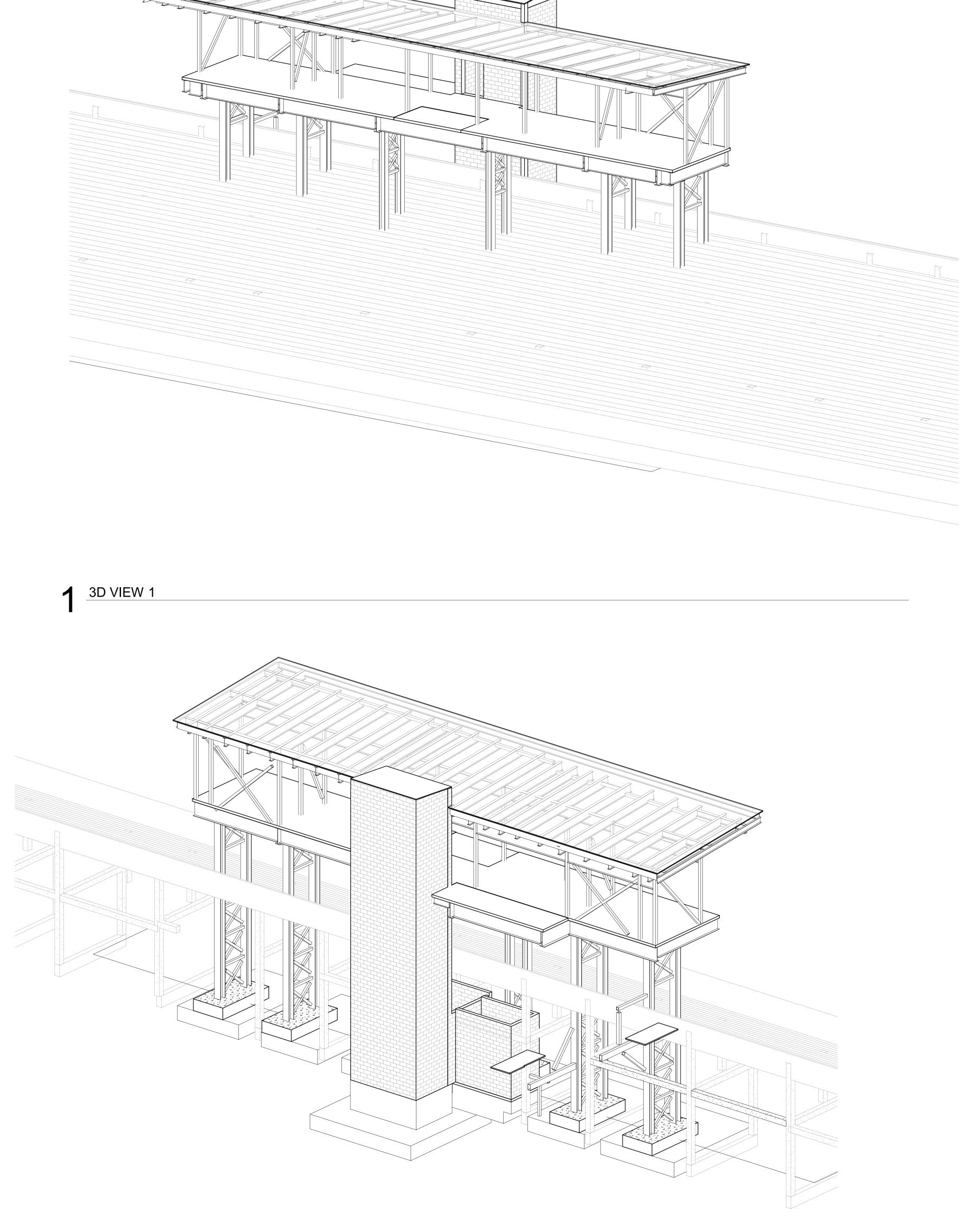
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	STRUCTURAL SHEET LIST
HEET NUMBER	SHEET NAME
S-000	3D VIEW & SHEET LIST
S-010	GENERAL NOTES
S-011	GENERAL NOTES
S-012	GENERAL NOTES
S-013	GENERAL SUBGRADE NOTES AND TYP DETAILS
S-101	PRESS BOX FOUNDATION PLAN
S-102	PRESS BOX LEVEL 1 FRAMING PLAN
S-103	PRESS BOX ROOF FRAMING PLAN
S-104	STAIR FRAMING PLANS
S-300	GENERAL CONCRETE AND STL REINF NOTES AND TYP DETAILS
S-301	GENERAL SLAB-ON-GRADE NOTES AND TYP DETAILS
S-302	GENERAL GRADE BEAM NOTES AND TYP DETAILS
S-303SF	GENERAL FOUNDATION NOTES AND TYP DETAILS
S-310	FOUNDATION DETAILS
S-311	FOUNDATION DETAILS
S-313	FOUNDATION DETAILS (CMU)
S-315	ELEVATOR PIT DETAILS
S-400	GENERAL CMU NOTES AND TYP DETAILS
S-401	GENERAL CMU NOTES AND TYP DETAILS
S-500	GENERAL STEEL NOTES AND TYP DETAILS
S-501	GENERAL STEEL NOTES AND TYP DETAILS
S-503	GENERAL STEEL CONNECTION NOTES AND TYP DETAILS
S-504	GENERAL COMPOSITE STEEL NOTES AND TYP DETAILS
S-505	GENERAL COMPOSITE STEEL NOTES AND TYP DETAILS
S-510	TYP. FLOOR FRAMING DETAILS
S-525	PRESS BOX BUILDING SECTIONS
S-528	PRESS BOX BUILDING SECTIONS
S-600	TYPICAL WIND BRACING ELEVATIONS
S-601	TYPICAL WIND BRACING ELEVATIONS
S-610	TYPICAL WIND BRACING DETAILS

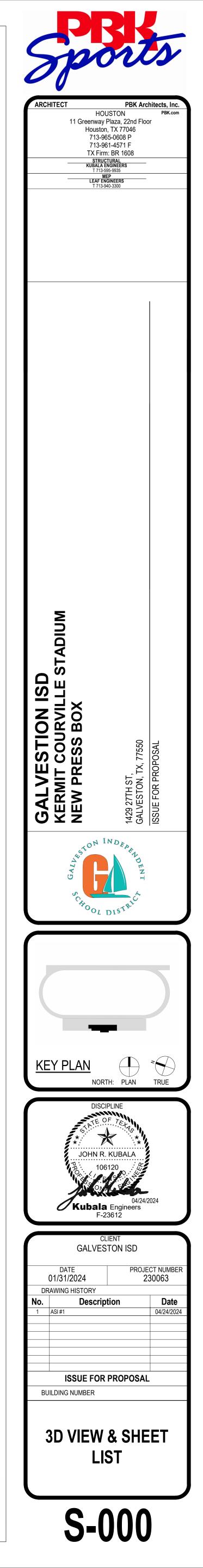
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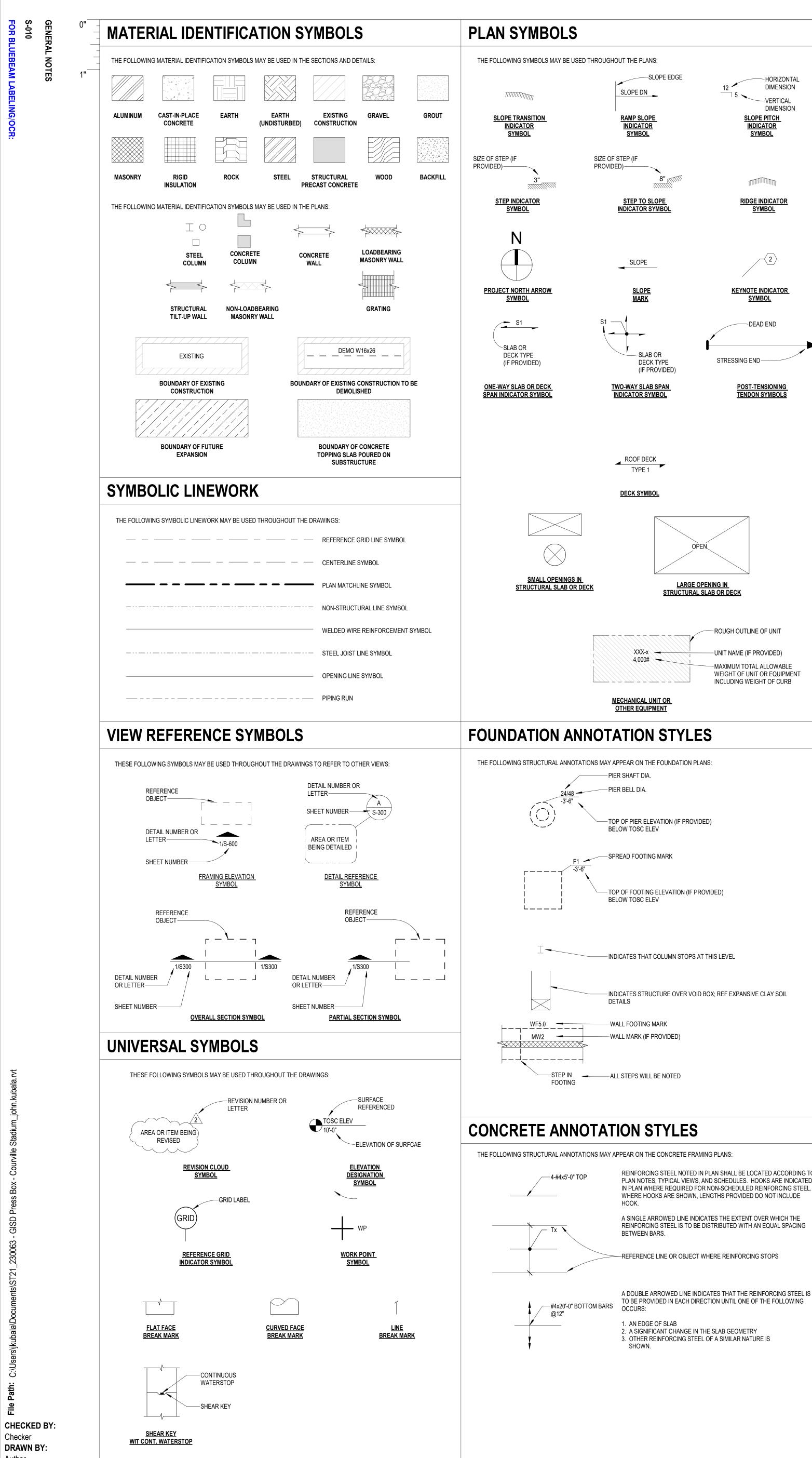
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NOTE: 3D IMAGES PRESENTED FOR INFORMATIONAL PURPOSES ONLY AND DO NOT SUPERCEDE INFORMATION SHOWN IN 2D PLANS AND DETAILS. PERSPECTIVE VIEWS ARE PROVIDED FOR A GENERAL UNDERSTANDING OF THE OVERALL STRUCTURAL FRAME. NOT ALL STRUCTURAL ELEMENTS ARE NECESSARILY SHOWN. THESE VIEWS SHOULD NOT BE USED FOR BIDDING, DETAILING OR ERECTION.







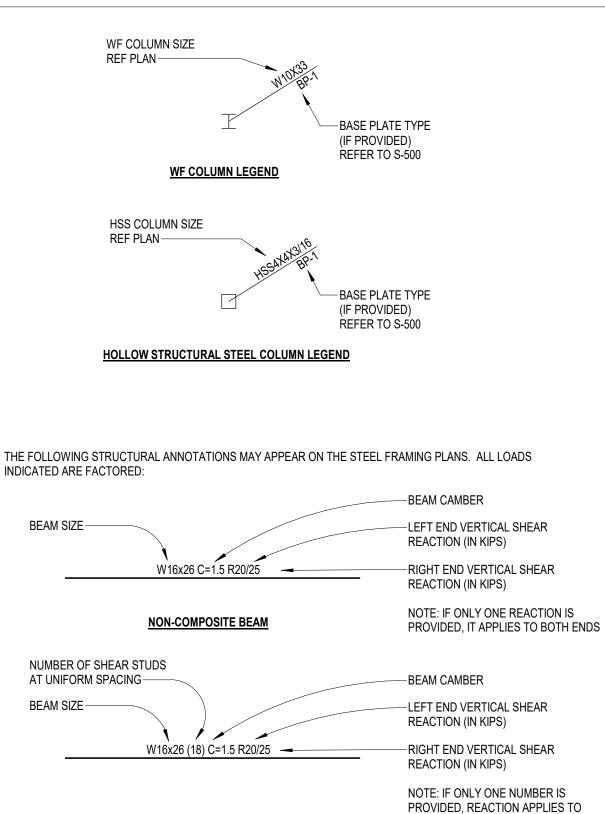


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EAR ON THE CONCRETE FRAMING PLANS:	
REINFORCING STEEL NOTED IN PLAN SHALL BE LOCATED ACCORDING TO PLAN NOTES, TYPICAL VIEWS, AND SCHEDULES. HOOKS ARE INDICATED IN PLAN WHERE REQUIRED FOR NON-SCHEDULED REINFORCING STEEL. WHERE HOOKS ARE SHOWN, LENGTHS PROVIDED DO NOT INCLUDE HOOK.	
A SINGLE ARROWED LINE INDICATES THE EXTENT OVER WHICH THE REINFORCING STEEL IS TO BE DISTRIBUTED WITH AN EQUAL SPACING BETWEEN BARS.	
REFERENCE LINE OR OBJECT WHERE REINFORCING STOPS	
A DOUBLE ARROWED LINE INDICATES THAT THE REINFORCING STEEL IS TO BE PROVIDED IN EACH DIRECTION UNTIL ONE OF THE FOLLOWING OCCURS:	
<ol> <li>AN EDGE OF SLAB</li> <li>A SIGNIFICANT CHANGE IN THE SLAB GEOMETRY</li> <li>OTHER REINFORCING STEEL OF A SIMILAR NATURE IS SHOWN.</li> </ol>	





BOTH ENDS

-ALTERNATE SHEAR STUD CALLOUT FOR NON-UNIFORM SPACING

DWG(S)

DWL(S)

GALV

GYP BD

# **TYPICAL STRUCTURAL ABBREVIATIONS**

COMPOSITE BEAM

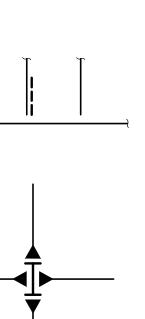
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<u>\</u>	
В	ANCHOR BOLT
FF	ABOVE FINISH FLOOR
CI	AMERICAN CONCRETE INSTITUTE
) D'L	ADDITIONAL
DJ	ADJACENT
FF	ABOVE FINISHED FLOOR
FS	ARCH FINISH SURFACE
GGR	
ISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ISI	AMERICAN IRON AND STEEL INSTITUTE
LT	ALTERNATE
RCH	ARCHITECTURAL
SCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
STM	AMERICAN SOCIETY FOR TESTING AND
	MATERIALS
WS	AMERICAN WELDING SOCIETY
-	
F	
FB	
FF	BELOW FINISH FLOOR
LE	BRACKET LEDGE ELEVATION
LK	BLOCK
LKG	BLOCKING
M O	BEAM BOTTOM OF
-	BACK OF ANGLE
OA OS	
OS OT	BOTTOM OF STEEL
ОТ	
P	BASE PLATE
RG	BEARING
RKT	
	BRICK LEDGE ELEVATION
TWN	BETWEEN
	CHANNEL
OMP	COMPRESSION
ANT	CANTILEVER
GS	CENTROID OF TENDONS
IP	CAST IN PLACE
J	CONTROL JOINT
L	CENTER LINE
JP	COMPLETE JOINT PENETRATION
LR	CLEAR
MU	CONCRETE MASONRY UNIT
OL	COLUMN
OMP	COMPRESSION
ONN	CONNECTION
ONC	CONCRETE
ONST	CONSTRUCTION
ONT	CONTINUOUS
ONTR	CONTRACTOR
OR	CORNER

CONCRETE REINFORCING STEEL INSTITUTE

CRSI

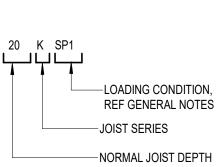
	DOWEL BAR ANCHOR DOUBLE
	DETAIL
	DIAGONAL
	DIMENSION(S)
	DEAD LOADS
	DOUBLE TEE
	DOWNSPOUT
[	DRAWING(S)
	DOWEL(S)
E	EACH
E	EDGE ANGLE OFFSET
E	ELECTRICAL DISTRIBUTION CENTER
ł	EACH FACE
	EXTERIOR INSULATION AND FINISH SYSTE
	EXPANSION JOINT
	ENGINEER EDGE OF ROOF DECK
	EDGE OF ROOF DECK EDGE OF FLOOR SLAB
	EQUAL
E	EQUIVALENT
E	EACH WAY
E	EXISTING
E	EXPANSION
E	EXTERIOR
ł	EXTRA STRONG
ł	FABRICATOR
F	FLOOR DRAIN
F	FOUNDATION
ł	FINISHED FLOOR
ł	FLOOR
ł	FLANGE
ł	FACTORY MUTUAL
ł	FIBER REINFORCED PLASTIC
ł	FAR SIDE
ł	FOOTING
ł	FIREPROOF(ING)
F	FIELD VERIFY
	GAUGE
	GENERAL CONTRACTOR
	GRADE
(	GYPSUM BOARD





\_\_\_\_

\_\_\_\_\_



REF PLAN FOR SIZE —

INDICATES BOTTOM OF KNEE BRACE

INDICATES STEEL BEAM SPLICE -

REFSTRUCTURAL STEEL SIMPLE

VERTICAL BRACE

BEAM BOTTOM BRACING ON PLAN

INDICATES MOMENT CONNECTION -REF MOMENT CONNECTION DETAILS

BEAM CONNECTION SBX-1

INDICATES OPEN-WEB STEEL JOIST KEY

INDICATES KNEE BRACE

<u>-</u> 1	HEIGHT	
IORIZ	HORIZONTAL	
ISA	HEADED STUD ANCHOR	
BC	INTERNATIONAL BUILDING CODE	
NFO	INFORMATION	
NT	INTERIOR	
NTERM	INTERMEDIATE	
SO	ISOLATION	
T	INVERTED TEE	
1		
<u>l</u>		
IBE	JOIST BEARING ELEVATION	
IST	JOIST	
IT	JOINT	
<u>(</u>		
<u>-</u> (IP	1000 POUNDS	
«LF	KIP PER LINEAR FOOT	
(SF	KIPS PER SQUARE FOOT	
(SI	KIPS PER SQUARE INCH	
101	KIFS FER SQUARE INCH	
=		
-	ANGLE OR LENGTH	
B	POUNDS TENSION DEVELOPMENT LENGTH AS	
_d	SHOWN IN REINFORCING LAP SCHEDULE	
L	LIVE LOAD	
LH	LONG LEG HORIZONTAL	
LV	LONG LEG VERTICAL	
.00	LOCATION	
ONG	LONGITUDINAL	
SH	LONG SIDE HORIZONTAL	
SV	LONG SIDE VERTICAL	
WC	LIGHT WEIGHT CONCRETE	
И		
<u>"</u> MAX	MAXIMUM	
MC		
ИЕСН	MECHANICAL	
MEZZ	MEZANINE	
MFR	MANUFACTURER	
MIN	MINIMUM	
MISC	MISCELLANEOUS	
40	MASONRY OPENING	
MTL	METAL	
MTR	MATERIAL	
N		
NIC	NOT IN CONTRACT	
NO OR #	NUMBER	
NOM	NOMINAL	
NS	NEAR SIDE	
NTS	NOT TO SCALE	

NORMAL WEIGHT CONCRETE (150 PCF)

NWC

<u>o</u>	
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OH	OPPOSITE HAND
OPNG(S)	OPENING(S)
<u>P</u>	
PAF	POWDER ACTUATED FASTENER
PCC	PRECAST CONCRETE
PCF	POUNDS PER CUBIC FOOT
PCI	PRECAST AND PRESTRESSED
PT	POST-TENSIONING INSTITUTE
PE	PROFESSIONAL ENGINEER
PEMB	PRE-ENGINEERED METAL BUILDING
PENTR	PENETRATION
PL	PLATE
PLAM	PLASTIC LAMINATE
PLF	POUNDS PER LINEAR FOOT
PP	PARTIAL PENETRATION
PREFAB	PREFABRICATED
PRELIM	PRELIMINARY
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POST-TENSIONING
<u>Q</u>	
QTY	QUANTITY
R	
= R	RADUIS
RAF	RAISED ACCESS FLOOR
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
REF	REFER TO
REINF	REINFORCING
REQD	REQUIRED
REV	REVERSE
RND	ROUND
RO	
-	
RTU	ROOF TOP UNIT
<u>s</u>	
SCHED	SCHEDULE(D)
SECT	SECTION
SF	SQUARE FOOT (FEET)
SHT	SHEET
SIM	SIMILAR
SPA	SPACE
SPECS	SPECIFICATIONS
SPEC'D	SPECIFIED
STIFF	STIFFNER
STIR	STIRRUPS
STL	STEFL
	SUB-CONTRACTOR
SW	SIDEWALK
SYM	SYMMETRICAL

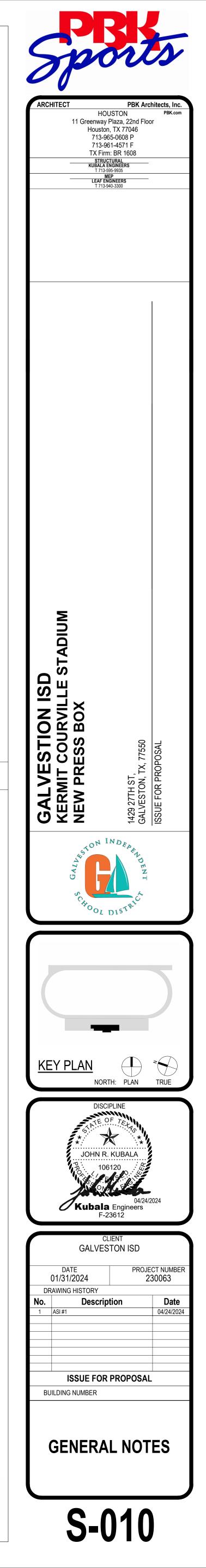
	TENSION
R	TERRAZO
	THICK
	TOP AND BOTTOM
	TOP OF BEAM
	TOP OF FOOTING
	TOP OF PIER ELEVATION
	TOP OF STEEL
С	TOP OF STRUCTURAL CONCRETE
I	TOP OF WALL
	TYPICAL
)	UNLESS NOTED OTHERWISE
,	
	SHEAR
Т	VERTICAL
	WATERSTOP
G	WATERPROOFING
F	WELDED WIRE FABRIC
	WIND BRACE
	WIND LOAD
	WITH
	WITHOUT
	WORKING POINT

WOOD

TEMP

TEMERATURE





# **GENERAL:**

## TYPICAL DETAILS:

- 1. TYPICAL DETAILS SHOWN ON THE DRAWINGS SHALL APPLY TO ALL SIMILAR LIKE CONDITIONS OCCURRING ON THE PROJECT WHETHER OR NOT THEY ARE KEYED IN AT EACH PARTICULAR LOCATIO MISCELLANEOUS:
- . WHERE CONFLICTS EXIST BETWEEN THE VARIOUS PUBLICATIONS AS SPECIFIED HEREIN, THE STRICTER REQUIREMENTS SHALL GOVERN UNLESS NOTED OTHERWISE. WHERE CONFLICTS EXIST BET VARIOUS PARTS OF THE STRUCTURAL CONTRACT DOCUMENTS (STRUCTURAL DOCUMENTS, SPECIFICATIONS) AS SPECIFIED HEREIN, THE STRUCTER REQUIREMENTS SHALL GOVERN.
- 2. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO OBTAIN ALL CONTRACT DOCUMENTS AND LATEST ADDENDA AND TO SUBMIT SUCH DOCUMENTS TO ALL SUBCONTRACTORS AND MAT SUPPLIERS PRIOR TO THE SUBMITTAL OF SHOP DRAWINGS, FABRICATION OF ANY STRUCTURAL MEMBERS, AND ERECTION IN THE FIELD.
- 3. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE, AND, EXCEPT WHERE SPECIFICALLY SHOWN, DO NOT INDICATE THE METHOD OR MEANS O CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, PROCEDURES, TECHNIQUES, ANI SEQUENCE.
- 4. SLEEVES AND BLOCKOUTS REQUIRED FOR PASSAGE OF DUCTWORK, PIPING, DRAINS, CONDUIT, ETC., AND ANCHORS REQUIRED FOR ANCHORING EQUIPMENT AND PIPING ARE NOT GENERALLY INC. ON THE STRUCTURAL DRAWINGS. THE CONTRACTOR SHALL DETERMINE SUCH REQUIREMENTS FROM OTHER SERIES DRAWINGS, SUBCONTRACTORS, AND SUPPLIERS AND SHALL COORDINATE TH LOCATIONS AND DETAILS FOR THESE ITEMS PRIOR TO FABRICATION OR CONSTRUCTION OF THE STRUCTURE. ANY CONFLICTS BETWEEN THESE ITEMS AND THE BUILDING STRUCTURE SHALL BE B TO THE ATTENTION OF THE ARCHITECT FOR RESOLUTION.
- 5. VERIFY, OR ESTABLISH, LOCATIONS AND DIMENSIONS OF ALL FRAMED OPENINGS RELATED TO EQUIPMENT OR DUCTWORK, INCLUDING INSULATION, IF ANY. WHERE SUBSTANTIAL RELOCATION OR RECONFIGURATION IS REQUIRED, SUBMIT A DRAWING TO THE ARCHITECT FOR REVIEW. 6. MATERIALS OR PRODUCTS SUBMITTED FOR APPROVAL WHICH ARE NOT AS SPECIFIED IN THE DOCUMENTS SHALL BE ACCOMPANIED BY A CURRENT ES REPORT (BY ICC EVALUATION SERVICE, INC.
- ICBO REPORT (BY INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS). MATERIALS OR PRODUCTS THAT DO NOT HAVE AN ES OR ICBO REPORT INDICATING THE SUBSTITUTED MATERIAL OR PRO TO BE EQUAL TO THAT SPECIFIED, WILL NOT BE CONSIDERED. 7. IF CERTAIN FEATURES ARE NOT FULLY SHOWN OR SPECIFIED ON THE DRAWINGS OR IN THE SPECIFICATIONS, THEIR CONSTRUCTION SHALL BE OF THE SAME CHARACTER AS SHOWN OR SPECIFIE SIMILAR CONDITIONS.
- 8. THE GENERAL CONTRACTOR SHALL COMPARE THE ARCHITECTURAL AND STRUCTURAL DRAWINGS AND REPORT ANY DISCREPANCY BETWEEN EACH SET OF DRAWINGS AND WITHIN EACH SET OF TO THE ARCHITECT AND ENGINEER PRIOR TO THE FABRICATION AND INSTALLATION OF ANY STRUCTURAL MEMBERS.
- 9. ALL HEAVILY LOADED VEHICLES, CONCRETE TRUCKS AND CRANES SHALL NOT BE DRIVEN ACROSS GRADE BEAMS OR BUILDING SLABS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMA SLAB INDUCED FROM THIS TYPE OF EQUIPMENT.
- 10. ERECTION OF STRUCTURAL STEEL MAY NOT BEGIN UNTIL CONCRETE FOUNDATION HAS CURED FOR A MINIMUM OF THREE DAYS. STRUCTURAL STEEL OR OTHER HEAVY LOADS SHALL NOT BE STO ANY SLAB UNTIL IT HAS CURED FOR A MINIMUM OF SEVEN DAYS.
- 11. NOTE THAT THE GROUND FLOOR SLAB IS A GROUND SUPPORTED SLAB AT GRADE AS PER THE DESIGN RECOMMENDED IN THE SOIL REPORT. IT IS NOT A STRUCTURAL SLAB AND AS SUCH IT IS NO DESIGNED FOR ANY EXTERNAL UPWARD OR DOWNWARD LOADS, IT IS INTENDED TO BE ENTIRELY SUPPORTED BY THE PREPARED GROUND UNDER THE SLAB. THE CONTRACTOR SHOULD NOTE T PERFORMANCE OF THE SLAB AS DESIGNED AND INTENDED BY THE SOIL ENGINEER IS HIGHLY DEPENDENT ON HOW WELL THE CONTRACTOR FOLLOWS THE SITE PREPARATION INSTRUCTION IN TH REPORT.
- 12. ALL STRUCTURAL ELEMENTS OF THE PROJECT HAVE BEEN DESIGNED BY THE STRUCTURAL ENGINEER TO RESIST THE REQUIRED CODE VERTICAL AND LATERAL FORCES THAT COULD OCCUR IN COMPLETED STRUCTURE ONLY. THE ABILITY OF THE STRUCTURAL FRAME TO RESIST THE REQUIRED CODE FORCES DERIVES FROM THE COMPLETE INSTALLATION OF THE LATERAL FORCE RESIST SYSTEMS AND DIAPHRAGMS DESCRIBED BELOW. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL REQUIRED BRACING DURING CONSTRUCTION TO MAINTAIN THE STABILITY AND ALL STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PROCESS UNTIL THE LATERAL-LOAD RESISTING OR STABILITY-PROVIDING SYSTEM IS COMPLETELY INSTALLED AND ALL DESIGNATED CO ELEMENTS (IF ANY) HAVE REACHED A MINIMUM OF 75% OF THEIR DESIGN STRENGTH.
- 13. THE STRUCTURE HAS BEEN DESIGNED FOR THE LOADS IDENTIFIED WITHIN THESE STRUCTURAL DRAWINGS THAT ARE ANTICIPATED TO BE APPLIED TO THE FINAL STRUCTURE ONCE COMPLETED / OCCUPIED. THE CONTRACTOR SHALL NOT OVERLOAD THE STRUCTURE DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING THE ADEQUACY OF THE STRUCTURE SUPPORT ANY APPLIED CONSTRUCTION LOADS, INCLUDING THOSE DUE TO CONSTRUCTION VEHICLES OR EQUIPMENT, MATERIAL HANDLING OR STORAGE, SHORING OR RESHORING, OR ANY OTH CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL SUBMIT CALCULATIONS SIGNED AND SEALED BY AN ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED VERIFYING THE ADD THE STRUCTURE FOR ANY PROPOSED CONSTRUCTION LOADS THAT ARE IN EXCESS OF THE STATED DESIGN LOADS. THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE TO DESIGN OR CHECK THE STRUCTURE FOR LOADS APPLIED TO THE STRUCTURE FOR ANY CONSTRUCTION ACTIVITY.

# WIND-BORNE DEBRIS REGION:

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GENERAL:	DESIGN CRITERIA:					
ODES, DRAWINGS AND SPECIFICATIONS:	DEAD LOADS:					
. THE CONSTRUCTION DOCUMENTS ARE BASED ON THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE IBC 2021, ALL CODES AND SPECIFICATIONS LISTED ABOVE SHALL INCLUDE ALL AMENDMENTS AND ADDENDA IN FORCE AT THE DATE OF THE CONTRACT DOCUMENTS.	1. DEAD LOADS INCLUDE THE WEIGHT OF THE STRUCTURAL COMPONENTS AND ALLOWANCES FOR PERMANENT PARTITIONS, PERMANENT FIXTURES, FINISHES, ROOFING, MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION MATERIALS SHOWN OR SPECIFIED.					
YPICAL DETAILS:	2. LOADINGS FOR MECHANICAL ROOMS ARE BASED ON THE WEIGHTS OF ASSUM	IED EQUIPMENT, AS INDICATED ON THE MECHANICAL DRAWINGS (INCLUDING THE WEIGHT OF CONCRETE PADS, WHERE				
. TYPICAL DETAILS SHOWN ON THE DRAWINGS SHALL APPLY TO ALL SIMILAR LIKE CONDITIONS OCCURRING ON THE PROJECT WHETHER OR NOT THEY ARE KEYED IN AT EACH PARTICULAR LOCATION.	INDICATED). ANY CHANGES IN TYPE, SIZE, LOCATION OR NUMBER OF PIECES OF EQUIPMENT SHOULD BE REPORTED TO THE ARCHITECT FOR VERIFICATION OF THE ADEQUACY OF SUPPORTING MEMBERS PRIOR TO THE PLACEMENT OF SUCH EQUIPMENT.					
IISCELLANEOUS:	3. DESIGN DEAD LOADING IS AS FOLLOWS:					
. WHERE CONFLICTS EXIST BETWEEN THE VARIOUS PUBLICATIONS AS SPECIFIED HEREIN, THE STRICTER REQUIREMENTS SHALL GOVERN UNLESS NOTED OTHERWISE. WHERE CONFLICTS EXIST BETWEEN THE VARIOUS PARTS OF THE STRUCTURAL CONTRACT DOCUMENTS (STRUCTURAL DOCUMENTS, SPECIFICATIONS) AS SPECIFIED HEREIN, THE STRICTER REQUIREMENTS SHALL GOVERN.	ROOF FLOOR	SELF WEIGHT + 10 PSF COLLATERAL SELF WEIGHT + 25 PSF COLLATERAL				
. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO OBTAIN ALL CONTRACT DOCUMENTS AND LATEST ADDENDA AND TO SUBMIT SUCH DOCUMENTS TO ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS PRIOR TO THE SUBMITTAL OF SHOP DRAWINGS, FABRICATION OF ANY STRUCTURAL MEMBERS, AND ERECTION IN THE FIELD.	LIVE LOADS: 1. DESIGN LIVE LOADING IS AS FOLLOWS:					
THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE, AND, EXCEPT WHERE SPECIFICALLY SHOWN, DO NOT INDICATE THE METHOD OR MEANS OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, PROCEDURES, TECHNIQUES, AND SEQUENCE.	ROOF TYPICAL FLOORS ALL SLABS-ON-GRADE	20 PSF, 300# CONCENTRATED LOAD (REDUCIBLE) 100 PSF,1000# CONCENTRATED LOAD (REDUCIBLE) 100 PSF				
SLEEVES AND BLOCKOUTS REQUIRED FOR PASSAGE OF DUCTWORK, PIPING, DRAINS, CONDUIT, ETC., AND ANCHORS REQUIRED FOR ANCHORING EQUIPMENT AND PIPING ARE NOT GENERALLY INDICATED ON THE STRUCTURAL DRAWINGS. THE CONTRACTOR SHALL DETERMINE SUCH REQUIREMENTS FROM OTHER SERIES DRAWINGS, SUBCONTRACTORS, AND SUPPLIERS AND SHALL COORDINATE THE LOCATIONS AND DETAILS FOR THESE ITEMS PRIOR TO FABRICATION OR CONSTRUCTION OF THE STRUCTURE. ANY CONFLICTS BETWEEN THESE ITEMS AND THE BUILDING STRUCTURE SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR RESOLUTION.	MECHANICAL/ELECTRICAL ROOM (MIN.) ELEVATOR MACHINE ROOM HANDRAILS AND GUARDRAILS STAIRWAYS AND EXITS	100 PSF (UNREDUCIBLE) 150 PSF (UNREDUCIBLE) 50 PLF OR 200# APPLIED AT TOP RAIL IN ANY DIRECTION 100 PSF + 300# CONCENTRATED LOAD AT TREAD MIDSPAN				
. VERIFY, OR ESTABLISH, LOCATIONS AND DIMENSIONS OF ALL FRAMED OPENINGS RELATED TO EQUIPMENT OR DUCTWORK, INCLUDING INSULATION, IF ANY. WHERE SUBSTANTIAL RELOCATION OR RECONFIGURATION IS REQUIRED, SUBMIT A DRAWING TO THE ARCHITECT FOR REVIEW.						
. MATERIALS OR PRODUCTS SUBMITTED FOR APPROVAL WHICH ARE NOT AS SPECIFIED IN THE DOCUMENTS SHALL BE ACCOMPANIED BY A CURRENT ES REPORT (BY ICC EVALUATION SERVICE, INC.) OR ICBO REPORT (BY INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS). MATERIALS OR PRODUCTS THAT DO NOT HAVE AN ES OR ICBO REPORT INDICATING THE SUBSTITUTED MATERIAL OR PRODUCT TO BE EQUAL TO THAT SPECIFIED, WILL NOT BE CONSIDERED.	SNOW LOADS:					
. IF CERTAIN FEATURES ARE NOT FULLY SHOWN OR SPECIFIED ON THE DRAWINGS OR IN THE SPECIFICATIONS, THEIR CONSTRUCTION SHALL BE OF THE SAME CHARACTER AS SHOWN OR SPECIFIED IN SIMILAR CONDITIONS.	1. DESIGN SNOW LOADING IS AS FOLLOWS:					
. THE GENERAL CONTRACTOR SHALL COMPARE THE ARCHITECTURAL AND STRUCTURAL DRAWINGS AND REPORT ANY DISCREPANCY BETWEEN EACH SET OF DRAWINGS AND WITHIN EACH SET OF DRAWINGS TO THE ARCHITECT AND ENGINEER PRIOR TO THE FABRICATION AND INSTALLATION OF ANY STRUCTURAL MEMBERS.	GROUND SNOW LOAD, Pg SNOW LOAD IMPORTANCE FACTOR SNOW RISK CATEGORY	0 PSF 1.1 III				
ALL HEAVILY LOADED VEHICLES, CONCRETE TRUCKS AND CRANES SHALL NOT BE DRIVEN ACROSS GRADE BEAMS OR BUILDING SLABS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO THE SLAB INDUCED FROM THIS TYPE OF EQUIPMENT.						
0. ERECTION OF STRUCTURAL STEEL MAY NOT BEGIN UNTIL CONCRETE FOUNDATION HAS CURED FOR A MINIMUM OF THREE DAYS. STRUCTURAL STEEL OR OTHER HEAVY LOADS SHALL NOT BE STOCKPILED ON ANY SLAB UNTIL IT HAS CURED FOR A MINIMUM OF SEVEN DAYS.						
1. NOTE THAT THE GROUND FLOOR SLAB IS A GROUND SUPPORTED SLAB AT GRADE AS PER THE DESIGN RECOMMENDED IN THE SOIL REPORT. IT IS NOT A STRUCTURAL SLAB AND AS SUCH IT IS NOT DESIGNED FOR ANY EXTERNAL UPWARD OR DOWNWARD LOADS, IT IS INTENDED TO BE ENTIRELY SUPPORTED BY THE PREPARED GROUND UNDER THE SLAB. THE CONTRACTOR SHOULD NOTE THAT THE PERFORMANCE OF THE SLAB AS DESIGNED AND INTENDED BY THE SOIL ENGINEER IS HIGHLY DEPENDENT ON HOW WELL THE CONTRACTOR FOLLOWS THE SITE PREPARATION INSTRUCTION IN THE SOIL REPORT.	WIND LOADS: 1. WIND PRESSURES ARE BASED ON THE PROVISIONS OF THE AMERICAN SOCIETY OF CIVIL ENGINEERS, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, ASCE 7-16, CITY OF GALVESTON AMENDMENTS, THE TEXAS DEPARTMENT OF INSURANCE WINDSTORM ZONE, AND THE FOLLOWING CRITERIA:					
2. ALL STRUCTURAL ELEMENTS OF THE PROJECT HAVE BEEN DESIGNED BY THE STRUCTURAL ENGINEER TO RESIST THE REQUIRED CODE VERTICAL AND LATERAL FORCES THAT COULD OCCUR IN THE FINAL	A. WIND DESIGN DATA (USED FOR PRESSURE DETERMINATION FOR THE	DESIGN OF BUIDLING)				
COMPLETED STRUCTURE ONLY. THE ABILITY OF THE STRUCTURAL FRAME TO RESIST THE REQUIRED CODE FORCES DERIVES FROM THE COMPLETE INSTALLATION OF THE LATERAL FORCE RESISTING SYSTEMS AND DIAPHRAGMS DESCRIBED BELOW. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL REQUIRED BRACING DURING CONSTRUCTION TO MAINTAIN THE STABILITY AND SAFETY OF	1. BASIC WIND SPEED, V	160 MPH (3-SECOND GUST) (ULTIMATE)				
ALL STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PROCESS UNTIL THE LATERAL-LOAD RESISTING OR STABILITY-PROVIDING SYSTEM IS COMPLETELY INSTALLED AND ALL DESIGNATED CONCRETE ELEMENTS (IF ANY) HAVE REACHED A MINIMUM OF 75% OF THEIR DESIGN STRENGTH.	<ol> <li>WIND OCCUPANCY CATEGORY</li> <li>WIND IMPORTANCE FACTOR, I</li> </ol>	III 1.0				
3. THE STRUCTURE HAS BEEN DESIGNED FOR THE LOADS IDENTIFIED WITHIN THESE STRUCTURAL DRAWINGS THAT ARE ANTICIPATED TO BE APPLIED TO THE FINAL STRUCTURE ONCE COMPLETED AND	<ol> <li>WIND EXPOSURE CATEGORY</li> <li>INTERNAL PRESSURE COEFFICIENT, Gcpi</li> </ol>	C +/-0.18				
OCCUPIED. THE CONTRACTOR SHALL NOT OVERLOAD THE STRUCTURE DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING THE ADEQUACY OF THE STRUCTURE TO SUPPORT ANY APPLIED CONSTRUCTION LOADS, INCLUDING THOSE DUE TO CONSTRUCTION VEHICLES OR EQUIPMENT, MATERIAL HANDLING OR STORAGE, SHORING OR RESHORING, OR ANY OTHER	6. WIDTH OF END ZONE, 2a	8 FT				
CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL SUBMIT CALCULATIONS SIGNED AND SEALED BY AN ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED VERIFYING THE ADEQUACY OF THE STRUCTURE FOR ANY PROPOSED CONSTRUCTION LOADS THAT ARE IN EXCESS OF THE STATED DESIGN LOADS. THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE TO DESIGN OR CHECK THE		CATED WITHIN A WIND-BORNE DEBRIS REGION ONLY, DO NOT USE FOR ANY PRESSURE DETERMINATION(S))				
STRUCTURE FOR LOADS APPLIED TO THE STRUCTURE FOR ANY CONSTRUCTION ACTIVITY.	<ol> <li>WIND-BORNE DEBRIS BASIC WIND SPEED TRIGGER, V</li> <li>BASIC WIND SPEED, V</li> </ol>	140 MPH (3-SECOND GUST) (ULTIMATE) 150 MPH				
	<ol> <li>WIND OCCUPANCY CATEGORY</li> <li>WIND-BORNE DEBRIS PROTENTION REQUIRED?</li> </ol>	ll YES				
	*** - THE INFORMATION SHOWN IN WIND LOADS SECTION 1.B IS ONLY PROVIDED TO INDICATE IF THE BUILDING IS WITHIN A WIND-BORNE DEBRIS AREA. THIS SECTION DOES NOT APPLY TO ANY COMPONENTS THAT ARE LISTED AS DELEGATED DESIGN. ALL DELEGATED DESIGN COMPONENTS SHALL BE DESIGN FOR THE WIND DESIGN DATA AND DESIGN WIND PRESSURES PROVIDED IN SECTION 1.A AND 1.C.					
WIND-BORNE DEBRIS REGION:	C. DESIGN WIND PRESSURES					
	1. MAIN WIND-FORCE RESISTING SYSTEM (MWFRS)					
. THE PROPOSED BUILDING IS LOCATED WITHIN ONE OF THE TEXAS DEPARTMENT OF INSURANCE DESIGNATED PER 2018 IBC / IRC CATASTROPHE ZONES. THE OWNER IS HEREBY INFORMED THAT THEY WILL NEED TO HIRE AN INDEPENDENT THIRD-PARTY SPECIAL INSPECTIONS COMPANY TO PROVIDE WINDSTORM CERTIFICATION (WPI-1 FORM, WPI-2 FORM, AND WPI-8 CERTIFICATE) FOR THE BUILDING / PROJECT.	I. WALLS (WW+LW)					
THE INDEPENDENT WINDSTORM INSPECTION COMPANY MUST HAVE A LICENSED ENGINEER CERTIFIED BY AND APPROVED BY THE STATE OF TEXAS TO PARTICIPATE IN THE TEXAS WINDSTORM INSURANCE ASSOCIATION'S WINDSTORM PROGRAM. THE APPLICATION FOR WINDSTORM BUILDING INSPECTION, FORM WPI-1, MUST BE SUBMITTED TO THE TEXAS DEPARTMENT OF INSURANCE PRIOR TO THE START OF	0'-30' 30'-50'	65 PSF 70 PSF				
CONSTRUCTION. PLEASE NOTE: THE WPI-1 FORM, THE WINDSTORM CERTIFICATION AND INSPECTION WORK, AND THE COMPLETION OF THE WPI-2 FORM HAVE NOT BEEN INCLUDED IN THE STRUCTURAL ENGINEER'S (EOR'S) SCOPE OF WORK FOR THIS PROJECT. AS NOTED ABOVE, THIS SERVICE SHALL BE PROVIDED BY AN ENGINEER APPOINTED BY THE COMMISSIONER OF INSURANCE TO INSPECT AND	2. COMPONENTS AND CLADDING	70 F3F				
CERTIFY COMPLIANCE OF THE STRUCTURES AS ELIGIBLE FOR WINDSTORM, HAIL, AND ANY OTHER AVAILABLE COVERAGE THROUGH THE TEXAS WINDSTORM INSURANCE ASSOCIATION. ARRANGEMENTS FOR WINDSTORM INSPECTIONS SHALL BE COORDINATED BETWEEN THE OWNER, THE GENERAL CONTRACTOR, AND THE WINDSTORM INSPECTOR PRIOR TO THE START OF CONSTRUCTION. ALL PERTINENT SUBMITTALS RELATED TO THE EXTERIOR BUILDING ENVELOPE SHALL NOT BE CONSIDERED APPROVED UNTIL THE WINDSTORM CERTIFICATION COMPANY HAS REVIEW AND APPROVED THE SUBMITTAL. THE GC	I. WALLS (AREA = 75 SF)					
SUBMITTALS RELATED TO THE EXTERIOR BUILDING ENVELOPE SHALL NOT BE CONSIDERED APPROVED UNTIL THE WINDSTORM CERTIFICATION COMPANY HAS REVIEW AND APPROVED THE SUBMITTAL. THE GC SHALL COORDINATE WITH THE WINDSTORM CERTIFICATION COMPANY TO DETERMINE ALL SUBMITTALS REQUIRED FOR REVIEW AND APPROVAL.	INTERIOR ZONE	65 PSF				
	END ZONE	75 PSF				
	III. ROOF UPLIFT (GROSS) - ROOF ATTACHMENTS (AREA = 10 S					
	INTERIOR ZONE 1' INTERIOR ZONE	80 PSF 80 PSF				
	END ZONE CORNER ZONE	110 PSF 172 PSF				

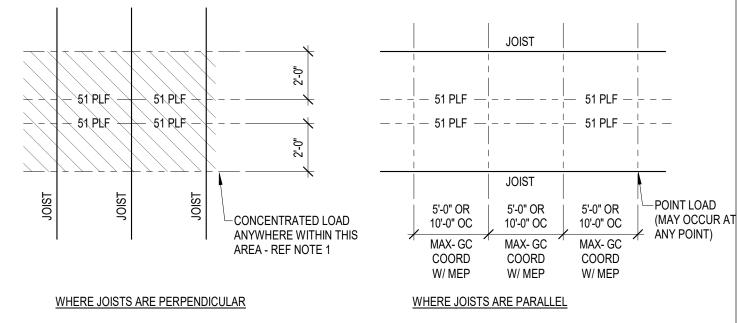
110 PSF 110 PSF 172 PSF

**OVERHANG INTERIOR ZONE\*** OVERHANG END ZONE\* OVERHANG CORNER ZONE\*

## MISCELLANEOUS LOADS:

1. ALL JOISTS ALONG PIPE RUN SHALL BE DESIGNED FOR SUSPENDED PIPE WEIGHT. IT'S THE GENERAL CONTRACTOR'S RESPONSIBILITY TO COORDINATE HOW OFTEN PIPES WILL BE HUNG (5'-0" OC OR 10'-0" OC) SO THAT PROPER LOADING MAY BE ACCOUNTED FOR. IT IS RECOMMENDED TO HANG FROM EACH JOIST (GC MUST COORDINATE WITH MEP CONTRACTOR TO ENSURE SAME HANGING PATTERN IS FOLLOWED):

ADDITIONAL JOIST DEAD-LOAD FOR								
MECHANICAL PIPE LOADS WITH WATER								
PIPE SIZE (DIAMETER)	PERPENDICULAR CONDITION	PARALLEL CONDITION						
3"	110 LBS AT 10'-0"	11 PLF						
4"	170 LBS AT 10'-0"	17 PLF						
5"	240 LBS AT 10'-0"	24 PLF						
6"	320 LBS AT 10'-0"	32 PLF						
8"	510 LBS AT 10'-0"	51 PLF						
10"	750 LBS AT 10'-0"	75 PLF						



PIPE RUN JOIST LOADING

NOTE: WHERE PIPES RUN PERPENDICULAR TO JOISTS. JOISTS THAT ARE SUPPORTING PIPES SHALL BE DESIGNED FOR ADDITIONAL CONCENTRATED DEAD LOAD AT ANY POINT ALONG JOIST SPAN WITHING THE HATCHED AREA.

2. ARCHITECTURAL BARRIER ACT STANDARD: ITEM

GRAB BAR TUB OR SHOWER SEAT **FASTENERS & MOUNTING DEVICES** 

## BUILDING MOVEMENT AND DEFLECTION:

A. ROOF MEMBERS

- 1. LIVE LOAD MAXIMUM ALLOWABLE DEFLECTION 2. TOTAL LOAD MAXIMUM ALLOWABLE DEFLECTION
- B. FLOOR MEMBERS
- 1. LIVE LOAD MAXIMUM ALLOWABLE DEFLECTION 2. TOTAL LOAD MAXIMUM ALLOWABLE DEFLECTION
- C. MEMBERS SUPPORTING MASONRY
- 1. LIVE LOAD MAXIMUM ALLOWABLE DEFLECTION
- D. BUILDING FRAME
- 1. MAXIMUM ALLOWABLE STORY DRIFT

250 POUNDS ANY DIRECTION 250 POUNDS ANY DIRECTION 250 POUNDS ANY DIRECTION

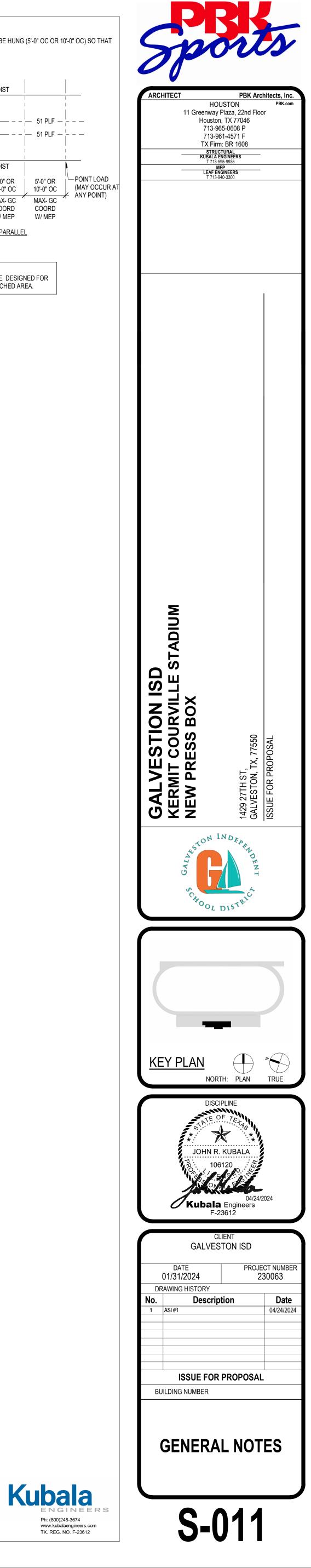
REQUIRED CAPACITY

DEFLECTION LIMIT SPAN/360 SPAN/240

SPAN/360 SPAN/240

SPAN/600 OR 3/8"

HEIGHT/500 (TOTAL BUILDING HEIGHT)



STRUCT	<u>URAL SUBMITTALS ( NO LEEDS)</u>	
SPECIFICATION SECTION	<u>ITEM</u>	<u>SUBMITTAL</u>
03 10 00	FORMWORK SHOP DRAWINGS	FOR INFORMATION ONLY/SIGNED AND SEALED
03 10 00	MANUFACTURER'S PRODUCT DATA FOR APPROVAL	FOR APPROVAL
03 10 00	CONSTRUCTION JOINT LAYOUT	FOR INFORMATION ONLY
03 20 00 03 20 00 03 20 00 03 20 00 03 20 00 03 20 00 03 20 00	STEEL REINFORCING SHOP DRAWINGS EMBEDDED METAL ASSEMBLY SHOP DRAWINGS MANUFACTURER'S PRODUCT INFORMATION FOR BAR SUPPORTS MILL TEST CERTIFICATE OF STEEL REINFORCING QUALIFICATION DATA WELDING CERTIFICATES	FOR APPROVAL FOR APPROVAL FOR APPROVAL FOR INFORMATION ONLY FOR INFORMATION ONLY FOR INFORMATION ONLY
03 30 00 03 30 00	CONCRETE MIX DESIGN SLAB ON GRADE AND COMPOSITE SLAB CONSTRUCTION JOINT LAYOUT AND POUR SEQUENCE	FOR APPROVAL FOR APPROVAL
03 30 00 03 30 00 03 30 00 03 30 00 03 30 00 03 30 00 03 30 00	MATERIAL CERTIFICATES FOR CONCRETE RELATED PRODUCTS PRODUCT DATA QUALIFICATION DATA MATERIAL TEST REPORTS FLOOR SURFACE FLATNESS FIELD QUALITY CONTROL REPORTS MINUTES OF PREINSTALLATION CONFERENCE	FOR APPROVAL FOR INFORMATION ONLY FOR INFORMATION ONLY FOR INFORMATION ONLY FOR INFORMATION ONLY FOR INFORMATION ONLY
04 22 00 04 22 00	CMU WALL SHOP DRAWINGS MIX DESIGN (MORTAR AND GROUT) MASONRY COMPRESSIVE STRENGTH SAMPLES FOR SELECTION AND VERIFICATION MATERIAL CERTIFICATES COLD/HOT WEATHER PROCEDURES QUALIFICATION DATA	FOR APPROVAL FOR APPROVAL FOR APPROVAL FOR APPROVAL FOR INFORMATION ONLY FOR INFORMATION ONLY
05 12 00 05 12 00	STRUCTURAL STEEL FRAMING SHOP DRAWINGS STEEL CONNECTION CALCULATIONS WELDING PROCEDURE SPECIFICATION WELDING CERITIFICATES MILL TEST CERTIFICATE OF STRUCTURAL STEEL PAINT COMPATIBILITY CERTIFICATE QUALIFICATION DATA	FOR APPROVAL FOR INFORMATION ONLY/ SIGNED AND SEALED FOR INFORMATION ONLY FOR INFORMATION ONLY FOR INFORMATION ONLY FOR INFORMATION ONLY
05 31 13	STEEL FLOOR DECK SHOP DRAWINGS	FOR APPROVAL
05 31 13	PRODUCT CERTIFICATE	FOR INFORMATION ONLY
05 31 13	PRODUCT TEST REPORT	FOR INFORMATION ONLY
05 31 23	STEEL ROOF DECK SHOP DRAWINGS	FOR APPROVAL
05 31 23	PRODUCT CERTIFICATE	FOR INFORMATION ONLY
05 31 23	PRODUCT TEST REPORT	FOR INFORMATION ONLY
05 40 00	COLD FORMED METAL STUD SHOP DRAWINGS	FOR APPROVAL
05 40 00	COLD FORMED METAL STUD CALCULATIONS	FOR INFORMATION OLY/ SIGNED AND SEALED
05 40 00	PRODUCT TEST REPORT	FOR INFORMATION ONLY
05 40 00	RESEARCH REPORT	FOR INFORMATION ONLY
05 40 00	WELDING CERTIFICATE	FOR INFORMATION ONLY
05 50 00	METAL FABRICATION-LADDERS	FOR APPROVAL/ SIGNED AND SEALED
05 50 00	METAL FABRICATION-TOILET PARTITION SUPPORT	FOR APPROVAL/ SIGNED AND SEALED
05 50 00	METAL FABRICATION-MEDICAL EQUIPMENT SUPPORT	FOR APPROVAL/ SIGNED AND SEALED
06 10 00	PRODUCT DATA	FOR INFORMATION ONLY
06 10 00	FASTENER PATTERNS	FOR APPROVAL
06 10 00	MATERIAL CERTIFICATES	FOR INFORMATION ONLY
06 10 00	EVALUATION REPORTS	FOR INFORMATION ONLY
06 15 00	WOOD DECK PRODUCT DATA	FOR APPROVAL
06 15 00	WOOD DECK SHOP DRAWINGS	FOR APPROVAL
06 15 00	RESEARCH EVALUATION REPORTS	FOR INFORMATION ONLY
06 16 00	WOOD SHEATHING PRODUCT DATA	FOR APPROVAL
06 16 00	EVALUATION REPORTS	FOR INFORMATION ONLY
06 18 00	GLUE LAMINATED TIMBER SHOP DRAWINGS	FOR APPROVAL
06 18 00	GLUE LAMINATED TIMBER CONNECTIONS	FOR INFORMATION ONLY/ SIGNED AND SEALED
06 18 00	TIMBER PRODUCT DATA	FOR INFORMATION ONLY
06 18 00	RESEARCH EVALUATION REPORTS	FOR INFORMATION ONLY
31 63 29	PIER REINFORCEMENT SHOP DRAWINGS	FOR APPROVAL
31 63 29	PIER CONCRETE MIX DESIGN	FOR APPROVAL
31 63 29	PIER DRILLING LOG	FOR INFORMATION ONLY

DELEGATED STRUCTURAL DESIGN OF COMPONENTS:

DOCUMENTS.

1. A STRUCTURAL COMPONENT IS AN INDIVIDUAL STRUCTURAL MEMBER DESIGNED TO BE PART OF A STRUCTURAL SYSTEM. A LIST OF STRUCTURAL COMPONENTS THAT ARE TO BE DESIGNED BY THE COMPONENT SUPPLIERS'S ENGINEERS IS PROVIDED IN THESE PLANS AND SPECIFICATIONS.

2. A COMPONENT'S DELEGATED ENGINEER AND RESPONSIBLE CHARGE, SHALL BE A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED.

3. ALL DRAWINGS AND CALCULATIONS FOR COMPONENTS IN QUESTION, OR THEIR ASSEMBLY INTO STRUCTURAL SYSTEMS SHALL REQUIRE THE SEAL AND SIGNATURE OF THE DELEGATED ENGINEER WHO PREPARED THEM.

4. THE DESIGN OF PRE-ENGINEERED SYSTEMS SPECIFIED IN THE CONTRACT DOCUMENTS WHICH ARE DESIGNED/ENGINEERED BY THE SYSTEM SUPPLIER IS THE SOLE RESPONSIBILITY OF THE SUPPLIER AND ITS DESIGN ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED. SUBMITTALS OF SUCH SYSTEMS TO THE STRUCTURAL ENGINEER OF RECORD SHALL BE REVIEWED FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS WITH REGARD TO THE ARRANGEMENT AND/OR SIZES OF MEMBERS SHOWN ON THE STRUCTURAL CONTRACT DOCUMENTS AND THE SUPPLIERS INTERPRETATION OF THE DESIGN INFORMATION INCLUDED IN THE CONTRACT DOCUMENTS. SUCH REVIEW BY THE STRUCTURAL ENGINEER OF RECORD SHALL NOT IMPLY ANY RESPONSIBILITY FOR THE ACTUAL DESIGN OF SUCH SYSTEMS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DIMENSIONAL ACCURACY AND CONFORMANCE WITH THE INFORMATION CONTAINED IN CONTRACT

5. SEE APPLICABLE SECTIONS OF GENERAL NOTES AND SPECIFICATIONS FOR THE APPROPRIATE DESIGN RESPONSIBILITIES OF THE SUPPLIER AND ITS LICENSED ENGINEER.

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## **SPECIAL INSPECTIONS:**

SPECIAL INSPECTION WORK AND THE FINAL LETTER OF COMPLIANCE HAVE NOT BEEN INCLUDED IN THE STRUCTURAL ENGINEERS SCOPE OF SERVICES. THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING THE SERVICES OF THE SPECIAL INSPECTOR AND THE TESTING LABORATORY. SPECIAL INSPECTIONS CAN BE PROVIDED BY AN INDEPENDENT SPECIAL INSPECTOR WHO IS APPROVED BY THE BUILDING AUTHORITY OR THE ENGINEER OF RECORD. THE SPECIAL INSPECTION WORK DOES NOT INCLUDE THE TESTING LABORATORY SERVICES AS CALLED FOR ON THE DRAWINGS. ARRANGEMENTS FOR SPECIAL INSPECTIONS SHOULD BE MADE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE OWNER IF SPECIAL INSPECTIONS ARE REQUIRED ON THE APPROVED PERMIT DRAWINGS AND FOR NOTIFYING THE TESTING LABORATORY AND SPECIAL INSPECTOR IN A TIMELY MANNER BEFORE CONSTRUCTION OPERATIONS CONTINUE. THE CONTRACTOR SHALL NOT PROCEED WITH ANY WORK REQUIRING INSPECTIONS WITHOUT THE TESTING LABORATORY'S OR SPECIAL INSPECTOR'S PRESENCE. THE STRUCTURAL ENGINEER WILL NOT PROVIDE A FINAL LETTER OF COMPLIANCE AFTER THE WORK IS COMPLETE UNLESS HE HAS REVIEWED ALL SPECIAL INSPECTIONS/TESTING LABORATORY TEST RESULTS. CHAPTER 17 OF THE 2018 INTERNATIONAL BUILDING CODE, INCLUDING ANY LOCAL AMENDMENTS, REQUIRES SPECIAL INSPECTION ON THE FOLLOWING ITEMS:

SOILS (SECTION 1705.6) CONCRETE CONSTRUCTION (SECTION 1705.3) STEEL (SECTION 1705.2) MASONRY (SECTION 1705.4) WOOD (SETION 1705.5) DRIVEN DEEP FOUNDATIONS (SECTION 1705.7) CAST-IN-PLACE DEEP FOUNDATIONS (SECTION1705.8)

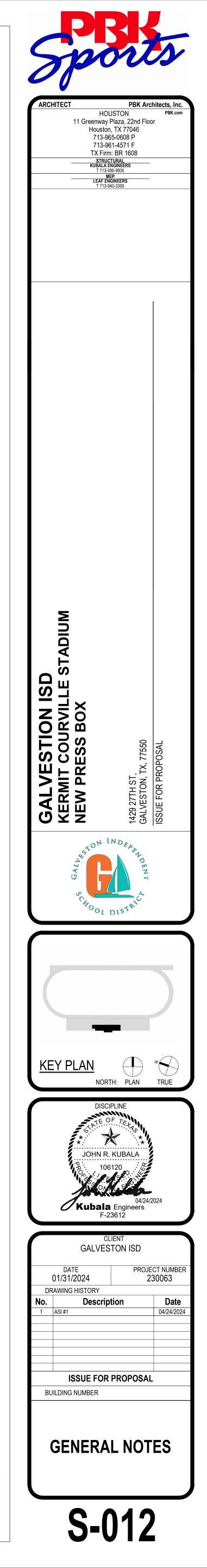
HELICAL PILE FOUNDATIONS (SECTION 1705.9) FABRICATED ITEMS (SECTION 1705.10)

SPECIAL INSPECTIONS FOR WIND RESISTANCE (SECTION 1705.11)

SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE (SECTION 1705.12) TESTING FOR SEISMIC RESISTANCE (SECTION 1705.13)

SPECIAL INSPECTIONS FOR WINDSTORM CERTIFICATION PER TDI





# **GENERAL FOUNDATION NOTES:**

1. THE FOUNDATION DESIGN AND SUBSURFACE INFORMATION IS BASED ON THE GEOTECHNICAL INVESTIGATION REPORT AS FOLLOWS GEOTECHNICAL CONSULTANT: BRAUN INTERTEC

GEOTECHNICAL REPORT NUMBER: B2208085 GEOTECHNICAL REPORT LOCATION: (COURVILLE STADIUM) 1429 27TH STREET, GAVESTON, TEXAS 77550 DATE OF REPORT: 08.22.2022

- 2. ALL RECOMMENDATIONS THEREIN THAT RELATE TO THE WORK SHOWN ON THESE DRAWINGS SHALL BE USED. FOR ANY CONFLICTS BETWEEN THE GEOTECHNICAL REPORT AND THESE DRAWINGS, THE GC SHALL ISSUE A REQUEST FOR INFORMATION/CLARIFICATION.
- 3. GEOTECHNICAL REPORT IS AVAILABLE TO THE GENERAL CONTRACTOR UPON REQUEST TO THE OWNER. THE INFORMATION INCLUDED THEREIN MAY BE USED BY THE GENERAL CONTRACTOR FOR HIS GENERAL INFORMATION ONLY. THE ARCHITECT AND ENGINEER WILL NOT BE RESPONSIBLE FOR THE ACCURACY OR APPLICABILITY OF SUCH DATA THEREIN.
- 4. PREPARED GRADE AREA UNDER ALL BUILDING SLABS AND GRADE BEAMS SHALL BE COVERED WITH A 15 MIL WATER VAPOR BARRIER MEETING THE REQUIREMENTS OF ASTM E 1745 (LATEST EDITION), CLASS A OR BETTER WITH MAXIMUM WATER PERMEANCE OF 0.01 PERMS WHEN TESTED IN ACCORDANCE WITH ASTM E96. THE RETARDER/BARRIER/MEMBRANE SHALL BE INSTALLED AND LAPPED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM E1643 (LATEST EDITION). PENETRATIONS SHALL BE SEALED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS.
- 5. WHERE VOID FORMS ARE REQUIRED, THESE FORMS SHALL BE CAPABLE OF SUPPORTING THE WEIGHT OF THE WET CONCRETE AND REINFORCEMENT. AFTER PLACEMENT ON THE SUBGRADE, THE FORMS SHALL BE TAPED AT ALL JOINTS. 1/8" THICK HARDBOARD SHALL BE LAID OVER THE TOP OF THE VOID FORMS PRIOR TO PLACEMENT OF THE REINFORCEMENT, AT LARGE AREAS AS REQUIRED. VOID FORMS SHALL BE SECURED TO THE SUBGRADE PER MANUFACTURER'S RECOMMENDATIONS. VOID FORMS SHALL BE WAX COATED FOR MOISTURE PROTECTION, RECTANGULAR IN PROFILE, AND EQUAL TO THE WIDTH OF THE ADJACENT GRADE BEAM. SOIL RETAINERS ARE REQUIRED, GRADE BEAMS TO BE FORMED EACH SIDE.

# EARTHWORK STRUCTURAL TESTING AND INSPECTIONS:

- 1. UNLESS NOTED OTHERWISE BY THE OWNER OR ARCHITECT, THE GENERAL CONTRACTOR SHALL NOTIFY THE GEOTECHNICAL ENGINEER OR OTHER AUTHORIZED INSPECTOR DURING EARTHWORK OPERATIONS, AND KEEP A COMPETENT TRAINED TECHNICIAN ASSIGNED TO THE PROJECT ON SITE DURING OPERATIONS. SERVICES PROVIDED SHALL INCLUDE:
- A. OBSERVE STRIPPING OPERATIONS AND EVALUATE THE REQUIRED STRIPPING DEPTH DURING THESE OPERATIONS.
- B. OBSERVE PROOFROLLING OPERATIONS AFTER SITE STRIPPING AND DETERMINE IF ANY SOFT SPOTS NEED TO BE UNDERCUT TO FIRM SOILS, REPLACED WITH SELECT FILL AND RECOMPACTED. C. VERIFY THAT THE SUBGRADE IS SCARIFIED, MOISTURE CONDITIONED, AND LIME STABILIZED (IF REQUIRED) PER SUBGRADE PREPARATION.
- D. THE SELECT FILL PAD MATERIAL SHALL BE TESTED FOR ACCEPTABILITY AND A MOISTURE DENSITY CURVE SHALL BE ESTABLISHED. SELECT FILL MATERIAL SHALL BE AS INDICATED ON SUBGRADE PREPARATION.
- E. VERIFY THAT THE SELECT FILL IS PLACED IN EIGHT INCH LOOSE LIFTS AND COMPACTED PER SUBGRADE PREPARATION.
- F. SELECT FILL MATERIAL SHALL BE TESTED DURING PLACEMENT OF EACH LIFT FOR THE ATTERBERG LIMITS IN ACCORDANCE WITH ASTM D4318-98 METHOD B "STANDARD TEST METHOD FOR LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS" TO VERIFY THAT THE SELECT FILL MATERIAL IS IN ACCORDANCE WITH THE ORIGINALLY APPROVED SELECT FILL MATERIAL. PROVIDE TESTS PER SUBGRADE PREPARATION.
- G. PROVIDE FIELD MOISTURE TESTS FOR THE FULL DEPTH OF THE PAD PER SUBGRADE PREPARATION.
- H. OBSERVE THE EXCAVATION DAILY AND ENSURE THAT THE CONTRACTOR MAINTAINS A CLEAN EXCAVATION THAT IS FREE OF WATER 100% OF THE TIME. CONTRACTOR SHALL PROVIDE PUMPS AS REQUIRED TO REMOVE WATER AT ALL TIMES.

## J. OBSERVE GRADING OPERATIONS TO ENSURE THAT PROPER DRAINAGE AWAY FROM THE BUILDING PAD IS PROVIDED. **SUBGRADE PREPARATION:**

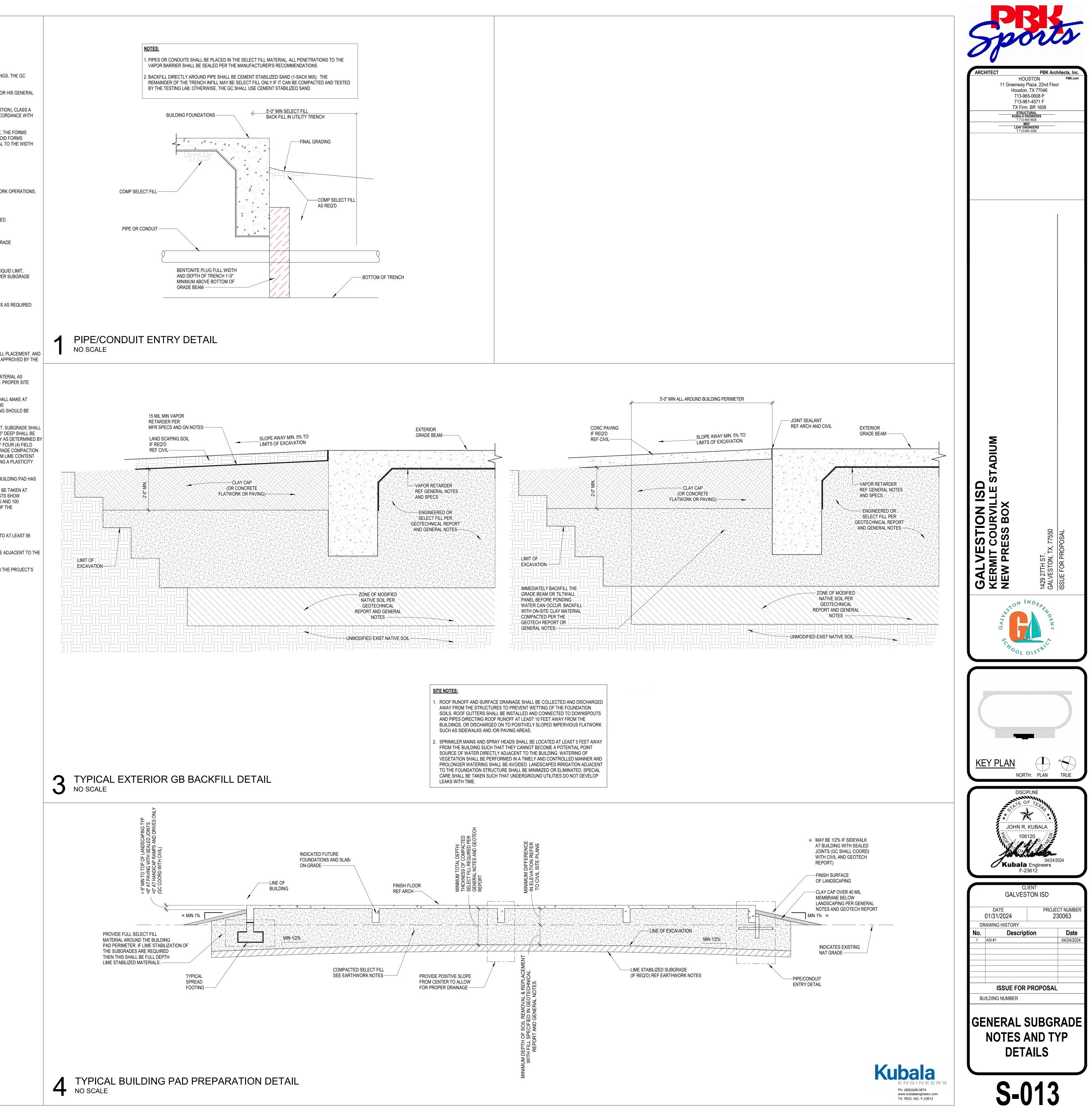
- 1. THE CONTRACTOR SHALL READ THE GEOTECHNICAL REPORT AND BE THOROUGHLY FAMILIAR WITH SITE AND SUBGRADE INFORMATION GIVEN THEREIN. ALL SUBGRADE PREPARATION, FILL, FILL PLACEMENT, AND FOUNDATION CONSTRUCTION SHALL BE PERFORMED IN STRICT COMPLIANCE WITH THE STRUCTURAL DOCUMENTS AND THE GEOTECHNICAL REPORT, AND SHALL BE OBSERVED, TESTED, AND APPROVED BY THE PROJECT'S GEOTECHNICAL-ENGINEER-OF-RECORD (GER) PRIOR TO PROCEEDING WITH FOUNDATION CONSTRUCTION.
- 2. SITE PREPARATION FOR THE BUILDING PAD SHALL CONSIST OF THE REMOVAL OF EXISTING PAVEMENT, TOPSOIL, VEGETATION, ORGANIC MATTER, AND OTHER DEBRIS/UNSUITABLE SURFACE MATERIAL AS NECESSARY TO PROVIDE THE REQUIRED AMOUNT OF FILL UNDER THE BUILDING AND EXTENDING OUT BEYOND THE PERIMETER OF THE BUILDING AS SHOWN IN THE SITE PREPARATION DETAIL. PROPER SITE DRAINAGE SHOULD BE MAINTAINED DURING CONSTRUCTION SO THAT PONDING OF SURFACE RUNOFF DOES NOT OCCUR AND CAUSE CONSTRUCTION DELAYS AND/OR INHIBIT SITE ACCESS.
- 3. THE SUBGRADE SHALL BE PROOFROLLED WITH A HEAVY, RUBBER-TIRED VEHICLE (STATIC WEIGHT OF AT LEAST 20 TONS AND WITH TIRE PRESSURES OF AT LEAST 90 PSI). THE CONTRACTOR SHALL MAKE AT LEAST TWO COMPLETE PASSES OVER THE AREA WITH THE SECOND PASS PERPENDICULAR TO THE FIRST PASS. AREAS OF THE SUBGRADE THAT ARE OBSERVED TO BE SOFT OR WEAK SHALL BE OVEREXCAVATED AND REPLACED WITH PROPERLY COMPACTED SOILS EXHIBITING SIMILAR CLASSIFICATION. MOISTURE CONTENT, AND DENSITY AS THE ADJACENT IN-SITU SOILS, PROOFROLLING SHOULD BE PERFORMED UNDER THE DIRECT OBSERVATION OF THE GEOTECHNICAL ENGINEER OR HIS/HER REPRESENTATIVE.
- 4. PREPARE THE BUILDING SUBGRADE SOILS IN DIRECT ACCORDANCE WITH THE RECOMMENDATIONS LISTED IN THE "EARTHWORK" AND "FLOOR SLABS" SECTIONS OF THE GEOTECHNICAL REPORT. SUBGRADE SHALL BE SCARIFIED AND MOISTURE CONDITIONED TO A DEPTH OF SIX (6) INCHES WHERE NO EXISTING SELECT FILL IS PRESENT. WHERE EXISTING FILL IS PRESENT THE FULL DPTH OF FILL, UP TO 2'-6" DEEP SHALL BE REMOVED AND REPLACED WITH PROPERLY COMPACTED AND MOISTURE CODITIONED SELECT FILL AND THEN RECOMPACTED TO BETWEEN 95 AND 100 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED B THE STANDARD PROCTOR DENSITY TEST (ASTM D698). THE MOISTURE CONTENT SHALL BE BETWEEN OPTIMUM AND +4 PERCENT OF THE OPTIMUM MOISTURE CONTENT. PROVIDE A MINIMUM OF FOUR (4) FIELD DENSITY TESTS PER LIFT OR ONE (1) FOR EVERY 2.500 SQUARE FEET WHICHEVER IS GREATER. IF WET WEATHER CONDITIONS ARE ENCOUNTERED AND WILL NOT ALLOW FOR ADEQUATE SUBGRADE COMPACTION EFFORTS, THEN THE SUBGRADE SHALL BE LIME STABILIZED WITH 6 TO 8 PERCENT BY VOLUME HYDRATED LIME IN ACCORDANCE WITHTHE LIME ASSOCIATION RECOMMENDATIONS. THE OPTIMUM LIME CONTENT SHALL BE DETERMINED AT THE TIME OF CONSTRUCTION BY A LIME SERIES TEST TO DETERMINE THE REQUIRED OPTIMUM LIME CONTENT NECESSARY TO ACHIEVE A pH OF 12.4 WHILE ACHIEVING A PLASTICITY INDEX OF LESS THAN 20. PRIOR TO PROCEEDING WITH THE SELECT FILL PLACEMENT, THE LIME STABILIZED SUBGRADE SHALL BE TESTED AND APPROVED BY THE TESTING LABORATOR
- 5. THE FINAL BUILDING PAD SHALL BE TESTED AND APPROVED BY THE PROJECT'S GER PRIOR TO INSTALLATION OF ANY FOUNDATION AND/OR SLAB-ON-GRADE RELATED CONSTRUCTION. IF THE BUILDING PAD HAS BEEN INSTALLED MORE THAN TWO MONTHS PRIOR TO THE PLACEMENT OF THE VAPOR RETARDER. PROVIDE FIELD MOISTURE TESTS FOR THE FULL DEPTH OF THE PAD 96 HOURS PRIOR TO PLACEMENT OF THE WATER VAPOR BARRIER TO ENSURE THAT THE FILL MOISTURE CONTENT HAS BEEN MAINTAINED PRIOR TO CONCRETE PLACEMENT. MOISTURE CONTENTS SHALL BE TAKEN AT 12 INCH VERTICAL INTERVALS WITH A MINIMUM OF TWO TESTS PER BORING AT A RATE OF ONE (1) BORING FOR EVERY 2,500 SQUARE FEET OF PAD WITH A MAXIMUM OF TEN (10). IF THE PAD TESTS SHOW MOISTURE CONTENT OUT OF THE SPECIFIED RANGES, THE TOP SIX (6) INCHES TO ONE FOOT OF MATERIAL SHALL BE REWORKED, MOISTURE CONDITIONED AND RECOMPACTED TO BETWEEN 95 AND 100 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR DENSITY TEST (ASTM D698). THE MOISTURE CONTENT SHALLBE BETWEEN OPTIMUM AND +2 PERCENT OF THE OPTIMUM MOISTURE CONTENT FOR SELECT FILL.
- 6. CONTRACTOR SHALL MAINTAIN A CLEAN EXCAVATION THAT IS FREE OF WATER 100% OF THE TIME. CONTRACTOR SHALL PROVIDE PUMPS AS REQUIRED TO REMOVE ANY WATER AT ALL TIMES. 7. BACKFILL AGAINST THE OUTSIDE FACE OF THE GRADE BEAMS SHOULD CONSIST OF SELECT FILL USED TO PREPARE THE BUILDING PAD. THE SELECT FILL SHOULD BE UNIFORMLY COMPACTED TO AT LEAST 95
- PERCENT OF THE STANDARD EFFORT (ASTM D 698) MAXIMUM DRY DENSITY AT A MOISTURE CONTENT WITHIN OPTIMUM AND +2% OF OPTIMUM MOISTURE CONTENT. 8. A MINIMUM OF 2.5 FT OF SELECT FILL MATERIAL IS REQUIRED UNDER THE FLOOR SLAB, AND SHALL EXTEND A MINIMUM OF 5'-0" BEYOND THE BUILDING PERIMETER. THE FINAL EXTERIOR GRADE ADJACENT TO THE
- STRUCTURE SHOULD BE SLOPED TO PROMOTE EFFECTIVE DRAINAGE AWAY FROM THE STRUCTURE. 9. EXERCISE CARE IN PLACEMENT AND COMPACTION OF FILL IN ALL LEAVE-OUTS. ALL FILL SHALL BE PLACED IN LOOSE LIFTS AND COMPACTED AT ELEVATED MOISTURE CONTENT AS DETAILED IN THE PROJECT'S GEOTECHNICAL REPORT. ANY REINFORCING SHALL BE APPROPRIATELY MANIPULATED TO ENSURE PROPER COMPACTION. VAPOR RETARDER SHALL BE SUITABLY PLACED AND LAPPED.

# **SITE DRAINAGE:**

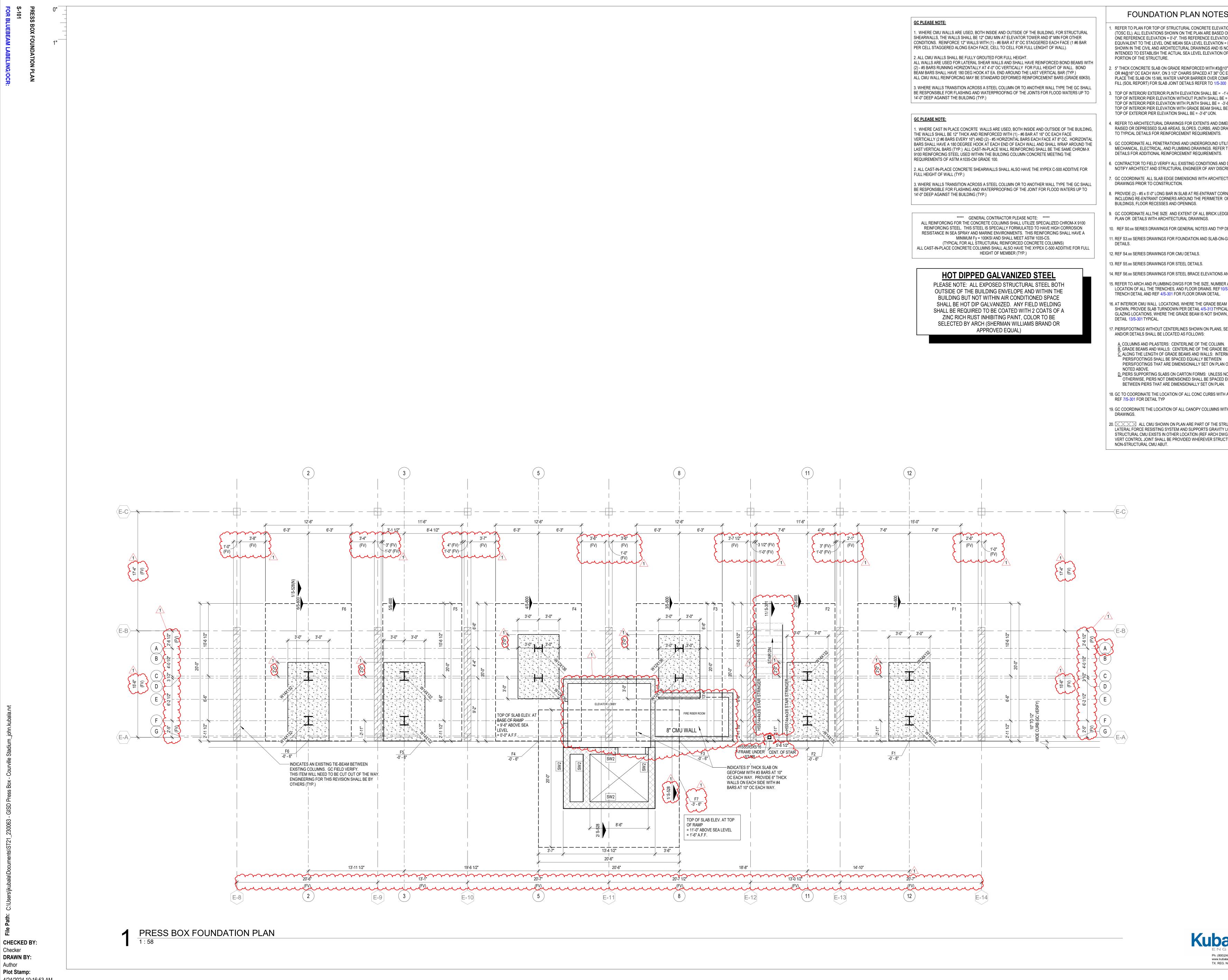
1. THE SITE SHALL BE GRADED TO PROVIDE POSITIVE DRAINAGE AWAY FROM ALL BUILDINGS AND SLABS. WATER SHALL NOT BE ALLOWED TO POND ADJACENT TO THE FOUNDATION.

- 2. WATER FROM ROOF DRAINS AND DOWNSPOUTS SHALL BE COLLECTED AND PIPED AWAY FROM THE BUILDING.
- 3. TREES AND VEGETATION SHALL NOT BE ALLOWED WITHIN A DISTANCE EQUAL TO THREE QUARTERS THEIR ULTIMATE HEIGHT AWAY FROM THE BUILDING.

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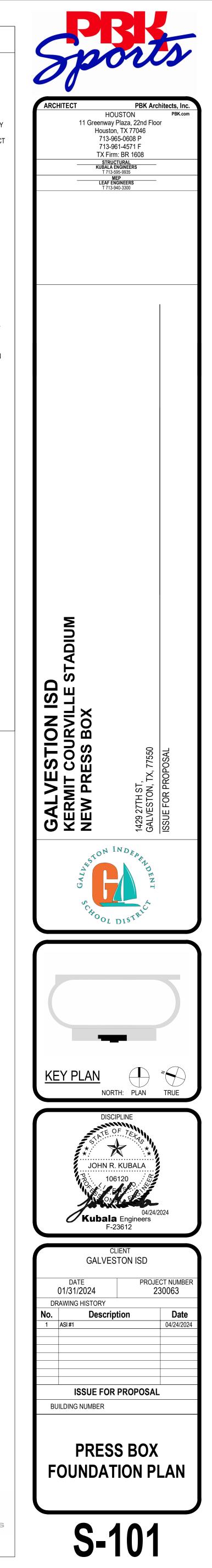


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## FOUNDATION PLAN NOTES

- . REFER TO PLAN FOR TOP OF STRUCTURAL CONCRETE ELEVATIONS (TOSC EL). ALL ELEVATIONS SHOWN ON THE PLAN ARE BASED ON A LEVEL ONE REFERENCE ELEVATION = 0'-0". THIS REFERENCE ELEVATION IS EQUIVALENT TO THE LEVEL ONE MEAN SEA LEVEL ELEVATION = REF CIVIL SHOWN IN THE CIVIL AND ARCHITECTURAL DRAWINGS AND IS NOT INTENDED TO ESTABLISH THE ACTUAL SEA LEVEL ELEVATION OF ANY PORTION OF THE STRUCTURE.
- 2. 5" THICK CONCRETE SLAB ON GRADE REINFORCED WITH #3@10" OC EACH WAY OR #4@16" OC EACH WAY, ON 3 1/2" CHAIRS SPACED AT 36" OC EACH WAY. PLACE THE SLAB ON 15 MIL WATER VAPOR BARRIER OVER COMPACTED SELECT FILL (SOIL REPORT) FOR SLAB JOINT DETAILS REFER TO 1/S-300 AND 2/S-300.
- 3. TOP OF INTERIOR/ EXTERIOR PLINTH ELEVATION SHALL BE = -1'-0" UON. TOP OF INTERIOR PIER ELEVATION WITHOUT PLINTH SHALL BE = -1'-0" UON. TOP OF INTERIOR PIER ELEVATION WITH PLINTH SHALL BE = -3'-6" UON. TOP OF INTERIOR PIER ELEVATION WITH GRADE BEAM SHALL BE = -3'-6" UON. TOP OF EXTERIOR PIER ELEVATION SHALL BE = -3'-6" UON.
- . REFER TO ARCHITECTURAL DRAWINGS FOR EXTENTS AND DIMENSIONS OF RAISED OR DEPRESSED SLAB AREAS, SLOPES, CURBS, AND DRAINS. REFER TO TYPICAL DETAILS FOR REINFORCEMENT REQUIREMENTS.
- 5. GC COORDINATE ALL PENETRATIONS AND UNDERGROUND UTILITIES WITH MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS. REFER TO TYPICAL DETAILS FOR ADDITIONAL REINFORCEMENT REQUIREMENTS.
- 6. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY ARCHITECT AND STRUCTURAL ENGINEER OF ANY DISCREPANCIES.
- . GC COORDINATE ALL SLAB EDGE DIMENSIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION.
- 8. PROVIDE (2) #5 x 5'-0" LONG BAR IN SLAB AT RE-ENTRANT CORNERS, TYPICAL. INCLUDING RE-ENTRANT CORNERS AROUND THE PERIMETER OF THE BUILDINGS, FLOOR RECESSES AND OPENINGS.
- . GC COORDINATE ALLTHE SIZE AND EXTENT OF ALL BRICK LEDGES SHOWN ON PLAN OR DETAILS WITH ARCHITECTURAL DRAWINGS.
- 10. REF S0.xx SERIES DRAWINGS FOR GENERAL NOTES AND TYP DETAILS
- 11. REF S3.xx SERIES DRAWINGS FOR FOUNDATION AND SLAB-ON-GRADE
- 12. REF S4.xx SERIES DRAWINGS FOR CMU DETAILS.
- 13. REF S5.xx SERIES DRAWINGS FOR STEEL DETAILS.
- 14. REF S6.xx SERIES DRAWINGS FOR STEEL BRACE ELEVATIONS AND DETAILS.
- 15. REFER TO ARCH AND PLUMBING DWGS FOR THE SIZE, NUMBER AND LOCATION OF ALL THE TRENCHES, AND FLOOR DRAINS. REF10/S-301 FOR TRENCH DETAIL AND REF 4/S-301 FOR FLOOR DRAIN DETAIL.
- 16. AT INTERIOR CMU WALL LOCATIONS, WHERE THE GRADE BEAM IS NOT SHOWN, PROVIDE SLAB TURNDOWN PER DETAIL 4/S-313 TYPICAL. AT INTERIOR GLAZING LOCATIONS, WHERE THE GRADE BEAM IS NOT SHOWN, PROVIDE DETAIL 13/S-301 TYPICAL.
- 7. PIERS/FOOTINGS WITHOUT CENTERLINES SHOWN ON PLANS, SECTIONS AND/OR DETAILS SHALL BE LOCATED AS FOLLOWS:
- A. COLUMNS AND PILASTERS: CENTERLINE OF THE COLUMN. B. GRADE BEAMS AND WALLS: CENTERLINE OF THE GRADE BEAM OR WALL. C. ALONG THE LENGTH OF GRADE BEAMS AND WALLS: INTERMEDIATE PIERS/FOOTINGS SHALL BE SPACED EQUALLY BETWEEN PIERS/FOOTINGS THAT ARE DIMENSIONALLY SET ON PLAN OR AS
- NOTED ABOVE. D. PIERS SUPPORTING SLABS ON CARTON FORMS: UNLESS NOTED OTHERWISE, PIERS NOT DIMENSIONED SHALL BE SPACED EQUALLY
- 18. GC TO COORDINATE THE LOCATION OF ALL CONC CURBS WITH ARCH DWGS.
- 19. GC COORDINATE THE LOCATION OF ALL CANOPY COLUMNS WITH ARCH
- DRAWINGS.
- 20. XXXX ALL CMU SHOWN ON PLAN ARE PART OF THE STRUCTURAL LATERAL FORCE RESISTING SYSTEM AND SUPPORTS GRAVITY LOADS. NON-STRUCTURAL CMU EXISTS IN OTHER LOCATION (REF ARCH DWGS). A 3/8" VERT CONTROL JOINT SHALL BE PROVIDED WHEREVER STRUCTURAL AND NON-STRUCTURAL CMU ABUT.

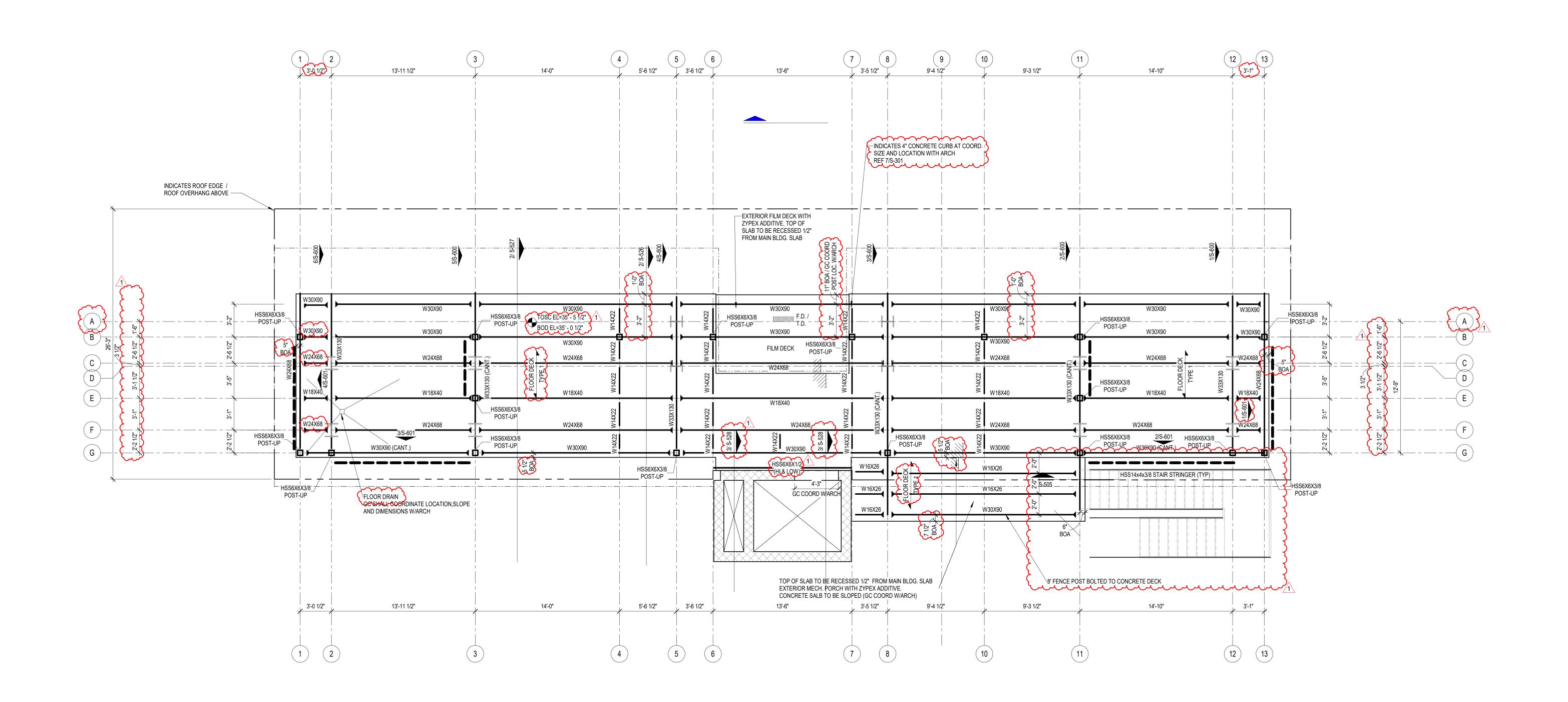




0"			$\overline{}$
	}	NON-COMPOSITE FLOOR DECK AND METAL ROOF DECK LEGEND	
	4	NON-COMPOSITE FLOOR DECK TYPES	1
1"		FLOOR DECK TYPE 1: 0.6C22 NON-COMPOSITE DECK.WITH 4 1/2" NWC ON 9/16 STEEL DECK-22 GA (GALV) (G90) - (5" TOTAL SLAB DEPTH). SLAB SHALL BE REINFORCED WITH WWR MIN 6x6-W2.9xW2.9, U.N.O.	1 1 1 1
	4	METAL ROOF DECK TYPES	1
	Z	ROOF DECK TYPE 2: 1.5 WR 20 GA (GALV.) MTL DECK.	1
	2	NOTES	1
		<ol> <li>STEEL DECK SHALL BE PLACED WITH TWO-SPAN CONDITION MINIMUM. NO SINGLE SPANS ARE ALLOWED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER-OF-RECORD.</li> </ol>	1
		1. REF SLABS FORM DECK (AT FLOORS) GENERAL NOTES AND METAL DECK SCHEDULE ON SHEET S-504 FOR MORE INFORMATION REGARDING FLOOR DECK REQUIREMENTS.	1
	}	2 REF METAL ROOF DECKING GENERAL NOTES AND METAL DECK SCHEDULE ON SHEET S-504 FOR MORE	1

INFORMATION REGARDING ROOF DECK

REQUIREMENTS.



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HOT DIPPED GALVANIZED STEEL PLEASE NOTE: ALL EXPOSED STRUCTURAL STEEL BOTH OUTSIDE OF THE BUILDING ENVELOPE AND WITHIN THE BUILDING BUT NOT WITHIN AIR CONDITIONED SPACE SHALL BE HOT DIP GALVANIZED. ANY FIELD WELDING SHALL BE REQUIRED TO BE COATED WITH 2 COATS OF A ZINC RICH RUST INHIBITING PAINT, COLOR TO BE SELECTED BY ARCH (SHERMAN WILLIAMS BRAND OR APPROVED EQUAL)

## GC PLEASE NOTE:

1. WHERE CMU WALLS ARE USED, BOTH INSIDE AND OUTSIDE OF THE BUILDING, FOR STRUCTURAL SHEARWALLS, THE WALLS SHALL BE 12" CMU MIN AT ELEVATOR TOWER AND 8" MIN FOR OTHER CONDITIONS. REINFORCE 12" WALLS WITH (1) - #6 BAR AT 8" OC STAGGERED EACH FACE (1 #6 BAR PER CELL STAGGERED ALONG EACH FACE, CELL TO CELL FOR FULL LENGHT OF WALL).

2. ALL CMU WALLS SHALL BE FULLY GROUTED FOR FULL HEIGHT. ALL WALLS ARE USED FOR LATERAL SHEAR WALLS AND SHALL HAVE REINFORCED BOND BEAMS WITH (2) - #5 BARS RUNNING HORIZONTALLY AT 4'-0" OC VERTICALLY FOR FULL HEIGHT OF WALL. BOND BEAM BARS SHALL HAVE 180 DEG HOOK AT EA. END AROUND THE LAST VERTICAL BAR (TYP.) ALL CMU WALL REINFORCING MAY BE STANDARD DEFORMED REINFORCEMENT BARS (GRADE 60KSI).

3. WHERE WALLS TRANSITION ACROSS A STEEL COLUMN OR TO ANOTHER WALL TYPE THE GC SHALL BE RESPONSIBLE FOR FLASHING AND WATERPROOFING OF THE JOINTS FOR FLOOD WATERS UP TO 14'-0" DEEP AGAINST THE BUILDING (TYP.)

## GC PLEASE NOTE:

1. WHERE CAST IN PLACE CONCRTE WALLS ARE USED, BOTH INSIDE AND OUTSIDE OF THE BUILDING, THE WALLS SHALL BE 12" THICK AND REINFORCED WITH (1) - #6 BAR AT 16" OC EACH FACE VERTICALLY (2 #6 BARS EVERY 16") AND (2) - #5 HORIZONTAL BARS EACH FACE AT 8" OC. HORIZONTAL BARS SHALL HAVE A 180 DEGREE HOOK AT EACH END OF EACH WALL AND SHALL WRAP AROUND THE LAST VERTICAL BARS (TYP.) ALL CAST-IN-PLACE WALL REINFORCING SHALL BE THE SAME CHROM-X 9100 REINFORCING STEEL USED WITHIN THE BUILDING COLUMN CONCRETE MEETING THE REQUIREMENTS OF ASTM A1035-CM GRADE 100.

2. ALL CAST-IN-PLACE CONCRETE SHEARWALLS SHALL ALSO HAVE THE XYPEX C-500 ADDITIVE FOR FULL HEIGHT OF WALL (TYP.)

3. WHERE WALLS TRANSITION ACROSS A STEEL COLUMN OR TO ANOTHER WALL TYPE THE GC SHALL BE RESPONSIBLE FOR FLASHING AND WATERPROOFING OF THE JOINT FOR FLOOD WATERS UP TO 14'-0" DEEP AGAINST THE BUILDING (TYP.)

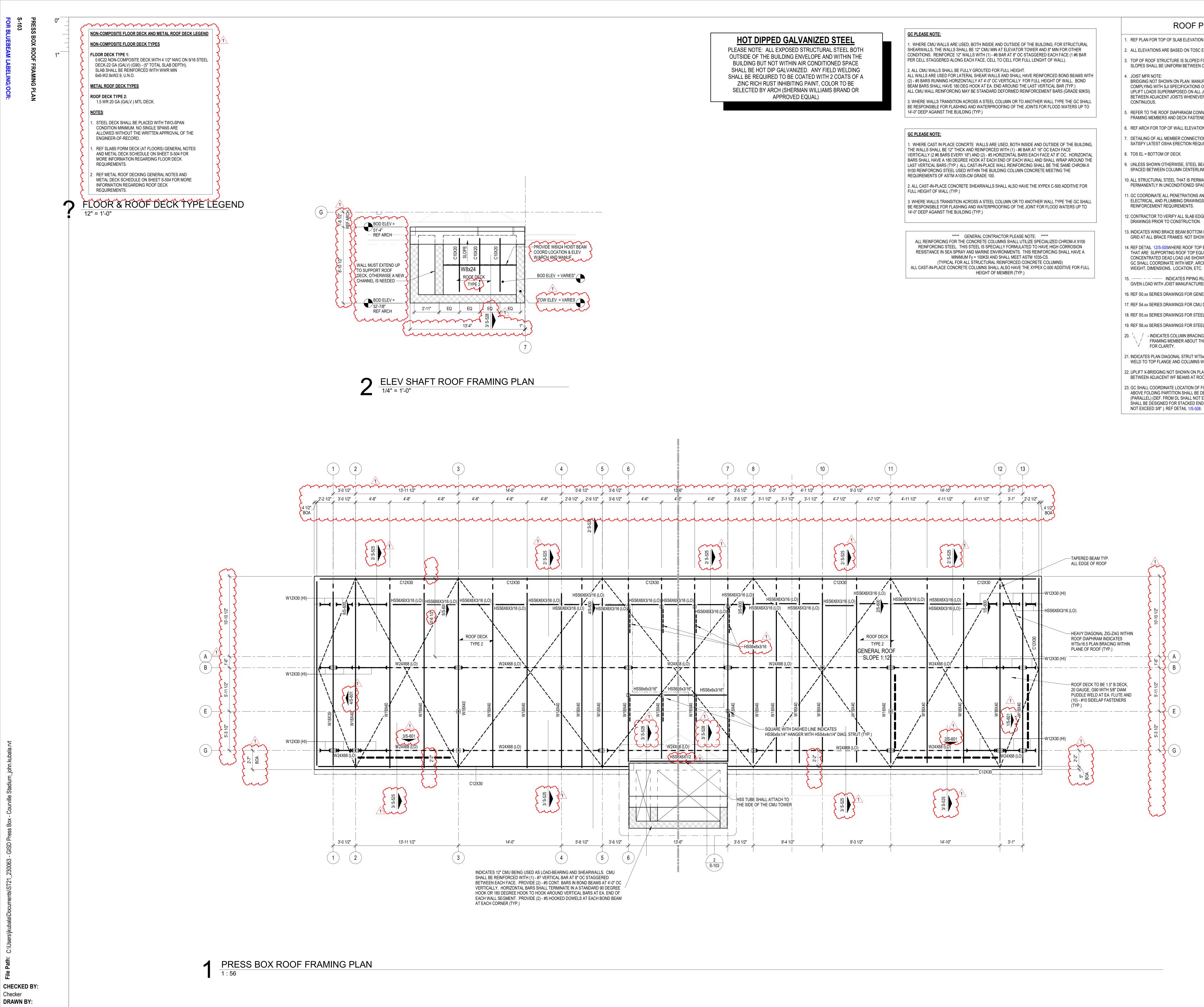
## \*\*\*\*\* GENERAL CONTRACTOR PLEASE NOTE: \*\*\*\*\* ALL REINFORCING FOR THE CONCRETE COLUMNS SHALL UTILIZE SPECIALIZED CHROM-X 9100 REINFORCING STEEL. THIS STEEL IS SPECIALLY FORMULATED TO HAVE HIGH CORROSION RESISTANCE IN SEA SPRAY AND MARINE ENVIRONMENTS. THIS REINFORCING SHALL HAVE A MINIMUM Fy = 100KSI AND SHALL MEET ASTM 1035-CS. (TYPICAL FOR ALL STRUCTURAL REINFORCED CONCRETE COLUMNS)

ALL CAST-IN-PLACE CONCRETE COLUMNS SHALL ALSO HAVE THE XYPEX C-500 ADDITIVE FOR FULL HEIGHT OF MEMBER (TYP.)

## COMPOSITE FLOOR PLAN NOTES

- 1. REF PLAN FOR TOP OF SLAB ELEVATION. 2. ALL ELEVATIONS ARE BASED ON TOSC EL = 0'-0"
- 3. STEEL DECK SHALL BE PLACED WITH A TWO-SPAN CONDITION MINIMUM. NO SINGLE SPANS ARE ALLOWED WITHOUT WRITTEN APPROVAL OF ENGINEER-OF-RECORD.
- 4. COMPOSITE BEAM CONSTRUCTION IS UNSHORED.
- 5. DETAILING OF ALL MEMBER CONNECTIONS TO THE SUPPORTS SHALL BE PERFORMED TO SATISFY LATEST OSHA ERECTION REQUIREMENTS. 6. TOS EL = BOTTOM OF DECK.
- 7. UNLESS SHOWN OTHERWISE, STEEL BEAMS OR JOISTS ARE CENTERED ON AND EQUALLY SPACED BETWEEN COLUMN CENTERLINES.
- 8. ALL STRUCTURAL STEEL THAT IS PERMANENTLY EXPOSED TO THE EXTERIOR OR IS PERMANENTLY IN UNCONDITIONED SPACE SHALL BE HOT-DIPPED GALVANIZED.
- 9. REFER TO MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR PENETRATIONS NOT SHOWN. REFER TO TYPICAL DETAILS FOR ADDITIONAL REINFORCEMENT REQUIREMENTS AT OPENINGS.
- 10. PROVIDE ADDITIONAL (5) #6 CONT. BARS IN COMPOSITE SLAB ALONG FULL PERIMETER OF SLAB AND AROUND OPENINGS. EXTEND BARS 10'-0" PAST CORNERS OF OPENINGS. PROVIDE STD HOOK AT TERMINATION ENDS. ALL LAPS IN REINFORCING SHALL BE WITH MECHANICAL COUPLERS OR 20'-0" LAP SPLICE (TYP).
- PRIOR TO CONSTRUCTION. 12. INDICATES WIND BRACE BEAM BOTTOM FLANGE BRACING PER 2/S-505 TYP ALONG ENTIRE
- GRIDAT ALL BRACE FRAMES. AT LOCATIONS WHERE BEAM SPACING EXCEEDS 4'-0" OC REF 1/S-505.
- 13. REF S0.xx SERIES DRAWINGS FOR GENERAL NOTES AND TYP DETAILS.
- 14. REF S4.xx SERIES DRAWINGS FOR CMU DETAILS.
- 15. REF S5.xx SERIES DRAWINGS FOR STEEL FRAMING DETAILS.
- 16. REF S6.xx SERIES DRAWINGS FOR STEEL BRACE ELEVATIONS AND DETAILS. 17. XXXX - ALL CMU SHOWN ON PLAN ARE PART OF THE STRUCTURAL LATERAL FORCE RESISTING SYSTEM AND SUPPORTS GRAVITY LOADS. NON-STRUCTURAL CMU EXISTS IN OTHER LOCATION (REF ARCH DWGS). A 3/8" VERT CONTROL JOINT SHALL BE PROVIDED WHEREVER STRUCTURAL AND NON-STRUCTURAL CMU ABUT.
- 18. INDICATES PLAN DIAGONAL STRUT WT5x15. COPE WEB AT BEAMS AND OVERLAP FLANGE 4". WELD TO TOP FLANGE AND COLUMNS WITH 5/16" FILLET WELD 3-SIDES (TYP.)
- 19. GC SHALL COORDINATE LOCATION OF FOLDING PARTITIONS WITH ARCH DRAWINGS. REF DETAIL -/---
- 20. REF DETAIL -/--- FOR ADDITIONAL REINF UNDER INTERIOR CMU WALLS PARALLEL TO DECK SPAN. GC TO COORDINATE THE LOCATION OF ALL CMU WALLS WITH ARCH DRAWINGS.



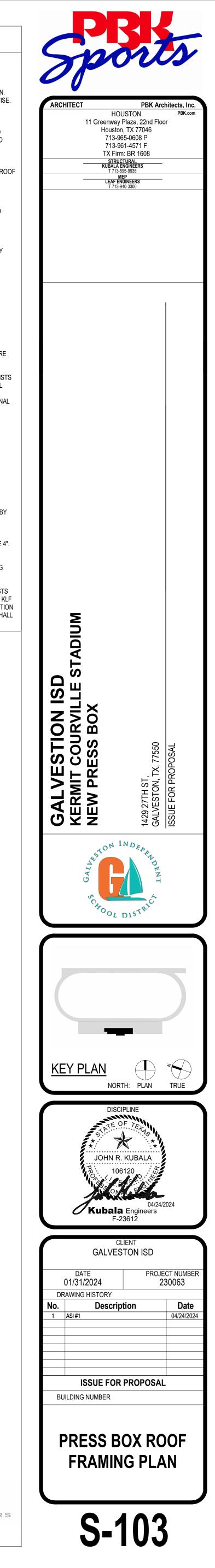


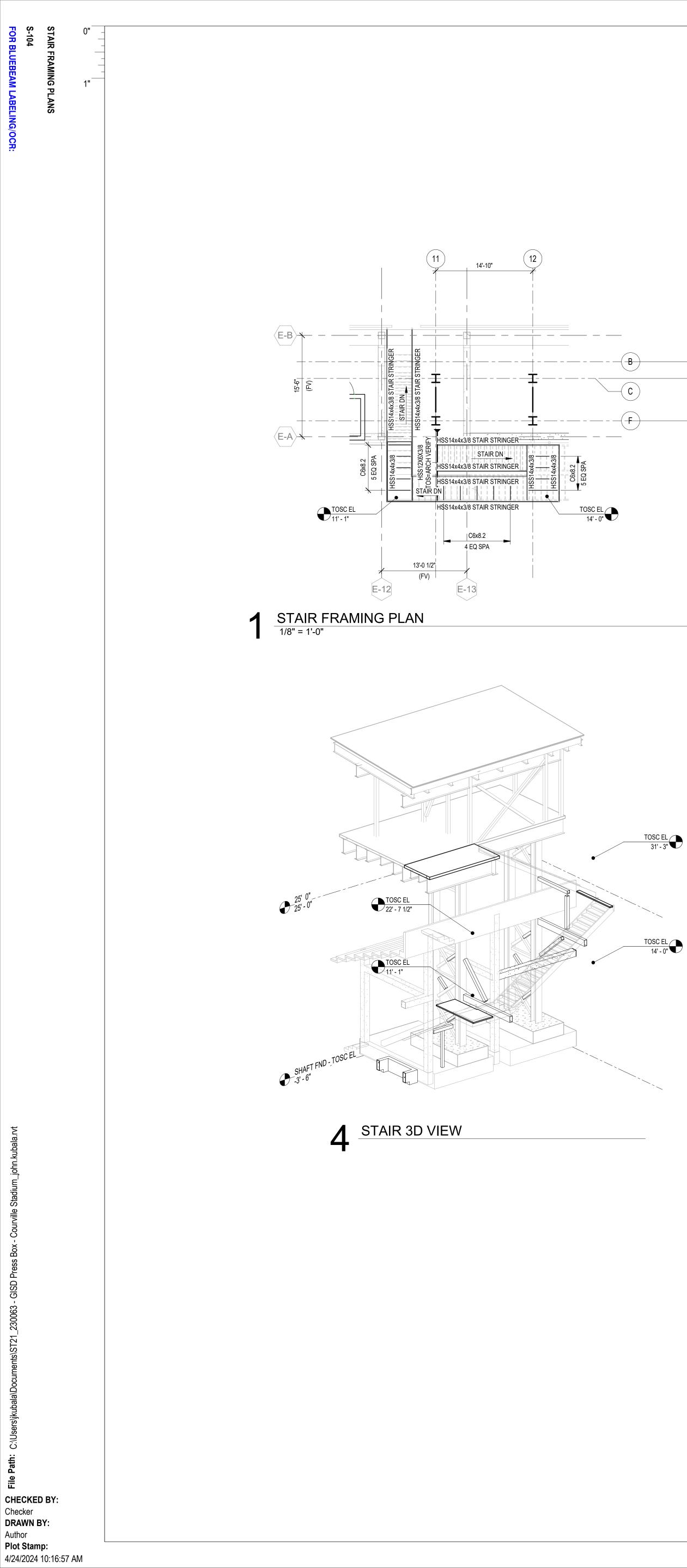
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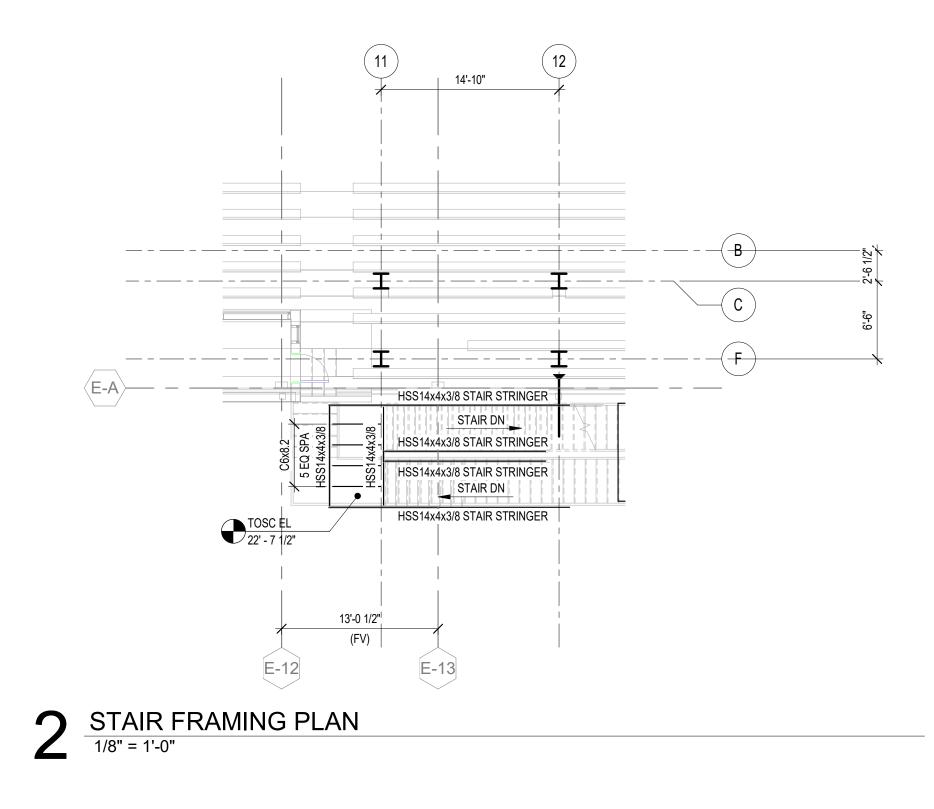
## ROOF PLAN NOTES

- 1. REF PLAN FOR TOP OF SLAB ELEVATION.
- 2. ALL ELEVATIONS ARE BASED ON TOSC EL = 0'-0".
- . TOP OF ROOF STRUCTURE IS SLOPED FOR DRAINAGE. REF ELEVATIONS NOTED ON PLAN. SLOPES SHALL BE UNIFORM BETWEEN COLUMN CENTERLINES UNLESS SHOWN OTHERWISE.
- BRIDGING NOT SHOWN ON PLAN. MANUFACTURER SHALL PROVIDE STANDARD BRIDGING COMPLYING WITH SJI SPECIFICATIONS OF LATEST ADOPTION, TYPICAL FOR GRAVITY AND UPLIFT LOADS SUPERIMPOSED ON ALL JOISTS. DIAGONAL BRIDGING SHALL BE PROVIDED BETWEEN ADJACENT JOISTS WHENEVER BOTTOM CHORD HORIZONTAL BRIDGING IS
- REFER TO THE ROOF DIAPHRAGM CONNECTION SCHEDULE FOR DECK ATTACHMENT TO ROOF FRAMING MEMBERS AND DECK FASTENER TYPE, SIZE AND SPACING. 6. REF ARCH FOR TOP OF WALL ELEVATIONS.
- DETAILING OF ALL MEMBER CONNECTIONS TO THE SUPPORTS SHALL BE PERFORMED TO SATISFY LATEST OSHA ERECTION REQUIREMENTS.
- 9. UNLESS SHOWN OTHERWISE, STEEL BEAMS OR JOISTS ARE CENTERED ON AND EQUALLY SPACED BETWEEN COLUMN CENTERLINES.
- 10. ALL STRUCTURAL STEEL THAT IS PERMANENTLY EXPOSED TO THE EXTERIOR OR IS PERMANENTLY IN UNCONDITIONED SPACE SHALL BE HOT-DIPPED GALVANIZED.
- 11. GC COORDINATE ALL PENETRATIONS AND UNDERGROUND UTILITIES WITH MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS, REFER TO TYPICAL DETAILS FOR ADDITIONAL REINFORCEMENT REQUIREMENTS.
- 12. CONTRACTOR TO VERIFY ALL SLAB EDGE DIMENSIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION.
- 3. INDICATES WIND BRACE BEAM BOTTOM FLANGE BRACING PER 4/S-507, TYP ALONG ENTIRE GRID AT ALL BRACE FRAMES. NOT SHOWN IN PLAN FOR CLARITY.
- 14. REF DETAIL 12/S-505WHERE ROOF TOP EQUIPMENT REQUIRES A STRUCTURAL CURB. JOISTS THAT ARE SUPPORTING ROOF TOP EQUIPMENT SHALL BE DESIGNED FOR AN ADDITIONAL CONCENTRATED DEAD LOAD (AS SHOWN ON PLAN AT ANY POINT ALONG JOIST SPAN). GC SHALL COORDINATE WITH MEP, ARCHITECTURE AND EQUIPMENT CUTSHEETS FOR FINAL WEIGHT, DIMENSIONS, LOCATION, ETC.
- 15. \_\_\_\_\_ – \_\_\_\_\_ INDICATES PIPING RUN, REF MEP DRAWINGS; GC SHALL COORDINATE GIVEN LOAD WITH JOIST MANUFACTURER. REF SHEET S-011.
- 16. REF S0.xx SERIES DRAWINGS FOR GENERAL NOTES AND TYP DETAILS 17. REF S4.xx SERIES DRAWINGS FOR CMU DETAILS.
- 18. REF S5.xx SERIES DRAWINGS FOR STEEL FRAMING DETAILS.
- 19. REF S6.xx SERIES DRAWINGS FOR STEEL BRACE ELEVATIONS AND DETAILS.
- <sup>/</sup> INDICATES COLUMN BRACING PER -/--- . TYPICAL AT COLUMNS UNBRACED BY FRAMING MEMBER ABOUT THIER LOCAL AXIS. NOT ALL SHOWN ON PLAN FOR
- 21. INDICATES PLAN DIAGONAL STRUT WT5x15. COPE WEB AT BEAMS AND OVERLAP FLANGE 4". WELD TO TOP FLANGE AND COLUMNS WITH 5/16" FILLET WELD 3-SIDES (TYP.)
- 22. UPLIFT X-BRIDGING NOT SHOWN ON PLANS FOR CLARITY. GC SHALL PROVIDE X-BRIDGING BETWEEN ADJACENT WF BEAMS AT ROOF PER DETAIL 11/S-505
- 23. GC SHALL COORDINATE LOCATION OF FOLDING PARTITIONS WITH ARCH DRAWINGS. JOISTS ABOVE FOLDING PARTITION SHALL BE DESIGNED FOR ADD'L DL= X.X K (PERP.) OR DL= 0.3 KLF (PARALLEL) (DEF. FROM DL SHALL NOT EXCEED 3/8"). END JOISTS ABOVE FOLDING PARTITION SHALL BE DESIGNED FOR STACKED END LOAD EQUAL TO 9000 POUNDS (DEF. FROM DL SHALL

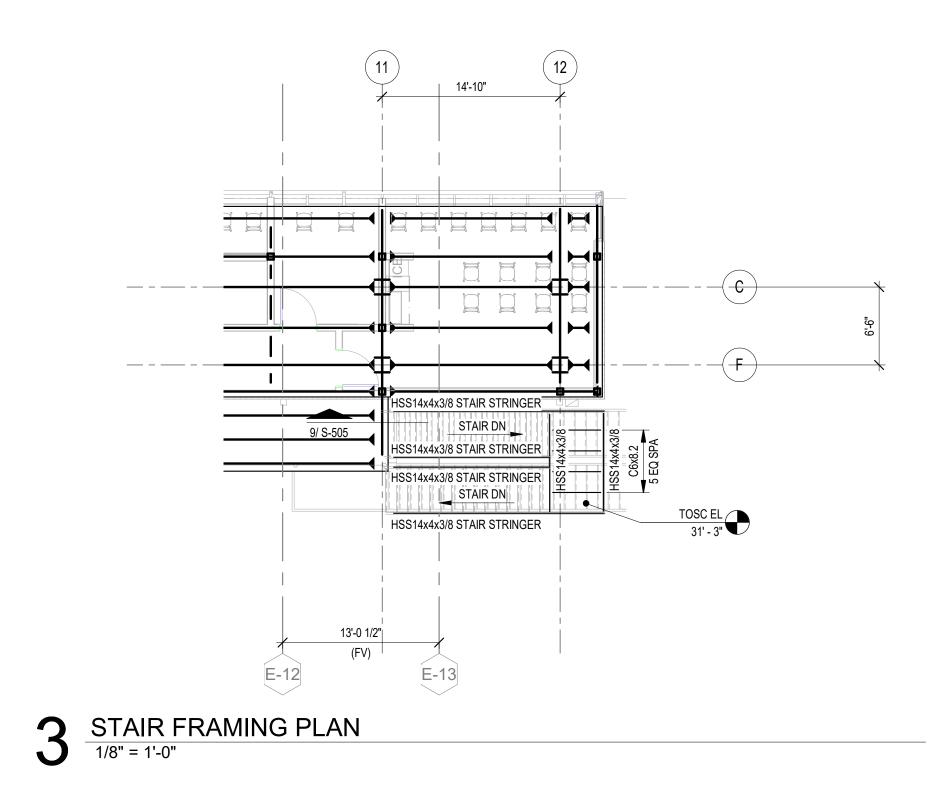


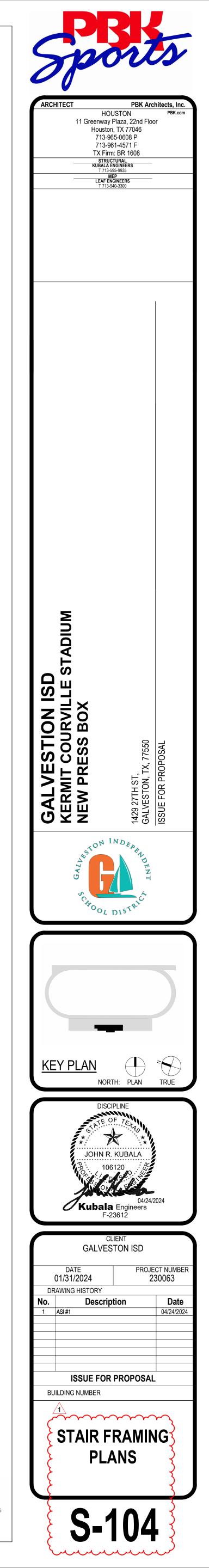












# **CONCRETE MIX:**

USAGE

1. CONCRETE SPECIFICATIONS SHALL BE AS FOLLOWS

## **CONCRETE MIX DESIGN SCHEDULE**

	28 DAY STRENGTH (PSI)			MAX	SLUMP	MAX	MAX CURE	CEMENT	MAX ALLOWABLE %		
	3000	3500	4000	5000	AGGREGATE SIZE (IN)	(IN)	W/C RATIO	DENSITY (PCF)	TYPE	FLY ASH (REF CM5)	ENTF
1. FOOTINGS			٠		1	3-5	0.50	150	1/11	30	
2. SLAB-ON-GRADE **			٠		1	3-5	0.50	150	1/11	20	
3. GRADE BEAMS AND PLINTHS **			٠		1	3-5	0.50	150	1/11	20	
4. COLUMNS				٠	3/4	3-5	0.50	150	1/11	20	
5. BEAMS			٠		1	3-5	0.50	150	1/11	20	
6. WALLS **			٠		1	6-8	0.50	150	1/11	30	
7. BASEMENT WALLS **				٠	1	6-8	0.50	150	1/11	30	
8. NORMAL WEIGHT SLAB ON NON-COMPOSITE METAL DECK			•		3/4	3-5	0.45	150	1/11	20	
9. SLAB FOR EQUIPMENT PADS			•		1	3-5	0.45	150	1/11	20	5 EX TO W
10. NON-COMPOSITE TOPPING SLAB		•			1	5-7	0.45	150	1/11	-	

\*\* - SPECIAL GC NOTE FOR CONCRETE WHICH IS PART OF A DEPRESSED AREA. SEE CONCRETE MIX NOTE 10.

2. PORTLAND CEMENT SHALL BE TYPE I OR TYPE III (CONFORM TO ASTM C150), EXCEPT AS FOLLOWS:

MASS CONCRETE ONLY CEMENT TYPE II

NORMAL WEIGHT AGGREGATE SHALL CONFORM TO ASTM C33. LIGHT WEIGHT AGGREGATE SHALL CONFORM TO ASTM C330. ALL AGGREGATE SHALL BE FROM A SINGLE SOURCE.

- 3. FLY ASH WILL NOT BE PERMITTED IN ARCHITECTURALLY EXPOSED CONCRETE. FLY ASH MAY BE USED ELSEWHERE, WITHIN THE SPECIFIED PROPORTION LIMITS, BUT THE CONTRACTOR SHALL FIRST VERIFY COMPATIBILITY WITH CURING COMPOUNDS, SEALERS, BOND BREAKER, FLOORING ADHESIVES AND OTHER MATERIALS PROPOSED TO BE IN CONTACT WITH THE CONCRETE.
- 4. CONCRETE MIX DESIGNS SHALL BE SUBMITTED FOR REVIEW A MINIMUM OF 7 DAYS PRIOR TO THE START OF THE WORK FOR ENGINEER AND OWNERS TESTING LABORATORY APPROVAL, PRIOR TO THE PLACEMENT OF CONCRETE. MIX DESIGNS MUST INDICATE CONFORMANCE WITH ACI 318-LATEST EDITION, CHAPTER 5, SECTION 5.3.

5. AT THE POINT OF DISCHARGE SLUMP TESTS, CONFORMING TO ASTM C143, SHALL BE TAKEN. SEE CONCRETE NOTE NO. 5 BELOW FOR RATE OF TESTS

- 6. AIR CONTENT TESTS CONFORMING TO ASTM C173 (VOLUMETRIC METHOD FOR LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE; ASTM C231 PRESSURE METHOD FOR NORMAL WEIGHT CONCRETE) SHALL BE TAKEN FOR EACH DAY'S POUR FOR ALL TYPES OF AIR-ENTRAINED CONCRETE BEING USED.
- 7. CONCRETE TEMPERATURE SHALL BE TESTED HOURLY WHEN THE AIR TEMPERATURE IS 40 DEG F AND BELOW, 80 DEG F AND ABOVE AND EACH TIME A SET OF COMPRESSION TEST SPECIMENS ARE MADE.

8. ONE SET OF FOUR COMPRESSION TEST SPECIMENS CONFORMING TO ASTM C31 SHALL BE MOLDED AND STORED FOR LABORATORY-CURED SPECIMENS. COMPRESSIVE STRENGTH TESTS SHALL CONFORM TO ASTM C39 AND SHALL CONSIST OF ONE SET FOR EACH DAY'S POUR EXCEEDING 5 CU. YDS. PLUS ADDITIONAL SETS FOR EACH 50 CU. YDS. MORE THAN THE FIRST 25 CU. YDS OF EACH CONCRETE CLASS PLACED IN ANY

ONE DAY. ONE SPECIMEN SHALL BE TESTED AT 7 DAYS, TWO SPECIMENS SHALL BE TESTED AT 28 DAYS, AND ONE SPECIMEN SHALL BE RETAINED FOR LATER TESTING AS REQUIRED.

9. VERIFY THAT POST INSTALLED ANCHORS ARE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS.

10. SPECIAL GC NOTE FOR CONCRETE WHICH IS PART OF A DEPRESSED AREA:

A. AT ALL DEPRESSIONS GREATER THAN OR EQUAL TO MINUS 6 INCHES FROM THE MAIN FINISH FLOOR THE GC SHALL PROVIDE XYPEX C-1000 ADMIXTURE (AT AN ASSUMED MINIMUM RATE OF 15 LBS/CU YD) INTO ALL OF THE CONCRETE. THE ADMIXTURE SHALL BE PLACED INTO THE MIX AT THE TIME OF BATCHING AT THE PLANT. DO NOT ADD DRY BAG MIX TO THE WET CONCRETE TRUCK ON-SITE. THE GC SHALL STRICTLY FOLLOW ALL MANUFACTURER'S INSTRUCTIONS FOR ADDITION, USE, HANDLING, ETC. THE ADD MIXTURE SHALL BE ADDED TO ALL OF THE CONCRETE WHICH MAKES UP ANY DEPRESSION GREATER THAN OR EQUA TO MINUS 6 INCHES FROM THE MAIN FINISH FLOOR. THIS INCLUDES BUT IS NOT LIMITED TO: DEPRESSED SLABS (FULL THICKNESS). ALL VERTICAL STEM WALLS (FULL THICKNESS) AND/OR ANY GRADE BEAMS (FULL DEPTH AND THICKNESS) WHICH FORM ANY PORTION OF THE VERTICAL DROP AND ALL HORIZONTAL SLAB FOR THE DEPRESSED AREA. THIS DOES NOT REDUCE OR REVISE ANY WATERPROOFING TREATMENTS. LAYERS OR SUBSTRATES THAT ARE CURRENTLY REQUIRED BY THE STRUCTURAL, ARCHITECTURAL, AND/OR OTHER CONSULTANT DRAWINGS, THIS IS IN ADDITION TO THOSE CURRENT MEASURES. THE COST FOR THIS ADD MIXTURE SHALL BE ACCOUNTED FOR WITHIN THE BASE BID AND SHALL INCLUDE. BUT IS NOT LIMITED TO ALL AREAS ARCHITECTURALLY LABELED AS FOLLOWS: ORCHESTRA PIT. ALL ELEVATOR PITS. AND THE BELOW GRADE FLY-LOFT RIGGING PIT. PLEASE NOTE: XYPEX C-1000 HAS BEEN CHOSEN AS A NEUTRAL MIX ADDITIVE THAT IS NOT INTENDED TO CHANGE THE CURRENTLY PLANNED CONCRETE SET TIME. IF

FOR SOME REASON THE SET TIME IS DESIRED TO BE INCREASED OR DECREASED XYPEX DOES HAVE ALTERNATIVE FORMULATIONS WHICH MAY BE USED; HOWEVER, THE GC MUST GET WRITTEN APPROVAL FROM

THE EOR PRIOR TO ANY CHANGE IN THE XYPEX C-1000 FORMULATION. THE XYPEX C-1000 IS AN ADDITIONAL MOISTURE INTRUSION MITIGATION MEASURE THAT IS REQUIRED IN ADDITION TO THE SPECIFIED

# **CAST-IN-PLACE CONCRETE:**

1. CONCRETE SUPPLIER SHALL BE AWARE OF CEMENTS THAT CAN CAUSE LATE ETTRINGITE FORMATION IN THE CEMENT PASTE AND BE PREPARED TO SHOW THAT THE CEMENTS USED WILL NOT CAUSE THIS PROBLEM.

WATERSTOPS NOTED IN THE OTHER GENERAL NOTES AND DETAILS RELATED TO CONCRETE COLD-JOISTS AND OTHER CONCRETE TRANSITIONS OF PLANE.

- 2. ALL MIXING, TRANSPORTING, PLACING AND CURING OF CONCRETE SHALL BE DONE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE AMERICAN CONCRETE INSTITUTE; ACI 301 AND ACI 318, LATEST EDITIONS.
- 3. NO HORIZONTAL JOINTS WILL BE PERMITTED IN CONCRETE EXCEPT WHERE THEY NORMALLY OCCUR OR WHERE SHOWN ON THE DETAILS. VERTICAL JOINTS SHALL OCCUR AT CENTER SPANS OR AT LOCATIONS APPROVED BY THE STRUCTURAL ENGINEER.
- 4. ALL MIXING, TRANSPORTING, PLACING AND CURING OF CONCRETE SHALL BE DONE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE AMERICAN CONCRETE INSTITUTE; ACI 301 AND ACI 318, LATEST EDITIONS. 5. ALL BASE PLATES AND ANCHOR BOLTS SHALL BE PROTECTED WITH 3" (MIN.) OF CONCRETE. ANCHOR BOLTS SHALL BE FABRICATED FROM FULL BODIED ASTM F1554, GRADE 36 LOW CARBON STEEL RODS HAVING THE
- SAME DIAMETER AS THE BOLT DIAMETER AND USING CUT THREADS. ROLLED THREADS ARE NOT ACCEPTABLE. BOLTS SHALL BE SET USING RIGID TEMPLATES.
- 6. AT HORIZONTAL CONCRETE FRAMING, FORMS SHALL NOT BE REMOVED UNTIL THE CONCRETE HAS REACHED 70 PERCENT OF THE 28-DAY COMPRESSIVE STRENGTH INDICATED. FLOOR SLABS AND BEAMS SHALL REMAIN SHORED UNTIL THE UPPER MOST LEVEL OF CONCRETE HAS REACHED 70 PERCENT OF THE 28-DAY COMPRESSIVE STRENGTH. FOR BUILDINGS WITH MORE THAN THREE STORIES IN HEIGHT, SHORING SHALL BE MAINTAINED FOR THREE LEVELS BELOW, UNTIL THE UPPER MOST LEVEL HAS REACHED 70 PERCENT OF THE SPECIFIED 28-DAY COMPRESSIVE STRENGTH.
- 7. ALL CONDUITS AND PIPES EMBEDDED IN CONCRETE SHALL COMPLY WITH ALL PROVISIONS SPECIFIED IN ACI 318, SECTION 6.3, WITH THE FOLLOWING SPECIFIC REQUIREMENTS: A. THE MAXIMUM OUTSIDE DIAMETER OF THE CONDUITS AND PIPES SHALL BE 1 1/2". NONE PERMITTED IN SLABS THINNER THAN 4 1/2".
- B. THE MINIMUM CLEAR DISTANCE BETWEEN CONDUITS AND PIPES SHALL BE 6". C. NONE PERMITTED IN SLABS-ON-GRADE WHICH WILL BE PERMANENTLY EXPOSED OR SCHEDULED TO RECEIVE THIN SET TILE. PLACE ALL PIPES AND CONDUITS IN THE FILL BENEATH THE VAPOR RETARDER.
- RE-COMPACT AS SPECIFIED. D. IN NON-EXPOSED SLABS-ON-GRADE, LIMIT SIZE TO 1" O.D. IN 5" SLAB SPACE 12" APART AND TIE TO UNDERSIDE OF REINFORCING MAT. WHERE LINES CONVERGE AT SOURCE, DOUBLE UP THE SLAB REINFORCING IN THE CONVERGENCE ZONE AND 3'-0" BEYOND. PLACE ALL LARGER LINES IN THE FILL BENEATH THE VAPOR RETARDER. E. NONE PERMITTED IN COLUMNS WITHOUT PRIOR APPROVAL
- F. DO NOT DISPLACE REINFORCING STEEL FROM ITS PROPER POSITION.
- 8. PROVIDE SHEAR KEYS IN ALL CONSTRUCTION JOINTS IN BEAMS AND WALLS, IN ACCORDANCE WITH THE TYPICAL CONCRETE DETAILS.
- 9. PLACE WATERSTOPS IN ALL EXTERIOR CONSTRUCTION JOINTS BELOW GRADE AND ELSEWHERE AS CALLED FOR.
- 10. FLOORS ARE NOT DESIGNED TO SUPPORT FORMWORK AND WET CONCRETE WEIGHT OF NEXT LEVEL. CONTRACTOR SHALL DESIGN AND PROVIDE RE-SHORING TO PREVENT OVERSTRESSING THE STRUCTURE. 11. SET FORMS TO FOLLOW SLOPES AND GRADES DEFINED ON PLAN, KEEPING MEMBER DEPTHS CONSTANT AT DEPTHS DETAILED OR SCHEDULED, UNLESS NOTED OTHERWISE. SLOPE UNIFORMLY BETWEEN
- ELEVATIONS GIVEN. BUILD IN CAMBER WHERE SPECIFIED.
- 12. CONSTRUCTION JOINTS PERMITTED ONLY WHERE INDICATED ON DRAWINGS. WHERE NOT SPECIFICALLY INDICATED ON DRAWINGS, LOCATE THE JOINTS AS FOLLOWS:
- A. LOCATE JOINTS NOT INDICATED TO LEAST IMPAIR STRENGTH AND APPEARANCE OF STRUCTURE. LOCATE VERTICAL JOINTS IN MIDDLE THIRD OF SPANS OF NON-POST-TENSIONED SLABS, BEAMS OR GIRDERS, UNLESS A BEAM INTERSECTS A GIRDER AT MIDDLE LOCATION, IN WHICH CASE OFFSET JOINTS IN GIRDERS TWICE WIDTH OF BEAM. LOCATE VERTICAL JOINTS WITHIN THE END THIRD OF SPANS OF POST-TENSIONED CONTINUOUS SLABS, BEAMS OR GIRDERS WHERE TENDON PROFILE IS AT OR NEAR THE CENTROID OF THE CONCRETE CROSS SECTION. B. LOCATE HORIZONTAL JOINTS IN WALLS AND COLUMNS AT UNDERSIDE OF SUPPORTED ELEMENTS AT THE TOP OF THE WALL OR COLUMN AND AT THE TOP OF FOOTINGS OR FLOOR SLABS AT THE BOTTOM OF THE WALL OR COLUMN. ROUGHEN SURFACE OF HORIZONTAL OR NEARLY HORIZONTAL CONSTRUCTION JOINTS SO THAT AGGREGATE SHALL BE EXPOSED UNIFORMLY, LEAVING NO LAITANCE, LOOSENED
- PARTICLES OR DAMAGED CONCRETE. C. REFER TO PLANS FOR JOINTS IN GRADE SUPPORTED SLABS.
- D. JOINTS ARE NOT ALLOWED BETWEEN PILASTERS AND BEAM/WALL THAT ARE MONOLITHIC. E. SUBMIT CONSTRUCTION JOINT LAYOUT PLANS FOR APPROVAL BY THE ENGINEER PRIOR TO CONSTRUCTION.

13. \*\*\*GC NOTE\*\*\*

- A. AT ALL CONCRETE COLD JOINTS OR TRANSITIONS BETWEEN PLANES: VERTICAL TO VERTICAL POURS, HORIZONTAL TO HORIZONTAL POURS, HORIZONTAL TO VERTICAL POURS, AND VERTICAL TO HORIZONTAL POURS, THE GC SHALL PROVIDE A CONTINUOUS WATER STOP WITHIN EACH JOINT. WATERSTOP MANUFACTURERS AND TYPES SHALL BE AS APPROVED IN THE SPECS AND THE GENERAL NOTES. ALL WATER STOPS MUST BE APPROPRIATE FOR THE CONDITION BASED ON THE MANUFACTURER'S DATA. THE GC SHALL BE IN STRICT COMPLIANCE WITH ALL MANUFACTURERS' USE, HANDLING, AND INSTALLATION INSTRUCTIONS. AT A MINIMUM, THE GC SHALL ASSUME A DUMBBELL-TYPE WATER STOP WITH WINGS THAT EXTEND TO EACH SIDE OF THE CONCRETE FOR EACH JOINT UNLESS OTHERWISE NOTED WITHIN THE CD'S TO BE AN ALTERNATE ACCEPTABLE WATER STOP TYPE.
- B. ADDITIONALLY, CONCRETE USED AT A SLAB DEPRESSION WITH A DEPTH GREATER THAN 6 INCHES, THE CONCRETE ADDITIVE XYPEX C-1000 SHALL BE INCLUDED IN THE CONCRETE MIX. REFER TO CONCRETE MIX. SCHEDULE FOR CONCRETE MIXES WHICH MAY REQUIRE XYPEX C-1000 AND CONCRETE MIX NOTE 10 FOR ADDITIONAL INFORMATION.

## **CONCRETE REINFORCEMENT:**

- 1. REINFORCING STEEL SHALL CONFORM TO ASTMA615. BARS SHALL BE NEW OR RECYCLED DOMESTIC BILLET STEEL OF A DOMESTIC MANUFACTURE. REINFORCING BARS SIZE #3 THROUGH #11 SHALL BE GRADE 60. REINFORCING BARS SIZE #11 THROUGH #18 SHALL BE GRADE 75.
- 2. DEFORMED BAR ANCHORS SHALL CONFORM TO ASTM A496, GRADE 70.
- 3. ALL WELDED WIRE FABRIC SHALL BE SMOOTH WIRE FABRIC CONFORMING TO ASTM A185, AND SHALL BE FURNISHED IN FLAT SHEETS.
- 4. CONCRETE COVERAGE AROUND REINFORCEMENT SHALL CONFORM TO THE REQUIREMENTS OF ACI 318 SECTION 7.7, LATEST EDITION, AND MEET REQUIREMENTS BELOW. THE REINFORCING STEEL DE ADJUST REINFORCING STEEL CAGE SIZES AT INTERSECTING REINFORCING MEMBERS AS REQUIRED TO ALLOW CLEARANCE FOR INTERSECTING BARS. SLAB ON GRADE REINFORCEMENT SHALL BE SUPP EVERY THIRD BAR, NOT TO EXCEED 45-INCH INTERVALS.

FOOTINGS/PIERS	3 IN
GRADE BEAMS	3 IN BOT; 2 IN SIDES (3" IF CAST AGAINST SOIL), 2 IN TOP
SLAB ON GRADE	2 IN TOP
SLAB BOTTOMS OVER VOID FORM	

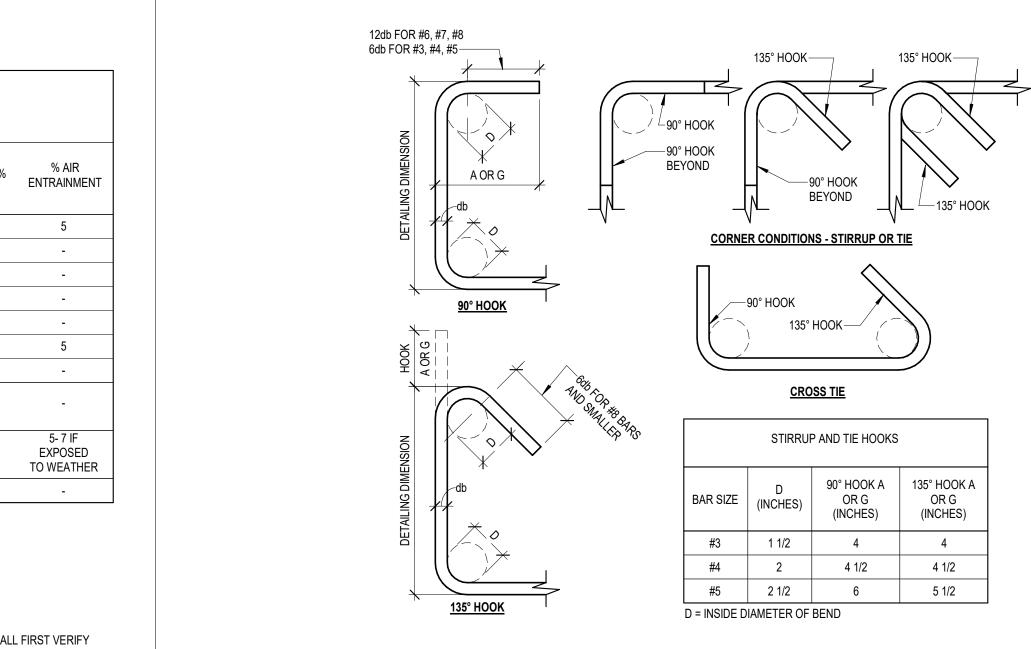
- COLUMNS NOT EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND (TYP INTERIOR CONDITIONS) 1 5/8"
- 5. DETAILING OF CONCRETE REINFORCEMENT AND ACCESSORIES SHALL CONFORM TO ACI 315, LATEST EDITION. ALL HOOKED BARS SHOWN SHALL HAVE STANDARD HOOKS, U.N.O.
- 6. REINFORCING SHALL NOT BE WELDED WITHOUT APPROVAL FROM THE STRUCTURAL ENGINEER
- 7. BOTTOM REINFORCING BARS SHALL BE SPLICED AT SUPPORTS AND CONTINUOUS TOP BARS SHALL BE SPLICED AT MID-SPAN.
- 8. ALL CONTINUOUS REINFORCEMENT SHALL BE LAPPED 56 BAR DIAMETERS AT SPLICE LOCATIONS.
- 9. WHERE BAR TYPES FROM THE BAR BENDING DIAGRAM ARE SPECIFIED, PROVIDE BARS ACCORDINGLY. OTHERWISE, DETAIL BARS IN BEAMS, COLUMNS, SLABS, AND WALLS AS FOLLOWS: A. RUN TOP AND BOTTOM BARS CONTINUOUS, WITH SPLICES AND HOOKS AS DESCRIBED BELOW.
- B. PROVIDE STANDARD 90 DEGREE HOOK ON TOP BARS AT CANTILEVER ENDS.
- C. SPLICE TOP AND INTERMEDIATE BARS AT THE CENTER LINE BETWEEN MEMBER SUPPORTS, UNLESS NOTED OTHERWISE. D. SPLICE BOTTOM BARS DIRECTLY OVER MEMBER SUPPORTS, UNLESS NOTED OTHERWISE. E. CENTER BARS NOTED AS "AT SUPT'S." OVER MEMBER SUPPORTS, AND CENTER BARS NOTED AS "BTWN. SUPT'S." BETWEEN SUPPORTS.
- F. PLACE BARS NOTED AS "2ND LAYER" BELOW THE PRIMARY TOP BARS (OR ABOVE THE PRIMARY BOTTOM BARS) AND PROVIDE #11 SPACER BARS PLACED AT INTERVALS OF 4'-0" BETWEEN THE TWO LAY G. ALL BAR SPLICES IN BEAMS, AND SLABS SHALL BE 30 BAR DIAMETERS, EXCEPT THAT SPLICES IN HORIZONTAL WALL BARS AND INTERMEDIATE BEAM BARS SHALL BE 66 BAR DIAMETERS. H. PROVIDE CORNER BARS FOR EACH HORIZONTAL BAR AT THE INSIDE AND OUTSIDE FACES OF INTERSECTING BEAMS OR WALLS. REFER TO TYPICAL CORNER BAR DETAIL ON.

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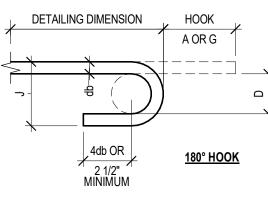
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## **TYPICAL STIRRUP AND TIE HOOK TYPES** NO SCALE

DETAILING DIMENSION <u>90° HOOK</u>



	FINISHED BEND	180°	HOOKS	90° HOOK
BAR SIZE	DIAMETER D, (INCHES)	A OR G, (INCHES)	J, (INCHES)	A OR G, (INCHES)
#3	2 1/4	5	3	6
#4	3	6	4	8
#5	3 3/4	7	5	10
#6	4 1/2	8	6	12
#7	5 1/4	10	7	14
#8	6	11	8	16
#9	9 1/2	15	11 3/4	19
#10	10 3/4	17	13 1/4	22
#11	12	19	14 3/4	24
#14	18 1/4	27	21 3/4	31
#18	24	36	28 1/2	41

# 3 TYPICAL END HOOK TYPE NO SCALE

		BEAM A		ICE LENGTHS	OPMENT		
		GRADE 60 RI	EINFORCEMEN	IT, NORMALWE		TE	
		f'c = 30	000 PSI	f'c = 40	000 PSI	f'c = 50	000 PSI
BAR SIZE	LAP CLASS	BOTTOM BARS	OTHER BARS	BOTTOM BARS	OTHER BARS	BOTTOM BARS	OTHEF BARS
<i>#</i> 2	A	12	13	12	12	12	12
#3	В	16	17	16	16	16	16
щл	A	16	20	14	18	12	16
#4	В	21	26	19	24	16	21
#5	A	23	29	20	25	18	23
#Э	В	30	38	26	33	24	30
#6	A	31	40	27	35	24	31
#0	В	41	52	36	46	32	41
#7	А	46	60	40	52	36	46
#1	В	60	78	52	68	47	60
#8	А	60	78	52	67	46	60
#0	В	78	102	68	88	60	78
#9	А	64	84	56	72	50	65
#3	В	84	110	73	94	65	85
#10	Α	72	93	62	81	56	72
#10	В	94	121	81	106	73	94
#11	A	85	110	74	96	66	86
π	В	111	143	97	125	86	112

## NOTES:

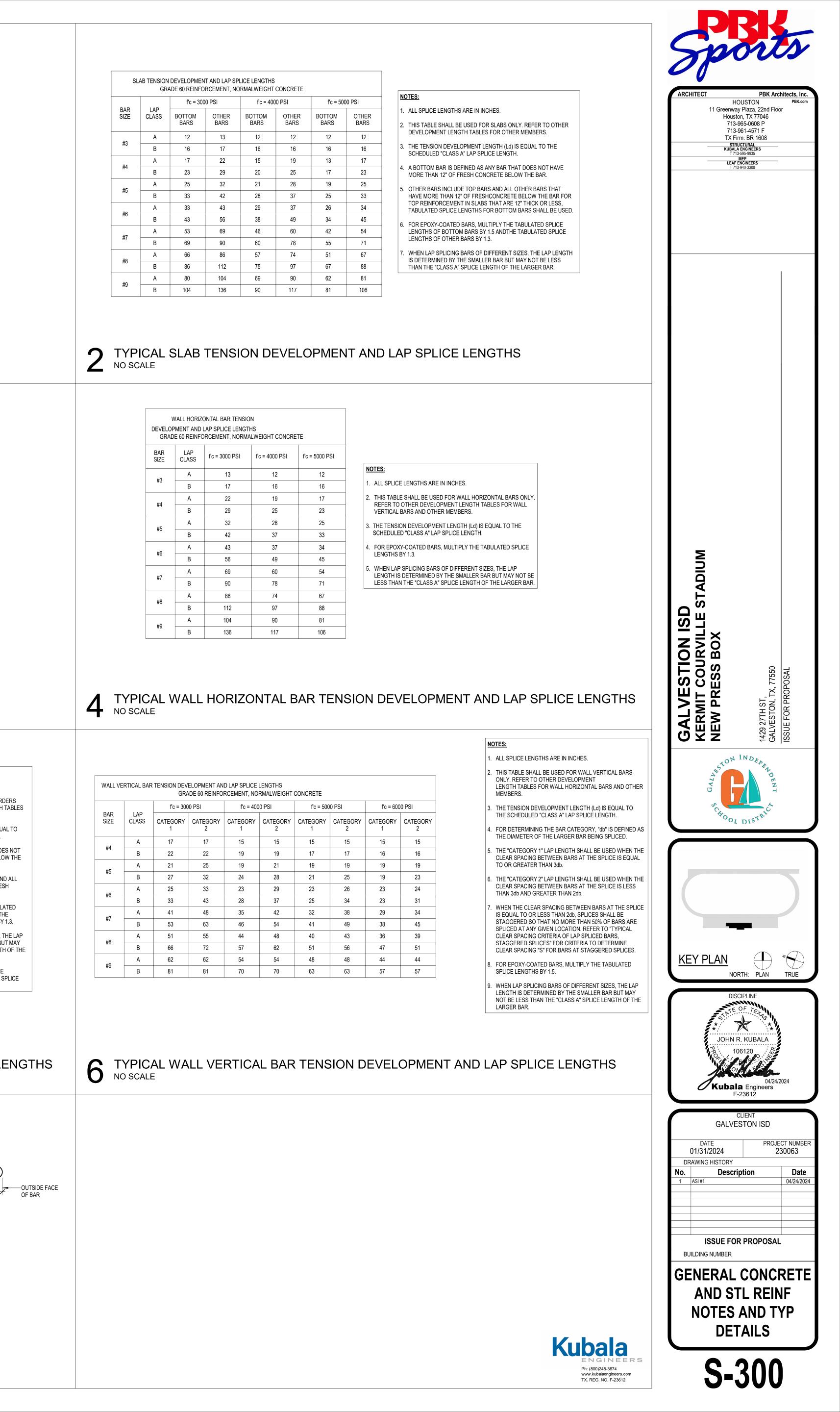
- ALL SPLICE LENGTHS ARE IN INCHES.
- THIS TABLE SHALL BE USED FOR BEAMS AND GIRDERS ONLY. REFER TO OTHER DEVELOPMENT LENGTH TABLES FOR OTHER MEMBERS.
- THE TENSION DEVELOPMENT LENGTH (Ld) IS EQUAL TO THE SCHEDULED "CLASS A" LAP SPLICE LENGTH.
- 1. A BOTTOM BAR IS DEFINED AS ANY BAR THAT DOES NOT HAVE MORE THAN 12" OF FRESH CONCRETE BELOW THE BAR
- . OTHER BARS INCLUDE TOP BARS, FACE BARS, AND ALL OTHER BARS THAT HAVE MORE THAN 12" OF FRESH CONCRETE BELOW THE BAR.
- . FOR EPOXY-COATED BARS, MULTIPLY THE TABULATED SPLICE LENGTHS OF BOTTOM BARS BY 1.5 AND THE TABULATED SPLICE LENGTHS OF OTHER BARS BY 1.3.
- WHEN LAP SPLICING BARS OF DIFFERENT SIZES, THE LAP LENGTH IS DETERMINED BY THE SMALLER BAR BUT MAY NOT BE LESS THAN THE "CLASS A" SPLICE LENGTH OF THE LARGER BAR.
- FOR CONCRETE STRENGTHS IN BETWEEN THOSE TABULATED HERE, USE DEVELOPMENT AND LAP SPLICE LENGTHS OF LOWER CONCRETE STRENGTH.

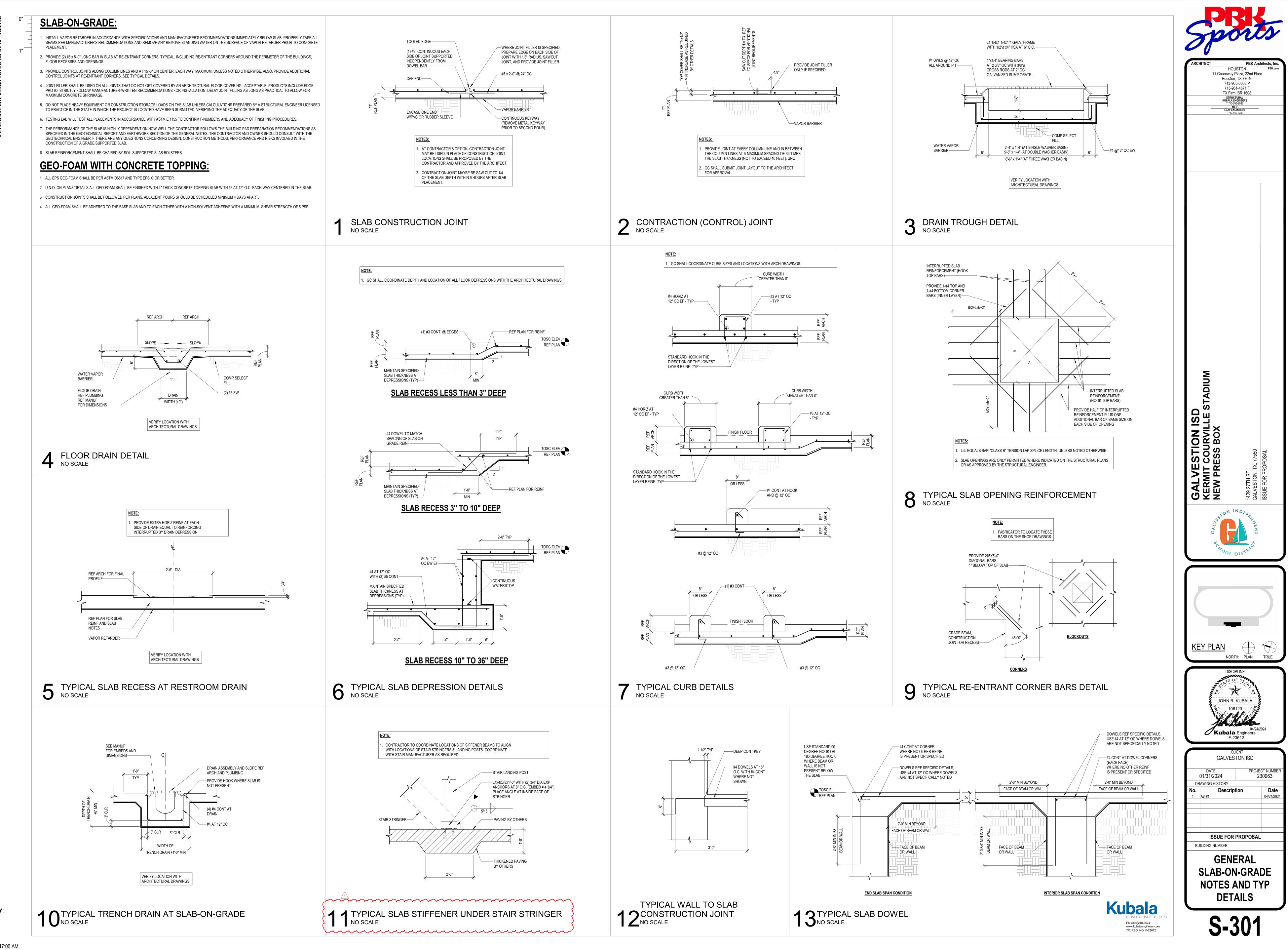
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TYPICAL BEAM AND GIRDER TENSION DEVELOPMENT AND LAP SPLICE LENGTHS 5 TYPICA NO SCALE

DETAILER SHALL					NT LENGTH				
PPORTED AT			GRAD	E 60 REIN	IFORCEME	NT,			
	BAR	f'c=30	00 PSI	f'c=40	00 PSI	f'c=50	000 PSI	BAR	
	SIZE	Lhb	0.7 Lhb	Lhb	0.7 Lhb	Lhb	0.7 Lhb	SIZE	Ldh - OUTSIDE FACE Ldh
	#3	9	7	8	6	7	6	#3	Ldh 90° HOOKS OF BAR 180° HOOKS
	#4	11	8	10	7	9	7	#4	NOTES:
	#5	14	10	12	9	11	8	#5	
	#6	17	12	15	11	13	10	#6	1. Ldh = DEVELOPMENT LENGTH OF STANDARD HOOKS IN TENSION (INCHES).
	#7	20	14	17	12	15	11	#7	2. Ldh = Lhb UNLESS CONDITIONS OF NOTE 3 ARE SATISFIED.
	#8	22	16	19	14	17	12	#8	3. Ldh = 0.7Lhb FOR #11 BARS AND SMALLER WHEN SIDE COVER (NORMAL TO PLANE OF HOOK)
	#9	25	18	22	16	20	14	#9	IS NOT LESS THAN 2 1/2 INCHES AND FOR 90° HOOKS COVER ON BAR EXTENSION BEYOND HOOK IS NOT LESS THAN 2 INCHES.
	#10	28	20	25	18	22	16	#10	
	#11	31	22	27	19	24	17	#11	4. HOOKS ARE NOT CONSIDERED EFFECTIVE FOR DEVELOPING BARS IN COMPRESSION.
	#14	38	-	33	-	29	-	#14	5. Ldh SHALL BE MULTIPLIED BY 1.2 FOR EPOXY-COATED HOOKED REINFORCING BARS.
LAYERS OF BARS.	#18	50	-	43	-	39	-	#18	]

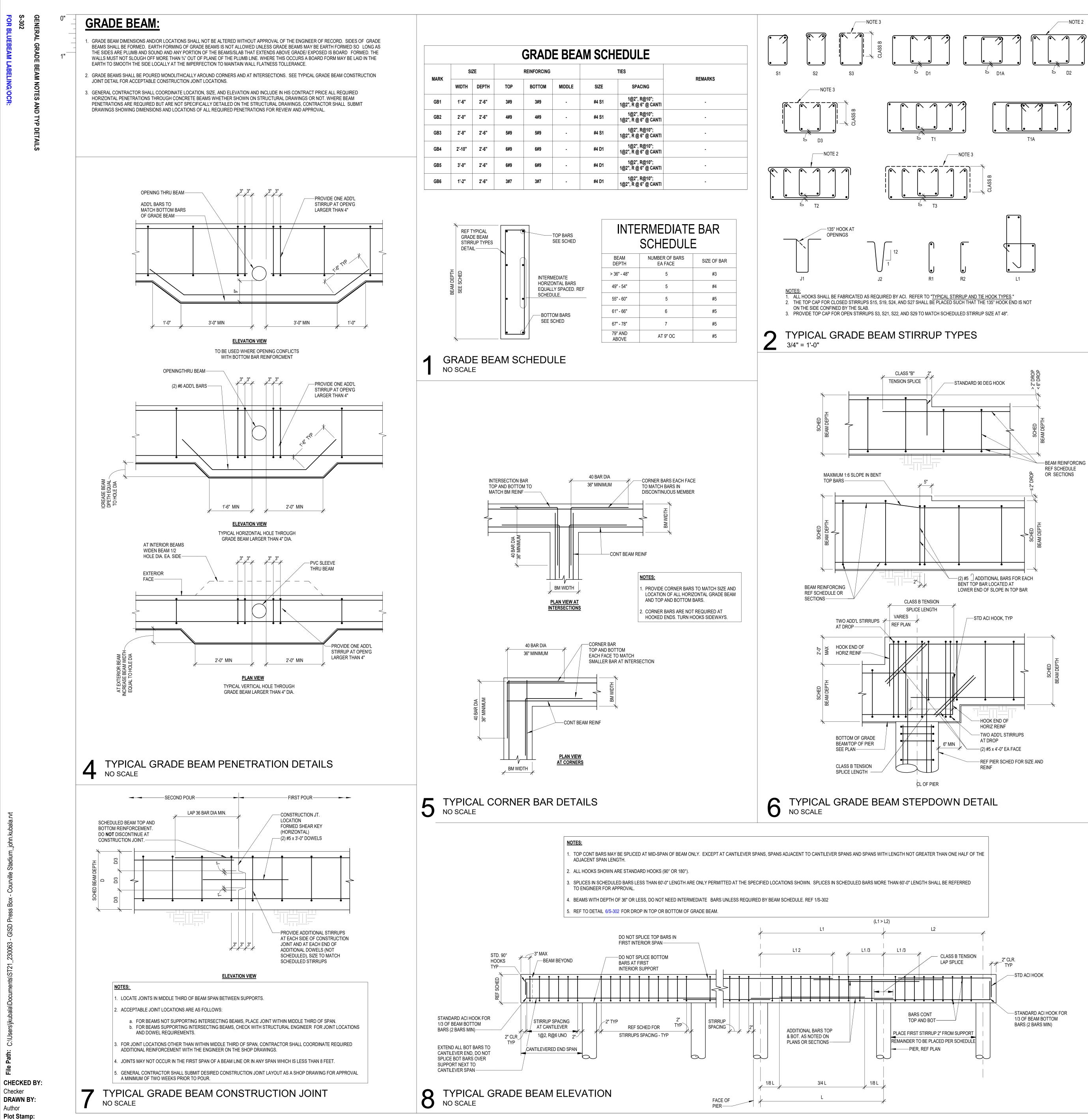






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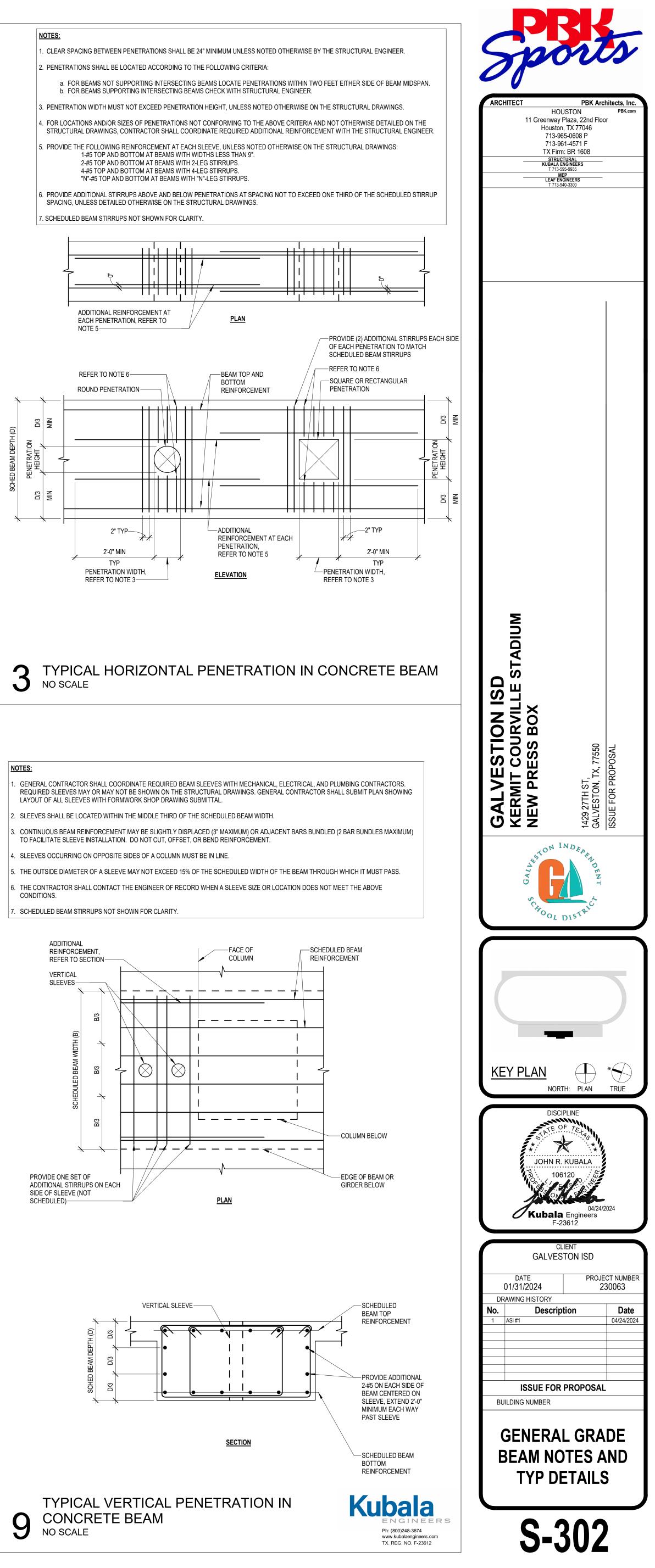


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- b. FOR BEAMS SUPPORTING INTERSECTING BEAMS CHECK WITH STRUCTURAL ENGINEER.

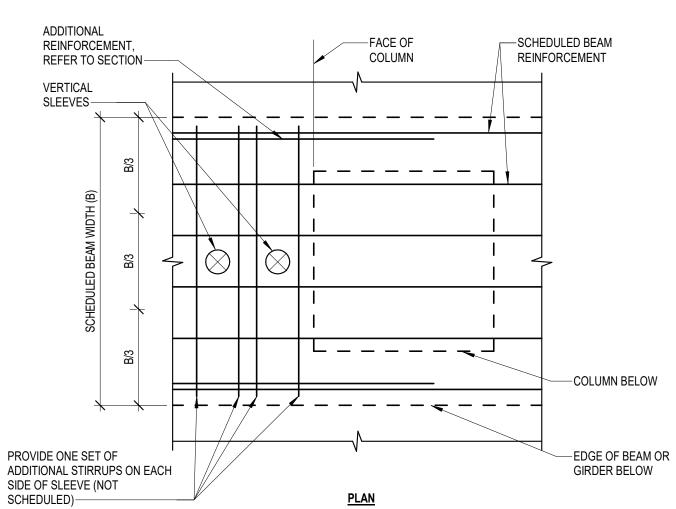
# 2-#5 TOP AND BOTTOM AT BEAMS WITH 2-LEG STIRRUPS.

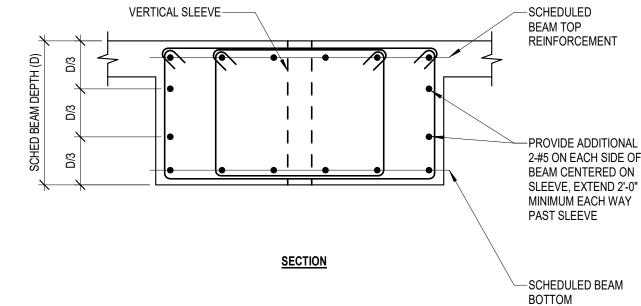
SPACING, UNLESS DETAILED OTHERWISE ON THE STRUCTURAL DRAWINGS.



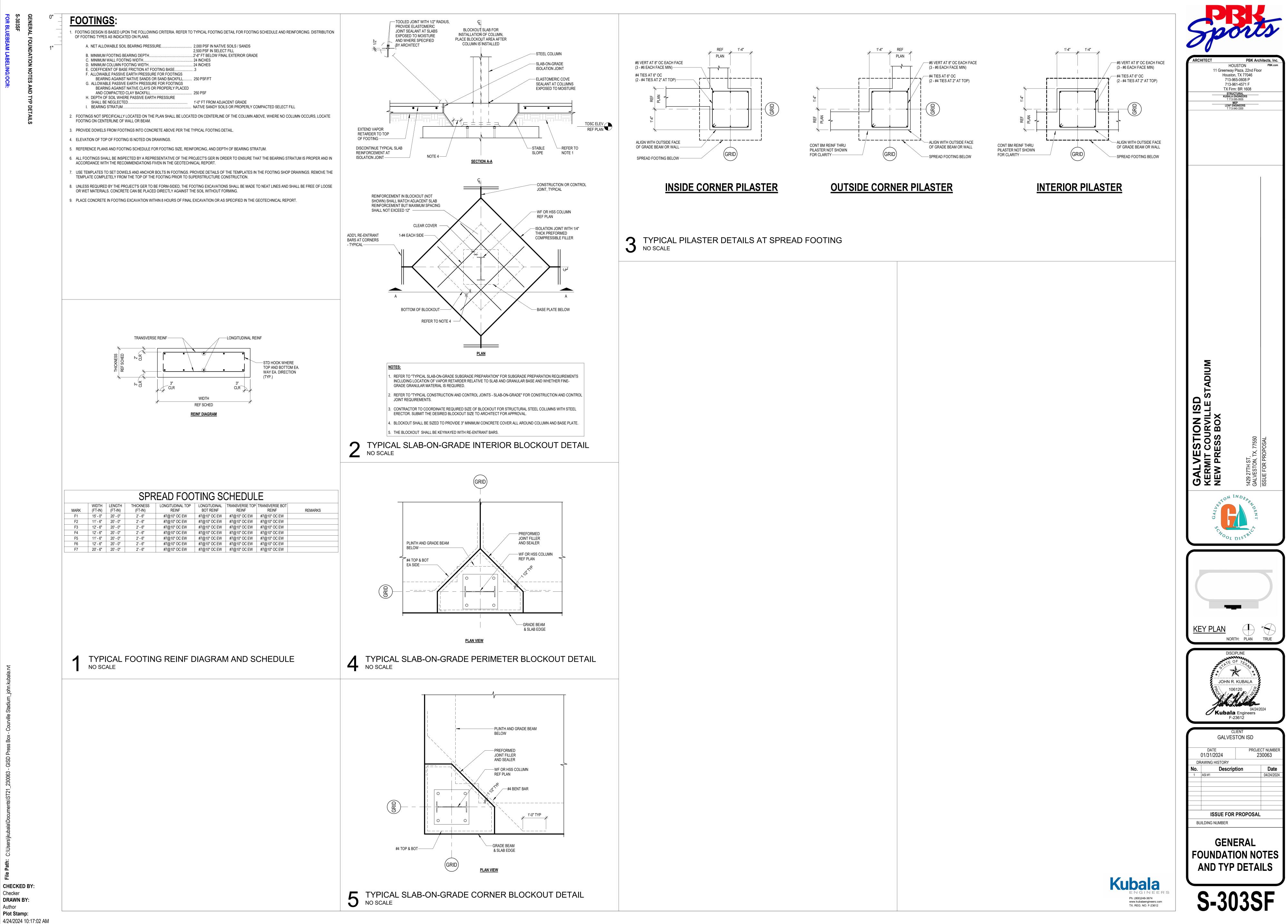
## NOTES:

- GENERAL CONTRACTOR SHALL COORDINATE REQUIRED BEAM SLEEVES WITH MECHANICAL, ELECTRICAL, AND PLUMBING CONTRACTORS. REQUIRED SLEEVES MAY OR MAY NOT BE SHOWN ON THE STRUCTURAL DRAWINGS. GENERAL CONTRACTOR SHALL SUBMIT PLAN SHOWING LAYOUT OF ALL SLEEVES WITH FORMWORK SHOP DRAWING SUBMITTAL.
- . SLEEVES SHALL BE LOCATED WITHIN THE MIDDLE THIRD OF THE SCHEDULED BEAM WIDTH
- CONTINUOUS BEAM REINFORCEMENT MAY BE SLIGHTLY DISPLACED (3" MAXIMUM) OR ADJACENT BARS BUNDLED (2 BAR BUNDLES MAXIMUM) TO FACILITATE SLEEVE INSTALLATION. DO NOT CUT, OFFSET, OR BEND REINFORCEMENT.
- THE OUTSIDE DIAMETER OF A SLEEVE MAY NOT EXCEED 15% OF THE SCHEDULED WIDTH OF THE BEAM THROUGH WHICH IT MUST PASS.
- 6. THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD WHEN A SLEEVE SIZE OR LOCATION DOES NOT MEET THE ABOVE
- CONDITIONS.
- Y. SCHEDULED BEAM STIRRUPS NOT SHOWN FOR CLARITY





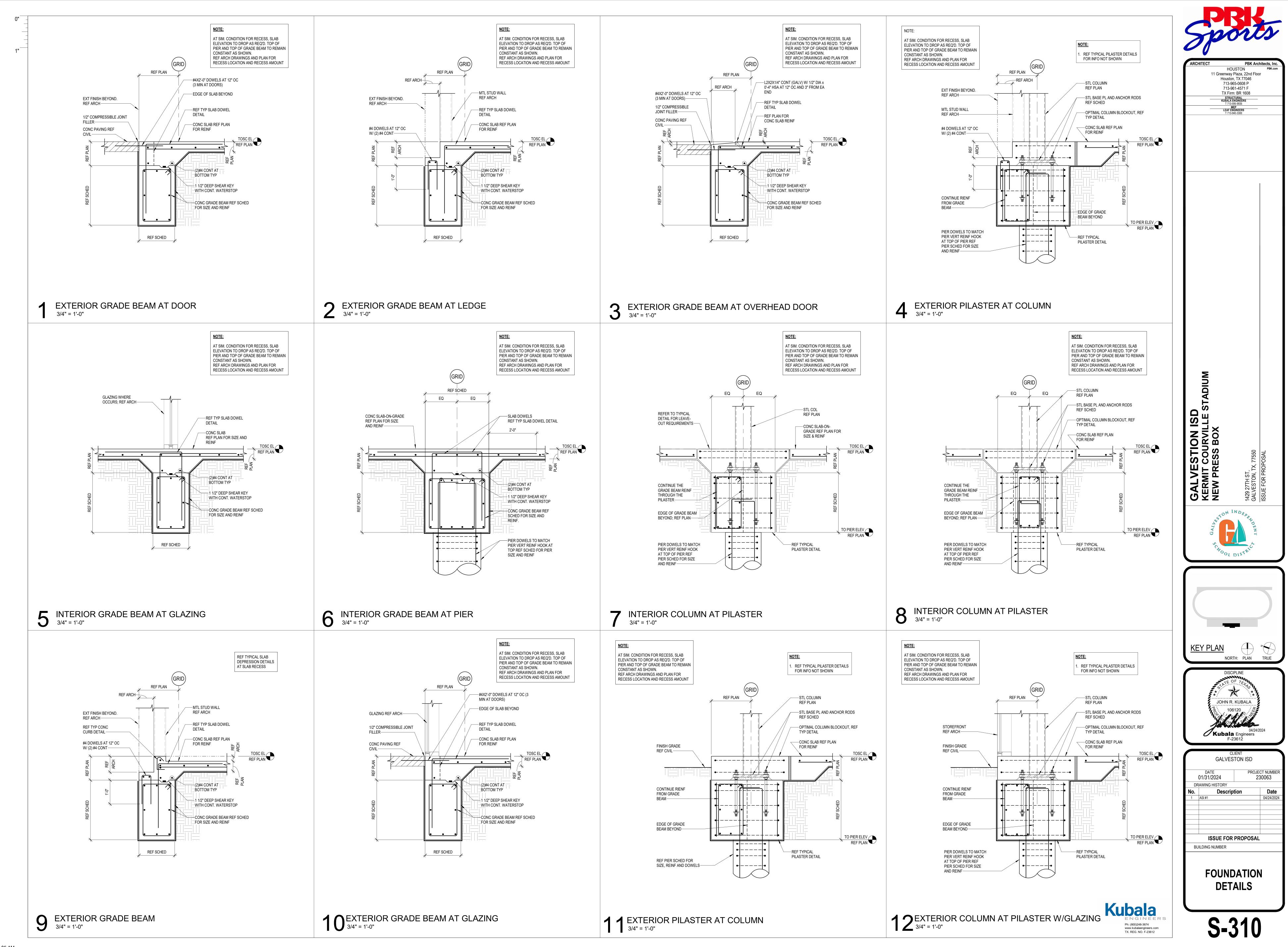
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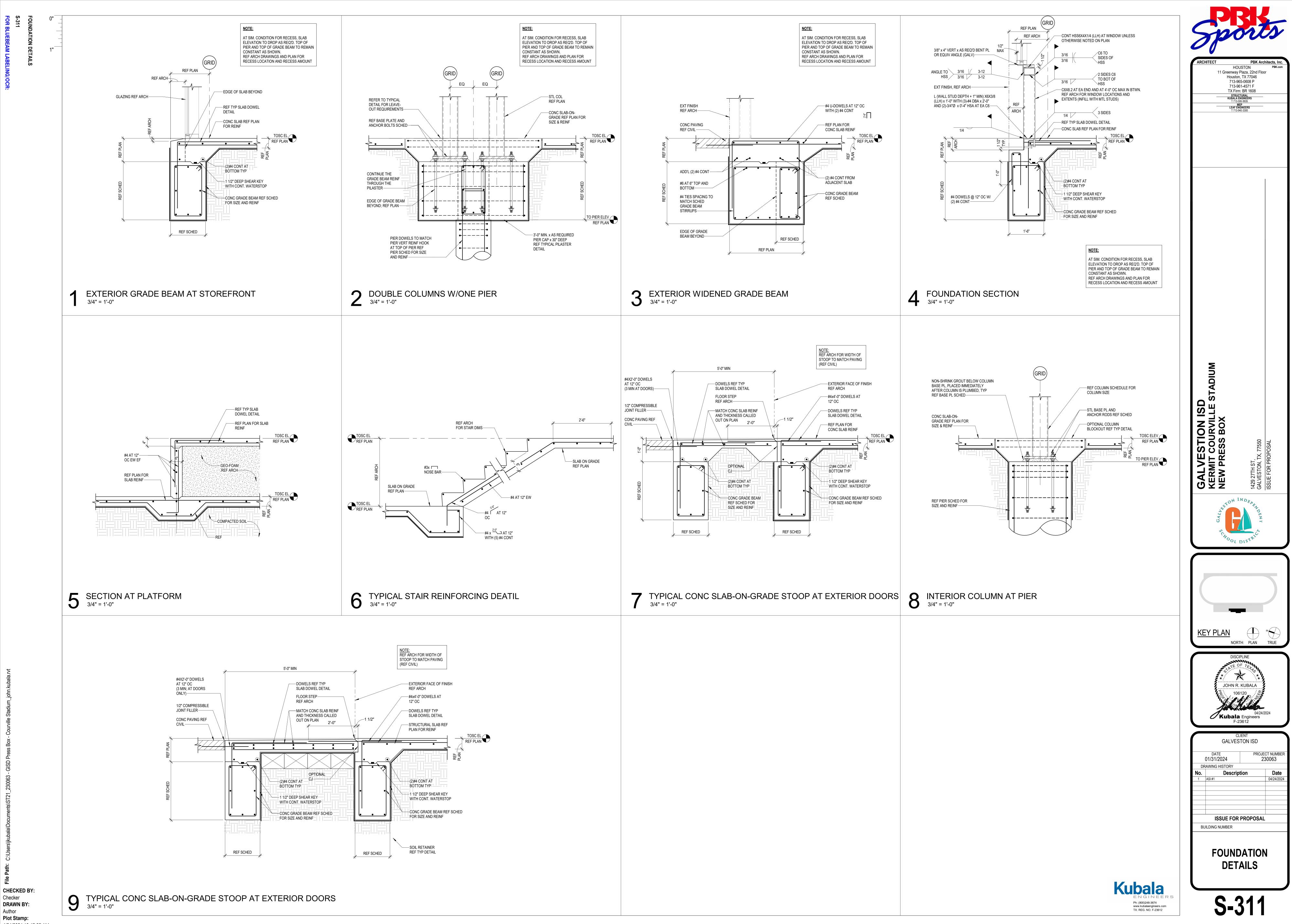
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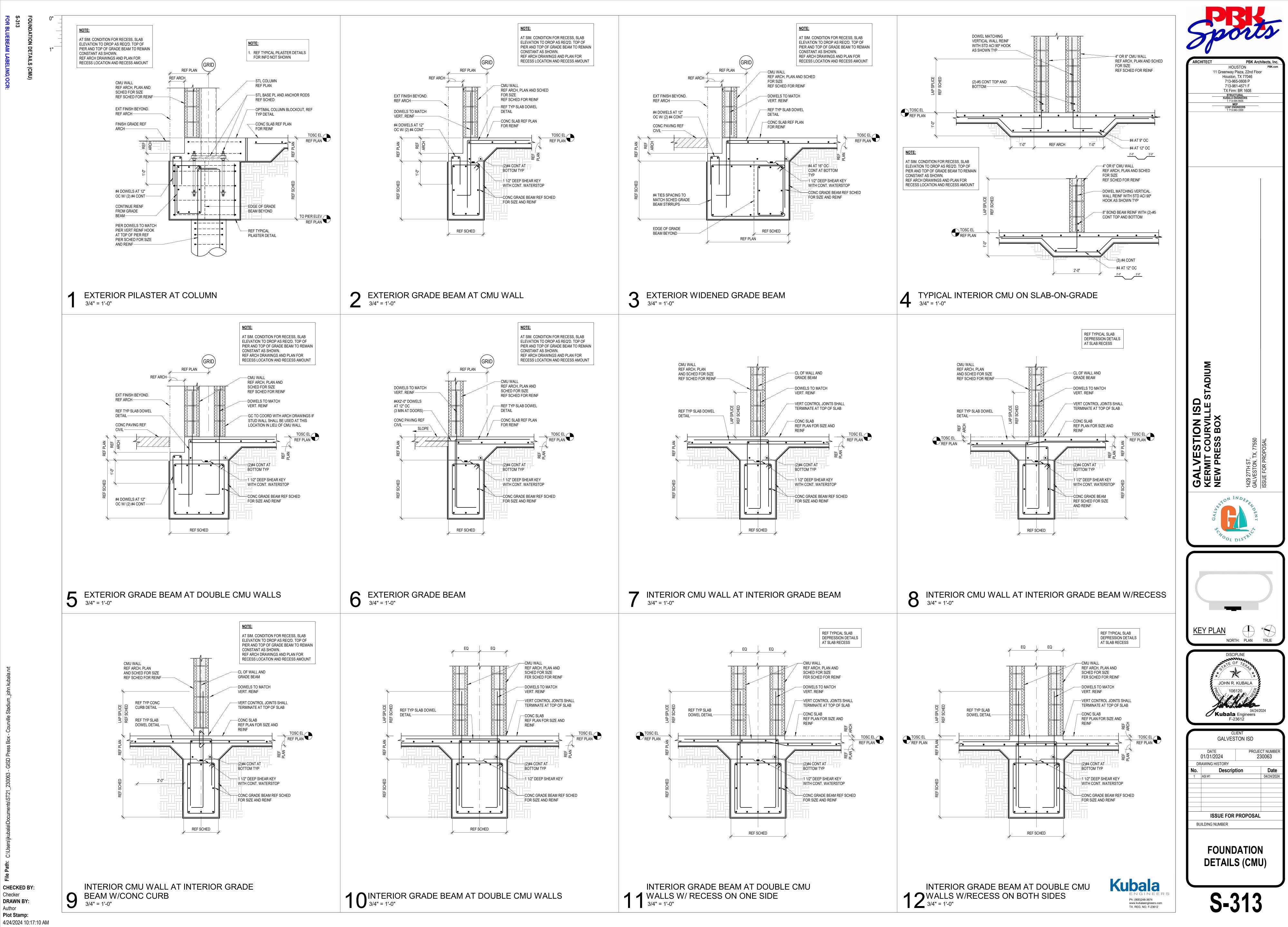


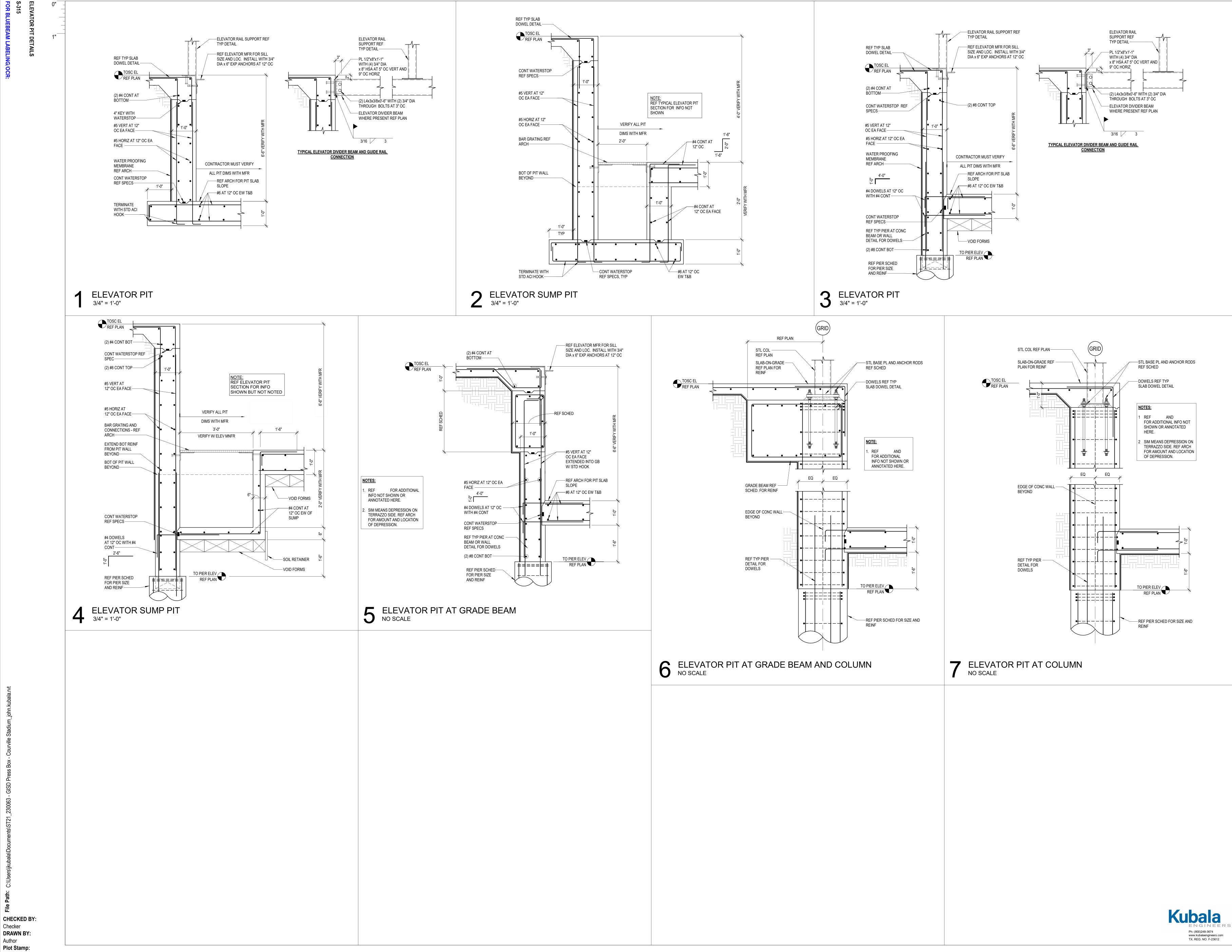


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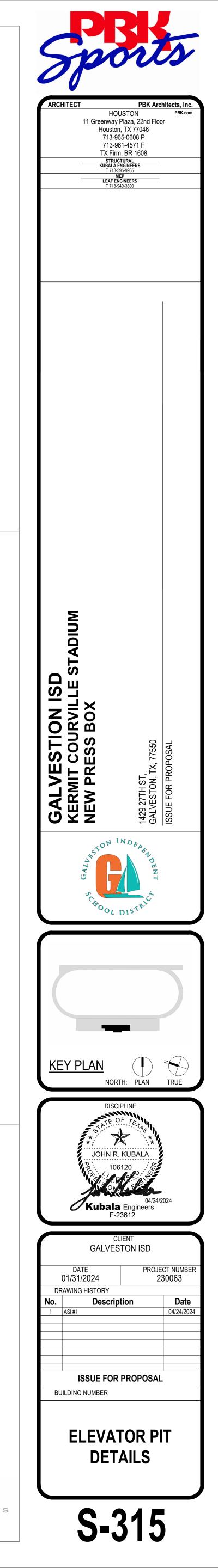


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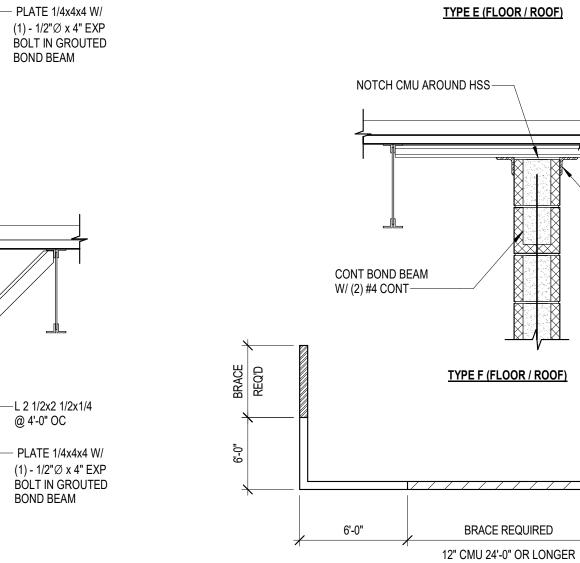
GENERAL S-400 FOR BLUE	0"	MASONRY:	
ENERAL CMU NOTES AND TYP E -400 OR BLUEBEAM LABELING/OCR:	 1"	<ol> <li>MASONRY TESTING SHALL CONSIST OF A QUALIFIED TESTING LABORATORY PROVIDING THE FOLLOWING SERVICES:         <ul> <li>A. OBSERVE THE INSTALLATION OF MASONRY UNITS.</li> <li>B. VERIFY THE QUANTITY, SIZE AND THE SPACING OF THE REQUIRED REINFORCING THAT IS SHOWN ON THE DRAWINGS.</li> <li>C. INSPECT THE GROUT SPACE PRIOR TO THE CLOSING OF CLEANOUTS AND ALL GROUTING OPERATIONS. VERIFY THAT THE SPECIFIED CELLS ARE FULLY GROUTED AS NOTED.</li> </ul> </li> </ol>	
) TYP DETAILS		D. MONITOR THE PROPORTIONING, MIXING AND CONSISTENCY OF MORTAR AND GROUT. PROVIDE 28 DAY COMPRESSIVE STRENGTH TESTS ON EACH GROUT MIX IN ACCORDANCE WITH ASTM C1019. PROVIDE COMPRESSION TESTS ON MASONRY PRISMS FOR EACH TYPE OF WALL CONSTRUCTION, IN ACCORDANCE WITH ASTM C1314. CONTRACTOR SHALL PREPARE ONE SET FOR TESTING AT 28 DAYS. TESTS ARE TO BE CONDUCTED FOR EACH 2000 SQUARE FEET OF WALL INSTALLED, BUT NOT LESS THAN TWO TESTS.	
ILS		MASONRY NOTES: MATERIALS:	
		<ol> <li>ALL CONCRETE MASONRY UNITS (CMU) SHALL SHALL CONFORM TO ASTM C90, TYPE 1, GRADE N, AND THE QUALITY CONTROL STANDARDS OF THE NATIONAL CONCRETE MASONRY UNITS SHALL BE LIGHTWEIGHT (LESS THAN 105 PCF, OVEN DRY UNIT WEIGHT).</li> <li>ALL CONCRETE MASONRY UNITS SHALL BE LIGHTWEIGHT (LESS THAN 105 PCF, OVEN DRY UNIT WEIGHT).</li> <li>ALL MASONRY UNITS SHALL HAVE A MAXIMUM LINEAR SHRINKAGE OF .06 OF 1% FROM THE SATURATED TO THE OVEN DRY CONDITION, WHEN TESTED WITH THE METHODS SET FORTH IN THE QUALITY CONTROL STANDARDS OF THE NATIONAL CONCRETE MASONRY ASSOCIATION.</li> <li>MASONRY UNITS SHALL HAVE CURED FOR NOT LESS THAN 28 DAYS WHEN PLACED IN THE STRUCTURE.</li> <li>COMPRESSIVE STRENGTHS:</li> <li>THE MINIMUM COMPRESSIVE STRENGTH OF MASONRY (fm) SHALL BE 2000 PSI AS DETERMINED BY THE UNIT STRENGTH METHOD OR BY THE PRISM TEST METHOD.</li> <li>ALL MASONRY UNITS SHALL HAVE A MINIMUM NET COMPRESSIVE STRENGTH OF 2500 PSI AND A MINIMUM NET TENSILE STRENGTH OF 125 PSI, WHEN TESTED IN</li> </ol>	
		ACCORDANCE WITH THE METHODS SET FORTH IN THE QUALITY CONTROL STANDARDS OF THE NATIONAL CONCRETE MASONRY ASSOCIATION. MORTAR: 1. UNLESS NOTED OTHERWISE, MORTAR SHALL CONFORM TO ASTM C270, TYPE 'S'. MORTAR SHALL BE FRESHLY PREPARED AND UNIFORMLY MIXED IN THE RATIO	
		<ul> <li>OF 1 PART PORTLAND CEMENT, 1/4 PART MINIMUM TO 1/2 PART MAXIMUM LIME PUTTY OR HYDRATED LIME, DAMP LOOSE SAND NOT LESS THAN 2-1/4 AND NOT MORE THAN 3 TIMES THE SUM OF THE VOLUMES OF THE CEMENT AND LIME USED.</li> <li>GROUT:</li> <li>1. GROUT FOR POURING SHALL BE OF FLUID CONSISTENCY AND MIXED IN THE RATIO BY VOLUMES, 1 PART PORTLAND CEMENT, 2 1/4 PARTS MINIMUM TO 3 PARTS MAXIMUM DAMP LOOSE SAND, 1 PART MINIMUM TO 2 PARTS MAXIMUM PEA GRAVEL, AND 0 TO 1/10 PART MAXIMUM HYDRATED LIME. GROUT SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI, WHEN TESTED IN ACCORDANCE WITH ASTM C476.</li> <li>2. GROUT FOR PUMPING SHALL BE OF FLUID CONSISTENCY AND SHALL HAVE NO LESS THAN 7 SACKS OF CEMENT IN EACH CUBIC YARD OF GROUT. SUBMIT THE MIX FOR APPROVAL.</li> </ul>	NO SCAL
		<ol> <li>ALL CELLS WITH REINFORCING BARS SHALL BE GROUTED SOLID.</li> <li>ALL CELLS THAT WILL HAVE DRILLED EXPANSION ANCHORS, EMBEDDED HEADED STUDS OR OTHER EMBEDDED ANCHORS MUST BE GROUTED SOLID.</li> </ol>	
		REINFORCEMENT: 1. PROVIDE HORIZONTAL JOINT REINFORCING (TRUSS OR LADDER TYPE, 9 GAGE) AT 16" OC VERTICALLY AT ALL CMU WALLS. PROVIDE PRE-FAB WIRE TIES AT ALL CORNERS AND INTERSECTIONS AT 16" O.C. REINFORCEMENT SHALL CONFORM TO ASTM A82 WITH A MINIMUM YIELD STRENGTH OF 60,000 PSI, AND SHALL BE HOT DIPPED GALVANIZED.	
		<ol> <li>OPENINGS IN MASONRY WALLS SHALL HAVE EITHER MASONRY OR STEEL LINTELS AS SHOWN ON THE DRAWINGS. ALL HORIZONTAL REINFORCING IN BOND BEAMS AND LINTEL BLOCKSSHALL BE CONTINUOUS, AND GROUTED SOLID. WHEN NO LINTEL IS DETAILED, A MINIMUM OF (2) #4 BARS IN A LINTEL BLOCK SHALL BE INSTALLED. THE BARS SHALL EXTEND A MINIMUM OF EIGHT INCHES BEYOND THE EDGE OF THE OPENING, AND EACH JAMB SHALL BE GROUTED SOLID FOR A DISTANCE OF EIGHT INCHES WITH (2) #5 VERTICAL MINIMUM. STEEL LINTELS SHALL BEAR 8" MINIMUM AT EACH END. PROVIDE VERTICAL CONTROL JOINTS AT THE ENDS OF ANY STEEL LINTEL, UNLESS 15# FELT OR FLASHING IS PROVIDED AT THE TOP AND BOTTOM OF THE LINTEL ANGLE WHERE THE ANGLE BEARS ON BRICK.</li> <li>LINTEL BLOCKS SHALL BE "U" SHAPED UNITS WITH SOLID BOTTOMS AND ARE TO BE USED OVER WINDOW AND DOOR OPENINGS. BOND BEAM BLOCKS SHALL BE</li> </ol>	
		<ul> <li>OPEN BOTTOM UNITS AND ARE TO BE USED AT THE TOPS OF WALLS AND AT THE MID-HEIGHT, UNLESS THE WALL HEIGHT EXCEEDS 16 FEET, IN WHICH BOND BEAMS SHALL BE PROVIDED 8'-0" ON CENTER VERTICALLY MAXIMUM, UNLESS SHOWN OTHERWISE ON THE DRAWINGS. PROVIDE (2) #4 BARS IN A SOLID GROUTED BOND BEAM UNLESS NOTED OTHERWISE. LINTEL BLOCKS SHALL NOT BE USED IN PLACE OF BOND BEAM BLOCKS.</li> <li>4. ALL MASONRY TIES TO BACKUP STRUCTURE SHALL BE HOT DIP GALVANIZED. UNLESS OTHERWISE NOTED ON THE DRAWINGS, PROVIDE HECKMANN NO. 315 ANCHOR WITH NO. 316 TRIANGULAR TIE ON COLUMNS AT 16" ON CENTER VERTICALLY AND A HECKMANN NO. 357 ANCHOR ON ALL BEAMS AT 16" ON CENTER VERTICALLY AND A HECKMANN NO. 315-C SCREW ON ANCHOR STRAP</li> </ul>	
		<ul> <li>SPACED 16" ON CENTER HORIZONTALLY VERTICALLY. AT WALL CORNERS, INTERSECTIONS AND OPENINGS, PROVIDE TWO VERTICAL ROWS OF ANCHORS SPACED 16" APART AND 16" ON CENTER VERTICALLY. TRIANGULAR TIES SHALL EXTEND 3/4" FROM FACE OF MASONRY. ANCHOR STRAPS SHALL BE ATTACHED TO METAL STUDS WITH TWO (2) #10-16x1 1/2" CADMIUM PLATED SHEET METAL SCREWS.</li> <li>5. AT FREE VERTICAL EDGES OF WALLS, AND AT THE FIRST CELL EACH SIDE OF CONTROL JOINTS, PROVIDE (1) VERTICAL IN GROUT FILLED END CORES. THE VERTICAL REINFORCING SHALL MATCH TYPICAL VERTICAL WALL REINFORCING UNLESS NOTED OTHERWISE, AND SHALL EXTEND TO THE TOP OF THE WALL.</li> </ul>	
		<ul> <li>6. UNLESS OTHERWISE SHOWN ON THE DRAWINGS, PROVIDE A MINIMUM OF #4 VERTICAL BARS AND DOWELS IN FULLY GROUTED CELLS AT 48" O.C.</li> <li>7. ALL BAR REINFORCING SHALL BE LAPPED AS FOLLOWS:         <ul> <li>#3 LAP SPLICE LENGTH = 19 INCHES</li> <li>* #3 LAP SPLICE LENGTH = 19 INCHES</li> </ul> </li> </ul>	
		<ul> <li>#4 LAP SPLICE LENGTH = 34 INCHES</li> <li>#5 LAP SPLICE LENGTH = 45 INCHES</li> <li>#6 LAP SPLICE LENGTH = 54 INCHES</li> <li>#7 LAP SPLICE LENGTH = 63 INCHES</li> <li>#8 LAP SPLICE LENGTH = 72 INCHES</li> <li>#9 LAP SPLICE LENGTH = 82 INCHES</li> <li>INCREASE LAP SPLICE LENGTHS BY 50% FOR EPOXY COATED REINFORCING</li> </ul>	
		<ol> <li>MISCELLANEOUS:</li> <li>ALL MASONRY DESIGN IS BASED ON CHAPTER 21 OF INTERNATIONAL BUILDING CODE, LATEST EDITION AND ACI 530, LATEST EDITION.</li> <li>SEE TYPICAL DETAILS FOR INTERIOR WALL BRACING, AND REINFORCING REQUIREMENTS.</li> <li>UNLESS NOTED OTHERWISE PER PLANS, SPECS OR DETAILS, MASONRY WALLS SHALL HAVE VERTICAL CONTROL JOINTS PER NCMA GUIDELINES TEK 10-2C AS FOLLOWS:</li> </ol>	
		<ul> <li>AT APPROXIMATELY SIXTEEN FEET ON CENTER</li> <li>CORNERS-AT A MAXIMUM DISTANCE NOT TO EXCEED ONE-HALF THE REQUIRED MAXIMUM DISTANCE</li> <li>BETWEEN MAIN AND INTERSECTING WALLS</li> <li>CHANGES IN WALL HEIGHTS</li> <li>ADJACENT TO LINTELS AND THROUGH OPENINGS IF NOT CROSSING VERTICAL REINFORCEMENT</li> </ul>	
		<ul> <li>AT PILASTERS AND CHANGES IN WALL THICKNESS</li> <li>ALL JOINT LOCATIONS SHALL BE COORDINATED WITH THE ARCHITECT.</li> <li>4. UNLESS NOTED OTHERWISE PER PLANS, SPECS OR DETAILS, BRICK VENEER CONTROL JOINTS SHALL BE PER BIA GUIDELINES-TECHNICAL NOTE 18A.</li> <li>WITHOUT OPENINGS. SPACE NO MORE THAN 25 FT</li> </ul>	
		<ul> <li>WITHOUT OPENINGS, SPACE NO MORE THAN 25 FT</li> <li>WITH MULTIPLE OPENINGS, SPACE NO MORE THAN 20 FT</li> <li>AT OR NEAR CORNERS</li> <li>AT OFFSETS AND SETBACKS</li> <li>AT WALL INTERSECTIONS</li> <li>AT CHANGES IN WALL HEIGHTS</li> <li>AT WALL BACKING SYSTEM CHANGES (CMU TO DRYWALL)</li> <li>AT SUPPORT CHANGES (CONCRETE TO STEEL)</li> </ul>	
		AT WALL FUNCTION OR CLIMATIC EXPOSURE CHANGES (INTERIOR TO EXTERIOR) 5. GROUT LIFT LIMITS     GROUT POURS SHALL NOT EXCEED 5 FEET PER LIFT WHEN GROUTING THE CELLS OF REINFORCED CMU, UNLESS	
ž		CLEANOUTS ARE PROVIDED IN THE BOTTOM COURSE OF EACH 5 FOOT SECTION. • GROUT POURS SHALL NOT EXCEED 24 FEET WHEN GROUTING THE CELLS OF HOLLOW CMU. WHEN GROUTING THE SPACE BETWEEN MULTI-WYTHE WALLS, THE TOTAL POUR SHALL NOT EXCEED 24 FEET FOR 3" SPACES, 12 FEET FOR 2 1/2" SPACES, AND 5 FEET FOR 2" SPACES. • MECHANICALLY VIBRATE ALL LIFTS IN EXCESS OF 1 FOOT. • ALL GROUT MUST BE PLACED WITHIN 1 1/2 HOURS FROM INTRODUCING WATER INTO THE MIXTURE.	
Courville Stadium_john.kubala.rvt		· GROUT LIFTS SHALL NOT BE STOPPED WITHIN 1 1/2" OF BED JOINT. · ALL CMU WALLS LOCATED ADJACENT TO EARTH FILL MUST BE FULLY GROUTED DIRECTLY ADJACENT TO, AND AT EAST 8" ABOVE, ALL SOIL IN CONTACT WITH THE WALL.	
GISD Press Box -		TYP 3" MIN 3" MIN -2" THICK X 8" TALL SOAP COURSES OF CMU	
C:\Users\jkubala\Documents\ST21_230063 -		1" THICK BEARING PLATE x 1'-0" MIN LENGTH ON 1" NON SHRINK GROUT WITH (4) 5/8" DIA x 1'-0" EMBEDMENT H.S.A.	
File Path: C:\Users\jkubal		AT THE FIRST TWO FULL CMU COURSES BELOW THE BEAM BEARING PROVIDE A 16" DEEP(MIN) x CONT. LINTEL / BOND BEAM COMPRISED OR (2) - # 5 BARS TOP AND BOTTOM AND #3 TIES AT 8" OC. ALL CELLS TO BE GROUTED. HOOK EA END OF TOP AND BOT BARS. AT ENDS OF WALL. GROUT ALL VERT CELLS BELOW BOND BEAM WITH TYP VERT BAR IN EACH CELL. EXTEND REINFORCED CELLS EA SIDE OF BEAM TO TOP OF WALL AS TYPICAL	
CHECKED BY Checker DRAWN BY:	:	T STEEL BEAM BEARING ON MASONRY WALL 3/4" = 1'-0"	5 TYPIC NO SCAL

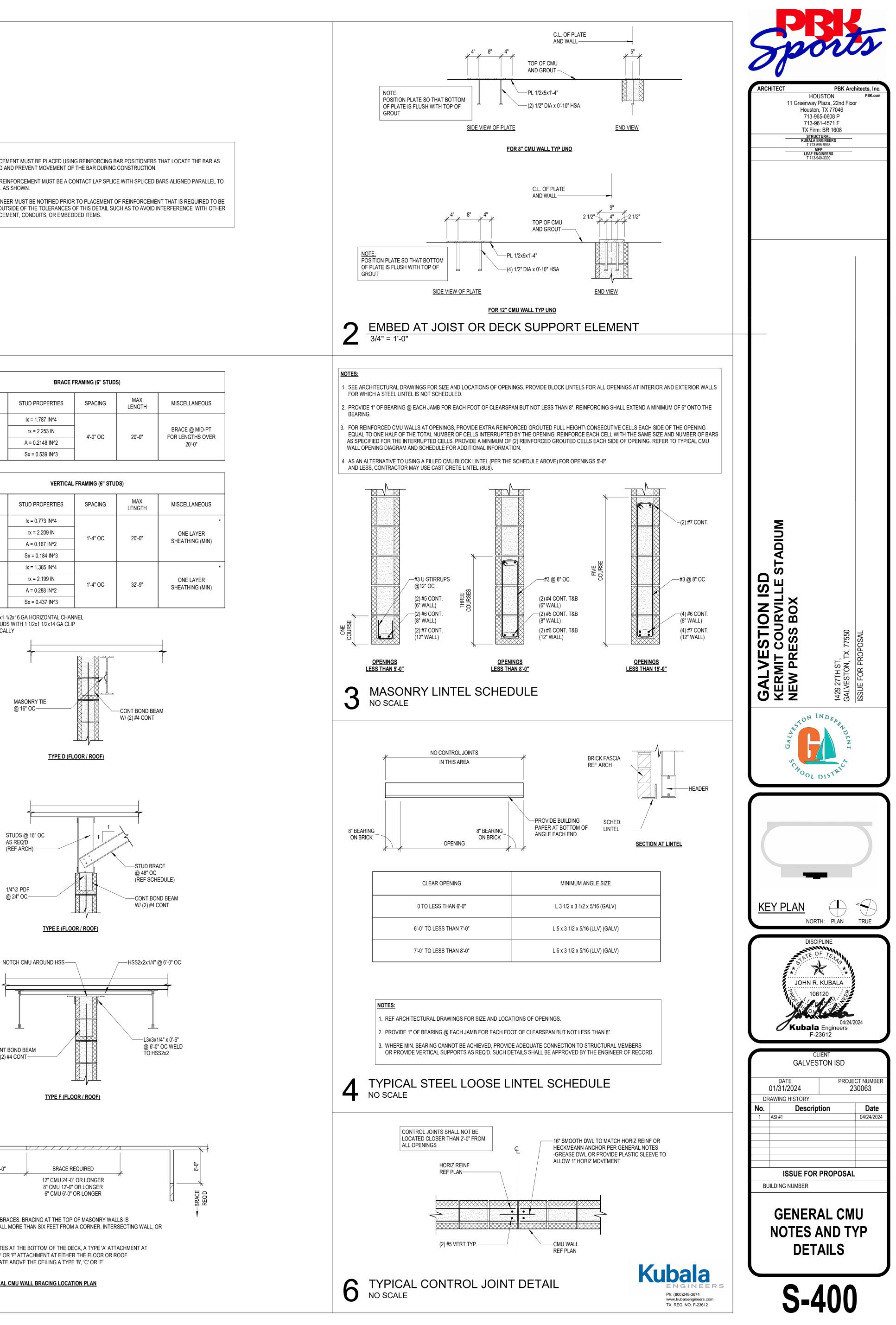
DRAWN I Author Plot Stamp: 4/24/2024 10:17:17 AM CONT BOND BEAM

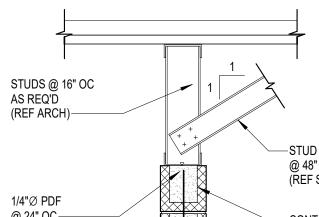
W/ (2) #4 CONT-

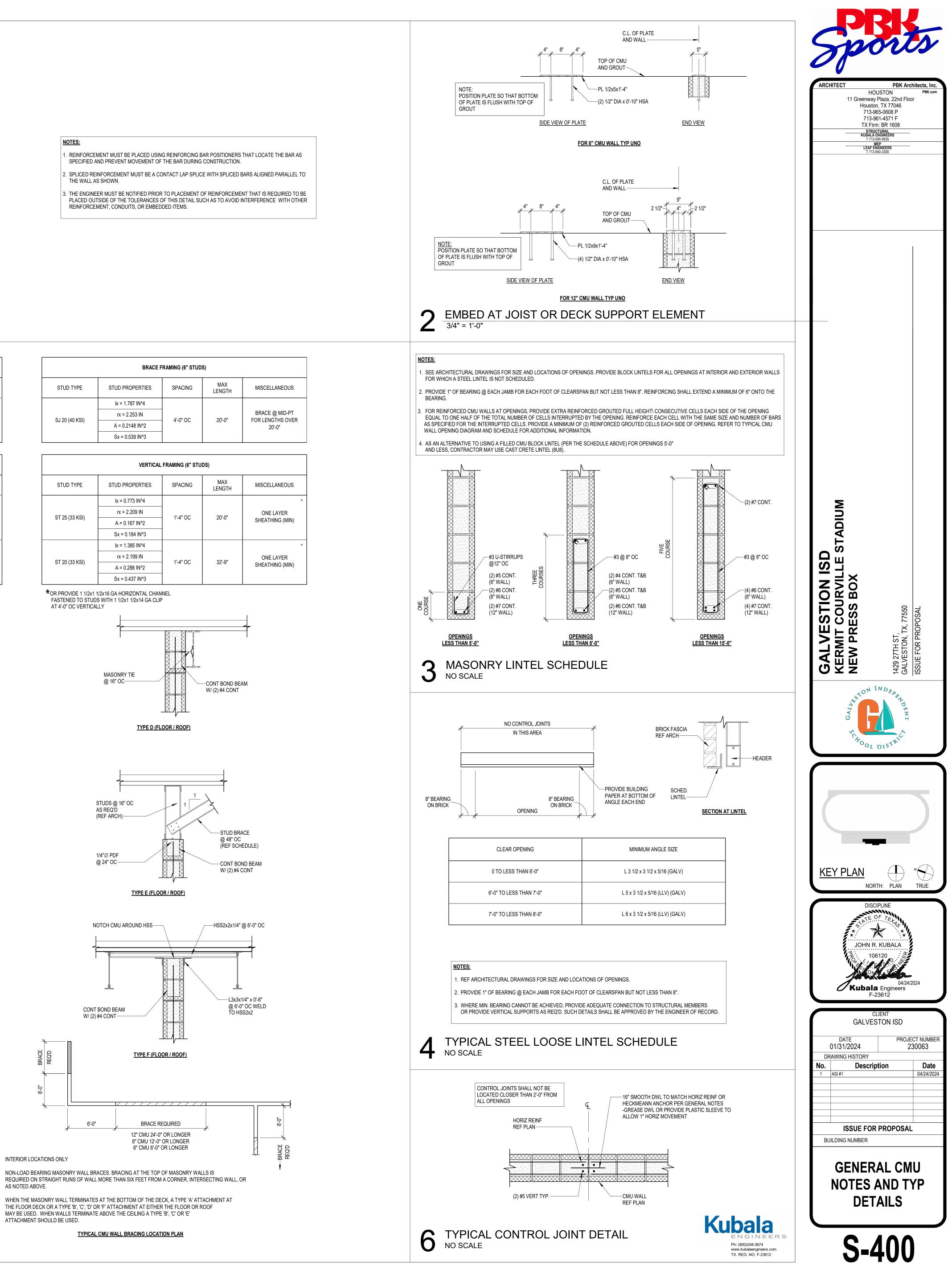
WHEN THE MASONRY WALL TERMINATES AT THE BOTTOM OF THE DECK, A TYPE 'A' ATTACHMENT AT THE FLOOR DECK OR A TYPE 'B', 'C', 'D' OR 'F' ATTACHMENT AT EITHER THE FLOOR OR ROOF MAY BE USED. WHEN WALLS TERMINATE ABOVE THE CEILING A TYPE 'B', 'C' OR 'E'

NON-LOAD BEARING MASONRY WALL BRACES. BRACING AT THE TOP OF MASONRY WALLS IS REQUIRED ON STRAIGHT RUNS OF WALL MORE THAN SIX FEET FROM A CORNER, INTERSECTING WALL, OR AS NOTED ABOVE.









CAL CMU VERTICAL BAR PLACEMENT

STUD PROPERTIES

lx = 0.541 IN^4

rx = 1.429 IN

A = 0.2136 IN^2

Sx = 0.273 IN^3

STUD PROPERTIES

lx = 0.239 IN^4

rx = 1.415 IN

A = 0.123 IN^2

Sx = 0.113 IN^3

lx = 0.414 IN^4

rx = 1.407 IN

A = 0.210 IN^2

Sx = 0.213 IN^3

\*OR PROVIDE 1 1/2x1 1/2x16 GA HORIZONTAL CHANNEL FASTENED TO STUDS WITH 1 1/2x1 1/2x14 GA CLIP

CONT BOND BEAM

SEE ARCH FOR

TOP OF BLOCK-

CONT BOND BEAM

W/ (2) #4 CONT-

W/ (2) #4 CONT-

STUD TYPE

SJ 20 (40 KSI)

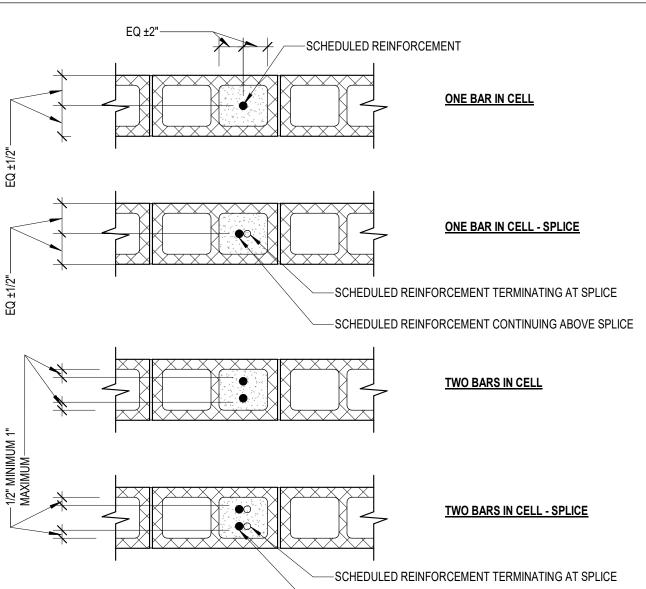
STUD TYPE

ST 25 (33 KSI)

ST 20 (33 KSI)

AT 4'-0" OC VERTICALLY

MAX SLOPE-



-SCHEDULED REINFORCEMENT CONTINUING ABOVE SPLICE

MAX

LENGTH

14'-0"

MAX

LENGTH

16'-9"

22'-6"

-L3x3x1/4" x 0'-6" @ 6'-0" OC WITH

EA ANGLE

(2) - 1/4"Ø EXP BOLTS

—L 2 1/2x2 1/2x1/4

@ 4'-0" OC

MISCELLANEOUS

BRACE @ MID-PT

FOR LENGTHS OVER

14'-0"

MISCELLANEOUS

ONE LAYER

SHEATHING (MIN)

ONE LAYER

SHEATHING (MIN)

BRACE FRAMING (3 5/8" STUDS)

SPACING

4'-0" OC

VERTICAL FRAMING (3 5/8" STUDS)

SPACING

1'-4" OC

1'-4" OC

TYPE A (FLOOR)

CONT L3x3x1/4

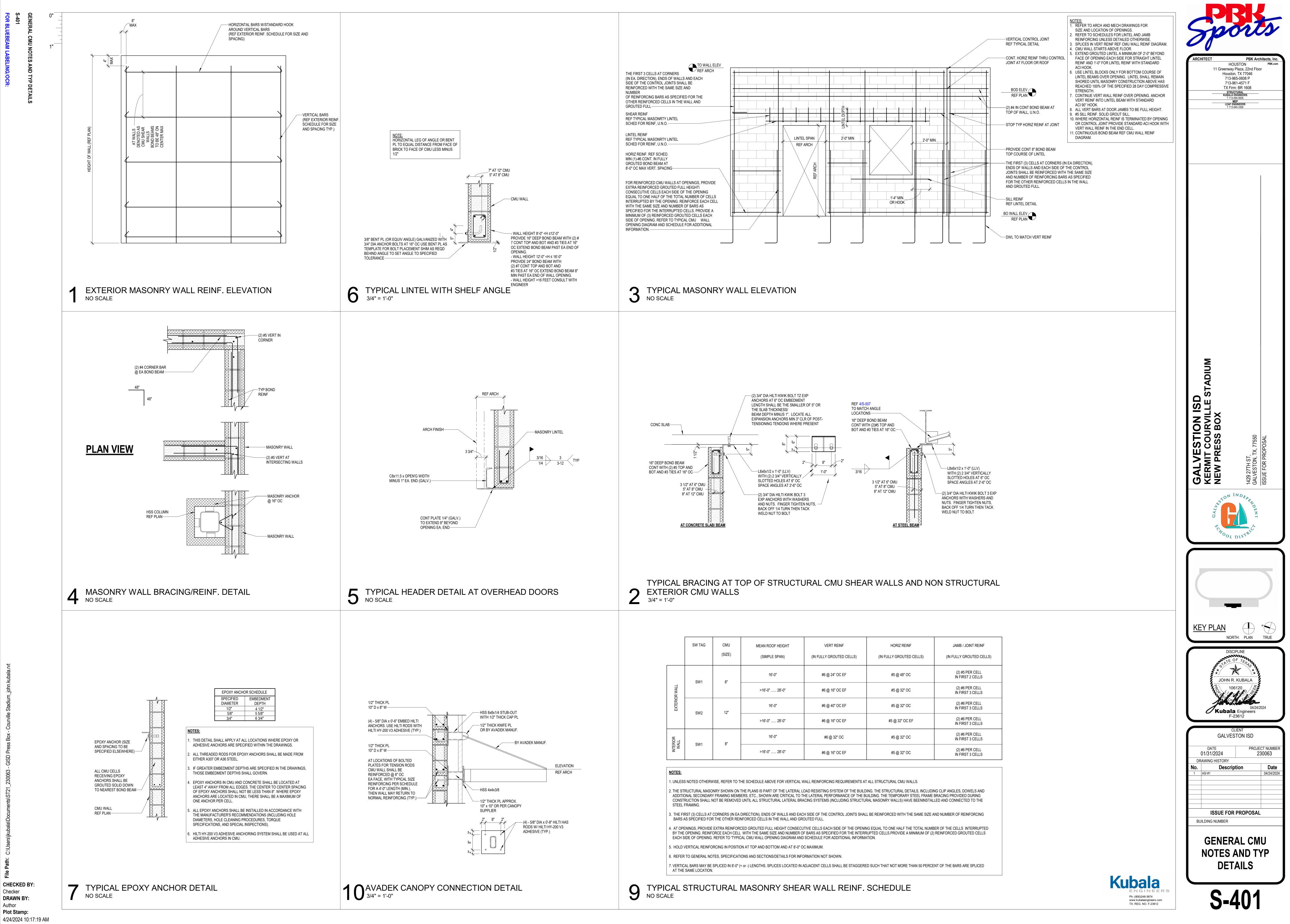
-REF ARCH FOR

TOP OF BLOCK

(TYP)-----

TYPE B (FLOOR / ROOF)

TYPE C (FLOOR / ROOF)



OF HEIGHT	VERT REINF	HORIZ REINF	JAMB / JOINT REINF
E SPAN)	(IN FULLY GROUTED CELLS)	(IN FULLY GROUTED CELLS)	(IN FULLY GROUTED CELLS)
6'-0"	#6 @ 24" OC EF	#5 @ 48" OC	(2) #5 PER CELL IN FIRST 2 CELLS
28'-0"	#6 @ 16" OC EF	#5 @ 32" OC	(2) #6 PER CELL IN FIRST 3 CELLS
6'-0"	#6 @ 40" OC EF	#5 @ 32" OC	(2) #6 PER CELL IN FIRST 3 CELLS
28'-0"	#6 @ 16" OC EF	#5 @ 32" OC EF	(2) #6 PER CELL IN FIRST 3 CELLS
5'-0"	#6 @ 32" OC	#5 @ 32" OC	(2) #6 PER CELL IN FIRST 3 CELLS
28'-0"	#6 @ 16" OC EF	#5 @ 32" OC	(2) #6 PER CELL IN FIRST 3 CELLS

# **STRUCTURAL STEEL:**

- MATERIAL: 1. STRUCTURAL STEEL IS TO CONFORM TO THE FOLLOWING ASTM SPECIFICATIONS, AND IS TO BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AISC SPECIFICATIONS:
- A. STEEL WIDE FLANGE AND WT SECTIONS .... ... ASTM A992 OR ASTM A572 - GRADE 50 B. MISCELLANEOUS STEEL SECTIONS (ANGLES, CHANNELS AND BARS)..... .....ASTM A36 ... ASTM A500, GRADE B OR C, (46 KSI MIN) C. HOLLOW STEEL SECTIONS .. D. STEEL PIPE SECTIONS... .. ASTM A53, GRADE B E. BOLTS AND NUTS (HEAVY-HEX).. ....ASTM A325 F. SHEAR-STUD CONNECTORS... ...ASTM A108 ....ASTM F1554, GRADE 36, GRADE 55 OR GRADE 105 G. ANCHOR RODS..
- 2. ALL STEEL SHALL BE DOMESTICALLY (INCLUDING CANADA) MILLED AND FABRICATED. FOREIGN STEEL SHALL NOT BE UTILIZED WITHOUT PRIOR APPROVAL FROM THE STRUCTURAL ENGINEER. THE APPROVAL PROCESS SHALL TAKE PLACE DURING BIDDING TIME. ANY REQUEST TO UTILIZE FOREIGN STEEL MADE AFTER BIDDING SHALL BE REJECTED.

...ASTM F436

...ASTM A36 OR A572 GRADE 50

- 3. STRUCTURAL STEEL, MISCELLANEOUS METAL, AND EMBEDS EXPOSED TO THE EXTERIOR ARE TO BE HOT DIP GALVANIZED AFTER FABRICATION, EXCEPT AS NOTED ON THE DRAWINGS. TUBE SHAPE MEMBERS
- EXPOSED TO THE EXTERIOR SHALL HAVE CAP PLATES SEAL WELDED, UNLESS NOTED OTHERWISE ON THE DRAWINGS. 4. STRUCTURAL STEEL IS TO BE PREPARED AND PRIMED ACCORDING TO THE PROJECT SPECIFICATIONS. STRUCTURAL STEEL LOCATED IN CRAWL SPACES OR OTHERWISE INACCESSIBLE AREAS IS TO RECEIVE 2 COATS OF PRIMER.
- 5. CONTINUITY PLATES (FULL DEPTH COLUMN STIFFENERS ALIGNED WITH BEAM FLANGES, OR FULL DEPTH BEAM STIFFENERS ALIGNED WITH COLUMN FLANGES) SHALL MATCH THE STEEL GRADE OF THE BASE
- MEMBER. 6. IN ADDITION TO THE STEEL INDICATED ON THE DRAWINGS, THE CONTRACTOR SHALL INCLUDE THREE (3) PERCENT OF TOTAL TONNAGE OF FABRICATED STEEL (LABOR FOR ERECTION SHALL BE INCLUDED) DURING THE PROCESS OF WORK AS MAY BE DIRECTED BY THE ARCHITECT/ENGINEER OF RECORD. IF STEEL IS NOT USED DURING THE COURSE OF THE PROJECT, OWNER IS TO RECEIVE A CREDIT FOR THE PORTION NOT USED.
- CONNECTIONS:

H. PLATES....

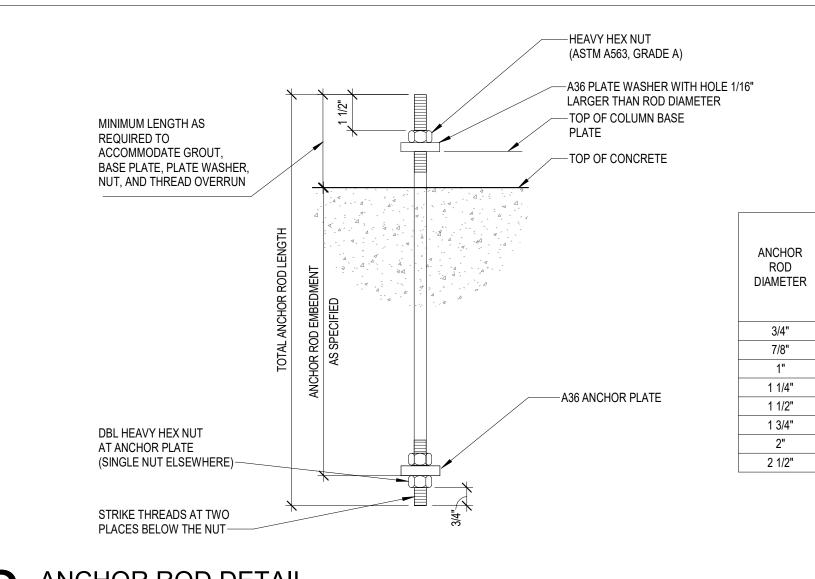
K. WASHERS..

- 1. ALL STRUCTURAL STEEL DETAILS AND CONNECTIONS SHALL CONFORM TO STANDARDS OF THE AISC. DOUBLE CONNECTIONS THROUGH COLUMN WEBS, BEAM TO BEAM CONNECTIONS AND BEAMS THAT FRAME OVER THE TOP OF COLUMNS REQUIRE A BEAM ERECTION SEAT OR A STAGGERED CONNECTION WITH AT LEAST ONE INSTALLED BOLT REMAINING IN PLACE TO SUPPORT THE FIRST BEAM WHILE THE SECOND BEAM IS BEING ERECTED.
- 2. CONNECTIONS THAT ARE NOT DETAILED ON THE DRAWINGS SHALL BE SELECTED FROM THE TABLES IN PART 10 OF THE LATEST EDITION OF THE MANUAL OF STEEL CONSTRUCTION OF THE AISC. TABLE 10-1 MAY BE USED FOR ALL-BOLTED DOUBLE ANGLE CONNECTIONS, TABLE 10-2 MAY BE USED FOR WELDED/BOLTED DOUBLE ANGLE CONNECTIONS, TABLE 10-3 MAY BE USED FOR ALL-WELDED DOUBLE ANGLE CONNECTIONS. BEAM REACTIONS SHALL BE ONE-HALF THE TOTAL ALLOWABLE UNIFORM LOAD GIVEN IN TABLE 3-6 THROUGH 3-9 IN PART 3 OF THE MANUALOF STEEL CONSTRUCTION OF AISC. CONNECTIONS FOR COMPOSITE BEAMS SHALL HAVE THE STANDARD AISC CAPACITY INCREASED BY 35 PERCENT.
- 3. PROVIDE ALL NECESSARY HOLES IN STRUCTURAL STEEL MEMBERS FOR ATTACHMENT OF ALL NON-STRUCTURAL ITEMS (IE: HOLES FOR WINDOW HEAD ANCHORS). SEE ARCHITECTURAL DRAWINGS FOR ANY REQUIREMENTS.
- 4. SPLICING OF STRUCTURAL STEEL MEMBERS MUST BE APPROVED BY THE STRUCTURAL ENGINEER, IF NOT ALREADY SHOWN ON THE DRAWINGS. 5. SHOP BOLTED CONNECTIONS ARE PERMISSIBLE IF SUFFICIENT BOLT CLEARANCE IS AVAILABLE FOR TIGHTENING OF HIGH STRENGTH BOLTS. CLEARANCES SHALL BE IN ACCORDANCE WITH TABLE 7-16 AND 7-17 OF
- THE LATEST EDITION OF THE MANUAL OF STEEL CONSTRUCTION OF THE AISC. ALL STEEL MEMBERSAND ASSEMBLIES SHALL BE SHOP FABRICATED TO THE GREATEST EXTENT POSSIBLE. TRUSSES SHALL BE FULLY SHOP ASSEMBLED. FIELD SPLICES FOR SHIPPING PURPOSES SHALL ONLY BE AS APPROVED BY THE ENGINEER OF RECORD. THE STEEL FABRICATOR AND THE STEEL ERECTOR SHALL COORDINATE THE SHOP FABRICATION, SHIPPING AND ERECTION OF ALL STRUCTURAL MEMBERS AND ASSEMBLIES. 6. ALL CONNECTION BOLTS FOR STRUCTURAL STEEL MEMBERS MUST CONFORM TO ASTM A325-N HIGH-STRENGTH BOLTS UNLESS NOTED OTHERWISE. MINIMUM SIZE SHALL BE 3/4 INCH DIAMETER. STRUCTURAL
- STEEL CONNECTIONS SHALL BE DESIGNED BY THE CONTRACTOR IN ACCORDANCE WITH THE MINIMUM REQUIREMENTS SPECIFIED ON S-503. BOLTS SHALL BE DIRECT TENSION INDICATING BOLTS CONFORMING TO ASTM F1852 WITH HARDENED WASHERS UNDER THE NUT AND SACRIFICIAL SPLINES. HEX NUTS MUST CONFORM TO ASTM A563 AND WASHERS MUST CONFORM TO ASTM F436. 7. ALL MOMENT CONNECTIONS SHALL BE FULL WELDED CONNECTIONS DESIGNED TO DEVELOP THE FULL CROSS-SECTION OF THE MEMBER. STIFFENER PLATES, WHERE SHOWN, ARE MANDATORY AND MAY NOT BE
- OMITTED. MOMENT CONNECTIONS ARE INDICATED ON THE PLANS BY A TRIANGULAR BULB ON THE END OF THE BEAM, OR BY THE LETTERS "MC". CANTILEVER BEAMS MOMENT CONNECTED TO THE FRAME SHALL BE THE SAME SIZE AS THE BACK-UP SPAN IF NO SIZE IS GIVEN. 8. WHERE HORIZONTAL FORCES ARE INDICATED ON PLAN AS "H=\_K", THE LICENSED PROFESSIONAL ENGINEER WORKING FOR THE FABRICATOR SHALL SIZE THE CONNECTION TO TRANSFER THE HORIZONTAL FORCE IN
- ADDITION TO THE REQUIRED VERTICAL REACTION. SLOTTED HOLES ARE NOT PERMITTED AT CONNECTIONS WITH HORIZONTAL FORCES. 9. EMBED PLATES TO BE INSTALLED IN THE FOUNDATION AND/OR SLAB SHALL BE SUBMITTED FOR REVIEW WITH THE ANCHOR BOLTS
- 10. BOLTS SHALL BE TIGHTENED BY THE AISC "SNUG TIGHT" METHOD UNLESS NOTED OTHERWISE
- 11. CANTILEVER BEAMS MOMENT CONNECTED TO THE FRAME SHALL BE THE SAME SIZE AS THE BACK-UP SPAN IF NO SIZE IS GIVEN.
- 12. SHELF ANGLES SHOWN AS CONTINUOUS IN THE SECTIONS SHALL BE INSTALLED IN 20'-0" MAXIMUM LENGTHS, LEAVING A 1/4" GAP BETWEEN ENDS AND AT CORNERS. LOCATE GAPS TO MATCH MASONRY CONTROL JOINTS. AT BUILDING EXPANSION JOINT, LEAVE A GAP TO MATCH EXPANSION JOINT WIDTH.
- 13. CONNECT MISCELLANEOUS STEEL MEMBERS USING FILLET WELDS SUFFICIENT TO DEVELOP THE TENSILE STRENGTH OF THE SMALLER MEMBER AT THE JOINT UNLESS SHOWN OTHERWISE.
- 14. STEEL MEMBERS SHOWN TO BE CURVED SHALL BE ROLLED IN A MANNER THAT WILL NOT CAUSE DISTORTION OR BUCKLING. SHOULD ALTERATIONS TO THE MEMBER SIZE, SUCH AS A THICKER FLANGE OR WEB, BE REQUIRED TO ENSURE THIS OUTCOME, THE ADDITIONAL STEEL SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE CONTRACT WELDING:
- 1. ALL WELDING MUST CONFORM TO THE AMERICAN WELDING SOCIETY ANSI/AWS D1.1 STANDARDS, AND SHALL CONFORM TO THE STANDARDS OF THE LATEST EDITION OF THE MANUAL OF STEEL CONSTRUCTION. ALL WELDERS MUST BE CERTIFIED IN ACCORDANCE WITH AWS D1.1. WELDING OF REINFORCING BARS SHALL COMPLY TO THE AMERICAN WELDING SOCIETY AWS D1.4. SHORT CIRCUIT TRANSFER FOR THE GAS METAL ARC WELDING PROCESS IS NOT PERMITTED.
- 2. ELECTRODES FOR ALL FIELD AND SHOP WELDING SHALL BE CLASS E70XX. ELECTRODES FOR MOMENT CONNECTIONS SHALL BE CLASS E7018 WITH A CHARPY TOUGHNESS OF AT LEAST 20 FT-LBS AT -20 DEGREES FAHRENHEIT.
- 3. ALL MISCELLANEOUS WELDS SHALL BE MINIMUM SIZE FILLET ALL AROUND AND MUST BE IN ACCORDANCE WITH AISC. WELDING OF CONTINUOUS MEMBERS SHALL BE A MINIMUM OF 2 INCHES OF 3/16 INCH FILLET STITCH WELDS AT 12 INCHES O.C., STAGGERED EACH SIDE, UNLESS SHOWN OTHERWISE ON THE DRAWINGS. COLUMN BASE PLATES, STIFFENER PLATES AND CAP PLATES SHALL BE WELDED ALL AROUND.
- 4. HEADED STUDS SHALL BE WELDED TO EMBED PLATES BY A METHOD IN WHICH THE CONNECTION CAN DEVELOP THE FULL TENSION AND SHEAR CAPACITY OF THE STUD.

# **BASE PLATE NOTES:**

- 1. ALL ANCHOR RODS SHALL BE F1554 GRADE 55 UNLESS NOTED OTHERWISE.
- 2. SIZE WELDS PER AISC MINIMUM FILLET REQUIREMENTS, 5/16" MINIMUM. 3. UNLESS NOTED OTHERWISE, ALL ANCHOR ROD NUTS SHALL BE TIGHTENED TO A "SNUG TIGHT" CONDITION AS DEFINED BY AISC AFTER THE CONCRETE IS AT LEAST 14 DAYS OLD.
- 4. USE OVERSIZED HOLES FOR ANCHOR RODS ACCORDING TO AMERICAN INSTITUTE OF STEEL CONSTRUCTION. PLATE WASHERS WITH STANDARD HOLES SHALL BE INSTALLED OVER OVERSIZED HOLES.
- 5. CONTRACTOR SHALL PROVIDE TEMPLATE FOR ANCHOR ROD INSTALLATION.
- 6. NON-SHRINK GROUT FOR BASE PLATES AND BEARING PLATES:

ALL GROUT USED UNDER STEEL COLUMN BASE PLATES OR BEARING PLATES SHALL BE A NON-METALLIC, SHRINKAGE RESISTANT COMPOUND CONFORMING TO ASTM C1090 AND THE CORPS OF ENGINEERS SPECIFICATION CRD-C-621. THE GROUT SHALL HAVE A MINIMUM STRENGTH OF 6,000 PSI WHEN BEARING ON 3,000 PSI CONCRETE OR LESS, A STRENGTH OF 8,000 PSI WHEN BEARING ON CONCRETE BETWEEN 3,000 AND 4,000 PSI, AND, UNLESS NOTED OTHERWISE ON THE DRAWINGS, A STRENGTH OF 8,000 PSI WHEN BEARING ON CONCRETE GREATER THAN 4,000 PSI. 100 PERCENT OF VOID UNDER ALL BASE PLATES IS TO BE GROUTED. ALL BASE PLATES WITH A DIMENSION GREATER THAN 24" SHALL HAVE TWO 1" DIAMETER GROUT HOLES. IF THE SPACE UNDER A COLUMN BASE PLATE IS LESS THAN 1/4", A PRESSURE INJECTION SYSTEM SHALL BE USED.





# **ANCHOR ROD DETAIL**

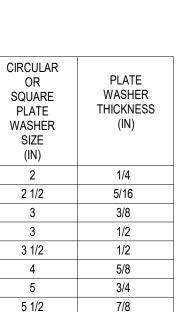
NO SCALE

GROUT THICKN	ESS SCHEDULE
ANCHOR BOLT SIZE (DIA.)	MINIMUM GROUT THICKNESS
LESS THAN 1 1/4"Ø	2"
GREATER THAN 1 1/4"Ø	3"

NOTES: . REFER TO SPECIFICATIONS AND GENERAL NOTES FOR GROUT REQUIREMENTS.

2. GROUT MAY BE BEVELED OR FORMED BUT SHALL EXTEND A MIN OF 1 1/2" BEYOND FACE OF BASE PLATE.





BASE

PLATE HOLE

DIAMETER

(IN)

1 5/16

1 9/16

1 13/16

2 1/16

2 5/16

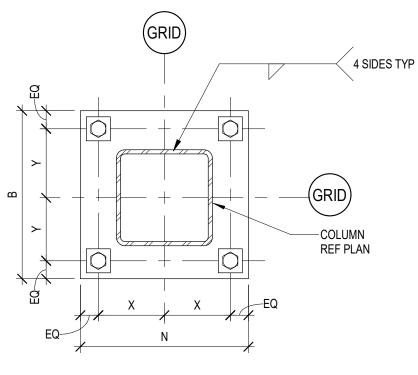
2 3/4

3 1/4

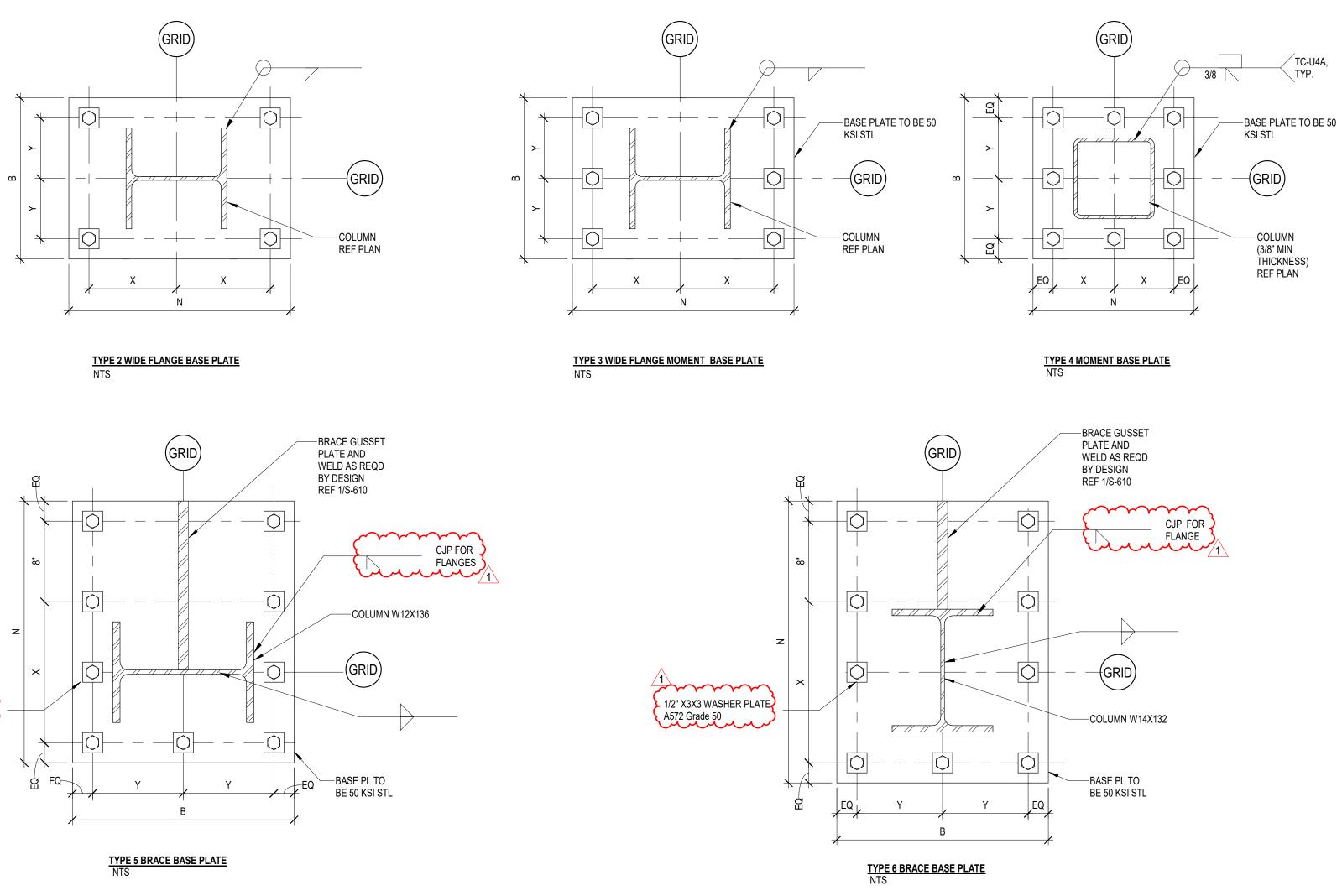
3 3/4

(IN)

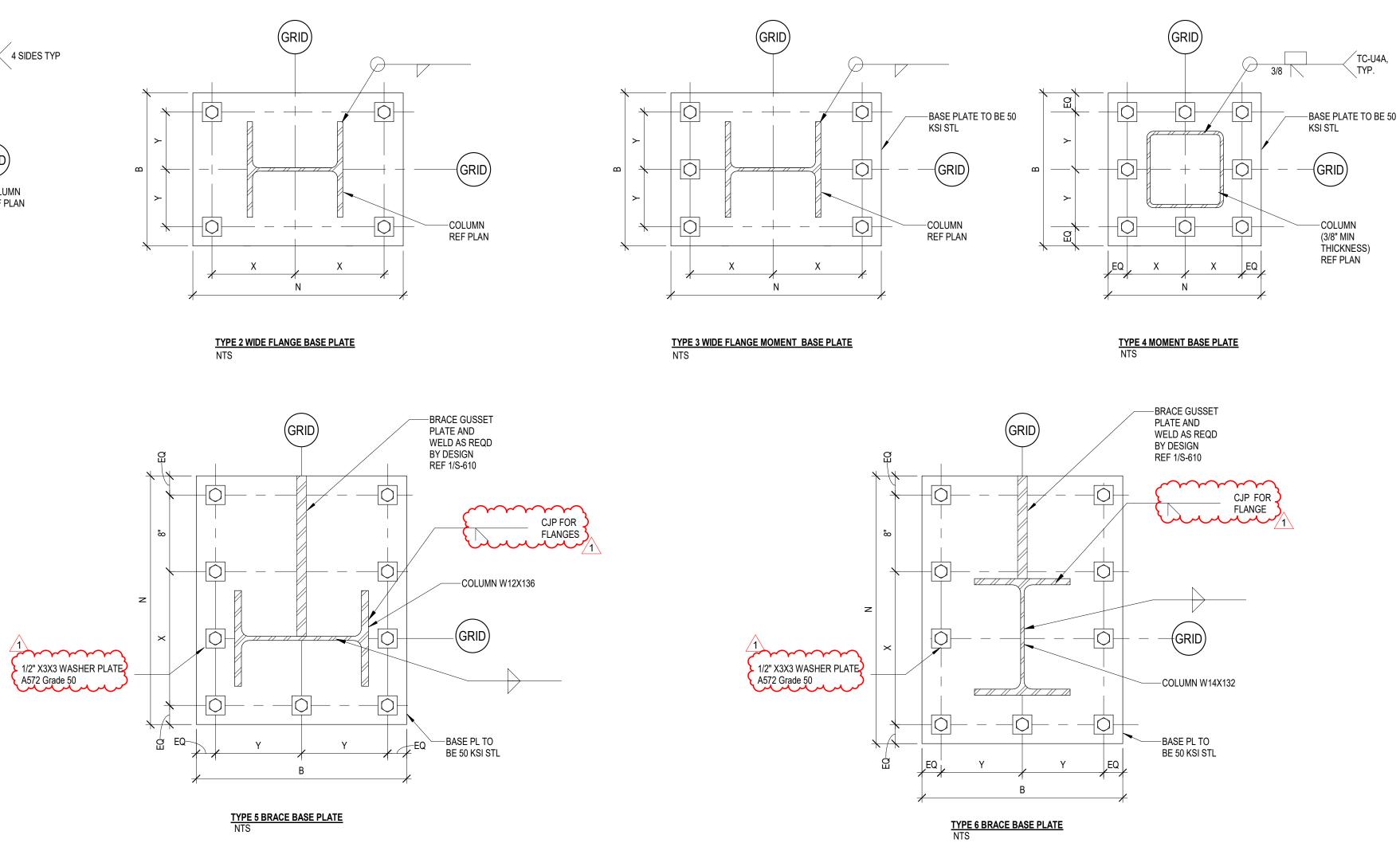
4



TYPE 1 HSS BASE PLATE







		BASE		BASE P	LATE DIMENS	IONS			ANC	IOR RODS		
ARK		PLATE TYPE	N LENGT H.(IN)	B WIDTH (IN)		X (IN)	Y (IN)	NUMBER	DIA (IN)	EMBED LENGTH (IN)	ANCHOR ROD GRADE	NOTES
- {	W14x132	6	32	24	2 3/4	19	9 1/2	9	1	18	55	BASE PLATE TO BE 50 KSI STEEL
- {	W12x136	5	26	22	2 3/4	14	9	9	1	18	55	BASE PLATE TO BE 50 KSI STEEL

## NOTES:

1. USE OVERSIZED HOLES FOR ANCHOR RODS ACCORDING TO AMERICAN INSTITUTE OF STEEL CONSTRUCTION.

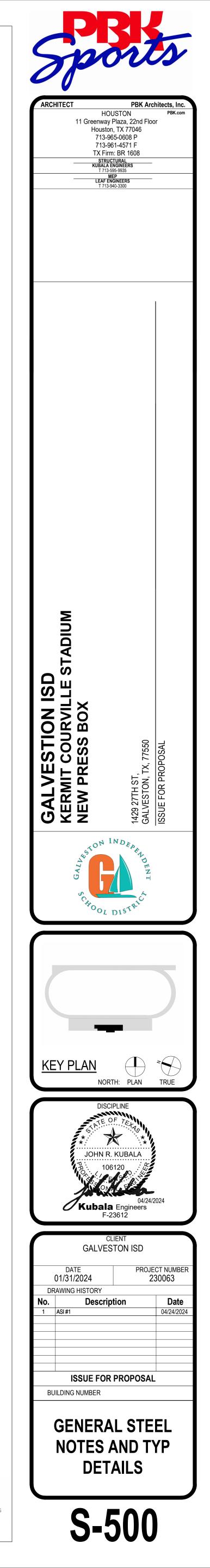
2. PLATE WASHERS WITH STANDARD HOLES SHALL BE INSTALLED OVER OVERSIZED HOLES.

3. CONTRACTOR SHALL PROVIDE TEMPLATE FOR ANCHOR ROD INSTALLATION.

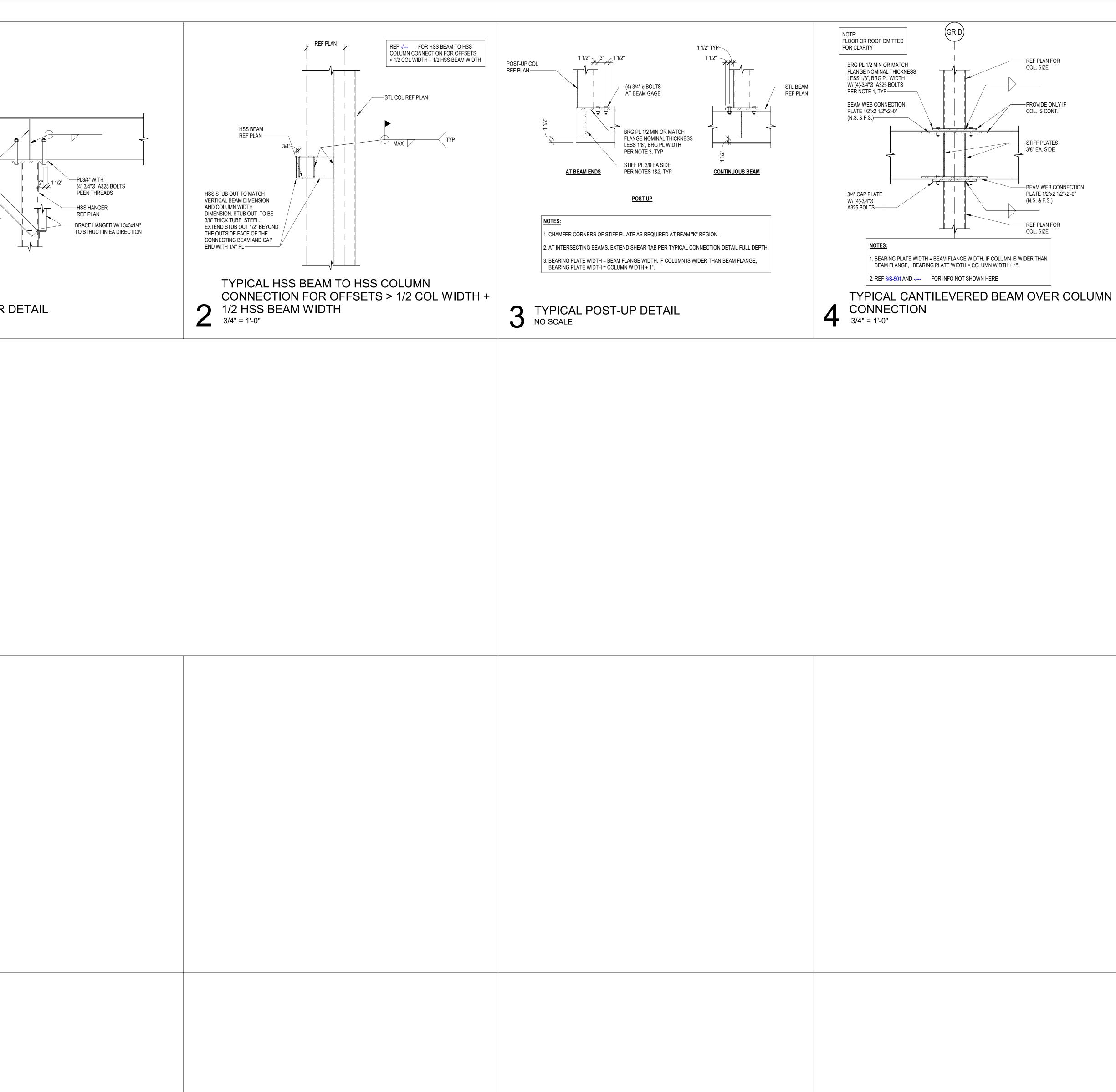
4. MINIMUM GROUT THICKNESS PER GROUT THICKNESS SCHEDULE.

5. SIZE WELDS PER AISC MINIMUM FILLET REQUIREMENTS, 5/16" MINIMUM.

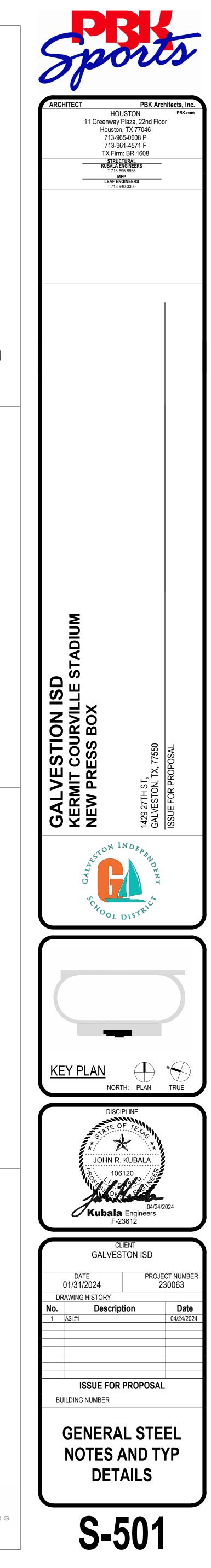


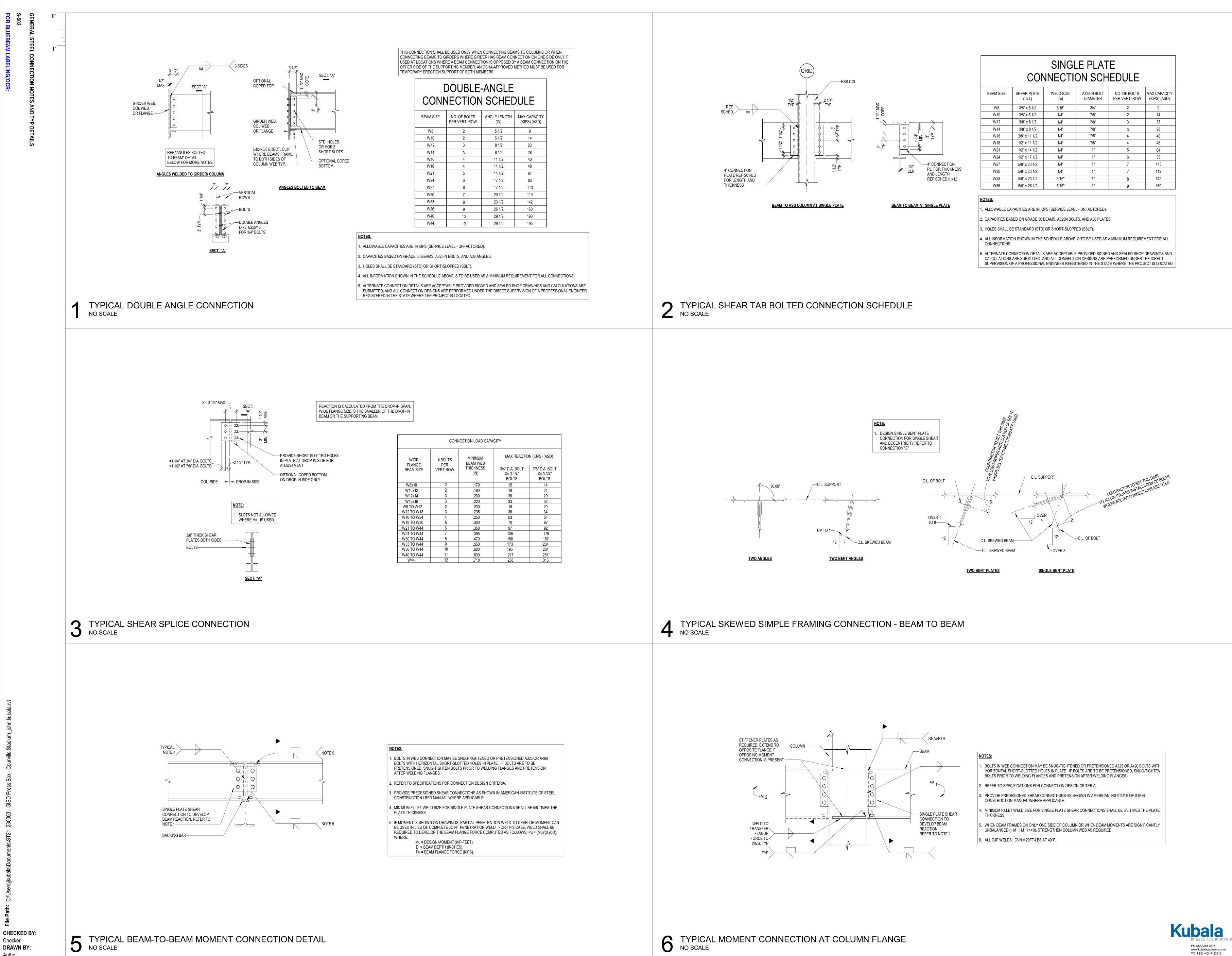


GENE S-501 FOR	0"	GENERAL INFO.:	
GENERAL STEEL NOTES AND TYF S-501 FOR BLUEBEAM LABELING/OCR:		<ol> <li>FOR ANY STEEL BEAM OR COLUMN THAT DOES NOT MEET THE MINIMUM SIZE REQUIRED, DUE TO THE U.L. DESIGN NUMBER (SELECTED BY THE ARCHITECT), THE THICKNESS OF THE SPRAYED FIRE PROTECTION MATERIAL MUST BE INCREASED AS REQUIRED BY THE FORMULA SHOWN IN THE U.L. FIRE RESISTANCE DIRECTORY (LATEST EDITION).</li> </ol>	
el notes M labeli	1"	<ol> <li>AT BRICK SUPPORT ANGLES, DURING CONSTRUCTION, THE BRICK SHALL BE INSTALLED WITHOUT SHORING THE SUPPORT ANGLE. SHORING THE BRICK DURING CONSTRUCTION CAN CAUSE HORIZONTAL BED JOINT CRACKING WHEN THE SHORES ARE REMOVED.</li> </ol>	
3 AND TYP DETAILS		3. HEADED ANCHORS/STUDS SHALL BE MANUFACTURED FROM COLD DRAWN MATERIALS PER ASTM A108. ANCHORS/STUDS SHALL BE OF GRADE 50 WITH SOLID FLUX FILLED HEADS. ANCHORS/STUDS STUDS SHALL BE AUTOMATICALLY END WELDED WITH IN ACCORDANCE WITH AWS D1.1. ANCHORS/STUDS FOR EMBEDDED PLATES AND OTHER ANCHORS SHALL BE SHOP WELDED. STUDS FOR COMPOSITE BEAMS MUST BE FIELD WELDED.	
DETAILS		4. AT BUILDINGS, WHERE SPLICED COLUMNS ARE REQUIRED, THE STEEL COLUMNS MUST BE SPLICED AT A MINIMUM OF 4'-0" ABOVE THE FINISH FLOOR. COLUMNS SHALL BE SPLICED AT EVERY OTHER LEVEL. AT WIDE FLANGE COLUMNS, PROVIDE HOLES IN THE WEBS FOR 3/4" DIAMETER SAFETY CABLES. AT TUBE OR PIPE COLUMNS, PROVIDE PLATES WITH HOLES WELDED TO THE COLUMNS FOR SAFETY CABLE CONNECTIONS. A L3x3x1/4 DECK SUPPORT ANGLE SHALL BE PROVIDED ON ALL SIDES OF THE COLUMN.	
		<ol> <li>ALL STRUCTURAL STEEL OUTSIDE OF THE BUILDING ENVELOPE SHALL BE HOT DIPPED GALVANIZED. WITH A MINIMUM ZINC COATING CLASS OF G90, MEETING THE REQUIREMENTS OF ASTM 123, AND SHALL BE APPLIED AFTER FABRICATION. ALL FIELD WELDS SHALL REQUIRED SHALL BE GROUND SMOOTH AND TOUCHED UP WITH A ZINC RICH PAINT.</li> <li>THE GENERAL CONTRACTOR AND HIS SUBCONTRACTORS SHALL COMPLY TO OSHA 29 CFR 1926 SUBPART R, SAFETY STANDARDS FOR STEEL ERECTION.</li> <li>THE DRAWINGS AND SPECIFICATIONS MAY NOT INDICATE OR DESCRIBE ALL OF THE WORK REQUIRED FOR THE</li> </ol>	STIFF PL TO MATCH WEB THICKNESS (TYP, 3/8" MIN)
		PERFORMANCE AND COMPLETION OF THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FABRICATION AND INSTALLATION OF ALL MISCELLANEOUS METAL ITEMS INDICATED, DESCRIBED, OR IMPLIED ON THE STRUCTURAL AND/OR THE ARCHITECTURAL DRAWINGS. MISCELLANEOUS STEEL ITEMS, WITHIN AN ASSEMBLY AND NOT ATTACHED TO THE STRUCTURE, ARE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND HIS SUBCONTRACTORS, WHETHER OR NOT THEY ARE SHOWN ON THE ARCHITECTURAL OR STRUCTURAL DRAWINGS. SUCH ASSEMBLIES INCLUDE, BUT ARE NOT LIMITED TO, EXTERIOR AND INTERIOR WALL ASSEMBLIES, CEILING ASSEMBLIES, PARTITION ASSEMBLIES, SHELF AND CABINET ASSEMBLIES AND ALL OTHER SIMILAR ASSEMBLIES. ANY MISCELLANEOUS METAL ITEMS INDICATED ON THE ARCHITECTURAL DRAWINGS AND NOT SHOWN ON STRUCTURAL DRAWINGS SHALL BE A MINIMUM OF L4x4x1/2", C7x9.8, 3/8" PLATE OR HSS4x4x3/8" UNLESS OTHERWISE APPROVED BY THE STRUCTURAL ENGINEER.	
		<ul> <li>8. THE GENERAL CONTRACTOR AND THE ELEVATOR SUPPLIER SHALL REVIEW THE STRUCTURAL DRAWINGS FOR FLOOR TO FLOOR AND FLOOR TO ROOF HEIGHTS FOR THE REQUIRED DISTANCE BETWEEN BRACE POINTS, FOR THEIR RAIL DESIGN. PROVIDE A W18x50 MINIMUM HOIST BEAM SIZE, IF NO OTHER SIZE IS PROVIDED ON THE PLANS. BRACING REQUIREMENTS FOR THE TOP OF THE RAIL, OR INTERMEDIATE RAIL BRACE POINTS, SHALL BE COORDINATED WITH THE STRUCTURAL DRAWINGS. IF BRACING IS REQUIRED BUT NOT SHOWN, PROVIDE A MINIMUM OF TS6x6X1/4 VERTICAL POST OR HANGER ATTACHED TO THE STRUCTURE WITH W8x12 BEAMS OR C7x9.8 CHANNELS SPANNING BETWEEN THE FRAMING MEMBERS. ALL MISCELLANEOUS STEEL MEMBERS REQUIRED TO ATTACH RAILS AT THE RAIL BRACE POINTS SHALL BE SUPPLIED BY THE ELEVATOR SUPPLIER. ELEVATOR MACHINE BEAM OR SHIVE BEAM LOADS SHALL BE COORDINATED WITH THE STRUCTURAL DRAWINGS. LOADS AND LOAD LOCATIONS VARYING FROM THE LOADS SHOWN ON THE STRUCTURAL DRAWINGS IS BASED ON:</li> <li>ELEVATOR MODEL NO. PER SPEC.</li> <li>MANUFACTURED BY PER SPEC.</li> </ul>	1 TYPICAL HANGER NO SCALE
		IF THE ELEVATOR MANUFACTURER AND/OR MODEL NUMBER CHANGES, THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL REVISIONS TO THE FOUNDATIONS AND THE FLOOR AND ROOF FRAMING AS REQUIRED DUE TO THE CHANGE IN THE ELEVATOR TYPE. IMPORTANT NOTE TO PROPOSERS:	
		<ol> <li>THESE DRAWINGS AND SPECIFICATIONS DO NOT NECESSARILY INDICATE ALL OF THE WORK REQUIRED FOR THE COMPLETION OF THE PROJECT. THESE DRAWINGS DO NOT NECESSARILY INDICATE ALL SECONDARY FRAMING WHICH MAY BE REQUIRED BASED ON THE ARCHITECTURAL DRAWINGS.</li> </ol>	
		2. WHERE MISCELLANEOUS METAL ITEMS ARE IMPLIED OR INDICATED ON THE STRUCTURAL OR ARCHITECTURAL DRAWINGS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FABRICATION AND INSTALLATION OF THESE ITEMS. THIS INCLUDES ANY MISCELLANEOUS METAL ITEMS INDICATED ON THE ARCHITECTURAL DRAWINGS AND NOT SHOWN ON THE STRUCTURAL DRAWINGS AND ANY ITEMS SHOWN ON THE STRUCTURAL DRAWINGS AND NOT NOTED. PROPOSERS SHALL ASSUME FOR PROPOSAL PURPOSES ONLY THE SIZE OF THESE ITEMS ARE AS FOLLOWS:	
		<ul> <li>A. ANGLES: L6X6X3/8</li> <li>B. CHANNELS: C12X20.7</li> <li>C. PLATES: 1/2" THICK</li> <li>D. ANCHOR RODS: 1" DIAMETER X 18"LONG</li> <li>E. EPOXY ANCHORS: ¾" DIAMETER AT 48"OC MAX SPACING</li> <li>F. WIDE FLANGE BEAMS: W24X55</li> <li>A. WIDE FLANGE BEAMS: W24X55</li> </ul>	
		<ul> <li>G. WIDE FLANGE COLUMNS: W12X79</li> <li>H. HSS COLUMNS AND BEAMS: HSS8X8X3/8</li> <li>THE CONTRACTOR SHALL SUBMIT AN RFI AND THE ENGINEER SHALL APPROVE THE SIZE OF THE MEMBER BEFORE CONSTRUCTION OR FABRICATION.</li> </ul>	
		3. PROVIDE SUPPORT FOR EDGES OF ROOF AND FLOOR DECK WHETHER SHOWN ON THE DRAWINGS OR NOT. PROVIDE CONTINUOUS SCREED ANGLE OR BENT PLATE FOR SLAB EDGES.	
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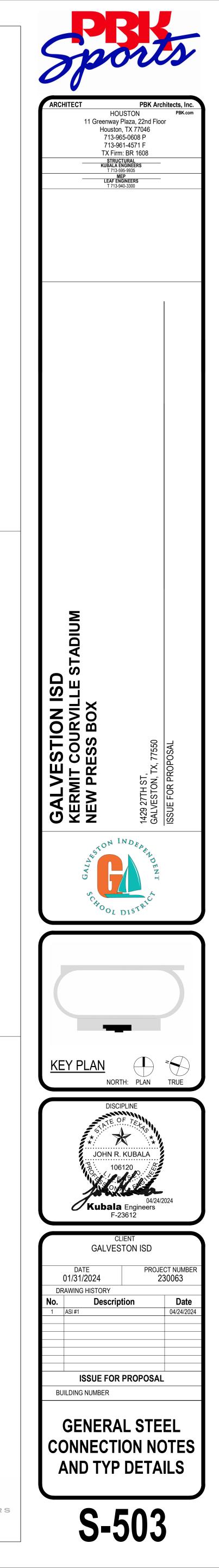




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	CON	• · · · • -	LE PLAT	_	
/I SIZE	SHEAR PLATE (t x L)	WELD SIZE (tw(	A325-N BOLT DIAMETER	NO. OF BOLTS PER VERT. ROW	MAX CAPACITY (KIPS) (ASD)
V8	3/8" x 5 1/2	3/16"	3/4"	2	9
/10	3/8" x 5 1/2	1/4"	7/8"	2	14
/12	3/8" x 8 1/2	1/4"	7/8"	3	23
/14	3/8" x 8 1/2	1/4"	7/8"	3	28
/16	3/8" x 11 1/2	1/4"	7/8"	4	40



2. DESIGN OF COM	POSITE STEEL BEA	AMS AND DE	ETAILS FOR CON	ISTRUCTION	ARE BASED	ON THE FO	LOWING DE	ECK SYSTEM	:		METAL DEC
		М	ETAL DE	ECK SC	HEDU	LE				FASTEN	CONNECTION SCH
DECK	DECK	DECK	SDI	DECK DEPTH	lp (IN4)	In (IN4)	Sp (IN3)	Sn (IN3)	Fy (KSI)	ATTACHMENT	RT MEMBERS
DESIGNATION ON PLAN TYPE 1	0.6C	GAUGE 22	DECK TYPE NON-COMPOSIT	(IN)	0.024	0.024	0.070	0.070	60	PATTERN (W/N) 33/4	5/8" PUDDLE WELD
In: NEGATIVE MC Sp: POSITIVE SEC Sn: NEGATIVE SE FY:YIELD STREN	ECTION MODULUS		NS EACH SHEET								
DO NOT EXCEED	CONCRETE THIC	KNESSES SI	HOWN. EXCESSIVE CON	CRETE WEIGI	HT DURING (	CASTING CA	N CAUSE SI	UPPORTING	BEAMS TO C		RETE IS PLACED AND I
5. PRIOR TO ERECT REQUIREMENTS	TING THE FIRST CO AND ESTABLISH A	OMPOSITE E QUALITY C	BEAMS, THE CON ONTROL PROCE	ITRACTOR SH DURE.	HALL CALL A	SPECIAL PF	E-CONSTRU	JCTION MEE	TING WITH A		NTRACTORS, TESTING
	ALL BE RETURNED	) TO THE SH	IOP FOR CORRE	CTION. CAMB	BERS MEASU	IRED BY THE	E CONTRAC	TOR ARE TO	BE VERIFIED	BY THE OWNER'S	TESTING LABORATOR
WELDED TO STE	ALL, IN GENERAL, E EEL FRAMEWORK	BE FASTENE BY PUDDLE	ED TO STEEL FR/ WELDS NOT LES	AMEWORK BY SS THAN 3/4" I	/ WELDING S DIAMETER, S	SHEAR STUE	OS THROUGH T MORE THA	H THE DECK AN 1'-0". WHE	IF FIELD WE RE SHEAR S		OS THROUGH METAL DE EEDS SPECIFIED MAXIN
0. WELD GIRDER F		BEAM WITH	2" LONG FILLET	WELDS AT A	MAXIMUM S	PACING OF	12 INCHES.	CONNECT S	DES OF ADJ/		I 1 1/2" LONG WELDS AT ED AT COLUMN LOCAT
AND DECK DEFL CONCRETE SUR DEFLECT TO API PROJECT AND F	ECTIONS. MINIML RFACE SHALL FOLL PROXIMATELY A S URNISH THE MATE	im Thickne .ow cambe Traight Lii	SS OF CONCRET R OF BEAMS, BUNDER FULL	te required Jt finished s Weight of (	) MUST BE PI SURFACE SH CONCRETE S	ROVIDED, A IALL NOT VA SLAB, IF ALL	ND TOP SUR RY BY MOR TOP OF STE	RFACES OF S E THAN 1/4" EEL ELEVATI	LABS MUST FROM ONE B ONS AND CA	BE CONSTRUCTED EAM TO ANOTHER MBERS ARE AS SPI	WITHIN SPECIFIED TO ADJACENT BEAM, NOF ECIFIED IN THE DRAWI CE FOR ADDITIONAL CO
TO DIFFERENTIA	LLOWED IN SLABS										
<ol> <li>DO NOT HANG C</li> <li>ALL METAL FLOC</li> </ol>								RTENANCES	EXCEEDING	100LB SHALL BE SU	UPPORTED BY STEEL B
			TO LOWE	NFORCEMENT R LAYER @ 48 MAXIMUM		AYER					GAUGE METAL C CLOSURE POUR BYDECK SUPPLI #4 x 10'-0" @ 12" CENTERED ON E
		•	TO LOWE	R LAYER @ 48		AYER				DSC ELEV EF PLAN	CLOSURE POUF BYDECK SUPPL #4 x 10'-0" @ 12"
		• 	TO LOWER 4'-0" N	R LAYER @ 48 MAXIMUM	B" MAXIMUM	•					CLOSURE POUF BYDECK SUPPL #4 x 10'-0" @ 12" CENTERED ON I
	STEEL		TO LOWER 4'-0" N	R LAYER @ 48 MAXIMUM	B" MAXIMUM	•					CLOSURE POUF BYDECK SUPPL #4 x 10'-0" @ 12"
			TO LOWER 4'-0" N	R LAYER @ 48 MAXIMUM	B" MAXIMUM	•					CLOSURE POUF BYDECK SUPPI #4 x 10'-0" @ 12' CENTERED ON
	STEEL GIRI	 _ DECK DER	4'-0" M	R LAYER @ 48	3" MAXIMUM	•	OR				CLOSURE POUL BYDECK SUPP #4 x 10'-0" @ 12 CENTERED ON
TYPI	STEEL GIRI SEE PLAN	DECK DER	4'-0" M • CONTINUA TYPE SB)	R LAYER @ 48 MAXIMUM • OUS SLAB BC @ 48" MAXIM	3" MAXIMUM	•	OR			DECK F	CLOSURE POUF BYDECK SUPPI #4 x 10'-0" @ 12" CENTERED ON
TYPI NON	STEEL GIRI SEE PLAN	DECK DER	4'-0" M • CONTINUA TYPE SB)	R LAYER @ 48 MAXIMUM • OUS SLAB BC @ 48" MAXIM	3" MAXIMUM	•	OR				CLOSURE POUF BYDECK SUPPL #4 x 10'-0" @ 12" CENTERED ON I
TYPI NON	STEEL GIRI SEE PLAN	DECK DER	4'-0" M • CONTINUA TYPE SB)	AXIMUM • OUS SLAB BC @ 48" MAXIM PLAC SS		•	OR				CLOSURE POUR BYDECK SUPPL #4 x 10'-0" @ 12" CENTERED ON F
B TYPI NON NO SC/	STEEL GIRI SEE PLAN		4'-0" M • CONTINUA TYPE SB)	AXIMUM • OUS SLAB BC @ 48" MAXIM PLAC SS	3" MAXIMUM		OR		CONCRE	DECK F	CLOSURE POUR BYDECK SUPPL #4 x 10'-0" @ 12" CENTERED ON E
B TYPI NON NO SC/	STEEL GIRI SEE PLAN		4'-0" M • CONTINUA TYPE SB)	AXIMUM • OUS SLAB BC @ 48" MAXIM PLAC SS		•	OR		CONCRE FLOOR D	DECK F	CLOSURE POUR BYDECK SUPPL #4 x 10'-0" @ 12" CENTERED ON E
B TYPI NON NO SC/	STEEL GIRI SEE PLAN CAL DE -COMPO ALE STRUCTION JOINT BETWEEN BEAMS,		4'-0" M • CONTINUA TYPE SB)	AXIMUM • OUS SLAB BC @ 48" MAXIM PLAC SS			OR		CONCRE FLOOR D	DECK F	CLOSURE POUF BYDECK SUPPL #4 x 10'-0" @ 12" CENTERED ON I PARALLEL
B TYPI NON NO SC/	STEEL GIRI SEE PLAN CAL DE -COMPO ALE STRUCTION JOINT BETWEEN BEAMS,		4'-0" M • CONTINUA TYPE SB)	AXIMUM • OUS SLAB BC @ 48" MAXIM PLAC SS					CONCRE FLOOR D	DECK F	CLOSURE POUF BYDECK SUPPI #4 x 10'-0" @ 12" CENTERED ON

JEBEAM LABELING/OCR:

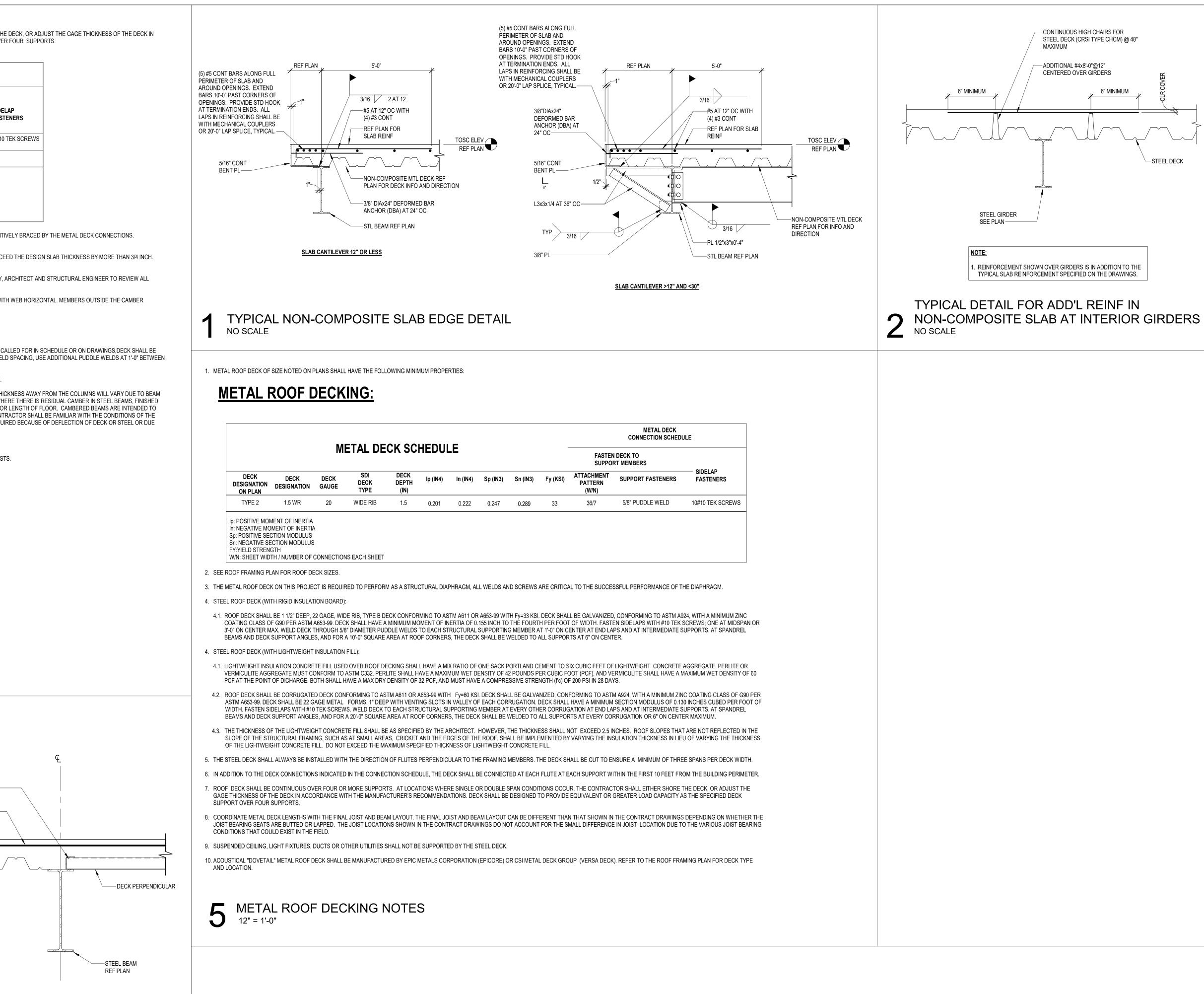
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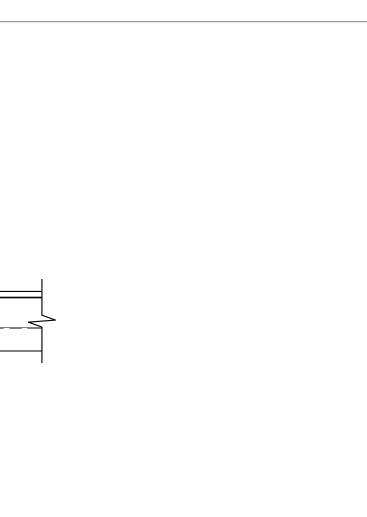
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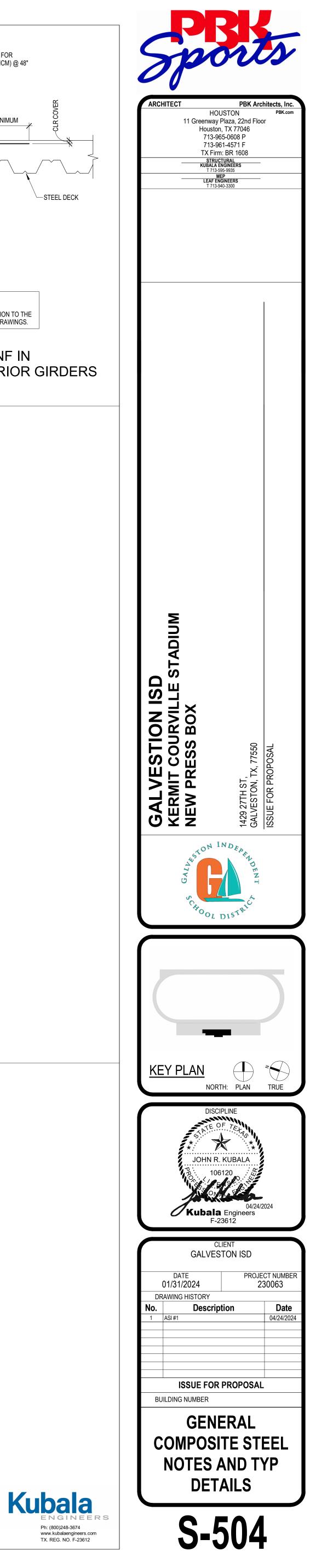
STEEL BEAM REF PLAN

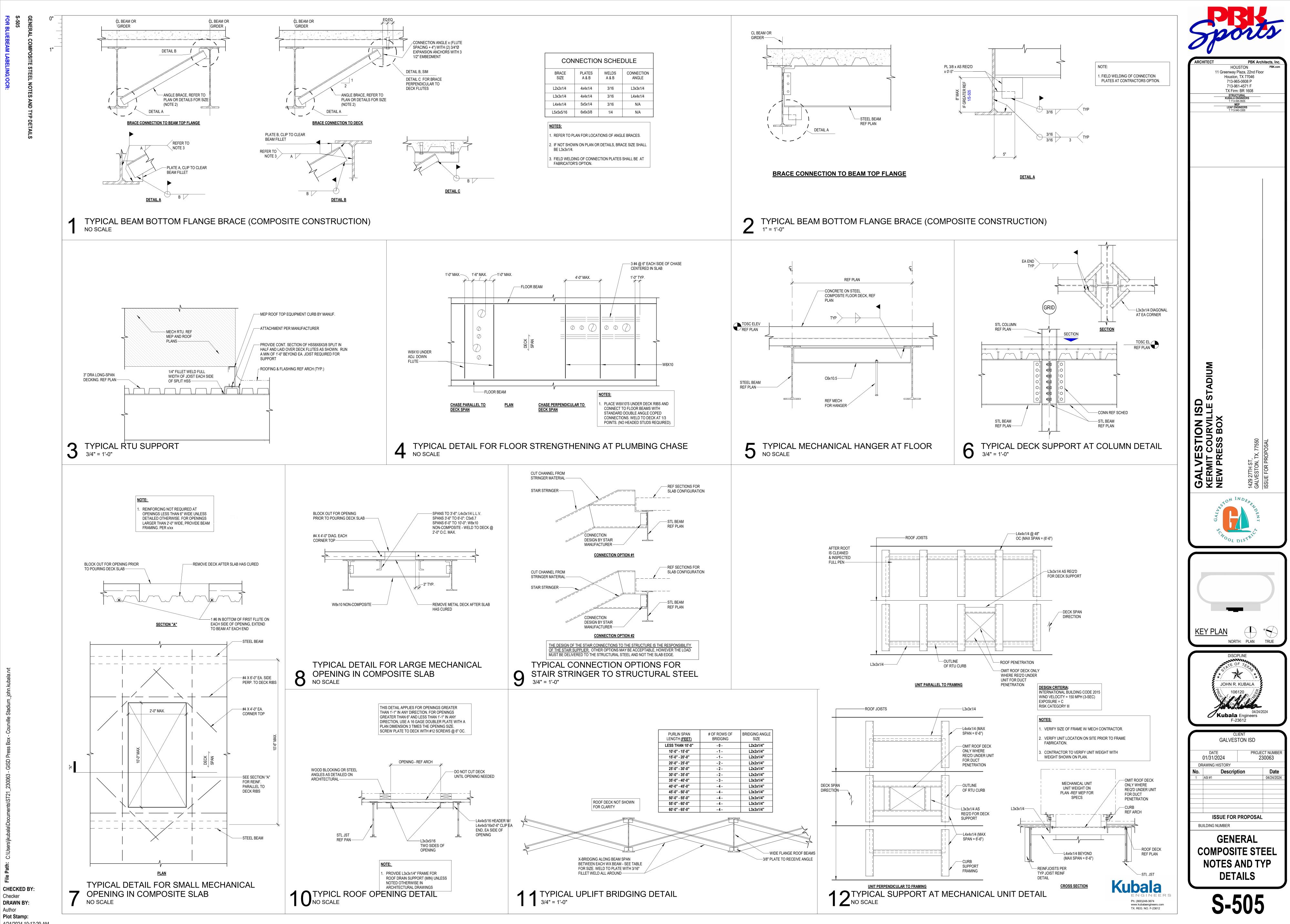
6 TYPICAL NON-COMPOSITE SLAB REINFORCEMENT NO SCALE



## DIRECTION CHANGE



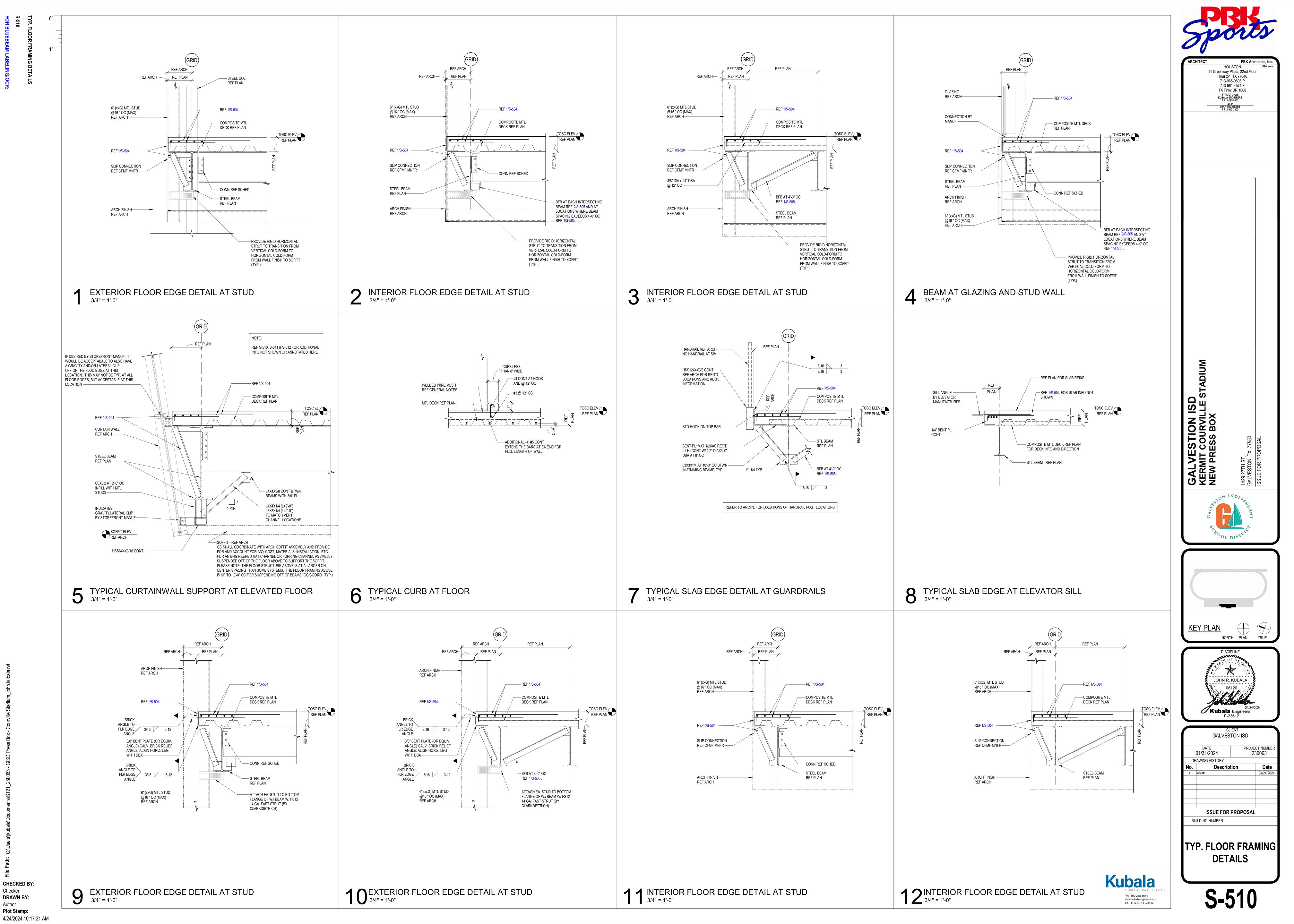


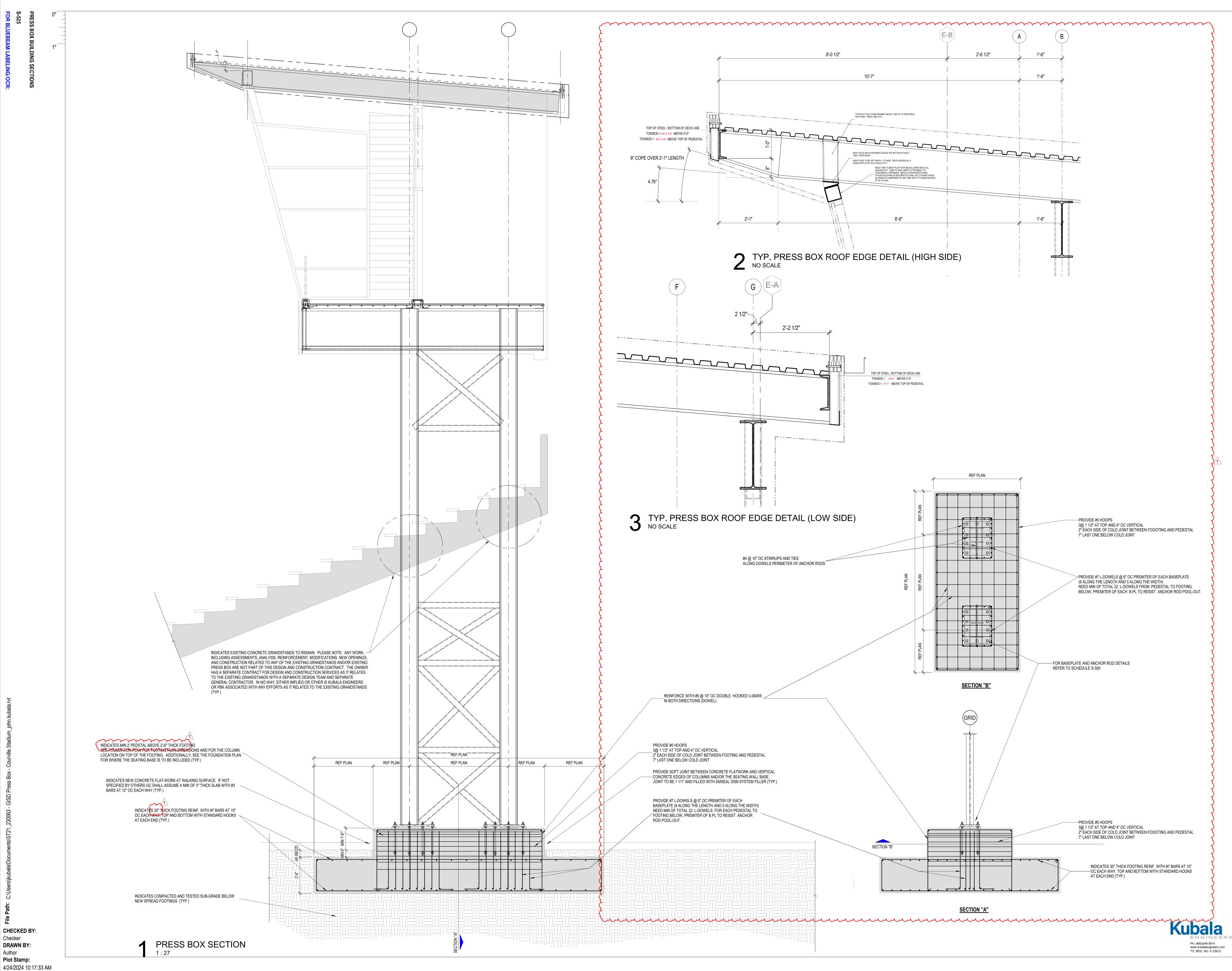


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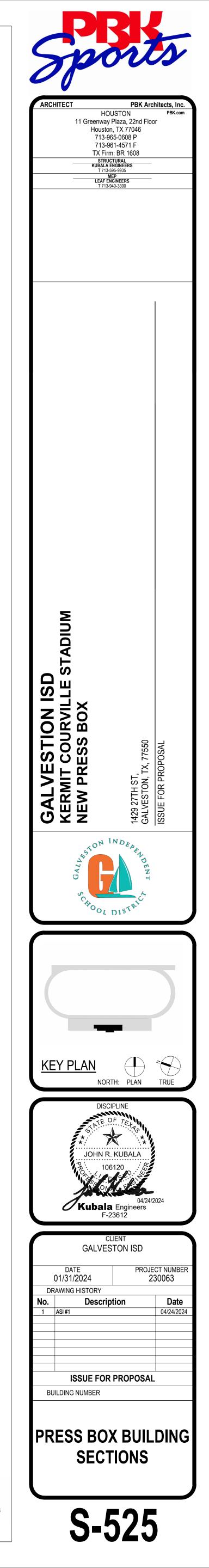
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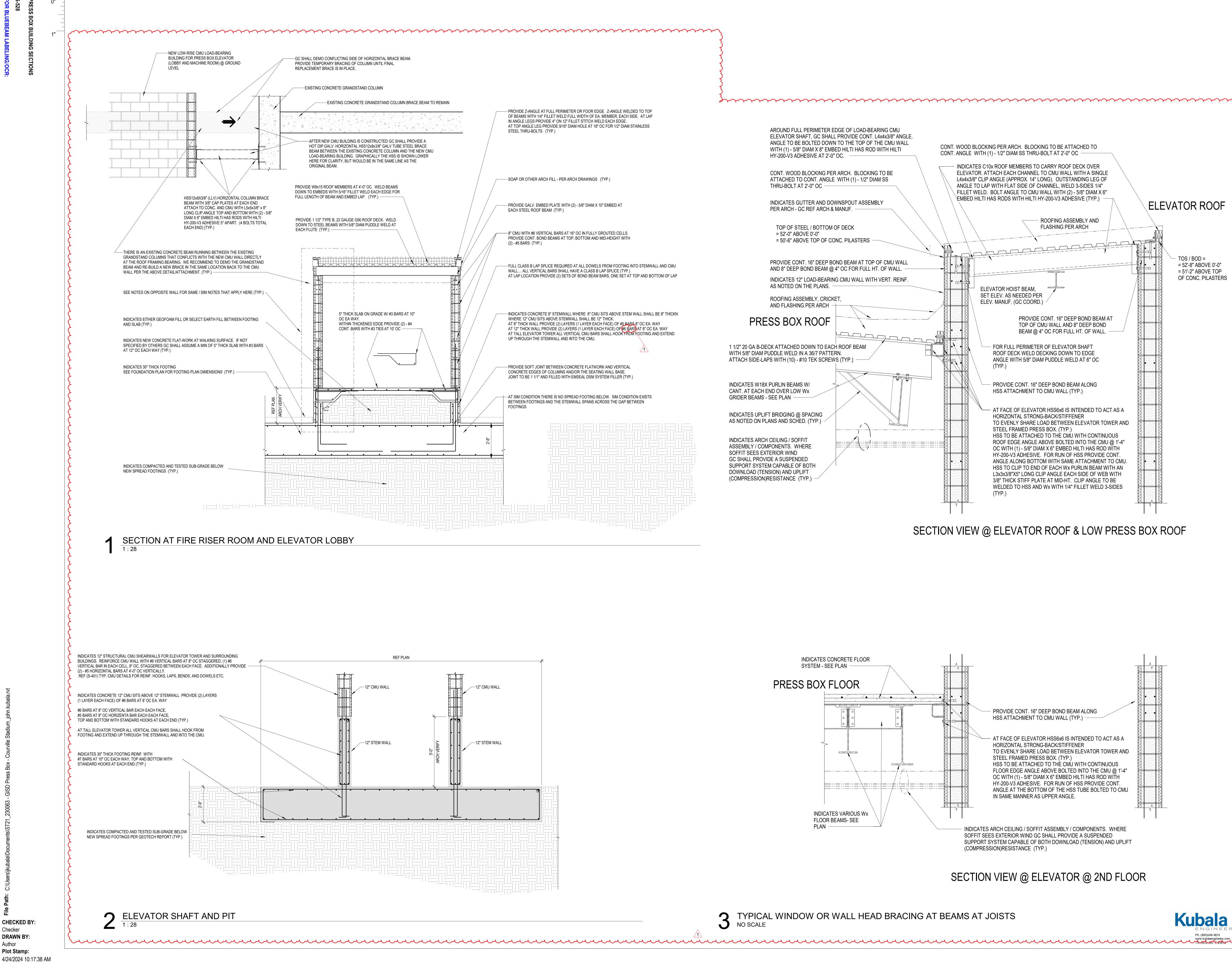




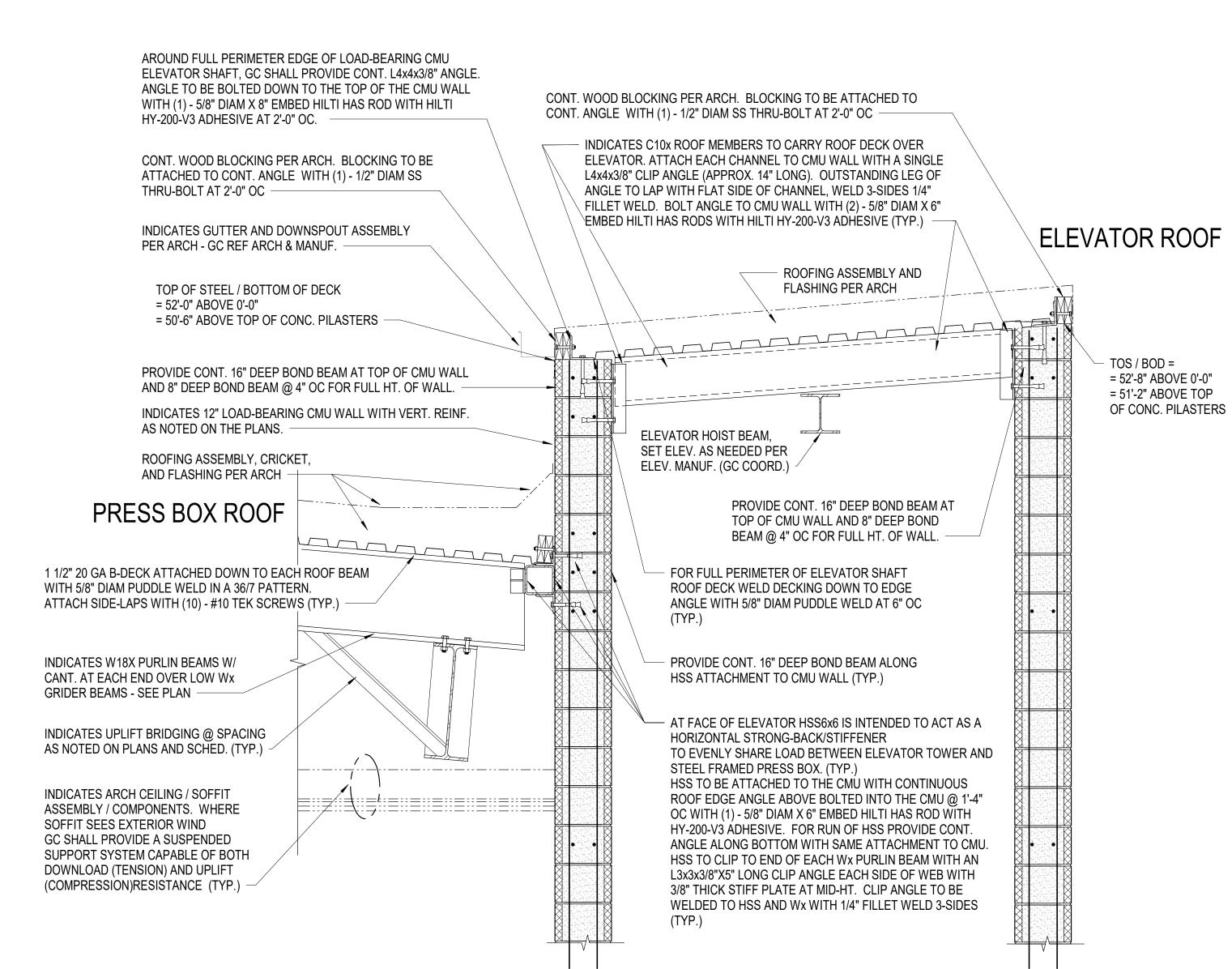


ENGINEERS Ph: (800)248-3674



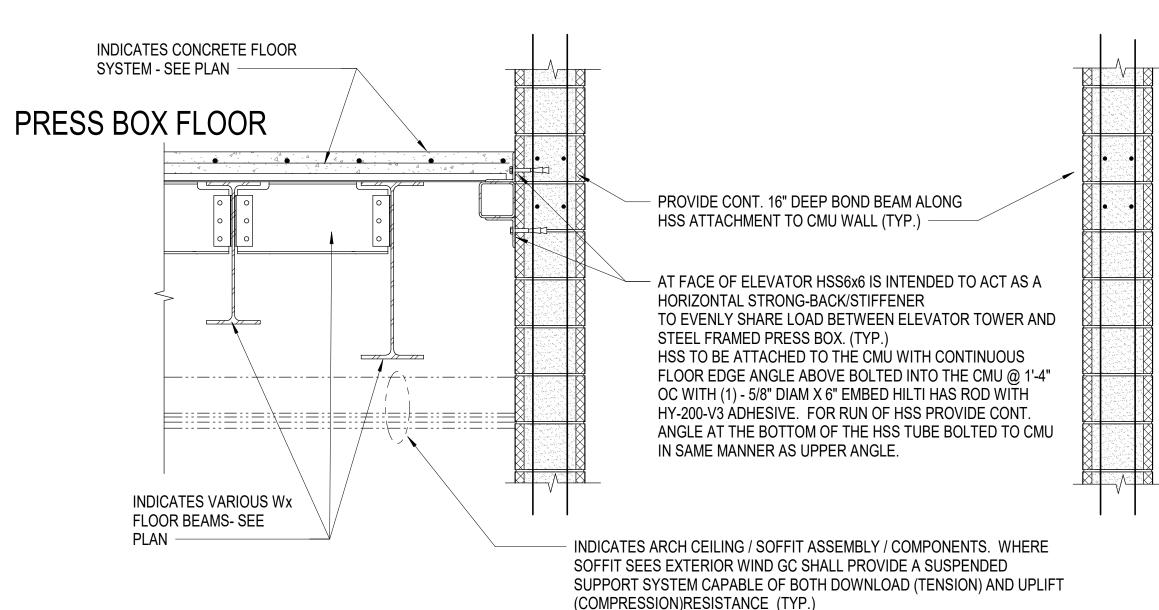


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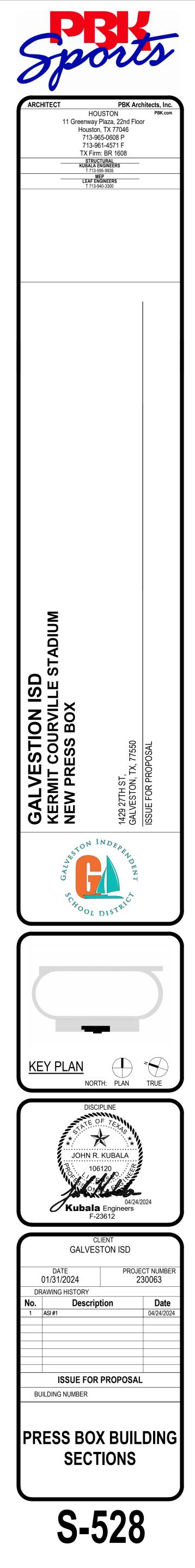
# SECTION VIEW @ ELEVATOR ROOF & LOW PRESS BOX ROOF

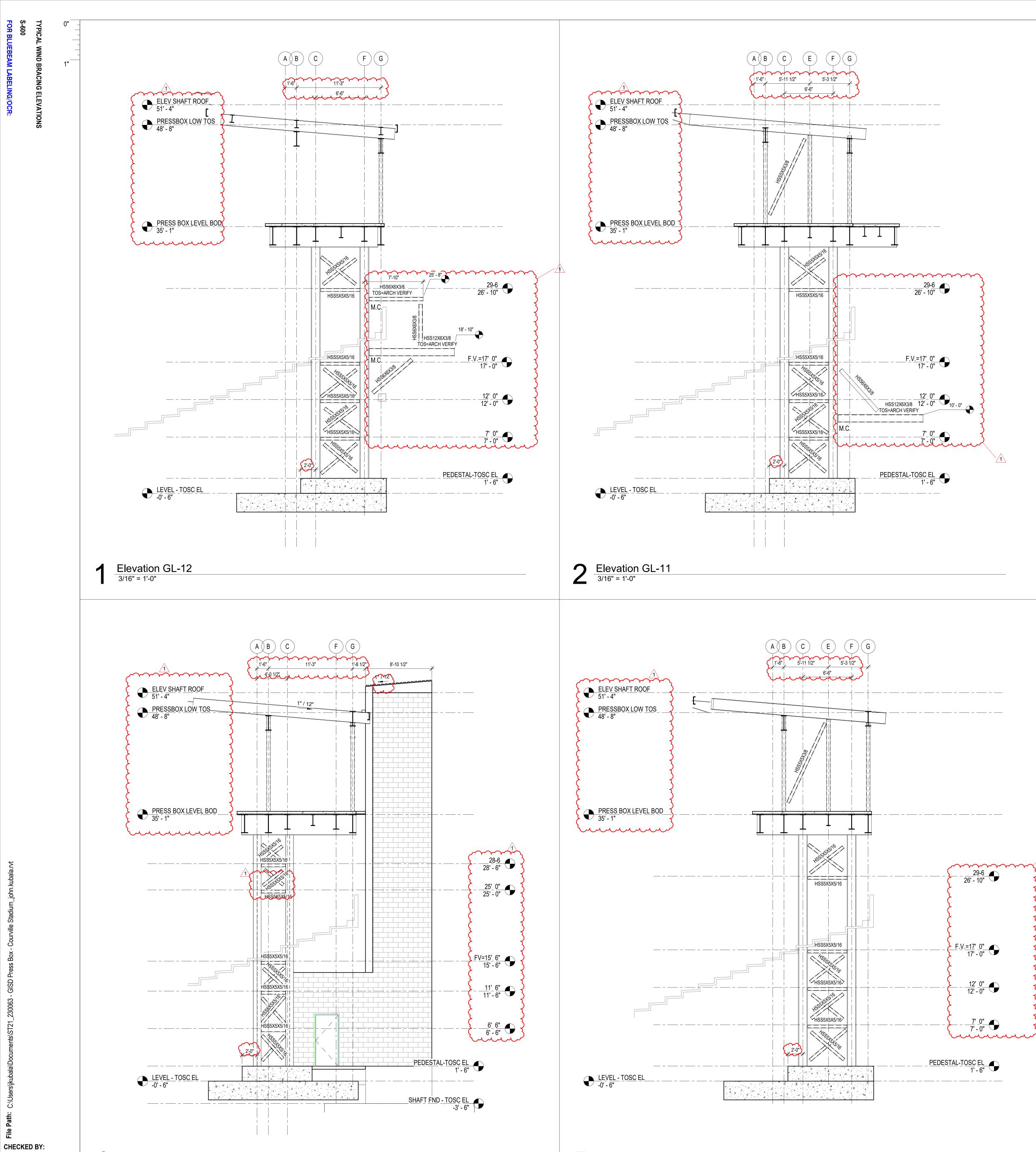


SECTION VIEW @ ELEVATOR @ 2ND FLOOR

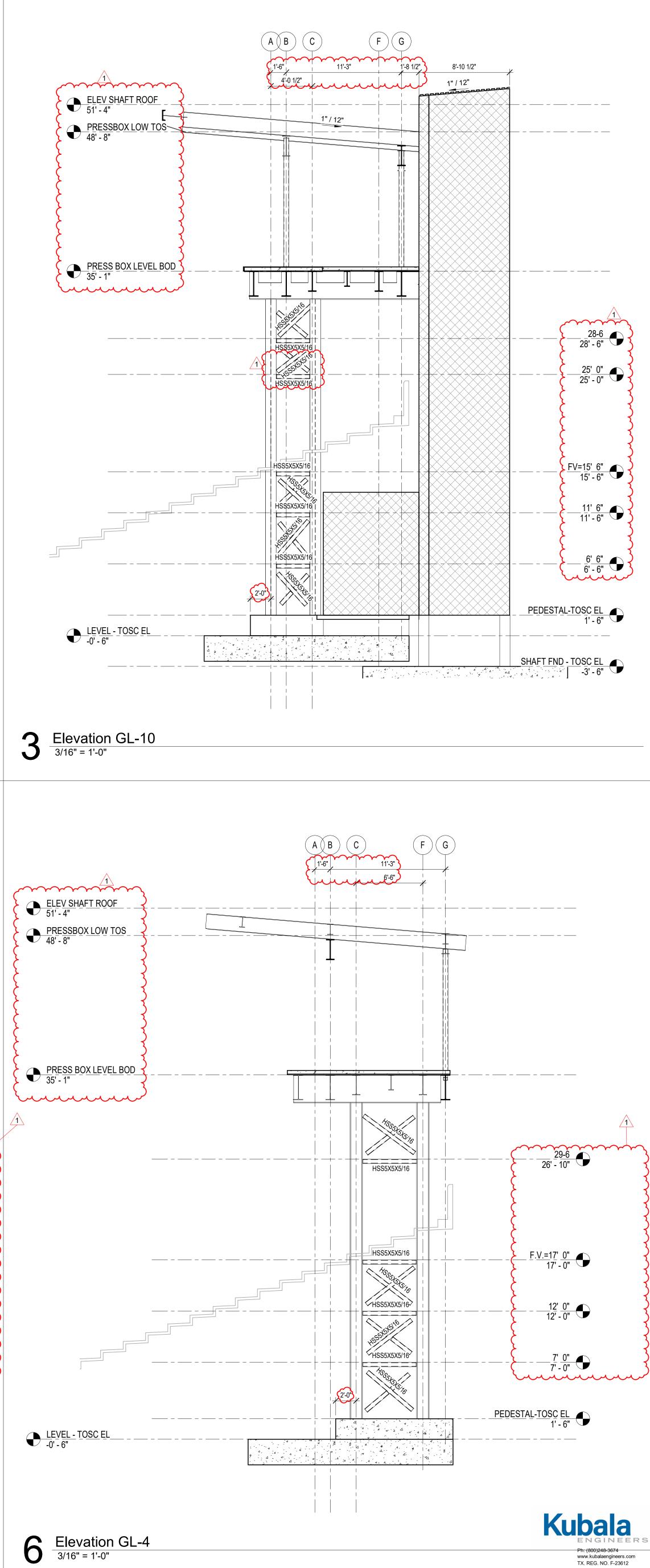
## **7** TYPICAL WINDOW OR WALL HEAD BRACING AT BEAMS AT JOISTS

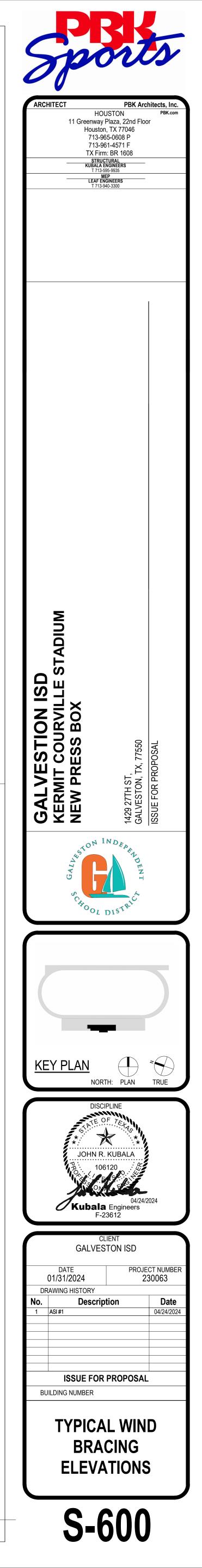
# Kubala Ph: (800)248-3674

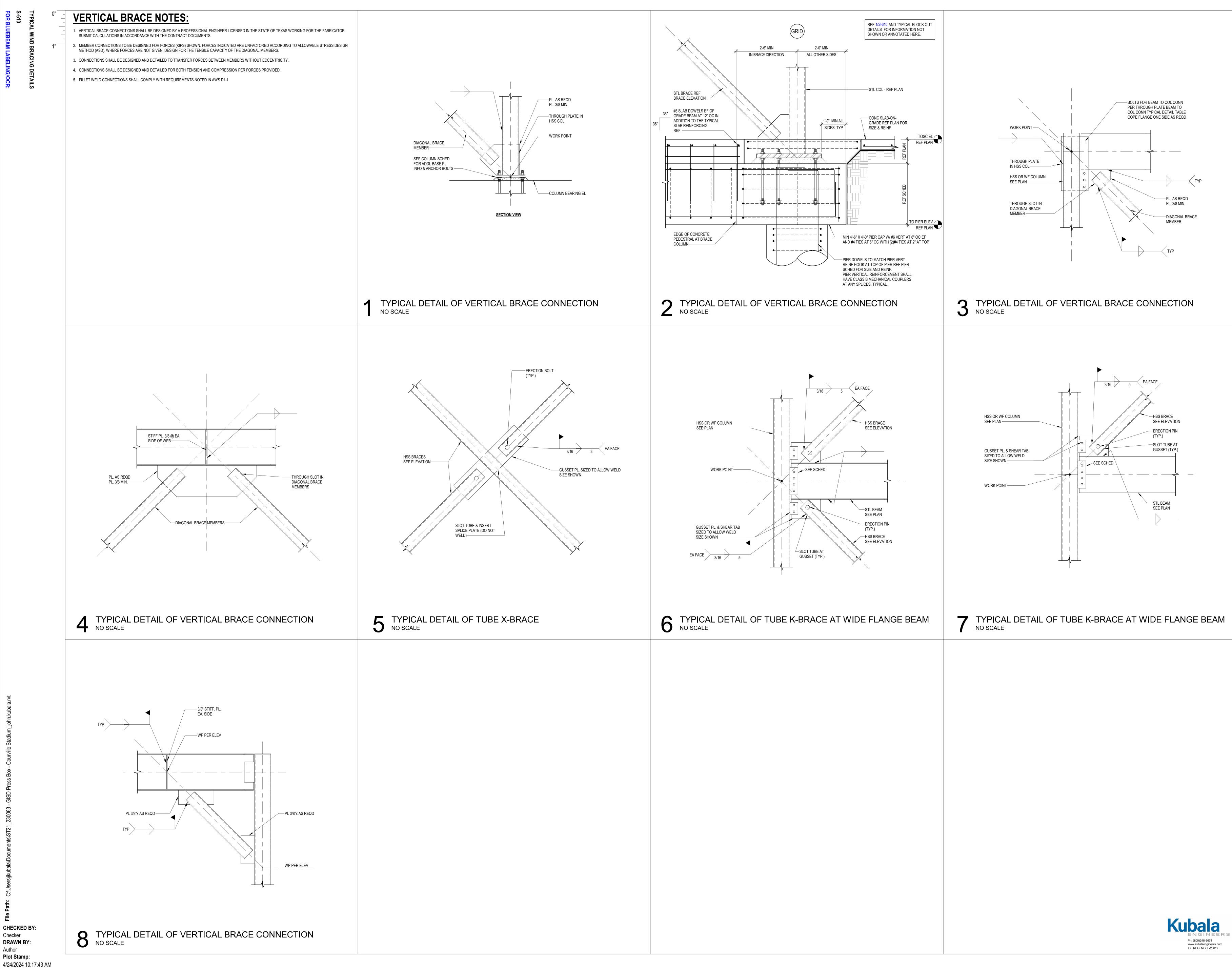




Checker DRAWN BY: Author Plot Stamp: 4/24/2024 10:17:41 AM **Elevation GL-7** 3/16" = 1'-0"







Author

