

C:\USERS\CHASE.YOUNG\DRIVE - PROFESSIONAL ENGINEERING CONSULTANTS\DESKTOP\CHISHOLM CREEK
 TB.DWG
 PLOTTED ---- BY CHASE YOUNG
 12:18:23 PM BY CHASE.YOUNG
 1/24/2025

DESIGN CRITERIA

- BUILDING CODE: INTERNATIONAL BUILDING CODE (IBC), 2018 EDITION, INCLUDING LOCAL SUPPLEMENTS. THE STRUCTURE IS CLASSIFIED AS A RISK CATEGORY I FACILITY.
- DEAD AND LIVE LOADS:

LOCATION	UNIFORM LIVE LOAD	CONCENTRATED LIVE LOAD	TOTAL DEAD LOAD*
BRIDGE	40 PSF	-----	10 PSF

*TOTAL DEAD LOAD INCLUDES WEIGHT OF STRUCTURAL ELEMENTS.
- SNOW LOADS

GROUND SNOW LOAD, P _g :	15 PSF
FLAT ROOF SNOW LOAD, P _r :	15.5 PSF
SNOW IMPORTANCE FACTOR, I _s :	1.0

SOIL PREPARATION AND FOUNDATIONS

- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENGAGE A LICENSED GEOTECHNICAL ENGINEER TO PERFORM A SUBSURFACE GEOTECHNICAL INVESTIGATION. THE RESULTS OF THE GEOTECHNICAL INVESTIGATION SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW. THE GEOTECHNICAL INVESTIGATION MUST, AT THE MINIMUM, PROVIDE THE FOLLOWING:
 - SUFFICIENT SOIL BORINGS SHALL BE MADE TO VERIFY THAT THE PRESUMPTIVE SOIL BEARING PRESSURE OF 1,500 PSF IN UNDISTURBED SOILS AND ENGINEERED FILLS USED FOR DESIGN IS ADEQUATE.
- LABORATORY TESTS SHALL BE MADE AS NECESSARY TO VERIFY THAT THE TOTAL SETTLEMENT IS LESS THAN 1" AND THE DIFFERENTIAL SETTLEMENT IS LESS THAN 1/2", NO SHRINK/SWELL POTENTIAL EXISTS, AND THE DEPTH IS ADEQUATE FOR THE SITE.
- DO NOT BACKFILL FOUNDATIONS/BASEMENT WALLS UNTIL THE RESTRAINING SLABS OR ADEQUATE BRACING ARE IN PLACE. ALL BACKFILL SHALL BE PLACED AND COMPACTED IN ACCORDANCE WITH THE SPECIFICATION.
- EXTERIOR SLABS SHALL SLOPE AWAY FROM THE STRUCTURE A MINIMUM OF 1/4" PER FOOT UNLESS NOTED OTHERWISE.
- SOIL SUPPORTED FOUNDATIONS:
 - DESIGN BEARING PRESSURE (NET) IS 1,500 PSF FOR FOUNDATIONS BEARING ON UNDISTURBED SOIL OR APPROVED ENGINEERED FILL MATERIAL. BEARING MATERIALS SHALL BE VERIFIED BY A LICENSED GEOTECHNICAL ENGINEER.
 - ALL FOUNDATIONS ARE DESIGNED WITH EARTH FORMED SIDES; THE TOP 7-1/4" OF THE FOUNDATION SHALL BE FORMED TO THE DESIGN DIMENSION WHEN VISIBLE AFTER CONSTRUCTION IS COMPLETE. THE CONSTRUCTED FOUNDATION DIMENSION SHALL BE NO LESS THAN THE DESIGN DIMENSION, AND NO MORE THAN 6" GREATER THAN THE DESIGN DIMENSION.

CONCRETE

- ALL CONCRETE HAS BEEN DESIGNED IN ACCORDANCE WITH ACI 318 AND THE BUILDING CODE, AND IN CONFORMANCE WITH THE CURRENT "ACI MANUAL OF CONCRETE PRACTICE."
- THE CONCRETE REQUIREMENTS ARE:
 - FINE AGGREGATE FOR NORMAL WEIGHT CONCRETE SHALL MEET ASTM C33.
 - COARSE AGGREGATES FOR NORMAL WEIGHT CONCRETE SHALL CONFORM TO ASTM C33. COARSE AGGREGATES SHALL BE NO LESS THAN 50% OF THE TOTAL AGGREGATE BY WEIGHT, UNLESS APPROVED BY THE ENGINEER PRIOR TO MIX DESIGN SUBMITTAL.
 - THE CONTRACTOR OR MIX DESIGNER SHALL SPECIFY AN APPROPRIATE SLUMP PER ACI 117 FOR THE APPLICATION AS NEEDED FROM PUMPING, WORKABILITY, AND FINISHING. IF CONCRETE IS PLACED THROUGH A FUNNEL HOPPER AT THE TOP OF A DEEP FOUNDATION ELEMENT, THE MIX SHALL HAVE A SLUMP BETWEEN 4" AND 8".
 - THE CONCRETE COMPRESSIVE STRENGTH, f_c, SHALL BE BASED ON 28-DAY TESTS UNLESS NOTED OTHERWISE.
 - REFER TO CONCRETE MIX DESIGN REQUIREMENTS TABLE FOR MIX DESIGN.
- ADMIXTURES, HARDENERS, & CURING COMPOUNDS
 - ALL CONCRETE ADMIXTURES SHALL, WHEN MIXED INTO CONCRETE, BE NON-CHLORIDE AND NON-CHLORIDE FORMING.
 - ALL ADMIXTURES MUST CONFORM TO ASTM C 494 AND C 260.
 - CONCRETE CURING COMPOUND AND SEALERS SHALL MEET ASTM C 309 TYPE 1 OR 1D.
 - USE OF "SELF CONSOLIDATING" CONCRETE MUST BE SUBMITTED FOR APPROVAL WITH THE CONCRETE MIX DESIGN.
- MISCELLANEOUS CONCRETE DETAILS:
 - ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 3/4" INSIDE THE FORMS OR TOOLED TO 3/4" RADIUS UNLESS NOTED OTHERWISE..
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL FORMING AND SHORING.
 - NO ALUMINUM SHALL BE EMBEDDED IN CONCRETE.

CONCRETE REINFORCING

- MATERIALS

ASTM	GRADE
REINFORCING STEEL:	A615 60

2. DETAILS:

- WELDING OF REINFORCING STEEL IS PROHIBITED UNLESS NOTED OTHERWISE. WHEN WELDING IS APPROVED, WELDING SHALL BE IN ACCORDANCE WITH AWS D1.4 "WELDING REINFORCING STEEL, ETC."
- SHOP DRAWINGS SHALL BE SUBMITTED WITH REINFORCING STEEL IN ACCORDANCE WITH ACI 315.

3. PLACEMENT:

- ALL REINFORCING AND EMBEDMENTS SHALL BE SUPPORTED ON CHAIRS/BOLSTERS TO THE DESIGN DIMENSIONS. SPACING SHALL BE SUFFICIENTLY CLOSE TO PREVENT DISPLACEMENT OR PERMANENT DEFORMATION DUE TO CONCRETE PLACEMENT, FOOT TRAFFIC, OR VIBRATION. "PUDDLING IN" OR "PULLING UP" REINFORCING IS NOT AN ACCEPTABLE METHOD FOR PLACING REINFORCING. CHAIRS/BOLSTERS SHALL HAVE PLASTIC COATED FEET OR BE MADE OF STAINLESS STEEL. CHAIRS/BOLSTERS IN CONTACT WITH EARTH SHALL HAVE BOTTOM PLATES AND BE COATED TO PREVENT CORROSION. ANCHOR RODS SHALL BE HELD IN PLACE WITH TEMPLATES SUFFICIENTLY STRONG TO PREVENT DISPLACEMENT OR TILTING.
- MAINTAIN ACI CLEAR COVER ON REINFORCING AS LISTED BELOW UNLESS NOTED OTHERWISE.

CAST AGAINST EARTH (BOTTOM OR SIDES):	3"
FORMED - EXPOSED TO SOIL, WEATHER OR LIQUIDS:	2"
- PROVIDE CORNER BARS OF THE SAME SIZE AND SPACING AS ADJACENT REINFORCING.
- REINFORCING STEEL SHALL BE LAPPED PER ACI.

STRUCTURAL WOOD

- ALL WOOD STRUCTURES HAVE BEEN DESIGNED IN ACCORDANCE WITH THE BUILDING CODE AND THE LATEST EDITION OF THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (NDS).

THE DESIGN OF THE STRUCTURE IS BASED UPON THE USE OF THE FOLLOWING WOOD PRODUCTS:

USE	WOOD TYPE	GRADE	F _v (PSI)	F _{cp} (PSI)	E (PSI)
JOISTS	(2 x 6)	SOUTHERN PINE #2			
	(2 x 10)	SOUTHERN PINE #2	800	1,300	1,400,000
	(2 X 12)	SOUTHERN PINE #2	750	1,250	1,400,000
COLUMNS	(4 X 4)	SOUTHERN PINE #1	1,500	1,650	1,600,000

ALL MEMBERS SHALL BE SURFACED DRY AND HAVE A MAXIMUM MOISTURE CONTENT OF 19%. STRESS INCREASE SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE NDS.

- ALL WOOD PRODUCTS IN DIRECT CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE TREATED WITH CCA-C, ACQ, CBA-A, CA-B OR SBX AND SHALL NOT BE IN CONTACT WITH SOIL.
- CONNECTIONS SHALL MEET THE FOLLOWING REQUIREMENTS:
 - ALL BOLTS SHALL BE ASTM A307 OR A36. WASHERS WITH AN OUTSIDE DIAMETER EQUAL TO AT LEAST TWICE THE BOLT DIAMETER ARE REQUIRED BETWEEN THE BOLT HEAD OR NUT AND THE WOOD SURFACE.
 - WOOD MEMBERS SHALL BE CONNECTED TOGETHER USING THE BUILDING CODE NAILING SCHEDULE, UNLESS NOTED OTHERWISE. ALL CONNECTIONS ARE BASED ON USING COMMON NAILS. ANY SUBSTITUTION OF BOX, SINKER, RING SHANK OR COOLER NAILS SHALL BE SUBMITTED WITH SEALED CALCULATIONS TO THE ENGINEER OF RECORD FOR APPROVAL. ALL OTHER FASTENERS, INCLUDING STAPLES, ARE PROHIBITED. ALL NAILS SHALL CONFORM TO THE FOLLOWING MINIMUM STANDARDS:

SIZE	LENGTH	DIAMETER	HEAD
6d	2"	0.113"	FULL ROUND HEAD
8d	2 1/2"	0.131"	FULL ROUND HEAD
10d	3"	0.148"	FULL ROUND HEAD
12d	3 1/4"	0.148"	FULL ROUND HEAD
16d	3 1/2"	0.162"	FULL ROUND HEAD
20d	4"	0.192"	FULL ROUND HEAD
30d	4 1/2"	0.207"	FULL ROUND HEAD
 - ALL FASTENERS (SCREWS, NAILS, BOLTS, ETC.) AND CONNECTORS INSTALLED IN CONTACT WITH PRESSURE TREATED LUMBER SHALL BE DOUBLE GALVANIZED..
 - ALL MANUFACTURED CONNECTORS SHALL BE BY SIMPSON STRONG-TIE COMPANY, INC., OR U.S.P. FILL ALL FASTENER HOLES WITH FASTENERS AS SPECIFIED BY THE CONNECTION MANUFACTURER UNLESS NOTED OTHERWISE.

CONCRETE MIX DESIGN REQUIREMENTS						
LOCATION	COMPRESSIVE STRENGTH, f _c (PSI)	TARGET AIR CONTENT	EXPOSURE CLASSES			NOTES
			F	C	S W	
WALL FOOTINGS	4500	6%	F2	C1	S0 W1	
STEM WALLS	4500	6%	F2	C1	S0 W1	



CHISHOLM CREEK PARK NORTH IMPROVEMENTS
 N WOODLAWN BLVD, WICHITA, KS 67220

Issue:		
1	ISSUED FOR BID	01/24/25
JOB NO.	247042-001	
DATE	24 JANUARY 2025	
PM	JAG	
DESIGNED BY	CAY	
DRAWN BY	CAY	
CHECKED BY	WAG	

GENERAL NOTES

S-001