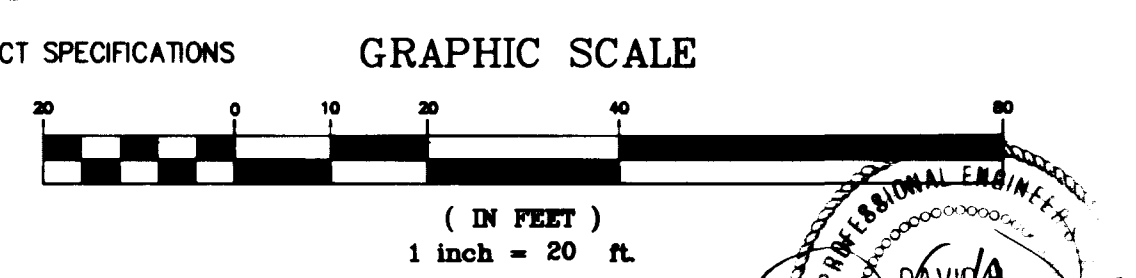


GENERAL STRUCTURAL NOTES

- A. DESIGN SPECIFICATIONS: 1994 EDITION OF THE UNIFORM BUILDING CODE (UBC).
- B. LOADING:
WIND: 15 PSF
SOIL: 110 PSF
- C. CONCRETE:
1. ALL CONCRETE SHALL HAVE AN ULTIMATE COMPRESSIVE STRENGTH $f'_c=4000$ PSI AT 28 DAYS. ALL CONCRETE SHALL BE MADE USING TYPE V CEMENT.
- D. REINFORCING STEEL:
1. ALL REINFORCING STEEL SHALL BE ASTM A615 GRADE 60. MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 2" UNLESS NOTED OTHERWISE. LAP SPLICES IN REINFORCING STEEL SHALL BE MADE ONLY AT LOCATIONS SHOWN OR APPROVED BY THE ENGINEER. LAPS IN HORIZONTAL STEEL SHALL BE STAGGERED UNLESS SHOWN OTHERWISE.
- E. STRUCTURAL STEEL:
1. STANDARD STRUCTURAL STEEL SHAPES, ROLLED SECTIONS, BARS, AND PLATES SHALL CONFORM TO ASTM A36 (FY=36 KSI) ALL BOLTS AND STUDS SHALL BE ASTM A307, UNLESS NOTED OTHERWISE.
- F. MASONRY:
1. ALL MASONRY SHALL CONFORM TO ASTM C90 GRADE N-1. SEE NOTE 4 FOR MINIMUM COMPRESSIVE STRENGTH AT 28-DAYS. FULL STRESSES ARE USED IN THE DESIGN. SPECIAL INSPECTION IS REQUIRED.
2. ALL VERTICAL REINFORCING SHALL HAVE A MINIMUM LAP SPLICE OF 48-BAR DIAMETERS. WHEN TWO BARS OCCUR IN ONE CELL THE SPLICE SHALL BE INCREASED TO 62-BAR DIAMETERS. ALL HORIZONTAL REINFORCING SHALL HAVE A MINIMUM LAP SPLICE OF 48-BAR DIAMETERS, STAGGER ALL HORIZONTAL REBAR SPLICES.
3. ALL CELLS IN CONCRETE BLOCKS SHALL BE FILLED SOLID WITH GROUT, UNLESS NOTED OTHERWISE IN THE DRAWINGS OR SPECIFICATIONS.
4. DESIGN STRENGTH OF MASONRY SHALL BE 1500 PSI UNLESS NOTED OTHERWISE ON PLANS. DESIGN STRENGTH SHALL BE VERIFIED BY PRISM TESTING PER UBC REQUIREMENTS.
5. MORTAR MIX SHALL CONFORM TO REQUIREMENTS FOR UBC TABLE 21-A, TYPE S, AND PROJECT SPECIFICATIONS. MORTAR SHALL ATTAIN A COMPRESSIVE STRENGTH OF 1800 PSI AT 28 DAYS.
6. GROUT SHALL CONFORM TO REQUIREMENTS FOR SECTION 2103 OF UBC FOR COARSE GROUT. USE SUFFICIENT WATER FOR GROUT TO FLOW INTO ALL JOINTS OF THE MASONRY WITHOUT SEGREGATION. GROUT SHALL ATTAIN A COMPRESSIVE STRENGTH AS SHOWN ON NOTE 4. FLY ASH WILL NOT BE PERMITTED IN GROUT.

- G FOUNDATIONS:
1. FOUNDATION DESIGN IS BASED ON RECOMMENDATIONS BY: WESTERN TECHNOLOGIES, INC. "GEOLOGICAL EVALUATION-PROPOSED SUMMERLIN RESORT" RAMPART BLVD. & SUMMERLIN PARKWAY DATED: MARCH 14, 1997 JOB NO.: 4127J028
ALL RECOMMENDATIONS CONTAINED IN THE REPORT SHALL BE FOLLOWED DURING CONSTRUCTION.
ALLOWABLE BEARING: 6000 PSF
ACTIVE PRESSURE: 35 PSF/FT.
PASSIVE PRESSURE: 250 PSF/FT (5000 PSF MAXIMUM)
COEFFICIENT OF FRICTION: 0.40
SURCHARGE LOADING: 0.30 x SURCHARGE
2. CONSTRUCTION SPECIFICATIONS: SEE THE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

REVISIONS
6-12-98 WALL REVISIONS
10-16-98 ADD RETAINING WALL TO EXIST. SIDE OF DOCK RAMP

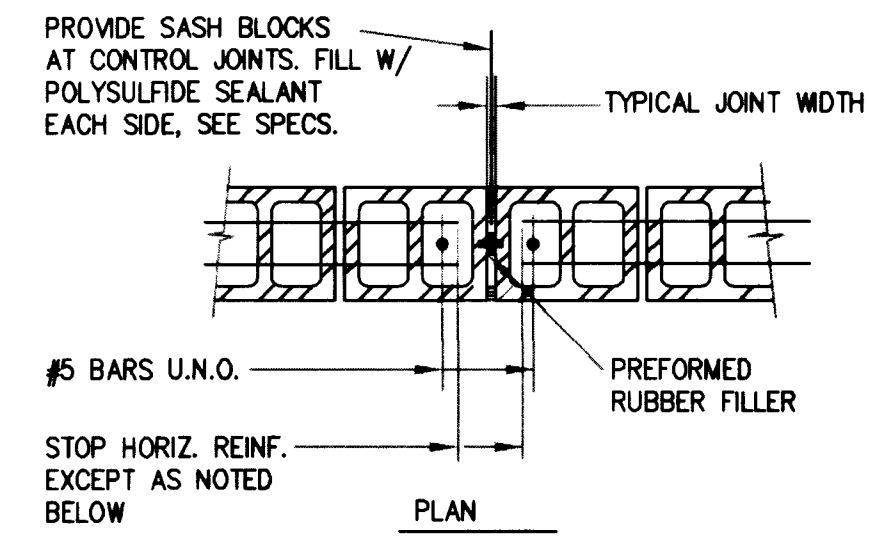


BASIS OF BEARING

NORTH 01°53'54" WEST, BEING THE CENTERLINE OF RAMPART BLVD. AS PER A MAP IN FILE 82, PAGE 64 OF PARCEL MAPS, CLARK COUNTY RECORDER'S OFFICE, CLARK COUNTY, NEVADA.
5-27-99

BENCHMARK

OLV00 305E6, BEING A RIVET AND PLATE, NEVADA POWER VAULT #JU-795, 9201, SUMMERLIN PARKWAY.
ELEV: 828.1527 METERS NAVD88 (2717.03 FEET)
NOTE: ALL RETAINING WALLS SHALL RECEIVE A STUCCO FINISH IDENTICAL TO BUILDINGS AND A CAP AS DETERMINED BY THE ARCHITECT.



- NOTES:
1. CONTRACTOR SHALL OBTAIN ARCHITECT'S APPROVAL OF JOINT LOCATIONS, WHICH SHALL NOT EXCEED 24'-0" O.C.
2. HORIZONTAL REINF. AT FLOOR AND ROOF LINES SHALL BE CONTINUOUS THRU JOINT.
3. CONCRETE BLOCK SHOWN - BRICK SIMILAR.
4. SAWCUT BLOCK OR BRICK AS REQ'D.

CMU WALL CONTROL JOINT

5

CONFERENCE CENTER

FF=11.50
PAD=10.50

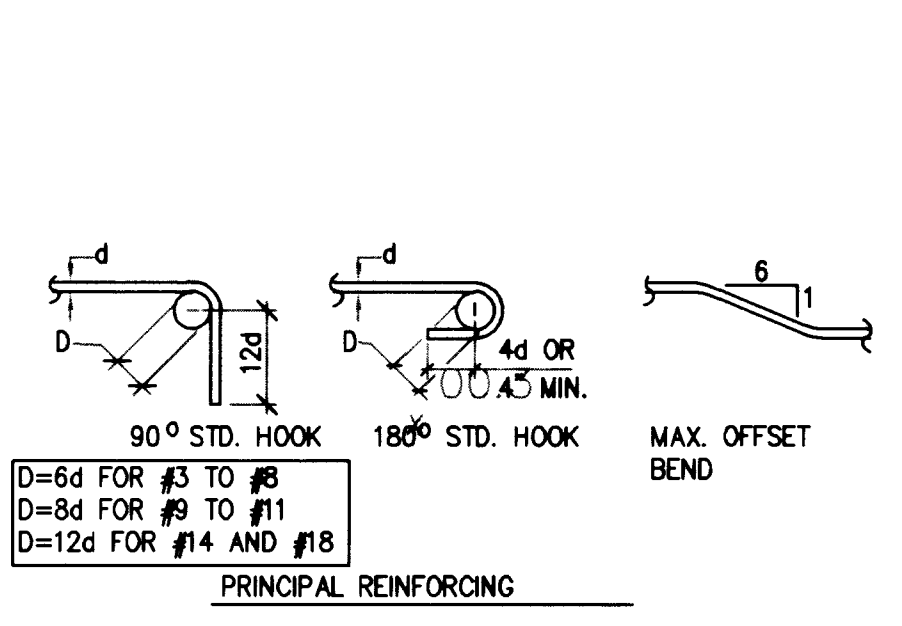
AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.
Call before you Dig- 1-800-227-2600
UNDERGROUND SERVICE ALERT (U.S.A.)

AVOID OVERHEAD POWER LINE CONTACT
Call before you OVERHEAD 1-702-593-6111
NEVADA POWER ENVIRONMENT AND SAFETY SERVICES DEPARTMENT

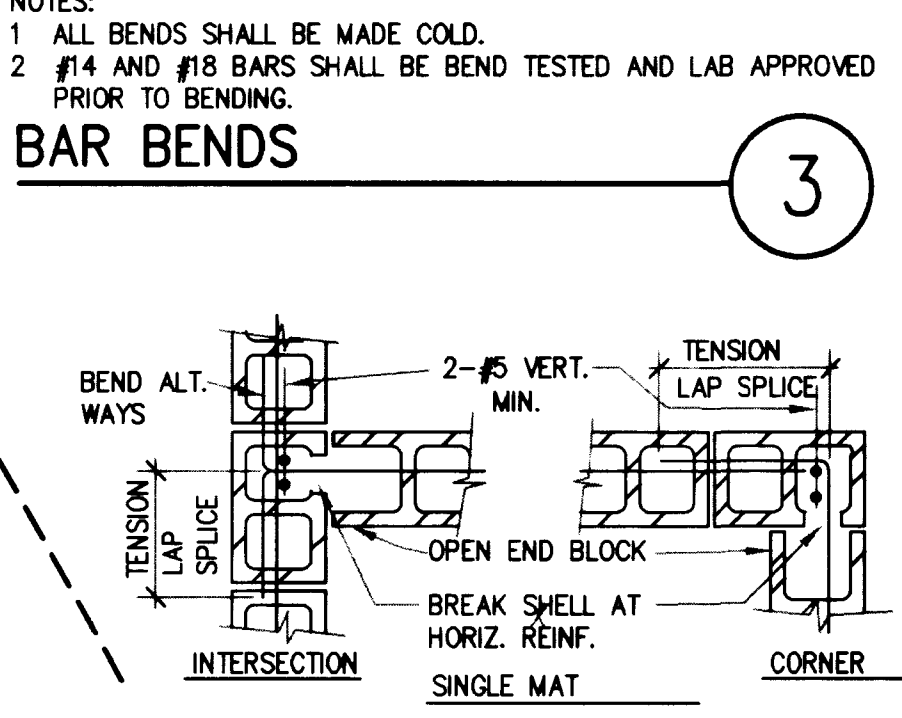
MARTIN & MARTIN ASSUMES NO RESPONSIBILITY FOR EXISTING UTILITY LOCATIONS AND ELEVATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION AND ELEVATION OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION. CONTRACTOR TO FIELD VERIFY ALL EXISTING SITE CONDITIONS PRIOR TO CONSTRUCTION. IF A CONFLICT EXISTS BETWEEN WHAT IS SHOWN ON THESE DRAWINGS AND WHAT EXISTS IN THE FIELD, THE CONTRACTOR IS TO NOTIFY THE ARCHITECT OR ENGINEER IMMEDIATELY.

LEGEND

EXISTING	PROPOSED	EXISTING	PROPOSED
RIGHT-OF-WAY	RIGHT-OF-WAY	SCREEN / RETAINING WALL	SCREEN / RETAINING WALL
CENTERLINE	CENTERLINE	CHAIN LINK FENCE	CHAIN LINK FENCE
WATER LINE	WATER LINE	TRASH ENCLOSURE	TRASH ENCLOSURE
SANITARY SEWER LINE	SANITARY SEWER LINE	GRADE BREAK	GRADE BREAK
GAS LINE	GAS LINE	WIRE FENCE	WIRE FENCE
STORM DRAIN	STORM DRAIN	FINISH FLOOR	FINISH FLOOR
POWER LINE / POWER POLE	POWER LINE / POWER POLE	CLEANOUT INVERT ELEVATION	CLEANOUT INVERT ELEVATION
TELEPHONE LINE	TELEPHONE LINE	FLOW LINE	FLOW LINE
FIRE HYDRANT	FIRE HYDRANT	FINISH GRADE	FINISH GRADE
WATER VALVE	WATER VALVE	CONCRETE	CONCRETE
METERS / PULL BOXES	METERS / PULL BOXES		
REDUCER	REDUCER		
MANHOLE	MANHOLE		
CLEANOUT	CLEANOUT		
CONTOUR	CONTOUR		
STREET LIGHTS	STREET LIGHTS		
100 W.H.P.S.	100 W.H.P.S.		
150 W.H.P.S.	150 W.H.P.S.		
200 W.H.P.S.	200 W.H.P.S.		
250 W.H.P.S.	250 W.H.P.S.		



- NOTES:
1. ALL BENDS SHALL BE MADE COLD.
2. #14 AND #18 BARS SHALL BE BEND TESTED AND LAB APPROVED PRIOR TO BENDING.
- ### BAR BENDS



NOTE: TENSION LAP SPLICE=48 BAR DIA.
CMU WALL INTERSECTIONS

3

TENSION DEVELOPMENT LENGTH, Q_d (IN INCHES)

FOR GRADE 60 UNCOATED BARS
 $f'_c = 4000$ PSI; NORMAL WEIGHT CONCRETE

BAR SIZE	TOP BARS						OTHER BARS					
	1	2	3	4	5	6	1	2	3	4	5	6
#3	14	14	14	14	14	12	12	12	12	12	12	12
#4	20	19	19	19	19	15	15	15	15	15	15	15
#5	31	25	23	23	23	24	19	18	18	18	18	18
#6	44	35	31	28	28	28	34	27	24	22	22	22
#7	59	48	42	33	33	33	46	37	32	28	25	25
#8	78	63	55	44	39	37	60	48	42	34	30	29
#9	99	79	69	56	50	42	76	61	53	43	38	32
#10	126	101	88	70	63	50	97	77	68	54	48	39
#11	154	123	108	86	77	62	119	95	83	67	59	48
#14	210	171	147	115	105	85	162	131	113	91	81	67
#18	309	259	216	176	154	123	237	197	166	139	119	118

- NOTES:
1. THIS TABLE FOR USE WITH NORMAL WEIGHT HARDROCK CONCRETE AND GRADE 60 UNCOATED REINFORCING BARS. FOR LIGHTWEIGHT AGGREGATE USE 1.3 Q_d .
2. TOP BARS ARE HORIZONTAL BARS WITH 12" OR MORE OF CONCRETE CAST IN THE MEMBER BELOW THE BAR.
3. FOR BARS ENCLOSED IN STANDARD COLUMN SPIRALS, USE 0.75 Q_d OR 12" MIN.
4. DEVELOPMENT LENGTH OF INDIVIDUAL BARS WITHIN A BUNDLE SHALL BE 1.2 Q_d FOR THAT BAR IN A 3-BAR BUNDLE AND 1.33 Q_d FOR A 4-BAR BUNDLE.
5. COMPRESSION DEVELOPMENT LENGTH (ONLY WHERE INDICATED ON DRAWINGS) FOR GRADE 60 BARS USE 22 BAR DIAMETERS.
6. CATEGORY SELECTION
-FOR FOUNDATION REINFORCEMENT USE CATEGORY 5 U.N.O.
-FOR COLUMN REINFORCEMENT AND DOMELS USE CATEGORY 3 U.N.O.
-FOR BEAM REINFORCEMENT USE CATEGORY 3 U.N.O.
-FOR STRUCTURAL SLAB REINFORCEMENT USE CATEGORY 3 U.N.O.
-FOR SLAB ON GRADE REINFORCEMENT USE CATEGORY 6 U.N.O.
-FOR WALL REINFORCEMENT AND DOMELS USE CATEGORY 3 (EXCEPT AS NOTED BELOW) U.N.O.
-FOR WALLS WITH A SINGLE MAT OF STEEL CENTERED IN THE WALL USE CATEGORY 5 FOR WALL REINFORCEMENT AND DOMELS U.N.O.
-FOR CHORD STEEL REINFORCEMENT USE CATEGORY 1 U.N.O.

TENSION DEVELOPMENT LENGTH, Q_d (IN INCHES)

TENSION LAP SPLICE LENGTH, Q_s (IN INCHES)

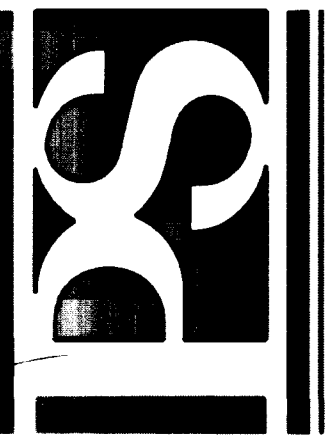
$f'_c = 4000$ PSI; NORMAL WEIGHT CONCRETE

BAR SIZE	LAP CLASS	TOP BARS						OTHER BARS					
		1	2	3	4	5	6	1	2	3	4	5	6
#3	A	14	14	14	14	14	12	12	12	12	12	12	12
#4	A	20	19	19	19	19	15	15	15	15	15	15	15
#5	A	31	25	23	23	23	24	19	18	18	18	18	18
#6	A	44	35	31	28	28	28	34	27	24	22	22	22
#7	A	59	48	42	33	33	33	46	37	32	28	25	25
#8	A	77	62	54	43	42	42	59	48	42	34	30	29
#9	A	99	79	69	56	50	42	76	61	53	43	38	32
#10	A	129	103	90	72	64	55	99	79	69	56	50	42
#11	A	163	131	114	92	85	65	128	101	88	70	63	50
#14	A	210	171	147	115	105	85	162	131	113	91	81	67
#18	A	309	259	216	176	154	123	237	197	166	139	119	118

- NOTES:
1. TABLE FOR USE WITH NORMAL WEIGHT HARDROCK CONCRETE AND GRADE 60 UNCOATED REINFORCING BARS. FOR LIGHTWEIGHT AGGREGATE USE 1.3 Q_s .
2. CLASS A - HALF OR LESS OF THE BARS ARE SPLICED WITHIN A REQUIRED LAP LENGTH.
CLASS B - MORE THAN HALF OF THE BARS ARE SPLICED WITHIN A REQUIRED LAP LENGTH.
3. TOP BARS ARE HORIZONTAL BARS WITH 12" OR MORE OF CONCRETE CAST IN THE MEMBER BELOW THE BAR.
4. FOR BARS ENCLOSED IN STANDARD COLUMN SPIRALS, USE 0.65 Q_s OR 12" MIN.
5. LAP SPLICES OF INDIVIDUAL BARS WITHIN A BUNDLE SHALL BE 1.2 Q_s FOR THAT BAR IN A 3-BAR BUNDLE AND 1.33 Q_s FOR THE SAME LOCATION. SPLICES FOR INDIVIDUAL BARS WITHIN A BUNDLE SHALL BE STAGGERED SUCH THAT THEY DO NOT OVERLAP.
6. Q_s - BASIC LAP LENGTH, SHOWN AT LEFT.
7. CATEGORY SELECTION
-FOR FOUNDATION REINFORCEMENT USE CATEGORY 5 U.N.O.
-FOR COLUMN REINFORCEMENT AND DOMELS USE CATEGORY 3 U.N.O.
-FOR BEAM REINFORCEMENT USE CATEGORY 3 U.N.O.
-FOR STRUCTURAL SLAB REINFORCEMENT USE CATEGORY 3 U.N.O.
-FOR SLAB ON GRADE REINFORCEMENT USE CATEGORY 6 U.N.O.
-FOR WALL REINFORCEMENT AND DOMELS USE CATEGORY 3 (EXCEPT AS NOTED BELOW) U.N.O.
-FOR WALLS WITH A SINGLE MAT OF STEEL CENTERED IN THE WALL USE CATEGORY 5 FOR WALL REINFORCEMENT AND DOMELS U.N.O.
-FOR CHORD STEEL REINFORCEMENT USE CATEGORY 1 U.N.O.

1

2



PAUL STEELMAN LTD
ARCHITECTURE PLANNING
3330 W. LEBLANC AVENUE, SUITE 100
LAS VEGAS, NEVADA 89120
PHONE 702-397-3585
FAX 702-397-3585



MARTIN & MARTIN
CIVIL ENGINEERS
1408 SOUTH JONES BLVD.
SUITE 7
LAS VEGAS, NEVADA 89102
PHONE (702) 248-8000

THE RESORT AT SUMMERLIN
HOTEL, CASINO & ENTERTAINMENT COMPLEX
LAS VEGAS, NEVADA

DATE: 2-11-98
SCALE: 1/4" = 1'-0"
JOB NO.: 107-V2830
REVISION:

SHEET FILE AND LOCATION
RETAINING WALL PLAN

SHEET NUMBER
C6.02
SHEET 31 OF 32
REVISION
ISSUED FOR CONTRACT BULLETIN #8
2-11-98
107-V2830
H:\CAD\1570\WALLS

