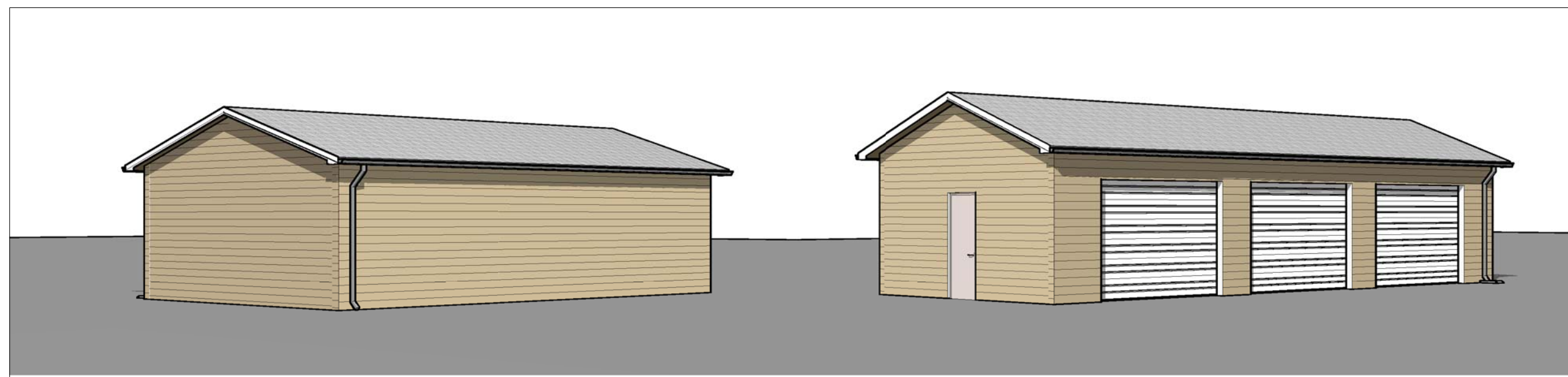


# SECURE GARAGE

14405 E. 42ND STREET S.  
INDEPENDENCE, MISSOURI 64055

ISSUED FOR:  
PERMIT - 08/04/2021



## GENERAL NOTES

- CONTRACTOR SHALL VISIT THE SITE, FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS AND OWNER REVIEW AND UNDERSTAND THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND CONDITIONS PRIOR TO BEGINNING ANY WORK AND SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCY. DO NOT SCALE DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CORRECTIONS AND REPAIRS REQUIRED DUE TO THEIR FAILURE TO DO SO. GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT ALL SUB-CONTRACTORS RECEIVE ALL ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.
- SOLELY AS A CONVENIENCE TO THE OWNER AND CONTRACTOR, THE ARCHITECT MAY INCLUDE DOCUMENTS PREPARED BY CERTAIN CONSULTANTS (OR INCORPORATE THE RECOMMENDATIONS OF SAID CONSULTANTS INTO DOCUMENTS PREPARED BY THE ARCHITECT) WITHIN THE SET OF DOCUMENTS ISSUED BY THE ARCHITECT. IT IS EXPRESSLY UNDERSTOOD, THAT BY SUCH ISSUANCE, THE ARCHITECT ASSUMES NO LIABILITY FOR THE SERVICES OF SAID CONSULTANTS.
- ALL WORK AND MATERIALS SHALL CONFORM TO THE APPLICABLE CODES LISTED IN THE PROJECT CODE SUMMARY.
- UNLESS OTHERWISE INDICATED ON THESE DRAWINGS AND SPECIFICATIONS AS BEING N.I.C. OR EXISTING, ALL ITEMS, MATERIALS, ETC. AND INSTALLATIONS OF THE SAME ARE A PART OF THE CONTRACT DEFINED BY THESE DRAWINGS AND SPECIFICATIONS AND THEIR INTENT.
- CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS AND COMPLY WITH SAFETY REGULATIONS AND RESTRICTIONS AS REQUIRED FOR WORKERS AND PEDESTRIAN PROTECTION DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT. PROVIDE PROTECTION AS REQUIRED TO PREVENT ANY DAMAGE TO EXISTING CONSTRUCTION WITHIN AND ADJACENT TO JOB SITE. WHERE DAMAGE OCCURS, THE CONTRACTOR SHALL REPAIR OR REPLACE DAMAGED AREA AND/OR MATERIAL AS REQUIRED TO THE OWNER'S APPROVAL AT NO ADDITIONAL COST. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND MAY NOT BE LIMITED TO NORMAL WORKING HOURS. PROVIDE SECURITY FENCE AND GATES AS NECESSARY AROUND THE AREA WITHIN THE SCOPE OF WORK.
- IF THERE ARE TRENCHES OR EXCAVATION 5'-0" OR MORE IN DEPTH INTO WHICH A PERSON IS REQUIRED TO DESCEND, CONTRACTOR SHALL OBTAIN NECESSARY PERMIT FROM THE APPROPRIATE LOCAL GOVERNING AGENCY.
- PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, TRANSPORTATION, UTILITIES, OTHER SERVICES AND RELATED TASKS NECESSARY FOR PROPER EXECUTION OF THE CONSTRUCTION REQUIRED BY CONTRACT DOCUMENTS.
- ANY REVISION OR ADDITIONAL WORK REQUIRED BY FIELD CONDITIONS OR LOCAL GOVERNING AUTHORITIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT BEFORE PROCEEDING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND PAYING FOR ALL PERMITS, LICENSES, INSPECTIONS AND TESTING INDICATED ON THE PLANS AND BY SPECIFICATIONS OR REQUIRED BY THE SOILS REPORT AND/OR REQUIRED BY ANY GOVERNMENT AGENCY.
- CONTRACTOR SHALL VERIFY THE SIZE AND LOCATION OF ALL UTILITY LINES AND STUBS TO THE BUILDING(S) AS MAY BE INDICATED ON THE PLANS.
- NO ADDITIONAL ROOF OPENING OR ROOF MOUNTED EQUIPMENT IS ALLOWED BEYOND THAT WHICH IS SHOWN ON THESE PLANS WITHOUT WRITTEN CONSENT OF THE ARCHITECT AND STRUCTURAL ENGINEER.
- NO STRUCTURAL MEMBER SHALL BE CUT FOR PIPES, HVAC DUCTS, ETC., UNLESS SPECIFICALLY DETAILED AND/OR APPROVED BY THE ARCHITECT AND STRUCTURAL ENGINEER.
- ALL SHOP WELDING TO BE DONE IN A CERTIFIED LICENSED SHOP. ALL FIELD WELDING SHALL BE DONE ONLY BY CERTIFIED WELDERS UNDER CONTINUOUS INSPECTION WITH CERTIFICATE ISSUED AS REQUIRED BY BUILDING OFFICIAL.
- WHERE LARGER STUDS OR FURRING IS REQUIRED TO COVER DUCTS, PIPING, CONDUIT, ETC., THE LARGER SIZE STUD OR FURRING SHALL EXTEND THE FULL LENGTH OF THE SURFACE WHERE THE FURRING OCCURS.
- NO HAZARDOUS MATERIALS WILL BE STORED AND/OR USED WITHIN THE BUILDING WHICH EXCEED THE QUANTITIES ALLOWED BY CODE.
- INSTALLATION OF ANY BUILDING INSULATION WHICH CONTAINS OR UTILIZES AN OZONE DEPLETING COMPOUND IS PROHIBITED.
- NO BUILDING OR PORTION OF A BUILDING SHALL BE OCCUPIED OR USED FOR STORAGE PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY.
- THE BUILDING AND FACILITIES MUST BE ACCESSIBLE TO AND FUNCTIONAL FOR THE PHYSICALLY DISABLED IN ACCORDANCE WITH AMERICANS WITH DISABILITIES ACT (ADA) AND ALL OTHER STATE/FEDERAL GOVERNING AGENCIES.

## CONSTRUCTION NOTES

- ALL WORK PERFORMED SHALL BE IN ACCORDANCE WITH THE BUILDING CODE OF THE AUTHORITY HAVING JURISDICTION AND THE RULES AND REGULATIONS OF ALL AGENCIES, DEPARTMENTS AND COMMISSIONS HAVING JURISDICTION. WHERE DISCREPANCIES OCCUR AND/OR WHERE THERE ARE CONFLICTS OR OMISSIONS IN THE DRAWINGS AND APPLICATIONS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IMMEDIATELY AND REFRAIN FROM STARTING AND COMPLETING SUCH WORK, OR DEPENDENT WORK, UNTIL TOLD BY THE ARCHITECT TO PROCEED.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS IN THE FIELD PRIOR TO COMMENCING WORK, AND SHALL REPORT TO THE ARCHITECT ANY CONDITION OR DISCREPANCY BETWEEN DRAWINGS AND FIELD CONDITIONS REQUIRING MODIFICATIONS BEFORE PROCEEDING WITH THE WORK.
- MINOR DETAILS NOT USUALLY SHOWN OR SPECIFIED, BUT NECESSARY FOR PROPER CONSTRUCTION OF ANY PART OF THE WORK SHALL BE INCLUDED AS IF THEY WERE INDICATED IN THE DRAWINGS.
- REFERENCING OF DRAWINGS IS FOR CONVENIENCE ONLY AND DOES NOT LIMIT APPLICATION OF ANY DRAWING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL CONDITIONS AND MATERIALS WITHIN THE PROPOSED CONSTRUCTION AREAS. THE CONTRACTOR SHALL DESIGN AND INSTALL ADEQUATE SHORING AND BRACING FOR ALL STRUCTURAL OR REMOVAL TASKS. THE CONTRACTOR SHALL HAVE SOLE RESPONSIBILITY FOR ANY DAMAGE OR INJURIES CAUSED BY OR DURING THE EXECUTION OF THE WORK.
- NOTES APPEAR ON VARIOUS SHEETS FOR VARIOUS SYSTEMS AND MATERIALS. SHEETS ARE TO BE OWNER REVIEWED AND NOTES ON ANY ONE SHEET ARE TO BE APPLIED TO RELATED SYSTEMS AND MATERIALS DEPICTED ON OTHER DRAWINGS.
- DETAILS NOT SHOWN ARE SIMILAR IN CHARACTER TO THOSE THAT ARE. WHERE SPECIFIC DIMENSIONS, DETAILS, OR DESIGN INTENT CANNOT BE DETERMINED, CONSULT THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.
- THE CONTRACTOR SHALL LAY OUT HIS OWN WORK, AND SHALL PROVIDE ALL DIMENSIONS REQUIRED FOR OTHER TRADES.
- THE CONTRACTOR SHALL DO ALL CUTTING, PATCHING AND REPAIRING AS REQUIRED TO PERFORM ALL OF THE WORK INDICATED ON THE DRAWINGS, AND ALL OTHER WORK THAT MAY BE REQUIRED TO COMPLETE THE JOB.
- GUTTER AND DOWNSPOUT SIZING PER OWNER'S CONTRACTOR.

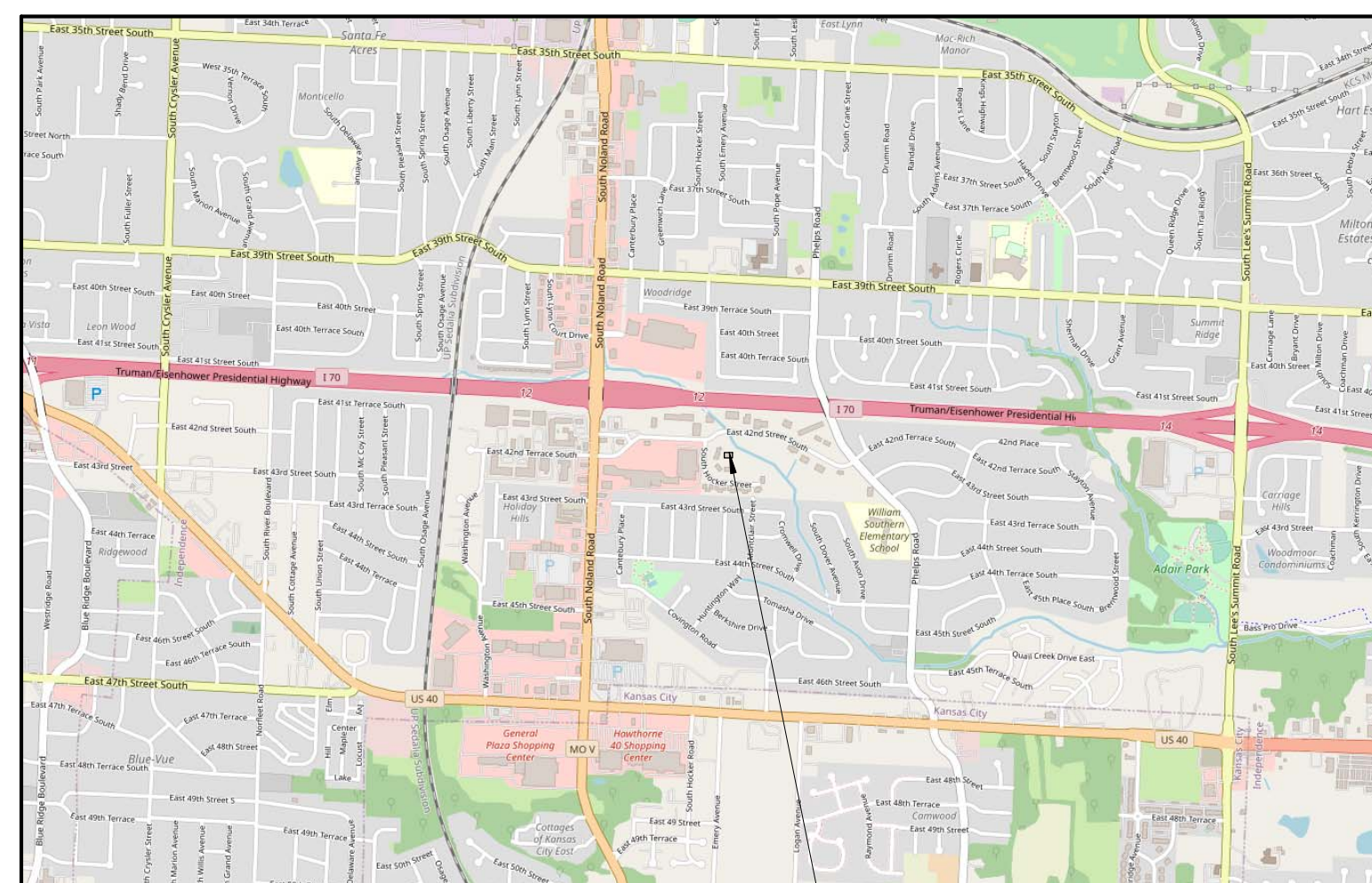
## INSTRUCTION TO CONTRACTOR

- THE INTENT OF THE SET OF CONTRACT DOCUMENTS IS TO INCLUDE ALL ITEMS NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK BY THE CONTRACTOR AS BINDING PERFORMANCE. THE CONTRACTOR SHALL BE REQUIRED ONLY TO THE EXTENT CONSISTENT WITH THE CONTRACT DOCUMENTS AND SPECIFICATIONS REASONABLY INFERRABLE FROM THEM AS BEING NECESSARY TO PRODUCE THE INDICATED RESULTS.
- ORGANIZATION OF THE SPECIFICATIONS INTO DIVISIONS, SECTIONS AND ARTICLES, ARRANGEMENT OF DRAWINGS SHALL NOT CONTROL THE CONTRACTOR, IN DIVIDING THE WORK AMONG SUBCONTRACTORS OR IN ESTABLISHING THE EXTENT OF WORK TO BE PERFORMED BY ANY TRADE.
- UNLESS OTHERWISE STATED IN THE CONTRACT DOCUMENTS, WORDS WHICH HAVE WELL-KNOWN TECHNICAL OR CONSTRUCTION INDUSTRY MEANINGS ARE USED IN THE CONTRACT DOCUMENTS IN ACCORDANCE WITH SUCH RECOGNIZED MEANINGS.
- GENERAL CONTRACTOR AND ELECTRICAL SUBCONTRACTOR TO FULLY COORDINATE ALL ELECTRICAL DEVICE BODIES AND COVER PLATES PER THE SPECIFICATIONS. DEVICE BODIES AND COVER PLATES ARE COLOR COORDINATED WITH SPECIALTY FINISHES. PROVIDE DEVICE BODY AND COVER PLATES TO THE ARCHITECT FOR OWNER REVIEW AND APPROVAL.
- GENERAL CONTRACTOR TO FULLY COORDINATE WITH MECHANICAL/PLUMBING SUBCONTRACTORS. ALL FIXTURE/DEVICE COLORS WHERE FIXTURE/DEVICE UNITS ARE PLACED WITHIN WALLS AND CEILING ASSEMBLIES VS ADJACENT MATERIAL FINISH COLOR.

## SHEET INDEX

GENERAL	
G1.0	COVER SHEET
CIVIL	
C-001	CIVIL COVER
C-100	SITE PLAN
C-210	DETAILS
ARCHITECTURE	
A1.1	PLANS & ELEVATIONS
A1.2	SPECIFICATION & DETAILS
STRUCTURAL	
S001	GENERAL NOTES
S010	STRUCTURAL TYPICAL DETAILS
S011	STRUCTURAL TYPICAL DETAILS
S100	STRUCTURAL FRAMING PLANS
ELECTRICAL	
E000	ELECTRICAL SCHEDULES, SPECS, AND LEGENDS
E100	ELECTRICAL FLOOR PLANS

## VICINITY MAP



## PROJECT DIRECTORY

### OWNER



INDEPENDENCE HOUSING AUTHORITY  
4215 S. HOCKER DR., BLDG 5  
INDEPENDENCE, MO 64055

NAME: MICHAEL BISHOP, EXEC. DIRECTOR  
PHONE: (816) 836-9200 x307  
EMAIL: MBISHOP@IHA1.ORG

### STRUCTURAL ENGINEER



STAND SEI  
8234 ROBINSON ST.  
OVERLAND PARK, KS 66204  
NAME: PAUL SPEARS, STRUCT. ENGINEER  
PHONE: (913) 214-2169  
EMAIL:

### ARCHITECT / CIVIL ENGINEER



ARCHITECTURE/ENGINEERING/SURVEYING  
3200 S. State Route 291, Bldg. 1, Independence, MO 64057  
(816) 373-4800 | powellcwm.com

POWELL CWM, INC.  
3200 S STATE ROUTE 291, BLDG 1  
INDEPENDENCE, MO 64057

NAME: NATHAN BOEN, ARCHITECT  
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NAME: TOBY WILLIAMS, ENGINEER  
PHONE: 816.373.4800  
EMAIL: TWILLIAMS@POWELLCWM.COM

### MEP ENGINEER



FSC  
INDIAN CREEK PARKWAY, STE. 300  
OVERLAND PARK, KS 66210  
NAME: LOGAN UNREIN  
PHONE: 913.693.5999  
EMAIL: LUnrein@fscmep.com

## CODE ANALYSIS

**APPLICABLE CODES**  
THE BUILDING SHALL BE IN COMPLIANCE WITH THE FOLLOWING:  
2018 INTERNATIONAL BUILDING CODE  
2018 INTERNATIONAL MECHANICAL CODE  
2018 INTERNATIONAL PLUMBING CODE  
2018 INTERNATIONAL FIRE CODE  
2018 INTERNATIONAL ENERGY CONSERVATION CODE  
2017 NATIONAL ELECTRIC CODE  
2010 ADA ACCESSIBILITY REQUIREMENTS

**OCCUPANCY GROUP**  
U: UTILITY AND MISCELLANEOUS  
(PRIVATE GARAGES) IBC SECTION 312.1

**TYPE OF CONSTRUCTION**  
V-B IBC SECTION 602

**BUILDING HEIGHT - TABLE 504.3 & 504.4**  
ALLOWABLE HEIGHT = 40 FT | 1 STORY  
ACTUAL HEIGHT = 13 FT 10 IN | 1 STORY  
**ALLOWABLE FLOOR AREA - TABLE 506.2**  
ALLOWABLE AREA = 5,500 SF PER STORY  
ACTUAL BUILDING AREA = 797 SF

**FIRE RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS - TABLE 601**  
PRIMARY STRUCTURAL FRAME: 0 HOURS  
BEARING WALLS EXTERIOR: 0 HOURS  
BEARING WALLS INTERIOR: 0 HOURS  
NONBEARING WALLS EXTERIOR: 0 HOURS  
NONBEARING WALLS INTERIOR: 0 HOURS  
FLOOR CONSTRUCTION: 0 HOURS  
ROOF CONSTRUCTION: 0 HOURS

**AUTOMATIC SPRINKLER SYSTEM, SECTION 903.2.11**  
REQUIRED: NO  
PROVIDED: NO

**FIRE EXTINGUISHERS**  
FIRE EXTINGUISHERS ARE FOR INTERIOR USE AS REQUIRED BY NFPA. OWNER SHALL PROVIDE FIRE EXTINGUISHERS. PLANS SHOW LOCATIONS THAT MEET REQUIRED 75' MAXIMUM DISTANCE.

- FINAL LOCATIONS OF ALL PORTABLE FIRE EXTINGUISHERS ARE TO BE COORDINATED BY OWNER REPRESENTATIVE WITH THE LOCAL GOVERNING AUTHORITY.
- A 2A10BC FIRE EXTINGUISHER WILL BE SUPPLIED BY OWNER AND INSTALLED BY GENERAL CONTRACTOR.
- FIRE EXTINGUISHER SHALL BE INSTALLED WITH STANDARD MANUFACTURER BRACKET @ 40" AFF.

**MEANS OF EGRESS (CHAPTER 10)**  
OCCUPANT LOAD - TABLE 1004.1.1

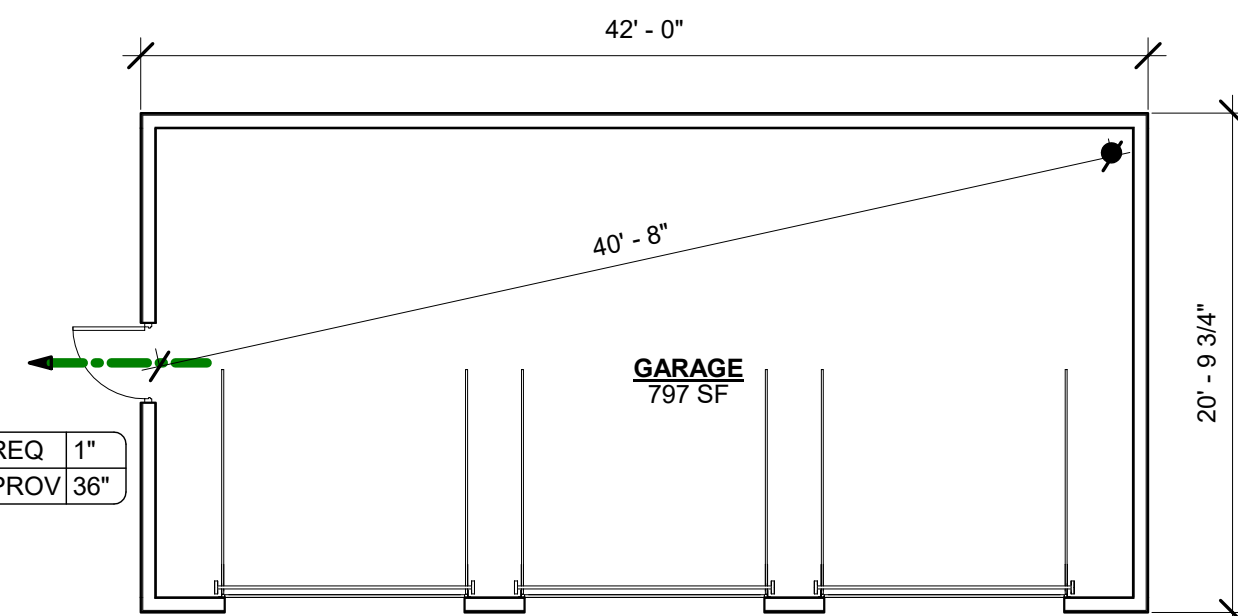
AREA/LOAD	SE	OCC. LOAD FACTOR	OCCUPANT
GARAGE	797 SF	200 GROSS	4 OCCUPANTS
<b>TOTAL OCCUPANTS:</b>			<b>4 OCCUPANTS</b>

MINIMUM REQUIRED EGRESS WIDTH - 1005.1  
REQUIRED: 4 OCC. X 0.2" = 1" REQUIRED  
PROVIDED: 1 DOORS @ 36" CLEAR = 36"  
**= 36" TOTAL PROVIDED**

NUMBER OF EXITS, TABLE 1006.3.2:  
REQUIRED: 1  
PROVIDED: 1

ACCESSIBLE MEANS OF EGRESS, SECTION 1009:  
REQUIRED: 1  
PROVIDED: 1

EXIT ACCESS TRAVEL DISTANCE - TABLE 1017.2  
REQUIRED: 300 FT  
PROVIDED: 40 FT 8 IN



1 CODE PLAN  
1/8" = 1'-0"

### CLIENT

MICHAEL BISHOP  
INDEP. HOUSING AUTH.  
4215 S. HOCKER DR., BLDG 5  
INDEPENDENCE, MO 64055  
(816) 836-9200 x307

INDEPENDENCE HOUSING AUTHORITY  
**SECURE GARAGE**  
14405 E 42nd St. S  
Independence, Jackson Co., MO 64055



NATHAN KENT BOEN, R.A.  
A-2017009063 (MISSOURI #)

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REVISIONS	NO.	DATE / DESCRIPTION
	1	CITY COMMENTS 04/08/2021
	2	OWNER UPDATES 08/04/2021

DRAWN BY: NC  
CHECKED BY: NB  
PROJECT #: 20-1718-02  
ISSUE DATE: 08/04/2021  
ISSUED FOR: PERMIT

COVER SHEET

G1.0

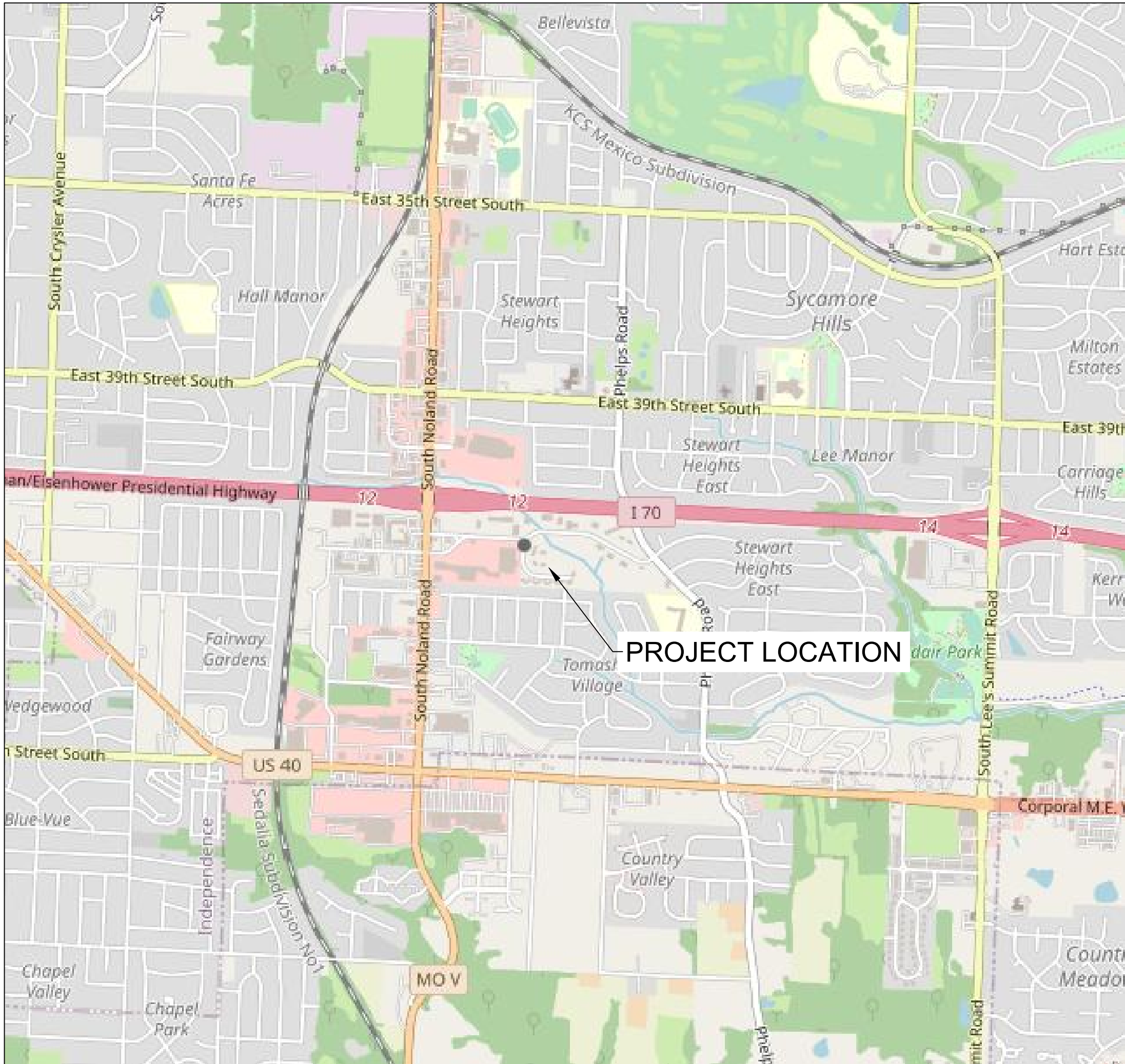


# Independence Housing Authority Secured Parking Garage

14405 E. 42ND STREET S  
INDEPENDENCE, JACKSON COUNTY, MO  
Section 23 Township 49N Range 32W

## CONSTRUCTION PLANS

LITTLE BLUE RIVER IS THE WATERSHED FOR THIS PROJECT.  
THE TOTAL DISTURBED AREA IS 0.09 ac.



### GENERAL NOTES

- THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO ALL APPLICABLE STANDARDS AND SPECIFICATIONS OF THE PUBLIC WORKS DEPARTMENT OF THE CITY OF INDEPENDENCE, MISSOURI, IN CURRENT USAGE AND ALL SUPPLEMENTS THERE TO.
- DO NOT SCALE THESE DRAWINGS.
- NO GEOLOGICAL INVESTIGATION WAS PERFORMED ON THIS SITE.
- CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS, BONDS, AND INSURANCE REQUIRED BY THE CITY.
- THE UTILITY LOCATIONS SHOWN ON THESE PLANS ARE TAKEN FROM UTILITY COMPANY RECORDS AND ARE APPROXIMATE ONLY. THEY DO NOT CONSTITUTE ACTUAL FIELD LOCATIONS. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION.
- CLEARING AND GRUBBING OPERATIONS AND DISPOSAL OF ALL DEBRIS THEREFROM SHALL BE PERFORMED BY THE CONTRACTOR IN STRICT ACCORDANCE WITH ALL STATE AND LOCAL CODES.
- THE DEVELOPER / OWNER SHALL CONTROL EROSION AND SILTATION DURING ALL PHASES OF CONSTRUCTION, AND SHALL KEEP THE STREETS CLEAN OF MUD AND DEBRIS.
- ALL EXCESS MATERIAL SHALL BE REMOVED LEGALLY FROM SITE AND DISPOSED OF OFF SITE.
- TRAFFIC CONTROL AND MAINTENANCE OF TRAFFIC DURING CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE PUBLIC WORKS DEPARTMENT.
- EROSION CONTROL MEASURES SHALL BE PROVIDED AT ALL LOCATIONS WHERE DRAINAGE IS LEAVING THE PROJECT SITE. THE EROSION CONTROL PLAN SHOWS MINIMUM EROSION CONTROL MEASURES TO BE PROVIDED. ADDITIONAL SITE SPECIFIC MEASURES MAY BE NECESSARY AND SHALL BE PROVIDED BY THE DEVELOPER / OWNER, AT THE CONTRACTOR'S EXPENSE.
- ANY EXISTING OR NEW STORM SEWER INLETS IN USE DURING DEMOLITION, GRADING OR CONSTRUCTION SHALL HAVE INLET PROTECTION.
- THE CONTRACTOR SHALL FIELD VERIFY ALL SITE CONDITIONS AND SHALL REPORT ANY DISCREPANCIES BETWEEN ACTUAL AND PLAN SHOWN CONDITIONS TO THE ENGINEER PRIOR TO BEGINNING CONSTRUCTION.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND QUANTITIES SHOWN ON THESE PLANS AND SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO COMMENCING ANY RELATED WORK.
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR DETERMINING THE LOCATION OF ALL EXISTING UTILITIES AND UNDERGROUND INSTALLATIONS, INCLUDING SERVICE CONNECTIONS, IN ADVANCE OF EXCAVATION OR TRENCHING, AND PROTECT THE SAME AS REQUIRED TO MAINTAIN GOOD OPERATING CONDITION.
- THE CONTRACTOR SHALL USE HIS OWN INFORMATION AND NOT RELY UPON ANY INFORMATION SHOWN ON THE DRAWINGS CONCERNING EXISTING UNDERGROUND INSTALLATIONS.
- ANY DELAY, ADDITIONAL WORK, OR EXTRA COST TO THE CONTRACTOR CAUSED BY OR RESULTING FROM DAMAGE TO EXISTING UNDERGROUND INSTALLATIONS SHALL NOT CONSTITUTE A CLAIM FOR EXTRA WORK, ADDITIONAL PAYMENT, OR DAMAGES. ALL DAMAGE TO EXISTING UTILITIES INCLUDING SERVICE CONNECTIONS SHALL RE REPAIRED BY AND AT THE EXPENSE OF THE CONTRACTOR.
- THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES AND OBTAIN ALL NECESSARY INSPECTIONS THROUGHOUT THE CONSTRUCTION ACTIVITIES.
- ALL EXCAVATION SHALL BE UNCLASSIFIED. NO SEPARATE PAYMENT WILL BE MADE FOR ROCK EXCAVATION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELOCATIONS, INCLUDING BUT NOT LIMITED TO ALL UTILITIES, STORM DRAINAGE, AND SIGNS AS REQUIRED, ALL WORK SHALL BE IN ACCORDANCE WITH THE GOVERNING AUTHORITIES' SPECIFICATIONS AND SHALL BE APPROVED BY SUCH. ALL COST SHALL BE INCLUDED IN THE CONTRACTOR'S CONTRACT WITH THE OWNER. ADDITIONALLY, ALL EXISTING UTILITY TOPS SHALL BE ADJUSTED TO FINISHED GRADE.
- REMOVAL OF EXISTING PAVING AND/OR BORING AT THE CONTRACTOR'S DISCRETION SHALL BE INCLUDED AS A PART OF ALL UTILITY INSTALLATIONS WHERE APPLICABLE AT THE CONTRACTOR'S EXPENSE AS WELL AS REPLACEMENT/REPAIR OF ALL DISTURBED MATERIALS IN ACCORDANCE WITH LOCAL SPECIFICATIONS AND CODES.
- THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION SCHEDULES AND ACTIVITIES WITH THE APPROPRIATE UTILITY OWNER AND ADJACENT PROPERTY OWNERS TO MINIMIZE DISRUPTION TO ADJACENT PROPERTY OWNERS INCLUDING VEHICULAR ACCESS.
- THE CONTRACTOR SHALL COORDINATE ALL UTILITY WORK, INCLUDING DEMOLITION AND REMOVAL, WITH THE APPROPRIATE UTILITY COMPANIES AND SERVICE PROVIDERS PRIOR TO DISCONTINUATION OF SERVICE. UTILITIES NOT NOTED FOR DEMOLITION SHALL REMAIN IN SERVICE AT ALL TIMES.
- THE CONTRACTOR SHALL MAINTAIN EXISTING UTILITY SERVICE TO ALL ADJOINING PROPERTIES UNTIL THE RELOCATED UTILITIES ARE INSPECTED AND APPROVED.
- ALL EXISTING UTILITIES SHALL BE REMOVED BACK TO THE CLOSEST STRUCTURE AND CAPPED AT THAT LOCATION UNLESS OTHERWISE INDICATED IN THESE PLANS.
- REMOVE ALL TREES, GRASS, WEEDS, ROOTS, AND OTHER DEBRIS FROM THE AREA TO BE EXCAVATED, FILLED OR GRADED.
- IF EXCAVATED MATERIAL IS UNSUITABLE FOR COMPACTION, AS DETERMINED BY THE GEOTECHNICAL ENGINEER, THE CONTRACTOR SHALL FURNISH SUITABLE BORROW.
- ALL SLOPES, CUT OR FILL, SHALL BE GRADED TO MAXIMUM FINISH SLOPE OF THREE (3) FEET HORIZONTAL TO ONE (1) FOOT VERTICAL. NO GRADED SLOPE SHALL EXCEED 3:1 WITHOUT SPECIFIC SLOPE PLANTING OR REINFORCEMENT.
- SITE SHALL BE GRADED TO ENSURE DRAINAGE OF WATER FROM ALL SURFACES.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL SURFACE AND GROUNDWATER CONTROL MEASURES.
- GRADES NOT OTHERWISE INDICATED ON THE PLANS SHALL BE UNIFORM LEVELS OR SLOPES BETWEEN POINTS WHERE ELEVATIONS ARE GIVEN. ABRUPT CHANGES IN SLOPES SHALL BE WELL ROUNDED.
- STORM DRAINAGE SYSTEMS WITHIN THE PROJECT AREA ARE TO BE COMPLETELY CLEANED AT THE COMPLETION OF THE PROJECT.
- EXISTING TREES WHERE INDICATED SHALL BE PROTECTED FROM CONSTRUCTION ACTIVITIES. ALL TREE PROTECTION FENCING TO BE INSPECTED DAILY AND ALL GRADING ACTIVITIES TO REMAIN OUTSIDE THE DRIP LINES.
- ALL TREE PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO GRADING.
- ALL SOILS UNDERCUTTING, OVER EXCAVATION, UNDER DRAIN INSTALLATION, AND ROCK FILLS SHALL BE DETERMINED AND DIRECTED BY THE SOILS ENGINEER.
- FILL AREAS TO BE COMPACTED TO 95% STANDARD PROCTOR MINIMUM UNLESS OTHERWISE INDICATED BY GEOTECHNICAL ENGINEER.
- UNLESS OTHERWISE INDICATED, ALL DISTURBED SOIL AREAS TO RECEIVE 6 INCHES OF TOPSOIL AND TO BE SEEDED AND MULCHED.
- THE CONTRACTOR SHALL PERFORM ALL CUTTING, PATCHING, AND REPAIRING AS REQUIRED TO PERFORM ALL OF THE WORK INDICATED ON THE DRAWINGS, AND ALL OTHER WORK THAT MAY BE REQUIRED TO COMPLETE THE JOB.

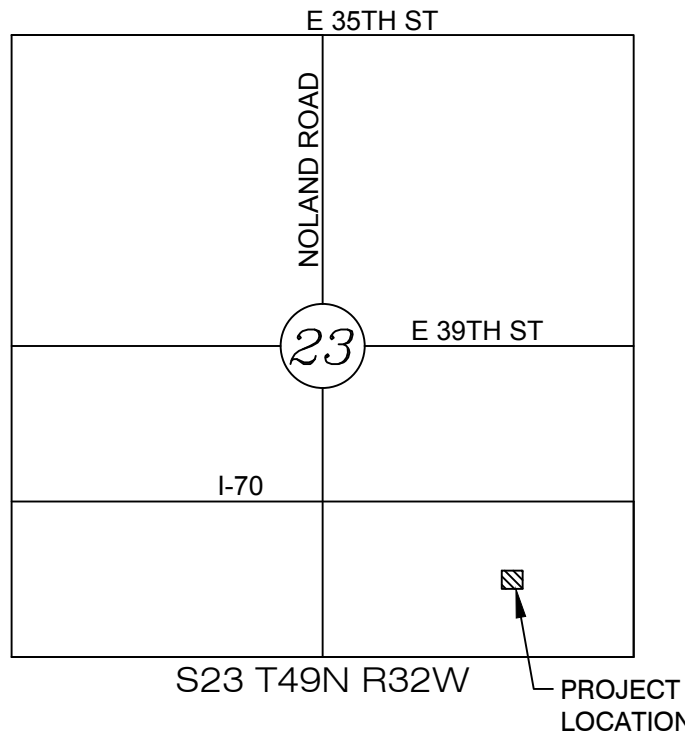
### UTILITY CONTACTS

CITY OF INDEOENDENCE	816-325-7000
SPIRE	800-582-1234
EVERGY	888-471-5275
AT&T	800-286-8313
SPECTRUM	816-358-5360
MISSOURI ONE CALL	1-800-DIG-RIGHT

UTILITIES:  
THE INFORMATION CONCERNING LOCATIONS OF UNDERGROUND UTILITIES SHOWN HEREON WHICH ARE NOT VISIBLE FROM THE SURFACE, HAS BEEN TAKEN FROM THE RECORDS AND FIELD LOCATIONS OF THE VARIOUS UTILITY COMPANIES AND HAS NOT BEEN FIELD VERIFIED BY THIS COMPANY. THESE LOCATIONS ARE NOT TO BE CONSTRUED AS ACCURATE OR EXACT.

NOTE: NO PUBLIC IMPROVEMENTS WILL BE CONSTRUCTED AS PART OF THIS PROJECT

☐ NOT FOR CONSTRUCTION  
☒ FOR CONSTRUCTION



### PROPERTY DESCRIPTION

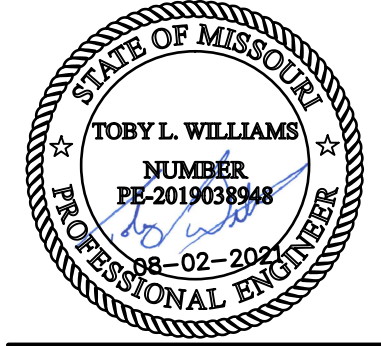
RNG-32 TWP-49 SEC-03 PT OF SE 1/4 DAF: BEG AT A PT 453' W & 40' N OF SE COR SD 1/4 TH W 655' M/L TH N 40' TH W 180' TH NLY ALG CURV TO RI 55.73' TH N 1080' M/L TH E 1320' M/L TH S 250' M/L TH W 499' TH S 944' TO POB



Certificates of Authority  
Architecture: MO 118 / KS 13  
Engineering: MO 4 / KS 241  
Land Surveying: MO 123 / KS 36

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TOBY L. WILLIAMS, PE  
PE-2019038948 (MISSOURI #)



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Independence, MO 64055  
816-836-9200  
michael-bishop@independenceha.org

Secured Parking Garage  
Independence Housing Authority  
14405 E. 42nd Street S  
Independence, Jackson County, MO 64055



REVISIONS	NO.	DATE / DESCRIPTION
	1	
	2	
	3	
	4	
	5	
	6	

PROJECT #: 1558-20-1718  
ISSUE DATE: 08/02/2020

FOR  
CONSTRUCTION

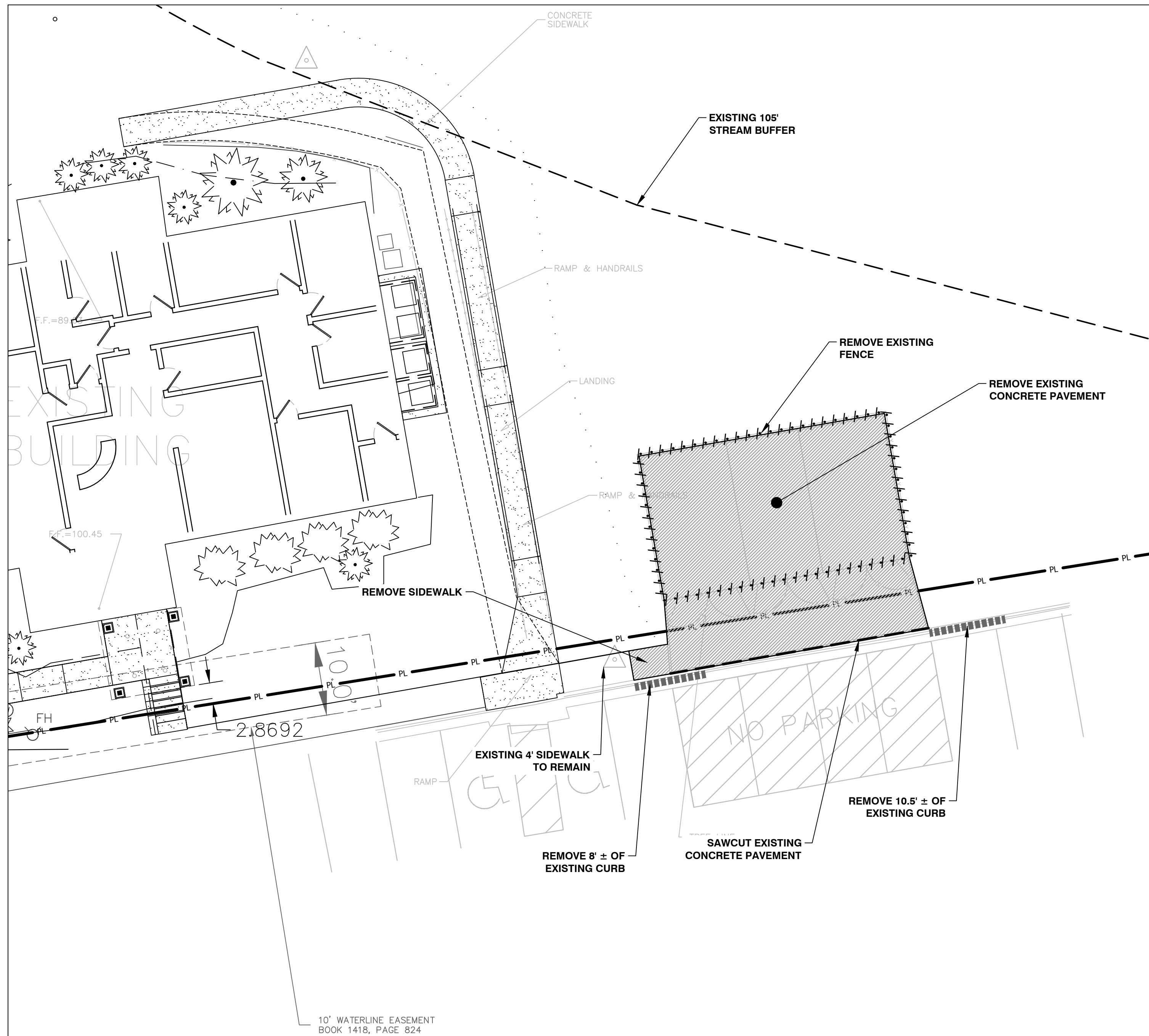
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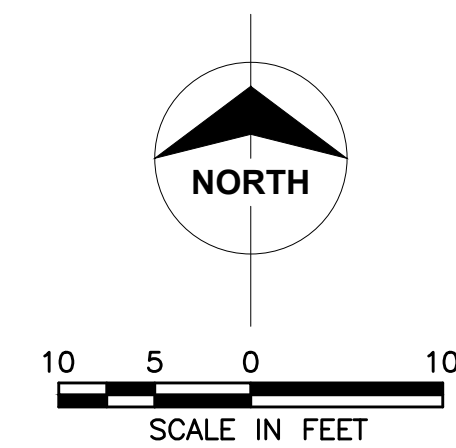


## LEGEND

- EXISTING CONCRETE PAVEMENT TO BE REMOVED
- EXISTING CURBS TO BE REMOVED
- EXISTING FENCE TO BE REMOVED
- SAW CUT

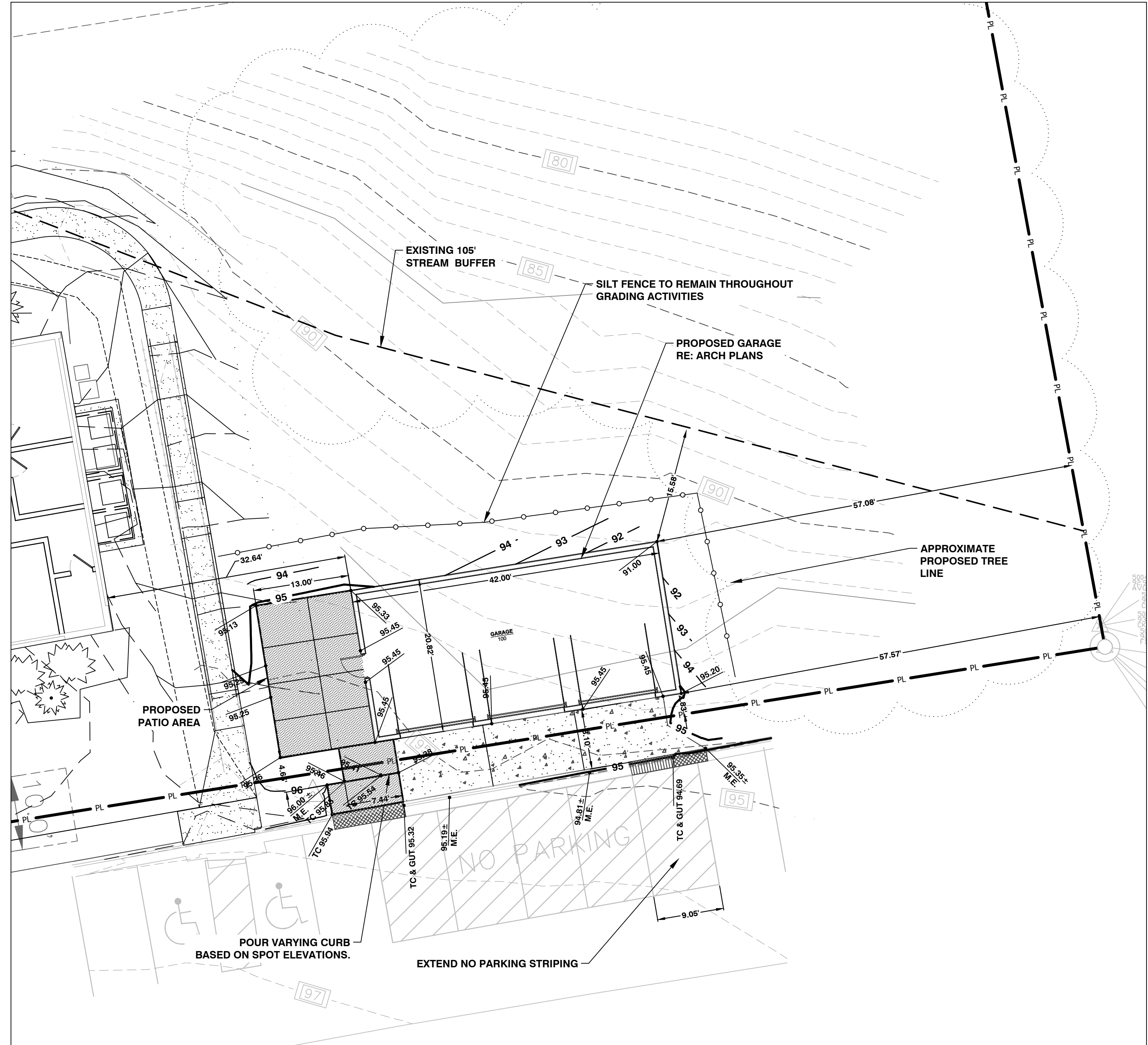


DEMOLITION PLAN

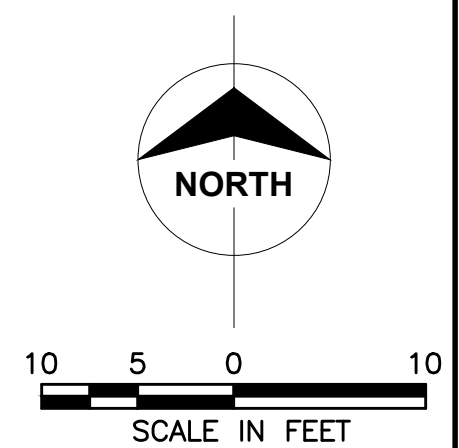


## LEGEND:

- NEW HEAVY DUTY CONCRETE PAVEMENT  
RE: C-210
- CONCRETE SIDEWALK  
RE: C-210
- INSTALL SILT FENCE
- NEW FLUSH CURB
- NEW TRANSITION CURB



GRADING AND DIMENSION PLAN



REVISIONS	NO.	DATE / DESCRIPTION	COMMENTS
1	04/09/2021	CITY COMMENTS	
2			
3			
4			
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6			

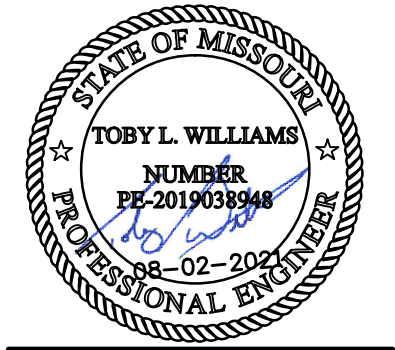
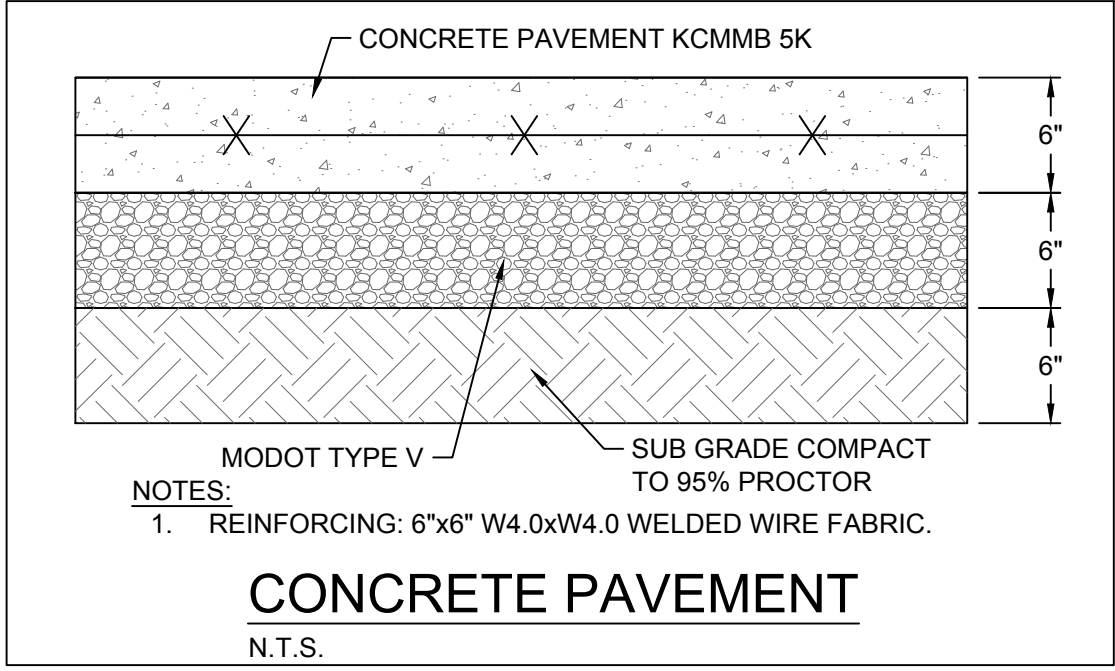
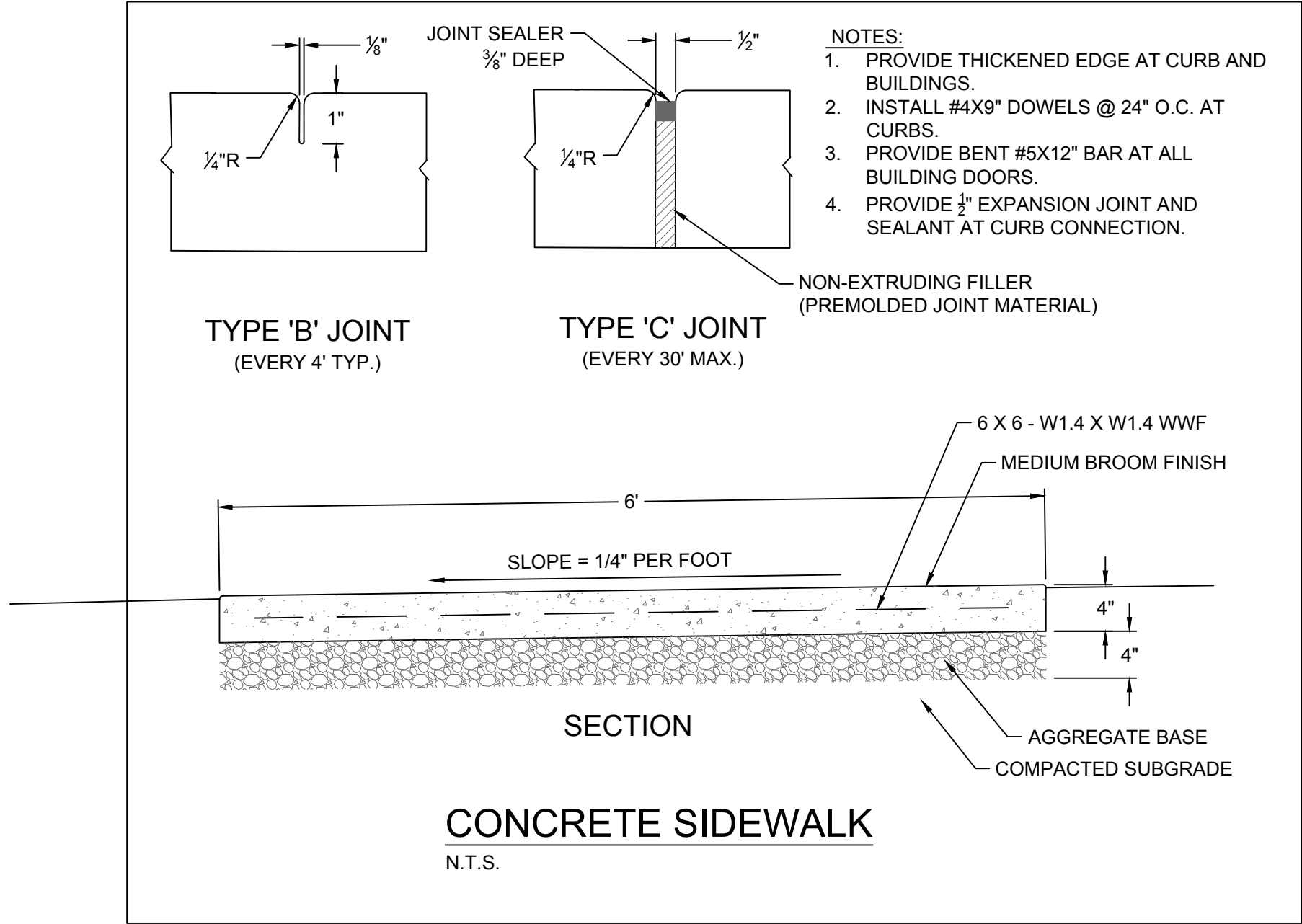
PROJECT #: 1558-20-1718  
ISSUE DATE: 08/02/2020

FOR  
CONSTRUCTION

SITE PLAN

C-100





PREPARED FOR:  
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Independence Housing Authority  
4215 S. Hocker Drive, Building 5  
Independence, MO 64055  
816-836-9200  
michael-bishop@independenceha.org

**Secured Parking Garage**  
**Independence Housing Authority**  
**14405 E. 42nd Street S**  
**Independence, Jackson County, MO 64055**

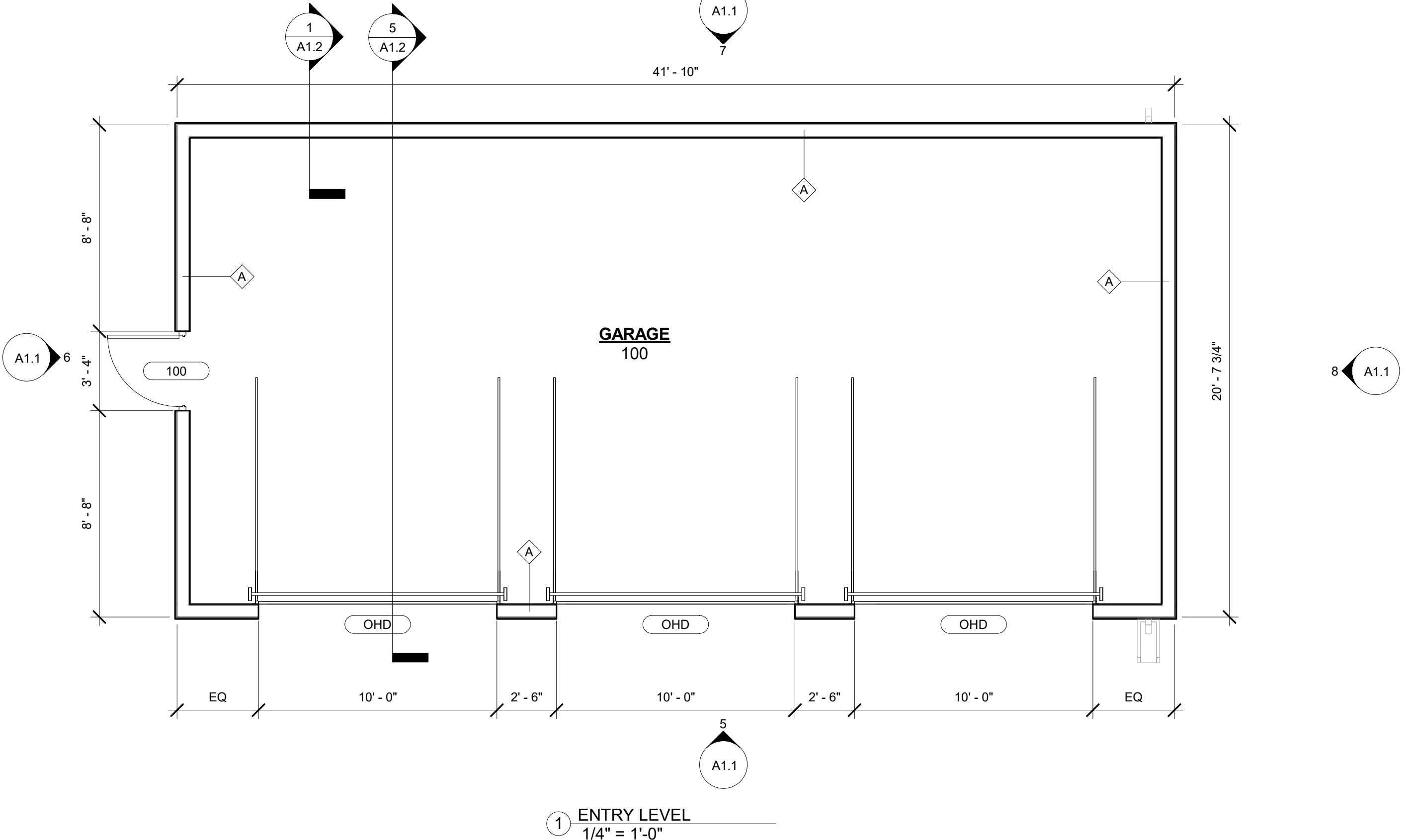
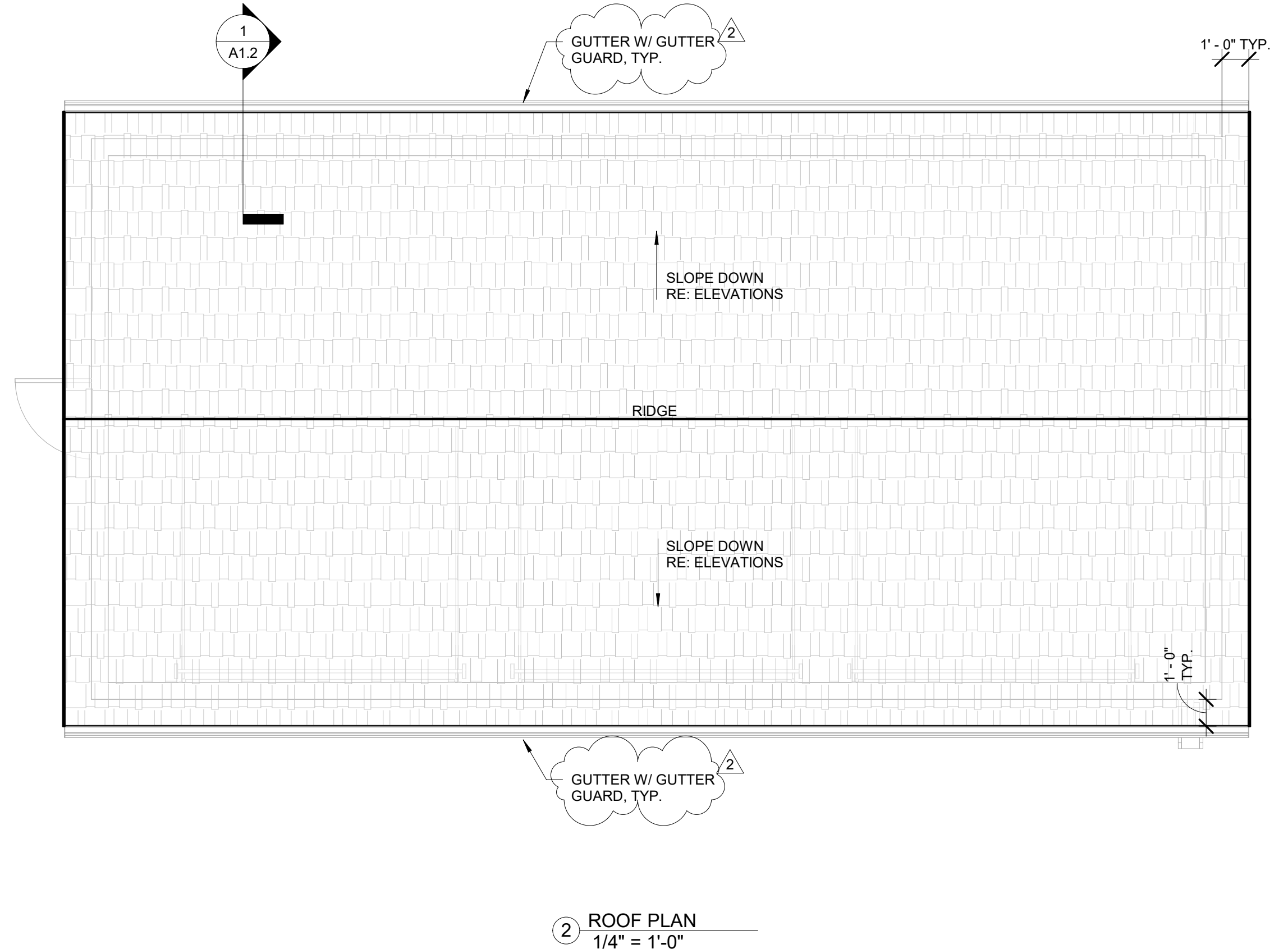
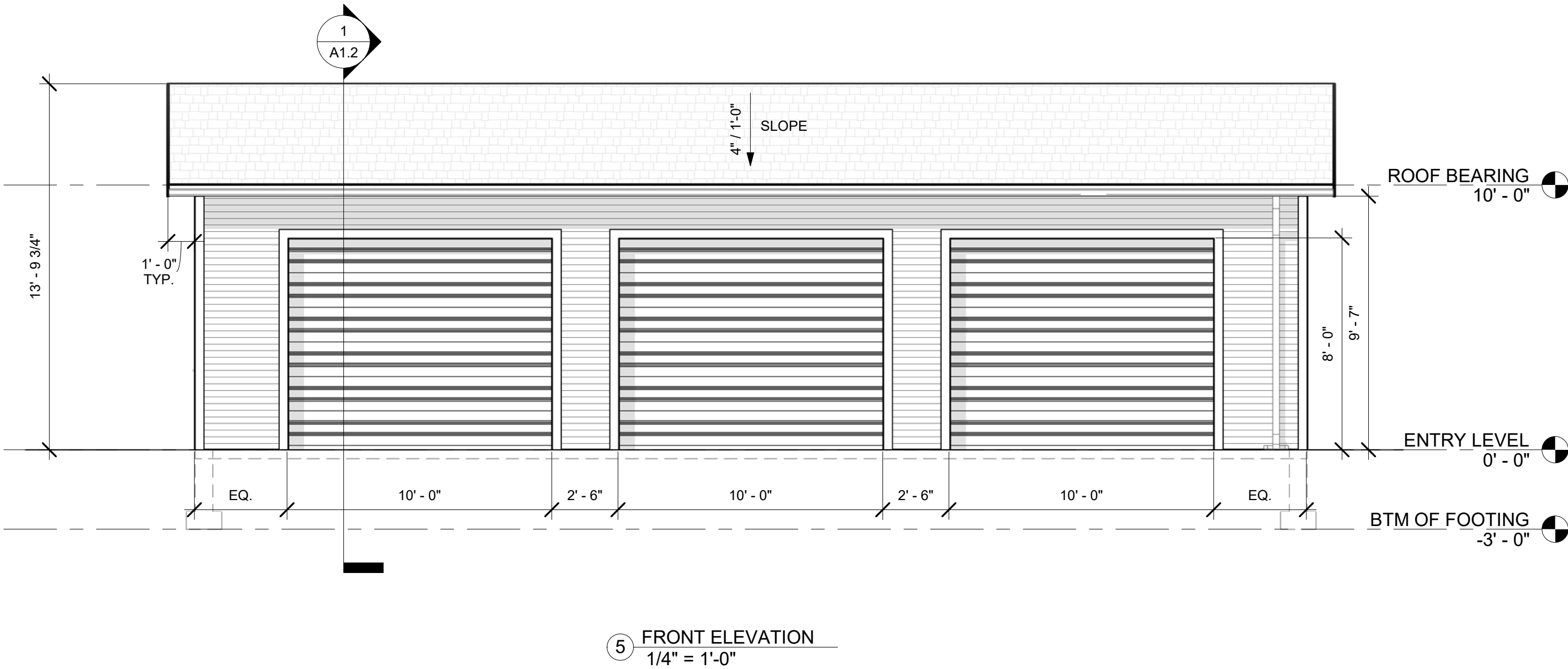
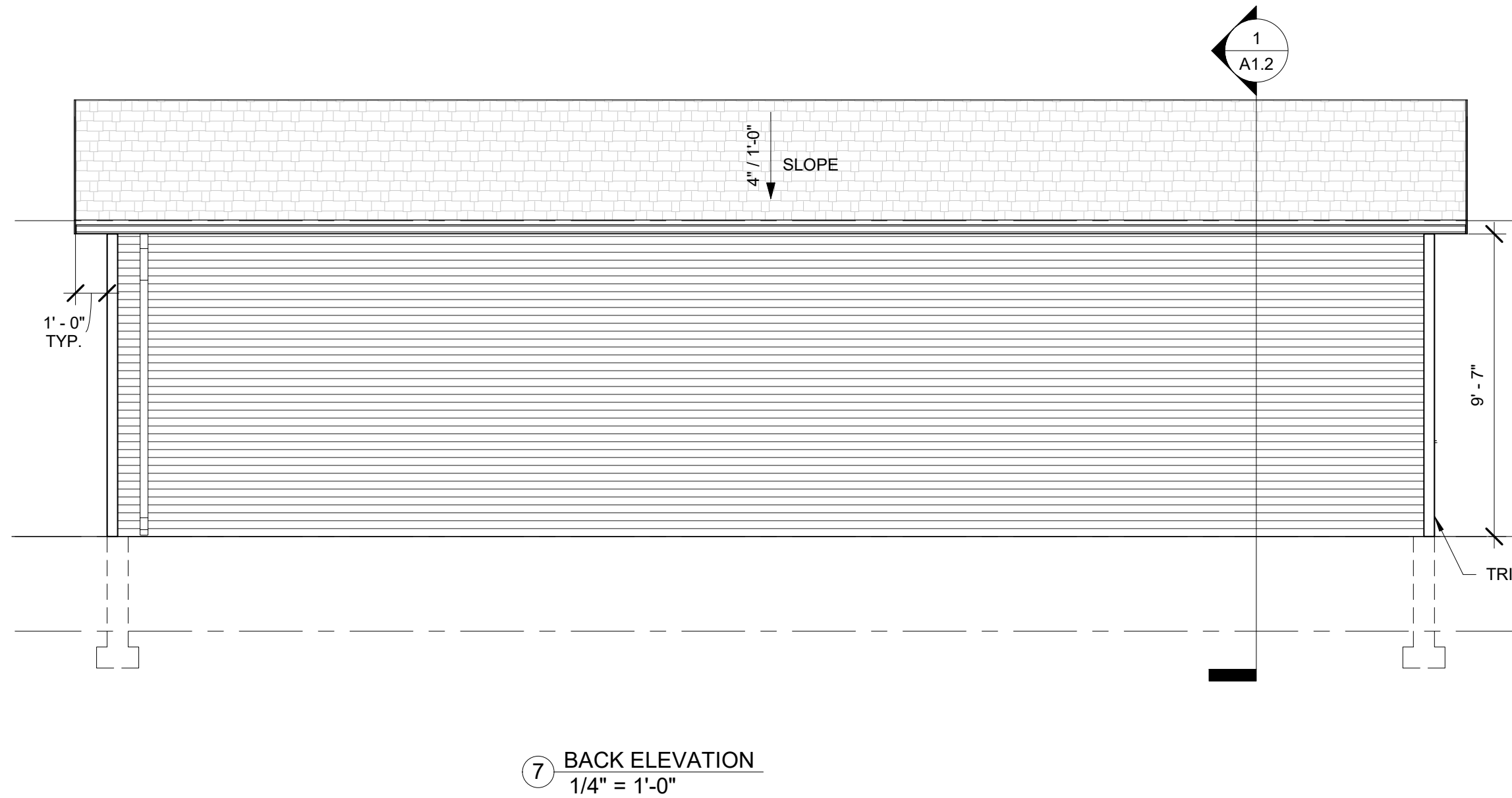
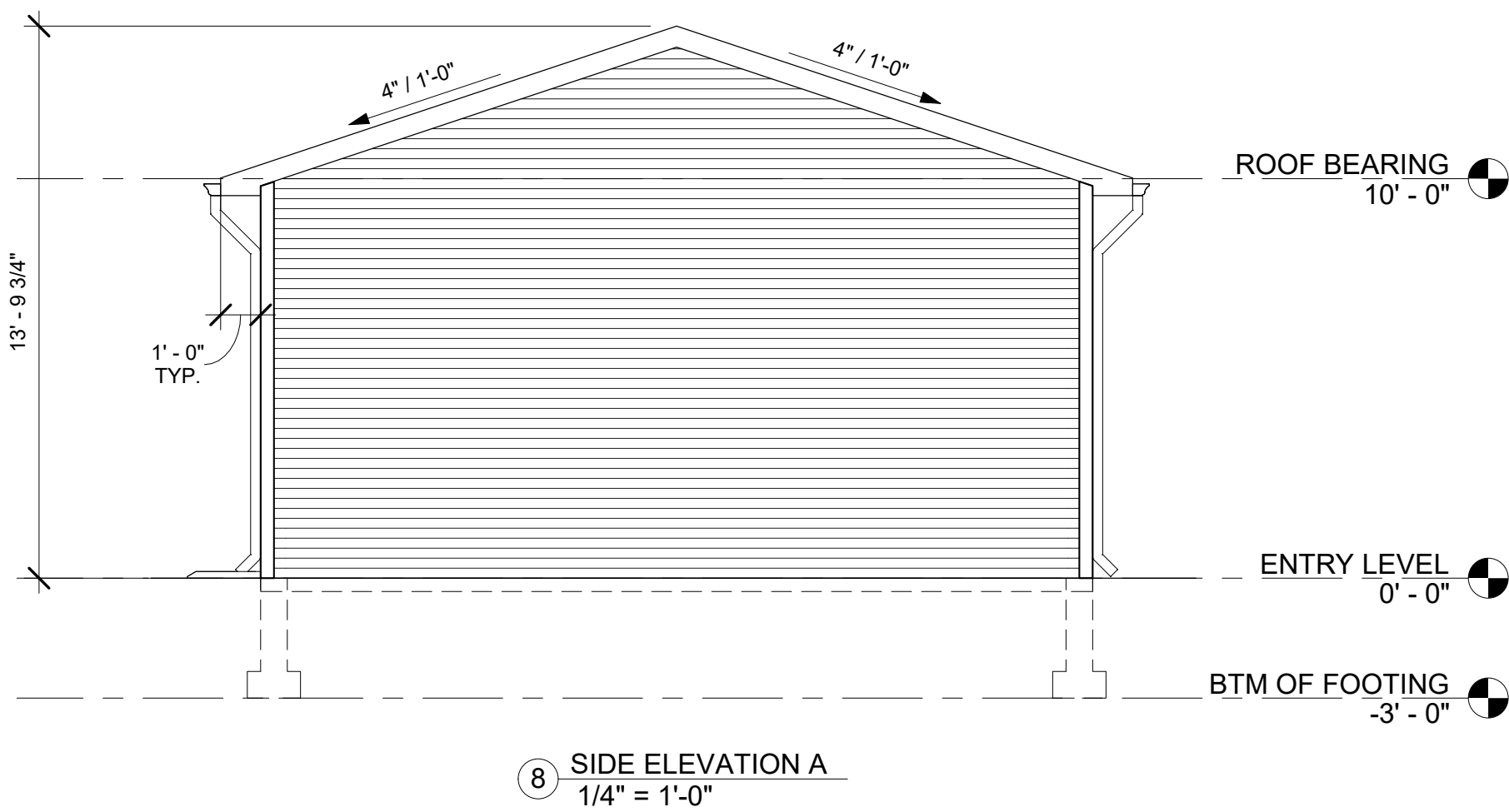
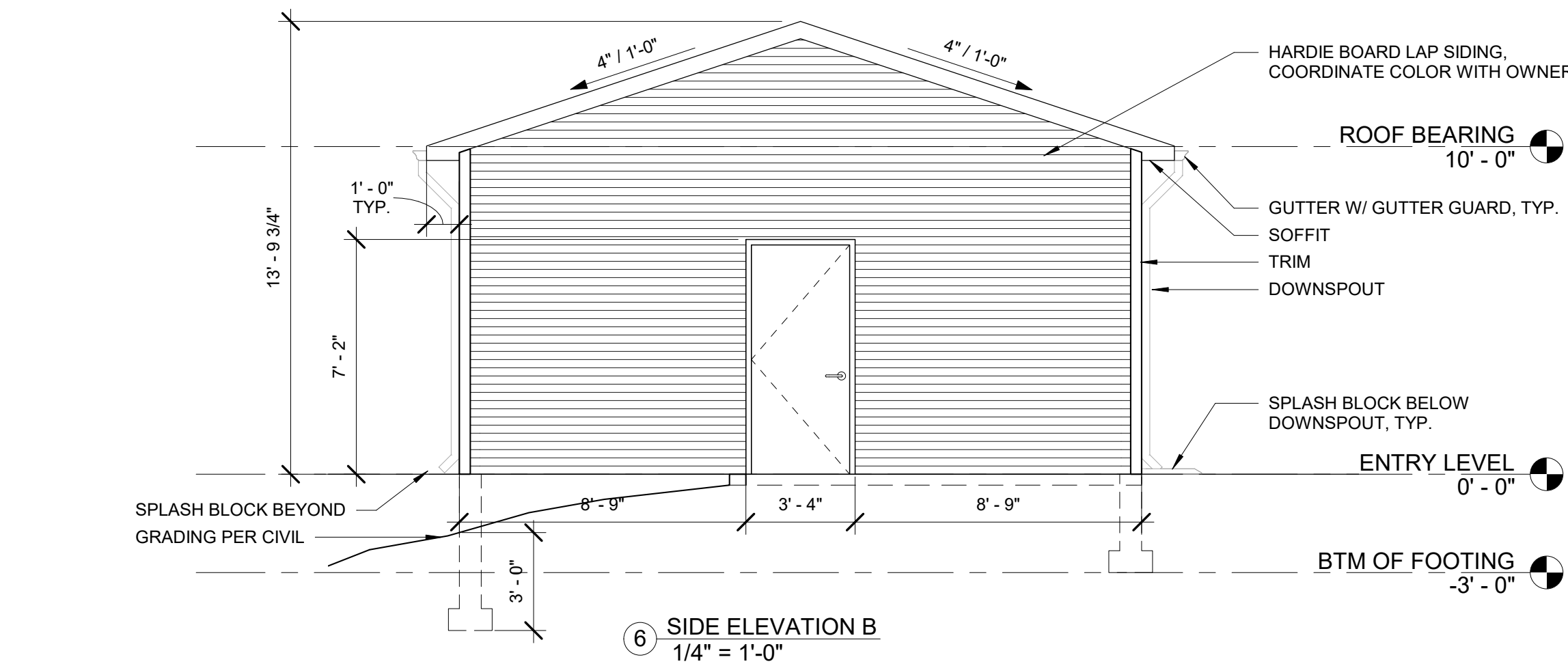
REVISIONS	NO.	DATE / DESCRIPTION
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PROJECT #: 1558-20-1718  
ISSUE DATE: 08/02/2020

FOR  
CONSTRUCTION

DETAILS

C-210



- ROOF PLAN NOTES**
1. LOCATE AND INSTALL ROOF/SOFFIT VENTS PER CODE.
  2. ROOF EAVES SHALL EXTEND 12" (SEE ROOF PLAN) FROM OUTSIDE OF BUILDING SHEATHING TO OUTSIDE OF SOFFIT PANEL, TYP.
  3. PROVIDE GUTTER GUARDS ON NEW GUTTERS. COMPOSITE ROOF SHINGLES.
- EXTERIOR ELEVATION GENERAL NOTES**
1. ROOF TO BE 40 YEAR COMPOSITION ROOF OVER 1/2" SHEATHING WITH 15# FELT. COORDINATE WITH OWNER.
  2. ALL ROOF CONSTRUCTION SHOULD FOLLOW ALL LOCAL CODES, INCLUDING INTERNATIONAL BUILDING CODE AND THE ASPHALT ROOFING MANUFACTURERS ASSOCIATION'S DESIGN AND APPLICATION METHODS MANUAL.
  3. COLORS OF SIDING AND ROOFING MATERIALS SHALL MATCH THE INDEPENDENCE HOUSING OFFICE BUILDING. COORDINATE WITH OWNER.

**LEGEND**

WALL TYPE: #

DOOR TAG: 000

ROOM TAG: Room Name 000

SECTION: 1 SIM A101

ELEVATION: 1 Ref A101 1 Ref

CEILING ELEVATION: MATERIAL # A.F.F.

JOIST/RAFTER SPAN DIRECTION: SIZE/O.C.

LOAD BEARING WALL: X X X X

**EXTERIOR MATERIALS LEGEND**

ROOF SHINGLES

HARDIE BOARD LAP SIDING

**WALL TYPES**

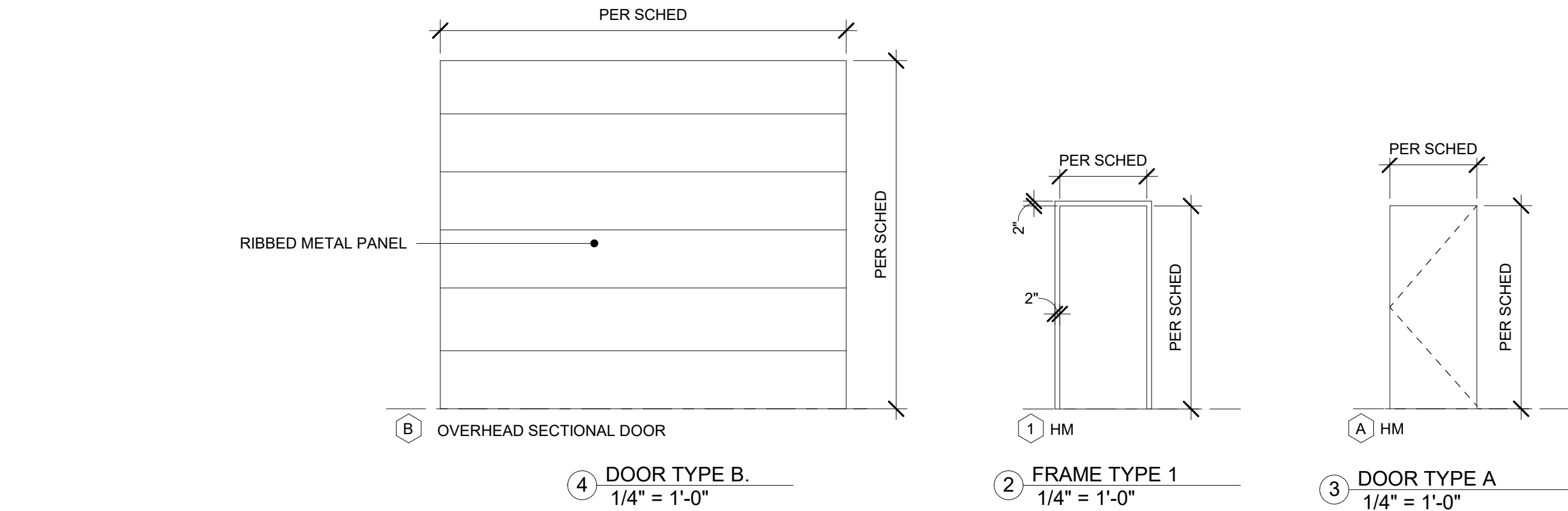
A: 1/2" SIDING, 1/2" SHEATHING, 6" STUD FRAMING, RE: STRCT, INSULATION, 5/8" GYP. BD.

REVISIONS	NO.	DATE	DESCRIPTION
	1	04/08/2021	CITY COMMENTS
	2	08/04/2021	OWNER COMMENTS

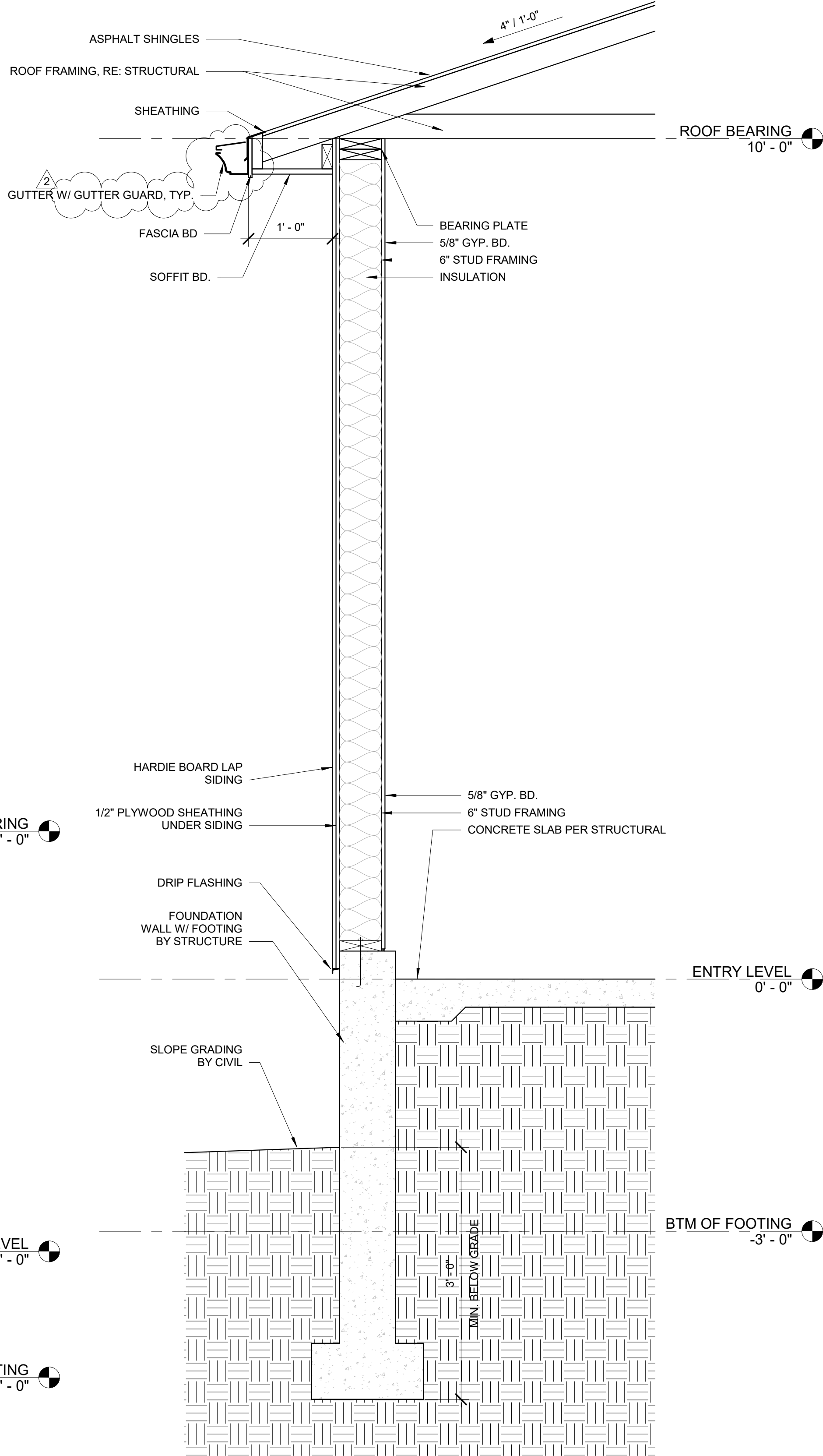
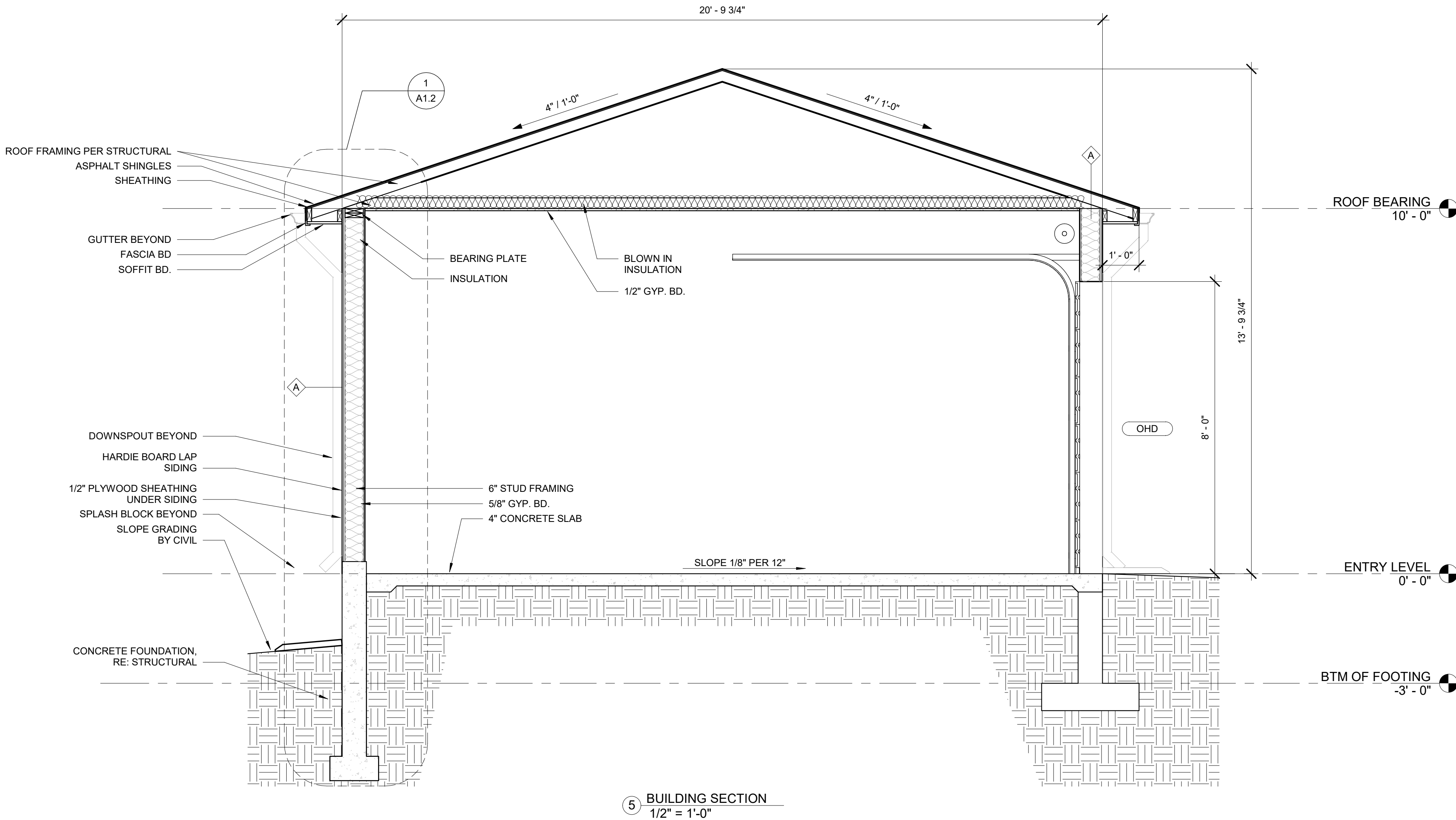
DRAWN BY: NC  
CHECKED BY: NB  
PROJECT #: 20-1718:02  
ISSUE DATE: 08/04/2021  
ISSUED FOR: PERMIT

PLANS & ELEVATIONS





DOOR SCHEDULE										
NUMBER	TYPE	DOOR TYPE	DOOR MATERIAL	FRAME TYPE	FRAME MATERIAL	HEIGHT	WIDTH	FIRE RATING	HARDWARE	COMMENTS
100	METAL DOORS - SINGLE	A	HM	1	HM	7' - 0"	3' - 0"	-		
OHD	OVERHEAD SECTIONAL DOOR - HAAS	B	24-Gauge Aluminum	MANFCTR.	METAL	8' - 0"	10' - 0"	-		
OHD	OVERHEAD SECTIONAL DOOR - HAAS	B	24-Gauge Aluminum	MANFCTR.	METAL	8' - 0"	10' - 0"	-		
OHD	OVERHEAD SECTIONAL DOOR - HAAS	B	24-Gauge Aluminum	MANFCTR.	METAL	8' - 0"	10' - 0"	-		





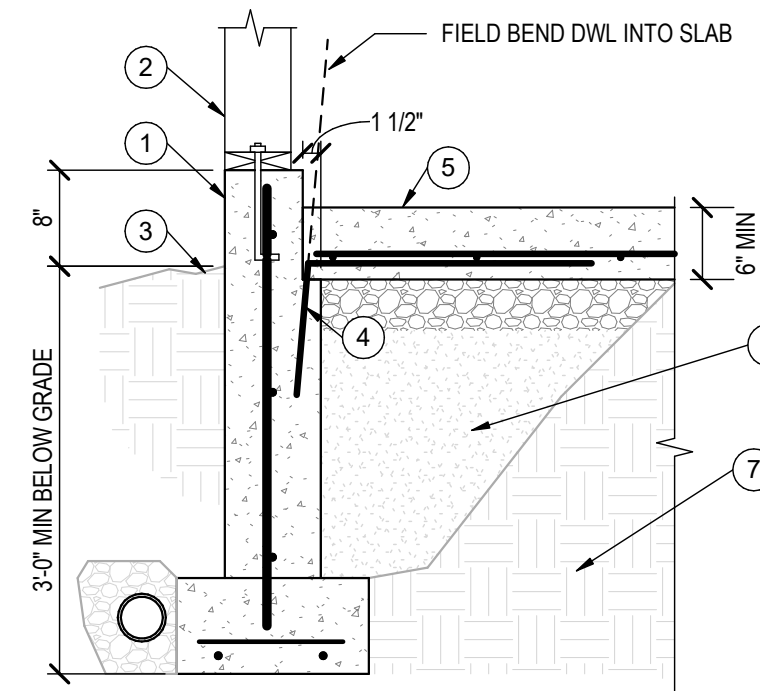
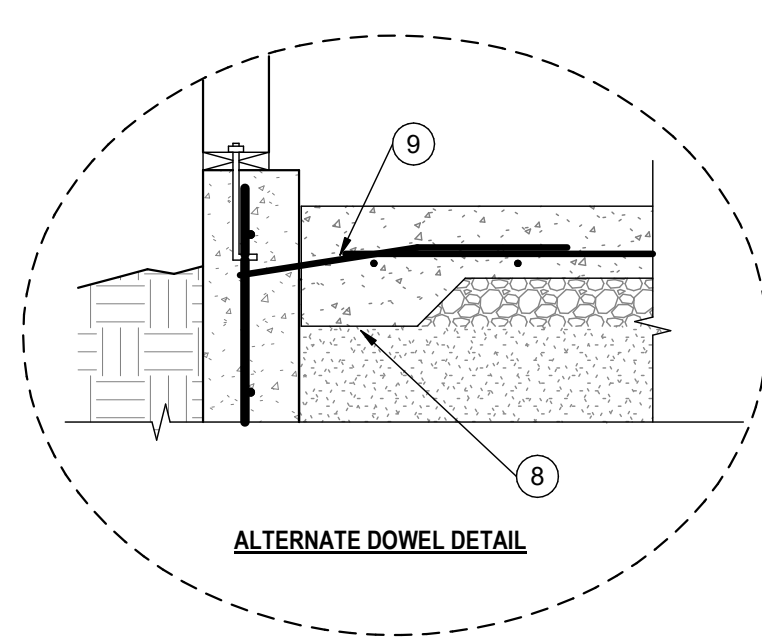








Civilian



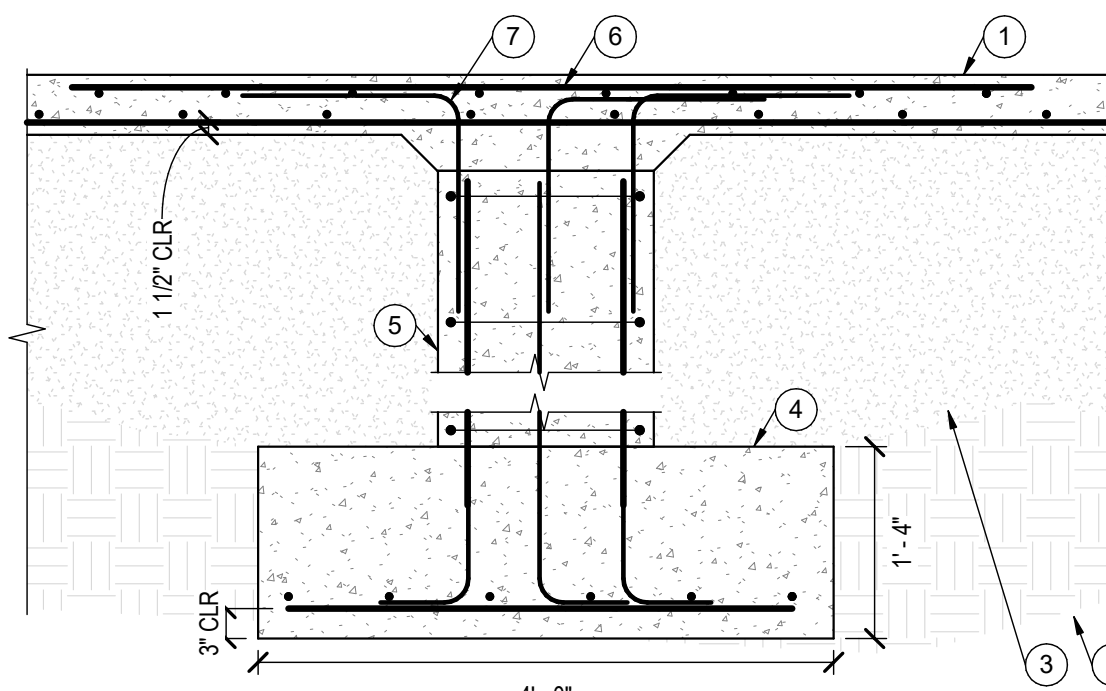
DETAIL NOTES:

- 1 BASEMENT WALL OR STEM WALL. RE: PLAN
- 2 WALL FRAMING. REFER TO PLAN AND GENERAL NOTES. SIMILAR COND AT FLOOR FRAMING
- 3 GRADE
- 4 #4 DWLS @ 12" OC. X 3'-0" LONG. EMBED IN WALL 12". FIELD BEND INTO FLOOR SLAB. ALTERNATIVELY, DRILL AND EPOXY DWLS 4" MIN INTO LEDGE
- 5 STRUCTURAL GARAGE SLAB. REINF PER DETAIL RZ136.
- 6 COMPACTED FILL OR GRAVEL AT OVERDIG
- 7 8"X8" THICKENED SLAB
- 8 #4 DWLS AT 12" OC X 2'-0" LONG. DRILL AND EPOXY 5" MIN INTO WALL
- 9

3

RZ139 - GARAGE SLAB EDGE

3/4" = 1'-0"



DETAIL NOTES:

- 1 SLAB ON GRADE. REINF W/ #4 BOT BARS EA WAY
- 2 UNDISTURBED NATIVE SOIL
- 3 FILL MATERIAL
- 4 4'-0" SQ X 16" CONC FTG. REINF W/ (8) #4 EA WAY BOTT. BOTT OF FTG TO BEAR ON UNDISTURBED SOIL, DEPTH AS REQD
- 5 1'-0" SQ CONC PIER. HOLD TOP DOWN 8" BELOW TOP OF SLAB. REINF W/ (8) #4 VERTS (EMBED W/ STD HOOK INTO FTG). PROVIDE #3 CLOSED TIES @ 12" OC
- 6 (8) #4 TOP BARS X 6'-8" @ 8" OC. EA WAY. 1-1/2" CLEAR TO TOP OF SLAB
- 7 (8) #4 DWLS (1'-6" X 1'-6") 3 EA SIDE OF PIER

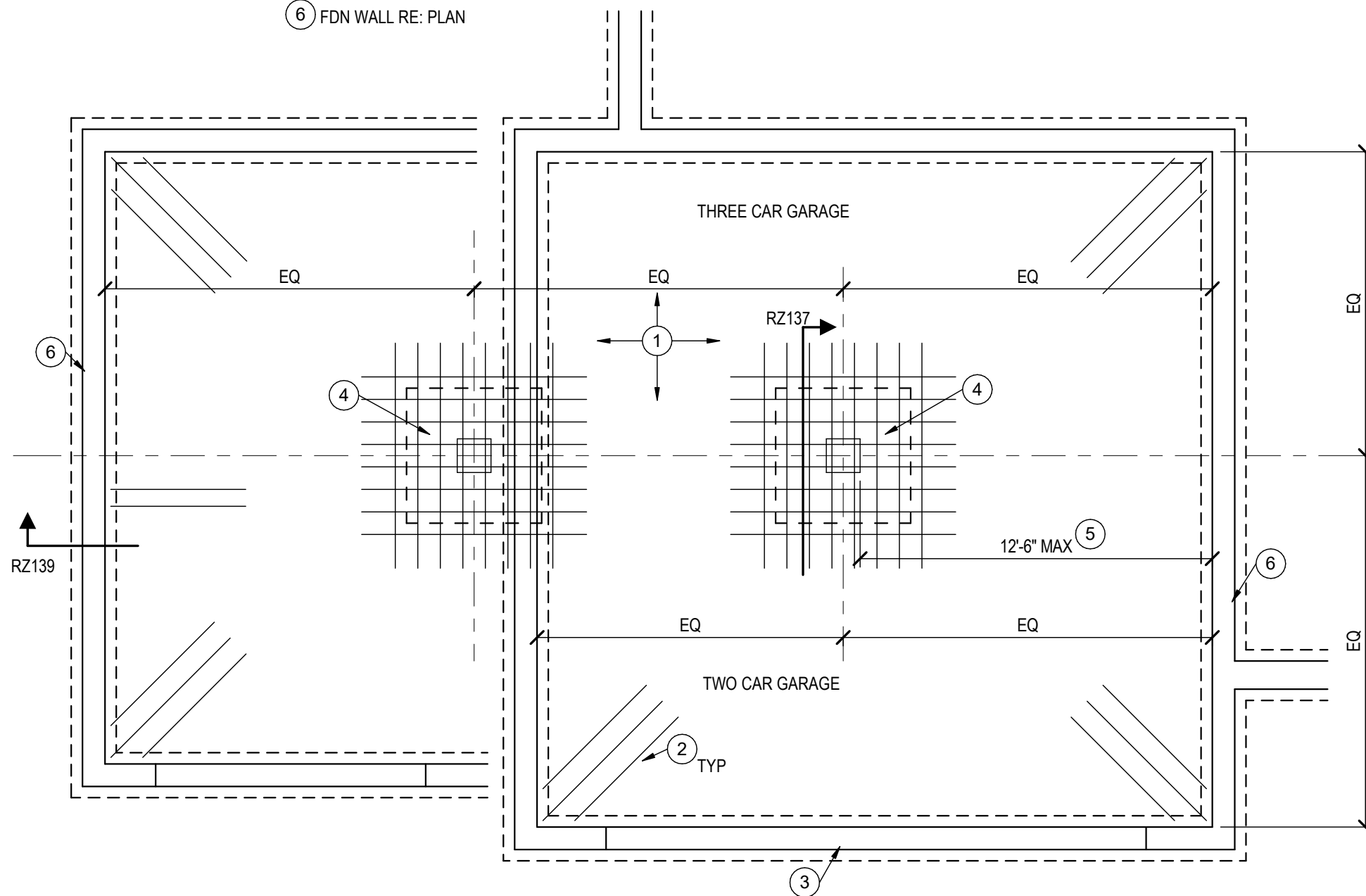
2

RZ137 - GARAGE PIER

3/4" = 1'-0"

DETAIL NOTES:

- 1 6" THICK CONC GARAGE SLAB. REINF W/ #4 @ 12" OC EA WAY. PROVIDE HOOKED DWLS INTO WALLS PER TYP DTL RZ139
- 2 (3) #4 CORNER BARS. SPACED 8" OC MAX
- 3 HOLD DOWN SLAB AT GARAGE DOORS AND MAN DOORS. PROVIDE HOOKED DWLS INTO FDN WALL
- 4 CONC PEDESTAL AND FTG PER TYP DTL RZ137. (1) PIER REQD FOR 2 CAR GARAGE, (2) PIERS REQD FOR 3 CAR GARAGE
- 5 MAX DIST FROM FACE OF PIER TO ANY CONC WALL OR ADDITIONAL PIER SHALL BE 12'-6" OR LESS
- 6 FDN WALL RE: PLAN



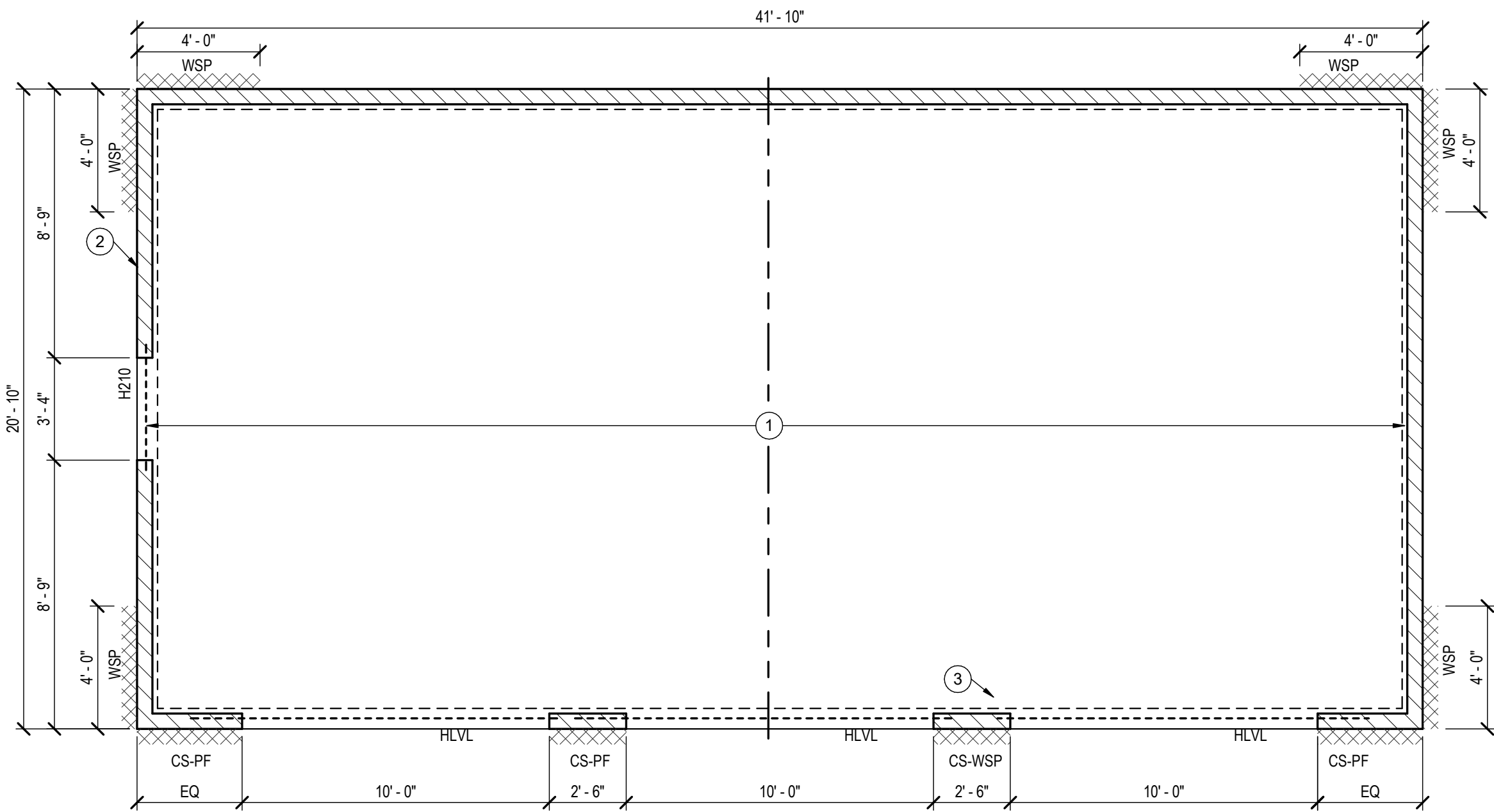
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RZ136 - GARAGE SLAB ON FILL

1/4" = 1'-0"

REVISONS	DESCRIPTION	
	DATE	
NO.		
	DATE	
FIELD:	STAND	
DRAWN:	CGB	
CHECKED:	PWS	
PROJ NO.	21044	
DATE:	3/10/2021	

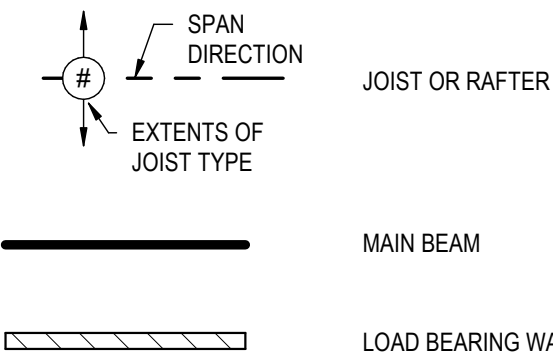




**CEILING PLAN NOTES:**

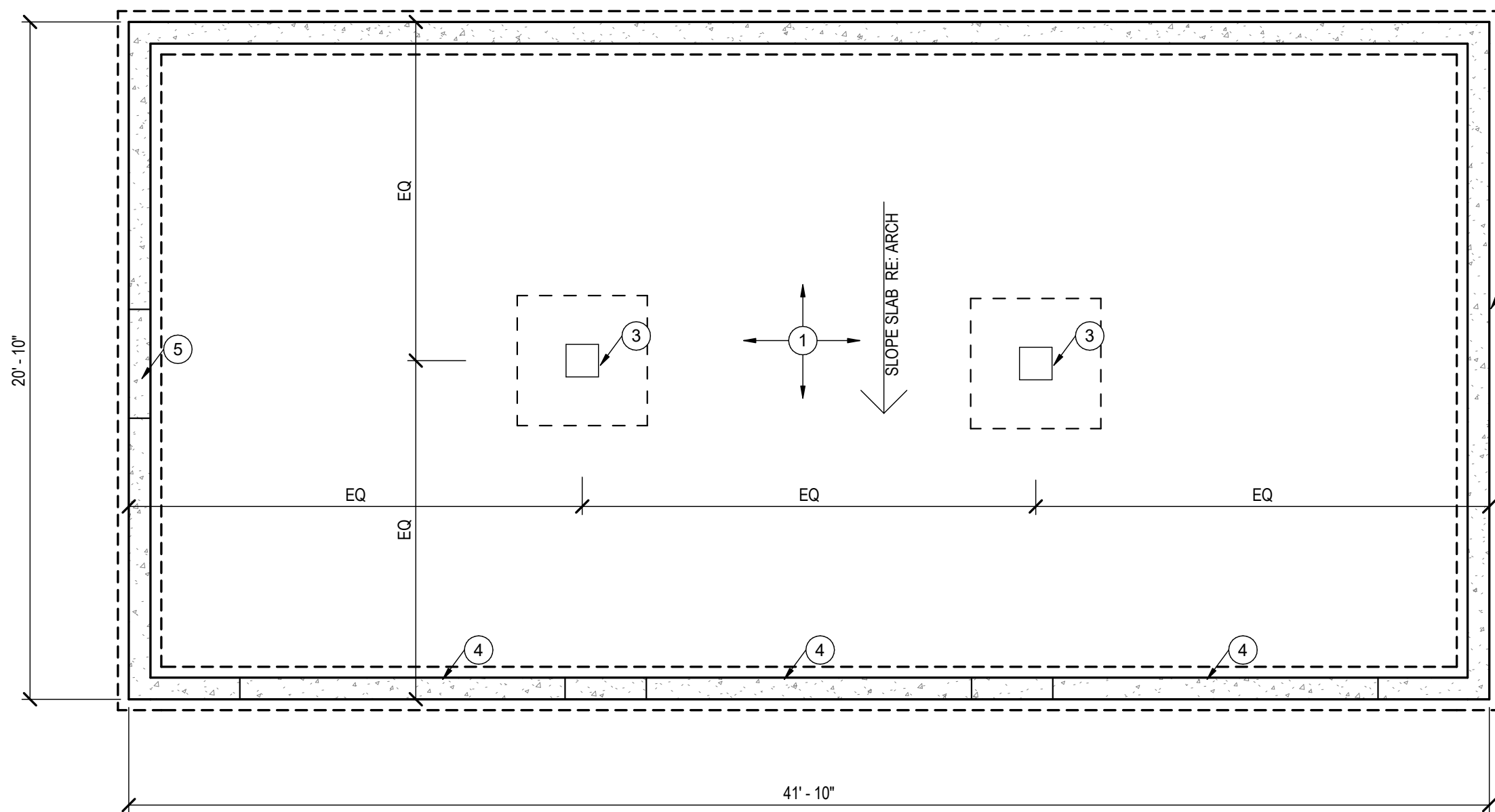
- 1 PREFAB WOOD ROOF TRUSSES @ 24" OC. AT BEARING POINTS. PROVIDE SIMPSON H2.5T TIE TO WALL TOP PLATE

**FRAMING LEGEND**



**2ND FLOOR CEILING FRAMING PLAN**

1/4" = 1'-0"

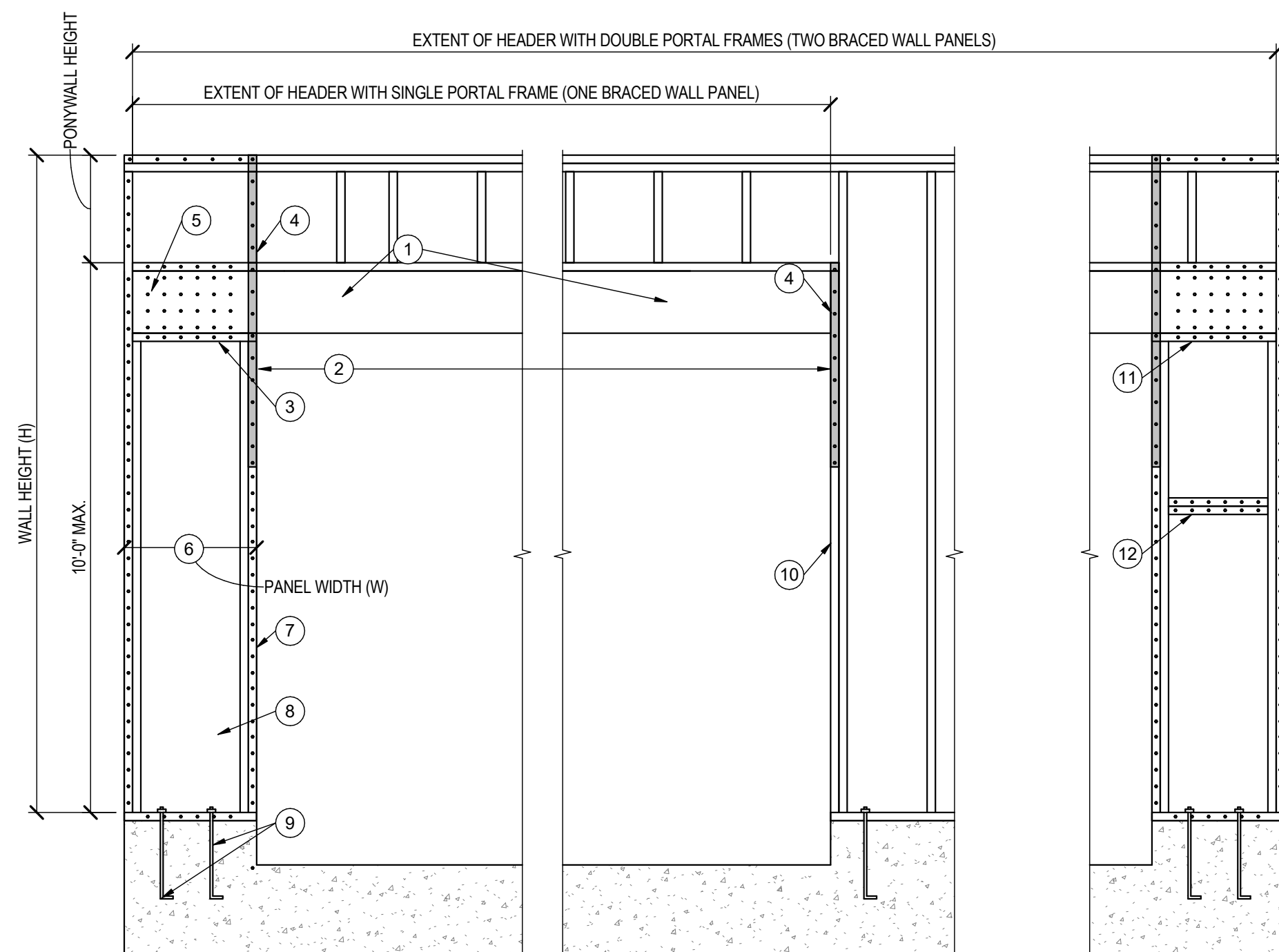


**FDN PLAN NOTES:**

- 1 GARAGE SLAB. RE: TYP DTL RZ136 FOR GARAGE SLAB ON FILL REQUIREMENTS.
- 2 8" CONCRETE STEM WALL ON 16" WIDE X 8" DEEP CONT FTG. REINF WALL W/ #4 VERTS @ 18" OC AND (3) #4 HORIZ EQ. SPOD. EMBED VERTS 6" MIN INTO FTG. REINF FTG W/ (2) #4 CONT AND #4 TRANSV @ 24" OC. FTG. TO BE MIN. 3'-0" BELOW GRADE.
- 3 GARAGE PIER. REFERENCE TYPICAL DETAILS.
- 4 RECESS STEM WALL AT GARAGE DOOR
- 5 RECESS STEM WALL AT WALK DOOR

**FDN AND 1ST FLOOR FRAMING PLAN**

1/4" = 1'-0"



MINIMUM PANEL WIDTH	
'H'	'W'
8'-0"	16"
9'-0"	18"
10'-0"	20"

**DETAIL NOTES:**

- 1 MINIMUM 3" x 11.25" NET HEADER
- 2 SPAN = 6'-0" TO 18'-0"
- 3 FASTEN TOP PLATE TO HEADER WITH TWO ROWS OF 16d SINKER NAILS AT 3' O.C. TYP
- 4 1000# STRAP OPPOSITE SHEATHING
- 5 FASTEN SHEATHING TO HEADER WITH 8d COMMON OR GALVANIZED BOX NAILS IN 3" GRID PATTERN AS SHOWN AND 3" O.C. IN ALL FRAMING (STUDS, BLOCKING, AND SILLS) TYP
- 6 REFER TO PANEL WIDTH SCHEDULE
- 7 MIN. 2x4 FRAMING
- 8 MIN. 7/16" THICKNESS WOOD STRUCTURAL PANEL
- 9 MIN. (2) 1/2" ANCHOR RODS WITH 2" x 2" x 3/16" PLATE WASHER
- 10 MIN. DOUBLE 2x4 DOUBLE POST
- 11 TYPICAL PORTAL FRAME CONSTRUCTION
- 12 FOR A PANEL SPLICE (IF NEEDED), PANEL EDGES SHALL BE BLOCKED AND OCCUR WITHIN 24" OF MID-HEIGHT. ONE ROW OF TYP SHEATHING-TO-FRAMING NAILING IS REQUIRED. IF 2x4 BLOCKING IS USED, THE 2x4S MUST BE NAILED TOGETHER WITH 3 16d SINKERS

**RZ206A - CS-PF (PORTAL FRAME @ GARAGE)**

1/2" = 1'-0"

**SHEET NOTES**

- A. REFER TO SHEET S001 FOR STRUCTURAL GENERAL NOTES.
- B. REFER TO S010-S011 FOR TYPICAL STRUCTURAL DETAILS.
- C. ALL WOOD HEADERS IN PERIMETER WALLS AND INTERIOR LOAD BEARING WALLS NOT SPECIFICALLY CALLED OUT SHALL BE SELECTED FROM THE HEADER SCHEDULE ON TYPICAL DETAIL SHEETS.
- D. ALL WOOD BEAMS SHALL BEAR ON A MINIMUM OF (3) 2x4 STUDS OR SHALL ATTACH TO INTERSECTING WOOD BEAMS WITH A SIMPSON HUGS410 OR BETTER U.N.O.
- E. ALL MULTI-PLY ENGINEERING LUMBER BEAMS ARE DESIGNATED BY NUMBER OF PLYS AND DEPTH [EX: (3) 14" LVL]. THE PLYS SHALL BE 1.75" WIDTH UNLESS NOTED OTHERWISE AND STRENGTH SHALL BE PER THE GENERAL NOTES. BEAMS SHALL BE FASTENED TOGETHER PER THE TYPICAL DETAILS.
- F. REFER TO ARCHITECTURAL SHEETS FOR ALL DIMENSIONS.
- G. ALL BEAMS IN CEILING FRAMING SHALL BE UPSET, UNLESS NOTED AS DOWNSET OR HDR. IF HEADER SIZE IS NOT GIVEN PICK THE SIZE FROM THE CHART ON THE TYP DETAIL SHEETS.
- H. ALL WALLS SHALL BE 2X4 @ 16" OC, UNLESS NOTED OTHERWISE. ALL EXTERIOR WALLS ARE LOAD BEARING.
- I. BEAM HANGERS ARE DENOTED ON PLANS AS "HX". REFER TO SCHEDULE ON S101 FOR REQUIREMENTS. WHERE NOT CALLED OUT, CONTACT ENGINEER OR USED HEAVIEST HANGER FOR NUMBER OF PLYS IN BEAM BEING SUPPORTED.
- K. SPECIFIC BEAMS CALLED OUT ON PLANS SHALL BE LOCATED UNDER THE LOAD BEARING ELEMENTS ABOVE.
- K. SPREAD FOOTINGS ARE DENOTED AS "FX". REFER TO SPREAD FOOTING SCHEDULE ON THIS SHEET FOR FOOTING SIZES AND REINFORCING.
- L. ANCHOR RODS SHALL BE PLACED IN TO THE TOP OF THE FOUNDATION WALLS PER THE GENERAL NOTES.
- M. PROVIDE PERIMETER FOUNDATION DRAINS.

**BRACED WALL PANEL LEGEND:**

WSP: WOOD STRUCTURAL PANEL. PANEL THICKNESS AND NAILING REQUIREMENTS IN GENERAL NOTES MEET BRACED WALL REQUIREMENTS.

GB: GYP BOARD. 1/2" GYP BOARD EA SIDE OF WALL. NAILS OR SCREWS PER GENERAL NOTES MAY BE USED. MAX FASTENER SPACING = 7" FOR BOTH EDGE AND FIELD FASTENERS.

PFG: PORTAL FRAME GARAGE. RE: TYP DETAIL WD-120 FOR REQUIREMENTS.

CS-PF: CONTINUOUSLY SHEATHED PORTAL FRAME. CONSTRUCT SIMILAR TO TYP DETAIL WD-120 EXCEPT THAT ALL SURFACES SHALL BE CONTINUOUSLY SHEATHED.

CS-WSP: CONTINUOUSLY SHEATHED WOOD STRUCTURAL PANEL.

EC-# END CONDITION FOR CONTINUOUSLY SHEATH WALL PANEL

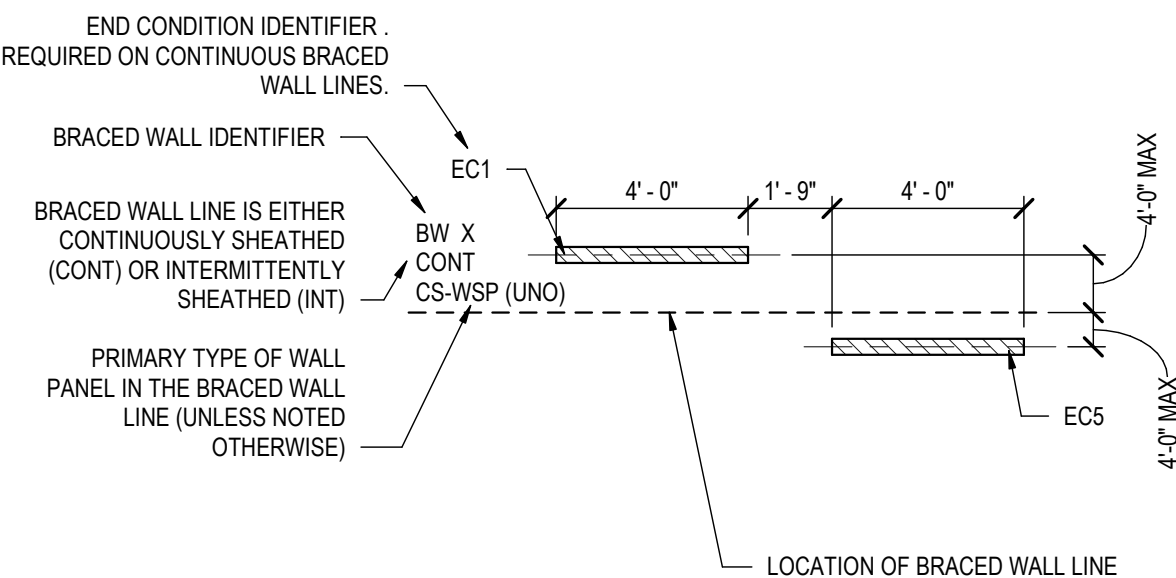
**END CONDITIONS (CONTINUOUSLY SHEATHED)**

EC1: PROVIDE RETURN PANEL AT THE END OF THE WALL. MIN RETURN PANEL LENGTH = 24".

EC2: PROVIDE SIMPSON DTTZZ HOLDDOWN AT CORNER. FASTEN TO STUDS W/ (8) SIMPSON SDS SCREWS AND ANCHOR TO CONCRETE W/ 1/2" DIA SIMPSON TITEN HD SCREW ANCHOR X 4" MIN EMBED (6" OVERALL LENGTH). WHERE HOLDDOWN IS REQUIRED BETWEEN FLOORS, PROVIDE DTTZZ ABOVE AND BELOW FLOOR AND FASTEN TO WALL STUDS. CONNECT TOGETHER WITH 1/2" DIAMETER THREADED ROD.

EC3: 48" WIDE BRACED WALL PANEL AT THE END OF THE WALL. NO RETURN PANEL IS REQUIRED.

EC5: SIMILAR TO EC2, EXCEPT HOLDDOWN DOES NOT OCCUR AT CORNER, BUT MAY BE UP TO 10'-0" AWAY FROM A CORNER.



08/05/21

Nathan Kent Boen, R.A.  
A-2017009063

**INDEPENDENCE HOUSING  
SECURE GARAGE**  
2510 MOHICAN AVENUE  
INDEPENDENCE, MO 64057

CLIENT  
MICHAEL BISHOP  
INDEP. HOUSING AUTH.  
4215 S. HOCKER DR., BLDG 5  
INDEPENDENCE, MO 64055  
(816) 836-9200 x307

**CONSULTANTS**

STAND STRUCTURAL  
ENGINEERING, INC.  
8234 Robinson Street,  
Overland Park, KS 66204  
913.244.2169  
stand-sei.com

**REVISIONS**

NO.	DATE	DESCRIPTION

FIELD: STAND

DRAWN: CGB

CHECKED: PWS

PROJ. NO. 21044

DATE: 3/10/2021

STRUCTURAL  
FRAMING PLANS



LEGEND

DUPLEX GROUNDING TYPE RECEPTACLE. CENTERED 4" ABOVE BACK SPLASH, COUNTER OR SURFACE. COORDINATE WITH ARCHITECTURAL CASEWORK DOCUMENTS.

DUPLEX GROUNDING TYPE RECEPTACLE. CENTER 18" A.F.F. UNLESS NOTED.

GROUND FAULT INTERRUPTING RECEPTACLE. CENTER 18" A.F.F. UNLESS NOTED.

PANELBOARD, TOP 84" A.F.F.

DISCONNECT SWITCH, SIZE AND TYPE AS NOTED IN DISCONNECT SWITCH SCHEDULE.

HOME RUN TO PANEL. ANY CIRCUIT WITHOUT FURTHER DESIGNATION INDICATES A 2-#12 WIRE CIRCUIT WITH GROUND, A GREATER NUMBER OF WIRES IS INDICATED AS FOLLOWS: 3-#12 WIRES WITH GROUND, 4-#12 WIRES WITH GROUND, CONDUIT SIZE PER N.E.C. IF HOME RUN IS ANNOTATED, SEE FEEDER AND BRANCH CIRCUIT SCHEDULE FOR SIZE.

ELECTRICAL NOTE

CONTINUATION

12" ROUND FIXTURE.

WALL SWITCH SINGLE POLE, CENTER 48" A.F.F.

LIGHT WITH FIXTURE MARK, WALL BRACKET

OCCUPANCY SENSOR

ELECTRICAL SPECIFICATIONS

- 1.1 THE ENTIRE ELECTRICAL SYSTEM SHALL COMPLY WITH THE 2011 NATIONAL ELECTRICAL CODE AND ANY OTHER APPLICABLE LOCAL CODES.
- 1.2 GROUNDING SHALL CONSIST OF COPPER CONDUCTORS IN CONDUIT. GROUNDING AND BONDING SHALL COMPLY WITH NEC ARTICLE 250. ALL METALLIC RACEWAYS SHALL BE GROUNDED.
- 1.3 ELECTRICAL EQUIPMENT EXPOSED TO WEATHER SHALL BE WEATHERPROOF.
- 1.4 WIRE:

A. ALL WIRE SHALL BE THWN FOR ALL EXTERIOR OR POSSIBLE WET LOCATIONS.

B. ALL WIRE SHALL BE THWN OR THHN FOR ALL INTERIOR OR DRY LOCATIONS.

C. ALL BUILDING WIRE SHALL BE 600 VOLTS COPPER.

D. THE MINIMUM WIRE SIZE FOR POWER AND LIGHTING SHALL BE #12 AWG., FOR CONTROLS #14 AWG.

E. THE USE OF ROMEX SHALL NOT BE PERMITTED.

F. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR CONDUIT AND WIRE ROUTING. ANY LENGTHS EXCEEDING 75' SHALL HAVE VOLT LOSS CALCULATED AND WIRE SIZES ADJUSTED AS REQUIRED BY CODE.
- 1.5 RACEWAYS:

A. ALL UNDERSLAB OR BELOW GRADE RACEWAYS SHALL BE SCHEDULE 40 PVC CONDUITS WITH RIGID GALVANIZED STEEL "RGS" ELBOWS AND RISERS TO ABOVE GRADE OR SLAB.

B. ALL CONDUITS INSIDE BUILDING SHALL BE 1/2" ELECTRICAL METALLIC TUBING "EMT" MINIMUM.

C. THE USE OF MC IS PERMITTED IF ALLOWED BY LOCAL AUTHORITY. MC CABLE IS ALLOWED ONLY WHERE CONCEALED IN INDOOR LOCATIONS.

D. FLEXIBLE METAL CONDUIT MAY BE USED FOR FINAL CONNECTION TO LIGHT FIXTURES AND MOTORS 6' MAXIMUM LENGTH ALLOWED.

E. RIGID OR INTERMEDIATE GALVANIZED STEEL CONDUIT SHALL BE USED FOR ALL EXTERIOR APPLICATIONS ABOVE GRADE.

F. SEALTITE SHALL BE USED FOR ALL EXTERIOR CONNECTIONS TO EQUIPMENT.

G. ALL RACEWAYS SHALL BE SUPPORTED FROM ROOF STRUCTURAL MEMBERS PER N.E.C. NO RACEWAYS SHALL BE ATTACHED DIRECTLY TO ROOF DECK.

H. ALL RACEWAYS SHALL BE RUN PARALLEL OR PERPENDICULAR TO BUILDING WALLS OR FLOORS.

I. PROVIDE PLASTIC BUSHINGS AT OPEN ENDS OF ALL CONDUITS WITH LOW VOLTAGE WIRING.

J. SEAL ALL PENETRATIONS THROUGH WALLS OR FLOOR WITH APPROPRIATE CAULK OR GROUT. SEAL PENETRATIONS THROUGH FIRE RATED WALLS, FLOORS, OR CEILINGS WITH UL LISTED FIRE STOP COMPOUND.
- 1.6 LUMINARIES:

A. ALL LIGHT FIXTURES SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR. REFER TO LIGHT FIXTURE SCHEDULE FOR SPECIFICATIONS.

B. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO SUPPORT LIGHT FIXTURES. LIGHT FIXTURES IN LAY-IN CEILING SHALL BE INDEPENDENTLY SUPPORTED WITH WIRE AT ALL FOUR CORNERS OF FIXTURE.

C. REPLACE DEFECTIVE LAMPS, LED ARRAYS, DRIVERS AND BALLASTS PRIOR TO PROJECT COMPLETION.
- 1.7 DEVICES:

A. ALL WIRING DEVICES, COVER PLATES, ETC. SHALL BE AS SPECIFIED ON POWER LEGEND.

B. POWER EQUIPMENT SHALL BE NEW AND BEAR A UL LABEL.

C. WIRING DEVICES SHALL BE GRAY IN COLOR, 20 AMP FEDERAL SPECIFICATION GRADE WITH STAINLESS STEEL COVER PLATES.
- 1.8 DISCONNECT SWITCHES

A. MATERIAL: DISCONNECT SWITCHES SHALL BE NEMA TYPE HD (HEAVY DUTY) QUICK-MAKE, QUICK-BREAK DISCONNECT SWITCHES: NOT FURNISHED BY OTHERS WITH EQUIPMENT, OR WHERE REQUIRED BY CODE. SWITCHES SHALL BE NON-FUSIBLE UNLESS INDICATED TO BE FUSIBLE.

1. MOTOR CIRCUIT DISCONNECT SWITCHES SHALL BE HORSEPOWER RATED TO MATCH THE MOTOR LOAD.

2. NON-FUSIBLE DISCONNECTS SHALL BE RATED 30 AMPS UNLESS OTHERWISE INDICATED.

B. ACCESSORIES: SWITCH ENCLOSURES SHALL BE RATED NEMA 3R FOR OUTDOOR AND WET LOCATIONS, UNLESS OTHERWISE SPECIFIED OR INDICATED ON THE DRAWINGS.

1. ELECTRICAL INTERLOCK: SWITCH SHALL BE FURNISHED WITH INTERLOCK CONTACTS.

C. CONTROLS: SWITCHES SHALL HAVE A DUAL COVER INTERLOCK TO PREVENT DOOR OPENING WITH SWITCH CLOSED AND TO PREVENT CLOSING SWITCH WITH DOOR OPEN.

1. SWITCH SHALL BE PAD LOCKABLE IN "OPEN" AND "CLOSED" POSITION.

D. ACCEPTABLE MANUFACTURERS:

1. CUTLER HAMMER/WESTINGHOUSE

2. GENERAL ELECTRIC

3. SQUARE D COMPANY
- 1.10 INDOOR OCCUPANCY SENSORS

A. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY THE FOLLOWING:

1. COOPER INDUSTRIES, INC.

2. HUBBELL BUILDING AUTOMATION, INC.

3. LEVITON MFG. COMPANY INC.

4. WATT STOPPER.

B. WALL- OR CEILING-MOUNTED, SOLID-STATE INDOOR OCCUPANCY SENSORS WITH A SEPARATE POWER PACK TO TURN LIGHTS ON WHEN COVERAGE AREA IS OCCUPIED, AND TURN THEM OFF WHEN UNOCCUPIED; WITH A TIME DELAY FOR TURNING LIGHTS OFF, ADJUSTABLE OVER A MINIMUM RANGE OF 1 TO 15 MINUTES.

C. POWER PACK: DRY CONTACTS RATED FOR 20-A BALLAST LOAD AT 120- AND 277-VAC, FOR 13-A TUNGSTEN AT 120-VAC, AND FOR 1 HP AT 120-VAC. SENSOR HAS 24-VDC, 150-MA, CLASS 2 POWER SOURCE, AS DEFINED BY NFPA 70.

E. SENSOR: SUITABLE FOR MOUNTING IN ANY POSITION ON A STANDARD OUTLET BOX.

F. RELAY: EXTERNALLY MOUNTED THROUGH A 1/2-INCH (13-MM) KNOCKOUT IN A STANDARD ELECTRICAL ENCLOSURE.

G. TIME-DELAY AND SENSITIVITY ADJUSTMENTS: RECESSED AND CONCEALED BEHIND HINGED DOOR.

H. BYPASS SWITCH: OVERRIDE THE "ON" FUNCTION IN CASE OF SENSOR FAILURE.

I. DUAL-TECHNOLOGY TYPE: DETECT OCCUPANTS IN COVERAGE AREA USING PIR AND ULTRASONIC DETECTION METHODS. THE PARTICULAR TECHNOLOGY OR COMBINATION OF TECHNOLOGIES THAT CONTROL ON-OFF FUNCTIONS IS SELECTABLE IN THE FIELD BY OPERATING CONTROLS ON UNIT.

1. SENSITIVITY ADJUSTMENT: SEPARATE FOR EACH SENSING TECHNOLOGY.

2. DETECTOR SENSITIVITY: DETECT OCCURRENCES OF 6-INCH- (150-MM-) MINIMUM MOVEMENT OF ANY PORTION OF A HUMAN BODY THAT PRESENTS A TARGET OF NOT LESS THAN 36 SQ. IN. (232 SQ. CM), AND DETECT A PERSON OF AVERAGE SIZE AND WEIGHT MOVING NOT LESS THAN 12 INCHES (305 MM) IN EITHER A HORIZONTAL OR A VERTICAL MANNER AT AN APPROXIMATE SPEED OF 12 INCHES/S (305 MM/S).

3. DETECTION COVERAGE (STANDARD ROOM): DETECT OCCUPANCY ANYWHERE WITHIN A CIRCULAR AREA OF 1000 SQ. FT. (93 SQ.M) WHEN MOUNTED ON A 96-INCH- (2440-MM-) HIGH CEILING.
- 1.11 DISTRIBUTION EQUIPMENT:

A. ALL BREAKERS SHALL BE BOLT-ON TYPE.

B. ALL BREAKERS SHALL BE RATED TO WITHSTAND INCOMING AVAILABLE FAULT CURRENT FROM UTILITY COMPANY TRANSFORMER.

C. SERIES RATING MAY BE ALLOWED IF ACCEPTABLE BY LOCAL CODES. ALL SERIES RATED APPLICATION MUST MEET ALL N.E.C. REQUIREMENTS.

D. PROVIDE NAMEPLATES FOR ALL ELECTRICAL EQUIPMENT AND TYPED DIRECTORY CARDS FOR PANELBOARDS.

E. PROVIDE ENGRAVED PLAQUE WITH AVAILABLE FAULT CURRENT AT SERVICE DISCONNECT AND AT EACH PANELBOARD.

F. CONTRACTOR SHALL PROVIDE ARC FLASH STUDY AND LABELING. LABELS SHALL BE PROVIDED AT SERVICE ENTRANCE, PANELBOARD, HVAC EQUIPMENT AND OTHER LOCATIONS AS REQUIRED.

BRANCH CIRCUIT FEEDER SCHEDULE

CIRCUIT BREAKER SIZE	3 PHASE W/NEUTRAL						3 PHASE					1 PHASE				
	3 POLE						3 POLE					2 POLE OR 1 POLE				
	NO. OF COND	HOT	NO. OF COND	GROUND	CONDUIT SIZE (INCHES)		NO. OF COND	HOT	NO. OF COND	GROUND	CONDUIT SIZE (INCHES)	NO. OF COND	HOT	NO. OF COND	GROUND	CONDUIT SIZE (INCHES)
15	4	12	1	12	1/2		3	12	1	12	1/2	2	12	1	12	1/2
20	4	12	1	12	1/2		3	12	1	12	1/2	2	12	1	12	1/2
25	4	10	1	10	1/2		3	10	1	10	1/2	2	10	1	10	1/2
30	4	10	1	10	1/2		3	10	1	10	1/2	2	10	1	10	1/2
40	4	8	1	10	3/4		3	8	1	10	1/2	2	8	1	10	1/2
50	4	6	1	10	3/4		3	6	1	10	3/4	2	6	1	10	3/4
60	4	4	1	10	1		3	4	1	10	1	2	4	1	10	3/4

FOR EACH CIRCUIT, SIZE THE WIRE BASED ON THE CIRCUIT BREAKER SIZE SHOWN IN THE PANELBOARDS SCHEDULE AS INDICATED ABOVE. ALL SIZES BASED UPON COPPER CONDUCTORS WITH THWN INSULATION.

PANELBOARD SCHEDULE: G

GO PANELBOARD TYPE

FEEDER ENTRANCE:

PANEL LOCATION:

120/208 VOLTAGE

1 PHASE

☒ 60 MAIN BREAKER

☐ TOP

100 AMP MAIN BUS

3 WIRE

☐ MAIN LUGS

☒ BOTTOM

1 NEMA ENCLOSURE

☐ 200% NEUT.

☐ SUB-FEED LUGS

MOUNT:

10,000 RMS SYMMETRICAL AMPS @ 208 VOLTS

☐ SUB-FEED BREAKER

☒ SURFACE

2/23/21 DATE

☐ COPPER BUSS

☒ SOLID NEUTRAL

☐ FLUSH

POLE #

SERVICE

VA LOAD

LOAD TYPE

C.B. TRIP

POLE

C.B. TRIP

POLE

LOAD TYPE

VA LOAD

SERVICE

POLE #

1 GARAGE OPENER

720

M

15

1

20

1

R

540

RECEPTACLE

2

3 GARAGE OPENER

720

M

15

1

20

1

540

SPARE

4

5 GARAGE OPENER

720

M

15

1

20

1

L

250

LIGHTING

6

7 SPACE

SPACE

8

1440

720

790

0

CONNECTED VAPH (LESS FEED THRU & SUB FEED)

L1 - 2230

L2 - 720

CONNECTED VAPH FROM FEED THRU AND SUB FEED

L1 -

L2 -

TOTAL CONNECTED VAPH

L1 - 2230

L2 - 720

LOAD TYPE

CODE DEMAND REQUIREMENTS

THIS PANEL

SUB PNLS

TOTAL

DEMAND VA

MIN. CODE VA (1.25 x CONT.) (NEC 210.19 & 215.2)

LIGHTING (NEC 220.42)

125%

250

250

313

391

RECEPTACLES (NEC 220.44)

1st 10,000VA + 1/2 x REMAINING

540

540

540

540

LARGEST MOTOR (NEC 430.24)

1.25 x LARGEST FLA

0

0

0

0

REMAINING MOTORS (NEC 430.24)

100% REMAINING MOTORS

2160

2160

2160

2160

HEATING (NEC 220.51)

100%

0

0

0

0

KITCHEN EQUIPMENT (NEC 220.56)

VARIES (SEE CODE SECTION)

0

0

0

0

WATER HEATER (NEC 210.19 & 215.2)

100%

0

0

0

0

MSC. (NEC 210.19 & 215.2)

100%

0

0

0

0

SPARE

0 x CODE MIN.VA

0

TOTAL LOADS

2950

0

2950

3013

3091

SIZING LOAD

15 AMPS

NOTES:

\* PANEL SHALL HAVE LOCKABLE HINGED DOOR.

LIGHT FIXTURE SCHEDULE

MARK	MANUFACTURER	CATALOG NO.	LAMP			FINISH	MOUNTING	VOLTS	INPUT WATTS	REMARKS
			NO.	WATTS	DESCRIPTION					
A	LITHONIA	OLF-2RH-40K-120-PE-DOB	1	25	LED	DARK BRONZE	WALL	120	25	LED WALL-MOUNTED FLOOD LIGHTS WITH TWO-HEADS AND DUSK-TO-DAWN PHOTOCELL.

NOTES:

POWELL

CWM

ARCHITECTURE/ENGINEERING/SURVEYING

3200 S. State Route 291, Bldg. 1, Independence, MO 64057

816.373.4800 | powellcwm.com

Certificate of Authority

Architecture: MO 318 / KS 13

Engineering: MO 4 / KS 241

Land Surveying: MO 123 / KS 34

STATE OF MISSOURI

Professional Engineer

2/22/2021

INDEPENDENCE HOUSING AUTHORITY

SECURE GARAGE

2510 MOHICAN AVE

INDEPENDENCE, MO 64057

CLIENT

MICHAEL BISHOP

INDEP. HOUSING AUTH.

4215 S. HOCKER DR., BLDG 5

INDEPENDENCE, MO 64055

816-836-9200 x307

CONSULTANTS

FSC, Inc.

9225 INDIAN CREEK PKWY STE. 300

OVERLAND PARK, KS 66210

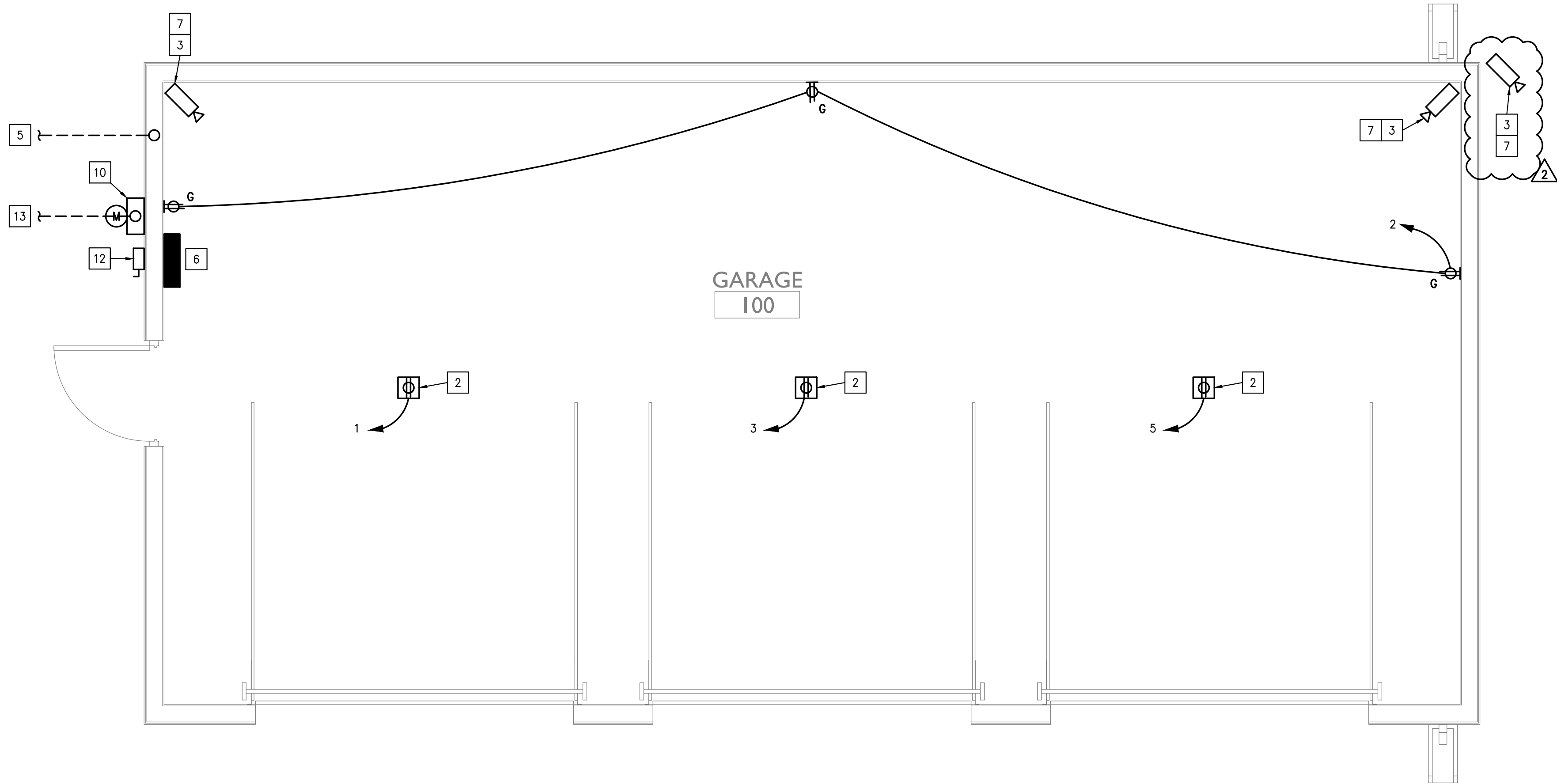
(913) 722-3473

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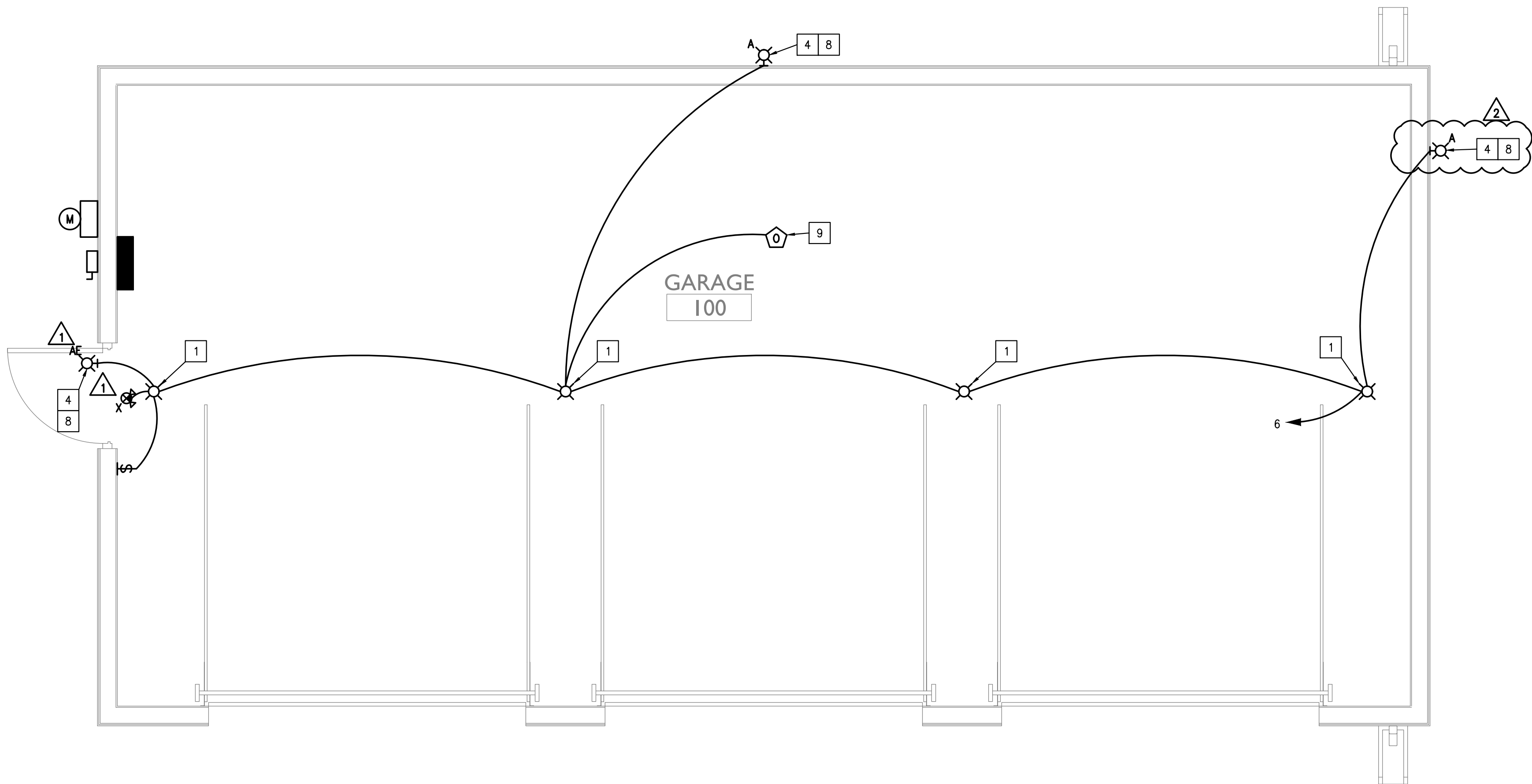
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DRAWN:	LU
CHECKED:	RDF
PROJ NO.	20-1718-02
DATE:	02/19/2021

ELECTRICAL SCHEDULES, SPECIFICATIONS, AND LEGEND  
**E000**





**1 ELECTRICAL FLOOR PLAN**  
SCALE: 3/8" = 1'-0"



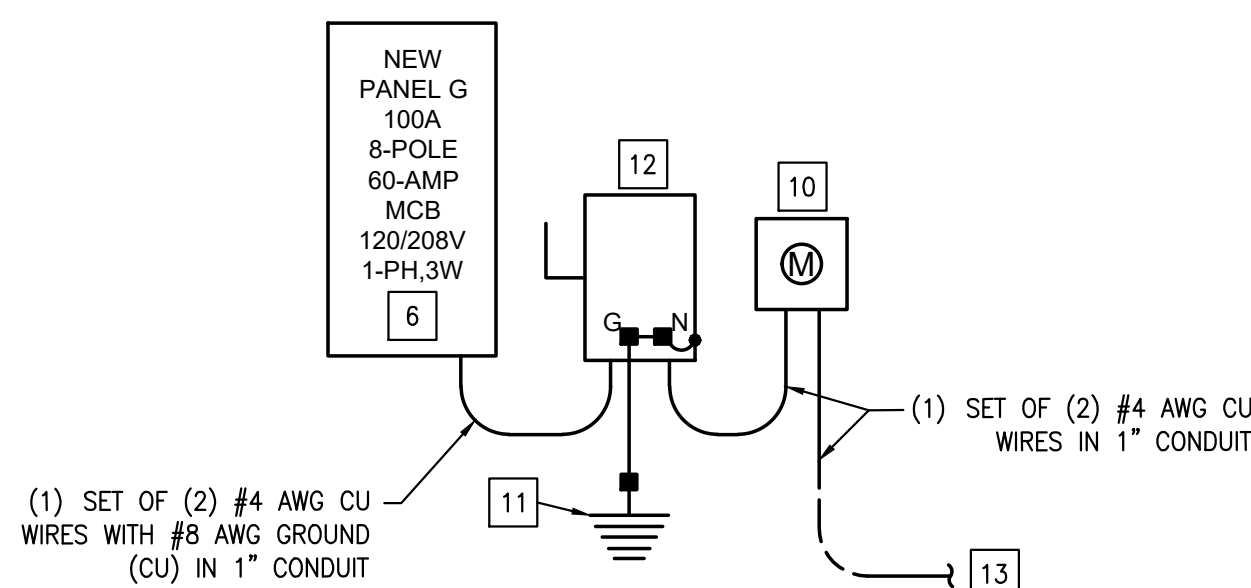
**2 LIGHTING FLOOR PLAN**  
SCALE: 3/8" = 1'-0"

## GENERAL NOTES

- DRAWINGS ARE DIAGRAMMATIC ONLY AND REPRESENT GENERAL SCOPE OF WORK. CONTRACTOR IS RESPONSIBLE TO REVIEW GENERAL CONSTRUCTION DRAWINGS, ARCHITECTURAL, CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS AND ASSOCIATED SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF CONSTRUCTION. NOTIFY ARCHITECT OF ANY CONFLICT OR DISCREPANCIES PRIOR TO BID.
- REFERENCE SHEET E000 FOR LIGHT FIXTURE SCHEDULE, BRANCH CIRCUIT FEEDER SCHEDULE, ELECTRICAL SPECIFICATIONS AND SYMBOL LEGEND.

## PLAN NOTES

- OWNER PROVIDED LED FIXTURE. COORDINATE WITH OWNER ON INSTALLATION REQUIREMENTS. PROVIDE J-BOX FOR CEILING-MOUNTING.
- FIELD LOCATE CEILING-MOUNTED RECEPTACLE FOR AUTOMATIC GARAGE DOOR OPENER. LOCATE PER THE MANUFACTURER'S RECOMMENDATIONS.
- PROVIDE 120V CONNECTION TO HEATER, IF REQUIRED, FOR CAMERA. COORDINATE WITH CAMERA MANUFACTURER.
- MOUNT EXTERIOR FIXTURE AT 9'-0" AFG.
- PROVIDE 3" CONDUIT UNDERGROUND FOR SECURITY/ALARM CABLING FROM MAIN BUILDING AND STUB UP INTO GARAGE. CONTRACTOR SHALL FIELD VERIFY LOCATION OF HEAD END SECURITY/ALARM EQUIPMENT WITHIN THE MAIN BUILDING, AND THE BEST ROUTING BELOW GRADE TO THE NEW GARAGE. .
- PROVIDE SQUARE-D QO (OR APPROVED EQUAL) 100-AMP, 208V, SINGLE-PHASE, 8-POLE LOAD CENTER WITH SOLID NEUTRAL AND 60-AMP MAIN BREAKER. SEE PANELBOARD SCHEDULE ON SHEET E000 FOR ADDITIONAL INFORMATION.
- PROVIDE ROUGH-IN FOR OWNER PROVIDED SECURITY CAMERA. COORDINATE WITH CAMERA MANUFACTURER FOR ROUGH-IN REQUIREMENTS.
- CIRCUIT FIXTURE ON UNSWITCHED HOT LEG OF CIRCUIT.
- PROVIDE DUAL-TECHNOLOGY OCCUPANCY SENSOR FOR AUTOMATIC ON/OFF CONTROL OF LIGHTS ON THE INTERIOR OF THE GARAGE.
- CONTRACTOR TO PROVIDE METERING BASE, SUPPORTS, SLIP RISER AND SECONDARY CONDUITS FROM TRANSFORMER PER IP&L REQUIREMENTS.
- PROVIDE #8 AWG CU GROUNDING CONDUCTOR TO GROUNDING ELECTRICAL SYSTEM (GES) AND NEW MAIN BONDING JUMPER TO NEUTRAL AT NEW SERVICE ENTRANCE SYSTEM. PROVIDE GES TO (2) 3/4"x10FT COPPER CLAD GROUND RODS, AND REINFORCING RODS IN FOOTINGS/SLAB PER THE NEC ARTICLE 250. VERIFY WITH LOCAL AHJ PRIOR TO CONSTRUCTION.
- PROVIDE 120/208V, SINGLE-PHASE, 60-AMP, S/E RATED DISCONNECT SWITCH IN NEMA-3R ENCLOSURE. PROVIDE TAMPER RESISTANT "LOCK-ON" SYSTEM LOCK TO PREVENT PUBLIC ACTUATION/INTERIOR ACCESS.
- CONTRACTOR TO PROVIDE UNDERGROUND CONDUIT PER IP&L REQUIREMENTS FROM MAIN BUILDING'S HOUSE METER. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY ON TAPPING EXISTING HOUSE METER.



**3 ONE-LINE DIAGRAM**  
SCALE: NTS