

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

ROOF PLAN NOTES:

1. PROVIDE 8" MINIMUM CONCRETE SLAB REINFORCED WITH *4 @ 8" c/c E.W. BOTTOM, ADDED TOP REINFORCING ARE NOTED IN PLAN (fc' = 5000 psi).

FOR ALL PARAPET WALLS PROVIDE REINFORCED MASONRY WITH #5@ 24"c/c.
 USE 3000 PSI GROUT MIX CONCRETE WITH 9" +/- I" SLUMP. USE 2"5 EACH END AT PARAPET.
 VERIFY AND COORDINATE ALL DIMENSIONS WITH ARCHITECTURE BEFORE COMMENCEMENT.
 W-I = CONCRETE WALL BELOW SEE SCHEDULE.

5. PROVIDE 9" MINIMUM CONCRETE SLAB REINFORCED WITH #5 @ 6" C/C E.W. BOTTOM, ADDED TOP REINFORCING ARE NOTED IN PLAN (FC' = 5000 PSI). LOADS DESIGN:

LIVE LOAD = 30 PSF

DEAD LOAD = 30 PSF

DESIGNE Blvd. #G-04, Miami, FL 33137
P: 305.438.9377 | F: 305.438.9379

DRAWN BY:

REVISIONS:

NEW RESIDENCE FOR: 4354 ALTON RD.

JÙAN FERNANDEZ-BARQUIN, P.B. # 40114

DATE: 10-20-2014

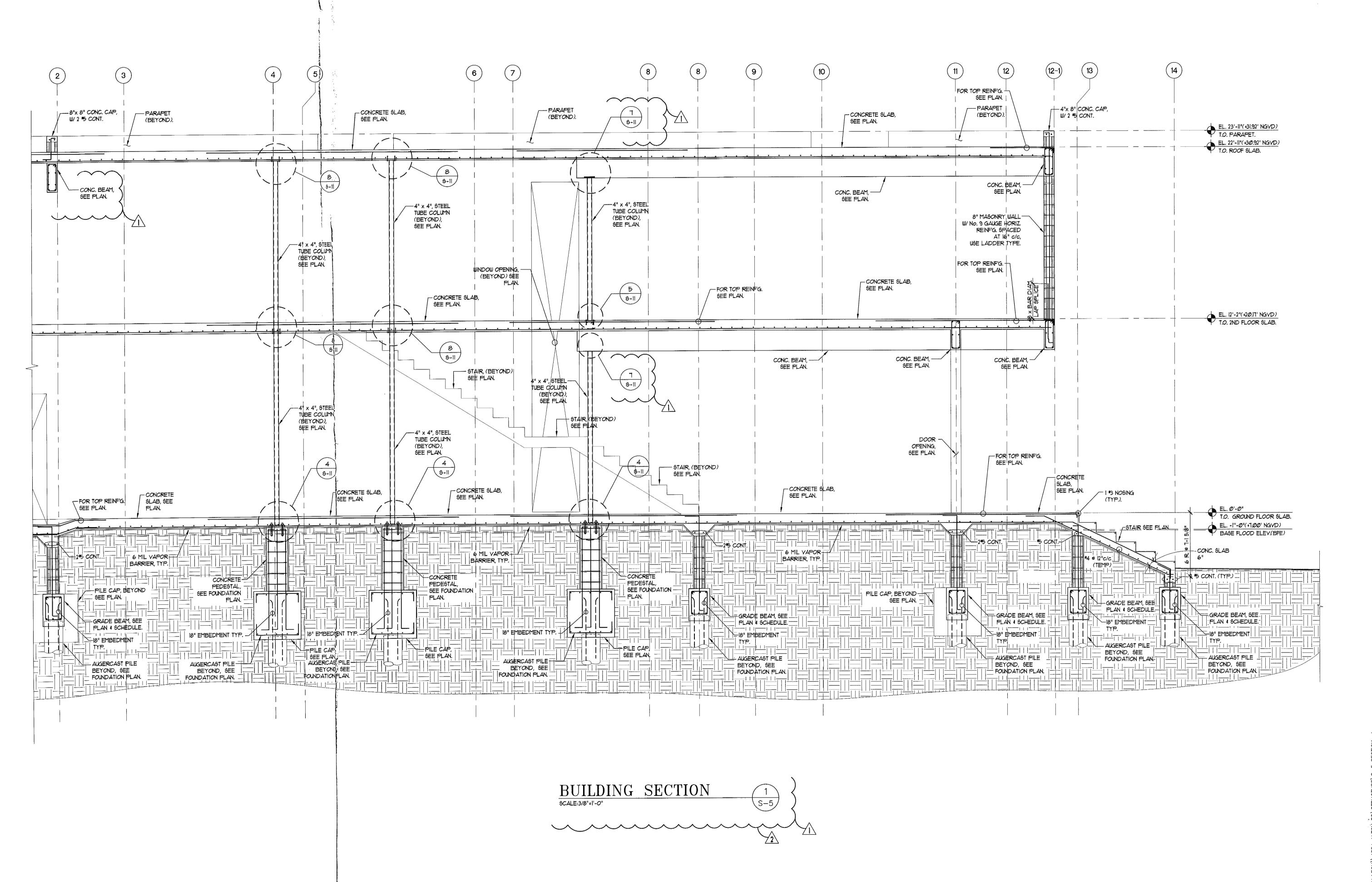
FERNANDEZ-BARQUIN, P.E. ;TURAL ENGINEER P.E. # 40114
RESHOLD INSPECTOR # 0947
N.W. 97th AVENUE, SUITE #240
DORAL, FLORIDA 33172
786-336-0881, FAX: 786-336-0884

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S-4

FRAMING PLAN

II-24-2015 BLDG, DEPT, COMMENTS



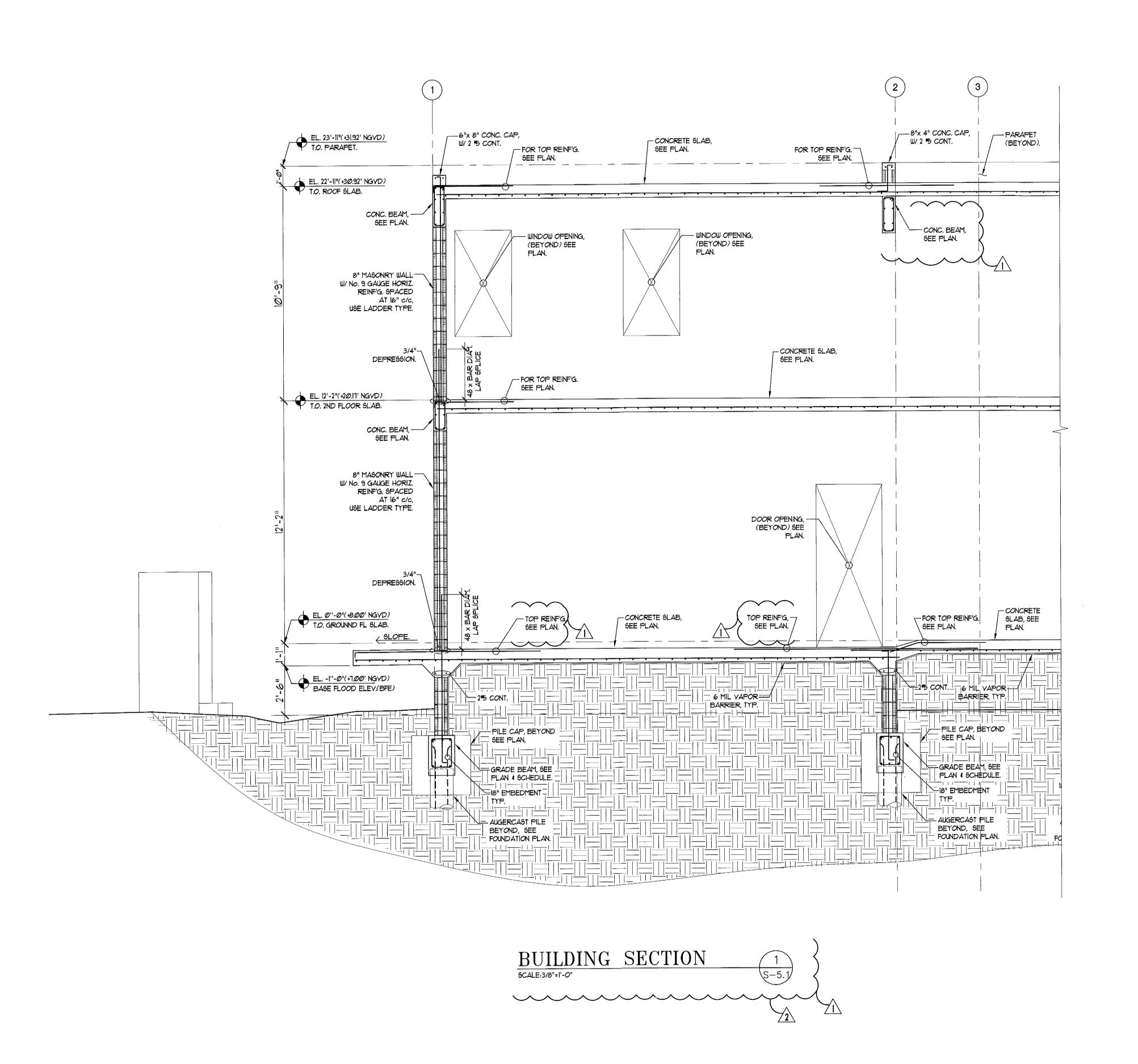
II-24-2015 ; BLDG. DEPT. COMMENTS. 2 12-15-2015 : BLDG. DEPT. COMMENTS.

JUAN FERNANDEZ-BARQUIN, P.E. # 40114

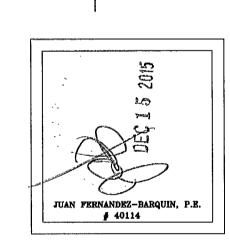
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BUILDING



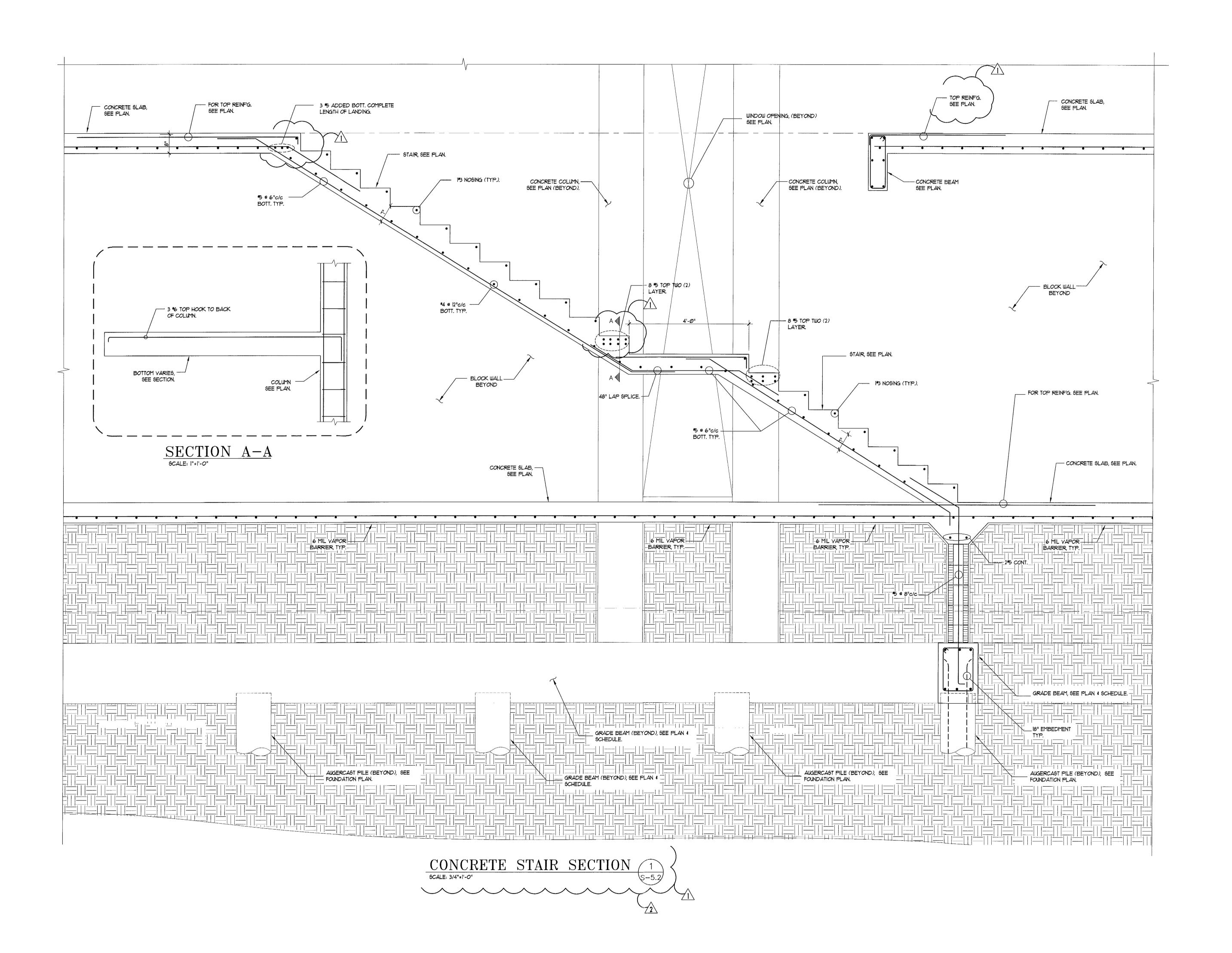
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S-5.1 BUILDING SECTION

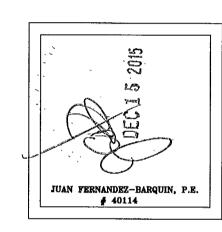


REVISIONS:

II-24-2015 : BLDG. DEPT.
COMMENTS.

12-15-2015 : BLDG. DEPT.
COMMENTS.

ARCHITECTURE
4300 Biscayne Blvd. #G-04, Miami, FL 33137



NEW RESIDENCE FOR: 4354 ALTON RD. MIAMI BEACH, FL 33139

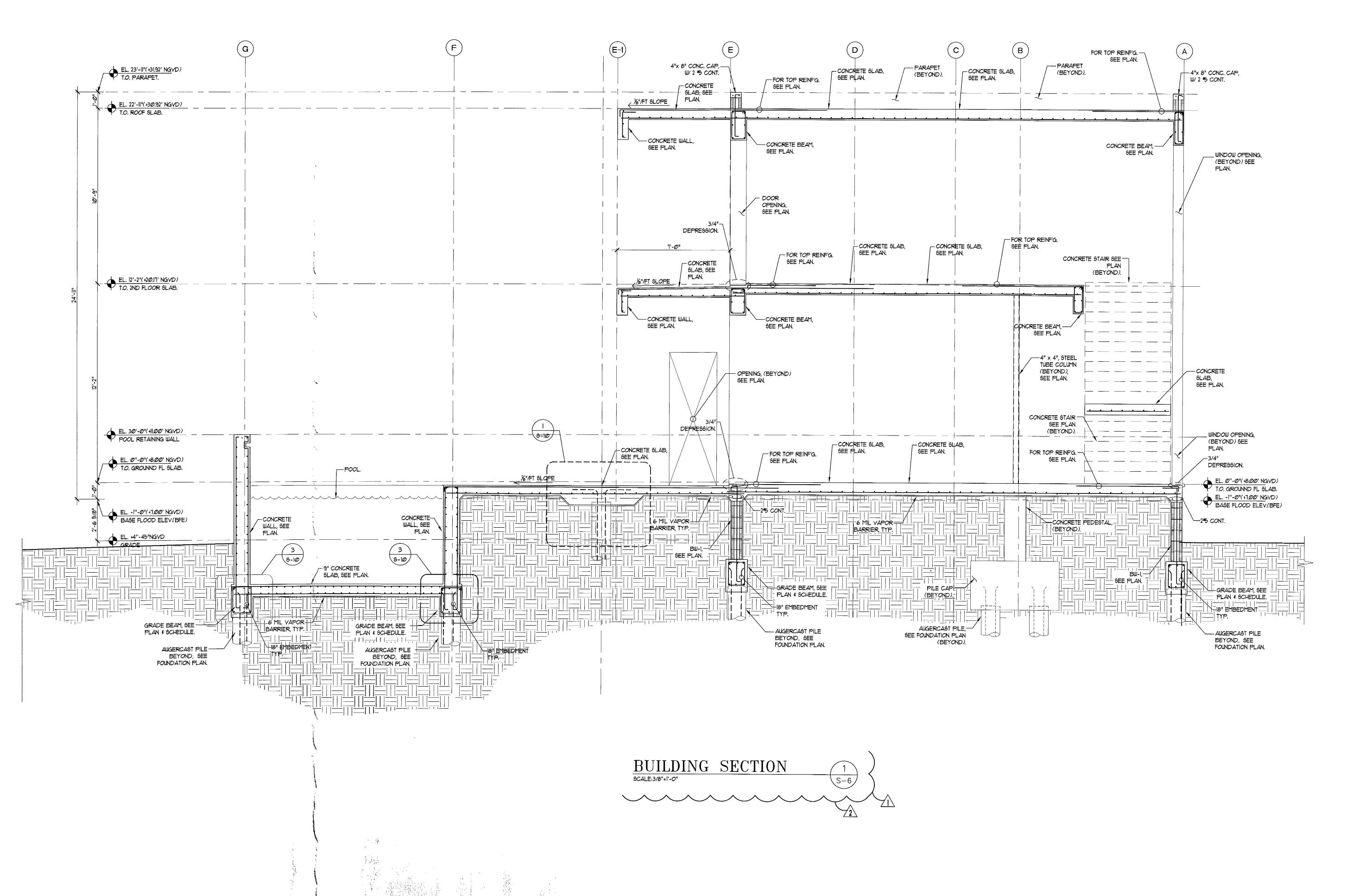
DATE: 10-20-2014

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S-5.2

BUILDING SECTION



REMSIONS:

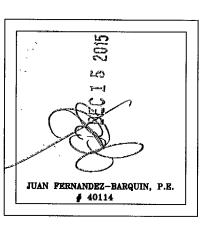
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COMMENTS.

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DESCAPE Blvd. #G-04, Miami, FL 33137



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DATE: 10-20-2014

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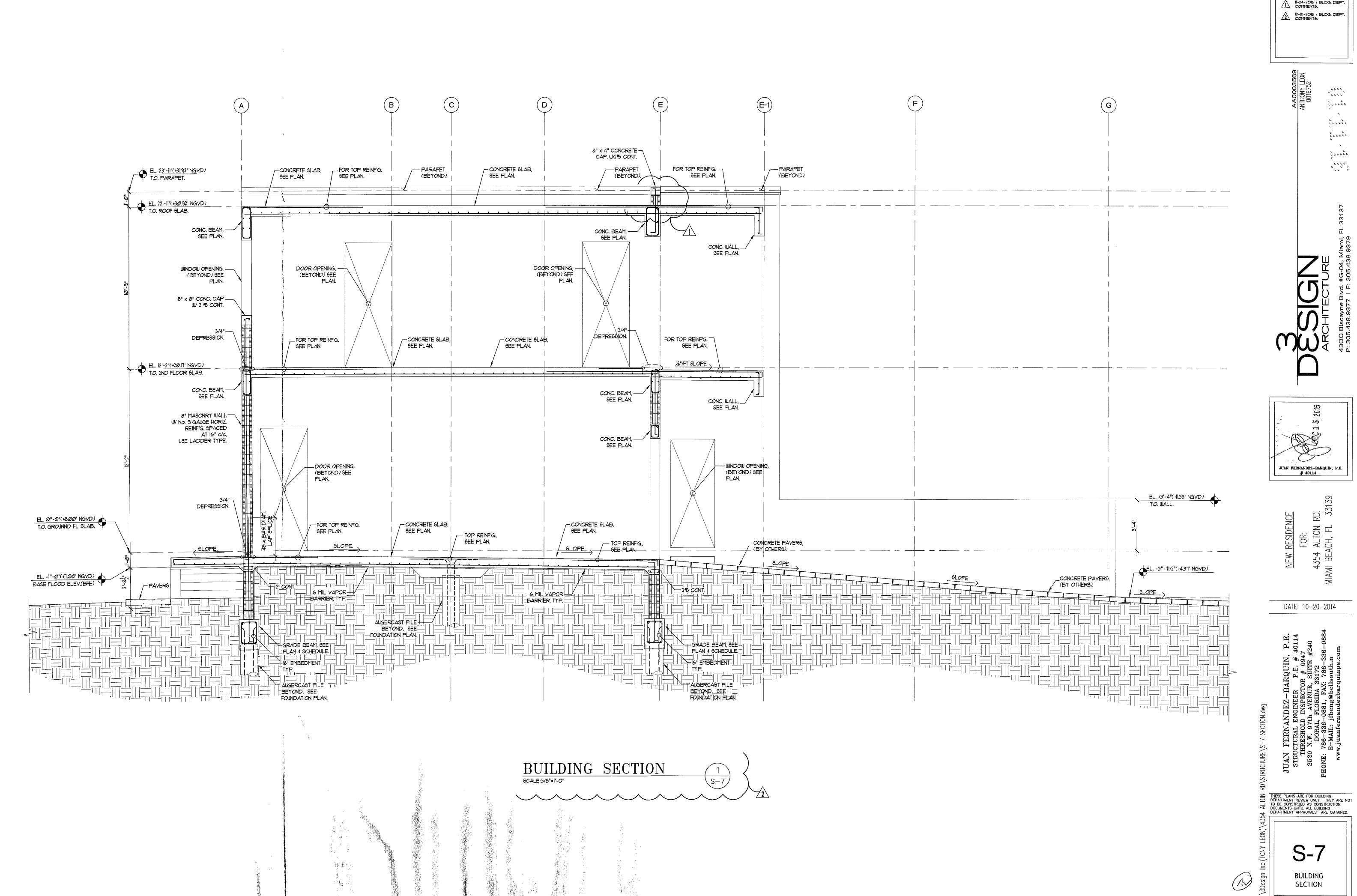
JUAN FERNANDEZSTRUCTURAL ENGINER
THRESHOLD INSPE

Z520 N.W. 97th AVEN

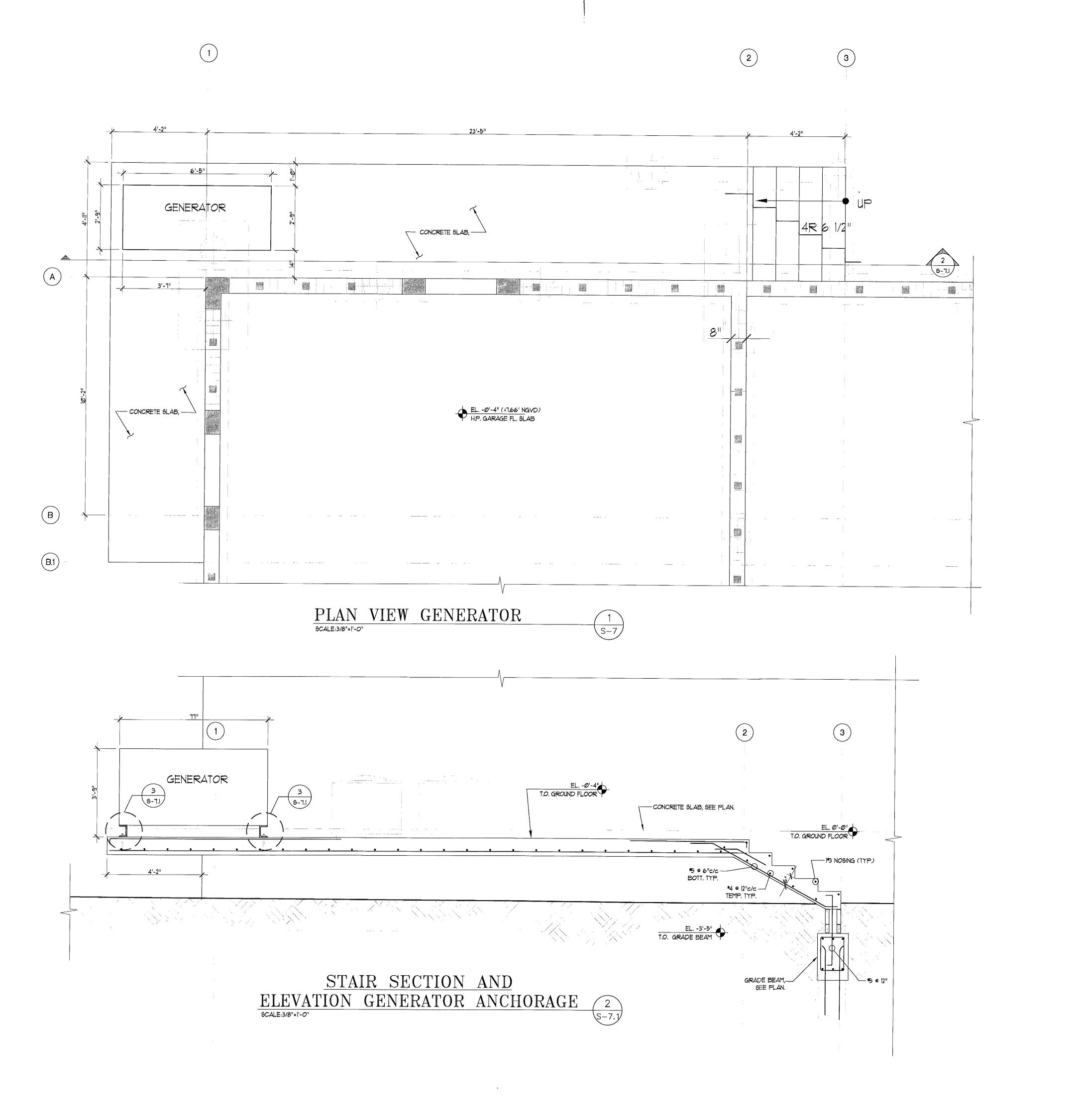
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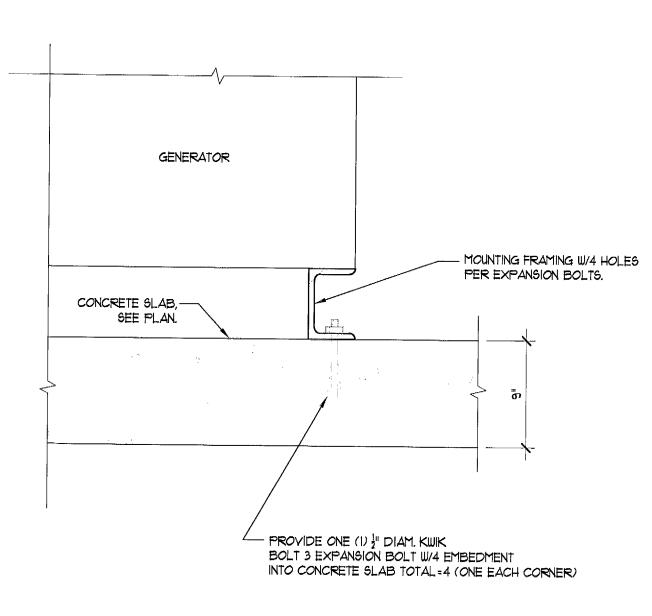
S-6

BUILDING
SECTION



REVISIONS: II-24-2015 : BLDG. DEPT. COMMENTS.





CONNECTION DETAIL

SCALE:3/8"=1'-0"

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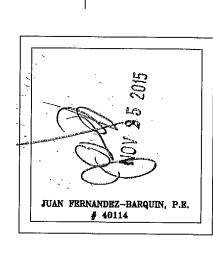
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II-24-2015 BLDG. DEPT. COMMENTS (NEW SHEET)

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ANTHONY LEON
RCHITECTURE

OO Biscayne Blvd. #G-04, Miami, FL 33137

REVISIONS:



NEW RESIDENCE FOR: 4354 ALTON RD. MIAMI BEACH, FL 33139

JAN FERNANDEZ-BARQUIN, P.E.

STRUCTURAL ENGINEER P.E. # 40114

THRESHOLD INSPECTOR # 0947

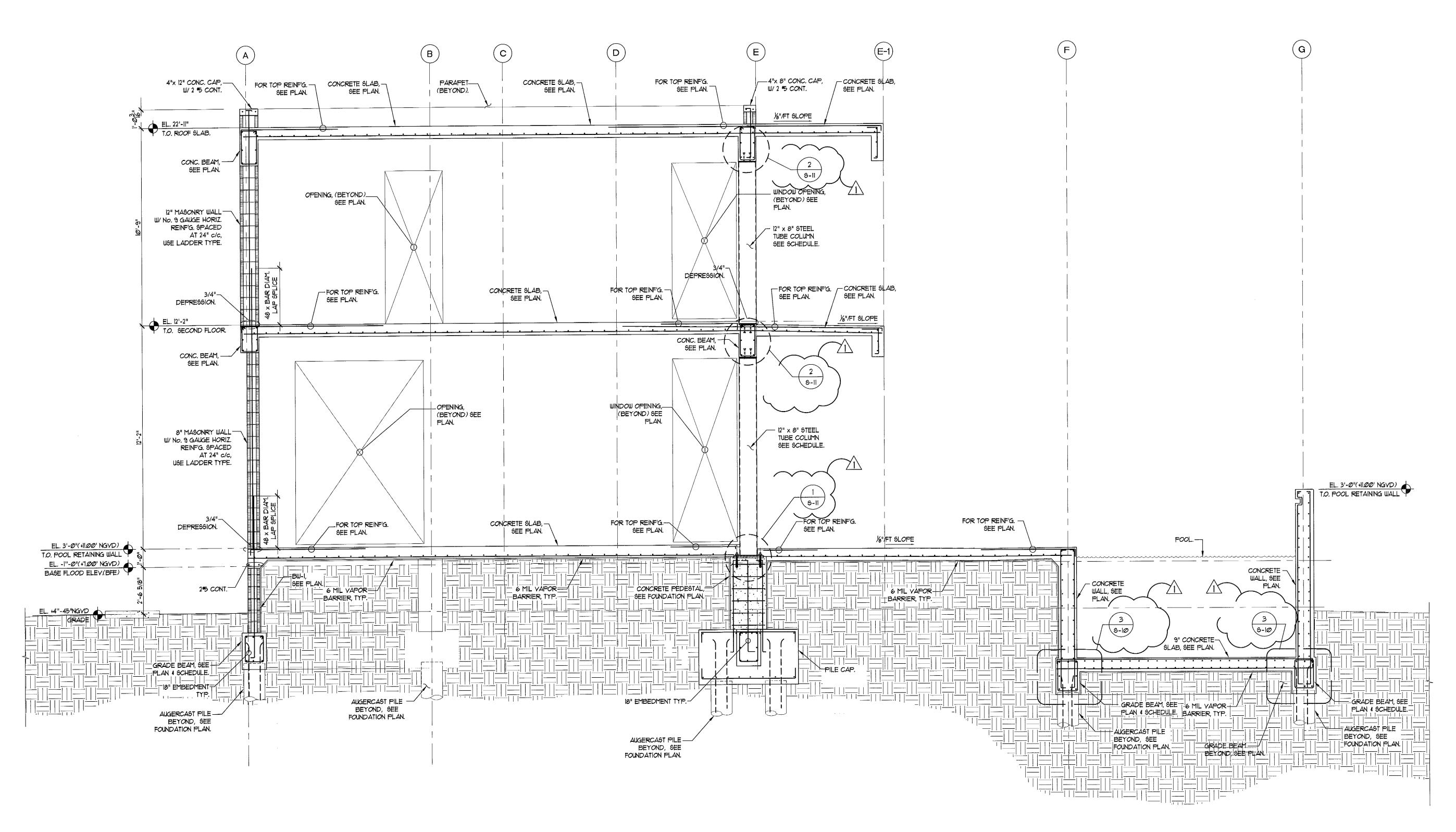
2520 N.W. 97th AVENUE, SUITE #240

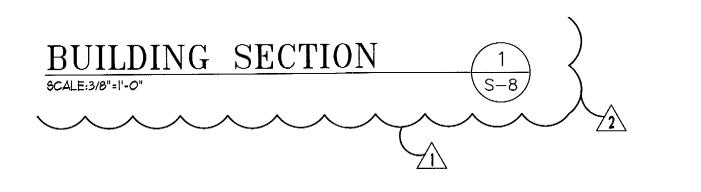
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COMMENTS.

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COMMENTS.

AAOOO3569 ANTHONY LEON 0016752

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JUAN FERNANDEZ-BARQUIN, P.E.

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DATE: 10-20-2014

IANDEZ-BARQUIN, P.E. Engineer P.E. # 40114

ED INSPECTOR # 0947

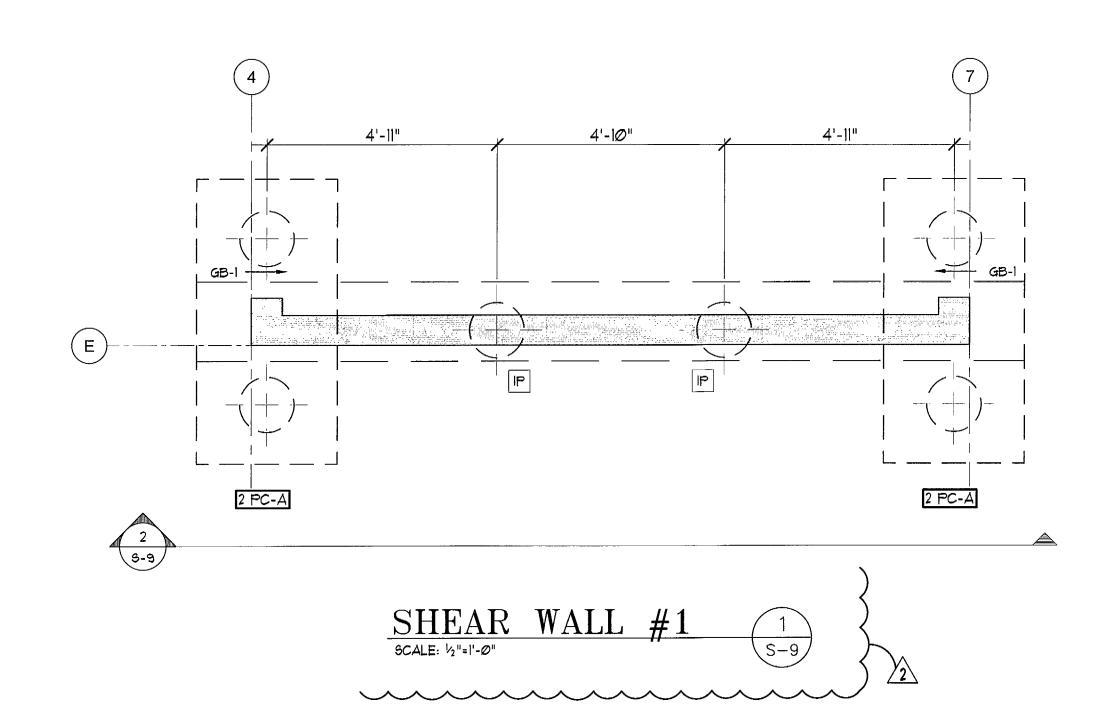
97th AVENUE, SUITE #240

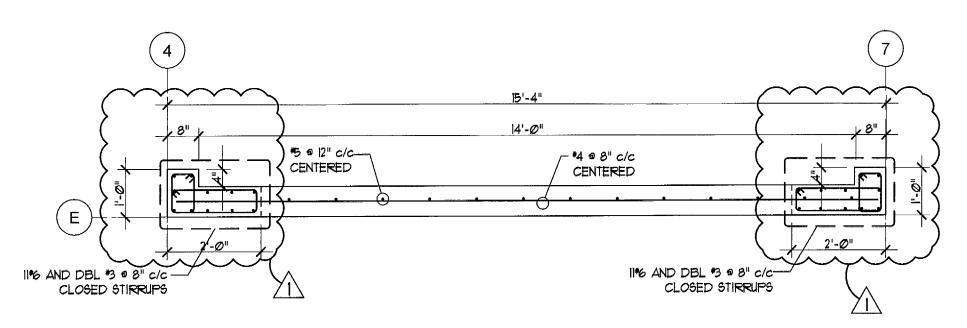
JUAN FERNANDEZ-BA
STRUCTURAL ENGINEER
THRESHOLD INSPECTO
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S-8
BUILDING
SECTION.

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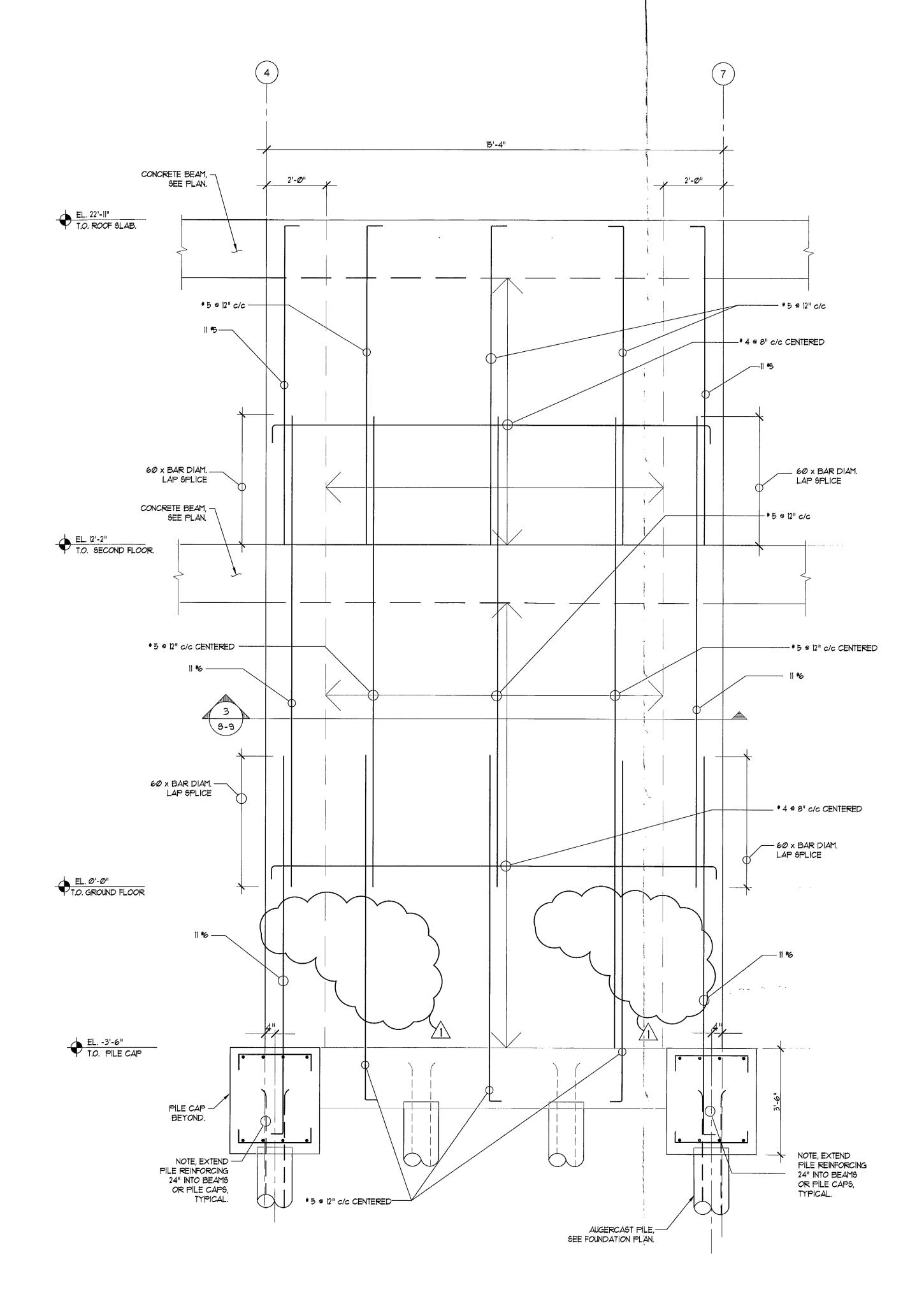


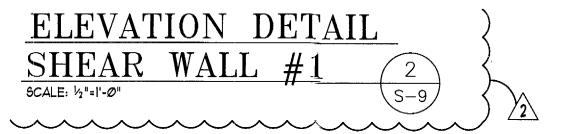
SHEAR WALL #1 BAR PLACEMENT DIAGRAM $\frac{3}{S-9}$ FOUNDATION OF THE SECOND FLOOR

SHEAR	WALL VER	TICAL RE	INFORCING	G SPLICING
f'c BAR SIZE	4,000 P.S.I.	5,000 P.S.I.	6,000 P.S.I.	REMARKS
* 4	24"	21"	19"	BASED ON 50% SPLICING
*5 \	24"	21"	19"	BASED ON 50% SPLICING
#6	24"	21"	19"	BASED ON 50% SPLICING
* 7	32"	29"	26"	BASED ON 50% SPLICING
*8	42"	38"	35"	BASED ON 50% SPLICING
* 9	53"	48"	44"	BASED ON 50% SPLICING
* 10	68"	61"	55"	BASED ON 50% SPLICING
*	83"	74"	68"	BASED ON 50% SPLICING

SHEAR WALL NOTES:

- 1. FOR CONCRETE STRENGTHS SEE SHEARWALL ELEVATIONS.
- 2. FOR HORIZONTAL WALL REINFORCING, SEE SHEARWALL ELEVATIONS.
- 3. FOR VERTICAL WALL REINFORCING, SEE SHEARWALL ELEVATIONS.
- 4. SEE TABLE FOR SHEARWALL VERTICAL STEEL SPLICE LENGTHS.
- 5. NOTE, AS THE MAIN VERTICAL REINFORCING IS REDUCED, THE INTERMEDIATE VERTICAL
- 6. REINFORCING MUST BE INCREASED. USE #5 @ 12"c/c VERT. EA. FACE AS INTERMEDIATE REINF'G TYPICAL.





REVISIONS: 11-24-2015 : BLDG. DEPT. COMMENTS. 2-15-2015 : BLDG. DEPT. COMMENTS.

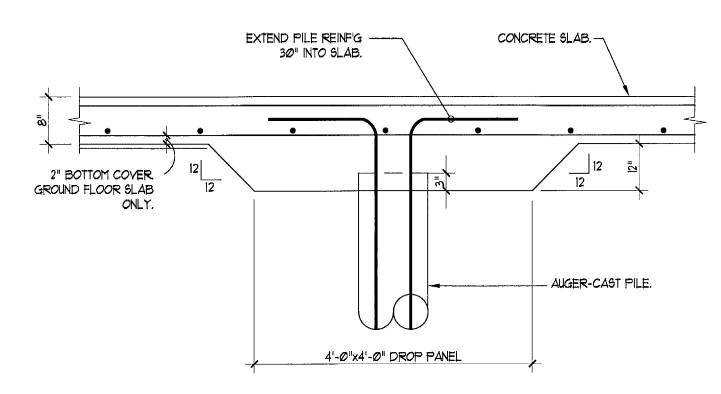
JUAN FERNANDEZ-BARQUIN, P.E. # 40114

NEW RESIDENCE FOR:

DATE: 10-20-2014

SHEAR WALL #1. FOUNDATION & BARS DIAGRAM.

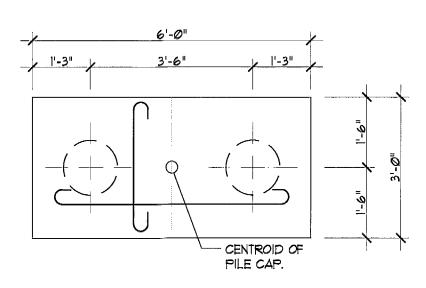
PILE CAPS



GROUND FLOOR

DROP PANEL DETAIL

S-100



2P.C. (14"ø 35 TONS)

T = 42"

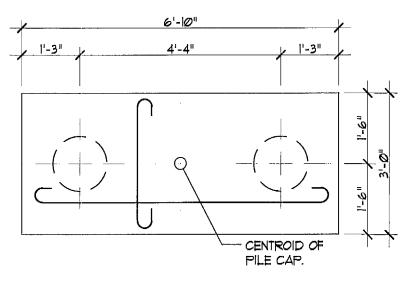
1 *5 SHORT WAY TOP & BOTTOM

1 *8 LONG WAY TOP & BOTTOM

1 *8 LONG WAY TOP & BOTTOM

(USE 5000 PSI CONCRETE)

NOTES: -CENTER OF PILE CAP TO BE LOCATED AT CENTROID OF COLUMN, U.O.N.



2P.C.A (14"ø 35 TONS)

T = 42"

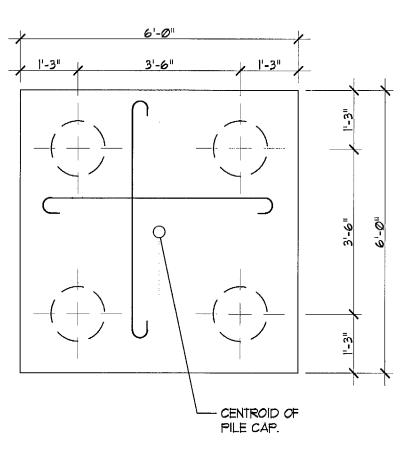
8 *5 SHORT WAY TOP & BOTTOM

1 *8 LONG WAY TOP & BOTTOM

1 *8 LONG WAY TOP & BOTTOM

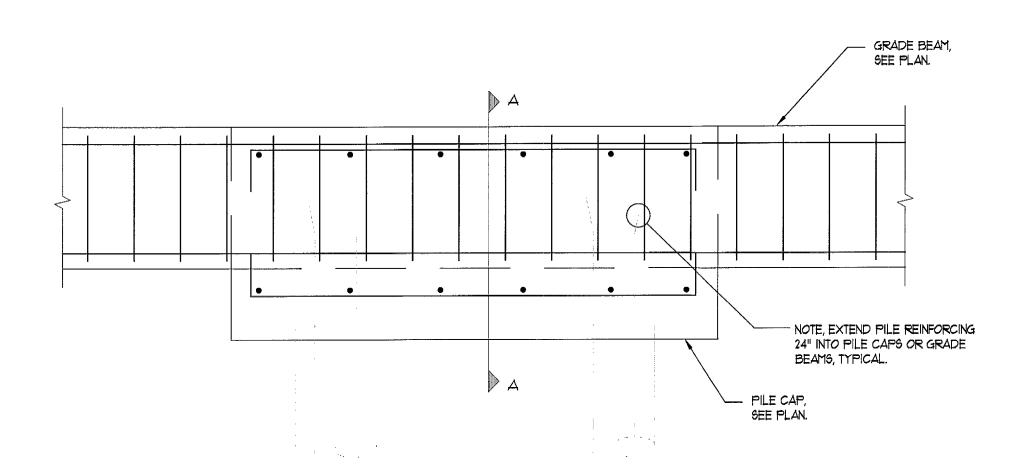
(USE 5000 PSI CONCRETE)

NOTES: -CENTER OF PILE CAP TO BE LOCATED AT CENTROID OF COLUMN, U.O.N.



4P.C. (14"ø 35 TONS)

NOTES: -CENTER OF PILE CAP TO BE LOCATED AT CENTROID OF COLUMN, U.O.N.



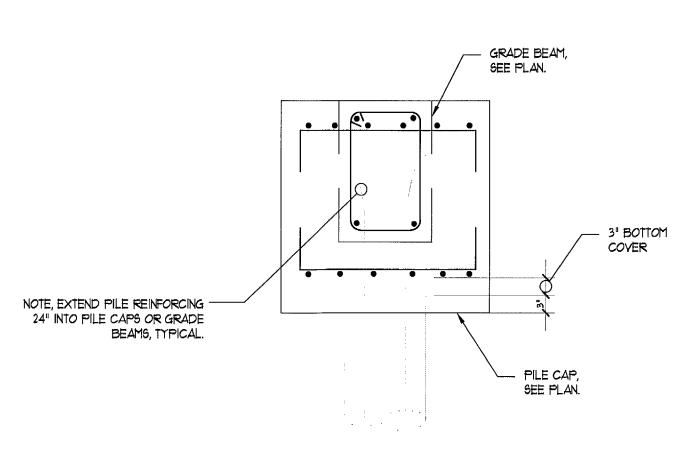
TYPICAL PILE CAP/GRADE BEAM DETAIL 2
SCALE: 3/4"=1'-0"

SCALE: 3/4"=1'-0"

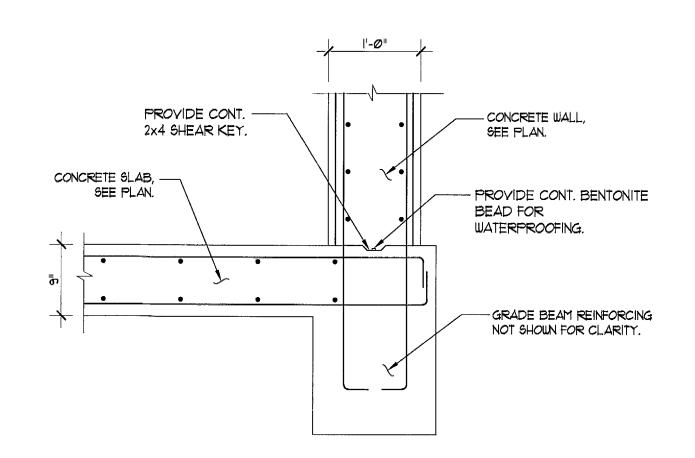
<u>NOTES</u>

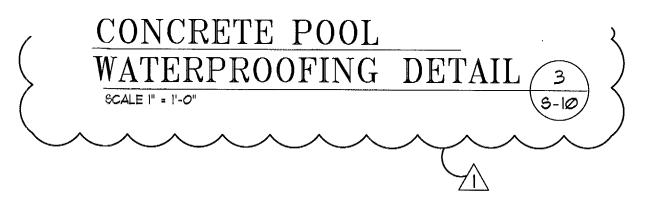
I. ALL GRADE BEAMS MUST RUN CONT. THRU ALL PILES CAPS

 ALL GRADE BEAMS MUST RUN CONT. THRU TO BACK OF PILE CAPS IF GRADE BEAM TERMINATES AT PILE CAP.



SECTION A-A





DRAWN BY:

REVISIONS:

JURE\S-10 PILE CAPS DETAILS.dwg

JAN FERNANDEZ-BARQUIN, P.

STRUCTURAL ENGINEER P.E. # 401

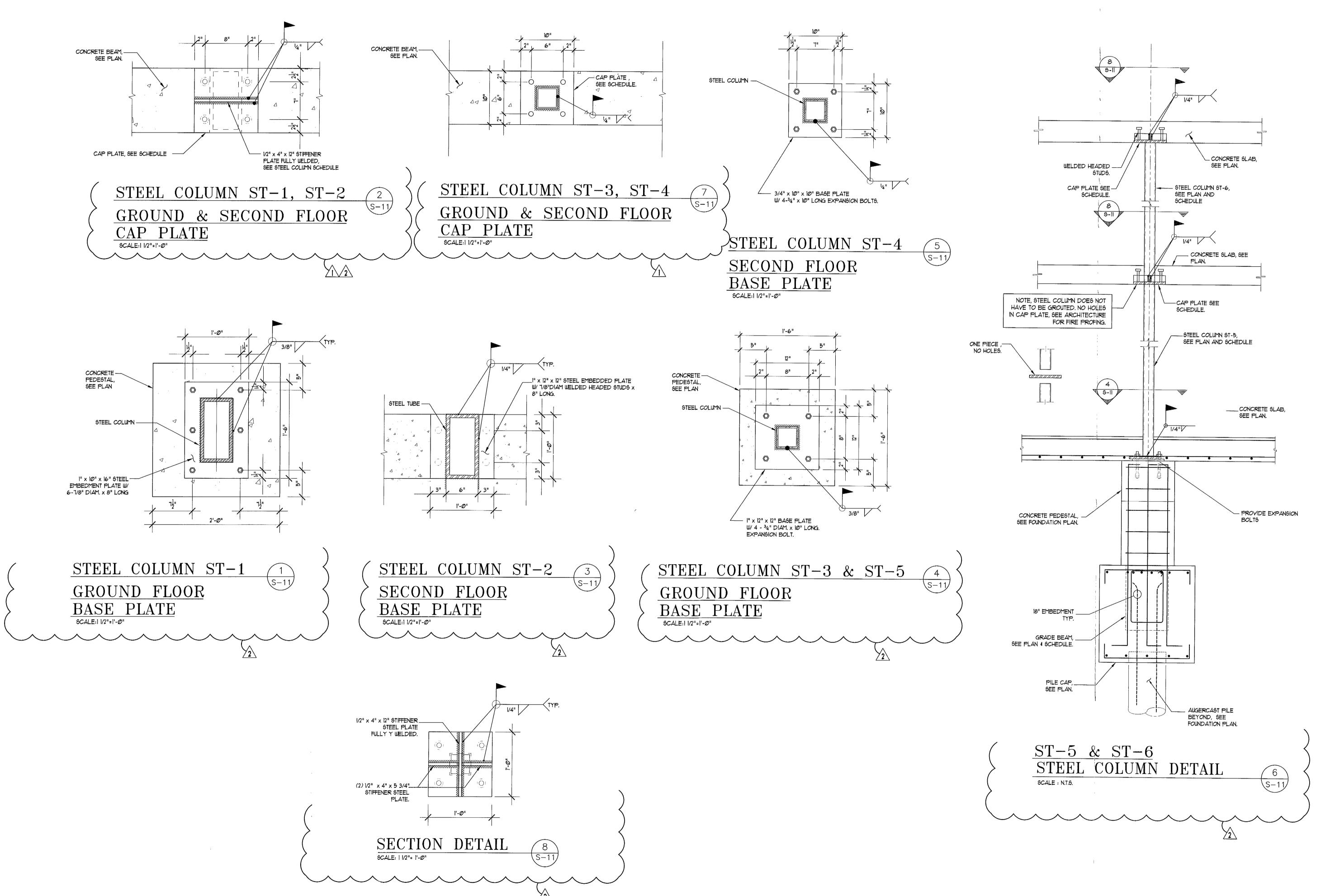
THRESHOLD INSPECTOR # 0947

2520 N.W. 97th AVENUE, SUITE #240

DORAL, FLORIDA 33172

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S-10
PILE CAPS
DETAILS.



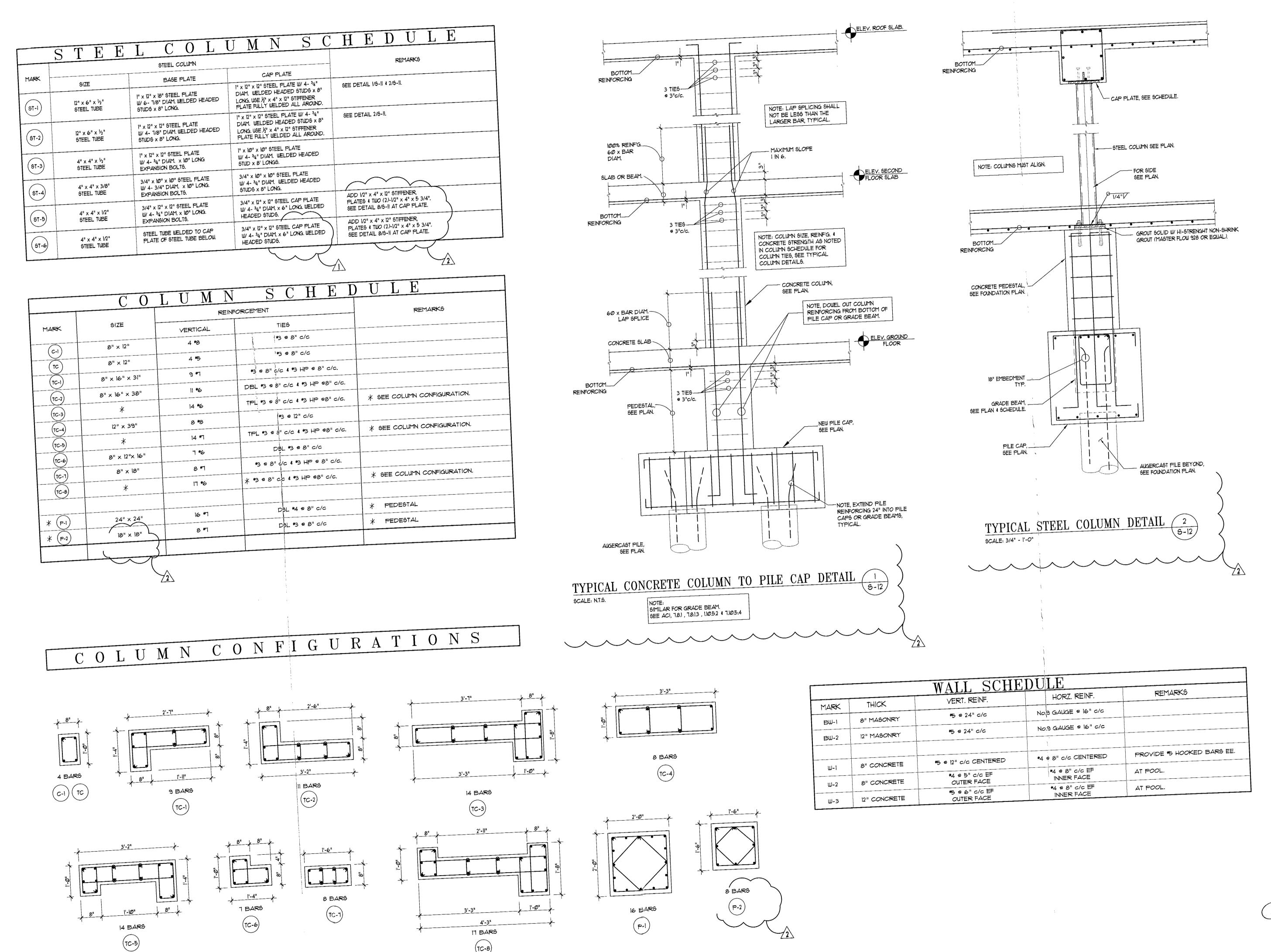
REVISIONS: II-24-2015 : BLDG. DEPT. COMMENTS. 2-15-2015 : BLDG. DEPT. COMMENTS.

JUAN PERNANDEZ-BARQUIN, P.E. # 40114

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DETAILS



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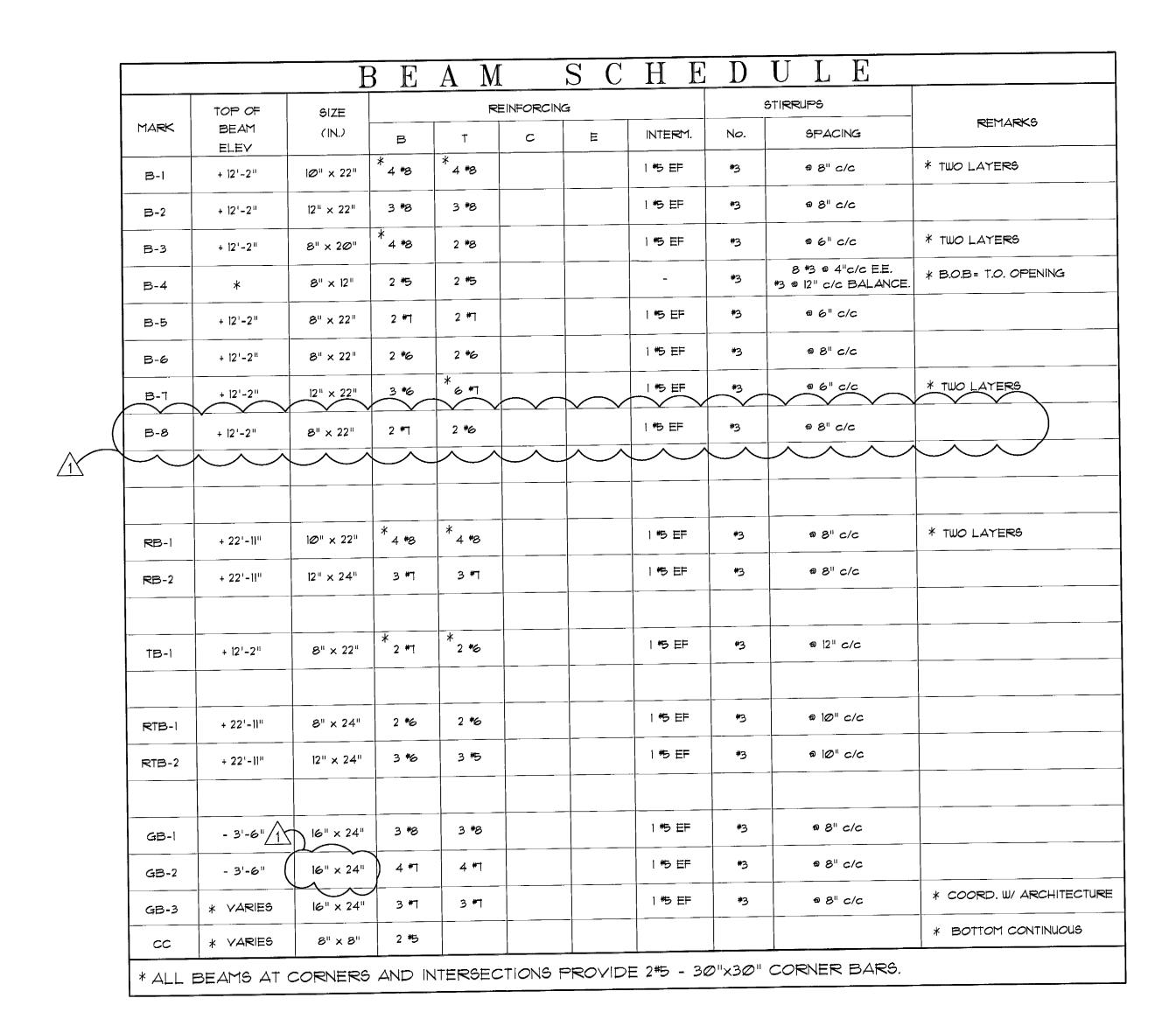
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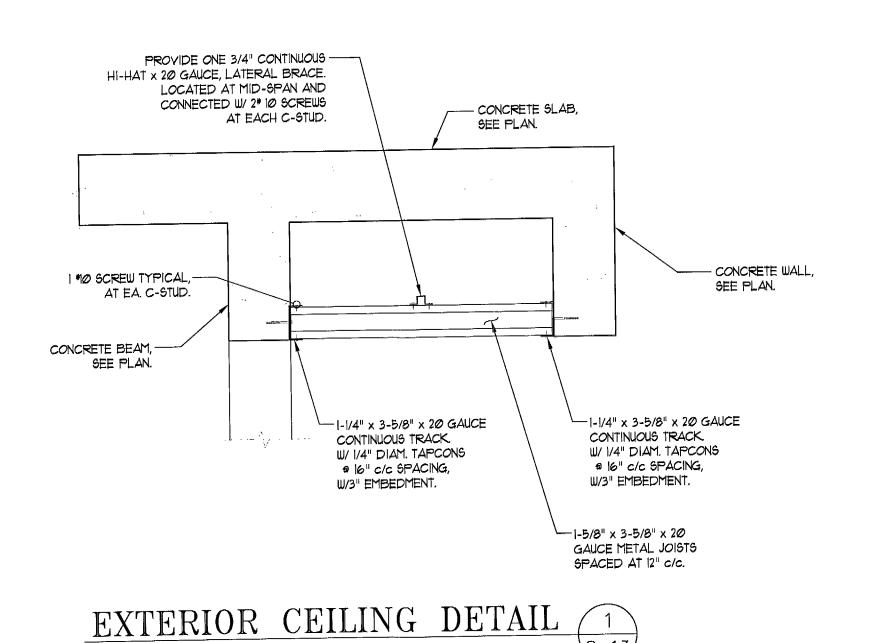
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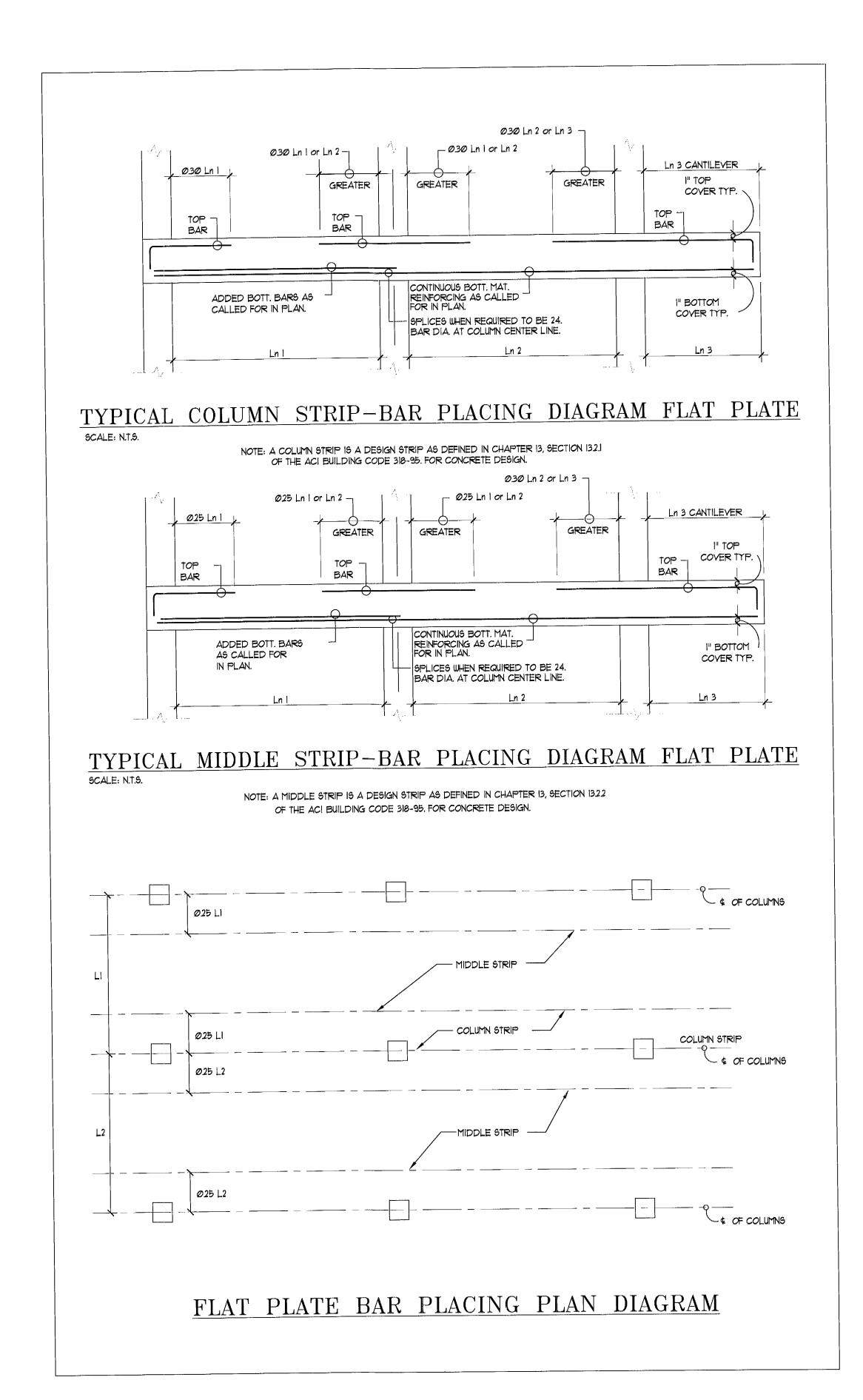
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COLUMN SCHEDULES & DETAILS

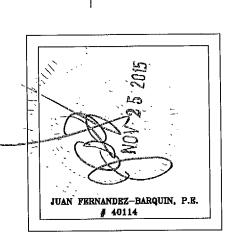






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NEW RESIDENCE FOR: 4354 ALTON RD. MIAMI BEACH, FL 33139

DATE: 10-20-2014

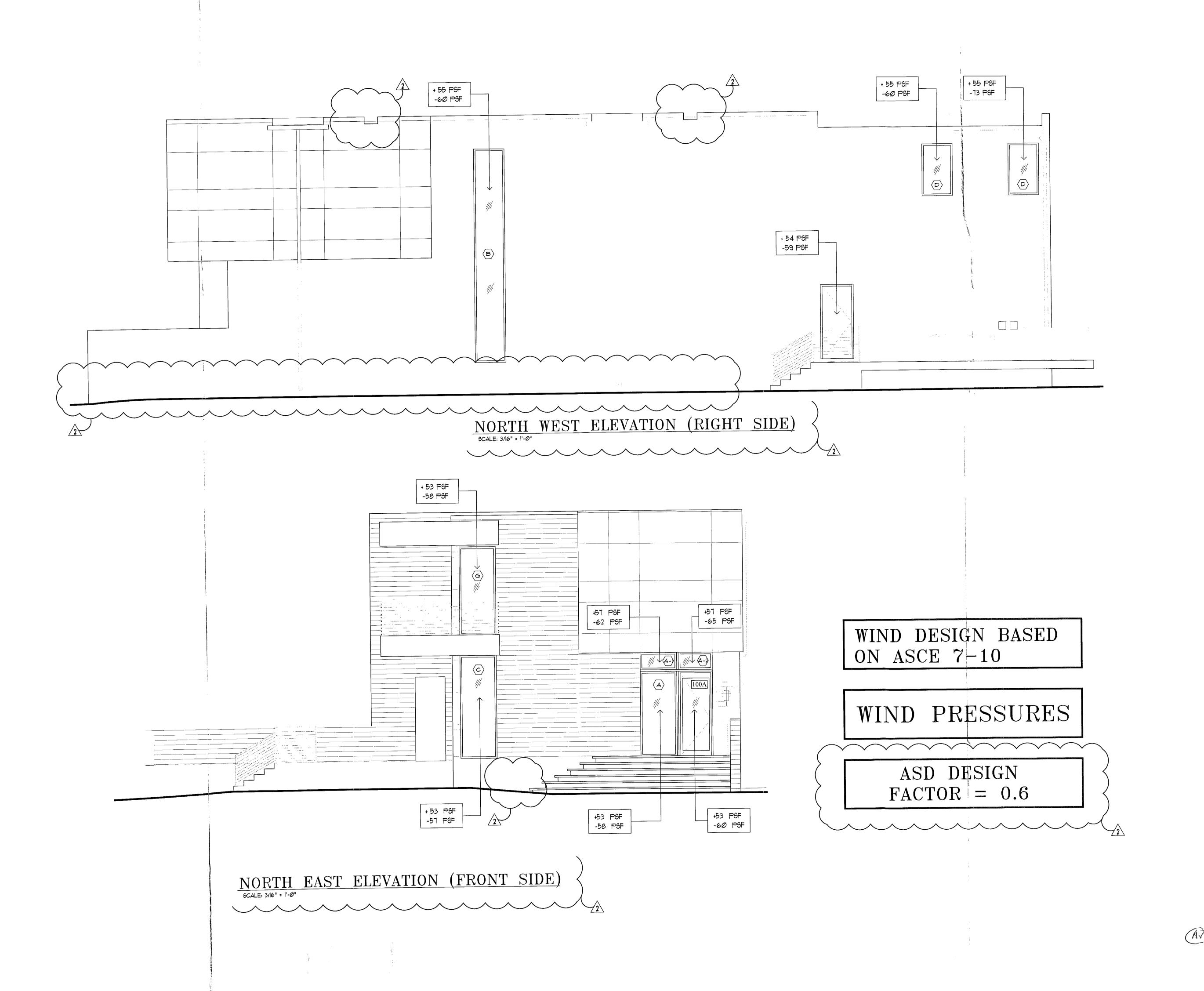
STRUCTURAL ENGINEER P.E. # 40114
THRESHOLD INSPECTOR # 0947
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IONE: 786-336-0881, FAX: 786-336-0884

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BEAM SCHEDULE,

DETAIL & FLAT PLATE DIAGRAM

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2-15-2015 : BLDG, DEPT. COMMENTS.



DATE: 10-20-2014

S-14 WIND PRESSURES

GENERAL STRUCTURAL NOTES:

I. FOUNDATION ALLOWABLE SOIL BEARING PRESSURE:

BASED ON SOIL REPORT BY DYNATECH ENGINEERS CORP DATED OCTOBER 27, 2014. THE FOUNDATIONS HAVE BEEN DESIGNED WITH AUGERCAST PILES, MINIMUM PILE LENGTH 32'-0". 14" DIAMETER 35 TONG IN COMPRESSION, AND 15 TONG IN TENSION. PROVIDE

5000 PSI GROUT WITH 6 * 1 FULL LENGTH REINFORCING * 3 TIES SPACED AT 12" FULL LENGTH OF PILES. ALL PILES MUST PROVIDE A MINIMUM 18" LENGTH OF EXPOSED PILE REINFORCING STEEL TO BE EMBEDDED IN THE PILE CAPS OR GRADE BEAMS. SOIL ENGINEER TO WITNESS AND CERTIFY THE INSTALLATION OF ALL THE PILES. G.C. TO PROVIDE AN 'AS-BUILT" SURVEY OF ALL PILES. ANY PILE THAT EXCEEDS 3" IN "X" OR 'Y" MUST BE IDENTIED IN SAME SURVEY FOR RELIEW BY E.O.R. THIS MUST BE SUBMITTED BEFORE PLACING ANY CONCRETE.

2. CONCRETE:

ALL CONCRETE TO ATTAIN A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 5,000 PSI IN 28 DAYS. AGGREGATES TO BE CLEAN AND WELL GRADED, MAXIMUM SIZE 3/4". CONCRETE SLUMP: 4" MIN. TO 6" MAX. VERTICAL CONCRETE DROP NOT TO EXCEED 8". FOR REINFORCED MASONRY USE 3000 PSI GROUT MIX CONCRETE WITH 9" +/- I" SLUMP.

PROVIDE CURING COMPOUND TO ALL CONCRETE SURFACES WITHIN 24 HOURS OF PLACING OF THE CONCRETE. CONCRETE SLABS ARE TO BE SPRAYED WITH CURING COMPOUND THE SAME DAY. COLUMNS AND BEAMS MAY BE SPRAYED THE NEXT DAY. SUBMIT FOR APPROVAL.

3. CONCRETE COVER:

TO BE AS FOLLOWS:	воттом	TOP	SIDES
PILE CAPS WALLS	3" -	2"	3" 15"
COLUMNS	-	-	15"
BEAMS	1.5"	1.5"	1.5"
SLABS	"	1"	Į"

4. REINFORCING STEEL:

TO BE NEW HIGH STRENGTH BILLET STEEL DEFORMED AS PER ASTM A-305, AND CONFORMING TO ASTM A-615± GRADE 60. LAP CONTINUOUS TOP AND BOTTOM BARS 48-BAR DIAMETERS, AT MID-SPAN FOR TOP, AND AT SUPPORTS FOR BOTTOM. PROVIDE "L" BARS 30" X 30" FOR TOP AND BOTTOM BARS, AT ALL CORNERS OF ALL TIE BEAMS.

HOOK DISCONTINUOUS ENDS OF ALL TOP BARS FOR STRUCTURAL BEAMS (NON TIE-BEAMS), REINFORCING STEEL TO BE DETAILED AND FABRICATED IN ACCORDANCE WITH "MANUAL OF STANDARD PRACTICE OF DETAILING REINFORCING CONCRETE STRUCTURES", AND THE ACI BUILDING CODE 318, LATEST EDITION. SUBMIT SHOP DRAWINGS FOR APPROVAL.

5. MASONRY:

- A. ALL CONCRETE BLOCK TO BE GRADE N-2, CONFORMING TO ASTM C-90, WITH A MINIMUM NET AREA COMPRESSIVE STRENGTH OF 1,900 PSI, AND A PRISM STRENGTH OF 1,500 PSI (MINIMUM). MORTAR SHALL BE TYPE M, WITH A MINIMUM STRENGTH OF 2,500 PSI (USE PORTLAND TYPE CEMENT).
- B. MASONRY WALLS SHALL BE REINFORCED HORIZONTALLY WITH 9 GAUGE DEFORMED GALVANIZED STEEL, SPACED AT 16" C/C VERTICAL. EXTEND HORIZONTAL REINFORCING 4" INTO ADJACENT COLUMNS. PROVIDE TRUSS TYPE FOR NON-REINFORCED MASONRY AND LADDER TYPE FOR REINFORCED MASONRY.
- C. FOR VERTICAL REINFORCEMENT, SEE SCHEDULE AND LAP 48 BAR DIAMETERS MINIMUM. PROVIDE FULL BED OF MORTAR FOR REINFORCED MASONRY. FOR GROUT USE 3,000 PSI GROUT MIX CONCRETE WITH 9" +/- 1" SLUMP.
- D. PROVIDE CLEANOUTS WHEN GROUTING BLOCK CELLS, AND CLEAN OUT BLOCK CELLS OF ALL MORTAR DROPPINGS. MAXIMUM VERTICAL DROP FOR GROUTING IS 4'-0".
- 6. PREFABRICATED METAL STAIRS/LADDERS AND RAILINGS:

CONTRACTOR TO PROVIDE FOR ALL PRE-FABRICATED METAL STAIRS AND METAL LADDERS, AND RAILINGS, SIGNED AND SEALED SHOP DRAWINGS, BY FLORIDA REGISTERED PROFESSIONAL ENGINEER, FOR APPROVAL BEFORE FABRICATION. CONNECTIONS OF THESE STAIRS AND LADDERS ALSO TO BE INCLUDED IN THE SHOP DRAWINGS. FOR RAILINGS, CONNECTIONS OF POSTS TO THE SLAB OR FLOOR ALSO TO BE INCLUDED IN THE SHOP DRAWINGS.

EXPANSION BOLTS:

ALL EXPANSION BOLTS, NOTED IN PLANS, ARE TO BE HILTI TYPE EXPANSION BOLTS, OR EQUAL. FOR SUBSTITUTION, SUBMIT TO STRUCTURAL ENGINEER FOR REVIEW AND HIS APPROVAL.

8. WIND DESIGN CRITERIA:

ALL STRUCTURAL ELEMENTS, EXPOSED TO WIND, HAVE BEEN DESIGNED PER THE GUIDELINES OF THE ASCE T-10 BUILDING CODE. FOR WIND UPLIFT ON THE ROOFS, USE ASCE 1-10 COMPONENTS AND

V = 175 MPH Gcpl = 0.18 (+/-) EXP. 'D'

9. STRUCTURAL STEEL:

STEEL TUBES AND PIPES TO BE FY = 46 KSI MINIMUM. SUBMIT SHOP DRAWINGS FOR APPROVAL BEFORE FABRICATION, ALL STRUCTURAL STEEL TO BE PAINTED WITH TWO COATS OF RUST-INHIBITIVE TYPE PAINT. ALL OTHER STEEL SHALL CONFORM TO ASTM A-36. DETAILED, FABRICATED AND ERECTED IN ACCORDANCE AISC SPECIFICATIONS, LATEST EDITION. STEEL COLUMN Fy=50 KSF.

ALL WELDING TO BE DONE BY COUNTY CERTIFIED WELDERS HOLDING CURRENT WELDING CERTIFICATES, AND MUST PRESENT SAME AT JOB SITE AT ALL TIMES.
ALL WELDING PER PLANS AND PER GUIDELINES OF THE AMERICAN WELDING SOCIETY.

11. SHOP DRAWINGS:

NO SHOP DRAWING SHALL BE SUBMITTED FOR ARCHITECT/ENGINEER'S REVIEW UNTIL AFTER THEY HAVE BEEN REVIEWED AND NOTED FOR CONSTRUCTION METHOD, DIMENSIONING, AND OTHER TRADE REQUIREMENTS BY THE CONTRACTOR, AND STAMPED WITH THE CONTRACTOR'S APPROVAL SEAL. ENGINEER ASSUMES NO RESPONSIBILITY FOR DIMENSIONS, QUANTITIES, ERRORS OR OMISSIONS, AS A RESULT OF CHECKING AND REVIEWING ANY SHOP DRAWINGS. ANY ERRORS OR OMISSIONS MUST BE MADE GOOD BY CONTRACTOR, IRRESPECTIVE OF RECEIPT, CHECKING OR REVIEW OF DRAWINGS BY ENGINEER, AND EVEN THOUGH WORK IS DONE IN ACCORDANCE WITH SUCH SHOP DRAWINGS.

12. PRE-FABRICATED FIXED AND SLIDING DOOR GLASS SYSTEMS:

CONTRACTOR TO PROVIDE SIGNED AND SEALED SHOP DRAWINGS, AND SIGNED AND SEALED CALCULATIONS, BY A FLORIDA REGISTERED PROFESSIONAL ENGINEER, FOR THE FOLLOWING ITEMS:

- I. THE COMPLETE GLASS ASSEMBLY AND COMPONENTS INCLUDING: GLASS, CONNECTIONS, AND FRAMES. SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION.
- 2. ALL FIXED AND SLIDING GLASS DOOR SYSTEMS/ASSEMBLIES INCLUDING: GLASS, CONNECTIONS, AND FRAMES. NOTE, ALL UNITSMANENT TO HAVE COUNTY PRODUCT APPROVALS.

13. DEWATERING:

MUST EVACUATE ALL WATER FROM WITHIN FORMWORK BEFORETEST PLACEMENT OF ANY CONCRETE. AFTER DEWATERING AND BEFORE PLACING CONCRETE, MUST RINSE THE REINFORCING STEEL CLEAN OF ALL DELETERIOUS MATERIAL IF PREVIOUSLY LEFT SUBMERGED.

14. DETAILS AND SECTIONS:

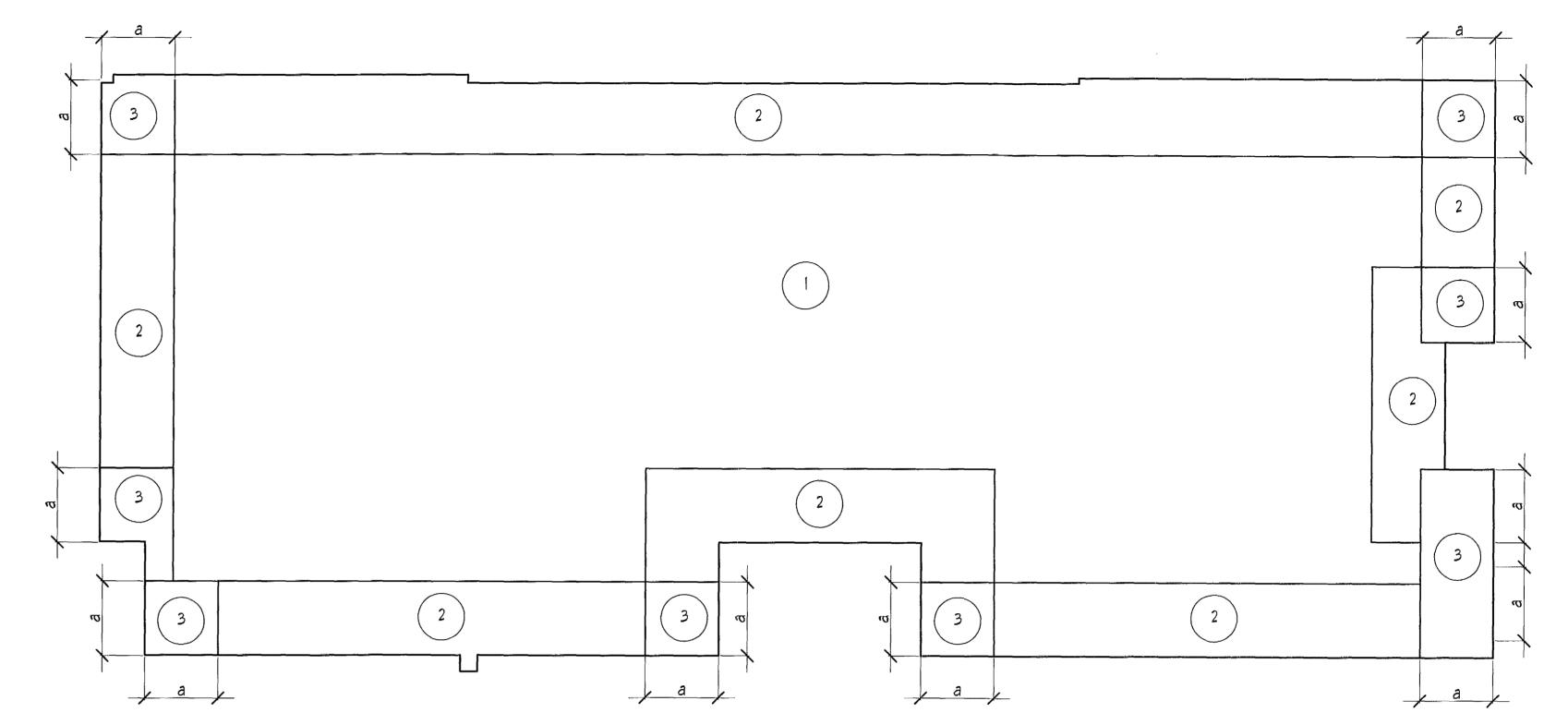
ALL DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED SIMILAR SITUATION ELSEWHERE ON THE PROJECT, UNLESS A DIFFERENT DETAIL, OR SECTION, IS SHOWN.

15. GENERAL:

THE CONTRACTOR SHALL USE THE STRUCTURAL DRAWINGS TOGETHER WITH THE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS TO LOCATE DEPRESSED SLABS, SLOPES, DRAINS, OUTLETS, RECESSES, OPENINGS, REGLETS, BOLT SETTINGS, SLEEVES, DIMENSIONS, ETC... POTENTIAL CONFLICTS SHALL BE TRANSMITTED TO THE ARCHITECT AND ENGINEER BEFORE PROCEEDING WITH THE WORK. CONTRACTOR TO PROVIDE ADEQUATE TIME FOR RESPONSE FROM ARCHITECT/ENGINEER.

16 GROUTING WITH HIGH STRENGTH NON-SHRINK GROUT:

USE OF A HIGH STRENGTH NON-SHRINK GROUT TO BE USED AS INDICATED IN THESE DOCUMENTS, OR AS REQUIRED FOR STRUCTURAL REPAIRS OR PATCHING. USE MASTERFLOW OR SIKA, OR EQUAL (SUBMIT TO ENGINEER FOR SUBSTITUTION). GROUT TO BE MIXED AS PER RECOMMENDATIONS OF MANUFACTURER. AREAS TO GROUTED MUST BE THOROUGHLY CLEANED OF ALL DEBRIS AND DELETERIOUS MATERIALS. GROUT THICKNESS TO BE AS SHOWN IN DOCUMENTS, HOWEVER, THICKNESS NOT TO EXCEED RECOMMENDATIONS OF MANUFACTURER IF REQUIRED, PROVIDE SEVERAL LAYERS, AS REQUIRED, IN ORDER TO ATT.



ROOF MEMBRANE WIND UPLIFT PRESSURES SCALE:3/16"=1'-0"



ATTAIN REQUIRED TOTAL THICKNESS.	
LARGER OF INTERMEDIATE REINF'G. LARGER OF EACH FACE. ### ### ### ### ### ### ### ### ### #	
"E" BAR NOTE 2 TOP BAR NOTE 2 TOP BAR	2
NOTE I At st BOTTOM BAR ALL STIRRUPS CLOSED, BOTTOM BAR SECTION A-A SECTION A-A	3
STD. HOOKS THRUOUT TOP AND BOTTOM L1 L2 STD. HOOKS THRUOUT TOP AND BOTTOM L1	NOTE: 1DO NOT R PRESSURE
TYPICAL BEAM DIAGRAM NOTES: 1. LARGER OF \$\frac{1}{2}(A^+ \(\text{ s1})\) OR \$\frac{1}{2}(A^+ \(\text{ s2})\) BUT NOT LESS THAN TWO BARS CONTINUOUS OR SPLICED WITH CLASS "B" SPLICES OR MECHANICAL OR WELDED SPLICE (ACI 7.1322 AND ACI 7.1323)	a = 3.6
2. ALL TOP BARS SPLICED WITH CLASS "B" SPLICES OR MECHANICAL OR WELDED SPLICES, AT MID-SPAN. "E" BARS ARE TOP BARS AT NON-CONTINUOUS ENDS, LEFT OR RIGHT.	

"C" BARS ARE TOP BARS OVER RIGHT INTERIOR SUPPORTS. TOP BARS CALLED FOR AS CONTINUOUS, WHEN SPLICED, SHALL BE SPLICED IN THE MIDDLE THIRD OF THE SPAN.

SEE NOTE 2 ABOVE.

ZONE	MEMBRANE NET WIND UPLIFT PRESSURES
	- 62 PSF
2	- 104 PSF
3	- 156 PSF

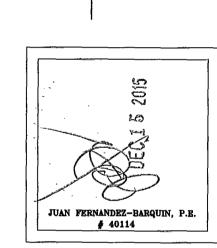
REDUCE WIND UPLIFT RE BY DEAD LOAD

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12-15-2015 : BLDG, DEPT, COMMENTS.

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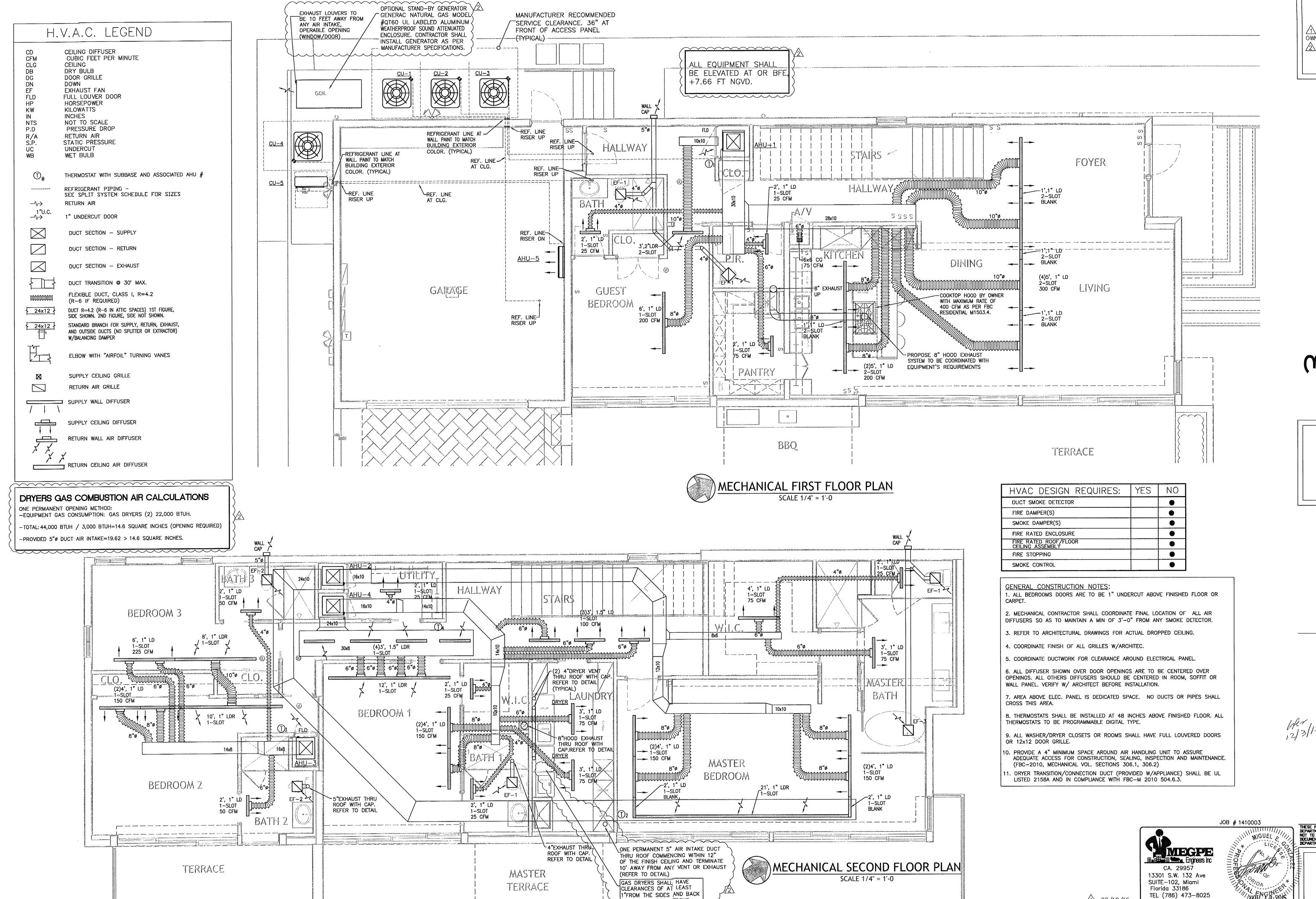
NEW RESIDENCE

DATE: 10-20-2014

THESE PLANS ARE FOR BUILDING
DEPARTMENT REVIEW ONLY. THEY ARE NOT
TO BE CONSTRUED AS CONSTRUCTION
DOCUMENTS UNTIL ALL BUILDING
DEPARTMENT APPROVALS ARE OBTAINED.

S-16

GENERAL NOTES & ROOF MEMBRANE WIND **UPLIFT PRESSURES**



AND 6" FROM THE FRONT

DRAWN BY: REVISIONS: <u>/1</u>\ 08/10/15 OWNER CHANGES <u>∕2</u> 11/13/15 BDC

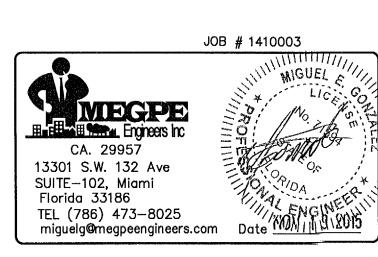
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SEAL

M-1

10F3



<u>/1</u> 08/10/15

NOT VALID FOR CONSTRUCTION UNLESS SIGNED AND SEALED IN THIS BLOCK

CONSTRUCTION DOCUMENTS SET. 12.10.2014

GENERAL H.V.A.C. NOTES

- 1.1. ALL WORK TO BE PERFORMED UNDER THESE DOCUMENTS SHALL CONFORM WITH THE FLORIDA BUILDING CODE 2010 EDITION, AND ALL OTHER APPLICABLE STATE AND LOCAL REGULATIONS AND ORDINANCES.
- ALL WORK SHALL BE PERFORMED BY A LICENSED AND INSURED MECHANICAL CONTRACTOR, IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETE SYSTEM SHALL BE FULLY OPERATIVE AFTER COMPLETION OF WORK. MECHANICAL CONTRACTOR SHALL FURNISH WRITTEN GUARANTEE THAT THE INSTALLED SYSTEM SHALL BE FREE OF MATERIALS AND WORKMANSHIP DEFECTS FOR A PERIOD OF ONE YEAR FROM FINAL ACCEPTANCE BY THE
- 1.4. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR OBTAINING HIS OWN PERMIT AND PAYING ALL PERMIT AND
- 1.5. SUBMIT SHOP DRAWINGS FOR ACCEPTANCE BY THE ARCHITECT AND/OR ENGINEER BEFORE PROCEEDING WITH PURCHASE OR INSTALLATION OF THE EQUIPMENT AND MATERIALS
- THE CONTRACTOR SHALL PROVIDE A SET OF PRINTS CLEARLY MARKED TO SHOW AS-BUILT CONDITIONS AT THE COMPLETION OF CONSTRUCTION. 1.7. INTERRUPTION OF EXISTING FACILITIES AND/OR SERVICES SHALL BE KEPT TO A MINIMUM. THE CONTRACTOR
- SHALL FURNISH ALL MATERIALS REQUIRED WHENEVER TEMPORARY CONNECTIONS ARE NECESSARY TO MAINTAIN CONTINUITY OF SERVICES. COORDINATE ALL INTERRUPTIONS WITH OWNER. 1.8. PRECAUTIONS SHALL BE TAKEN TO PREVENT CONTAMINATION OF OWNER EQUIPMENT, FURNITURE AND CARPETING WITHIN THIS BUILDING. COVER AND WRAP EQUIPMENT, FURNITURE AND CARPETING AS NECESSARY. DUST AND DEBRIS SHALL BE STRICTLY CONTROLLED. CLOSE COORDINATION WITH OWNER WILL BE REQUIRED.
- DURING CONSTRUCTION CONTRACTOR SHALL FOLLOW THE "SMACNA" 1995 "INDOOR AIR QUALITY GUIDELINES FOR OCCUPIED BUILDINGS UNDER CONSTRUCTION". 1.9. ALL BUILDING CONSTRUCTION AFFECTED BY THE REMOVAL, RELOCATION OR INSTALLATION OF ANY PIECE OF EQUIPMENT SHALL BE REPAIRED AND FINISHED AS REQUIRED TO MATCH EXISTING CONDITIONS, OR AS DIRECTED
- BY THE ARCHITECTURAL DRAWINGS AND / OR SPECIFICATIONS. 1.10. IF ANY CONFLICT IS ENCOUNTERED WITHIN THE DESIGN DOCUMENTS, REGARDLESS OF TRADE OR RESPONSIBILITY, THE GREATER SCOPE OF WORK SHALL PREVAIL, AND ARCHITECT AND/OR ENGINEER SHALL BE ADVISED.

FIELD VERIFICATION

- ALL WORK SHALL BE FIELD VERIFIED BEFORE INSTALLATION AND COORDINATED WITH ALL OTHER TRADES. 2.2. WHERE INTERFERENCES OCCUR AND DEPARTURES FROM INDICATED DESIGN WILL BE REQUIRED TO DETERMINE CHANGES ON LOCATIONS, SIZES AND ELEVATIONS OF PIPING, DUCTWORK, ETC. THE CONTRACTOR SHALL SUBMIT A WRITTEN REQUEST FOR THE CHANGE ACCOMPANIED BY A DETAILED DRAWING FOR APPROVAL FROM ARCHITECT/ ENGINEER PRIOR TO PROCEEDING WITH ANY CHANGE OR DEPARTURES FROM EXISTING CONTRACT.
- 2.3. COORDINATE LOCATION OF DUCTWORK WITH OTHER TRADES, PARTICULARLY WHERE DUCTS RUN THROUGH STRUCTURAL ELEMENTS. PROVIDE ALL NECESSARY SLEEVES BEFORE CONCRETE IS POURED. 2.4. CONTRACTOR SHALL VERIFY EXISTING DUCTWORK SIZES WHICH CONNECT TO NEW DUCTWORK BEFORE
- ABRICATION AND INSTALLATION. 2.5. CONTRACTOR SHALL VERIFY EXISTING PIPING SIZES WHICH CONNECT TO NEW PIPING BEFORE FABRICATION AND 2.6. BEFORE CUTTING OR MAKING OPENINGS IN ANY BUILDING COMPONENT, CONTRACTOR SHALL VERIFY USING ANY

REQUIRED MEANS THAT ITS LOAD BEARING CAPABILITY IS NOT COMPROMISED IN ANY MATTER.

NOT USED.

- 4.1. ALL MECHANICAL EQUIPMENT LOCATED ON THE EXTERIOR OF THE BUILDING SHALL BE CONSTRUCTED AND
- INSTALLED TO WITHSTAND HURRICANE FORCE WINDS FROM ANY DIRECTION. 4.2. MECHANICAL EQUIPMENT SHALL BE SUPPORTED PER MANUFACTURER RECOMMENDATIONS AND AS REQUIRED FOR APPLICABLE CODES AND STANDARDS, USING SOUND INDUSTRY STANDARD PRACTICES. STRUCTURAL ENGINEER DESIGN AND RECOMMENDATIONS SHALL BE FOLLOW. SUBMIT SHOP DRAWINGS OF ALL SUPPORTING STRUCTURES THAT CLEARLY INDICATE SIZES, MATERIAL, DESIGN AND PRODUCT APPROVAL NUMBERS.
- 4.3. VIBRATION ISOLATORS SHALL BE PROVIDED FOR ALL MECHANICAL EQUIPMENT WITH MOVING AND/OR ROTARY PARTS. SUBMIT SHOP DRAWINGS SHOWING, BUT NOT LIMITED, ISOLATION PERFORMANCE AND ALLOWABLE
- 4.4. PROVIDE FOR ALL OUTDOOR MOUNTED EQUIPMENT SURFACE AND COIL PROTECTION AGAINST CORROSION DUE TO PROXIMITY TO MARINE AND/OR CORROSIVE ENVIRONMENT. 4.5. CONTROL WIRING SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR. THE CONTRACTOR SHALL
- FURNISH ALL MOTORS, STARTERS AND RELAYS, ETC., TO CONFORM A FULLY OPERATING SYSTEM. COORDINATE WITH THE ELECTRICAL DIVISION ALL WORK RELATED TO THE MECHANICAL SYSTEMS. 4.6. INSULATE REFRIGERANT SUCTION PIPING WITH 1/2" MINIMUM FIRE RESISTANT FOAM, PLASTIC OR CLOSED CELL POLYETHYLENE PRE-MOLDED PIPE INSULATION WITH THERMAL RESISTIVITY OF AT LEAST R-4 AND EXTERNAL SURFACE PERMEANCE NOT EXCEEDING 0.05 PERM, ALSO IT SHALL CONFORM WITH ASTM E 84 FLAME SPREAD
- AND SMOKE DEVELOPMENT INDEX 25/50. 4.7. CONDENSATE DRAIN PIPING INSTALLED ON NON-AIR CONDITIONED SPACES SHALL BE PROPERLY INSULATED. 4.8. REFRIGERANT PIPING SHALL BE SEAMLESS COPPER TYPE "L" HARD OR SOFT DRAWN ACR COPPER TUBING WITH WROUGHT COPPER SOLDER JOINT FITTINGS. SOLDER SHALL BE EQUAL TO HARRIS"S "STAY—SILV 15", 15%
- 4.9. OPERATING AND MAINTENANCE MANUAL SHALL BE PROVIDED TO THE BUILDING OWNER BY THE MECHANICAL CONTRACTOR. THE MANUAL SHALL INCLUDE, AT LEAST, THE FOLLOWING:
- -EQUIPMENT CAPACITY (INPUT AND OUTPUT) AND REQUIRED MAINTENANCE ACTIONS -EQUIPMENT OPERATION AND MAINTENANCE MANUALS. -HVAC SYSTEM CONTROL MAINTENANCE AND CALIBRATION INFORMATION, INCLUDING WIRING DIAGRAMS, SCHEMATICS, AND CONTROL SEQUENCE DESCRIPTIONS. DESIRED OR FIELD-DETERMINED SETPOINTS SHALL BE PERMANENTLY RECORDED ON CONTROL DRAWINGS, AT CONTROL DEVICES OR, FOR DIGITAL CONTROL SYSTEMS, IN PROGRAMMING COMMENTS.
- MANUALS SHALL BE SUBMITTED TO THE ENGINEER FOR ACCEPTANCE. 4.10. EQUIPMENT DATA SHOWN IN THE EQUIPMENT SCHEDULES IS BASED ON MANUFACTURER'S ACTUAL CATALOG. VERIFY THIS INFORMATION WITH MANUFACTURERS PRIOR TO PURCHASING OR INSTALLING ANY EQUIPMENT. MANUFACTURER'S NAMES SHALL BE INTERPRETED AS ESTABLISHMENT OF REQUIRED TYPE CLASS AND QUALITY. ALL SUBSTITUTIONS SHALL BE APPROVED BY THE PROJECT ENGINEER.
- PROVIDE ALL NECESSARY INSTRUCTIONS TO THE OWNER IN THE OPERATION OF THE MECHANICAL SYSTEM. 4.12. SEE EQUIPMENT SCHEDULES ON DRAWINGS FOR INFORMATION ON ALL SPECIFIED EQUIPMENT FOR THIS JOB.

DUCTWORK

- 5.7. PROVIDE ALL NECESSARY ACCESS PANELS TO CONTROL VALVES, DAMPERS, SENSORS, AND ANY OTHER DEVICES
- NON-ACCESSIBLE OTHERWISE. 5.8. ALL SIZES SHOWN FOR LINED AND UNLINED DUCTS ARE CLEAR INSIDE DUCT DIMENSIONS.

-A COMPLETE WRITTEN NARRATIVE OF HOW EACH SYSTEM IS INTENDED TO OPERATE.

- 5.9. CONDITIONED AIR DUCTWORK, SHALL BE CLASS "ONE" FIBER GLASS DUCT BOARD IN ACCORDANCE WITH SMACNA'S FIBROUS DUCT STANDARDS. INSULATION SHALL HAVE THE REQUIRED DENSITY AND THICKNESS TO PROVIDE A MINIMUM INSULATION VALUE OF R-6. 5.10. PROVIDE VOLUME DAMPERS, TURNING VANES, ETC., IN DUCTWORK FOR PROPER AIR FLOW AND BALANCE.
- PROVIDE MULTIPLE VANE EXTRACTORS OR SPLITTERS WITH CONTROL RODS AT ALL OUTLETS CONNECTED CLOSER THAN TWO DUCT DIAMETERS TO MAIN SUPPLY DUCT AND WHERE SHOWN. 5.11. VENTILATION AND EXHAUST AIR DUCTWORK SHALL BE OF SHEET METAL CONSTRUCTION PER SMACNA'S
- STANDARDS. 5.12. EXHAUST VENTS SHALL BE LOCATED 10' MINIMUM DISTANCE FROM ANY OUTSIDE AIR INTAKE. 5.13. SEE SCHEDULES ON PLANS FOR AIR DISTRIBUTION DEVICES SPECIFICATIONS.

TEST AND BALANCING

- 6.1. BALANCE ALL SYSTEMS TO PROVIDE FLOW QUANTITIES AND CAPACITIES AS INDICATED ON DRAWINGS, INCLUDING EXISITNG SYSTEMS AND V.A.V. SYSTEMS.
- 6.2. PERFORM A COMPLETE OPERATING AND BALANCING TEST OF THE FINISHED SYSTEM. PROVIDE WRITTEN REPORT OF THE RESULT OF THIS TEST STATING THE ACCEPTABILITY OF THE SYSTEM AND COMPLIANCE WITH THE DESIGN DOCUMENTS. TEST AND BALANCE AGENCY SHALL BE AN INDEPENDENT, AABC OR NEBB CERTIFIED AGENCY, AND SHALL BE RETAINED BY THE OWNER. CONTRACTOR SHALL COORDINATE WITH OWNER AND TESTING AND COMMISSIONING AGENCY ALL WORK FOR FINAL CERTIFICATION OF THE HVAC SYSTEM.
- IT IS THE RESPONSIBILITY OF THE TEST AND BALANCING TO RESET AND BALANCE ALL COMPONENTS OF THE AIR CONDITIONING UNITS SYSTEM SERVING THE TENANT, AND ALL OTHER BUILDING SYSTEMS SUPPORTING THE ABOVE MENTIONED DEVICES.

	SPLIT A/C EC	QUIPMENT SO	CHEDULE-1		\triangle
	UNIT DESIGNATION		AHU-1	> AHU-2,4 <	AHU-3
	AREA SERVED	- 14	SEE PLAN	SEE PLAN <	SEE PLAN
	UNIT MANUFACTURER		YORK	YORK	YORK
	MODEL NUMBER		AHV60D	> AHV48D <	AHE18B
	NOMINAL TONS		5.0	2.0	1.5
	SYSTEM SEER		15.3) 16.25	16.25
	TOTAL AIR SUPPLY	CFM	2,000	1,600	600
1	OUTSIDE AIR	CFM		<	===
TINIT ST	RETURN AIR	CFM	2,000) 1,600	600
AIR HANDLING	EXTERNAL STATIC PRESSURE	IN.W.G.	0.5	0.5	0.3
₹ 1 ~	FAN SIZE	НР	3/4	1/3	1/3
A R	FAN MOTOR FLA	AMP	4.9	2.8	2.8
	ENTERING AIR TEMPERATURE	(DB/WB)* F	75 / 63	75 / 63	75 / 63
	LEAVING AIR TEMPERATURE	(DB/WB) F	55/55	55/55	55/55
	TOTAL COOLING COIL CAPACITY	мвн	53.1	43.3	16.8
	TOTAL SENSIBLE HEAT	МВН	35.2	29.8	12.1
	TOTAL HEATING CAPACITY	МВН	26.3	16.4	8.2
	ELECTRIC HEATER SIZE (240 V)	Kw	7.7	4.8	2.4
	MCA / MOCP	AMP	46.2/50	28.5/30	16/20
	ELECTRICAL CHARACTERISTICS	V/PH/Hz	240/1/60	240/1/60	240/1/60
	DIMENSIONS (HxWxD)	in.	57/24.5/21.5	57/24.5/21.5	46/21.5/175
	WEIGHT	lbs.	157	154	115
	UNIT DESIGNATION		CU-1	CU-2,4) CU-3
	UNIT MANUFACTURER		YORK	YORK <	YORK
	MODEL NUMBER		CZH06011	CZH04811 <	YCJF18S4
FZ	LOCATION		ROOF	GROUND) ROOF
	AMBIENT TEMPERATURE	• F	95	> 95	95
CONDENSING	REFRIGERANT	R	R-410A	R-410A	R-410A
Š Š	MIN. REFR. LINES SIZES (LIQ/GAS	S) in.	3/8 / 7/8	3/8 / 7/8	3/8 / 3/4
	COMPRESSOR MOTOR FLA	AMP	25.6	→ 10.3 _{<}	9.0
COOLED	FAN MOTOR SIZE	НР	1/3	1/3	1/8
AIR O	FAN MOTOR FLA	AMP	2.8	2.8	0.8
`	MCA / MOCP	AMP	34.8/60	> 15.6/25 _{<}	12/20
	ELECTRICAL CHARACTERISTICS	V/PH/Hz	240/1/60	240/1/60	240/1/60
	DIMENSIONS (HxWxD)	in.	40/42/34	40/42/34	28/29/29
	WEIGHT	lbs.	330	> 310	125
SF	PLIT A/C EQUIPMENT NOTES	AND ACCES	ORIES:		

SPLIT A/C EQUIPMENT NOTES AND ACCESORIES:

- SIZE REFRIGERATION PIPING AS PER MANUFACTURER RECOMMENDATIONS. OVERSIZE LINES AS REQUIRED TO COMPENSATE FOR LINE LOSS WITH MINIMUM CAPACITY REDUCTION. SUBMIT SHOP
- 2. AIR HANDLING UNIT SHALL CONTAIN SOLID STATE INTERLOCK BOARD WITH BUILT IN FUSE AND TIME DELAY RELAY.
- 3. PROVIDE 5 YEAR WARRANTY ON ALL REFRIGERATION COMPONENTS. PROVIDE ALL RELAYS, TRANSFORMERS, ETC. AS REQUIRED FOR COMPLETE OPERATING SYSTEM. PROVIDE A 1 INCH THICK, THROWAWAY TYPE FILTER WITH A 30% MINIMUM EFFICIENCY. UNIT CONSTRUCTION AND INSTALLATION SHALL GUARANTEE AN EASY ACCESS TO FILTER SECTION
- FOR PROPER FILTER INSPECTION AND REPLACEMENT. 6. UNIT INSULATION AND UNIT ADHESIVE SHALL COMPLY WITH NFPA 90A REQUIREMENTS FOR FLAME SPREAD AND SMOKE GENERATION. INSULATION SHALL CONTAIN AN EPA REGISTERED IMMOBILIZED ANTI-MICROBIAL AGENT TO EFFECTIVELY RESIST THE GROWTH OF BACTERIA AND FUNGI IN ACCORDANCE WITH ASTM STANDARDS G21 AND G22.
- FAN MOTOR SHALL BE HIGH EFFICIENCY TYPE. 8. FAN AND MOTORS SHALL BE PROVIDED WITH CIRCUIT PROTECTION.
- 9. CONDENSATE DRAIN PANS SHALL BE INSULATED AND SLOPED TO OUTLET. PANS SHALL HAVE STAINLESS STEEL LINERS. 10. SUPPORT UNIT HIGH ENOUGH TO ACCOMMODATE CONDENSATE DRAIN TRAPS IN ACCORDANCE
- WITH MANUFACTURER'S RECOMMENDATIONS. . THE FAN DRIVE SHALL BE SELECTED FOR 125% OF THE MOTOR RATED HORSEPOWER.
- 12. CONTRACTOR SHALL GUARANTEE ADECUATE CLEARANCE ALL AROUND THE UNIT FOR MAINTENANCE ACCESS. 13. CONDENSING UNIT SHALL BE INSTALLED TO WITHSTAND WIND PRESSURE FROM ANY DIRECTION
- AS PER THE "HVHZ" REQUIREMENTS OF THE F.B.C. 14. PROVIDE SINGLE STAGE FOR AHU-3 AND 2 STAGES FOR AHU-1,2 PROGRAMABLE, DIGITAL
- THERMOSTAT AS RECOMMENDED BY UNITS MANUFACTURER AND SHALL BE CAPABLE OF
- PROVIDING AFTER HOURS SET BACK FOR ENERGY EFFICIENCY PURPOSES. 15. PROVIDE APPROVED ELECTRONIC WATER LEVEL DETECTOR. DETECTOR SHALL SHUT DOWN THE
- UNIT UPON DETECTION OF CONDENSATE HIGH LEVEL. 16. CORROSION PROTECTION COATING FOR ALL EXTERIOR CONDENSER COILS AND EQUIPMENT CABINETS.

	SPLIT A/	C SYSTEM S	SCHEDULE-2	
	UNIT NUMBER		(AHU-5)	L
A	MANUFACTURER		MITSUBISHI	١
Î	MODEL NUMBER	· · · · · · · · · · · · · · · · · · ·	MSZ-GE18NA	L
Ř	NOMINAL TONS		1.5	
	TOTAL C.F.M.		600	-
H	C.F.M. OA			١
A	ENT. AIR TEMP. 'F	(DB/WB)	75/63	-
Ň	BLOWER MOTOR F		1.0 AMP	
Ď	VOLTAGE		24 V	+
TT	UNIT WEIGHT (LBS		22	1
U N	MATCHING COND.	UNIT	(ČU-5 \\	ŀ
I	AUX. ELECTRIC STRIP HEATER	KW		
Ť	STRIP HEATER (INSIDE OF UNIT)	BTUH	***	r
•	(INSIDE OF CIVITY	STAGE	_	
		VOLTAGE	1	ľ
~	UNIT NUMBER		(CU-5)	
Č	MANUFACTURER		MĬŤSŰBĬŚHI	Γ
O N	MODEL NUMBER		MUY-GE18NA	L
	NOMINAL TONS		1.5	
Ď	No. OF COMPRESS	SORS	1	ļ
U	R.L.A. EACH		10.0	
N	No. OF CONDENSE	R FANS	1	
Ï	F.L.A. EACH		0.93	
Ť	VOLTAGE		240-1-60	ŀ
	MCA/MOCP		14/20	
	WEIGHT (LBS.)		119	\vdash
	SENSIBLE COOLING		13.6	1
	TOTAL COOLING CA	APACITY (MBH)	17.2	F
Q	S.E.E.R./E.E.R.		19.2/	l
ν V	TOTAL HEATING CA	PACITY (MBH)	21.6	H
Ŝ	C.O.P./H.S.P.F.		/10.0	
S Y S T	LIQUID LINE (IN.)		1/4	ŀ
E	SUCTION LINE (IN.)	1/2	
M	AREA SERVED		GARAGE	
				L

A SCHEDULE-2		FAN SC	HEDULE		
MITSUBISHI MSZ-GE18NA	UNIT NUMBER		EF-1	EF-2	EF-3
1.5 600	AREA SERVED		BATHROOMS	BATHROOMS	BATHROOMS
75/63	LOCATION		CEILING	CEILING	CEILING
1.0 AMP	DUTY SU	PPLY / EXHAUST	EXHAUST	EXHAUST	EXHAUST
24 V 22 (ČIL) 5 V	FAN TYPE		CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL
ČU−5 11	DRIVE	BELT / DIRECT	DIRECT	DIRECT	DIRECT
-	FAN SPEED	RPM	करण स्टब्स क्रम		
QU-5	AIR QUANTITY	CFM	50	64	98
MITSUBISHI MUY-GE18NA	TOTAL STATIC PRESSURE	"H ₂ O	0.2	0.2	0.2
1.5	OPENING REQUIRED	. IN			<u> </u>
10.0	FAN MOTOR	AMP.	0.5	0.4	0.6
0.93 240-1-60	ELECTRICAL CHARACT.	√/Ø/Hz	120/1/60	120/1/60	120/1/60
14/20	MANUFACTURER	1	соок	соок	соок
H) 13.6 17.2	MODEL NUMBER		GC-122	GC-124	GC-144
19.2/	WEIGHT	lbs.	15	15	15
21.6	REMARKS	48	12	1)2	12
1/4 1/2 GARAGE		LID STATE SPEED CO	DNTROL		

3. NOT USED.

- I. SINGLE STAGE HEAT/COOL DIGITAL PROGRAMMABLE THERMOSTAT. 2. REF. LINES SIZE AND REFRIGERANT CHARGE AS PER MANUFACTURER'S RECOMMENDATIONS.
- 4. INSULATE SUCTION LINES WITH 3/4" SLIP ON ARMAFLEX APPROVED FOR OUTDOOR USE; PAINTED WHITE WHERE EXPOSED WITH U.V. RESISTANT PAINT. USE ONLY 90° LONG RADIUS FITTINGS. 5. MANUFACTURER/PROVIDER SHALL VERIFY LISTED CAPACITIES AND
- 6. USE ONLY 90° LONG RADIUS FITTING IN CONDENSATE LINES. 7. PROVIDE 3/4" RUBBER ISOLATOR PADS FOR COND. UNITS (MASON INDUSTRIES SUPER-W PADS OR EQUAL) (SEE DETAIL).
- 8. CLEAR WEATHER PROOF I.D. ON ALL CU'S INDICATING WHICH UNIT IT SERVES. 9. FACTORY PROVIDED DRAIN PAN MICRO-FLOAT SWITCH IN PRIMARY
- 10. CORROSION PROTECTION COATING FOR ALL EXTERIOR CONDENSER COILS AND EQUIPMENT CABINETS.

DISTRIBUTION PRODUCTS PRIOR TO ORDERING.

GENERAL AND HVAC CONTRACTOR TO COORDINATE FINISH AND COLOR OF ALL AIR

FAN SCHEDULE										
UNIT NUMBER		EF-1	EF-2	EF-3						
AREA SERVED		BATHROOMS	BATHROOMS	BATHROOMS						
LOCATION		CEILING	CEILING	CEILING						
DUTY	SUPPLY / EXHAUST	EXHAUST	EXHAUST	EXHAUST						
FAN TYPE	3	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL						
DRIVE	BELT; ∕ DIRECT	DIRECT	DIRECT	DIRECT						
FAN SPEED	RPM			****						
AIR QUANTITY	CFM	50	64	98						
TOTAL STATIC PRESSUR	E "H ₂ O	0.2	0.2	0.2						
OPENING REQUIRED	. IN									
FAN MOTOR	AMP.	0.5	0.4	0.6						
ELECTRICAL CHARACT.	√/ø/Hz	120/1/60	120/1/60	120/1/60						
MANUFACTURER	1	COOK	соок	соок						
MODEL NUMBER		GC-122	GC-124	GC-144						
WEIGHT	lbs.	15	15	15						
REMARKS		12	12	02						

AIR DISTRIBUTION SCHEDULE SYMBOL DESCRIPTION MANUFACTURER MODEL NUMBER MATERIAL REMARKS TITUS CG 300F SERIES ALUMINUM W/ O.B.D. CEILING GRILLE (OR EQUIVALENT) PATTERN CONTROLLER. INLET DAMPER AND INSULATED FLOWBAR DIFFUSER TITUS ALUMINUM LD/LD1 FT SERIES (OR EQUIVALENT LDR FLOWBAR RETURN TITUS FT SERIES ALUMINUM (OR EQUIVALENT

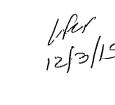
SEAL

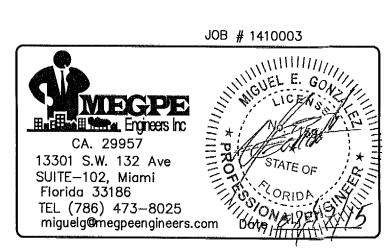
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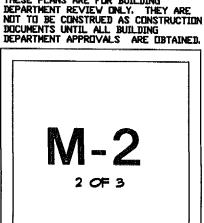
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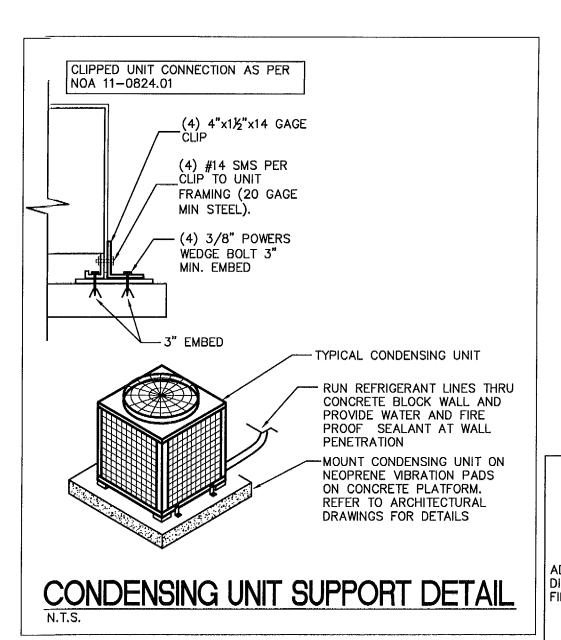
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<u>/1\</u> 08/10/15 OWNER CHANGES









SEAL JOINT WITH — DUCT SEALER

AND TAPE

MANUAL ---

VOLUME DAMPER

BAND

SPIN COLLAR ---

AND EXTRACTOR

WITH DAMPER

LOW VELOCITY SUPPLY AIR ____

DUCT (SEE PLAN VIEW)

VOLUME DAMPER

INSTALL FLEXIBLE DUCT-

INSULATED AND VAPOR SEALED

DIFFUSER

FOLLOW SMACNA DUCT

CONSTRUCTION STANDARDS

COLLAR AND DIFFUSER BACK -

FLEXIBLE DUCT CONNECTION DETAIL

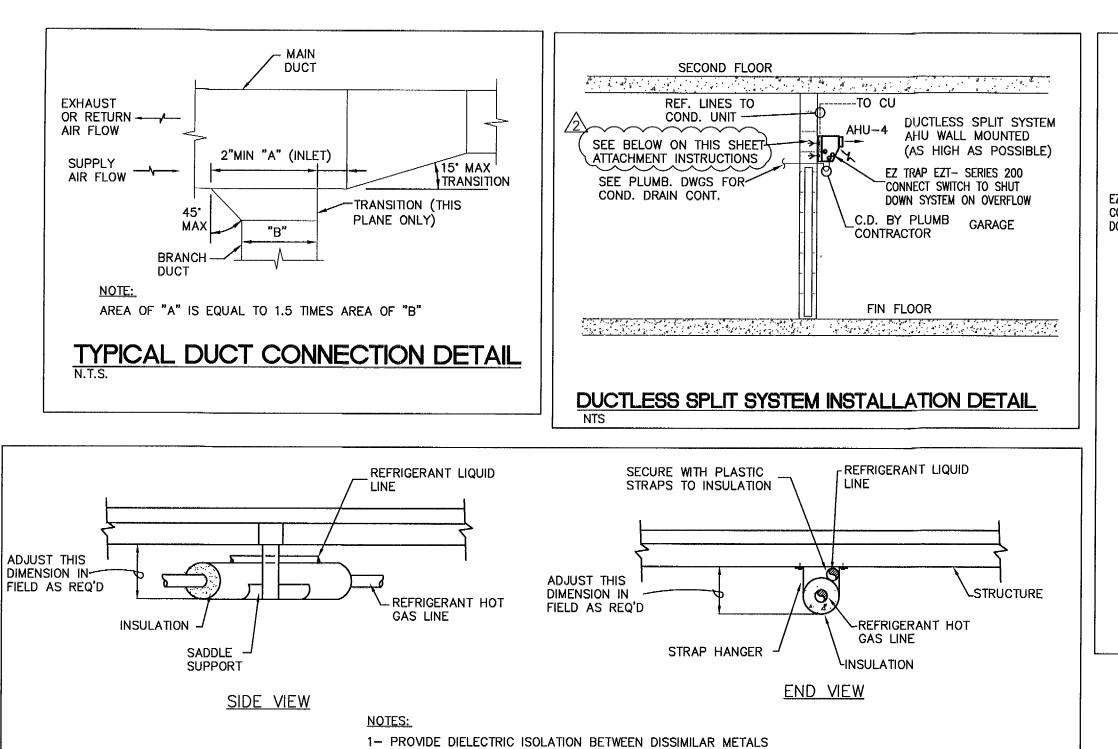
SUPPORT AS REQUIRED

FOR NO SAG.

FLOW

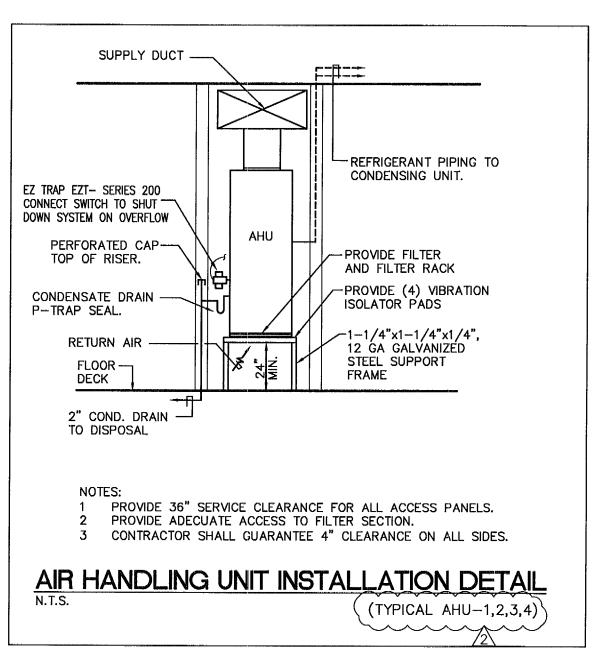
DETAIL

N.T.S.



2- PROVIDE SADDLE PROTECTION AT EACH SUPPORT

TYPICAL REFRIGERANT PIPING HANGER DETAIL



EXTERIOR WALL

SHEET METAL DUCT

SEE PLANS FOR SIZES.

BACK DRAFT

VIBRATION HANGER -

WITH NEOPRENE ISOLATOR

(TYPICAL OF 4)

. PROVIDE

CEILING GRILLE.

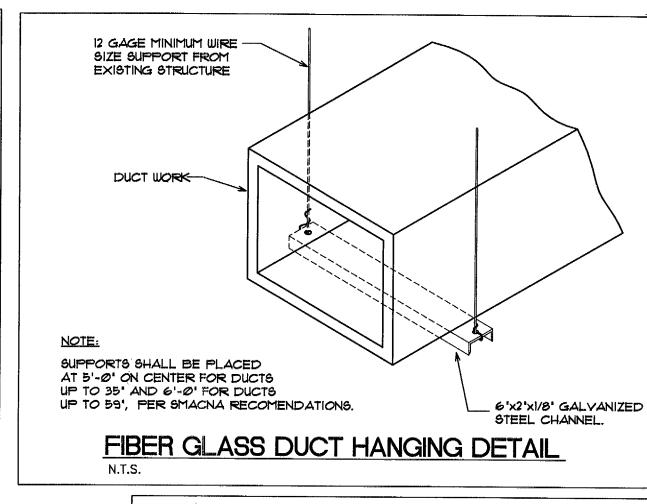
COORDINATE COLOR SELECTION WITH ARCHITECT.

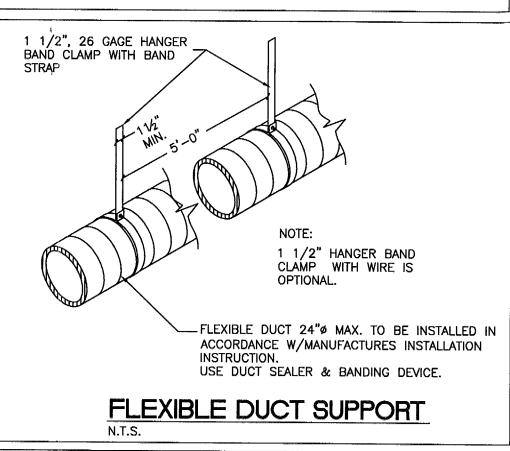
BACKDRAFT

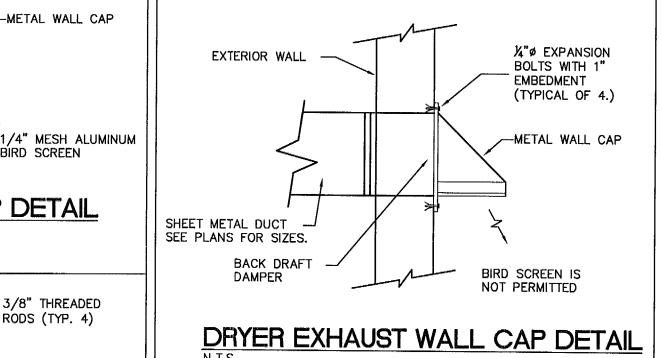
STRUCTURE

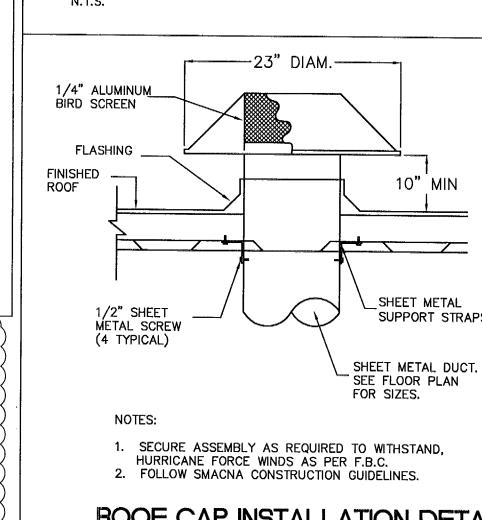
DAMPER.
2. SUPPORT FAN
FROM

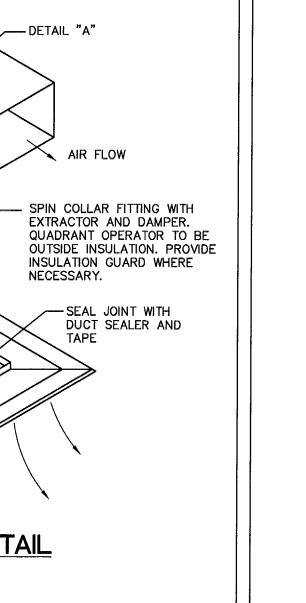
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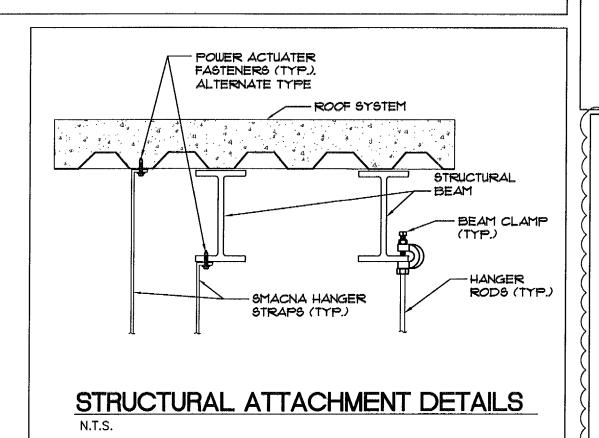


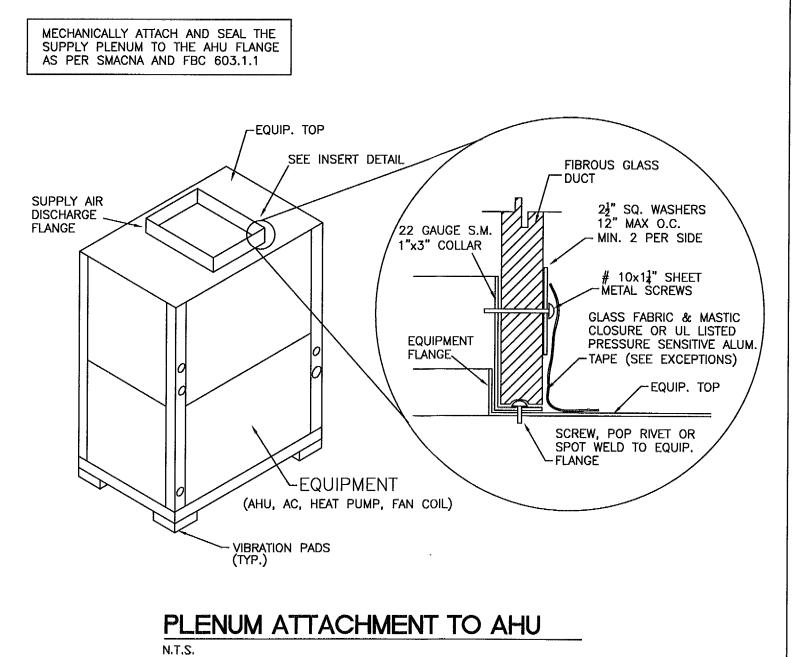












AHU-5 MANUFACTURER WALL ATTACHMENT INSTRUCTIONS:

. ATTACHING THE INSTALLATION PLATE: ·FIND A STUD IN THE WALL TO ATTACH INSTALLATION PLATE (1) HORIZONTALLY ON THE WALL WITH

AS PER SMACNA FIBROUS GLASS DUCT CONSTRUCTION STANDARDS. - PAGE 2.14 (FIG 2-25)

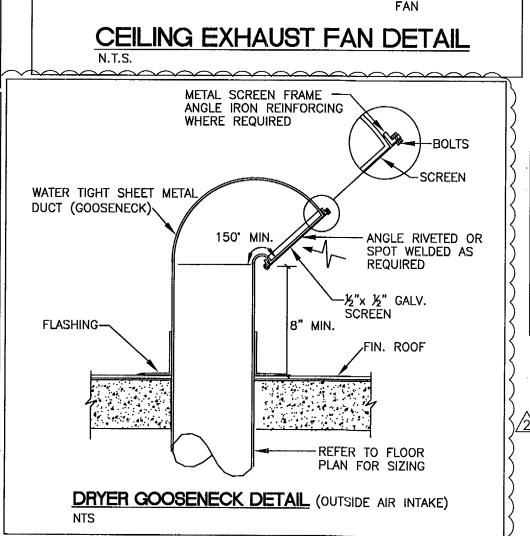
•TO PREVENT INSTALLATION PLATE (1) FROM VIBRATING, BE SURE TO INSTALL THE ATTACHMENT SCREWS IN THE HOLES INDICATED IN THE ILLUSTRATION. FOR ADDED SUPPORT, ADDITIONAL SCREWS MAY ALSO BE INSTALLED IN OTHER HOLES. ·WHEN THE INDOOR UNIT IS TO BE ATTACHED TO A CONCRETE WALL USING RECESSED BOLTS.

SECURE INSTALLATION PLATE (1) USING 7/16 IN. X 13/16 IN. × 7/16 IN. X 1 IN. (11 MM × 20 MM · 11 MM×26 MM) OVAL HOLE (17-3/4 IN. [450 MM] PITCH).

·IF THE RECESSED BOLT IS TOO LONG, CHANGE IT FOR A SHORTER ONE (FIELD-SUPPLIED). 1) DETERMINE WHERE THE HOLES WILL BE LOCATED ON THE WALL.

2) DRILL A \emptyset 3 IN. (75 MM) HOLE. THE OUTDOOR SIDE SHOULD BE 6/32 TO 9/32 IN. (5 TO 7 MM) LOWER THAN THE INDOOR SIDE.

3) INSERT WALL HOLE SLEEVE (C).



¼"ø EXPANSION

(TYPICAL OF 4.)

-METAL WALL CAP

BOLTS WITH 1"

EMBEDMENT

BIRD SCREEN

3/8" THREADED

SHEETMETAL

DUCTWORK

(SEE PLANS FOR DUCT

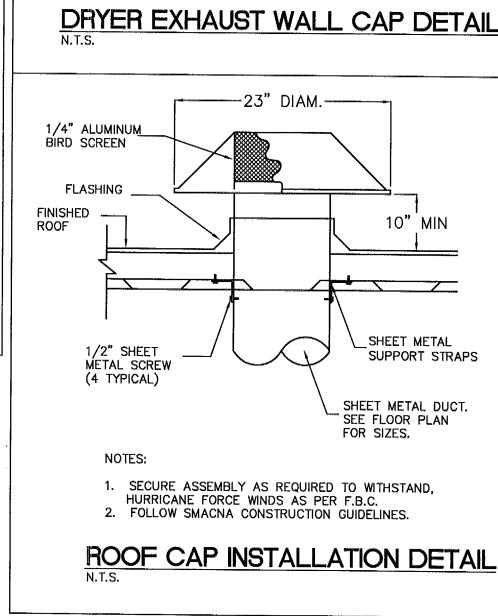
FLEXIBLE

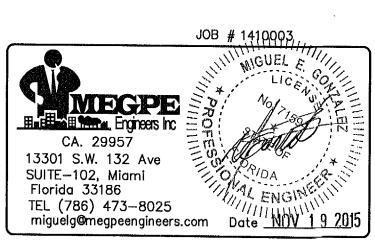
CONNECTION

SIZES)

RODS (TYP. 4)

EXHAUST WALL CAP DETAIL





M-33 OF 3

DRAWN BY:

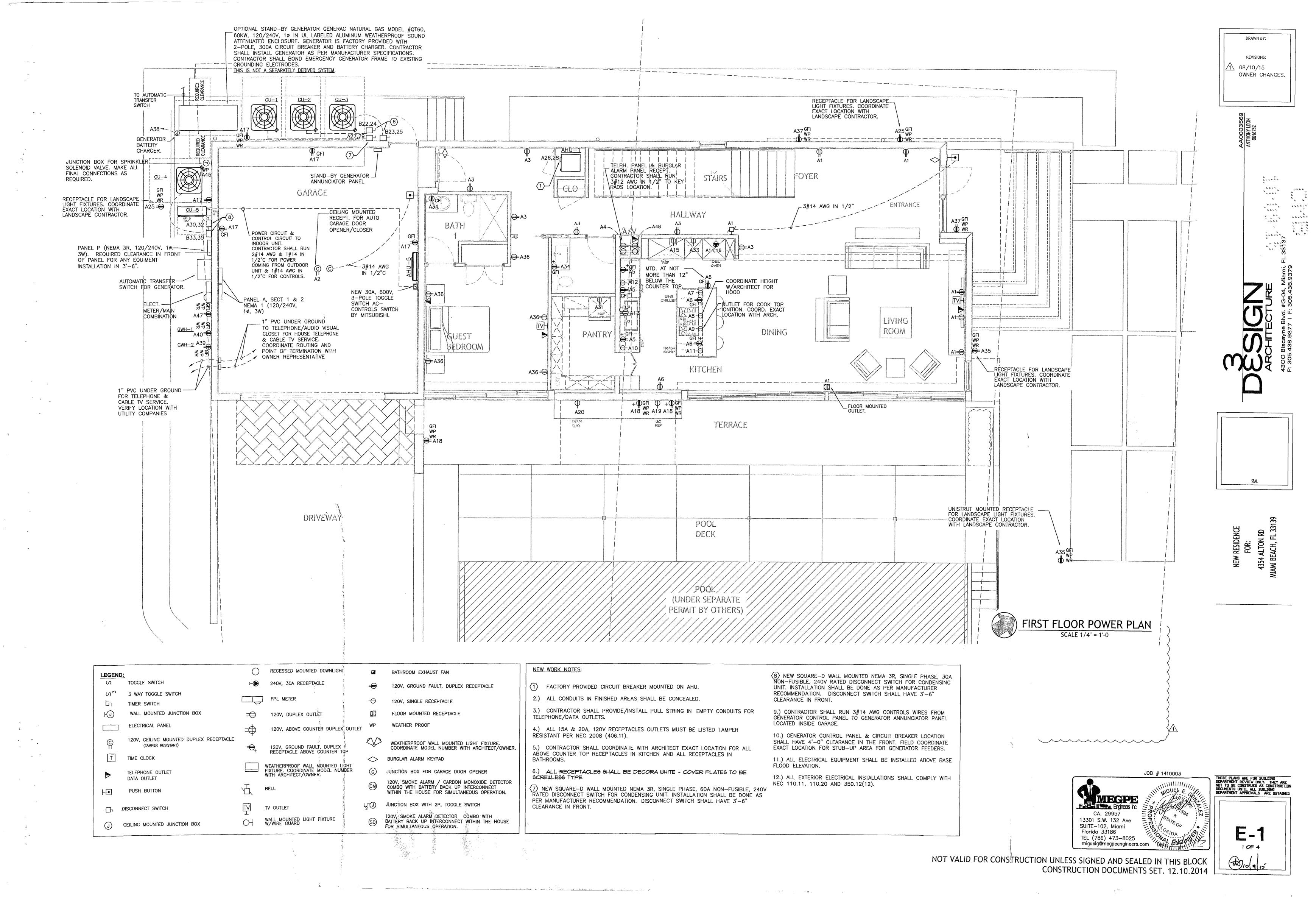
REVISIONS:

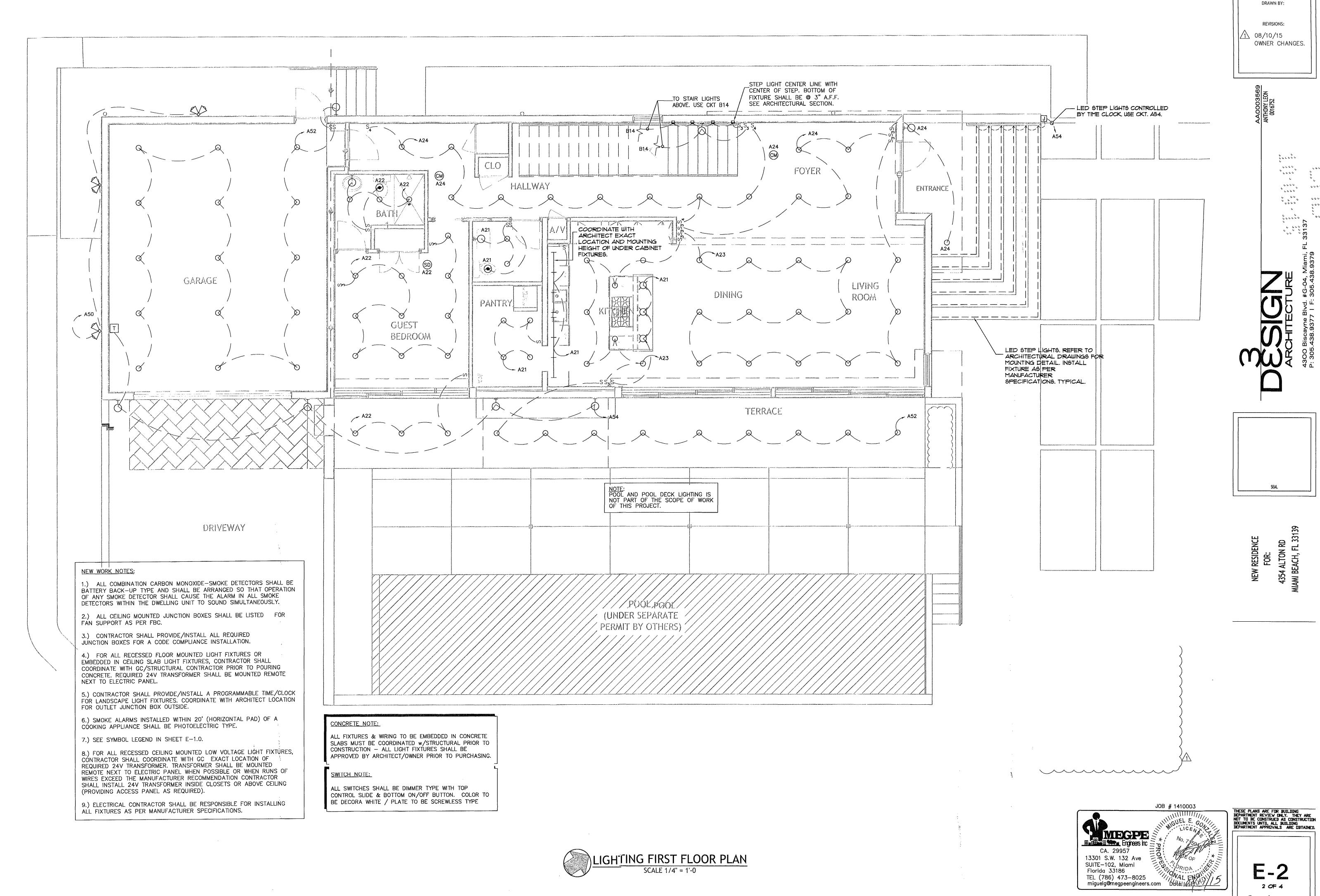
2 11/13/15 BDC

6666

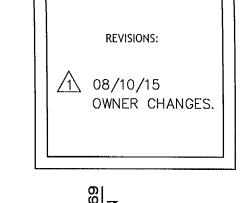
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NOT VALID FOR CONSTRUCTION UNLESS SIGNED AND SEALED IN THIS BLOCK CONSTRUCTION DOCUMENTS SET. 12.10.2014



DRAWN BY:

NEW WORK NOTES:

1 FACTORY PROVIDED CIRCUIT BREAKER MOUNTED ON AHU.

2.) ALL CONDUITS IN FINISHED AREAS SHALL BE CONCEALED.

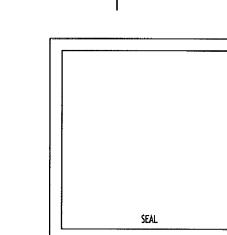
3.) CONTRACTOR SHALL PROVIDE/INSTALL PULL STRING IN EMPTY CONDUITS FOR TELEPHONE/DATA OUTLETS.

4.) ALL 15A & 20A, 120V RECEPTACLES OUTLETS MUST BE LISTED TAMPER RESISTANT PER NEC 2008 (406.11).

5.) CONTRACTOR SHALL COORDINATE WITH ARCHITECT EXACT LOCATION FOR ALL ABOVE COUNTER TOP RECEPTACLES IN BATHROOMS.

6.) ALL RECEPTACLES SHALL BE DECORA WHITE - COVER PLATES TO BE SCREWLESS TYPE.

7.) ALL EXTERIOR ELECTRICAL INSTALLATIONS SHALL COMPLY WITH NEC 110.11, 110.20 AND 350.12(12).



NEW WORK NOTES: 1.) ALL COMBINATION CARBON MONOXIDE-SMOKE DETECTORS SHALL BE BATTERY BACK-UP TYPE AND SHALL BE ARRANGED SO THAT OPERATION

2.) ALL CEILING MOUNTED JUNCTION BOXES SHALL BE LISTED FOR FÁN SUPPORT AS PER FBC.

OF ANY SMOKE DETECTOR SHALL CAUSE THE ALARM IN ALL SMOKE

DETECTORS WITHIN THE DWELLING UNIT TO SOUND SIMULTANEOUSLY.

3.) CONTRACTOR SHALL PROVIDE/INSTALL ALL REQUIRED JUNCTION BOXES FOR A CODE COMPLIANCE INSTALLATION.

4.) FOR ALL RECESSED FLOOR MOUNTED LIGHT FIXTURES OR EMBEDDED IN CEILING SLAB LIGHT FIXTURES, CONTRACTOR SHALL COORDINATE WITH GC/STRUCTURAL CONTRACTOR PRIOR TO POURING CONCRETE. REQUIRED 24V TRANSFORMER SHALL BE MOUNTED REMOTE NEXT TO ELECTRIC PANEL.

5.) ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL FIXTURES AS PER MANUFACTURER SPECIFICATIONS.

6.) SMOKE ALARMS INSTALLED WITHIN 20' (HORIZONTAL PAD) OF A COOKING APPLIANCE SHALL BE PHOTOELECTRIC TYPE.

7.) SEE SYMBOL LEGEND IN SHEET E-1.0.

8.) FOR ALL RECESSED CEILING MOUNTED LOW VOLTAGE LIGHT FIXTURES, CONTRACTOR SHALL COORDINATE WITH GC EXACT LOCATION OF REQUIRED 24V TRANSFORMER. TRANSFORMER SHALL BE MOUNTED REMOTE NEXT TO ELECTRIC PANEL WHEN POSSIBLE OR WHEN RUNS OF WIRES EXCEED THE MANUFACTURER RECOMMENDATION CONTRACTOR SHALL INSTALL 24V TRANSFORMER INSIDE CLOSETS OR ABOVE CEILING (PROVIDING ACCESS PANEL AS REQUIRED). RER SPECIFICATIONS.

CONCRETE NOTE:

ALL FIXTURES & WIRING TO BE EMBEDDED IN CONCRETE SLABS MUST BE COORDINATED w/STRUCTURAL PRIOR TO CONSTRUCTION - ALL LIGHT FIXTURES SHALL BE APPROVED BY ARCHITECT/OWNER PRIOR TO PURCHASING.

SWITCH NOTE:

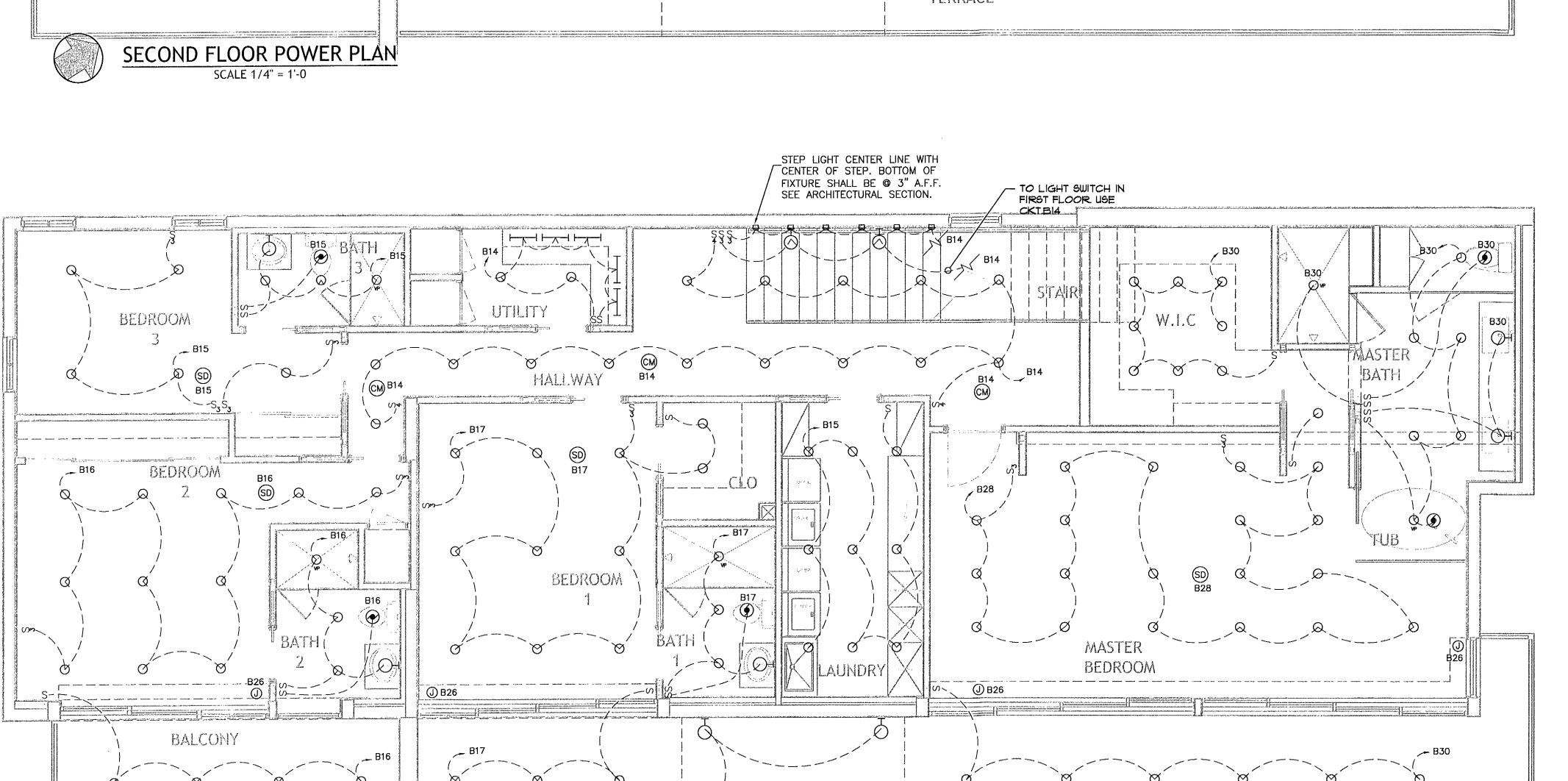
TERRACE

ALL SWITCHES SHALL BE DIMMER TYPE WITH TOP CONTROL SLIDE & BOTTOM ON/OFF BUTTON. COLOR TO BE DECORA WHITE: / PLATE TO BE SCREWLESS TYPE

> JOB # 1410003 MEGPE CA. 29957 13301 S.W. 132 Ave SUITE-102, Miami Florida 33186 TEL (786) 473-8025 miguelg@megpeengineers.com

THESE PLANS ARE FOR BUILDING
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DEPARTMENT APPROVALS ARE OBTAINED.

NOT VALID FOR CONSTRUCTION UNLESS SIGNED AND SEALED IN THIS BLOCK CONSTRUCTION DOCUMENTS SET. 12.10.2014



CONTROLLED BY TIME CLOCK

LOCATED IN GARAGE.

SECOND FLOOR LIGHTING PLAN

SCALE 1/4" = 1'-0

.

GENERAL ELECTRICAL NOTES

- 1. ALL WORK SHALL CONFORM WITH ALL LOCAL, STATE, FEDERAL ORDINANCES AND BUILDING CODES GOVERNING THE INSTALLATION OF THE ELECTRICAL SYSTEM. IF WORK AS LAID OUT, INDICATED OR SPECIFIED IS CONTRARY TO OR CONFLICTS WITH LOCAL ORDINANCES, BUILDING CODES AND REGULA-TIONS, THE CONTRACTOR SHALL REPORT IN WRITING TO THE ARCHITECT/ ENGINEER BEFORE SUBMITTING A BID. THE ARCHITECT/ENGINEER WILL THEN ISSUE INSTRUCTIONS AS HOW TO PROCEED.
- 2. THE DRAWING ARE TO BE CONSIDERED DIAGRAMMATIC, NOT NECESSARILY SHOWING IN DETAIL OR TO SCALE ALL OF THE MINOR ITEMS. UNLESS SPECIFIC DIMENSIONS ARE SHOWN, THE STRUCTURAL, ARCHITECTURAL AND SITE CONDITIONS SHALL GOVERN THE EXACT LOCATIONS. CONTRACTOR SHALL FOLLOW DRAWINGS IN LAYING OUT WORK, CHECK DRAWINGS OF ALL TRADES TO VERIFY SPACES IN WHICH WORK WILL BE INSTALLED AND MAINTAIN MAXIMUM HEAD ROOM, OR SPACE CONDITIONS AT ALL POINTS. WHERE HEAD ROOM, OR SPACE CONDITIONS APPEAR INADEQUATE, ARCHITECT/ENGINEER SHALL BE NOTIFIED BEFORE PROCEEDING WITH INSTALLATION. THIS CONTRAC-TOR SHALL, WITHOUT EXTRA CHARGE, MAKE FIELD MODIFICATION IN LAYOUT AS NEEDED TO PREVENT CONFLICT WITH WORK OF VARIOUS TRADES OR FOR PROPER EXECUTION OF THE WORK.
- 3. EXAMINE ALL DRAWINGS CAREFULLY PRIOR TO SUBMITTING A BID. CONTRACTOR WILL BE REQUIRED TO FURNISH, INSTALL AND/OR CONNECT WITH APPROPRIATE SERVICES ALL ELECTRICAL ITEMS SHOWN ON ANY OF THE ARCHITECTURAL, PLUMBING, AIR CONDITIONING, SPRINKLER, DRAWINGS WITHOUT ADDITIONAL EXPENSE TO THE OWNER. IF DISCREPANCIES, CONFLICTS, INTERFERENCES OR OMISSIONS OCCUR BETWEEN DRAWINGS, NOTIFY IN WRITING THE ARCHITECT/ENGINEER IN AMPLE TIME TO PERMIT REVISIONS BEFORE THE BIDS ARE
- 4. VERIFY SERVICE CHARACTERISTICS, LOCATION AND CONNECTION WITH TELEPHONE AND ELECTRIC UTILITY COMPANIES PERFORM ALL WORK RELATED TO SERVICE IN STRICT ACCORDANCE WITH UTILITY Co. STANDARDS AND REQUIREMENTS.
- 5. INSTALL MATERIALS AND EQUIPMENT IN A NEAT AND FIRST CLASS WORKMANLIKE MANNER. THE OWNER RESERVES THE RIGHT TO DIRECT REMOVAL AND REPLACE-MENT OF ITEM WHICH, IN HIS OPINION, DO NOT PRESENT A NEAT AND WORKMAN-LIKE APPEARANCE. REMOVAL AND REPLACEMENT IS TO BE DONE IMMEDIATELY WHEN DIRECTED BY THE OWNER IN WRITING, AT THE SOLE EXPENSE OF CONTRAC-
- 6. START OF WORK BY CONTRACTOR SHALL BE CONSIDERED AS ACCEPTANCE BY HIM OF ALL CLAIMS OR QUESTIONS AS TO SUITABILITY OF THE WORK OF OTHER TRADES OR OTHER CONTRACTORS TO RECEIVE HIS WORK. THIS CONTRACTOR SHALL REMOVE AND REPLACE, AT HIS EXPENSE, ALL ELECTRICAL WORK WHICH MAY HAVE TO BE REMOVED BECAUSE OF INTERFERENCE WITH OTHER TRADES.
- 7. THIS CONTRACTOR SHALL OBTAIN AND PAY ALL INSURANCE, FEES, PERMITS ASSO-CIATION DUES, ROYALTIES, AND TAXES OF WHATEVER NATURE SHALL APPLY TO THIS WORK, HE SHALL ALSO PAY ALL INSPECTION FEES AS MAY BE REQUIRED BY LAW OR ORDINANCE AND SHALL KEEP THE OWNER HARMLESS FROM ANY DAMAGE AND EXPENSE ARISING FROM ANY VIOLATION OF THE LAWS, RULES OR ORDINANCES.
- 8. ALL WIRE COPPER, IN RACEWAY. ROMEX CABLE IS ALLOWED. IF APPROVED BY OWNER.
- 9. WIRE UP COMPLETE ALL THE A/C EQUIPMENT AND CONTROLS AS DIRECTED BY A/C CONTRACTOR. CONTROL WIRING SHALL BE SEPARATE RACEWAY FROM POWER
- 10. PROVIDE RACEWAYS AND PREWIRE TELEPHONE SYSTEM COMPLETELY.
- 11. PROVIDE RACEWAYS AND PREWIRE CABLE TV SYSTEM. BEFORE INSTALLATION COORDINATE SIZE OF ALL RACEWAYS WITH CABLE TV CO. FIELD REPRESENTATIVE.
- 12. PROVIDE MEANS "FURNISH AND INSTALL".
- 13. COORDINATE WORK WITH WORK OF OTHER TRADES TO AVOID ALL CONFLICTS.
- 14. DO A COMPLETE JOB, EVERYTHING CONNECTED, READY FOR USE.
- 15. PROVIDE TEMPORARY WIRING SYSTEM FOR USE OF ALL TRADES, ADEQUATE FOR ENTIRE NEEDS OF THIS PROJECTS.
- 16. CONNECT ALL MOTORS, STARTERS, CONTROLS, DISC. SWITCHES, CKT. BKR. ETC., WHETHER FURNISHED UNDER THIS CONTRACT BY THE GENERAL CONTRACTOR. OTHER SUBCONTRACTORS, OR THE OWNER.
- 17. PROVIDE PULL WIRES WHEN EMPTY CONDUITS ARE SHOWN ON THE PLANS.
- 18. INSTALL ALL LIGHT FIXTURES .
- PROVIDE EMPTY PVC RACEWAYS (SERVICE ENTRANCE) FOR TELEPHONE Co. & CABLE TV Co. AS PER THEIR REQUIREMENTS AND DIRECTIONS.
- 20. PROVIDE ALL WIRING DEVICES.
- 21. IDENTIFY CLEARLY ON A TYPE WRITTEN FORM ALL CIRCUITS AND EQUIPMENT TO CORRESPOND WITH THE PLANS AND PANELS SCHEDULE AND ATTACH INSIDE THE PERTAINING PANEL.
- 22. RACEWAYS: ALL UNDERGROUND RACEWAYS TO BE PVC, INSIDE CONCRETE SLAB EMT WITH APPROVED SET SCREW FITTING, OR PVC, INSIDE PARTITIONS EMT OR ENT.
- 23. SHOP DRAWINGS: THIS CONTRACTOR SHALL FURNISH THE ENGINEER WITH SHOP DRAWINGS OF EQUIPMENT PRIOR TO PURCHASE FOR APPROVAL.
- 24. TESTING: THE CONTRACTOR SHALL TEST ALL WORK AND EQUIPMENT AS DIRECTED BY THE ARCHITECT AND BY AUTHORITIES HAVING JURISDICTION, FURNISHING ALL EQUIPMENT AND NECESSARY PERSONNEL AND ELECTRIC POWER. THE ENTIRE INSTALLATION SHALL BE TESTED FOR SHORTS, GROUNDS AND OPEN CIRCUITS, AND ALL DEFECTS SHALL BE DEMONSTRATED TO BE IN PROPER WORKING AND OPERATING CONDITION TO THE COMPLETE SATISFACTION
- 25. GUARANTEES: ALL EQUIPMENT AND MATERIALS SHALL BE GUARANTEED FOR ONE YEAR AFTER THE DATE OF ACCEPTANCE BY OWNER.
- 26. AT COMPLETION OF JOB THE ELECTRICAL CONTRACTOR SHALL GIVE THE OWNER AN AS-BUILT SET OF REPRODUCIBLE SEPIAS SHOWING THE EXACT ELECTRICAL INSTALLATION. 27. BEFORE BIDDING THE JOB THE ELECTRICAL CONTRACTOR SHALL VISIT THE
- SITE AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS. 28. ALL CONDUCTORS SHALL BE THW OR THWN COPPER. ALL EXPOSED
- CONDUITS SHALL BE RUN AS NEAT AS POSSIBLE. 29. ALL RECEPTACLES SHALL BE INSTALLED AT 12" A.F.F. UNLESS OTHERWISE NOTED.
- 30. ALL ELECTRICAL EQUIPMENT MUST BE U.L. APPROVED. 31. WALL MOUNTED SMOKE DETECTORS AND HORNS SHALL BE MOUNTED 6" FROM CEILING, 12" HORIZONTALLY FROM DOOR FRAMES AND 36" FROM ANY HVAC VENT
- OR FAN BLADE TIP. THEY SHALL BE INTERLOCKED WITH BATTERY BACK-UP AND HARDWIRED TO A NON-SWITCHABLE LIGHTING CIRCUIT. 32. MINIMUM 50% OF LAMPS SHALL BE HIGH EFFICIENCY FBC E404. (TYP).
- 33. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED ABOVE BASE FLOOD ELEVATION.
- 34. ALL EXTERIOR ELECTRICAL INSTALLATIONS SHALL COMPLY WITH NEC 110.11, 110.20 AND 350.12(12).

ı	TWO	SECTION	DNAL F	PANEL	FEED-	THRU (.UGS (42 &	30 CIF	RCUITS)				
	PNL	AMPS	VOLT	AGE	CKTS	WIRE	PHASE	MAIN	MOUN	T MAN	UFACT	URER	TYPE	
	Α	400	120/	240	72	3	1	LUGS	FLUSH	SIEN	MENS /	ÆQ.	NEMA 1 TYPE P1 — 42KAIC	
				СКТ	BKR					CKT BKR		BKR		
	CKT No.	WIRE	COND	POLE	AMPS	S	ERVING	CKT No.	WIRE	COND	POLE	AMPS	SERVING	
	1	3#12	1/2	1	20	LIVIN	G/DIN. REC.	2	3#12	1/2	1	20	GARAGE DOOR OP.	
	3	3#12	1/2	1	20	RECE	EPT. 1ST FL.	4	3#12	1/2	1	20	TEL/ALARM RECEPT.	
	5	3#12	1/2	1	20	SMALL	APPLIANCES	6	3#12	1/2	1	20	SMALL APPLIANCES	
	7	3#12	1/2	1	15	WINE	COOLER	8	3#12	1/2	1	20	KITCHEN HOOD	
9	9	3#12	1/2	1	20	соок	TOP IGNITION	10	3#12	1/2	1	20	DISHWASHER-1	
	11	3#12	1/2	1	20	TRASH	COMPACTOR	12	3#12	1/2	1	20	DISHWASHER-2	
	13	3#12	1/2	1	20	GARBA	GARBAGE DISPOSAL		7//10	1 /0	2	40	DOUBLE OVEN	
	15	3#12	1/2	1	15	REFRIC	S./FREEZER	16	3#12	1/2		40	DOOBLE OVEN	
	17	3#12	1/2	1	20	GARAC	SE/EXT. REC	18	3#12	1/2	1	20	RECEPT. TERRACE	
and the same of th	19	3#12	1/2	1	15	TERRA	CE REFRIG.	20	3#12	1/2	1	20	B.B.Q. IGNITION	9
	21	3#12	1/2	1	20	1ST .I	FL LIGHTS	22	3#12	1/2	1	20	1ST .FL LIGHTS	
de la company de	23	3#12	1/2	1	20	1ST .	FL LIGHTS	24	3#12	1/2	1	20	1ST .FL LIGHTS	
7	25	3#12	1/2	1	20	LANSO	CAPE LIGHTS	26	2#6	3/4	_	E0.	A1111 4	(8)
	27	2#6	3/4	2	60	Cı	CU-1		2#6 1#10G		2	50	AHU-1	(8)
8	29	1#10G	374	2	80	"	J— (30	7//40	4 /0	_		CU-5	
-	31	3#12	1/2	1	15	PANTR	Y REFRIG.	32	3#12	1/2	2	20	00-3	®
	33	3#12	1/2	1	20	MICRO	WAVE	34	3#12	1/2	1	20	1ST. FL BATH REC.	
	35	3#12	1/2	1	20	LANDS	CAPE LIGHTS	36	3#12	1/2	1	20	1ST. FL BED REC.	
ŧ	37	3#12	1/2	1	20	EXTER	IOR REC.	38	3#12	1/2	1	20	GEN. BATT. CHARGER	
9	39	3#12	1/2	1	20	GAS V	VATER HTR-2	40	3#12	1/2	1	20	GAS WATER HTR-1	9
,	41 43	3#6 1#10G	1	2	60	PANE	L "P"	42 44	3#1/0 1#6G	1 1/2	2	150	PANEL "B"	
and definitions	45	3#12	1/2	1	20	SOLE	NOID VALVE	46	3#12	1/2	1	20	MOTORIZED SHADES	
	47	3#12	1/2	1	20	HW R	ECIRC. PUMP	48	3#12	1/2	1	20	A/V RECEPT.	
, and the second	49	3#12	1/2	1	20	SI	PARE	50	3#12	1/2	1	20	EXTERIOR LIGHTS	
Market .	51	3#12	1/2	1	20	. SI	PARE	52	3#12	1/2	1	20	GARAG/TERR. LIGHTS	
of the second state of the second second	53	_	-	_		S	PACE	54	3#12	1/2	1	20	EXTERIOR LIGHTS	
•	55		-	_		S	PACE	56			1	20	SPARE	
	57	_	_		_	5	SPACE	58	_	-	1	20	SPARE	
American de	59	_	_		_	9	SPACE	60	_	_	-	-	SPACE	
	61	-	_	_	-	5	SPACE	62	_		_	_	SPACE	
	63	-	_	<u> </u>		. 8	SPACE	64	_	-		_	SPACE	
	65	_	_	_	-	S	SPACE	66	_		_	_	SPACE	1
-	67	_	_	_	_	S	SPACE	68	_	_	_	_	SPACE	
	69	-	_	-		. 5	SPACE	70	_	· _	_		SPACE	
1	71			· `			PACE	72					CDACE	1

NEC TABLE 220 PART III FOR PNL A	<u>KW</u>
1,565.2 SQ FT @ 3 WATTS/SQ FT	_ 4.7
TWO 20 AMPS SMALL APPL. CKT. @ 1500W EACH	_ 3.0
REFRIGERATOR ×2	_ 3.4
DBL. OVEN	_ 7.6
DISHWASHER x2	2.4
GARBAGE DISPOSAL	
BBQ FRIDGE	
U.C. WINE COOLER	
BBQ IGNITION	0.0
SPRINKLER SOLENOID	
COOKTOP IGNITER	
WATER HEATER IGNITERTRASH COMPACTOR	
MICROWAVE	
GARAGE DOOR	
EXTERIOR LIGHTS	
KITCHEN HOOD	0.7
LANDSCAPE LIGHTS	1.0
MOTORIZED SHADES	
PANEL P	8.6
TOTAL WITHOUT DEMAND	42.4
FIRST 10.0 KW @ 100%	10.0
NEXT 32.4 KW @ 40%	12.96
* AHU's+STRIP HTRS 1 (7.7KW+1.18KW) @ 100%	
* AHU 4 (3.36KW) @ 100%	
PANEL B	_ 20.6
TOTAL DEMAND	- 55.8
TOTAL DEMAND 55.8 KW $/$ 240V = 232.5 AMPS	
FEEDER: THWN CU 3#350 & 1#4 (GND) 2 1/2"C	
* HEATING LOAD LARGER THAN COOLING LOAD & NON-CONCURREN	IT.

GENERATOR CALCULATION:

OPTIONAL STAND-BY GENERATOR IS DESIGN TO SUPPLY PANEL A TOTAL DEMAND. TOTAL DEMAND 55.8 KW / 240V = 232.5 AMPS

FUTURE OPTIONAL STAND-BY GENERATOR GENERAC QT060 60KW, 120/240V, 10

PNL	. AMPS	VOLT	AGE	CKTS	WIRE	PHASE	MAIN	MAIN MOUNT MANUFACTURER				TYPE
В	200	120/	′ 240	40	3	1	LUGS	FLUSH S		MENS	/EQ.	NEMA 1 LOAD CENTER 42KAIC
			СКТ	BKR	,						BKR	
CKT No.	WIRE	COND	POLE	AMPS	S	ERVING	CKT No.	WIRE	COND INCH	POLE	AMPS	SERVING
1	3#12	1/2	1	20	BED-	1 REC.	2	3#12	1/2	1	20	BED-2 REC.
3	3#12	1/2	1	20	BED-	3 REC.	4	3#12	1/2	1	20	M.B. REC.
5	3#12	1/2	1	20	BATH	BATH REC.		3#12	1/2	1	15	2ND FL. REFRIG.
7	3#12	1/2	1	20	BATH	REC.	8	3#12	1/2	1	20	HALLWAY REC.
9	3#12	1/2	1	20	WASHI	WASHER-1		3#12	1/2	1	20	WASHER-2
) 11	3#12	1/2	1	15	DRYE	R-1 IGNITION	12	3#12	1/2	1	15	DRYER-2 IGNITION
13	3#12	1/2	1	20	LAUNDI	RY REC.	14	3#12	1/2	1	20	HALLWAY LIGHTS 2ND FL
15	3#12	1/2	1	20	BED-3	BED-3 LIGHTS		3#12	1/2	1	20	BED-2 LIGHTS 2ND FL.
17	3#12	1/2	1	20	BED-1 LIGHTS		18	2#10				AHU2
19	2#12		2	20	AHU-	7	20	1#10G	3/4		30	CU-2
21	1#12G	., -		20	210		22	2#10	3/4		2 25	
23	2#12		2	20	CU-	3	24	1#10G	•			
25	1#12G	.,_	-	20	00 (26	3#12	1/2	1	20	MOTORIZED SHADES
27	3#12	1/2	1	20	TERRA	ACE REC.	28	3#12	1/2	1	20	MASTER BED LIGHTS
29	2#10	7/4	2	70	AHU-	4	30	3#12	1/2	1	20	MASTER BATH LIGHTS
31	1#10G			30	Ariu.	— -T	32	_	_	1	20	SPARE
33	2#10	3/4	2	25	CU-	4	34		_	1	20	SPARE
35	1#10G		_				36	_	_	_	_	SPACE
37	-	_		_	SPAC	E	38		_			SPACE
39	_		_	_	SPAC	E	40			_	_	SPACE

	PNI	AMPS	VOLT	AGF	CKTS	WIRE	PHASE	MAIN	MOUN	IT MAN	UFACT	JRER	TYPE
**	Р	100	120/	-	18	3	1		FLUSI		SIEMENS /EQ.		NEMA 3R LOAD CENTER 42KAIC
				СКТ	BKR								
	CKT No.	WIRE	COND	POLE	AMPS	S	ERVING	CKT No.	WIRE	COND	POLE	AMPS	SERVING
	1				20		UTURE	2			1	20	LANDSCAPING
	3			2 GFCI	20	POOL I	RECIRC. PUMP	4			1	20	FUTURE POOL LIGHT
	5			_			UTURE	6			1	20	FUTURE POOL DECK LIGHTS
*	7			2	20	AIR	BLOWER	8			1	20	FUTURE HEATER IGNITER
	9			1	20	S	PARE	10			1	20	SPARÉ
	11	_	_		_	S	PACE	12			1	20	SPARE
	13	_		_	_	S	SPACE	14	_	-	_	-	SPACE
	15	-	_	_	_	S	PACE	16	_		_	-	SPACE
	17		_		_	S	PACE	18	_	_	_	-	SPACE

*BEFORE INSTALLATION THE ELECTRICAL CONTRACTOR SHALL VERIFY THE SIZE OF THE CIRCUIT BREAKERS WITH THE MANUFACTURER'S REQUIREMENTS

FEEDER: THHN CU 3#6 AND 1#10 GROUND 1"C

+ THRU A NEMA 3R, 4P, ST TIME CLOCK

FEEDER CALCULATION FOR PNL P	KW
++ POOL RECIRC. PUMP ++ LIGHTING/RECEP	4.0 1.2 0.5
++ AIR BLOWER	2.9
FUTURE CONNECTED LOAD 8.6 KW / 240V = 36 AMPS	0.0

++ POOL EQUIPMENT INSTALLATION IS NOT PART OF THE SCOPE OF WORK OF THIS PROJECT. PROVISIONS FOR FUTURE POOL EQUIPMENT, DECK & POOL LIGHTING WERE CONSIDERED AS FUTURE LOAD IN PANEL "P". CONTRACTOR SHALL PROVIDE/INSTALL CIRCUIT BREAKERS AS PER PANEL SCHEDULE AND LABEL THEM AS SPARE BREAKERS. NO WIRING WILL BE PROVIDED FOR THE FUTURE LOAD SHOWN.

NEC TABLE 220 PART III FOR PNL B	
2,242 SQ FT @ 3 WATTS/SQ FT	6.7
REFRIGERATOR	1.5
DRYER x2	2.2
WASHER x2	3.0
SHADE SYST.	
TOTAL WITHOUT DEMAND	14.0
FIRST 10.0 KW @ 100%	
NEXT 4.0 KW @ 40%	
* AHU's+STRIP HTRS 2,3,4 (4.8KW+0.672KW)X2 + (2.4KW+0.672KW) @ 100%	13.9/
TOTAL DEMAND	 - 25.6
TOTAL DEMAND 25.6 KW / 240V = 106.7 AMPS	
FEEDER: THWN CU 3#1/0 & 1#6 (GND) 1 1/2"C	
* HEATING LOAD LARGER THAN COOLING LOAD & NON-CONCURR	ENT.

PANEL SCHEDULES NOTES:

1. A DEDICATED NEUTRAL CONDUCTOR MUST BE PROVIDED FOR ALL 120V BRANCH CIRCUITS. 2. ELECTRICAL PANEL CLEARANCE TO COMPLY WITH 110.26. 3. ALL RECEPTACLE LOCATED IN KITCHEN MUST BE SUPPLIED BY SMALL APPLIANCE CIRCUITS NEC 4. PER NEC 406.11, ALL 125-VOLT, 15- AND 20-AMPERE RECEPTACLES INSTALLED IN DWELLING UNIT ROOMS OR AREAS, AS IDENTIFIED IN THIS CODE ARTICLE, SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES.

BREAKERS WITH THE MANUFACTURER'S REQUIREMENTS 6. FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, OR SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY A LISTED ARC-FAULT CIRCUIT INTERRUPTER, COMBINATION-TYPE,

INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT AS PER NEC 210.12(B)

5. BEFORE INSTALLATION THE ELECTRICAL CONTRACTOR SHALL VERIFY THE SIZE OF THE CIRCUIT

(7) CIRCUIT CONTROLLED THRU TIME-CLOCK. (8) CIRCUIT BREAKER SHALL BE HACR TYPE.

(9) CIRCUIT EQUIPMENT GROUNDING CONDUCTOR SHALL BE BONDED TO GAS PIPING SERVING THIS PARTICULAR APPLIANCE TO COMPLY WITH NEC 250.104(B).

* ELECTRICAL CONTRACTOR SHALL VERIFY BEFORE INSTALLATION THE SIZE OF CIRCUIT BREAKER AND FEEDER WITH MANUFACTURER'S REQUIREMENTS. HEATING LOAD LARGER THAN COOLING LOAD & NON-CONCURRENT.

--3#1/0 & 1#6 (GND) 1 1/2"C STAND-BY GENERATOR NEMA 3R, 300A, 2P, -GENERAC NA 60KW, 120/240V 42,000 AIC 120/240V, 10 & 300A 2P,ST,TIME CIRCUIT BREAKER MAIN CKT BKR SWITCH FOR CKTS P6 --- 3#350 AWG & 1#4 (GND) IN 2½°C INTERSYSTEM BONDING SWITCH FOR - 3#6 AND 1#10(G) 1"C CKT. A25,35,54 1#6 AWG BONDING GROUND FLOOR JUMPER TO CATV BOX TO FPL PAD MTD. TRANSF. 3#350 MCM & 1#4 (GND) IN - 3#350 AWG & 1#4 (GND) IN 21"C 22"C COORDINATE W/ FPL

USE) & TVSS.

 SPACE
 72
 SPACE

REP. (MAX. DISTANCE 215')

3#350 AWG & 1#4 (GND) IN 22"C

GROUNDING ELEGTRODE CONDUCTOR 1#2 - NEMA 3R GENERAC ATS 300A. COPPER (G) - 3/4"C TO (1) 5/8" DIA 42KAIC. 1ø. 240V AUTOMATIC X 10 FT. LONG COPPER CLAD STEEL TRANSFER SWITCH (OUTDOOR GND DRIVEN ROD C.W.P. & BUILDING

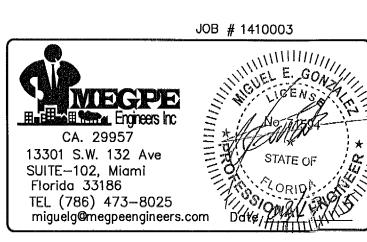
ALL WIRE SHALL BE THHN CU RATED @ 75' IN RACEWAY UNLESS OTHERWISE NOTED

ELECTRICAL RISER DIAGRAM

RISER NOTES:

1.) CONTRACTOR SHALL BOND NEUTRAL BAR AND EQUIPMENT GROUNDING TERMINAL BAR IN THE SERVICE ENTRANCE MAIN CIRCUIT BREAKER. FEEDER WITH EQUIPMENT GROUNDING CONDUCTOR SHALL BE RUN ALL DISTRIBUTION PANELS.

(*) CONTRACTOR SHALL PROVIDE 1#6AWG BONDING JUMPER BETWEEN THE GROUND BUS BAR AND ALL NEW PANELBOARDS PRESENT IN THE ELECTRICAL SYSTEM, INCLUDING THE CATV SYSTEM BOX TO COMPLY WITH NEC 2008 250.94.



THESE PLANS ARE FOR BUILDING
DEPARTMENT REVIEW DNLY. THEY ARE
NOT TO BE CONSTRUCTION
DOCUMENTS UNTIL ALL BUILDING
DEPARTMENT APPROVALS ARE OBTAINED, 4 OF 4

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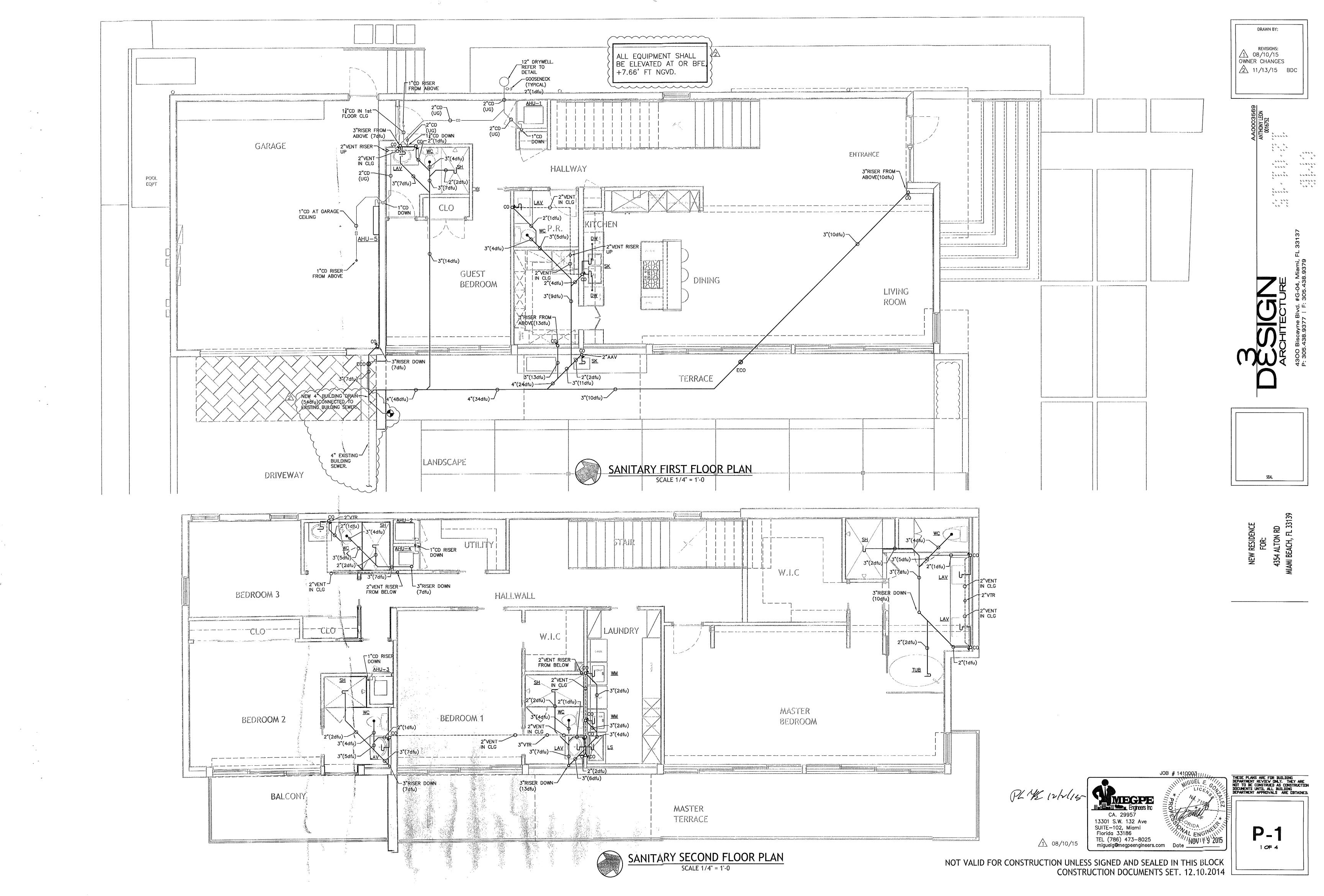
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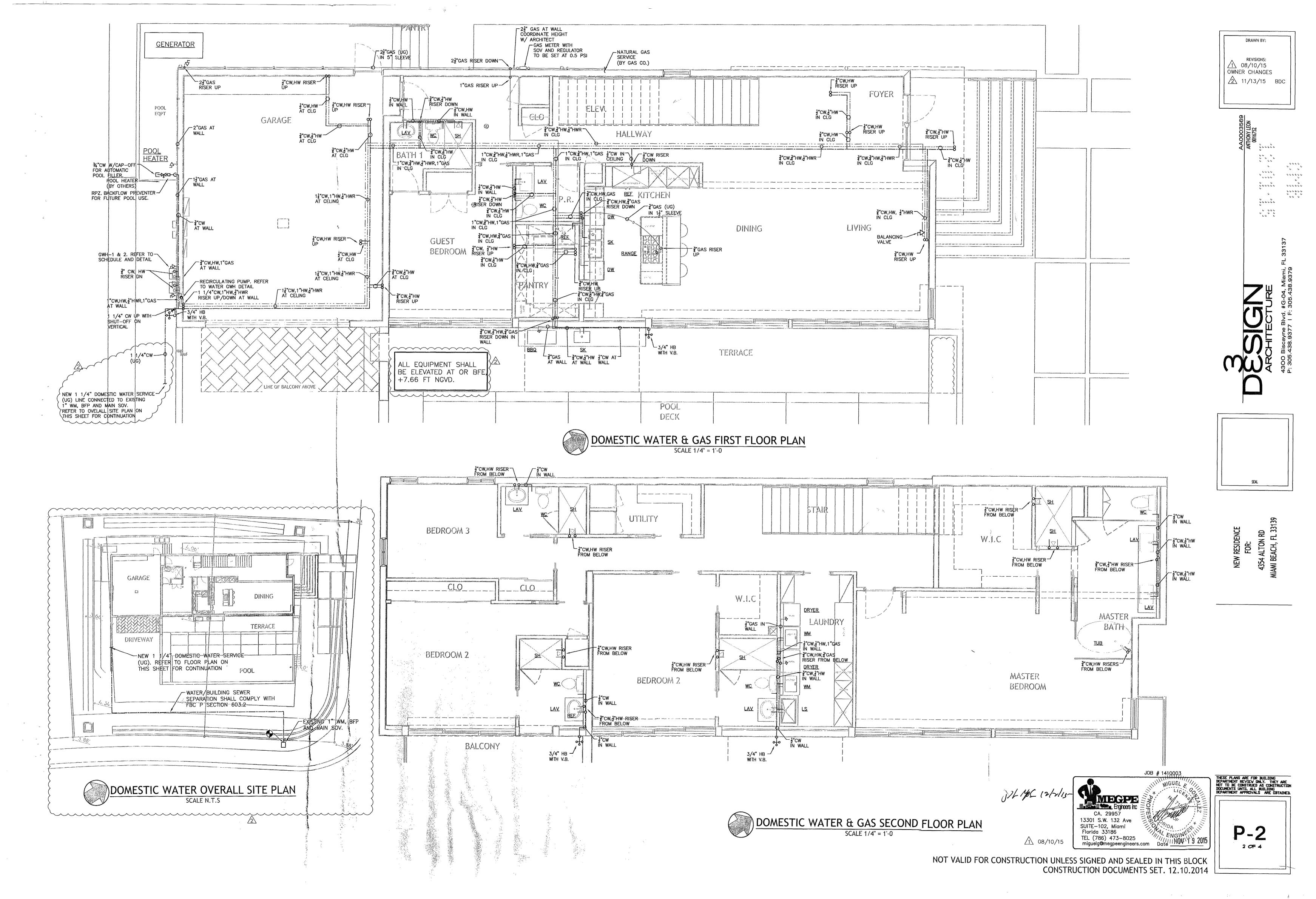
OWNER CHANGES.

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NOT VALID FOR CONSTRUCTION UNLESS SIGNED AND SEALED IN THIS BLOCK CONSTRUCTION DOCUMENTS SET. 12.10.2014





MARK	FIXTURE	SOIL/ WASTE (IN.)	VENT (IN.)	COLD WATER (IN.)	HOT WATER (IN.)	MANUFACTURER MODEL No.	DESCRIPTION
WC	TANK TYPE FLOOR MOUNTED	3	2	1/2		BY OWNER	-12" ROUGH-IN, AN ELONGATED BOWL AT COMFORT HEIGHT, WATER SEVER OF 1.28 GPF.
LAV	LAVATORY	1 1/2	2	1/2	1/2	BY OWNER	-PROVIDE AERATOR OF 1.5 GPM, AND HOT LIMIT SAFETY STOP.
SH	SHOWER	2	2	1/2	1/2	BY OWNER	-PROVIDE AERATOR OF 1.5 GPMPROVIDE ANTI SCALD THERMOSTATIC VALVE
TUB	TUB	1 1/2	2	1/2	1/2	BY OWNER	-PROVIDE AERATOR OF 1.5 GPMPROVIDE ANTI SCALD THERMOSTATIC VALVE
SK	SINK	1 1/2	2	1/2	1/2	BY OWNER	-PROVIDE AERATOR OF 1.5 GPM.
REF	REFRIGERATOR			1/2		BY OWNER	-PROVIDE FILTER AND BACKFLOW DEVICE IN LINE.
WM	WASHER MACHINE	2	2	1/2	1/2	BY OWNER	-IT SHALL BE PROTECTED AGAINST BACKFLOW BY AN AIR GAP INSTALLED INTEGRALLY WITHIN THE MACHINE CONFORMING TO ASSE 1007 OR WITH THE INSTALLATION OF A BACKFLOW PREVENTER EQUAL TO WATTS 800MQT CONFORMING TO ASSE 1020, CSA B64.1.2.
DW	DISHWASHER	1 INDIRECT	2		1/2	BY OWNER	-IT SHALL CONFORM TO ASSE 1006 OR PROVIDE A BACKFLOW PREVETER EQUAL TO WATTS 288A CONFORMING TO ASSE 1001, CSA B64.1.1. AND INDIRECT WASTE W/AN AIR BREAK.
IM	ICE MAKER			1/2		BY OWNER	-PROVIDE BACKFLOW PREVENTER EQUAL TO WATTS 008PCQT CONFORMING TO ASSE 1056 PROVIDE INDIRECT WASTE IF REQUIRED.
НВ	HOSE BIBB			1/2		"WATTS" SERIE MHB-RC	-PROVIDE VACCUM BREAKER

PLUMBING FIXTURES, FAUCETS AND FIXTURE FITTINGS SHALL COMPLY WITH REQUIREMENTS OF F.B.C. P2701.

GAS PIPING SYSTEM INSTALLATION NOTES: G2415.1 (404.1) INSTALLATION OF MATERIALS. ALL MATERIALS USED SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE STANDARDS UNDER WHICH THE MATERIALS ARE ACCEPTED AND APPROVED. IN THE ABSENCE OF SUCH INSTALLATION PROCEDURES, THE MANUFACTURER'S INSTRUCTIONS SHALL BE FOLLOWED. WHERE THE REQUIREMENTS OF REFERENCED STANDARDS OR MANUFACTURER'S INSTRUCTIONS DO NOT CONFORM TO MINIMUM PROVISIONS OF THIS CODE, THE PROVISIONS OF THIS CODE SHALL APPLY.

WALL HUNG FIXTURES SHALL BE SUPPORTED AS PER FBC 2517.5.1.1.

G2415.2 (404.2) CSST. CSST PIPING SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE TERMS OF THEIR APPROVAL, THE CONDITIONS OF LISTING, THE MANUFACTURER'S INSTRUCTIONS AND THIS CODE. G2415.3 (404.3) PROHIBITED LOCATIONS. PIPING SHALL NOT BE INSTALLED IN OR THROUGH A DUCTED SUPPLY, RETURN OR EXHAUST, OR A CLOTHES CHUTE, CHIMNEY OR GAS VENT, DUMBWAITER OR ELEVATOR SHAFT. PIPING INSTALLED DOWNSTREAM OF THE POINT OF DELIVERY SHALL NOT EXTEND THROUGH ANY TOWNHOUSE UNIT OTHER THAN THE UNIT SERVED BY SUCH PIPING. G2415.4 (404.4) PIPING IN SOLID PARTITIONS AND WALLS. CONCEALED PIPING SHALL NOT BE LOCATED IN SOLID PARTITIONS AND SOLID WALLS, UNLESS INSTALLED IN A CHASE OR CASING.

G2415.5 (404.5) PIPING IN CONCEALED LOCATIONS. PORTIONS OF A PIPING SYSTEM INSTALLED IN CONCEALED LOCATIONS SHALL NOT HAVE UNIONS. TUBING FITTINGS, RIGHT AND LEFT COUPLINGS, BUSHINGS, COMPRESSION COUPLINGS, AND SWING JOINTS MADE BY COMBINATIONS OF FITTINGS. **EXCEPTIONS:**

TUBING JOINED BY BRAZING. 2. FITTINGS LISTED FOR USE IN CONCEALED LOCATIONS.

G2415.6 (404.6) UNDERGROUND PENETRATIONS PROHIBITED. GAS PIPING SHALL NOT PENETRATE BUILDING FOUNDATION WALLS AT ANY POINT BELOW GRADE. GAS PIPING SHALL ENTER AND EXIT A BUILDING AT A POINT ABOVE GRADE AND THE ANNULAR SPACE BETWEEN THE PIPE AND THE WALL SHALL BE SEALED. G2415.7 (404.7) PROTECTION AGAINST PHYSICAL DAMAGE. IN CONCEALED

LOCATIONS, WHERE PIPING OTHER THAN BLACK OR GALVANIZED STEEL IS INSTALLED THROUGH HOLES OR NOTCHES IN WOOD STUDS, JOISTS, RAFTERS OR SIMILAR MEMBERS LESS THAN 11/2 INCHES FROM THE NEAREST EDGE OF THE MEMBER, THE PIPE SHALL BE PROTECTED BY SHIELD PLATES. PROTECTIVE STEEL SHIELD PLATES HAVING A MINIMUM THICKNESS OF 0.0575-INCH (NO.16 GAGE) SHALL COVER THE AREA OF THE PIPE WHERE THE MEMBER IS NOTCHED OR BORED AND SHALL EXTEND A MINIMUM OF 4 INCHES ABOVE SOLE PLATES, BELOW TOP PLATES AND TO EACH SIDE OF A STUD, JOIST OR RAFTER.

G2415.8 (404.8) PIPING IN SOLID FLOORS. PIPING IN SOLID FLOORS SHALL BE LAID IN CHANNELS IN THE FLOOR AND COVERED IN A MANNER THAT WILL ALLOW ACCESS TO THE PIPING WITH A MINIMUM AMOUNT OF DAMAGE TO THE BUILDING. WHERE SUCH PIPING IS SUBJECT TO EXPOSURE TO EXCESSIVE MOISTURE OR CORROSIVE SUBSTANCES, THE PIPING SHALL BE PROTECTED IN AN APPROVED MANNER. AS AN ALTERNATIVE TO INSTALLATION IN CHANNELS, THE PIPING SHALL BE INSTALLED IN A CONDUIT OF SCHEDULE 40 STEEL, WROUGHT IRON, PVC OR ABS PIPE IN

ACCORDANCE WITH SECTION G2415.6.1 OR G2415.6.2. G2415.8.1 (404.8.1) CONDUIT WITH ONE END TERMINATING OUTDOORS. THE CONDUIT SHALL EXTEND INTO AN OCCUPIABLE PORTION OF THE BUILDING AND, AT THE POINT WHERE THE CONDUIT TERMINATES IN THE BUILDING, THE SPACE BETWEEN THE CONDUIT AND THE GAS PIPING SHALL BE SEALED TO PREVENT THE POSSIBLE ENTRANCE OF ANY GAS LEAKAGE. THE CONDUIT SHALL EXTEND NOT LESS THAN 2 INCHES BEYOND THE POINT WHERE THE PIPE EMERGES FROM THE FLOOR. IF THE END SEALING IS CAPABLE OF WITHSTANDING THE FULL PRESSURE OF THE GAS PIPE, THE CONDUIT SHALL BE DESIGNED FOR THE SAME PRESSURE AS THE PIPE. SUCH CONDUIT SHALL EXTEND NOT LESS THAN 4 INCHES OUTSIDE OF THE BUILDING. SHALL BE VENTED ABOVE GRADE TO THE OUTDOORS AND SHALL BE INSTALLED TO PREVENT THE ENTRANCE OF WATER AND INSECTS.

G2415.8.2 (404.8.2) CONDUIT WITH BOTH ENDS TERMINATING INDOORS. WHERE THE CONDUIT ORIGINATES AND TERMINATES WITHIN THE SAME BUILDING, THE CONDUIT SHALL ORIGINATE AND TERMINATE IN AN ACCESSIBLE PORTION OF THE BUILDING AND SHALL NOT BE SEALED. THE CONDUIT SHALL EXTEND NOT LESS THAN 2 INCHES BEYOND THE POINT WHERE THE PIPE EMERGES FROM THE FLOOR.

G2415.9 (404.9) ABOVE-GROUND PIPING OUTDOORS. ALL PIPING INSTALLED OUTDOORS SHALL BE ELEVATED NOT LESS THAN 31/2 INCHES (152 MM) ABOVE GROUND AND WHERE INSTALLED ACROSS ROOF SURFACES, SHALL BE ELEVATED NOT LESS THAN 31/2 INCHES ABOVE THE ROOF SURFACE, PIPING INSTALLED ABOVE GROUND, OUTDOORS, AND INSTALLED ACROSS THE SURFACE OF ROOFS SHALL BE SECURELY SUPPORTED AND LOCATED WHERE IT WILL BE PROTECTED FROM PHYSICAL DAMAGE. WHERE PASSING THROUGH AN OUTSIDE WALL, THE PIPING SHALL ALSO BE PROTECTED AGAINST CORROSION BY COATING OR WRAPPING WITH AN INERT MATERIAL. WHERE PIPING IS UNCASED IN A PROTECTIVE PIPE SLEEVE, THE ANNULAR SPACE BETWEEN THE PIPING AND THE SLEEVE SHALL BE SEALED. G2415.10 (404.10) ISOLATION. METALLIC PIPING AND METALLIC TUBING THAT CONVEYS FUEL GAS FROM AN LP-GAS STORAGE CONTAINER SHALL BE PROVIDED WITH AN APPROVED DIELECTRIC FITTING TO ELECTRICALLY ISOLATE THE UNDERGROUND PORTION OF THE PIPE OR TUBE FROM THE ABOVE GROUND PORTION THAT ENTERS A BUILDING. SUCH DIELECTRIC FITTING SHALL BE INSTALLED ABOVEGROUND OUTDOORS. G2415.11 (404.11) PROTECTION AGAINST CORROSION. METALLIC PIPE OR

TUBING EXPOSED TO CORROSIVE ACTION, SUCH AS SOIL CONDITION OR

MOISTURE, SHALL BE PROTECTED IN AN APPROVED MANNER.ZINC COATINGS

(GALVANIZING) SHALL NOT BE DEEMED ADEQUATE PROTECTION FOR GAS PIPING ÙNDERGROUND. WHERE DISSIMILAR METALS ARE JOINED UNDERGROUND, AN insulating coupling or fitting shall be used. Piping shall not be laid in G2415.11.1 (404.11.1) PROHIBITED USE, UNCOATED THREADED OR SOCKET WELDED

JOINTS SHALL NOT BE USED IN PIPING IN CONTACT WITH SOIL OR WHERE INTERNAL OR EXTERNAL CREVICE CORROSION IS KNOWN TO OCCUR. G2415.11.2 (404.11.2) PROTECTIVE COATINGS AND WRAPPING. PIPE PROTECTIVE COATINGS AND WRAPPINGS SHALL BE APPROVED FOR THE APPLICATION AND SHALL BE FACTORY APPLIED.

EXCEPTION: WHERE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS, FIELD APPLICATION OF COATINGS AND WRAPPINGS SHALL BE PERMITTED FOR PIPE NIPPLES, FITTINGS AND LOCATIONS WHERE THE FACTORY COATING OR WRAPPING HAS BEEN DAMAGED OR NECESSARILY

G2415.12 (404.12) MINIMUM BURIAL DEPTH. UNDERGROUND PIPING SYSTEMS SHALL E INSTALLED A MINIMUM DEPTH OF 12 INCHES BELOW GRADE, EXCEPT AS PROVIDED FOR IN SECTION G2415.12.1.

G2415.12.1 (404.12.1) INDIVIDUAL OUTSIDE APPLIANCES. INDIVIDUAL LINES TO OUTSIDE LIGHTS. GRILLS OR OTHER APPLIANCES SHALL BE INSTALLED A MINIMUM OF 8 INCHES BELOW FINISHED GRADE, PROVIDED THAT SUCH INSTALLATION IS APPROVED AND IS INSTALLED IN LOCATIONS NOT SUSCEPTIBLE TO PHYSICAL DAMAGE. G2415.13 (404.13) TRENCHES. THE TRENCH SHALL BE GRADED SO THAT THE PIPE HAS A FIRM, SUBSTANTIALLY CONTINUOUS BEARING ON THE BOTTOM OF THE TRENCH. G2415.14 (404.14) PIPING UNDERGROUND BENEATH BUILDINGS. PIPING INSTALLED UNDERGROUND BÉNEATH BUILDINGS IS PROHIBITED EXCEPT WHERE THE PIPING IS ENCASED IN A CONDUIT OF WROUGHT IRON, PLASTIC PIPE. STEEL PIPE OR OTHER APPROVED CONDUIT MATERIAL DESIGNED TO WITHSTAND THE SUPERIMPOSED LOADS. THE CONDUIT SHALL BE PROTECTED FROM CORROSION IN ACCORDANCE WITH SECTION G2415.9 AND SHALL BE INSTALLED IN ACCORDANCE WITH SECTION

G2415.12.1 OR G2415.12.2. G2415.14.1 (404.14.1) CONDUIT WITH ONE END TERMINATING OUTDOORS. THE CONDUIT SHALL EXTÉND INTO AN OCCUPIABLE PORTION OF THE BUILDING AND, AT THE POINT WHERE THE CONDUIT TERMINATES IN THE BUILDING, THE SPACE BETWEEN THE CONDUIT AND THE GAS PIPING SHALL BE SEALED TO PREVENT THE POSSIBLE ENTRANCE OF ANY GAS LEAKAGE! THE CONDUIT SHALL EXTEND NOT LESS THAN 2 INCHES (51 MM) BEYOND THE POINT WHERE THE PIPE EMERGES FROM THE FLOOR, WHERE THE END SEALING IS

CAPABLE OF WITHSTANDING THE FULL PRESSURE OF THE GAS PIPE. THE CONDUIT SHALL BE DESIGNED FOR THE SAME PRESSURE AS THE PIPE. SUCH CONDUIT SHALL EXTEND NOT LESS THAN 4 INCHES OUTSIDE THE BUILDING, SHALL BE VENTED ABOVE GRADE TO THE OUTDOORS AND SHALL BE INSTALLED SO AS TO PREVENT THE ENTRANCE OF WATER AND INSECTS.

G2415.14.2 (404.14.2) CONDUIT WITH BOTH ENDS TERMINATING INDOORS. WHERE THE CONDUIT ORIGINATES AND TERMINATES WITHIN THE SAME BUILDING, THE CONDUIT SHALL ORIGINATE AND TERMINATE IN AN ACCESSIBLE PORTION OF THE BUILDING AND SHALL NOT BE SEALED. THE CONDUIT SHALL EXTEND NOT LESS THAN 2 INCHES BEYOND THE POINT WHERE THE PIPE EMERGES FROM THE FLOOR. G2415.15 (404.15) OUTLET CLOSURES. GAS OUTLETS THAT DO NOT CONNECT TO APPLIANCES SHALL BE CAPPED GAS TIGHT EXCEPTION: LISTED AND LABELED FLUSH-MOUNTED-TYPE QUICK-DISCONNECT DEVICES AND LISTED AND LABELED GAS CONVENIENCE OUTLETS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

G2415.16 (404.16) LOCATION OF OUTLETS. THE UNTHREADED PORTION OF PIPING OUTLETS SHALL EXTEND NOT LESS THAN L INCH (25 MM) THROUGH FINISHED CEILINGS AND WALLS AND WHERE EXTENDING THROUGH FLOORS, OUTDOOR PATIOS AND SLABS, SHALL NOT BE LESS THAN 2 INCHES (51 MM) ABOVE THEM. THE OUTLET FITTING OR PIPING SHALL BE SECURELY SUPPORTED. OUTLETS HALL NOT BE PLACED BEHIND DOORS, OUTLETS SHALL BE LOCATED IN THE ROOM OR SPACE WHERE THE APPLIANCE IS INSTALLED. EXCEPTION: LISTED AND LABELED FLUSH-MOUNTED-TYPE QUICK-DISCONNECT DEVICES AND LISTED AND LABELED GAS CONVENIENCE OUTLETS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

G2415.17 (404.17) PLASTIC PIPE. THE INSTALLATION OF PLASTIC PIPE SHALL COMPLY WITH SECTIONS G2415.17.1 THROUGH G2415.17.3. G2415.17.1 (404.17.1) LIMITATIONS. PLASTIC PIPE SHALL BE INSTALLED OUTDOORS UNDERGROUND ONLY. PLASTIC PIPE SHALL NOT BE USED WITHIN OR UNDER ANY BUILDING OR SLAB OR BE OPERATED AT PRESSURES GREATER THAN 100 PSIG (689 KPA) FOR NATURAL GAS OR 30 PSIG (207 KPA) FOR LP-GAS.

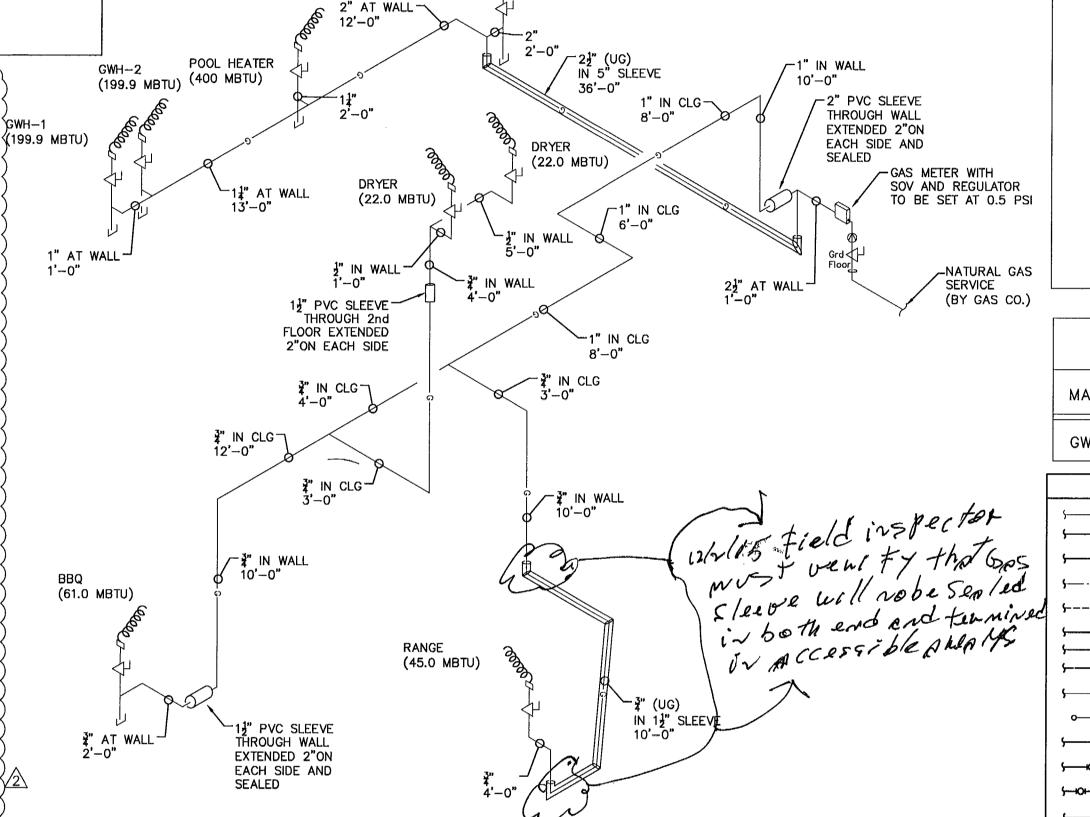
1. PLASTIC PIPE SHALL BE PERMITTED TO TERMINATE ABOVE GROUND OUTSIDE OF BUILDINGS WHERE INSTALLED INPREMANUFACTURED ANODELESS RISERS OR SERVICE HEAD ADAPTER RISERS THAT ARE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS INSTALLATION PLASTIC PIPE SHALL BE PERMITTED TO TERMINATE; WITH A WALL HEAD ADAPTER WITHIN BUILDINGS WHERE THE PLASTIC PIPE IS INSERTED IN A PIPING MATERIAL FOR FUEL GAS USE IN 3. PLASTIC PIPE SHALL BE PERMITTED UNDER OUTDOOR PATIO. WALKWAY AND DRIVEWAY SLABS PROVIDED THAT THE BURIAL DEPTH COMPLIES WITH SECTION G2415.10. G2415.17.2 (404.17.2) CONNECTIONS. CONNECTIONS OUTDOORS AND UNDERGROUND BETWEEN IETALLIC AND PLASTIC PIPING SHALL BE MADE ONLY WITH TRANSITION FITTINGS CONFORMING TO ASTM D 2513 CATEGORY I OR ASTM F 1973. G2415.17.3 (404.17.3) TRACER. A YELLOW INSULATED COPPER TRACER WIRE OR OTHER APPROVED

CONDUCTOR SHALL BE INSTALLED ADJACENT TO UNDERGROUND NONMETALLIC PIPING. ACCESS SHALL BE PROVIDED TO THE TRACER WIRE OR THE TRACER WIRE SHALL TERMINATE ABOVE GROUND AT EACH END OF THE NONMETALLIC PIPING.
THE TRACER WIRE SIZE SHALL NOT BE LESS THAN 18 AWG AND THE INSULATION TYPE SHALL BE G2415.18 (404.18) PROHIBITED DEVICES. A DEVICE SHALL NOT BE PLACED INSIDE THE PIPING OR FITTINGS THAT WILL REDUCE THE CROSS SECTIONAL AREA OR OTHERWISE OBSTRUCT THE FREE

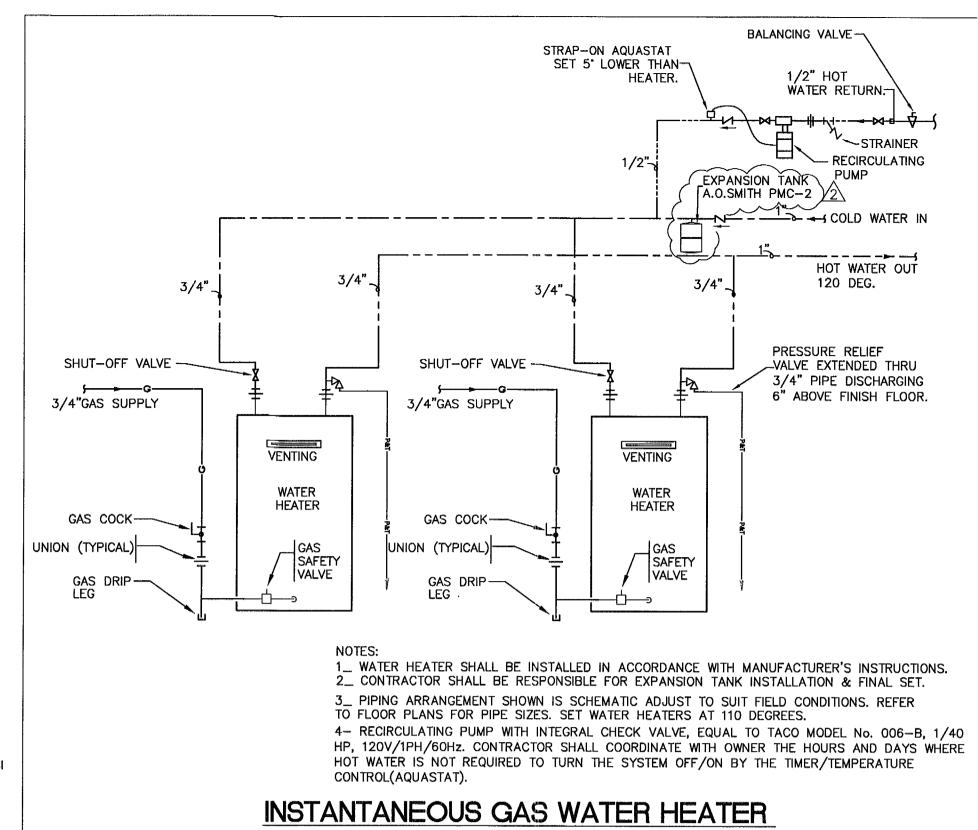
2. AN APPROVED FITTING OR DEVICE WHERE THE GAS PIPING SYSTEM HAS BEEN SIZED TO ACCOMMODATE THE PRESSURE DROP OF THE FITTING OR DEVICE. G2415.19 (404.19) TESTING OF PIPING. BEFORE ANY SYSTEM OF PIPING IS PUT IN SERVICE OR CONCEALED, IT SHALL BE TESTED TO ENSURE THAT IT IS GAS TIGHT. TESTING, INSPECTION AND PURGING OF PIPING SYSTEMS SHALL COMPLY WITH SECTION G2417.

GAS SYSTEM CALCULATIONS TOTAL GAS MBH 45.00 RANGE 199.9 MBH 399.80 GWH-1,2 GENERATOR 926 MBH 926.00 400.00 POOL HEATER 400 MBH BBQ GRILL 61 MBH 61.00 GAS DRYERS 22 MBH 44.00 TOTAL GAS DEMAND: 1,875.80 CALCULUS FROM PRESSURE REGULATOR TO GWH WAS BASED ON THE LONGEST LENGTH METHOD AND SCHEDULE 40 PIPING MATERIAL, THEREFORE FBC FG TABLE 402.4[2] WAS USED. AS PER FLORIDA GAS CODE CONSIDERING PRESSURE DROP 0.5 INCH WC, 0.6 GAS SPECIFIC GRAVITY, 0.5 PSI GAS PRESSURE, TOTAL CAPACITY OF 1,875.80 MBTUH AND MAXIMUM LENGTH OF 68 FT.

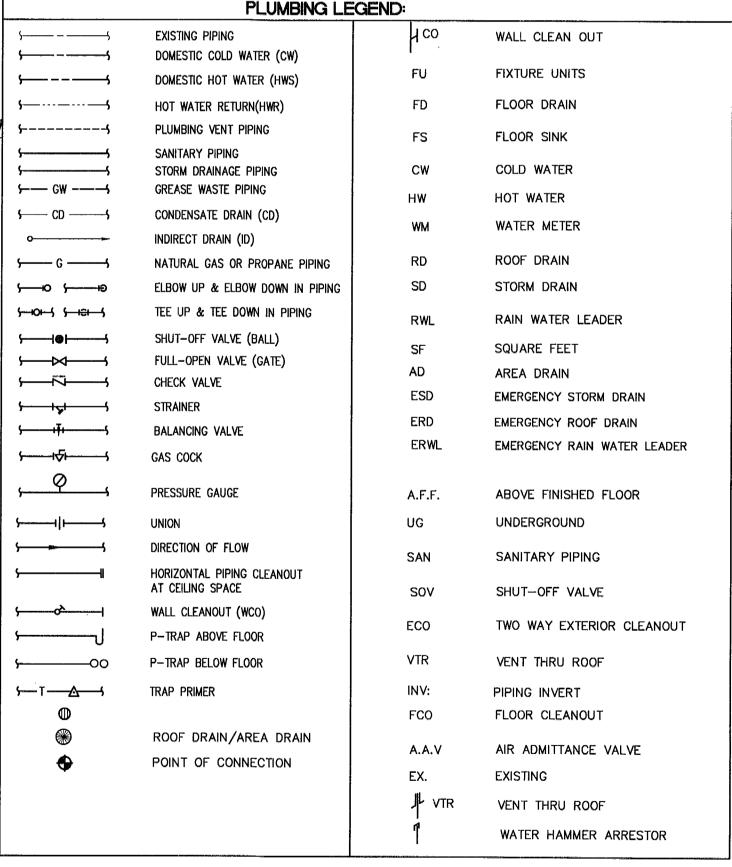
> **GENERATOR** (926.0 MBTU)



GAS RISER DIAGRAM



GAS WATER HEATER SCHEDULE STORAGE MARK GAS BTUH GAS TYPE VENT SIZE EFFICIENCY MANUFACTURER AND MODEL TANK NATURAL GWH-1,2 NORITZ, NRC1111-OD 199,900 N/A GAS



JOB # 1410003 MEGPE CA. 29957 13301 S.W. 132 Ave SUITE-102, Miami Florida 33186 TEL (786) 473-8025

DEPARTMENT REVIEW DNLY. THEY ARE NOT TO BE CONSTRUCTION DOCUMENTS UNTIL ALL BUILDING DEPARTMENT APPROVALS ARE OBTAINED.

NOT VALID FOR CONSTRUCTION UNLESS SIGNED AND SEALED IN THIS BLOCK CONSTRUCTION DOCUMENTS SET. 12.10,2014

miguelg@megpeengineers.com Date/

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OWNER CHANGES

3 OF 4

GENERAL PLUMBING NOTES

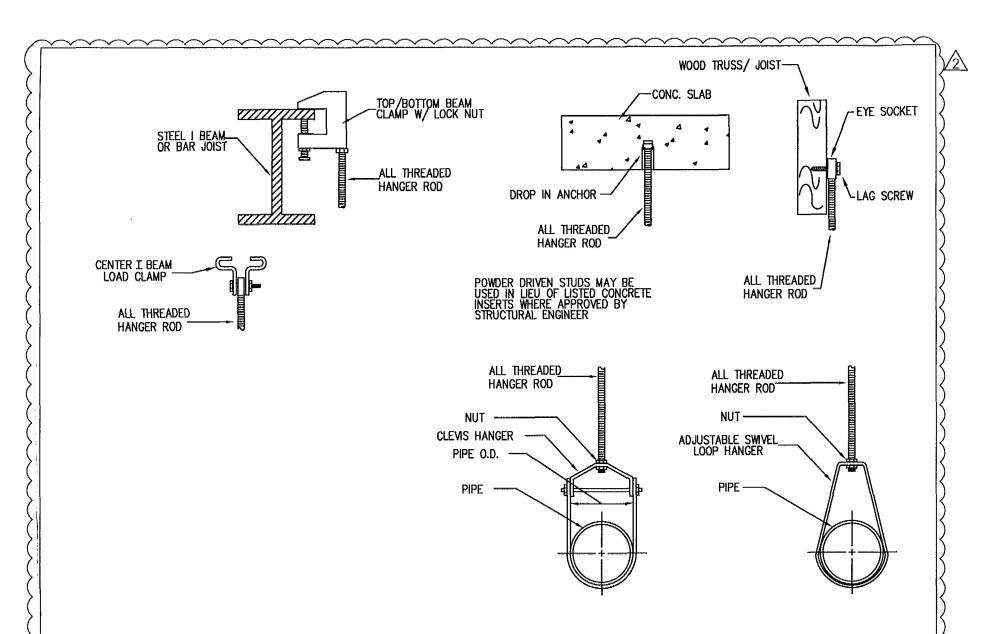
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE FLORIDA BUILDING CODE 2010 EDITION, AND ALL APPLICABLE LOCAL ORDINANCES.
- 2. ALL WORK SHALL BE PERFORMED BY A LICENSED PLUMBING CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETE SYSTEM SHALL BE FULLY OPERATIVE AFTER COMPLETION 3. PLUMBING CONTRACTOR SHALL FURNISH WRITTEN GUARANTEE THAT ALL PLUMBING WORK SHALL
- BE FREE OF DEFECTS OF MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM FINAL ACCEPTANCE.
- DURING THE BIDDING PROCESS CONTRACTOR SHALL VISIT THE SITE AND THOROUGHLY FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS. LOCATION OF EXISTING POINTS OF CONNECTIONS SHALL BE FIELD VERIFIED BEFORE SUBMITTING BID. REQUEST ANY REQUIRED CLARIFICATION AND NOTIFY ARCHITECT AND/OR ENGINEER OF DISCREPANCIES BETWEEN FIELD CONDITIONS AND CONSTRUCTION DOCUMENTS BEFORE COMMENCING WORK.
- COORDINATE NEW PLUMBING WORK WITH LIGHTING, ELECTRICAL, DUCTWORK, STRUCTURAL FRAMING AND CEILING SYSTEMS. CONTRACTOR SHALL COORDINATE LOCATION AND SIZE OF ALL PENETRATIONS THROUGH WALLS, CEILINGS, FLOORS AND ROOFS WITH OTHER TRADES AND REPORT ANY DISCREPANCIES TO
- ARCHITECT/ENGINEER. NO STRUCTURAL MEMBER SHALL BE CUT OR MODIFIED WITHOUT WRITTEN AUTHORIZATION. DRAWING ARE DIAGRAMMATIC. DO NOT SCALE DRAWINGS FOR EXACT LOCATION OF FIXTURES AND
- CONTRACTORS SHALL BE RESPONSIBLE FOR ALL PERMITS, TAXES, INSPECTIONS AND TEST FEES. ALL MATERIALS TO BE PROVIDED UNDER THIS CONTRACT SHALL MEET ALL THE REQUIREMENTS OF THE F.P.C, AND ALL OTHER LOCAL STANDARDS AND REGULATIONS. MATERIALS SHALL BE NEW, FREE OF DEFECTS AND OF AN AMERICAN MANUFACTURER, INDELIBLY MARKED WITH MANUFACTURER NAME, WEIGHT AND/OR CLASS. MANUFACTURER NAMES SHALL BE INTERPRETED AS ESTABLISHMENT OF REQUIRED TYPE, CLASS AND QUALITY. MATERIAL SHALL BE PROVIDED AS FOLLOWS:
- A. ALL WASTE, VENT, AND STORM PIPING BELOW GRADE SHALL BE ONE OF THE FOLLOWING TYPES (AS PER TABLE-702.2, F.P.C.) :
- A.1 SERVICE WEIGHT CAST IRON, SOIL PIPE. PIPING AND FITTINGS SHALL CONFORM TO THE REQUIREMENTS OF CISPI STANDARD 301, ASTM A-888 OR ASTM A-74, LATEST ISSUE. CAST IRON PIPE AND FITTING SHALL BE MARKED WITH THE COLLECTIVE TRADEMARK OF
- THE CAST IRON SOIL PIPE INSTITUTE. A.3 SCHEDULE 40 ABS OR (DWV) PVC PIPING INSTALLED IN ACCORDANCE WITH ASTM D 2321. 1. FOR BUILDINGS EXCEEDING 3-STORIES IN HEIGHT, UNDERGROUND DRAINAGE PIPING SHALL BE SERVICE WEIGHT CAST IRON AS PER SECTION A.1. FOAM CORE PIPING SHALL NOT BE USED.
- B. ALL WASTE, VENT, AND STORM PIPING ABOVE GRADE SHALL BE ONE OF THE FOLLOWING TYPES (AS PER TABLE-702.1, F.P.C.):

2. DO NOT USE IT WHEN 140 F OR ABOVE WASTE TEMPERATURE IS EXPECTED.

- B.1 SERVICE WEIGHT CAST IRON SOIL PIPE. PIPING AND FITTINGS SHALL CONFORM WITH THE REQUIREMENTS OF CISPI STANDARD 301, ASTM A-888 OR ASTM A-74.
- B.2 BELL AND SPIGOT, 'NO HUB' SERVICE WEIGHT CAST IRON, OR WROUGHT IRON, WITH SEALING SLEEVES AND STAINLESS STEEL COUPLING JOINTS, CLAMPS AND BOLTS. PIPING AND FITTINGS SHALL CONFORM WITH THE REQUIREMENTS OF CISPI STANDARD 301, ASTM A-888 OR ASTM A-74, LATEST ISSUE.
- B.3 SCHEDULE 40 ABS OR (DWV) PVC PIPING. COMBUSTIBLE OR FOAM CORE PIPING SHALL NOT BE LOCATED IN RETURN AIR PLENUM AND DO NOT USE IT WHEN 140 F OR ABOVE WASTE TEMPERATURE IS EXPECTED.
- C. SANITARY PIPE FITTINGS:
- C.1 JOINTS FOR HUBLESS PIPE AND FITTING SHALL CONFORM WITH THE F.P.C. AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND LOCAL CODE REQUIREMENTS. HUBLESS COUPLINGS SHALL CONFORM TO CISPI 301. JOINTS FOR HUB AND SPIGOT PIPE SHALL BE INSTALLED WITH COMPRESSION GASKETS CONFORMING TO THE REQUIREMENTS OF ASTM STANDARD C-564 AND C-1563 OR SHALL BE INSTALLED WITH LEAD AND
- D. DOMESTIC WATER PIPING AND FITTINGS SHALL CONFORM WITH TABLES 605.3 THRU 605.5. OF THE F.P.C. AND SHALL MEET THE FOLLOWING TERMS:
- D.1 WHEN COPPER IS USED TYPE 'L' SHALL BE ABOVE GROUND AND TYPE 'K' BELOW GROUND CONFORMING WITH ASME B-88, AND ASTM B-16, LEAD - FREE SOLDER. D.2 DOMESTIC WATER PIPING SHALL NO BE INSTALLED BELOW SLAB, UNLESS INDICATED
- OTHERWISE ON THESE DRAWINGS. D.3 PROVIDE WATER HAMMER ARRESTOR WHERE QUICK-CLOSING VALVE ARE UTILIZED. THEY SHALL CONFORM TO ASSE 1010 AND BE INSTALLED AS PER MANUFACTURER'S
- D.4 INSULATE ALL HOT WATER PIPING WITH 1" RIGID FIBERGLASS OR 1/2" THICK FLEXIBLE FOAM INSULATION (ARMAFLEX). FLEXIBLE FOAM INSULATION SHALL NOT BE SPLIT, AND SHALL BE TAPED AT BUTT JOINTS.
- E. WALL CLEANOUTS.
- E.1 JOSAM SERIES 58750 WITH ACCESS COVER OR EQUAL. E.2 PROVIDE CHROME PLATED BRASS ESCUTCHEONS WITH LOCKING SCREWS WHERE PIPE PASS
- THROUGH FINISHED WALLS. E.3 A CLEANOUT SHALL BE PROVIDED AT THE BASE OF EACH SOIL AND WASTE STACK.
- F.1 LOCATION OF FULL-OPEN VALVES. AS PER FPC 606.1
- F.2 LOCATION OF SHUTOFF VALVES. AS PER FPC 606.2 F.3 QUARTER TURN BALL VALVES, RATED FOR 125 PSI. MANUFACTURED BY NIBCO, SCOTT, STOCKHAM OR EQUAL.
- G.1 SEE PLUMBING FIXTURE SCHEDULE FOR FIXTURE SPECIFICATIONS. G.2 PLUMBING FIXTURES SHALL COMPLY WITH WATER CONSERVATION REGULATION FS.553.14. G.3 EXPOSED HOT WATER PIPING SERVING PLUMBING FIXTURES SHALL BE PROPERLY
- 10. PERFORM THE FOLLOWING TEST:
- A. NEW DOMESTIC WATER PIPING SHALL BE HYDROSTATICALLY TESTED AT 100 PSIG FOR A
- PERIOD OF NO LESS THAN ONE HOUR. B. WASTE AND VENT PIPING SHALL BE FILLED WITH WATER TO A 10 FOOT HEAD AND ALLOWED
- TO STAND UNTIL THE WATER LEVEL REMAINS CONSTANT. CORRECT ALL DEFECTS DISCLOSED BY ABOVE TESTING. D. STERILIZE ALL NEW DOMESTIC WATER PIPING WITH A MIXTURE OF TWO POUNDS OF CHLORINATED
- LIME TO EACH 1000 GALLONS OF WATER (50 PPM OF AVAILABLE CHLORINE). RETAIN MIXTURE IN PIPE FOR A PERIOD OF 24 HOURS. FLUSH THOROUGHLY WITH POTABLE WATER BEFORE PLACING SYSTEM IN SERVICE. 11. SANITARY, GREASE & STORM PIPING 2 1/2" AND SMALLER SHALL BE SLOPED AT 1/4" PER FOOT
- MINIMUM. PIPES LARGER THAN 2 1/2" SHALL BE SLOPED AT 1/8" PER FOOT MINIMUM FALLS INSULATE ALL AIR CONDITIONING AND REFRIGERATION CONDENSATE DRAIN WITH 3/4"INCOAFLEX PIPE INSULATION OR EQUAL. FINISHED, WHERE EXPOSED, WITH 2 COATS OF WHITE LATEX PAINT AS PER
- MANUFACTURER'S INSTRUCTION. 13. PIPING PENETRATION AT ROOFS, CEILINGS, FLOORS AND WALLS SHALL BE SEALED AIR AND WATER TIGHT. WHERE PENETRATING FIRE RATED CONSTRUCTION, FIRE SAFE TO PROVIDE PROTECTION
- MATCHING REQUIRED FIRE RESISTANCE RATING. 14. ALL HORIZONTAL VENT PIPING SHALL SLOPE TO DRAW TO STACKS. NO POCKETS OR LOW POINTS SHALL BE CREATED IN THE VENT LINES WHICH MAY PREVENT VENTING IF FILLED WITH CONDENSATION. 15. CEILING ACCESS PANELS SHALL BE PROVIDED FOR VALVES INSTALLED ABOVE OTHERWISE
- NON-ACCESSIBLE CEILINGS. 16. NO EQUIPMENT OR MATERIALS SHALL BE PURCHASED OR INSTALLED PRIOR TO FINAL
- APPROVAL OF SHOP DRAWINGS. 17. THE CONTRACTOR SHALL PROVIDE A SET OF PRINTS CLEARLY MARKED TO SHOW AS-BUILT
- CONDITIONS AT THE COMPLETION OF CONSTRUCTION. 18. FURNISH AND INSTALL DIELECTRIC COUPLINGS AT ALL CONNECTIONS BETWEEN DISSIMILAR METALS. 19. ALL PIPES CROSSING THRU CORROSIVE MATERIAL TO BE WRAPPED WITH A 120# ROOFING PAPER.
- 20. PROTECTION OF PIPES AND PLUMBING SYSTEM COMPONENTS:

21. ACCESS & VENTILATION SHALL BE PROVIDED TO ALL AIR ADMITTANCE VALVES.

A. PIPING PROTECTION SHALL COMPLY WITH SECTIONS: 305.1 CORROSION, 305.2 BREAKAGE, 305.3 STRESS & STRAIN, 305.4 SLEEVES, 305.5 PIPES THROUGH OR UNDER FOOTINGS OR FOUNDATION WALL, 305.6 FREEZING, 305.7 WATERPROOFING OF OPENING, 305.8 PROTECTION AGAINST PHYSICAL DAMAGE & 305.9 PROTECTION OF COMPONENTS OF PLUMBING OF THE FLORIDA PLUMBING CODE, 2010.



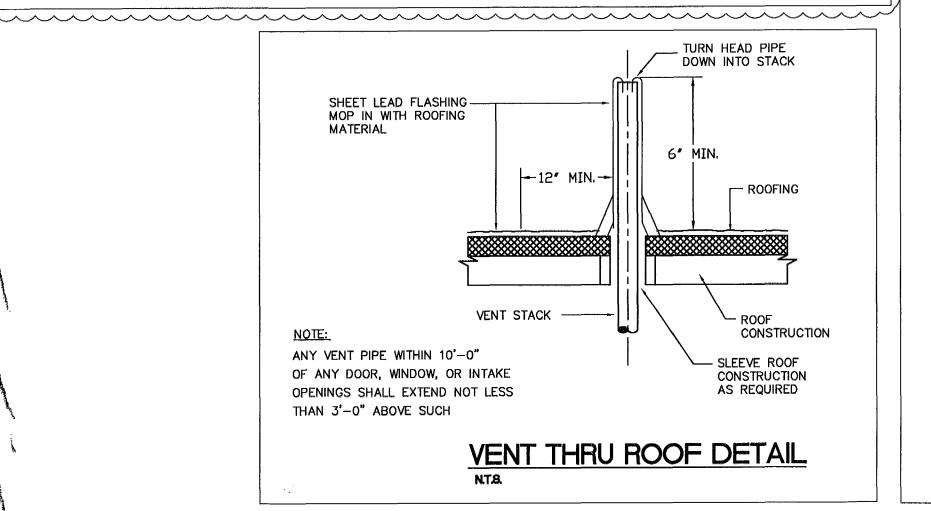
HANGER SPACING				
PIPING MATERIAL	MAXIMUM HORIZONTAL SPACING feet	MAXIMUM VERTICAL SPACING feet		
CAST IRON PIPE	5.0	15		
COPPER OR COPPER-ALLOY PIPE	12	10		
COPPER OR COPPER—ALLOY TUBING, 1 1/4" DIAMETER AND SMALLER	6	10] L	
COPPER OR COPPER-ALLOY TUBING, 1 1/2" DIAMETER AND SMALLER	10	10		
PVC PIPE	4.0	10		
REFER TO FBC P TABLE 308.5 OR FBC	R TABLE P2605 FOR	DIFFERENT]	

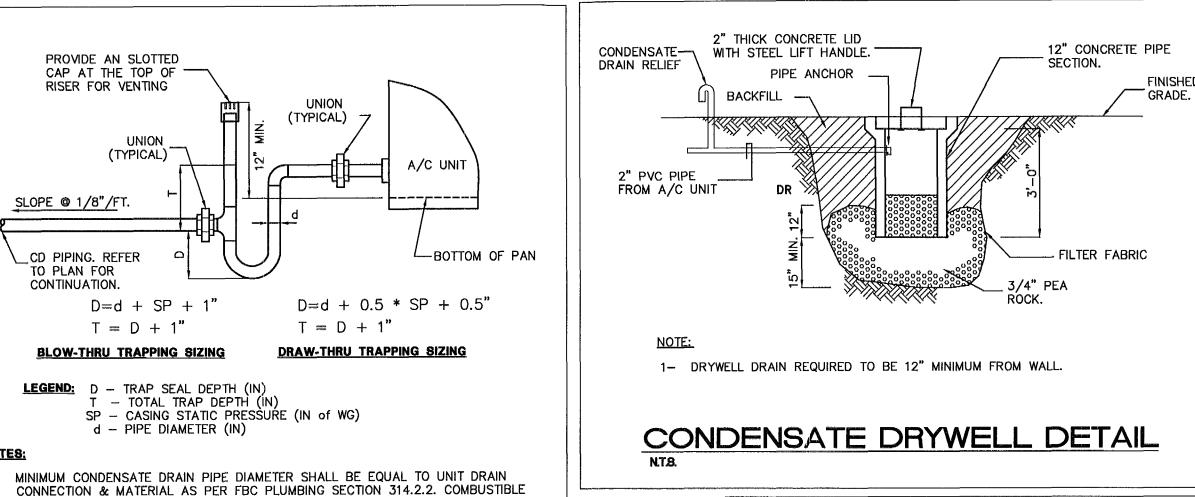
APPROVED PIPING MATERIALS.

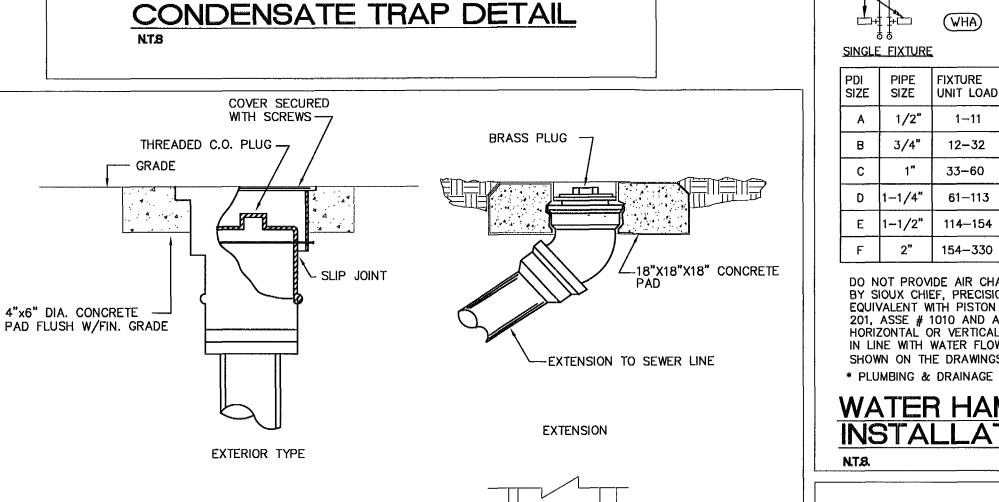
1. CEILING PIPES SHALL BE INSTALLED USING GRIPPLE HANG FAST SUSPENSION SYSTEM BY GRIPPLE, INC. 2. HANGER SHALL BE INSTALLED AND SIZED AS PER MANUFACTURER'S INTRUCTIONS COMPLYING WITH FBC HANGER SPACING TABLES. 3. ALL HANGER RODS, HANGERS, FASTENERS, ETC. SHALL BE

PROVIDED WITH FACTORY APPLIED HOT DIPPED GALVANIZING 4. ALL HANGERS SHALL BE LISTED FOR THEIR INTENDED SERVICE.

PIPE HANGERS DETAIL







PIPING SHALL NOT BE USED IN RETURN AIR PLENUM. SEE PLAN FOR PIPE SIZES.

MANUFACTURER RECOMMENDATIONS AND IMPLEMENT THE SIZES THAT RESULT IN

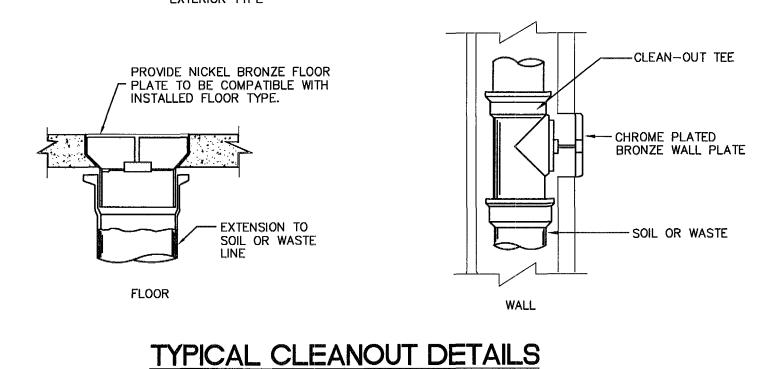
AUXILIARY AND SECONDARY DRAIN SYSTEMS SHALL COMPLY WITH F.M.C. SECTION

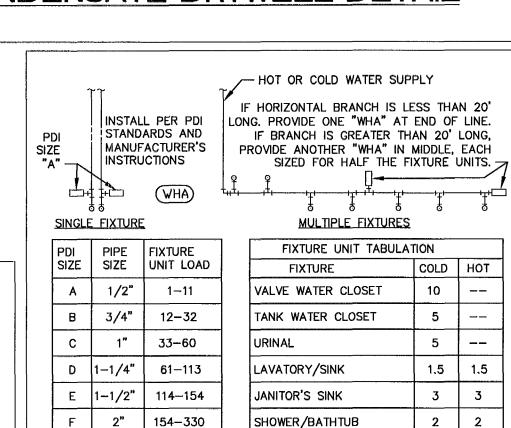
307.2.3. AN APPROVED WATER LEVEL DETECTOR OR FLOAT SWITCH TO SHUT DOWN

2 ALL DIMENSION SHOWN ARE THE MINIMUM REQUIRED. CONTRACTOR SHALL VERIFY

THE UNIT MAY BE INSTALLED AS PER F.M.C. 307.2.3.

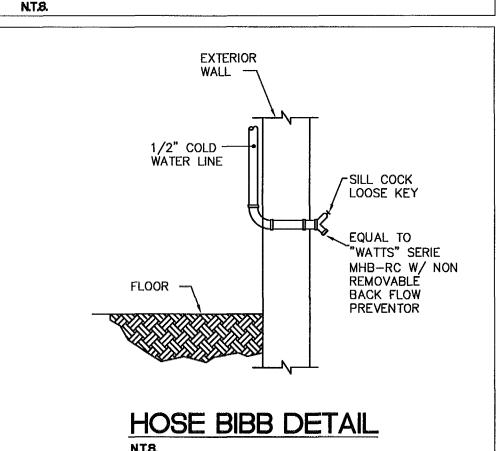
PRIMARY DRAIN WITHIN UNCONDITIONED AREAS SHALL BE INSULATED.

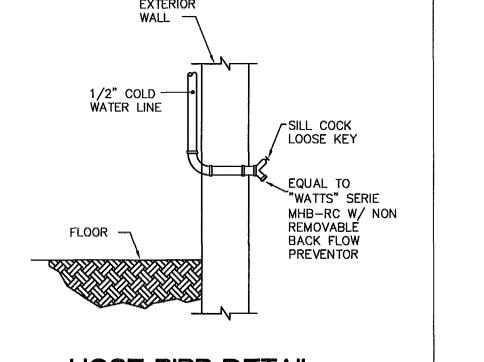




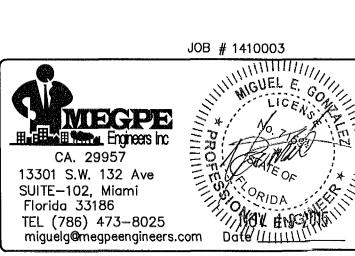
DO NOT PROVIDE AIR CHAMBERS. PROVIDE WATER HAMMER ARRESTERS BY SIOUX CHIEF, PRECISION PLUMBING PRODUCTS, WATTS OR APPROVED EQUIVALENT WITH PISTON AND O-RING CONSTRUCTION, HAVING PDI #WH-201, ASSE # 1010 AND ANSI # A112.26.1M CERTIFICATION. INSTALL IN HORIZONTAL OR VERTICAL POSITION, BUT NEVER UPSIDE DOWN. INSTALL IN LINE WITH WATER FLOW DIRECTION IF POSSIBLE. SIZE THE UNITS AS SHOWN ON THE DRAWINGS AND/OR PER THE TABLES SHOWN ABOVE. * PLUMBING & DRAINAGE INSTITUTE(PDI)

WATER HAMMER ARRESTERS INSTALLATION GUIDE





MEGPE 13301 S.W. 132 Ave SUITE-102, Miami



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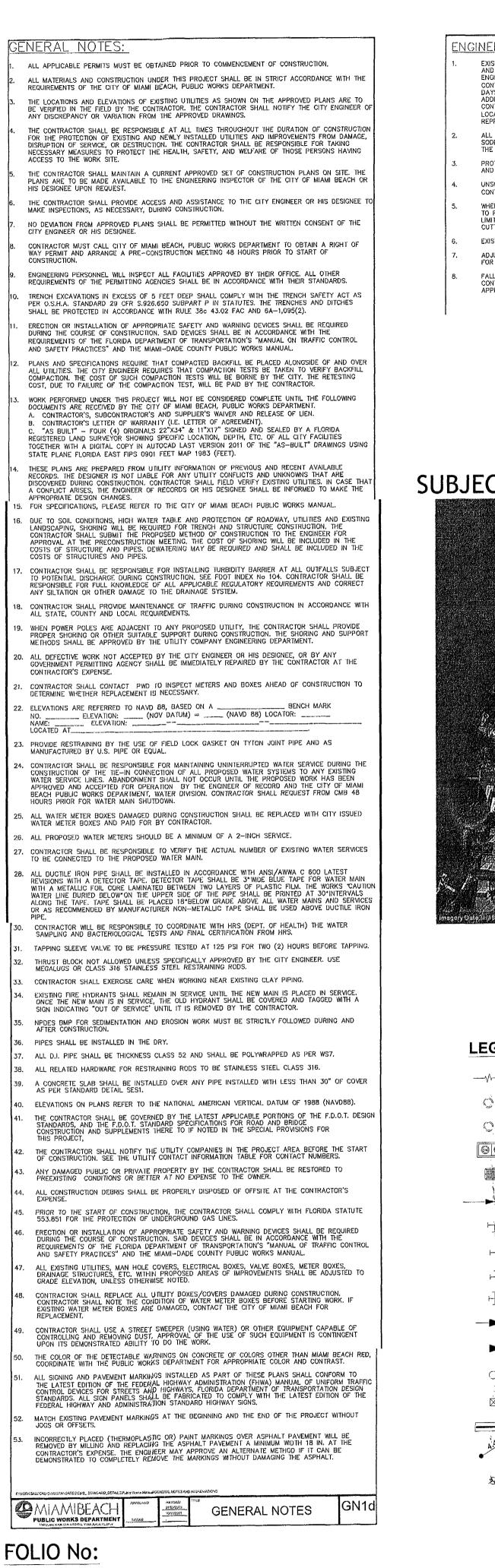
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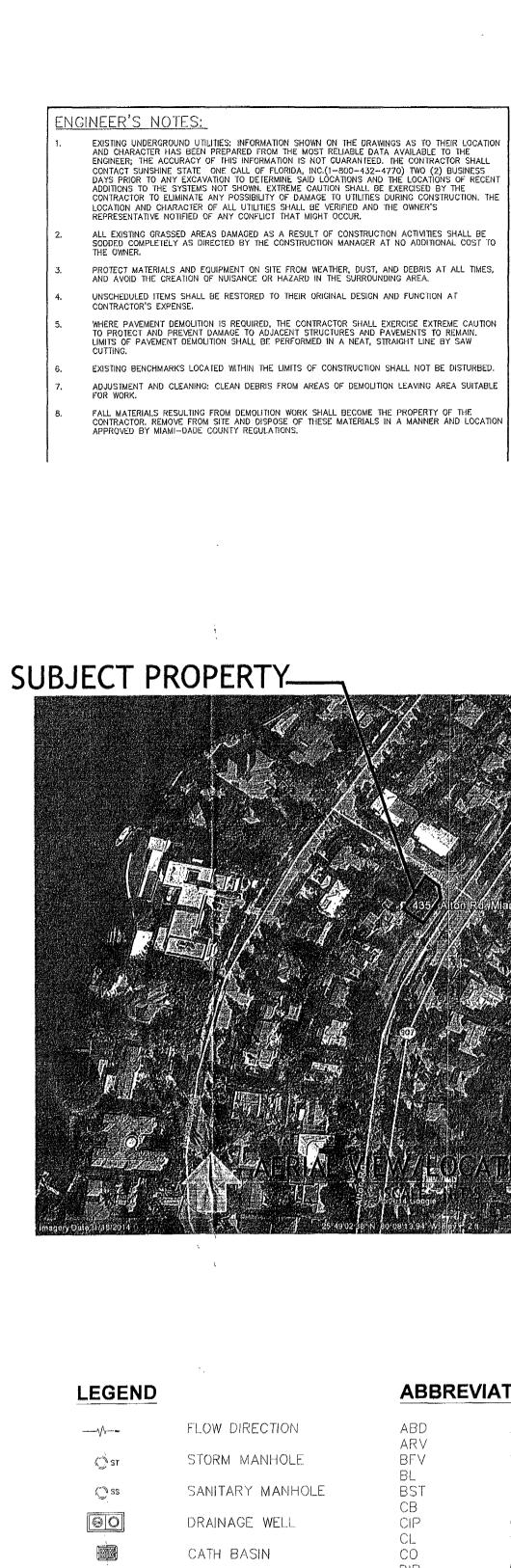
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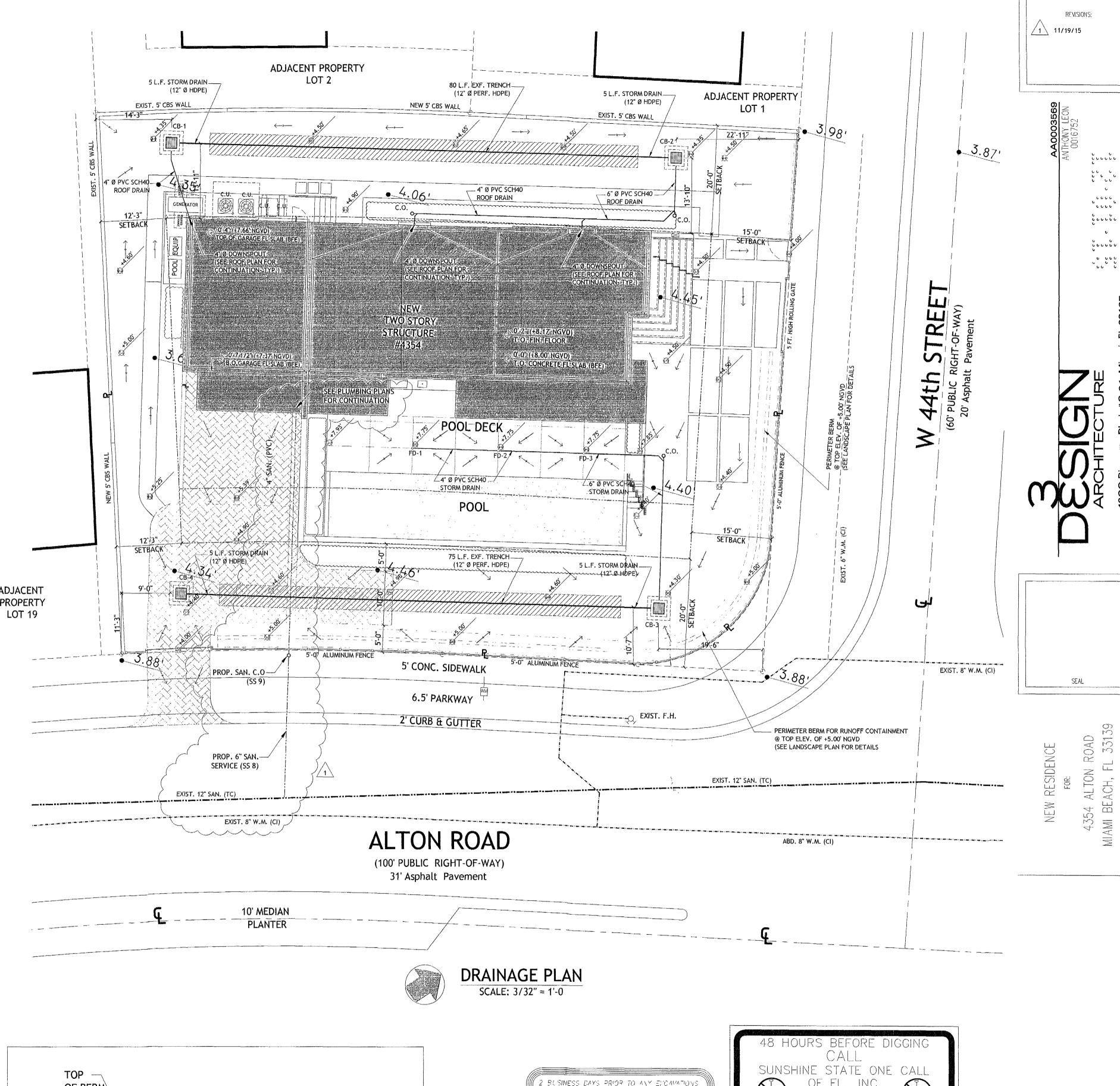
PLYS 12/2/18

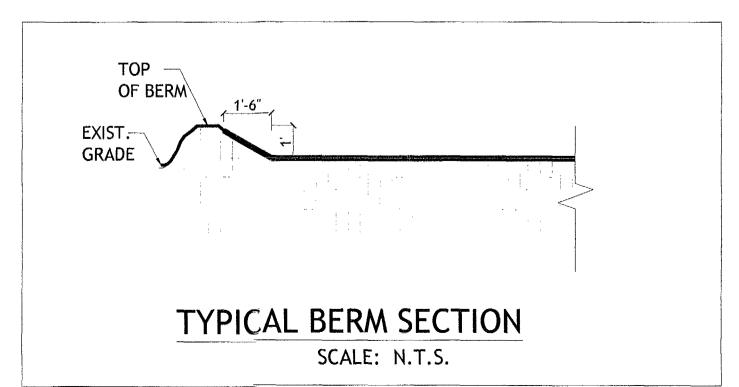
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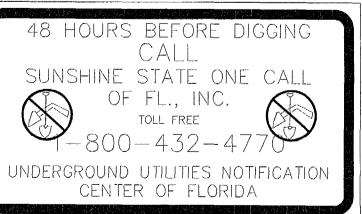
LEGEND	'.	ABBREVI	ATIONS
	FLOW DIRECTION	ABD	ABANDONNED
() ST	STORM MANHOLE	ARV BFV	AIR RELEASE VALVE BUTTERFLY VALVE
Q ss	SANITARY MANHOLE	BL BST	BASE LINE BELL SOUTH TELEPHONE
	DRAINAGE WELL	CB CIP	CATCH BASIN CAST IRON PIPE
	CATH BASIN	CL CO	CENTERLINE CLEAN OUT
	VALŸE	DIP E	DUCTILE IRON PIPE EAST
 	TEE	EOP EL, ELEV	EDGE OF PAVEMENT ELEVATION
$\stackrel{\downarrow}{\rightarrow}$	45 DEG. BEND	ESMT EXIST	EASEMENT EXISTING
,	90 DEG. BEND	FH FPL	FIRE HYDRANT FLORIDA POWER & LIGHT
⊢	CROSS	FT GV	FOOT/FEET GATE VALVE
	REDUCER	LF LT	LINEAR FEET LEFT
—	PLUG	MH N	MANHOLE NORTH
O	FIRE HYDRANT	NTS PL	NOT TO SCALE PROPERTY LINE
; ⊠	WATER METER	PROP RT	PROPOSED RIGHT
	EXFILTRATION TRENCH	S SAN, SS	SOUTH SANITARY SEWER
4,45	EXIST. ELEVATION	ST TC	STORM SEWER TERRA COTTA
A AS	PROP. ELEVATION	TS TV	TAPPING SLEEVE TAPPING VALVE
শ্ৰে		TBFV W	TO BE FIELD VERIFIED WEST
	4	WM	WATER MAIN







PLMES 12/2/15

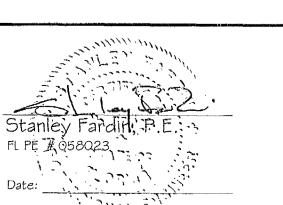


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Samabi Consulting Engineers 13335 SW 124th STREET, SUITE I

MIAMI, FL 33186 T: 305-454-821 f: 305-514-0582 samabi@bellsouth.net Certificate of Authorization No.: 2661

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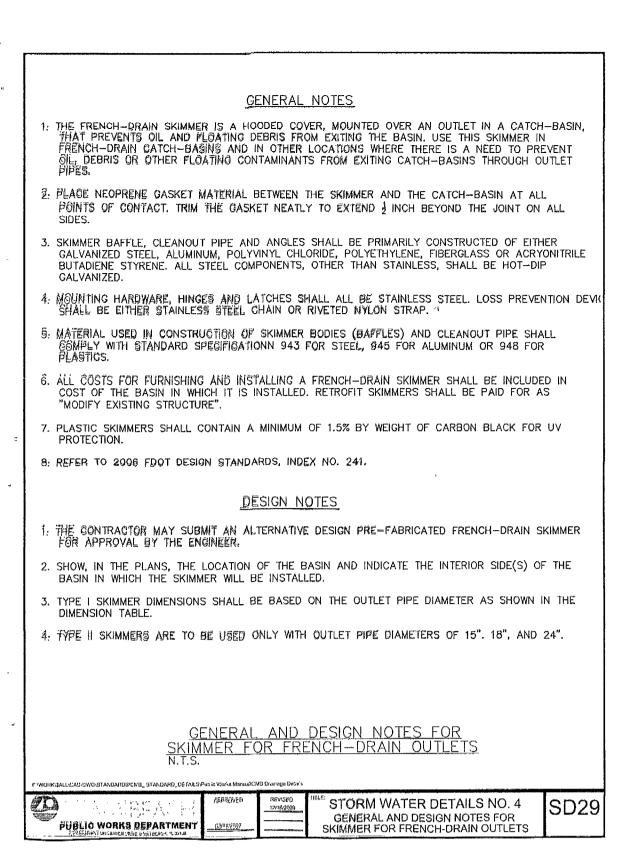
> _____ LOCATION MAP **GENERAL NOTES** DRAINAGE PLAN

FOLIO No:

02-3222-011-1430

LEGAL DESCRIPTION:

LOT 20 & 21 BLOCK 6 OF NAUTILUS SUBDIVISION, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 8,AT PAGE 95,OF THE PUBLIC RECORDS OF MIAMI-DADE COUNTY, FLORIDA.



FRONT ELEVATION

STORM WATER DETAILS NO. 4

FRENCH-DRAIN OUTLETS

1. THE CLEANOUT PORT FOR THE TYPE II SKIMMER SHALL BE GASKETED, WITH EITHER A THREADED SCREW—IN LID OR A LID SECURED BY FOUR

2. THE BACKS OF SKIMMERS MUST CONFORM TO THE SHAPE OF THE BASIN WALLS ON WHIGH THEY ARE MOUNTED.

3. SHOW, IN THE PLANS, THE RADII REQUIRED FOR CURVED—BACK SKIMMERS.

TYPE II SKIMMER FOR FRENCH-DRAIN OUTLETS N.T.S.

STAINLESS STEEL QUICK-RELEASE LATCHES.

-TEN ‡"ø x 2" STUDS WITH NUTS & WASHERS

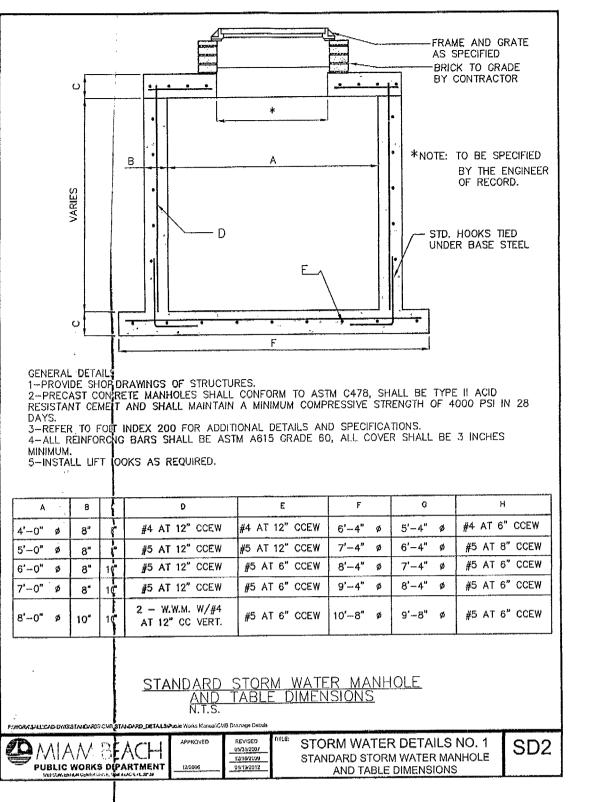
-10" ROUND CLEANOUT POR WITH NEOPRENE GASKET

____15"ø PIPE

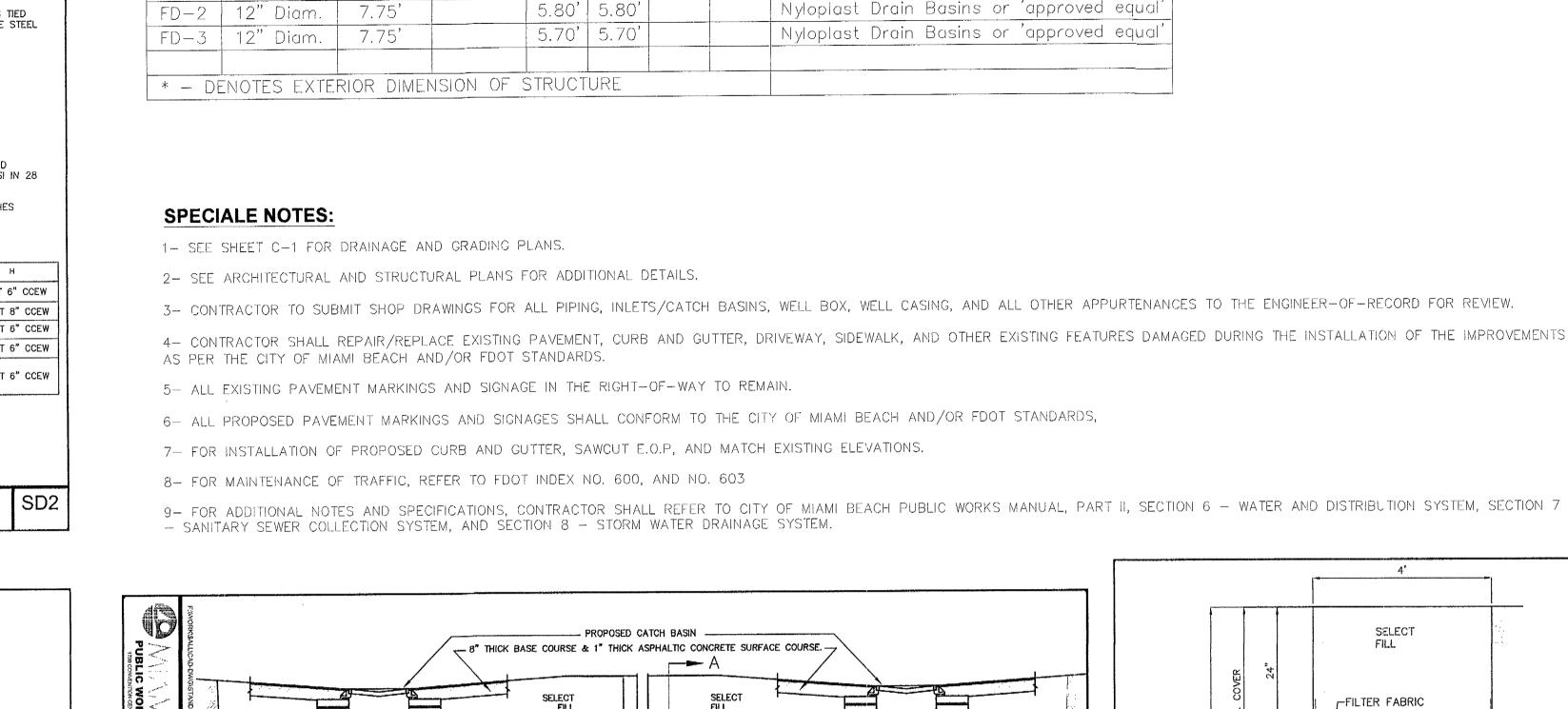
_____18"ø PIPE

---- 24"ø PIPE

DEVICE FLANGE (3" MIN.)



3/8" EXPANSION JOINT-6.25" 4" MIN. 4.75" PAVEMENT 4000 PSI CONCRETE -4 REBARS -STORM WATER DETAILS NO. 4 TRENCH DRAIN SYSTEM DETAIL



SCHEDULE OF DRAINAGE STRUCTURES

-1.75'

-1.75'

-1.75

-1.75

 0.30°

5.90'

INVERTS

0.30'

0.30' | 1.80'

NOTES

Provide 30" Sump

Provide 30" Sump

Provide 30" Sump & Baffle (N,S)

Nyloplast Drain Basins or 'approved equal

Provide 30" Sump & Baffle (N)

SIZE(*) TOP EL. BOTT. EL.

4.35

4.35'

4.35

4.30'

7.75'

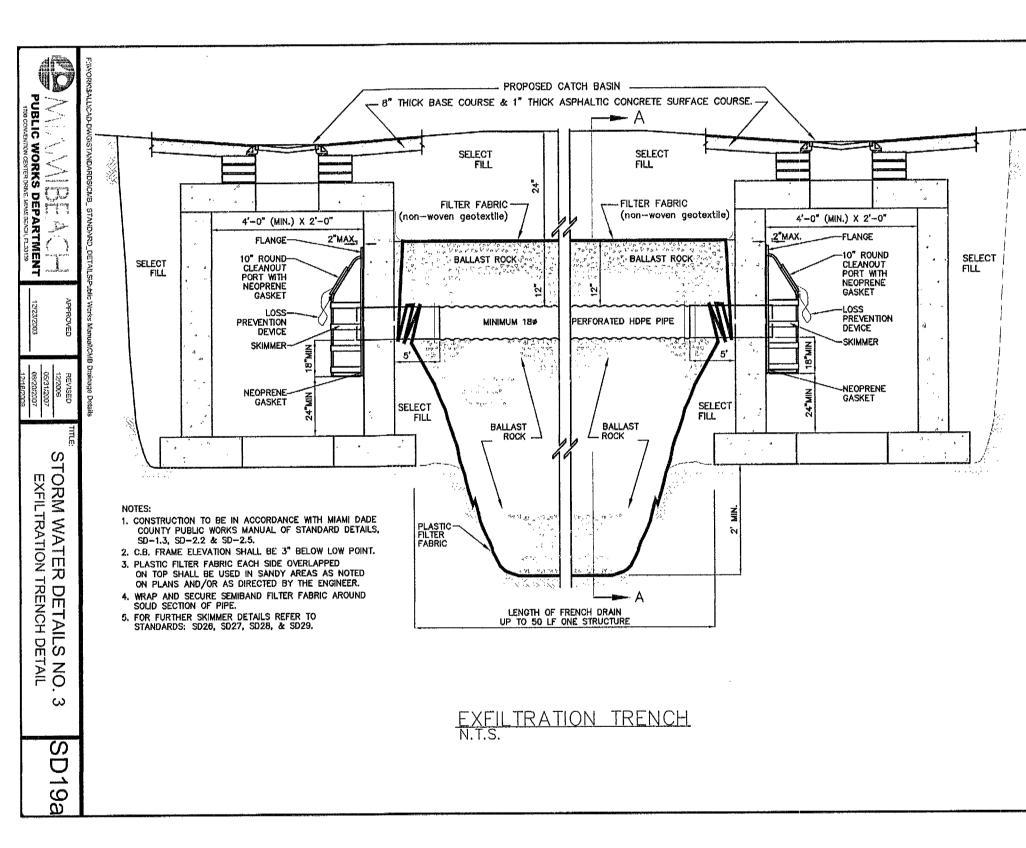
MARK

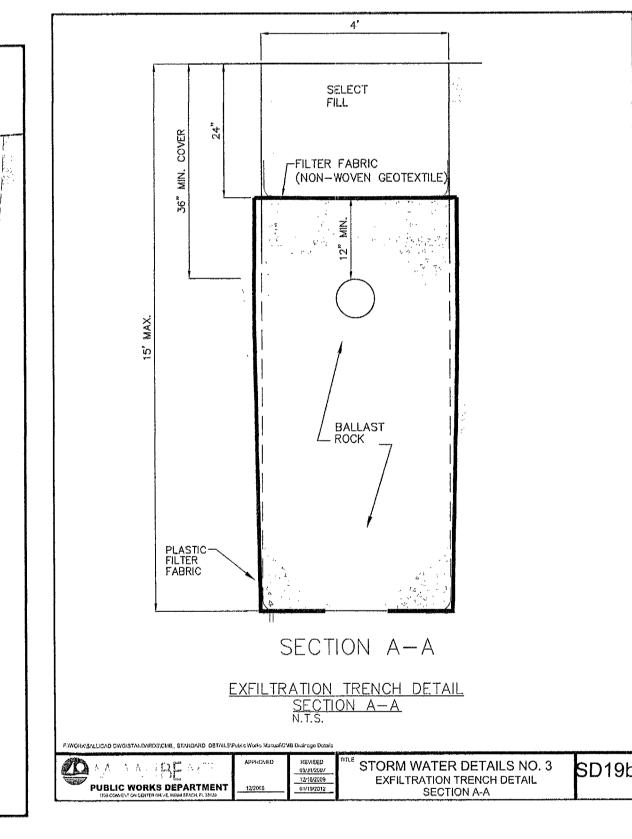
CB-1

CB-3

52"x52'

12" Diam





PAVING, GRADING AND DRAINAGE NOTES:

CLEANOUT

NEOPRENE

PREVENTION

-NEOPRENE GASKET

SIDE ELEVATION

PUBLIC WORKS DEPARTMENT

GASKET

1- ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE CITY OF MIAMI-DADE COUNTY DERM, SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD), AND ALL OTHER LOCAL AND NATIONAL CODES WHERE APPLICABLE.

2- ALL WORK TO BE IN COMPLIANCE WITH THE REQUIREMENTS OF AND ACCEPTABLE TO THE CITY OF MIAMI-DADE COUNTY, AND THE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT).

3- CONTRACTOR SHALL PROVIDE HIS OWN LINE AND GRADE FROM HORIZONTAL AND VERTICAL CONTROL. CONTROL. CONTRACTOR SHALL ALSO PROVIDE 'AS-BUILT' GRADE CERTIFIED BY A REGISTERED LAND SURVEYOR, AS REQUIRED BY MIAMI-DADE COUNTY, AND THE CITY OF MIAMI-BEACH. 4- REFER TO STRUCTURAL PLANS FOR SPECIFICATIONS AND DETAILS FOR PARKING GARAGE SLAB UNDER PROPOSED BUILDING.

5- ALL ELEVATIONS REFER TO N.G.V.D., 1929 DATUM.

6- ALL EXCAVATIONS SHALL COMPLY WITH OSHA'S SAFETY EXCAVATION STANDARDS AND FLORIDA'S TRENCH SAFETY ACT. CONTRACTOR SHALL FURNISH THE OWNER WITH WRITTEN ASSURANCE THAT HE WILL COMPLY WITH THESE REGULATIONS.

7- BID PRICES SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS COMPLETE IN-PLACE, TESTED, AND ACCEPTED BY THE ENGINEER.

8- ALL AREAS WHERE NEW STORM DRAINAGE IMPROVEMENTS ARE INSTALLED SHALL BE GRADED TO PROMIDE POSITIVE DRAINAGE AWAY FROM BUILDING STRUCTURE CONTRACTOR SHALL SOD ALL AREAS DISTURBED BY THE WORK UPON COMPLETION OF THE GRADING.

9- CONTRACTOR SHALL REMOVE AND REPLACE SIDEWALK ALONG THE ENTIRE PROPERTY LINE.

10- CONTRACTOR SHALL RECONSTRUCT SWALE/SOD ALONG THE ENTIRE PROPERTY LINE.

11- CONTRACTOR SHALL MILL AND RESURFACE 2-INCHES AVERAGE USING S-III ASPHALT MIX DESIGN ON THE DRIVING LANE (10-FOOT WIDE) ALONG THE ENTIRE PROPERTY LINE.

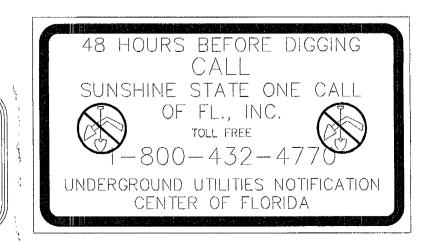
12- ANY WORK AND/OR IMPROVEMENTS FROM/TO THE RIGHT-OF-WAY INCLUDING LANDSCAPING AND IRRIGATION WILL REQUIRE A SEPARATE CMB PUBLIC WORKS DEPARTMENT RIGHT-OF-WAY CONSTRUCTION PERMIT.

13- ALL CONSTRUCTION AND/OR USE OF EQUIPMENT IN THE RIGHT-OF-WAY WILL A SEPARATE CMB PUBLIC WORKS DEPARTMENT RIGHT-OF-WAY CONSTRUCTION PERMIT PRIOR TO THE START OF CONSTRUCTION

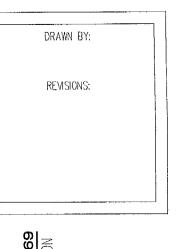
14- A CMB RIGHT-OF-WAY CONSTRUCTION PERMIT IS REQUIRED BEFORE STARTING ANY DEMOLITION AND OR CONSTRUCTION ACTIVITY NISIDE THE RIGHT-OF-WAY.

PITABLE CONTACT OUR CHECK FOR LOCATIONS OF CITY UTILITIES 305-673-7080 PUBLIC ACPKS DEPARIMENT CITY OF MIAMI BEACH

TRUSINI SS DAYS PRIOR O ANY XCAZATIONS











ROAD

THESE PLANS ARE FOR BUILDING DEPARTMENT REVIEW ONLY. THEY ARE NOT TO BE CONSTRUED AS CONSTRUCTION DOCUMENTS UNTIL ALL BUILDING
DEPARTMENT APPROVALS ARE OBTAINED.

