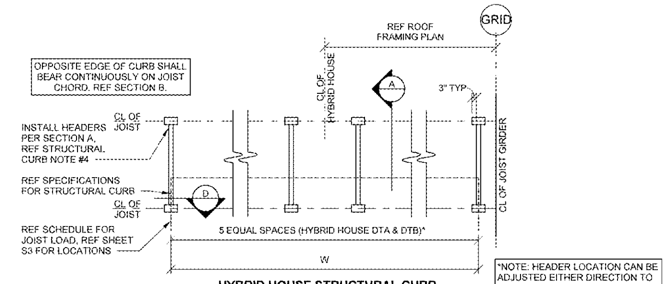
STRUCTURAL CURBS

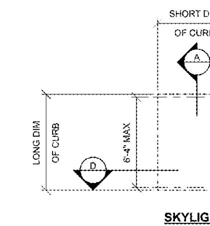
UNIT SIZE	CURB WIDTH (W)	JOIST LOAD
3-5 TON	6' - 2"	400 LBS
5 TON DH	6' - 4"	400 LBS
10 TON	6' - 10"	600 LBS
10 TON DH	7' - 4"	500 LBS
20 TON	6' - 11"	1100 LBS
AHU	15' - 5"	1800 LBS
HYBRID HOUSE DTA & DTB	27' - 0"	2800 LBS

NOTES:

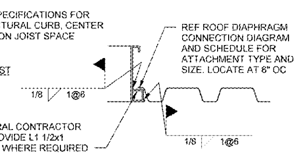
1. INSTALL STRUCTURAL CURBS, HEADERS, AND FRAMES AND WELD TO SUPPORT STEEL BEFORE DECK IS PLACED.
2. ADJUST LOCATION OF RTU SO CURB FALLS WITHIN 3 INCHES OF JOIST PANEL POINTS. IF CURB IS MORE THAN 3 INCHES FROM PANEL POINT ADD REINFORCING PER JOIST REINFORCING DETAIL. (5-S4.1)
3. GENERAL CONTRACTOR SHALL COORDINATE RTU DIMENSIONS AND FRAMING LOCATIONS WITH THE STEEL FABRICATOR, MECHANICAL AND ERECTION SUBCONTRACTORS.
4. HEADERS ARE REQUIRED FOR STRUCTURAL CURBS WHEN THE CURB DOES NOT SPAN BETWEEN TWO JOIST OR THE CURB CANTILEVERS MORE THAN TWO FEET OVER THE JOIST. HEADERS ARE REQUIRED AS SHOWN FOR AHU'S AND HYBRID HOUSES.
5. REF DETAIL 1 FOR CONNECTION OF DECK PARALLEL TO CURB, WHERE REQUIRED.
6. DO NOT INSTALL STRUCTURAL CURBS ON TOP OF DECK.
7. STEEL SUPPLIER TO FURNISH STOCK ANGLE FOR FIELD FABRICATED FRAMES.
8. REF SPEC SECTION 07721 AND MECHANICAL ROOFTOP HVAC UNIT SCHEDULES FOR RTU ANCHORAGE.
9. CURB WIDTHS SHOWN IN THE STRUCTURAL CURB SCHEDULE ARE FOR ROOF FRAMING DESIGN PURPOSES ONLY AND SHALL NOT BE USED FOR STRUCTURAL CURB FABRICATION.



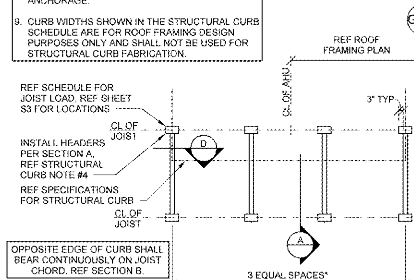
HYBRID HOUSE STRUCTURAL CURB



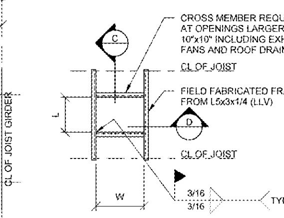
SKYLIGHT STRUCTURAL CURB



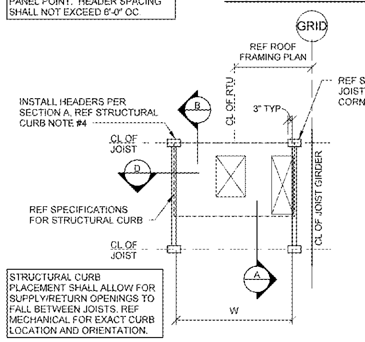
DETAIL 1



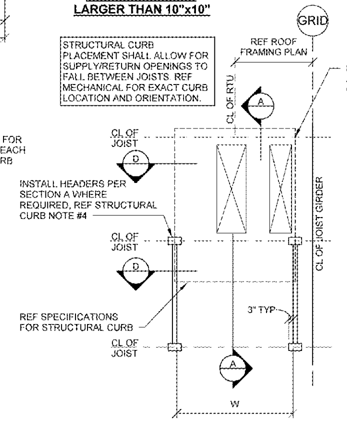
AHU STRUCTURAL CURB



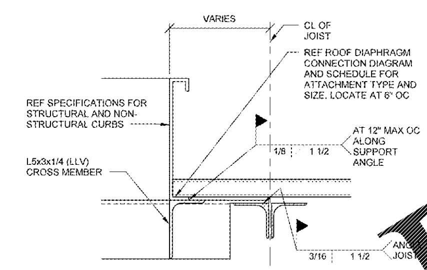
OPENING IN ROOF LARGER THAN 10"x10"



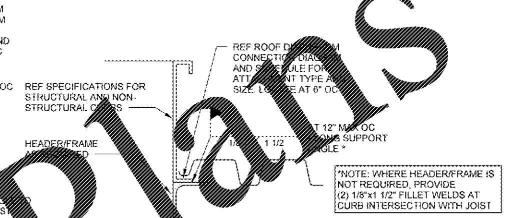
RTU STRUCTURAL CURB



20 TON RTU STRUCTURAL CURB



SECTION C



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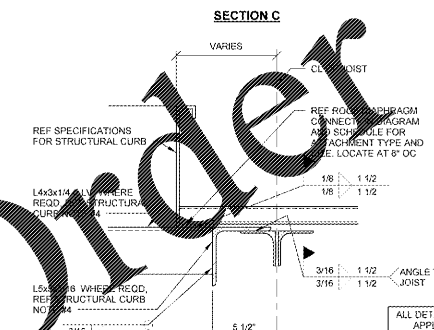
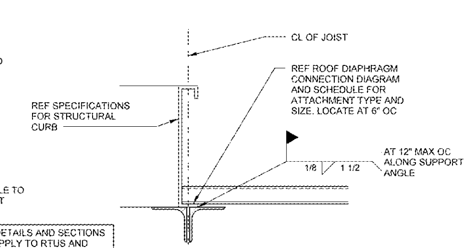


SECTION A

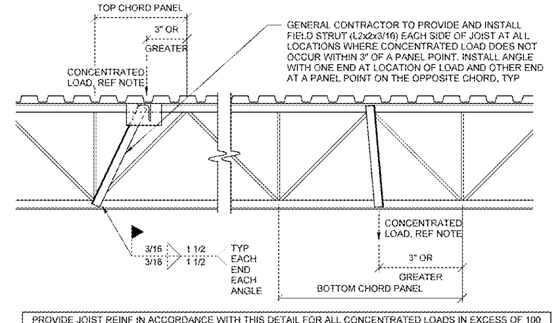


ALL DETAILS AND SECTIONS APPLY TO RTUS AND SKYLIGHTS. REF ARCH SHEET A4.1 FOR RTU/SKYLIGHT PLACEMENT ON CURB

SECTION B

3 RTU FRAMING SUPPORT PLAN

NTS



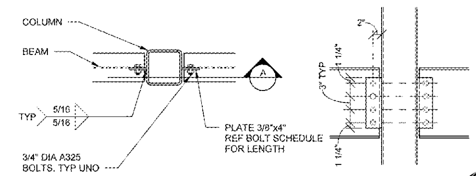
PROVIDE JOIST REINF IN ACCORDANCE WITH THIS DETAIL FOR ALL CONCENTRATED LOADS IN EXCESS OF 100 POUNDS. WHERE MORE THAN ONE CONCENTRATED LOAD EXISTS WITHIN A CHORD PANEL AND THE SUM OF THOSE LOADS EXCEEDS 100 POUNDS, PROVIDE JOIST REINFORCEMENT AS DETAILED SUCH THAT THE SUM OF THE LOADS WITHIN THE REMAINING UNSUPPORTED CHORD LENGTH DOES NOT EXCEED 100 POUNDS.

5 JOIST REINFORCING

3/4" = 1'-0"

BOLT SCHEDULE

SECTION	BOLTS PER MEMBER	PLATE LENGTH
W8	2	5 1/2"
W10	2	5 1/2"
W12	3	8 1/2"
W14	3	8 1/2"
W16	4	11 1/2"
W18	5	1' - 2 1/2"
W21	6	1' - 5 1/2"
W24	7	1' - 8 1/2"
W27	8	1' - 11 1/2"
W30	9	2' - 2 1/2"



SECTION A

4 BOLT SCHEDULE

NTS

JOIST SCHEDULE

MARK	JOIST SIZE DEPTH	JOIST SIZE TYPE	DEAD LOAD (DL)	LIVE LOAD (LL)	PONDING LOAD (PL)	SNOW LOAD (SL)	SNOW DRIFT S1 (PLF)	SNOW DRIFT X (FT)	DIAGRAM NUMBER	NOTES
J1	30"	KSP	94	125	0	187	0	0' - 0"	[illegible]	1,2,3
J1A	30"	KSP	83	111	0	494	0	0' - 0"	1	[illegible]
J1B	30"	KSP	83	111	0	166	432	25' - 2 5[illegible]	1	[illegible]
J1C	30"	KSP	83	111	0	468	130	7' - 7 3[illegible]	1	1,2,3
J1D	30"	KSP	94	125	0	419	0	0' - 0"	1	1,2,3,4
J1E	30"	KSP	94	125	0	187	232	14' - 0"	5	1,2,3,4
J1F	30"	KSP	94	125	0	187	304	15' - 5 1/8"	[illegible]	1,2,3
J1G	30"	KSP	92	123	0	[illegible]	[illegible]	13' - 7 1/4"	[illegible]	1,2,3
J1H	30"	KSP	92	123	0	[illegible]	243	1' - 9 5/8"	5	1,2,3
J2	30"	KSP	119	125	0	[illegible]	0	[illegible]	1	1,2,3
J2A	30"	KSP	116	122	0	[illegible]	0	[illegible]	1	1,2,3
J2B	30"	KSP	116	[illegible]	0	[illegible]	496	23' - 2 5/8"	1	1,2,3
J2C	30"	KSP	116	[illegible]	[illegible]	503	[illegible]	8' - 3"	1	1,2,3
J2D	30"	KSP	111	117	[illegible]	175	[illegible]	23' - 4"	5	1,2,3
J2E	30"	KSP	115	121	[illegible]	181	304	15' - 5 1/8"	4	1,2,3
J3	30"	KSP	94	125	[illegible]	[illegible]	624	22' - 5 1/4"	1,2	1,2,3
J3A	30"	KSP	[illegible]	111	177	[illegible]	253	10' - 2 7/8"	1,2	1,2,3
J4	30"	KSP	[illegible]	123	197	185	616	22' - 5 1/4"	1,2	1,2,3
J4A	30"	KSP	[illegible]	122	195	503	291	10' - 8 1/4"	1,2	1,2,3
J5	30"	KSP	[illegible]	122	0	183	0	0' - 0"	1	1,2,3
J5A	30"	[illegible]	[illegible]	122	0	503	0	0' - 0"	1	1,2,3
J5B	30"	[illegible]	[illegible]	119	[illegible]	178	331	12' - 6 3/8"	1	1,2,3
J5C	30"	[illegible]	148	119	0	363	146	5' - 6 1/2"	1	1,2,3
J6	22"	[illegible]	119	125	200	187	624	22' - 5 1/4"	1,2	1,2,6
J7	12"	[illegible]	86	114	182	341	441	17' - 3 5/8"	1,3	1,2
[illegible]	[illegible]	REF NOTE #7	93	[illegible]	0	187	0	0' - 0"	1	1,2,7
TJ1	[illegible]	KSP	119	[illegible]	200	187	623	22' - 4 3/4"	1,2	1,2,3,5
TJ2	[illegible]	KSP	104	109	174	439	0	0' - 0"	1,2	1,2,3,5

JOIST SCHEDULE NOTES

1. A. UNIFORM GRA[illegible] LOADS ARE TABULATED FOR EACH JOIST AS FOLLOWS:
   - DEAD LOAD (D[illegible] DEAD LOADS (REF SHEET S0)
   - [illegible]IVE LOAD (L[illegible] ROOF LIVE LOADS (REF SHEET S0)
   - [illegible]OW LOA[illegible] (SL) = SNOW LOADS (REF SHEET S0)
   - [illegible] LOAD (PL) = PONDING LOAD (REF S0 AND DIAGRAM #2 AND #4)
   - [illegible]W DRIFT LOADS SHALL BE USED IN CONJUNCTION WITH DEAD AND SNOW LOADS ONLY (DL+SL).
   - PONDING LOAD SHALL BE A LIVE LOAD IN ADDITION TO THE UNIFORM ROOF LIVE LOAD. PONDING LOAD SHALL NOT BE INCLUDED WITH THE SNOW LOADS.

   B. IN ADDITION TO THE ROOF UNIFORM GRAVITY LOADS, DESIGN SPECIAL JOISTS TO ACCOMODATE THE SNOW DRIFT LOADS SHOWN IN THE JOIST SCHEDULE, RTU LOADS, SOFFIT LOADS, AND ANY OTHER CONCENTRATED OR DISTRIBUTED LOADS INDICATED IN THE JOIST DIAGRAMS OR FRAMING PLANS.

   C. RTU LOADS ARE PROVIDED IN THE RTU SUPPORT FRAMING PLAN. REF 1-S3 AND 3-S4.1 FOR LOCATIONS.

   D. ALL LOADS SHOWN ON THESE DIAGRAMS AND ON OTHER DRAWINGS ARE DESIGN WORKING LOADS FOR WORKING STRESS DESIGN WITH APPROPRIATE BUILDING CODE LOAD FACTOR ALREADY APPLIED. NO INCREASE IN STRESS OR LOAD REDUCTION IS ALLOWED FOR WIND OR SEISMIC LOAD COMBINATIONS. ALL ADDITIONAL SPECIFIED AXIAL LOADS ARE TO BE ADDITIVE TO FULL GRAVITY AND FULL UPLIFT LOADS TO PRODUCE THE WORST CASE CONDITION.

   E. THE LIVE LOAD DEFLECTION LIMIT IS L/240.

   F. PROVIDE 5" JOIST SEATS AT ALL JOISTS, UNO.

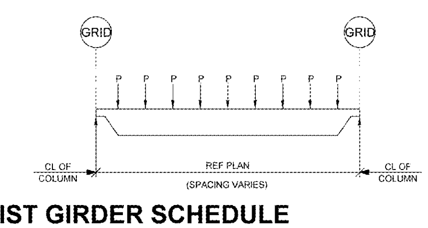
   G. WHERE JOISTS ARE PARALLEL TO AND NEAR WALLS, 50 FEET OR LESS IN LENGTH, PROVIDE A MAXIMUM 1/2" CAMBER AND FOR JOISTS GREATER THAN 50 FEET, PROVIDE A MAXIMUM 3/4" CAMBER.
2. JOISTS SHALL RESIST THE MOST CRITICAL EFFECTS FROM THE LOAD COMBINATIONS LISTED IN THE APPLICABLE BUILDING CODE.
3. JOISTS SUPPORTING RTUS, AHUS OR HYBRID HOUSES SHALL HAVE A MINIMUM TOP CHORD WIDTH OF 6" TO ALLOW FOR PROPER INSTALLATION OF HEADERS WHERE REQUIRED. IF TOP CHORD WIDTH SUPPORTING RTUS, AHUS OR HYBRID HOUSES IS GREATER THAN 9" COORDINATE HEADER OFFSET WITH STEEL SUPPLIER.
4. JOISTS SUPPORTING THE CONDENSER RACK FRAME POST SHALL HAVE A MAXIMUM TOP AND BOTTOM CHORD WIDTH OF 9" TO ALLOW FOR PROPER INSTALLATION OF POST SUPPORT ANGLES. REF DETAIL 2-S4.3. IF CHORD WIDTHS ARE GREATER THAN 9" COORDINATE WITH ENGINEER OF RECORD.
5. JOISTS AT AUTO CENTER SIDEWALL SHALL BE DESIGNED FOR A HORIZONTAL LOAD FROM WIND OR SEISMIC APPLIED TO THE BOTTOM CHORD BY COLUMN BRACE. REF SECTION 4-S8.1.
6. DESIGN JOISTS FOR A NET ROOF UPLIFT OF 13.1 PSF ALONG THE ENTIRE LENGTH OF THE JOIST. THE ROOF UPLIFT PRESSURES NOTED IN THE DESIGN LOADS DO NOT APPLY.
7. REF VESTIBULE SECTION 5-S6.1 FOR JOIST DETAILS.

JOIST GIRDER SCHEDULE

MARK	DEPTH	GRID	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	GRID	NOTES
			PANEL POINT LOADS (DEAD LOAD + ROOF LIVE/SNOW LOAD) (KIPS)											
JG1	60"	B	33.5	27.9	[illegible]	15.9	[illegible]	13.8	15.2	[illegible]	0.0	0.0	B.8	1,2,3
JG2	60"	B	33.6	27.7	[illegible]	15.1	[illegible]	13.1	14.5	[illegible]	15.5	16.5	C.3	1,2,3
JG3	60"	B	33.1	[illegible]	[illegible]	[illegible]	[illegible]	12.8	14.1	14.1	0.0	0.0	C	1,2,3,4,6
JG3A	60"	B	28.2	23.9	17.0	[illegible]	[illegible]	4.7	6.6	11.7	12.5	0.0	C	1,2,3
JG3B	60"	B	[illegible]	[illegible]	20.2	[illegible]	15.7	13.8	13.5	15.0	0.0	0.0	C	1,2,3,4
JG4	32"	B	30.2	[illegible]	17.3	13.3	[illegible]	11.5	0.0	0.0	0.0	0.0	B.6	1,2,3,6
JG5	60"	B.8	16.3	[illegible]	17.3	[illegible]	[illegible]	17.3	16.9	17.3	0.0	0.0	D.2	1,2,3,4
JG6	60"	C.3	16.5	16.5	[illegible]	[illegible]	[illegible]	16.6	21.4	20.0	20.6	0.0	D.4	1,2,3,4
JG7	60"	C	16.5	16.5	[illegible]	[illegible]	16.5	0.0	0.0	0.0	0.0	0.0	D	1,2,3,4,6
JG8	[illegible]	B.6	12.8	12.8	13.6	[illegible]	14.5	14.5	14.5	14.5	0.0	0.0	D	1,2,3,4,6
[illegible]	60"	B.6	21.0	18.9	15.3	[illegible]	14.3	14.3	14.3	14.3	0.0	0.0	D	1,2,3,4
JG9	48"	[illegible]	22.2	18.4	14.3	[illegible]	13.4	13.4	13.4	13.4	0.0	0.0	D	1,2,3
JG10	[illegible]	[illegible]	21.6	20.3	20.9	18.1	17.0	16.3	16.2	16.2	16.8	17.3	E.2	1,2,3
JG11	[illegible]	D.4	17.5	16.3	15.5	15.4	15.4	15.9	16.5	0.0	0.0	0.0	E.2	1,2,3
[illegible]	[illegible]	D	15.4	15.4	15.4	15.4	15.4	15.4	15.4	15.4	15.4	0.0	E	1,2,3,6
[illegible]	[illegible]	D	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	0.0	E	1,2,3
[illegible]	[illegible]	E.2	[illegible]	17.4	19.2	34.3	32.3	33.2	22.1	0.0	0.0	0.0	E.9	1,2,3
[illegible]	[illegible]	E.2	[illegible]	16.5	18.7	28.3	32.3	32.6	23.4	0.0	0.0	0.0	E.9	1,2,3
[illegible]	[illegible]	E	[illegible]	14.5	14.5	14.5	14.5	14.5	14.5	14.5	0.0	0.0	F	1,2,3,6
[illegible]	[illegible]	[illegible]	[illegible]	16.1	16.1	16.2	16.4	16.8	16.8	16.4	0.0	0.0	F	1,2,3,6
[illegible]	[illegible]	E	[illegible]	25.4	24.4	26.6	17.8	16.5	16.5	16.5	0.0	0.0	F	1,2,3
[illegible]	[illegible]	E	[illegible]	13.3	13.3	13.3	13.3	13.3	13.3	13.3	0.0	0.0	F	1,2,3
JG17	60"	E.9	34.4	32.6	33.5	22.3	19.0	18.5	22.9	0.0	0.0	0.0	F.7	1,2,3
JG17A	60"	E.9	28.6	32.6	33.0	23.6	18.8	17.8	23.0	0.0	0.0	0.0	F.7	1,2,3
[illegible]	60"	[illegible]	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	0.0	0.0	G	1,2,3,6
[illegible]	[illegible]	F	17.0	17.0	16.6	16.4	16.3	16.3	16.3	16.3	0.0	0.0	G	1,2,3,6
JG19	60"	F.7	21.7	22.2	18.8	17.1	16.5	16.4	16.4	0.0	0.0	0.0	G.5	1,2,3
JG20	60"	G	15.2	15.2	15.2	15.2	15.2	15.2	13.7	14.6	0.0	0.0	H	1,2,3,4,6
JG20A	60"	G	15.7	15.7	15.7	15.7	16.2	18.0	17.7	12.7	0.0	0.0	H	1,2,3,4
JG21	60"	G	13.5	13.5	13.5	13.5	15.1	21.5	26.5	0.0	0.0	0.0	G.9	1,2,3,4
JG22	60"	G.5	16.4	16.4	14.8	15.2	17.2	17.2	19.1	27.2	34.6	0.0	J	1,2,3
JG23	60"	H	17.3	17.6	17.6	17.7	16.0	0.0	0.0	0.0	0.0	0.0	J	1,2,3
JG23A	60"	H	17.5	17.7	19.0	24.5	31.6	0.0	0.0	0.0	0.0	0.0	J	1,2,3,6
JG24	48"	J	11.2	11.2	11.2	11.2	11.2	12.0	13.5	14.9	0.0	0.0	K	1,2,3,5,6
JG25	60"	J	17.2	17.2	17.2	17.2	17.3	19.4	23.4	27.1	0.0	0.0	K	1,2,3

JOIST GIRDER NOTES

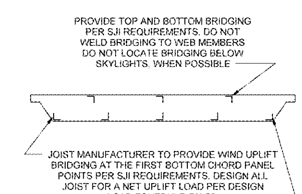
1. A. ROOF LIVE LOAD INCLUDES BASE SNOW AND SNOW DRIFT LOAD WHERE APPLICABLE.
   B. LOADS DO NOT INCLUDE JOIST GIRDER SELF WEIGHT.
   C. JOIST GIRDERS SHALL HAVE 7 1/2" SEATS.
   D. LIMIT JOIST GIRDER SEAT WIDTH TO A MAXIMUM OF 11 INCHES.
   E. LOADS INCLUDE POINT LOADS SHOWN ON FRAMING PLAN (e.g. RTU'S, DRAIN LINES, SOFFITS, ETC).
   F. THE LIVE LOAD DEFLECTION LIMIT IS L/240 UNLESS NOTED OTHERWISE IN THE SCHEDULE.
2. ALL LOADS SHOWN ON THESE DIAGRAMS AND ON OTHER DRAWINGS ARE DESIGN WORKING LOADS FOR WORKING STRESS DESIGN WITH THE APPROPRIATE BUILDING CODE LOAD FACTOR ALREADY APPLIED. NO INCREASE IN STRESS OR LOAD REDUCTION IS ALLOWED FOR WIND OR SEISMIC LOAD COMBINATIONS. ALL ADDITIONAL SPECIFIED AXIAL LOADS ARE TO BE ADDITIVE TO FULL GRAVITY AND FULL UPLIFT LOADS TO PRODUCE THE WORST CASE CONDITION.
3. JOIST GIRDER MANUFACTURER SHALL CONSIDER THE EFFECTS OF THE TWISTING FORCES ON A JOIST GIRDER INDUCED WHEN UNEQUAL LENGTH JOISTS BEAR ON OPPOSITE SIDES OF THE SAME JOIST GIRDER. ANY ADDITIONAL BOTTOM CHORD BRACING REQUIRED TO RESIST THE TORSIONAL FORCES MUST BE DESIGNED AND SPECIFIED ON THE JOIST GIRDER SUBMITTAL BY THE JOIST GIRDER MANUFACTURER.
4. DO NOT PLACE A GIRDER VERTICAL WEB MEMBER BELOW JOIST LOCATIONS AT GIRDERS MARKED WITH (*) TO AVOID A CONFLICT WITH THE LIGHTING. (REF ROOF FRAMING PLAN FOR LOCATIONS).
5. JOIST GIRDERS AT PERIMETER WALLS SHALL BE LIMITED TO A LIVE LOAD DEFLECTION OF L/360 AND A TOP CHORD WIDTH OF 11 INCHES.
6. JOIST GIRDERS WITH SHEAR COLLECTORS (REF 1-S5.1) SHALL HAVE A MINIMUM TOP CHORD WIDTH OF 8 INCHES.



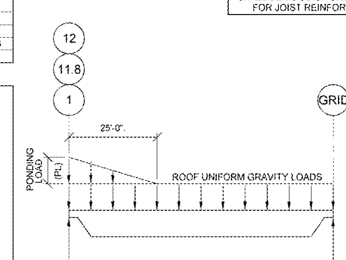
2 JOIST GIRDER SCHEDULE

NTS

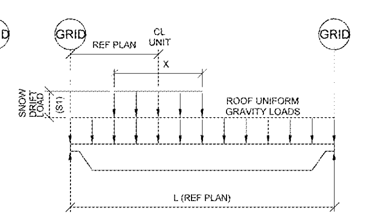
CONTRACTOR NOTE:
BRIDGING AND WEB MEMBERS ARE NOT DESIGNED FOR LOADS OTHER THAN AXIAL. NO ATTACHMENT OF ANY TYPE SHALL BE MADE TO BRIDGING OR JOIST WEB MEMBERS. ALL LOAD ATTACHMENT SHALL BE TO JOIST CHORDS ONLY. REF DETAIL 5-S4.1 FOR JOIST REINFORCEMENT WHEN REQUIRED.



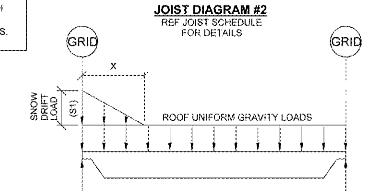
TYPICAL JOIST BRIDGING DIAGRAM



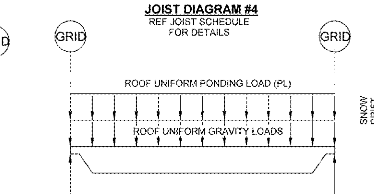
JOIST DIAGRAM #2
REF JOIST SCHEDULE FOR DETAILS



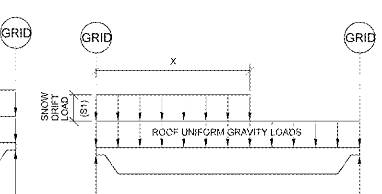
JOIST DIAGRAM #4
REF JOIST SCHEDULE FOR DETAILS



JOIST DIAGRAM #1
REF JOIST SCHEDULE FOR DETAILS



JOIST DIAGRAM #3
REF JOIST SCHEDULE FOR DETAILS



JOIST DIAGRAM #5
REF JOIST SCHEDULE FOR DETAILS

1 JOIST SCHEDULE AND DIAGRAMS

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