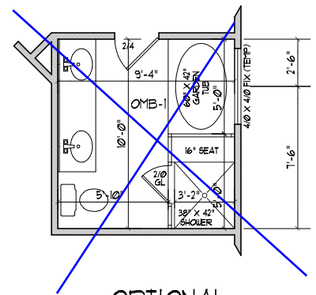
PLAN I.D.

A-2 SCR PORCH /BBQ DECK OPTIONS

SHEET





OPTIONAL
MASTER BATH W/TUB

ELEVATION "B"
SECOND FLOOR PLAN
WITH REC ROOM

SCALE ---------- 1/8"=1'-Ø"

1245 HEATED SQ. FT.

NOTES:

1) 8'-Ø" CLG. HGT. (8' - 1 1/2" PLT. HGT.) UNLESS OTHERWISE NOTED.
2) ALL WALLS FIGURED AT 4" WIDTHS UNLESS OTHERWISE NOTED.
3) SET WINDOWS AT 1'-4" A.S.F. UNLESS OTHERWISE NOTED.
4) DIMENSIONS ARE TO FRAMING UNLESS OTHERWISE NOTED.
5) CONSULT WINDOW MANUFACTURER'S SPECS. FOR EGRESS REQUIREMENTS, PRESSURE RATINGS, & ROUGH OPNG'S.

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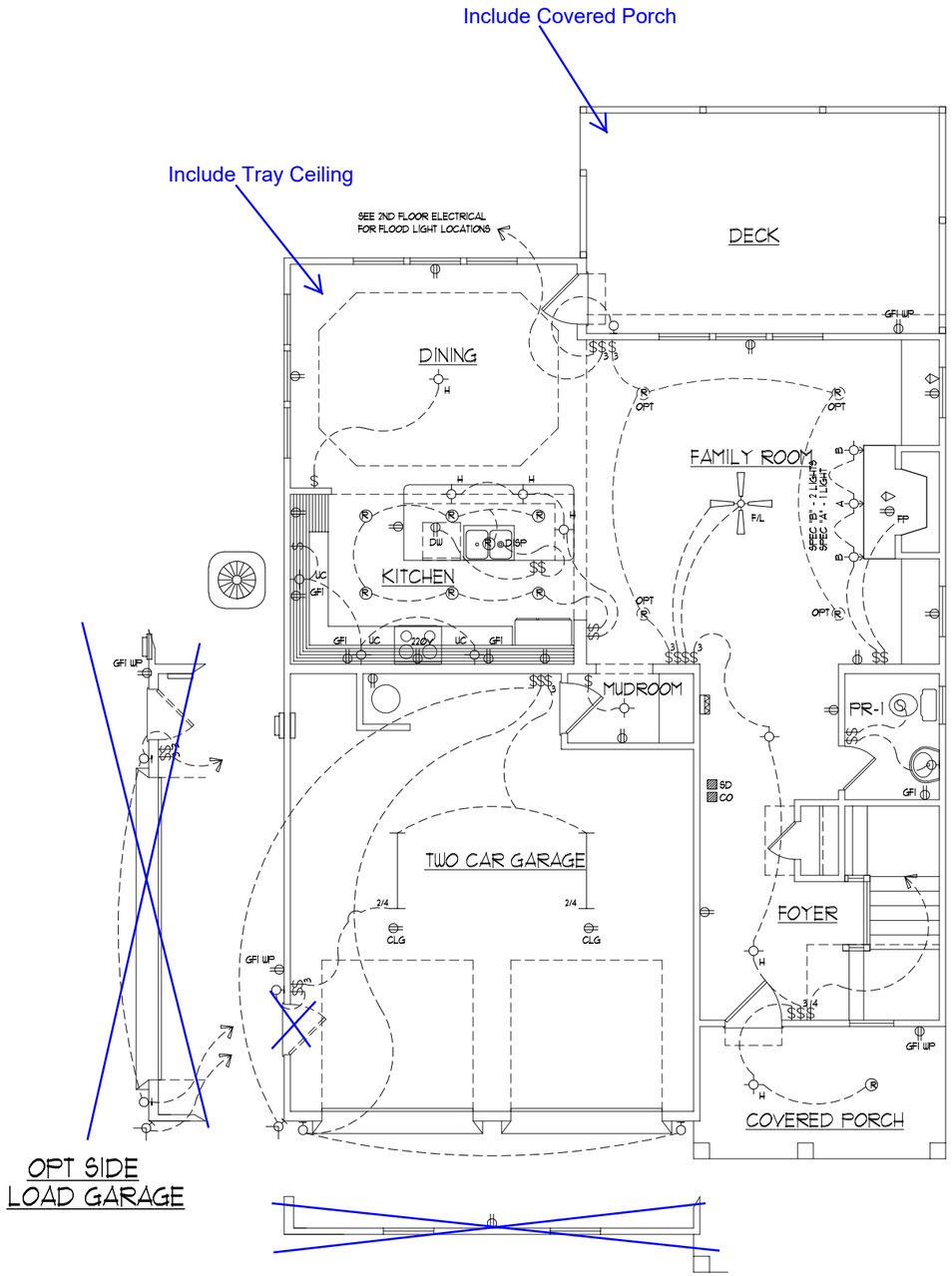
PLAN NAME C-2190-35GL

DATE 3-25-20

PLAN I.D.

A-3B

SHEET



OPTIONAL ELECTRICAL ITEMS

WITH ALL LIGHTS LISTED RESPECTIVE SWITCHES ARE ASSUMED

RECESSED LIGHTS FLUORESCENT LIGHT IN LIEU OF RECESSED CANS @ KITCHEN ONLY
CEILING FANS IN LIEU OF FLUSH MOUNT
FLOODLIGHTS
HANGING LIGHTS @ KITCHEN
UNDER CABINET LIGHTS
EXTERIOR LIGHTS AT GARAGE DOOR

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ELECTRICAL SYMBOLS

- CEILING MOUNTED LIGHT FIXTURE
- DIRECTIONAL EYEBALL LIGHT FIXTURE
- RECESSED LIGHT FIXTURE
- MINI RECESSED LIGHT FIXTURE
- WALL MOUNTED LIGHT FIXTURE
- FLUORESCENT LIGHT
  1/2 -- 1 BULB @ 2'
  2/2 -- 2 BULB @ 2'
  1/4 -- 1 BULB @ 4'
  2/4 -- 2 BULB @ 4'
  4/4 -- 4 BULB @ 4'
- HANGING LIGHT FIXTURE
- TELEPHONE JACK
- CABLE JACK
- KEYLESS LIGHT FIXTURE
- CEILING FAN WITH LIGHT FIXTURE
- UNDER CABINET LIGHT
- EXHAUST FAN
- RECESSED SHOWER LIGHT
- EXTERIOR FLOOD LIGHT
- SMOKE DETECTOR
- CARBON MONOXIDE DETECTOR
- DOOR CHIMES
- ELECTRICAL PANEL
- METERBOX
- A/C UNIT
- 110 OUTLET
- 220 OUTLET
- SINGLE SWITCH
- 3-WAY SWITCH
- 4-WAY SWITCH
- OUTDOOR OUTLET
- GFI

FIRST FLOOR ELECTRICAL LAYOUT

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(919) 601-1406
DynamicDesignGroup@gmail.com
www.DDGhomeplans.com

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E-1
SHEET

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David D Grorud
(919) 601-1406
DynamicDesignGroup@gmail.com
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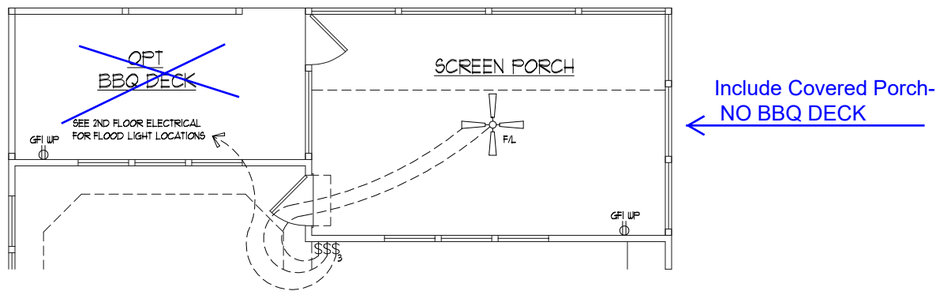
E-1
SCR PORCH /BBQ DECK OPTIONS
SHEET



Include Covered Porch- NO BBQ DECK

OPTIONAL
SCREEN PORCH/BBQ DECK
ELECTRICAL LAYOUT

ELECTRICAL SYMBOLS

PROFESSIONAL MEMBER
AID AMERICAN INSTITUTE OF BUILDING DESIGN

- CEILING MOUNTED LIGHT FIXTURE
- DIRECTIONAL EYEBALL LIGHT FIXTURE
- RECESSED LIGHT FIXTURE
- MINI RECESSED LIGHT FIXTURE
- WALL MOUNTED LIGHT FIXTURE
- FLUORESCENT LIGHT
  - 1/2 -- 1 BULB @ 2'
  - 2/2 -- 2 BULB @ 2'
  - 1/4 -- 1 BULB @ 4'
  - 2/4 -- 2 BULB @ 4'
  - 4/4 -- 4 BULB @ 4'
- HANGING LIGHT FIXTURE
- TELEPHONE JACK
- CABLE JACK
- KEYLESS LIGHT FIXTURE
- CEILING FAN WITH LIGHT FIXTURE
- UNDER CABINET LIGHT
- EXHAUST FAN
- RECESSED SHOWER LIGHT
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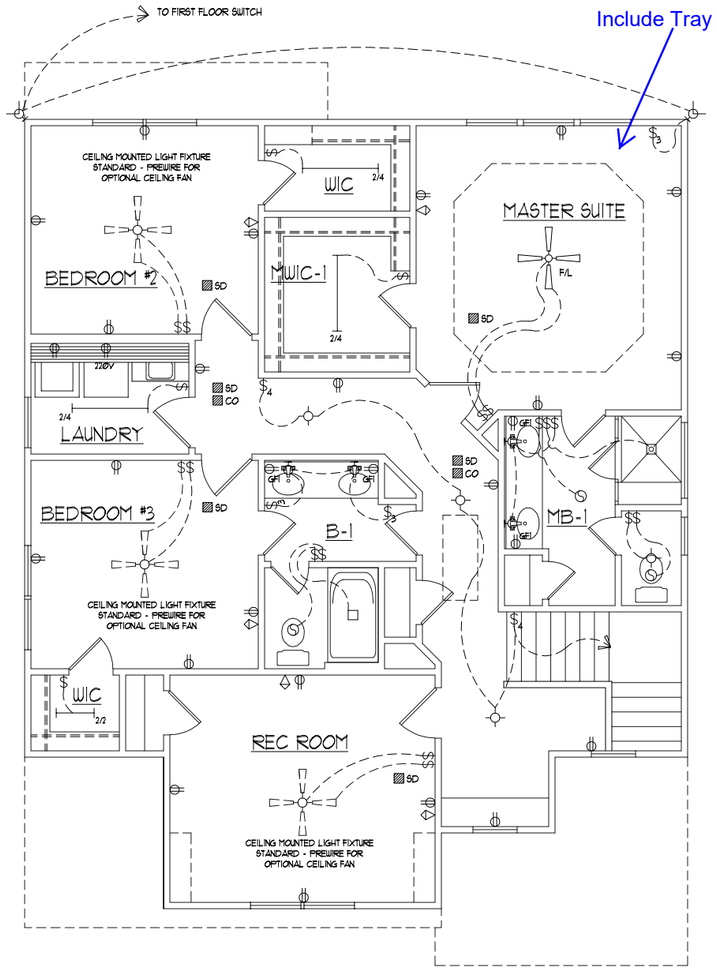
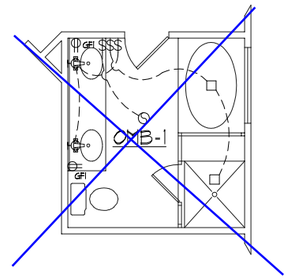
- 110 OUTLET
- 220 OUTLET
- SINGLE SWITCH
- 3-WAY SWITCH
- 4-WAY SWITCH
- OUTDOOR OUTLET
- GFI





OPTIONAL MASTER BATH

ELEVATION "A"
SECOND FLOOR
WITH REC ROOM
ELECTRICAL LAYOUT

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DynamicDesignGroup@gmail.com
www.DDGhomeplans.com

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HAVENBROOKE
PLAN NAME
C-2190-35GL
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3-25-20
DATE

E-2A
SHEET

FOUNDATION STRUCTURAL NOTES

NC (2018 NCRC): Wind: 115-120 mph - CRAWL

1. (3)2x10 SYP#2 OR SPF#2 GIRDER, TYPICAL UNO.

2. CONCRETE BLOCK PIER SIZE SHALL BE:

SIZE	HOLLOW	SOLID
8x16	UP TO 32"	UP TO 5'-0"
12x16	UP TO 48"	UP TO 9'-0"
16x16	UP TO 64"	UP TO 12'-0"
24x24	UP TO 96"	

- WITH 30" x 30" x 10" CONCRETE FOOTING, UNO.

3. WALL FOOTING AS FOLLOWS
   - DEPTH: 8" - UP TO 2 STORY
     10" - 3 STORY
   - WIDTH:
   - SIDING: 16" - UP TO 2 STORY
     20" - 3 STORY
   - BRICK: 16" - 1 STORY
     20" - 2 STORY
     24" - 3 STORY

- FOR FOUNDATION WALL HEIGHT AND BACKFILL REQUIREMENTS, REFER TO CODE TABLE R404.1.1 (1 THRU 4) NOTE: ASSUMED SOIL BEARING CAPACITY = 2000 PSF. CONTRACTOR MUST VERIFY SITE CONDITIONS AND CONTACT SOILS ENGINEER IF MARGINAL OR UNSTABLE SOILS ARE ENCOUNTERED.

4. (4) 2x10 SPF #2 OR SYP #2 GIRDER

5. (2) 1.75x9.25 LVL OR LSL GIRDER

6. (3) 1.75x9.25 LVL OR LSL GIRDER

7. "■" DESIGNATES A SIGNIFICANT POINT LOAD TO HAVE SOLID BLOCKING TO PIER. SOLID BLOCK ALL BEAM BEARING POINTS NOTED TO HAVE THREE OR MORE STUDS TO FND, TYPICAL.

8. ABBREVIATIONS:
   - "SJ" = SINGLE JOIST
   - "DJ" = DOUBLE JOIST
   - "TJ" = TRIPLE JOIST

9. ADJUST SUBFLOOR THICKNESS OR JOIST SPACING AS REQ'D FOR FLOOR FINISH MATERIALS.

WALL VENTED CRAWL SPACE

REQUIRED

911 SQ. FT. / 150 = 6.47 SQ. FT. OF VENTILATION

CLOSED CRAWL SPACE VENTILATION METHODS

(SEE REFERENCED SECTIONS IN CODE BOOK FOR DETAILED INSTRUCTIONS)

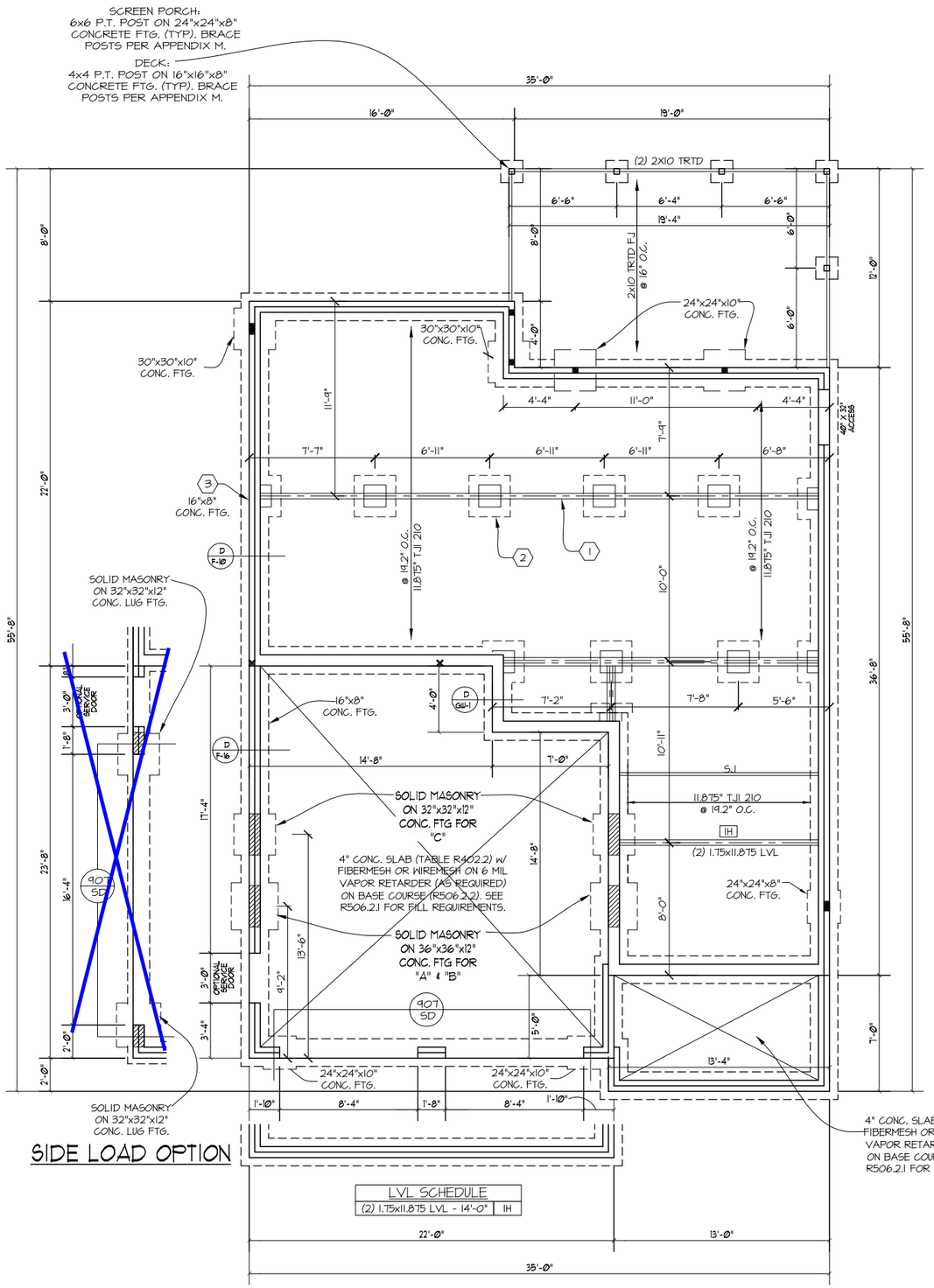
(R408.3.1) DEHUMIDIFIER
A PERMANENTLY INSTALLED DEHUMIDIFIER SHALL BE PROVIDED IN THE CRAWL SPACE WITH THE MINIMUM RATED CAPACITY OF 15 PINTS PER DAY.

(R408.3.2) SUPPLY AIR
911 SQ. FT. / 30 = 34 CFM

(R408.3.3) HOUSE AIR
911 SQ. FT. / 50 = 20 CFM

(R408.3.4) EXHAUST FAN
911 SQ. FT. / 50 = 20 CFM

(R408.3.5) CONDITIONED SPACE
THE CRAWL SPACE SHALL BE DESIGNED AS A HEATED AND COOLED, CONDITIONED SPACE WITH WALL INSULATION INSTALLED AS PER THE REQUIREMENTS OF SECTION R408.3.8.



SIDE LOAD OPTION

LVL SCHEDULE	
(2) 1.75x11.875 LVL - 14'-0"	IH

CRAWL SPACE FOUNDATION PLAN

SCALE ----------1/8"=1'-0"

NOTES:
1) SEE SHEET D-1 FOR DETAILS.
2) DIMENSIONS ARE TO EXTERIOR OF FOUNDATION.

NORTH CAROLINA PROFESSIONAL SEAL 16073 ENGINEER JAMES H. HERMAN 4.12.22

STRUCTURAL DESIGN BY:
SOUTHERN ENGINEERS, P.A.
3716 BENSON DR., RALEIGH, NC 27609
LICENSE: C-1287, PHONE: 919-878-1617
PROJECT # 16-1591-GL

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- Any deviations or discrepancies on plans are to be brought to the immediate attention of Southern Engineers. Failure to do so will void Southern Engineer's liability
- Seal is valid for a project permitted within one year from date of seal.
- Use of these plans constitutes approval of terms & conditions as defined in the customer agreement.

REFER TO "SD" & "BD" SHEET(S) FOR STANDARD DETAILS, BRACING DETAILS AND STRUCTURAL NOTES.

WOOD "I" JOISTS

(SHALL BE ONE OF THE FOLLOWING):
- TJI 210 BY I-LEVEL
- LPI 20 PLUS BY LP
- BCI 5000s 1.8 BY BC

- ALL WOOD "I"JOISTS SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

- INSTALL SQUASH BLOCKS, WEB STIFFENERS, ETC. AS REQUIRED BY AND ACCORDING TO THE I-JOIST MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS.

- HANGERS FOR I-JOISTS ARE THE RESPONSIBILITY OF THE I-JOIST SUPPLIER.

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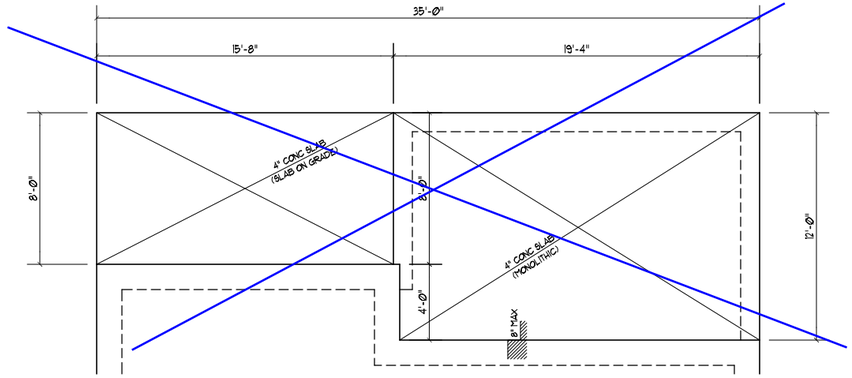
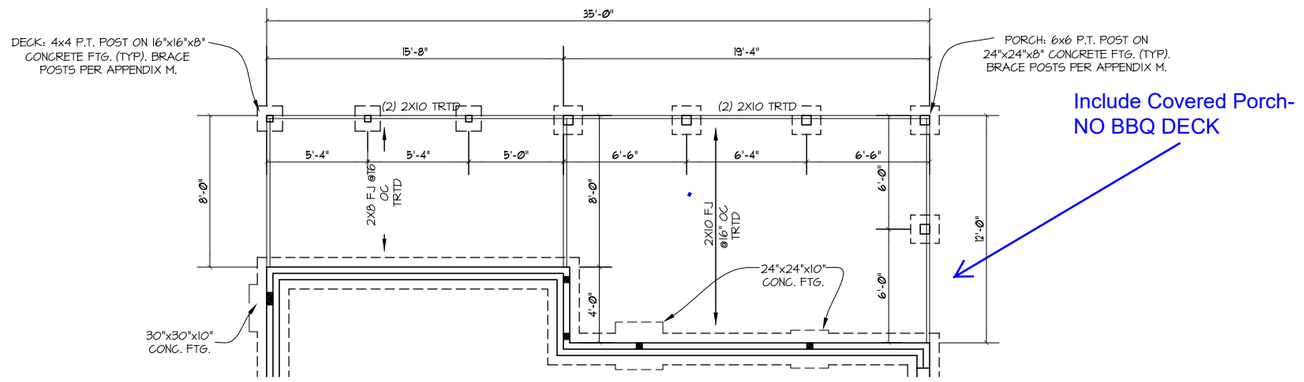
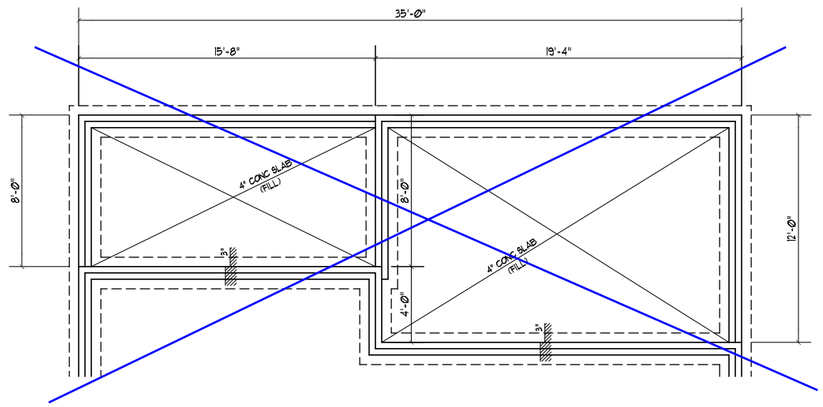
S-1
SHEET



SCREEN PORCH/BBQ DECK
WITH MONOLITHIC SLAB FOUNDATION



SCREEN PORCH/BBQ DECK
WITH CRAWLSPACE FOUNDATION



SCREEN PORCH/BBQ DECK
WITH STEM WALL/SLAB FOUNDATION

SCREEN PORCH/BBQ DECK
FOUNDATION OPTIONS

SCALE: ---------- 1/8"=1'-0"

NOTES:
1) SEE SHEET D-1 FOR DETAILS.
2) DIMENSIONS ARE TO EXTERIOR OF FOUNDATION.

PROFESSIONAL MEMBER
AIBD AMERICAN INSTITUTE OF BUILDING DESIGN

NORTH CAROLINA PROFESSIONAL SEAL 16073 ENGINEER JAMES H. HERMAN 4.2.20

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S-1
SCR PORCH /BBQ DECK OPTIONS
SHEET

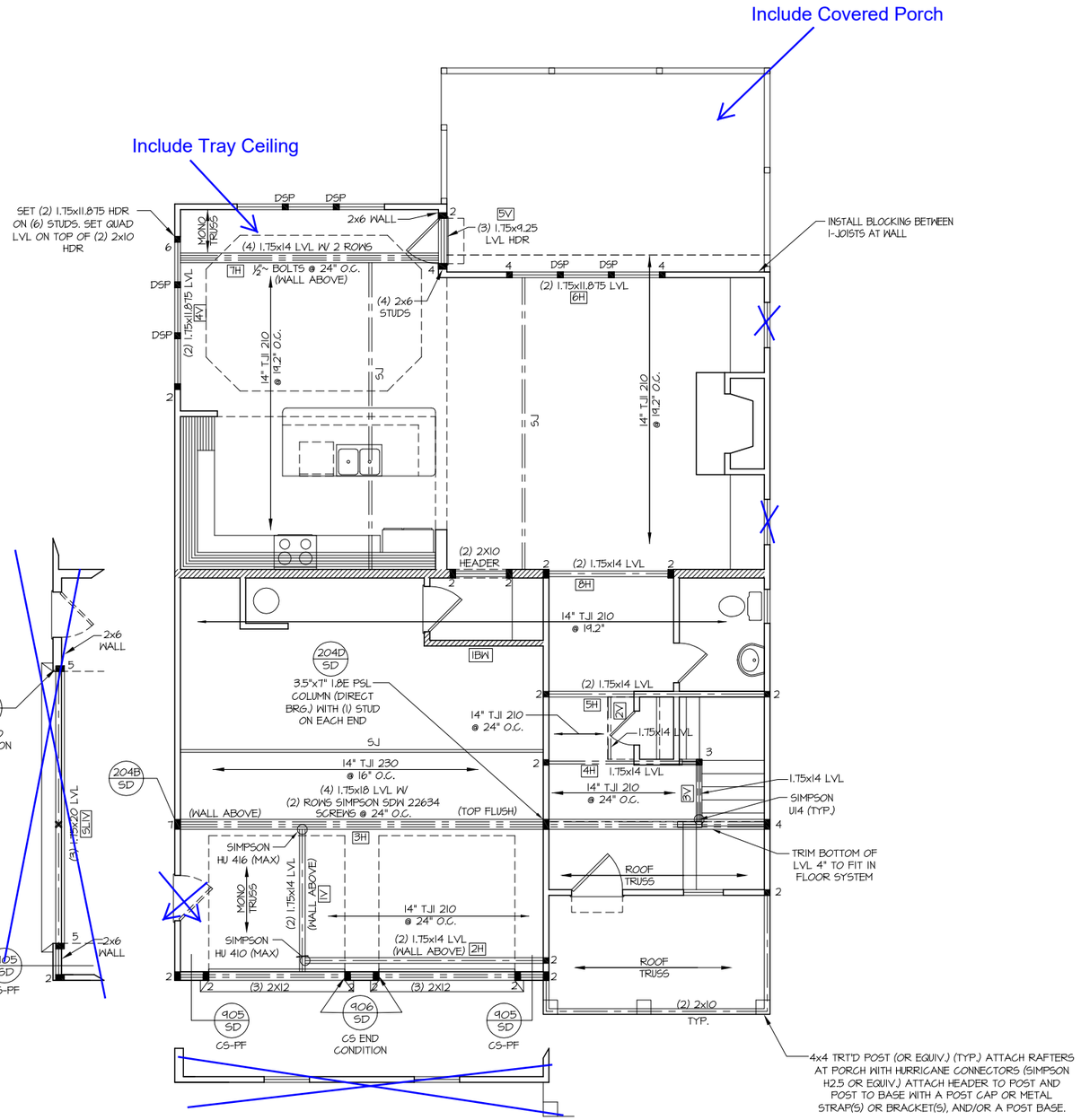
HEADER/BEAM & COLUMN NOTES

1. ALL EXTERIOR AND LOAD BEARING HEADERS SHALL BE MIN. (2)2x6 (4" WALL) OR (3)2x6 (6" WALL) WITH (1) SUPPORT STUD, UNLESS NOTED OTHERWISE.

2. THE NUMBER SHOWN AT BEAM AND HEADER SUPPORTS INDICATES THE NUMBER OF SUPPORT STUDS REQUIRED IN STUD POCKET OR COLUMN. THE NUMBER OF KING STUDS AT EACH END OF HEADERS IN EXTERIOR WALLS SHALL BE ACCORDING TO ITEM "a" IN TABLE R602.3(5) OR AS BELOW:
   - UP TO 4' SPAN: (1) KING STUD
   - OVER 4' UP TO 8' SPAN: (2) KING STUDS
   - OVER 8' UP TO 11' SPAN: (3) KING STUDS
   - OVER 11' SPAN: (4) KING STUDS

WHOLE HOUSE BRACING SUMMARY

TOTAL REQUIRED BRACING: 89
TOTAL PROVIDED BRACING: 147
(IN FEET)



PROFESSIONAL MEMBER
AIBD AMERICAN INSTITUTE OF BUILDING DESIGN

NORTH CAROLINA PROFESSIONAL SEAL 16073 ENGINEER JAMES H. HERMAN 4.12.20

STRUCTURAL DESIGN BY:
SOUTHERN ENGINEERS, P.A.
3716 BENSON DR., RALEIGH, NC 27609
LICENSE: C-1287, PHONE: 919-878-1617

PROJECT # 16-1591-GL

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REFER TO "SD" & "BD" SHEET(S) FOR STANDARD DETAILS, BRACING DETAILS AND STRUCTURAL NOTES.

WOOD "I" JOISTS

(SHALL BE ONE OF THE FOLLOWING):

- TJI 210 BY I-LEVEL
- LPI 20 PLUS BY LP
- BCI 5000s 1.8 BY BC

- ALL WOOD "I"JOISTS SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
- INSTALL SQUASH BLOCKS, WEB STIFFENERS, ETC. AS REQUIRED BY AND ACCORDING TO THE I-JOIST MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS.
- HANGERS FOR I-JOISTS ARE THE RESPONSIBILITY OF THE I-JOIST SUPPLIER.

LVL SCHEDULE	
2H	(2) 1.75x14 LVL - 16'
3H	(4) 1.75x18 LVL - 36'
4H	(1) 1.75x14 LVL - 10'
5H	(2) 1.75x14 LVL - 14'
6H	(2) 1.75x11.875 LVL - 10'
7H	(4) 1.75x14 LVL - 16'
8H	(2) 1.75x14 LVL - 8'
9H	(2) 1.75x14 LVL - 8'
1V	(2) 1.75x14 LVL - 10'
2V	(1) 1.75x14 LVL - 4'
3V	(1) 1.75x14 LVL - 4'
4V	(2) 1.75x11.875 LVL - 10'
5V	(3) 1.75x9.25 LVL - 6'

REFER TO "SD" & "BD" SHEET(S) FOR STANDARD DETAILS, BRACING DETAILS AND STRUCTURAL NOTES.

LVL SCHEDULE	
SIDE LOAD OPTION	
(3) 1.75x20 LVL - 20'-0"	5LIV

ELEVATION "B"
FIRST FLOOR CEILING / STRUCTURAL PLAN

SCALE: ---------- 1/8" = 1'-0"

NOTES:
1) SHADED WALLS DENOTE LOAD BEARING WALLS.
2) ■ DENOTES SOLID STUDS.

DYNAMIC DESIGN GROUP, INC
David D Gorud
(919) 601-1406
DynamicDesignGroup@gmail.com
www.DDGhomeplans.com

PROJECT FOR: CAPITOL CITY HOMES
LOCATION: MULTI
LOT: MULTI
SUBDIVISION: MULTI
COUNTY: MULTI

HAVENBROOKE
PLAN NAME
C-2190-35GL
PLAN I.D.
3-25-20
DATE

S-2B
SHEET

NORTH CAROLINA PROFESSIONAL SEAL 16073 4/21/20 ENGINEER JAMES H. HERMAN

PROFESSIONAL MEMBER AID AMERICAN INSTITUTE OF BUILDING DESIGN

STRUCTURAL DESIGN BY:
SOUTHERN ENGINEERS, P.A.
3716 BENSON DR., RALEIGH, NC 27609
LICENSE: C-1287, PHONE: 919-878-1617

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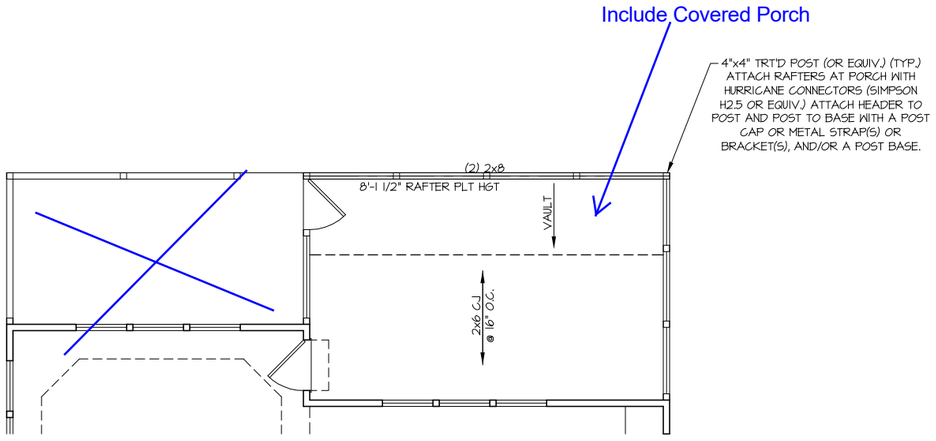

SCREEN PORCH CEILING / STRUCTURAL PLAN

SCALE: ---------- 1/8" = 1'-0"

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(919) 601-1406
DynamicDesignGroup@gmail.com
www.DDGhomeplans.com

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COUNTY: MULTI

HAVENBROOKE

PLAN NAME C-2190-35GL

3-25-20 DATE

PLAN I.D.

S-2 SCR PORCH OPTION

SHEET

HEADER/BEAM & COLUMN NOTES

1. ALL EXTERIOR AND LOAD BEARING HEADERS SHALL BE MIN. (2)2x6 (4" WALL) OR (3)2x6 (6" WALL) WITH (1) SUPPORT STUD, UNLESS NOTED OTHERWISE.

2. THE NUMBER SHOWN AT BEAM AND HEADER SUPPORTS INDICATES THE NUMBER OF SUPPORT STUDS REQUIRED IN STUD POCKET OR COLUMN. THE NUMBER OF KING STUDS AT EACH END OF HEADERS IN EXTERIOR WALLS SHALL BE ACCORDING TO ITEM "d" IN TABLE R602.3(5) OR AS BELOW:
   - UP TO 4' SPAN: (1) KING STUD
   - OVER 4' UP TO 8' SPAN: (2) KING STUDS
   - OVER 8' UP TO 11' SPAN: (3) KING STUDS
   - OVER 11' SPAN: (4) KING STUDS

PROFESSIONAL MEMBER
AIBD
AMERICAN INSTITUTE OF BUILDING DESIGN

STRUCTURAL DESIGN BY:
SOUTHERN ENGINEERS, P.A.
3716 BENSON DR., RALEIGH, NC 27609
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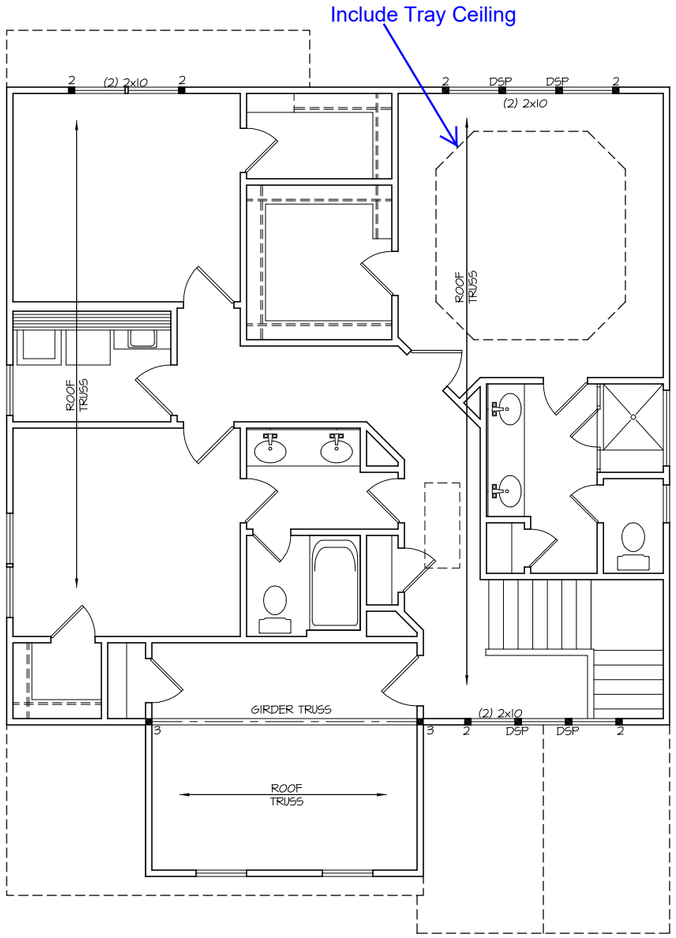

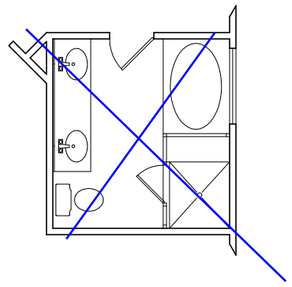

ELEVATION "B"
WITH REC ROOM
SECOND FLOOR CEILING / STRUCTURAL PLAN

SCALE: ---------- 1/8" = 1'-0"

NOTES:
1) SHADED WALLS DENOTE LOAD BEARING WALLS.
2) ■ DENOTES SOLID STUDS.

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SUBDIVISION: MULTI
COUNTY: MULTI

HAVENBROOKE

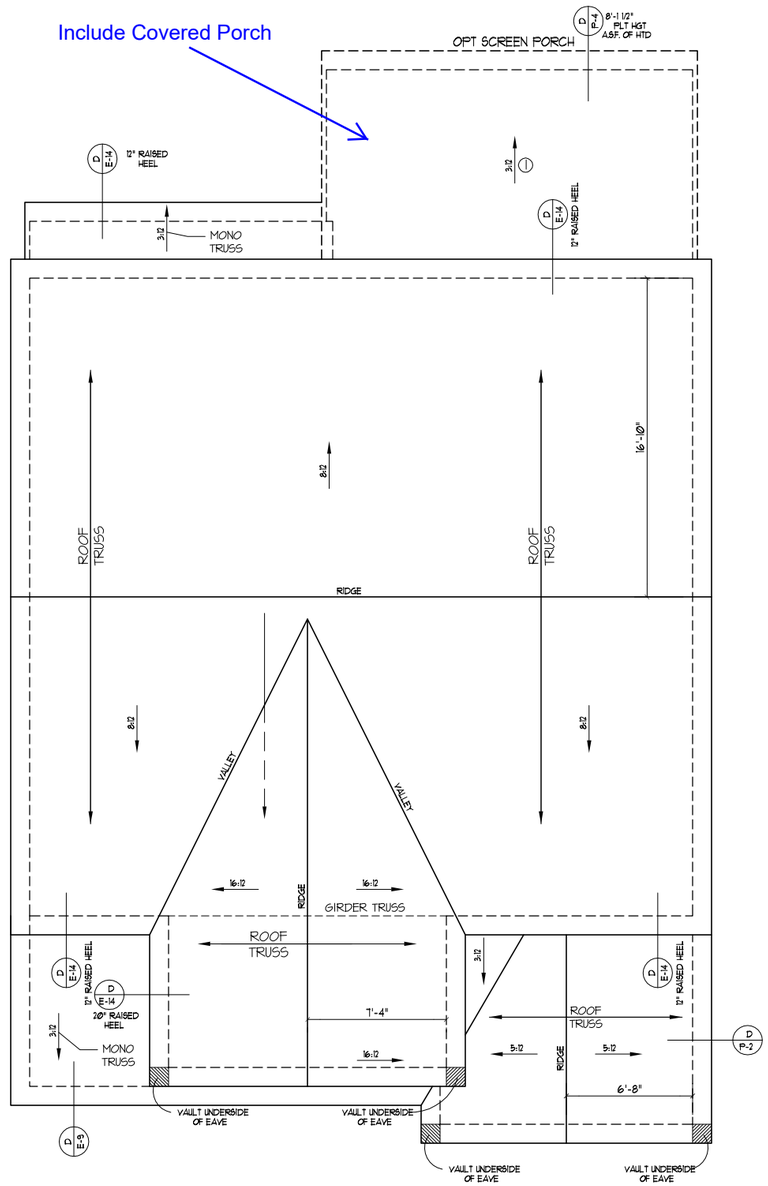
PLAN NAME: C-2190-35GL

DATE: 3-25-20

PLAN I.D.

S-3B

SHEET



NORTH CAROLINA PROFESSIONAL SEAL 16073 4.21.20 ENGINEER JAMES H. HERMAN

PROFESSIONAL MEMBER AIBD AMERICAN INSTITUTE OF BUILDING DESIGN

STRUCTURAL DESIGN BY:
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REFER TO "SD" & "BD" SHEET(S) FOR STANDARD DETAILS, BRACING DETAILS AND STRUCTURAL NOTES.

TRUSS SYSTEM REQUIREMENTS

NC (2018 NCRC): Wind: 115-120 mph

1. TRUSS SYSTEM LAYOUTS (PLACEMENT PLANS) SHALL BE DESIGNED IN ACCORDANCE WITH SEALED STRUCTURAL PLANS. ANY NEED TO CHANGE TRUSSES SHALL BE COORDINATED WITH SOUTHERN ENGINEERS.
2. TRUSS SCHEMATICS (PROFILES) SHALL BE PREPARED AND SEALED BY TRUSS MANUFACTURER.
3. ALL TRUSSES SHALL BE DESIGNED FOR BEARING ON SPF #2 OR #3 PLATES OR LEDGERS (UNO).
4. ALL REQUIRED ANCHORS FOR TRUSSES DUE TO UPLIFT OR BEARING SHALL MEET THE REQUIREMENTS AS SPECIFIED ON THE TRUSS SCHEMATICS.

ATTIC VENTILATION

REQUIRED
1180 SQ FT OF ATTIC / 300 = 5.93 SQ. FT. OF INLET & OUTLET

PROVIDED
(INLET)
SOFFIT .07 SQ. FT. PER x 64 LINEAR FT. OF VENT. = 4.48 SQ. FT. OF VENT. 46 % (TOTAL OF INLET)
(OUTLET)
RIDGE .11 SQ. FT. PER x 48 LINEAR FT. OF VENT. = 5.28 SQ. FT. OF VENT. 54 % (TOTAL OF OUTLET)
9.76 TOTAL SQ. FT. OF VENT.

ELEVATION "B"
ROOF FRAMING PLAN

SCALE ----------1/8"=1'-0"

NOTES:
1) SEE SHEET D-1 FOR DETAILS.
2) DIMENSIONS ARE FROM EXT. OF FRAMING TO CENTER LINE OF RIDGE.

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COUNTY: MULTI

HAVENBROOKE
PLAN NAME
C-2190-35GL
PLAN I.D.
3-25-20
DATE

S-4B
SHEET

STRUCTURAL NOTES

NC (2018 NCRC): Wind: 115-120 mph

1. ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS INCLUDING ROOF RAFTERS, HIPS, VALLEYS, RIDGES, FLOORS, WALLS, BEAMS AND HEADERS, COLUMNS, CANTILEVERS, OFFSET LOAD BEARING WALLS, PIER & GIRDER SYSTEM, FOOTING, AND PILING SYSTEM. ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL ACCURACY OR ARCHITECTURAL LAYOUT INCLUDING ROOF SYSTEM. ALL REQUIREMENTS FOR PROFESSIONAL CERTIFICATION SHALL BE PROVIDED BY THE APPROPRIATE PROFESSIONAL. SOUTHERN ENGINEERS, P.A. CERTIFIES ONLY THE STRUCTURAL COMPONENTS AS SPECIFICALLY STATED.

2. ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF RESIDENTIAL CODE, PLUS ALL LOCAL CODES AND REGULATIONS. THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR, AND WILL NOT HAVE CONTROL OF, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE CONSTRUCTION WORK, NOR WILL THE ENGINEER BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE CONSTRUCTION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. "CONSTRUCTION REVIEW" SERVICES ARE NOT PART OF OUR CONTRACT. ALL MEMBERS SHALL BE FRAMED ANCHORED, TIED AND BRACED IN ACCORDANCE WITH GOOD CONSTRUCTION PRACTICE AND THE BUILDING CODE.

3. DESIGN LOADS (LISTED AS: LIVE LOAD, DEAD LOAD, DEFLECTION)
   - ROOMS OTHER THAN SLEEPING ROOMS: (40 PSF, 10 PSF, L/360)
   - SLEEPING ROOMS: (30 PSF, 10 PSF, L/360)
   - ATTIC WITH PERMANENT STAIR: (40 PSF, 10 PSF, L/360)
   - ATTIC WITHOUT PERMANENT STAIR: (20 PSF, 10 PSF, L/360)
   - ATTIC WITHOUT STORAGE: (10 PSF, 10 PSF, L/240)
   - STAIRS: (40 PSF, 10 PSF, L/360)
   - EXTERIOR BALCONIES: (60 PSF, 10 PSF, L/360)
   - DECKS: (40 PSF, 10 PSF, L/360)
   - GUARDRAILS AND HANDRAILS: (200 LBS)
   - PASSSENGER VEHICLE GARAGES: (50 PSF, 10 PSF, L/360)
   - FIRE ESCAPES: (40 PSF, 10 PSF, L/360)
   - SNOW: (20 PSF)

4. WALLS SHALL BE BRACED BY SHEATHING WALLS ON ALL STORIES WITH WOOD STRUCTURAL PANELS. SEE FRAMING NOTES FOR THICKNESS AND NAILING REQUIREMENTS.

5. SEE APPENDIX M (DCA6) FOR EXTERIOR DECK REQUIREMENTS INCLUDING ATTACHMENTS FOR LATERAL LOADS.

6. CONCRETE SHALL HAVE A MINIMUM 28 DAY STRENGTH OF 3000 PSI AND A MAXIMUM SLUMP OF 5 INCHES UNLESS NOTED OTHERWISE (UNO). AIR ENTRAINED PER TABLE 402.2. ALL CONCRETE SHALL BE PROPORTIONED, MIXED, HANDLED, SAMPLED, TESTED, AND PLACED IN ACCORDANCE WITH ACI STANDARDS. ALL SAMPLES FOR PUMPING SHALL BE TAKEN FROM THE EXIT END OF THE PUMP. CONTROL JOINTS IN SLABS SHALL BE SPACED ON A GRID OF +-30 TIMES THE DEPTH (D). CONTROL JOINTS SHALL BE SAWCUT TO A DEPTH OF 1/D. (I.E. 4" CONCRETE SLABS SHALL HAVE 1/4" DEEP CONTROL JOINTS SAWCUT IN SLAB ON A +-10'-0" x +-10'-0" GRID).

7. ALLOWABLE SOIL BEARING PRESSURE ASSUMED TO BE 2000 PSF. THE CONTRACTOR MUST CONTACT A GEOTECHNICAL ENGINEER AND THE STRUCTUAL ENGINEER IF UNSATISFACTORY SUBSURFACE CONDITIONS ARE ENCOUNTERED. THE SURFACE AREA ADJACENT TO THE FOUNDATION WALL SHALL BE PROVIDED WITH ADEQUATE DRAINAGE, AND SHALL BE GRADED SO AS TO DRAINSURFACE WATER AWAY FROM FOUNDATION WALLS.

8. ALL FRAMING LUMBER SHALL BE SPF #2 (Fb = 875 PSI) UNLESS NOTED OTHERWISE (UNO). ALL TREATED LUMBER SHALL BE SYP # 2. PLATE MATERIAL MAY BE SPF # 3 OR SYP #3 ($F_{c\perp}$ = 425 PSI - MIN).

9. L.V.L. SHALL BE LAMINATED VENEER LUMBER: Fb=2600 PSI, Fv=285 PSI, E=1.9x10 PSI.
   - 9.1. P.S.L. SHALL BE PARALLEL STRAND LUMBER: Fb=2900 PSI, Fv=290 PSI, E=2.0x10 PSI.
   - 9.2. L.S.L. SHALL BE LAMINATED STRAND LUMBER: Fb=2250 PSI, Fv=400 PSI, E=1.55x10 PSI.

   INSTALL ALL CONNECTIONS PER MANUFACTURERS INSTRUCTIONS.

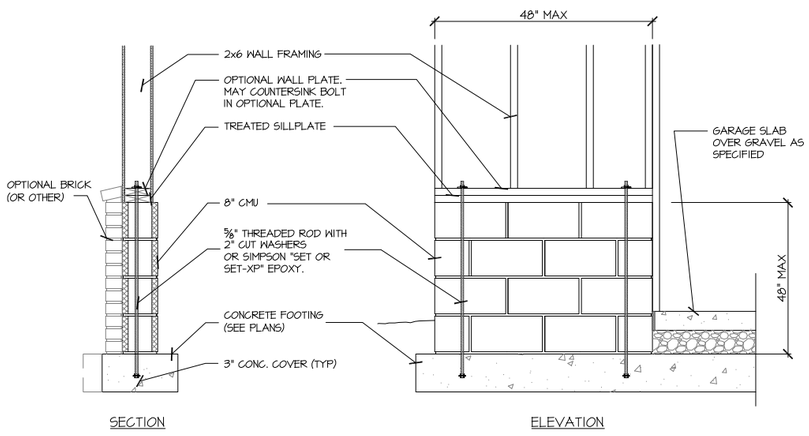
10. ALL ROOF TRUSS AND I-JOIST LAYOUTS SHALL BE PREPARED IN ACCORDANCE WITH THE SEALED STRUCTURAL DRAWINGS. TRUSSES AND I-JOISTS SHALL BE INSTALLED ACCORDING TO THE MANUFACTURE'S SPECIFICATIONS. ANY CHANGE IN TRUSS OR I-JOIST LAYOUT SHALL BE COORDINATED WITH SOUTHERN ENGINEERS.

11. ALL STRUCTURAL STEEL SHALL BE ASTM A-36. STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3 1/2" INCHES AND FULL FLANGE WIDTH. PROVIDE SOLID BEARING FROM BEAM SUPPORT TO FOUNDATION. BEAMS SHALL BE ATTACHED TO EACH SUPPORT WITH TWO LAG SCREWS (1/2" DIAMETER x 4" LONG). LATERAL SUPPORT IS CONSIDERED ADEQUATE PROVIDING THE JOIST ARE TOE NAILED TO THE SOLE PLATE, AND SOLE PLATE IS NAILED OR BOLTED TO THE BEAM FLANGE @ 48" O.C. ALL STEEL TUBING SHALL BE ASTM A500. LAP ALL REBAR SPLICES 30 BAR DIAMETERS.

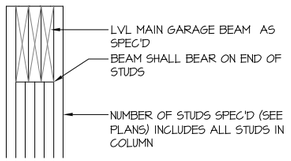
12. REBAR SHALL BE DEFORMED STEEL, ASTM615, GRADE 60.

13. FLITCH BEAMS SHALL BE BOLTED TOGETHER USING (2) ROWS OF 1/2" DIAMETER BOLTS (ASTM A325) WITH WASHERS PLACED UNDER THE THREADED END OF BOLT. BOLTS SHALL BE SPACED AT 24" O.C. (MAX), AND STAGGERED AT THE TOP AND BOTTOM OF BEAM (2" EDGE DISTANCE), WITH 2 BOLTS LOCATED AT 6" FROM EACH END.

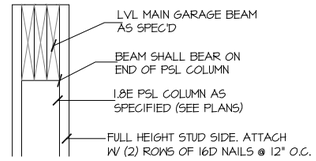
14. BRICK LINTELS (WHEN REQUIRED) SHALL BE 3 1/2"x3 1/2"x1/4" STEEL ANGLE FOR UP TO 6'-0" SPAN AND 6"x4"x5/16" STEEL ANGLE WITH 6" LEG VERTICAL FOR SPANS UP TO 9'-0". SEE PLANS FOR SPANS OVER 9'-0". SEE ALSO SECTION R703.7.3 LINTELS.



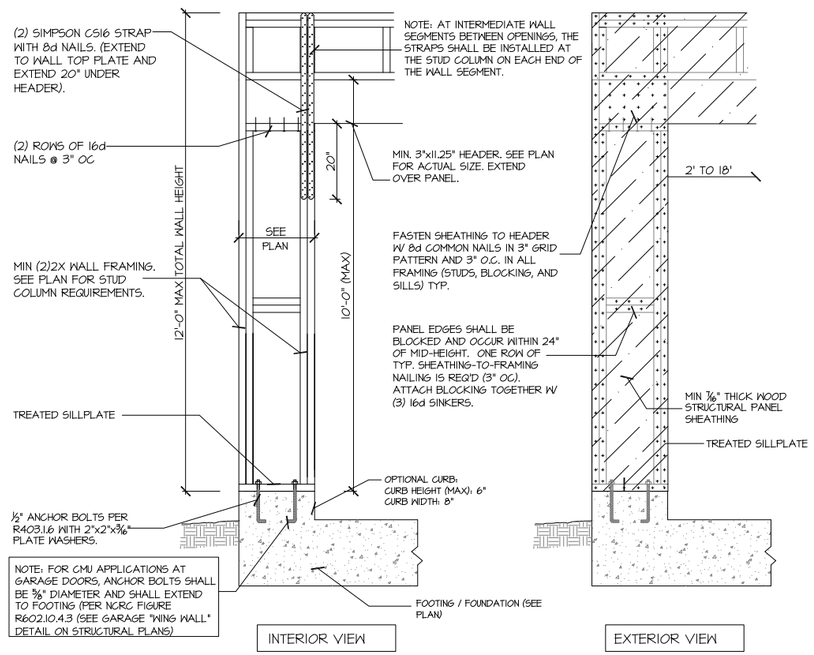
907 SD — GARAGE 'WING WALL' REINFORCING
PER IRC FIGURE R602.10.4.3



204B SD — TYP. GARAGE BEAM BEARING
NTS



204D SD — TYP. GARAGE BEAM BEARING
NTS



905B SD — CS-PF: CONTINUOUS PORTAL FRAME CONSTRUCTION
DETAIL AND APPLICATION BASED ON NCRC FIGURE R602.10.1 - PORTAL FRAME CONSTRUCTION

NORTH CAROLINA PROFESSIONAL SEAL 16073 ENGINEER JAMES H. HERMAN

STRUCTURAL DESIGN BY:
SOUTHERN ENGINEERS, P.A.
3716 BENSON DR., RALEIGH, NC 27609
LICENSE: C-1287, PHONE: 919-878-1617
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PROFESSIONAL MEMBER
AIBD AMERICAN INSTITUTE OF BUILDING DESIGN

FRAMING NOTES

NC (2018 NCRC): Wind: 115-120 mph

1. BRACING METHOD AND TYPE: CONTINUOUSLY SHEATHED WSP: CS-WSP. NOTE THAT THE WALL BRACING AMOUNT PROVIDED ON THE PLANS (DETAILS AND SPECIFICATIONS) IS GREATER THAN THE AMOUNT OF WALL BRACING REQUIRED BY SECTION R602.10 OF THE CODE. SEE NOTES BELOW FOR DETAILS AND SPECIFICATIONS FOR WALL BRACING AND WALL FRAMING.

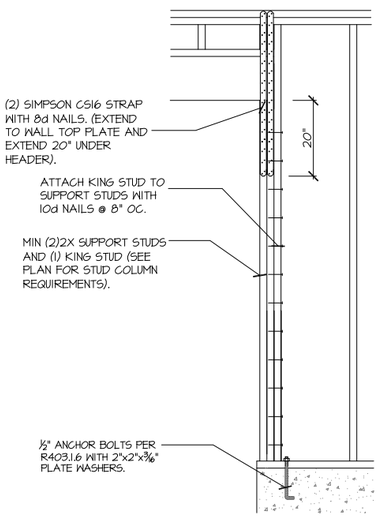
2. EXTERIOR WALL SHEATHING: WALLS SHALL BE BRACED BY SHEATHING WALLS ON ALL STORIES WITH WOOD STRUCTURAL PANEL SHEATHING (WSP) (EXPOSURE B: 7/16". EXPOSURE C: 15/32"). SHEATHING SHALL BE ATTACHED WITH 8d NAILS AT A 6"/12" NAILING PATTERN (6" OC AT PANEL EDGES AND 12" OC AT INTERMEDIATE SUPPORTS). INSTALL BLOCKING AT ALL PANEL EDGES.

3. WSP SHEATHING SHALL EXTEND TO THE UPPERMOST DOUBLE BEARING PLATE. BLOCK AT ROOF PER SECTION R602.10.4.5 AND ATTACH BRACED WALLS PER CODE. WSP SHEATHING BETWEEN FLOORS SHALL BE SPLICED ALONG CONTINUOUS BAND OR THE WSP SHEATHING MAY BE SPLICED ACROSS STUDS (CONTINUOUS ACROSS FLOOR SYSTEM) WITH BLOCKING AT PANEL EDGES. (MINIMUM 12" BEYOND FLOOR BREAK) OR OTHER APPROVED METHOD.

4. "HD" = HOLDOWN: HOLD-DOWN DEVICE (NOTED AS "HD" ON PLANS) SHALL BE AN 800 POUND CAPACITY ASSEMBLY AS NOTED ON PLANS. SEE DETAILS FOR HD ASSEMBLY.
   - **GROUND/FIRST FLOOR: USE "HD HOLD-DOWN DETAIL" ON SD SHEET (OR EQUIV.)
   - **UPPER FLOORS: ATTACH BASE OF KING STUD WITH A SIMPSON CS22 STRAP DOWN ACROSS THE BAND AND DOWN TO A STUD BELOW OR HEADER BELOW. EXTEND STRAP 7" MIN ALONG EACH STUD (OR HEADER) AND ATTACH EACH END W/ (7) 8d NAILS.

5. INTERIOR BRACED WALL: (NOTED AS "IBW" ON PLANS) ATTACH 1/2" GYPSUM BOARD (GB) ON EACH SIDE OF WALL WITH A MIN. OF 5d COOLER NAILS OR #6 SCREWS @ 7" O.C. ALONG THE EDGES AND AT INTERMEDIATE SUPPORTS.

6. INTERIOR BRACED WALL-WOOD STRUCTURAL PANEL: (NOTED AS "IBW-WSP" ON PLANS). ATTACH ONE SIDE WITH 7/16" WSP SHEATHING WITH 8d NAILS AT A 6"/12" NAILING PATTERN (6" OC AT PANEL EDGES AND 12" OC AT INTERMEDIATE SUPPORTS). INSTALL BLOCKING AT ALL PANEL EDGES. ATTACH GB OVER WSP AS REQUIRED. ATTACH OPPOSITE SIDE WITH 1/2" GB WITH A MIN. OF 5d COOLER NAILS OR #6 SCREWS @ 7" OC ALONG THE EDGES AND AT INTERMEDIATE SUPPORTS.



906 SD — CS-PF: END CONDITION DETAIL
(FOR USE WITH SINGLE CS-PF CONDITION)
DETAIL AND APPLICATION BASED ON NCRC FIGURE R602.10.1 - PORTAL FRAME CONSTRUCTION

DYNAMIC DESIGN GROUP, INC
David D Grorud
(919) 601-1406
DynamicDesignGroup@gmail.com

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HAVENBROOKE
PLAN NAME
C-2190-35GL
PLAN I.D.
3-25-20
DATE

SD
SHEET