

General

- The Contractor shall verify all dimensions prior to starting construction. The Architect shall be notified of any discrepancies or inconsistencies.
- Notes and details on the drawings shall take precedence over these general notes, typical details, and the project specifications.
- All work shall conform to the minimum standards of following codes:
The 2006 edition of the International Building Code (IBC) and other regulating agencies which have authority over any portion of the work, and those codes and standards listed in these notes.
- The contract Structural drawings and specifications represent the finished structure. They do not indicate the method of construction.
- All specifications and codes noted shall be the latest approved editions and revisions by the governmental agency having jurisdiction over this project.
- Contractor shall investigate the site during clearing and earth work operations for filled excavations or buried structures such as cesspools, cisterns, foundations, utilities, etc. If any such structures are found, the Structural Engineer shall be notified immediately.
- IBC Lateral Loads:

Use Group	I
Importance Factor I_e	1.0
Soil Site Class	C
Spectral Response Coefficient	
S_{DS}	0.4203
S_{D1}	0.1831
Mapped Spectral Response Acceleration	
S_a	0.5309
S_1	0.1684
Soil Factor Coefficient	
F_a	1.1876
F_v	1.6315

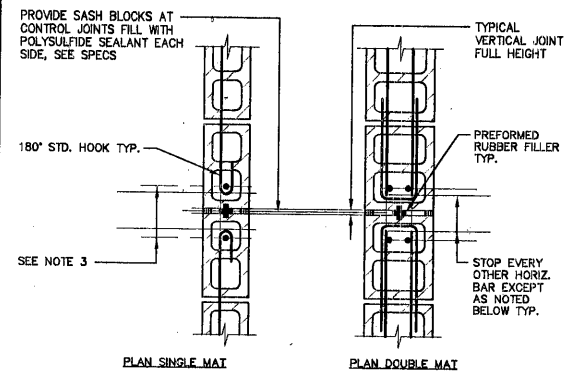
- IBC Table 1904.3 Sulfate Exposure
(See General Notes - Concrete Item #3 for concrete water cement ratio limits): Negligible

Quality Assurance and Special Inspection

- Testing Laboratory: Retained by owner and satisfactory to Architect/Structural Engineer and governing code authority to perform required tests and inspections of this contract and applicable codes.
Material Certification: Submit laboratory test reports certifying materials are of identifiable tested stock to owner, testing laboratory, Architect/Structural Engineer and, upon request, to governing code authority. If laboratory test reports cannot be made available, testing laboratory will perform tests as directed by Architect/Structural Engineer. Contractor shall pay testing laboratory for costs related to tests and inspections of unidentifiable materials or materials furnished without laboratory test reports, materials found deficient after initial tests and inspections, or materials replacing deficient materials.
- Concrete.
- Testing laboratory will review concrete mix design data and will perform the following concrete tests at frequency indicated in IBC section 1905.6:
(a) Slump tests in compliance with ASTM C143.
(b) Prepare four test cylinders for compressive strength testing in compliance with ASTM C39, A31 318 and IBC section 1905.6. Test one cylinder at 7 days, two cylinders at 28 days and retain remaining cylinder for tests until completion of project. Determine concrete compressive strength at 28 days based on average of two cylinders tested.
(c) Entrained air content in compliance with ASTM C231 for air entrained concrete.
- Reinforcing:
(a) During placement
- Structural masonry.
- Ten percent of drilled-in, epoxy, or grout set anchors shall be proof tested to 2 times allowable tension. Notify Architect/Structural Engineer of any failures so additional testing of adjacent anchors can be directed.
- Excavation and back-filling.

Reinforcing Steel (for Concrete and Masonry)

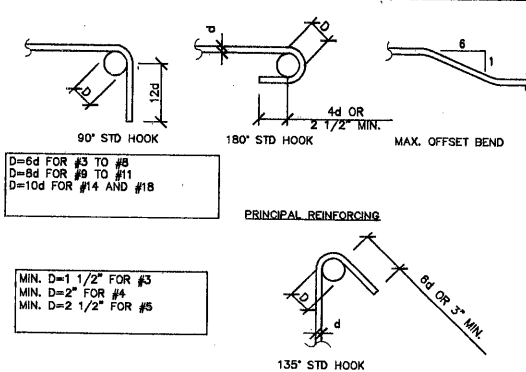
- All reinforcing steel shall be detailed and placed in accordance with the "Building Code Requirements for Reinforced Concrete" and the "Manual of Standard Practice for Reinforced Concrete Construction" by CRSI and WCRSI as modified by the project drawings and specifications.
- Deformed reinforcing bars shall conform to the requirements of ASTM A615 grade 60 and ASTM A706 grade 60 for deformed weldable bars.
- All reinforcing bar bends shall be made cold.
- Lap splices shall be made only where shown on the structural drawings.
- Reinforcing dowels between footings and walls or columns shall be the same number, size, spacing and grade as the specified vertical reinforcing, u.n.o.
- All reinforcing bars shall be marked so their identification can be made when the final in-place inspection occurs.



- NOTES:
- Contractor shall obtain architect's approval of joint locations, which shall not exceed 24'-0" o.c.
 - Horizontal reinf. at floor lines, roof lines, lintel reinf. and every other horiz. bar (or bar set) shall be continuous through joint.
 - Provide vertical wall reinf. each side of joint, #5 bars min.

1 PLAN DETAIL CMU WALL CONTROL JOINT

NOT TO SCALE



- Notes:
- All bends shall be made cold.
 - #14 and #18 bars shall be bend tested and lab approved prior to bending.

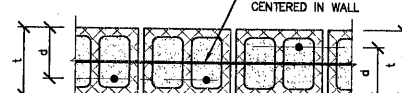
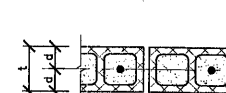
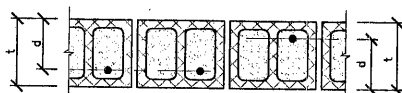
2 BAR BENDS

NOT TO SCALE

VERTICAL REBAR PLACED FOR MAXIMUM d

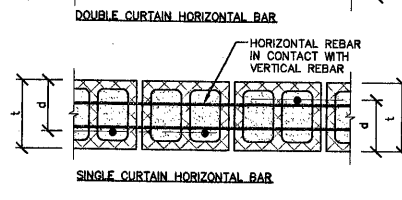
VERTICAL REBAR IN CENTER OF CELL

SINGLE CURTAIN HORIZONTAL BAR



NOMINAL THICKNESS	ACTUAL THICKNESS (t)	d (Inches)			
		#3-#6	#7	#8	#9
6" CMU	5 5/8"	3.25	NP	NP	NP
8" CMU	7 5/8"	5.25	5	4.625	NP
10" CMU	9 5/8"	7.25	7	6.625	6.25
12" CMU	11 5/8"	9.25	9	8.625	8.25
16" CMU	15 5/8"	13.25	13	12.625	12.25

Concrete Masonry Unit		
NOMINAL THICKNESS	ACTUAL THICKNESS (t)	d (Inches)
6" CMU	5 5/8"	2.8
8" CMU	7 5/8"	3.8
10" CMU	9 5/8"	4.8
12" CMU	11 5/8"	5.8
16" CMU	15 5/8"	7.8



- NOTE:
- Where vertical reinforcing bars occur in a cell, bars shall be secured in place by a bar positioner at the top and bottom, and at the intervals not exceeding 200 diameters.

3 PLAN DETAIL FOR REBAR PLACEMENT IN CMU

NOT TO SCALE

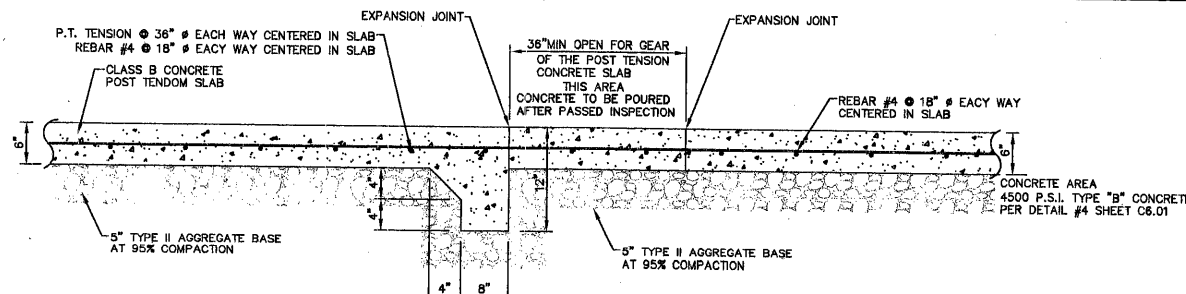
CMU Thickness	Masonry Design Strength	Tension Development and Lap Splice Length (for Masonry only)											
		$f_m = 1500$ psi						$f_m = 2500$ psi					
		Center	Edge	Center	Edge	Center	Edge	Center	Edge	Center	Edge	Center	Edge
8"	#3	19	19	17	17	15	15	15	15	15	15	15	15
	#4	26	30	22	26	20	23	18	21	17	20	18	19
	#5	32	48	28	42	25	37	23	34	21	32	20	30
	#6	58	100	50	88	45	77	41	71	38	65	36	61
	#7	80	124	70	107	62	98	57	88	53	81	49	78
12"	#3	19	19	17	17	15	15	15	15	15	15	15	15
	#4	26	30	22	26	20	23	18	21	17	20	18	19
	#5	32	48	28	42	25	37	23	34	21	32	20	30
	#6	53	100	48	86	41	77	38	71	35	65	33	61
	#7	82	124	54	107	48	98	44	88	41	81	38	78
16"	#3	19	19	17	17	15	15	15	15	15	15	15	15
	#4	26	30	22	26	20	23	18	21	17	20	18	19
	#5	32	48	28	42	25	37	23	34	21	32	20	30
	#6	78	152	66	131	59	117	54	107	50	99	47	93
	#9	92	171	80	148	71	133	65	121	60	112	57	105

- NOTES:
- All lengths are in inches.
 - For bar placement, edge distance (d Dim.) see detail 3/-
 - Where 2 bars per cell occur they shall be placed per edge condition see note 2.
 - 6" CMU 2 bars per cell is not permitted.
8" CMU 2 bars per cell up to #5 are permitted.
10" CMU 2 bars per cell up to #7 are permitted.
 - NP indicates Not Permitted.
 - #10 and #11 bars where shown on plans or details require a mechanical splice.

ALL STEEL FABRICATION IS TO BE COMPLETE BY AN APPROVED STEEL FABRICATOR.

4 TENSION DEVELOPMENT AND LAP SPICE LENGTH (FOR MASONRY ONLY)

NOT TO SCALE



5 TENNIS COURT SLAB

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

VEHICLE BOLLARD

SEE LANDSCAPE PLANS L5.02

- FOOTING:
30" #4-8" DEEP MINIMUM
- REINFORCING:
VERTICAL:
HORIZONTAL:
8 - #8 BARS EQUALLY SPACED
2 - #3 BAR AT TOP
2 - #3 BAR AT 3" #
1 - #3 BAR EVERY 18" THEREAFTER
3" CLEARANCE BOTTOM AND SIDES
2" CLEARANCE TOP

VEHICLE GATE BOLLARD

SEE LANDSCAPE PLANS L5.02

- FOOTING:
30" #4-8" DEEP MINIMUM
- REINFORCING:
VERTICAL:
HORIZONTAL:
8 - #8 BARS EQUALLY SPACED
2 - #3 BAR AT TOP
2 - #3 BAR AT 3" #
1 - #3 BAR EVERY 18" THEREAFTER
3" CLEARANCE BOTTOM AND SIDES
2" CLEARANCE TOP

VEHICLE GATE HINGE

- FOOTING:
24" #4-8" DEEP AS SPECIFIED
- REINFORCING:
VERTICAL:
HORIZONTAL:
8 - #7 BARS EQUALLY SPACED
2 - #3 BAR AT TOP
2 - #3 BAR AT 3" #
1 - #3 BAR EVERY 14" THEREAFTER
3" CLEARANCE BOTTOM AND SIDES
2" CLEARANCE TOP

28" BACKSTOP

- 10" SCHEDULE 80 PIPE (10.75" O.D.)
36" FOOTING MINIMUM DEPTH 6'-0"
- REINFORCING:
VERTICAL:
HORIZONTAL:
12 - #8 BARS EQUALLY SPACED
2 - #3 BAR AT TOP
2 - #3 BAR AT 3" #
1 - #3 BAR EVERY 15" THEREAFTER
3" CLEARANCE BOTTOM AND SIDES
2" CLEARANCE TOP

DUGOUT

- MAXIMUM RAIL SPACING:
TOP 4'-0"
- POST SIZE:
4" SCHEDULE 80 PIPE (5.563" O.D.)
- FOOTING:
18" #4-8" DEEP
- REINFORCING:
VERTICAL:
HORIZONTAL:
4 - #8 BARS EQUALLY SPACED
2 - #3 BAR AT TOP
2 - #3 BAR AT 3" #
1 - #3 BAR EVERY 18" THEREAFTER

BULL PEN

- POST SIZE:
4" SCHEDULE 80 PIPE (4.5" O.D.)
- FOOTING:
18" #4-8" DEEP
- REINFORCING:
VERTICAL:
HORIZONTAL:
4 - #8 BARS EQUALLY SPACED
2 - #3 BAR AT TOP
2 - #3 BAR AT 3" #
1 - #3 BAR EVERY 18" THEREAFTER

6" FENCE AND MAN GATE

- POST SIZE:
3" SCHEDULE 40 PIPE (3.5" O.D.)
- FOOTING:
12" #4-8" DEEP
- REINFORCING:
VERTICAL:
HORIZONTAL:
4 - #5 BARS EQUALLY SPACED
2 - #3 BAR AT TOP
2 - #3 BAR AT 3" #
1 - #3 BAR EVERY 10" THEREAFTER
3" CLEARANCE BOTTOM AND SIDES
2" CLEARANCE TOP

10" FENCE AND MAN GATE

- POST SIZE:
4" SCHEDULE 80 PIPE (4.5" O.D.)
- FOOTING:
18" #4-8" DEEP
- REINFORCING:
VERTICAL:
HORIZONTAL:
4 - #8 BARS EQUALLY SPACED
2 - #3 BAR AT TOP
2 - #3 BAR AT 3" #
1 - #3 BAR EVERY 10" THEREAFTER
3" CLEARANCE BOTTOM AND SIDES
2" CLEARANCE TOP

FIELD A & B - 20" FENCE

- POST SIZE:
4" SCHEDULE 80 PIPE (4.5" O.D.)
- FOOTING:
18" #4-8" DEEP
- REINFORCING:
VERTICAL:
HORIZONTAL:
4 - #8 BARS EQUALLY SPACED
2 - #3 BAR AT TOP
2 - #3 BAR AT 3" #
1 - #3 BAR EVERY 12" THEREAFTER
3" CLEARANCE BOTTOM AND SIDES
2" CLEARANCE TOP

BARBECUE GRILL

- USE 3 - #6 REBAR EACH WAY BOTTOM
3" CLEARANCE BOTTOM AND SIDES

TENNIS COURT

- 10" FENCE
POST SIZE:
4" SCHEDULE 80 PIPE (5.563" O.D.)
- FOOTING:
18" #4-8" DEEP
- REINFORCING:
VERTICAL:
HORIZONTAL:
4 - #8 BARS EQUALLY SPACED
2 - #3 BAR AT TOP
2 - #3 BAR AT 3" #
1 - #3 BAR EVERY 14" THEREAFTER
3" CLEARANCE BOTTOM AND SIDES
2" CLEARANCE TOP

4" FENCE

- POST SIZE:
4" SCHEDULE 80 PIPE (4.5" O.D.)
- FOOTING:
18" #4-8" DEEP
- REINFORCING:
VERTICAL:
HORIZONTAL:
4 - #8 BARS EQUALLY SPACED
2 - #3 BAR AT TOP
2 - #3 BAR AT 3" #
1 - #3 BAR EVERY 14" THEREAFTER
3" CLEARANCE BOTTOM AND SIDES
2" CLEARANCE TOP

FIELD C - 25" FENCE

- POST SIZE:
10" SCHEDULE 40 PIPE (10.75" O.D.)
- FOOTING:
24" #4-8" DEEP
- REINFORCING:
VERTICAL:
HORIZONTAL:
8 - #7 BARS EQUALLY SPACED
2 - #3 BAR AT TOP
2 - #3 BAR AT 3" #
1 - #3 BAR EVERY 14" THEREAFTER
3" CLEARANCE BOTTOM AND SIDES
2" CLEARANCE TOP

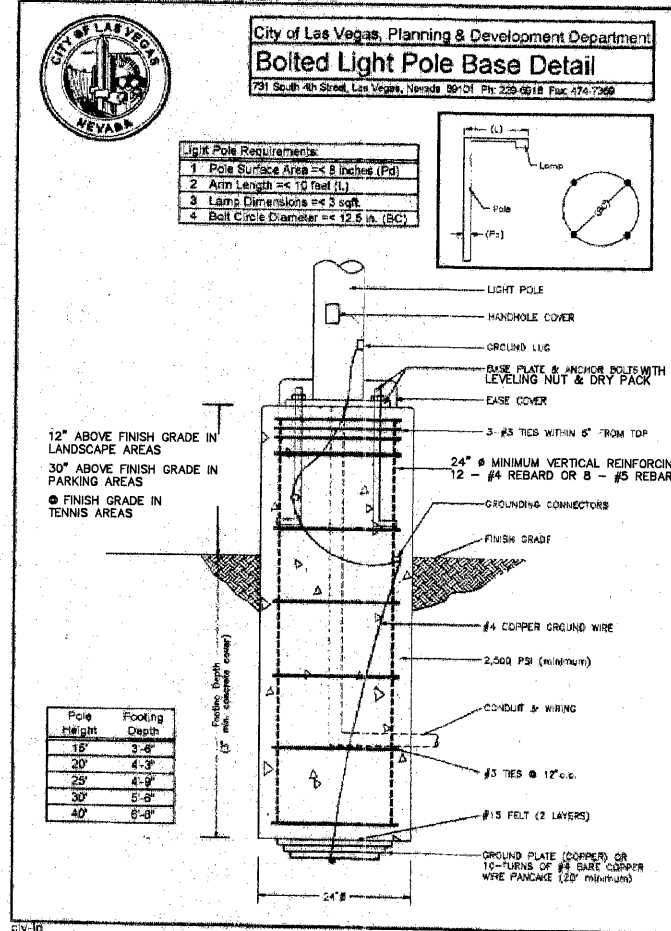
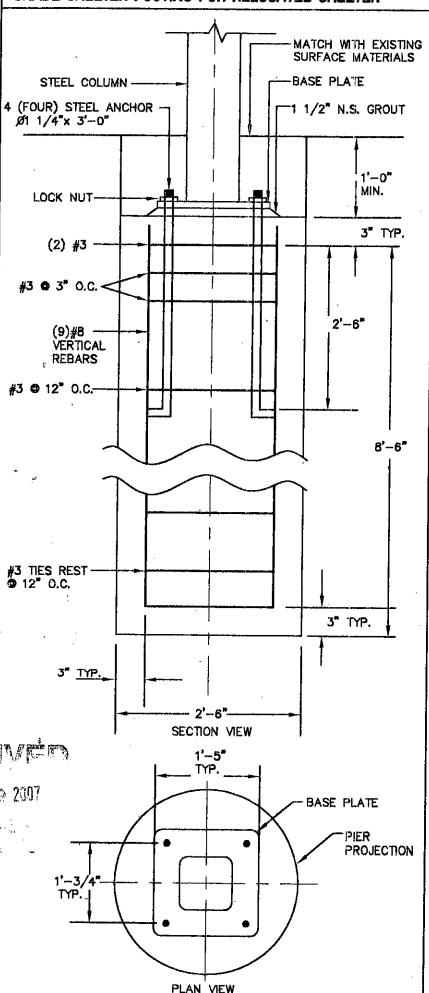
LIGHT POLES

- 40' POLE
- FOOTING:
30" #4-8" DEEP
- REINFORCING:
VERTICAL:
HORIZONTAL:
12 - #5 BARS EQUALLY SPACED
2 - #3 BAR AT TOP
2 - #3 BAR AT 3" #
1 - #3 BAR EVERY 12" THEREAFTER

TENNIS NET POST

- USE 5" SCHEDULE 40 PIPE
MAX. NET TENSION 500 ± 25#
- FOOTING:
12" #4-8" DEEP
- REINFORCING:
VERTICAL:
HORIZONTAL:
(4) #5
(2) #3 TOP, (2) #3 SPACED,
(2) #10" THEREAFTER

SHADE SHELTER FOOTING FOR RELOCATED SHELTER



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REVISIONS

CONSULTANT

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6345 S. JONES BLVD., SUITE 100
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Lorenzi Park Renovations
Phase 1

STRUCTURAL DETAIL SHEET

STAMP
BUY M. MORRIS
EXE 12-31-07
CIVIL
NO. 14553
10-15-07

OWNER: CITY OF LAS VEGAS
DEPARTMENT OF PUBLIC WORKS
ARCHITECTURAL SERVICES

400 EAST STEWART AVENUE
LAS VEGAS, NEVADA 89101
PHONE: (702) 220-6535
FAX: (702) 384-6546
TDD: (702) 366-9108

DATE: 06/13/2007
SCALE: 1"=4'-0"
SHEET NO: 071531401
CLV DWG NO: 65019-47
SHEET NO: C6.04