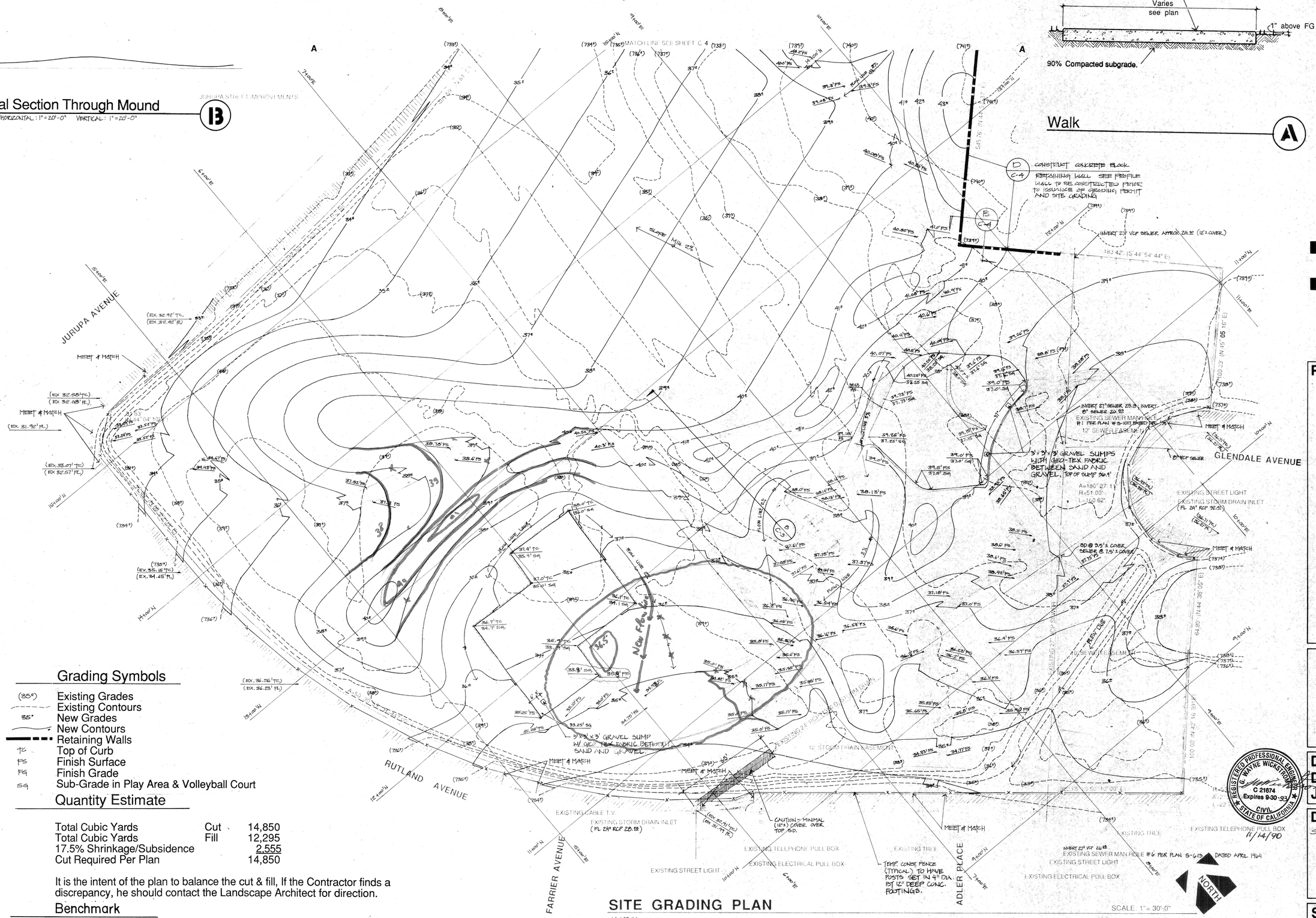
Typical Section Through Mound (B)

SCALE: HORIZONTAL: 1" = 20'-0" VERTICAL: 1" = 20'-0"



Grading Symbols

(35.5')	Existing Grades
	Existing Contours
35'	New Grades
	New Contours
	Retaining Walls
TC	Top of Curb
FS	Finish Surface
FG	Finish Grade
SG	Sub-Grade in Play Area & Volleyball Court

Quantity Estimate

Total Cubic Yards	Cut	14,850
Total Cubic Yards	Fill	12,295
17.5% Shrinkage/Subsidence		2,555
Cut Required Per Plan		14,850

It is the intent of the plan to balance the cut & fill, If the Contractor finds a discrepancy, he should contact the Landscape Architect for direction.

Benchmark

1" iron pipe at the centerline intersection of Rutland Avenue and Adler Place per City of Riverside Field Book LL 19/45A. Elevation 733.42'.

SITE GRADING PLAN

NOTE: ORIGIN OF GRID IS CENTER POINT OF CUL-DE-SAC ON GLENDALE AVE. 10+00'N & 10+00'E

ALL CONCRETE WALKS, SLABS & CURBS TO BE 1" (0.08') ABOVE FINISH GRADE - SEE DETAIL "A" THIS PAGE.

ALL PERIMETER WALLS & FENCES (INCLUDING TEMPORARY CONST. FENCE) ARE TO BE IN PLACE PRIOR TO START OF THIS WORK.

SEE SITE CONSTRUCTION PLANS C-5 & C-6

EPC REVIEW NOT REQUIRED
PLANNING DEPT.
Craig Cano 4-12-89
NAME DATE

LANDSCAPE ARCHITECTURE AND PLANNING
515 W. COMMONWEALTH, SUITE 205
FULLERTON, CA 92632 (714) 773-0973
ASLA

Heimberger Hirsch

BY: DATE: 03/22/90
CITY BUS. TAX CERTIFIC. NO: C41268

Project;

Rutland Park

The City of Riverside
3900 Main Street
Riverside, CA 92522

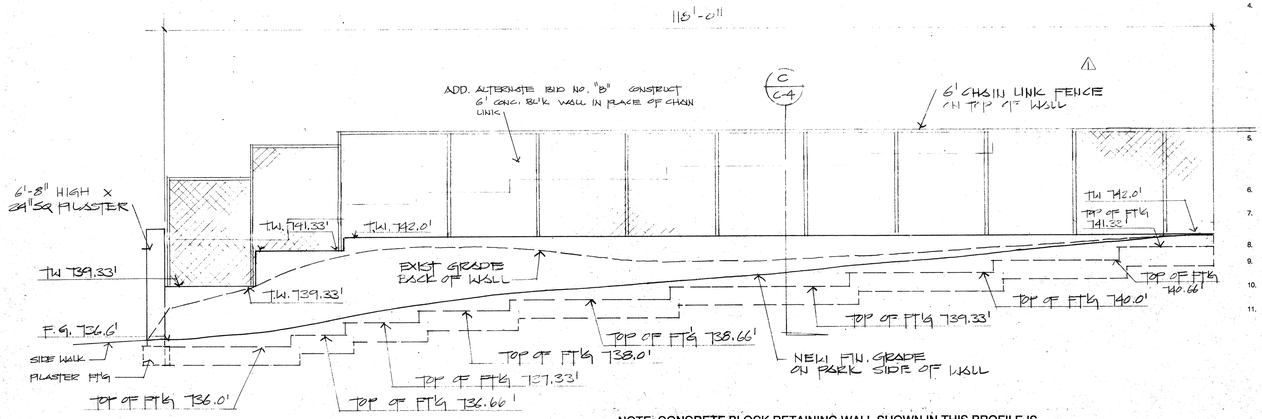
REGISTERED LANDSCAPE ARCHITECT
CARL O. HEIMBERGER
#1523
Signature
3-20-89
Date
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
G. WAYNE WICKSTROM
C 21674
Expires 9-30-93
CIVIL
STATE OF CALIFORNIA

Date; MARCH 20, 1989
Design; HEIMBERGER
Job No; 88007

Description;
SITE GRADING PLAN
As Built

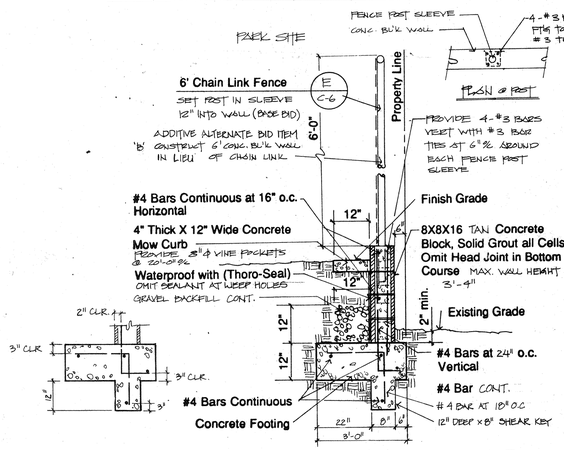
Sheet 4 of 22
DWG. # C-3
P-0418



NOTE: CONCRETE BLOCK RETAINING WALL SHOWN IN THIS PROFILE IS ADD/ALT. BID ITEM 'B' IN LIEU OF CHAIN LINK FENCING, CONSTRUCT BLOCK WALL TO A HEIGHT OF 6' FOR BASE BID, GRADE AREA PER PLAN ON DWG-12 & CONSTRUCT TYPICAL CHAIN LINK FENCE PER E/C-6.

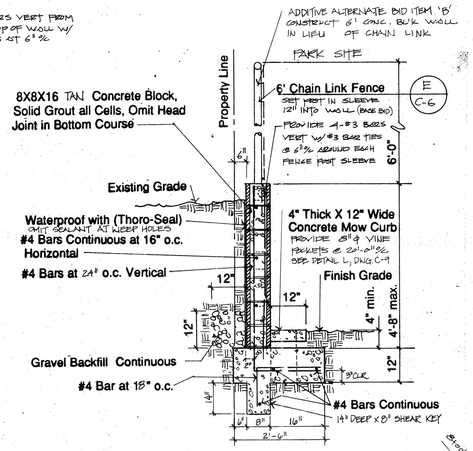
Profile Retaining Wall Type "C"

Scale 1/8" =1'-0" Horiz., 1/4"=1'-0" Vert. (A)



Property Line Retaining Wall "B"

Scale: 1/2" - 1'-0" (B)



Property Line Retaining Wall "C"

Scale: 1/2" - 1'-0" (C)

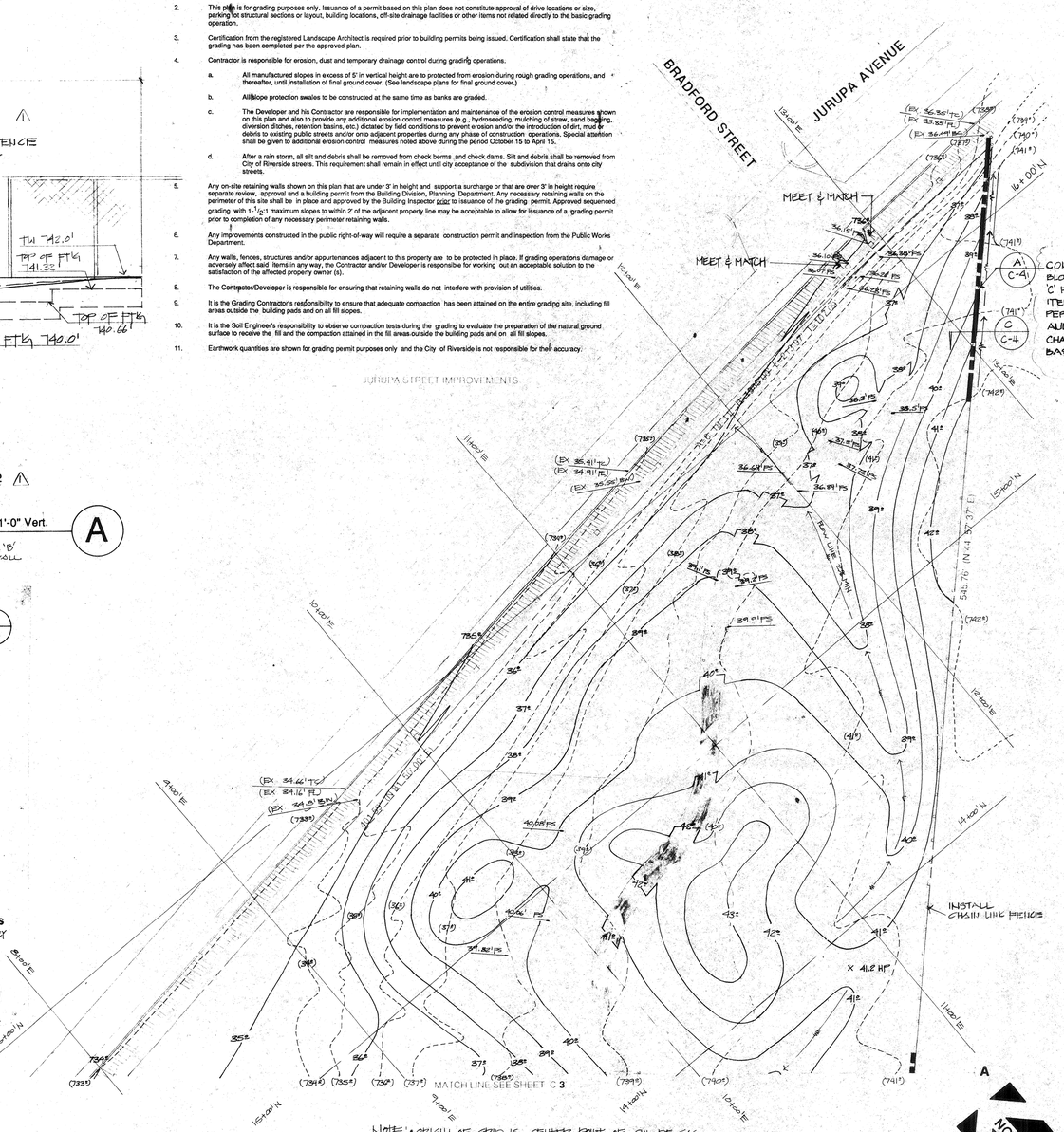
Note: Retaining wall & chain link fence are included in base bid. Additive Alternate "B" construct concrete block wall in lieu of the chain link fence.

NOTE: RETAINING WALL & CHAIN LINK FENCE ARE ADD/ALT. ITEM 'C'. ADD/ALT. ITEM 'B' CONSTRUCT CONCRETE BLOCK WALL IN LIEU OF THE CHAIN LINK FENCE. IN BASE BID GRADE PER PLAN B/C-12 AND CONSTRUCT CHAIN LINK FENCE PER DETAIL E/C-6.

A

General Notes:

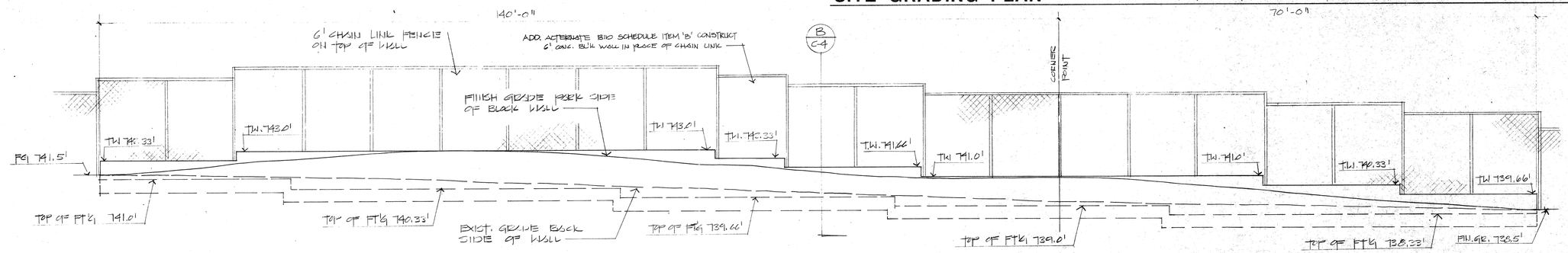
1. All grading shall conform to Chapter 70 of the current city adopted edition of the Uniform Building Code.
2. This plan is for grading purposes only. Issuance of a permit based on this plan does not constitute approval of drive locations or size, parking lot structural sections or layout, building locations, off-site drainage facilities or other items not related directly to the basic grading operation.
3. Certification from the registered Landscape Architect is required prior to building permits being issued. Certification shall state that the grading has been completed per the approved plan.
4. Contractor is responsible for erosion, dust and temporary drainage control during grading operations.
   a. All manufactured slopes in excess of 5' in vertical height are to protected from erosion during rough grading operations, and thereafter, until installation of final ground cover. (See landscape plans for final ground cover.)
   b. All slope protection swales to be constructed at the same time as banks are graded.
   c. The Developer and his Contractor are responsible for implementation and maintenance of the erosion control measures shown on this plan and also to provide any additional erosion control measures (e.g., hydroseeding, mulching of straw, sand bagging, diversion ditches, retention basins, etc.) dictated by field conditions to prevent erosion and/or the introduction of dirt, mud or debris to existing public streets and/or onto adjacent properties during any phase of construction operations. Special attention shall be given to additional erosion control measures noted above during the period October 15 to April 15.
   d. After a rain storm, all silt and debris shall be removed from check berms and check dams. Silt and debris shall be removed from City of Riverside streets. This requirement shall remain in effect until city acceptance of the subdivision that drains onto city streets.
5. Any on-site retaining walls shown on this plan that are under 3' in height and support a surcharge or that are over 3' in height require separate review, approval and a building permit from the Building Division, Planning Department. Any necessary retaining walls on the perimeter of this site shall be in place and approved by the Building Inspector prior to issuance of the grading permit. Approved sequenced grading with 1-1/2:1 maximum slopes to within 2' of the adjacent property line may be acceptable to allow for issuance of a grading permit prior to completion of any necessary perimeter retaining walls.
6. Any improvements constructed in the public right-of-way will require a separate construction permit and inspection from the Public Works Department.
7. Any walls, fences, structures and/or appurtenances adjacent to this property are to be protected in place. If grading operations damage or adversely affect said items in any way, the Contractor and/or Developer is responsible for working out an acceptable solution to the satisfaction of the affected property owner (s).
8. The Contractor/Developer is responsible for ensuring that retaining walls do not interfere with provision of utilities.
9. It is the Grading Contractor's responsibility to ensure that adequate compaction has been attained on the entire grading site, including fill areas outside the building pads and on all fill slopes.
10. It is the Soil Engineer's responsibility to observe compaction tests during the grading to evaluate the preparation of the natural ground surface to receive the fill and the compaction attained in the fill areas outside the building pads and on all fill slopes.
11. Earthwork quantities are shown for grading permit purposes only and the City of Riverside is not responsible for their accuracy.



NOTE: • ORIGIN OF GRID IS CENTER POINT OF CUL-DE-SAC ON GLENDALE AVE. 10+00' N & 10+00' E
• SEE DWG. C-3 FOR VERTICAL CONTROL BENCHMARK INFO
• ALL PERIMETER WALLS & FENCES TO BE COMPLETE PRIOR TO START OF THIS WORK

SITE GRADING PLAN

SCALE: 1"= 30'-0"



Profile Retaining Wall Type "B"

Scale 1/8"= 1'-0" Horiz., 1/4"=1'-0" Vert. (D)

Note: Concrete block retaining wall shown in this profile is base bid together with chain link fence. Additive Alternate "B" in lieu of chain link fence, construct 6' block wall on top of retaining wall.

LANDSCAPE ARCHITECTURE AND PLANNING
515 W. COMMONWEALTH, SUITE 205
FULLERTON, CA 92632 (714) 773-0973
ASLA
Heimberger Hirsch

Project;

Rutland Park

The City of Riverside
3900 Main Street
Riverside, CA 92522

REGISTERED LANDSCAPE ARCHITECT
CARL O. HEIMBERGER
#1523
Signature
3-30-89
Date
STATE OF CALIFORNIA

Date; MARCH 29, 1989
Design; HEIMBERGER
Job No; 88007

REGISTERED PROFESSIONAL ENGINEER
G. WAYNE WICKSTROM
C 21674
Expires 9-30-93
CIVIL
STATE OF CALIFORNIA
9/14/90

Description;
SITE GRADING PLAN
△1 10/18/89 ADDENDUM NO. ONE

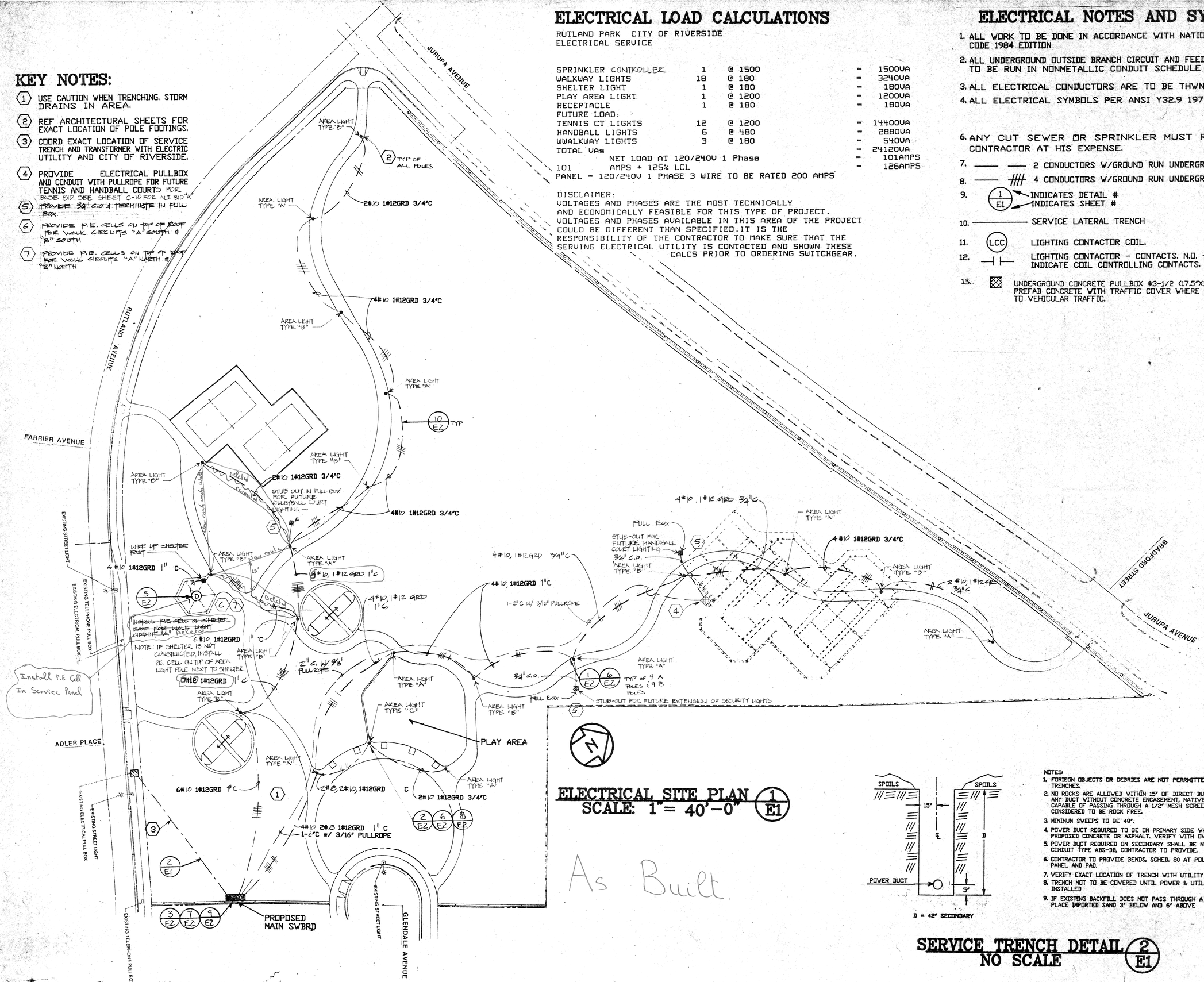
As Built

EPC REVIEW NOT REQUIRED
PLANNING DEPT
J. Clay Larson 6-12-89
NAME DATE

Sheet 5 of 22
DWG. # C-4
P-0418

KEY NOTES:

1. USE CAUTION WHEN TRENCHING. STORM DRAINS IN AREA.
2. REF ARCHITECTURAL SHEETS FOR EXACT LOCATION OF POLE FOOTINGS.
3. COORD EXACT LOCATION OF SERVICE TRENCH AND TRANSFORMER WITH ELECTRIC UTILITY AND CITY OF RIVERSIDE.
4. PROVIDE ELECTRICAL PULLBOX AND CONDUIT WITH PULLROPE FOR FUTURE TENNIS AND HANDBALL COURTS FOR BASE BID. SEE SHEET C-10 FOR ALT BID "A"
5. ~~PROVIDE~~ 3/4" C.O & TERMINATE IN PULL BOX.
6. PROVIDE P.E. CELLS ON TOP OF ROOF FOR WALK CIRCUITS "A" SOUTH & "B" SOUTH
7. PROVIDE P.E. CELLS ON TOP OF ROOF FOR WALK CIRCUITS "A" NORTH & "B" NORTH



ELECTRICAL SITE PLAN (1/E1)
SCALE: 1" = 40'-0"

As Built

ELECTRICAL LOAD CALCULATIONS

RUTLAND PARK CITY OF RIVERSIDE
ELECTRICAL SERVICE

SPRINKLER CONTROLLER	1	@ 1500	-	1500VA
WALKWAY LIGHTS	18	@ 180	-	3240VA
SHELTER LIGHT	1	@ 180	-	180VA
PLAY AREA LIGHT	1	@ 1200	-	1200VA
RECEPTACLE	1	@ 180	-	180VA
FUTURE LOAD:				
TENNIS CT LIGHTS	12	@ 1200	-	14400VA
HANDBALL LIGHTS	6	@ 480	-	2880VA
WWALKWAY LIGHTS	3	@ 180	-	540VA
TOTAL VAs			-	24120VA
NET LOAD AT 120/240V 1 Phase			-	101AMPS
101 AMPS + 125% LCL			-	126AMPS

PANEL - 120/240V 1 PHASE 3 WIRE TO BE RATED 200 AMPS

DISCLAIMER:
VOLTAGES AND PHASES ARE THE MOST TECHNICALLY AND ECONOMICALLY FEASIBLE FOR THIS TYPE OF PROJECT. VOLTAGES AND PHASES AVAILABLE IN THIS AREA OF THE PROJECT COULD BE DIFFERENT THAN SPECIFIED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE SURE THAT THE SERVING ELECTRICAL UTILITY IS CONTACTED AND SHOWN THESE CALCS PRIOR TO ORDERING SWITCHGEAR.

ELECTRICAL NOTES AND SYMBOLS

1. ALL WORK TO BE DONE IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE 1984 EDITION
2. ALL UNDERGROUND OUTSIDE BRANCH CIRCUIT AND FEEDER CIRCUITS ARE TO BE RUN IN NONMETALLIC CONDUIT SCHEDULE 40.
3. ALL ELECTRICAL CONDUCTORS ARE TO BE THWN COPPER.
4. ALL ELECTRICAL SYMBOLS PER ANSI Y32.9 1972.
6. ANY CUT SEWER OR SPRINKLER MUST REPLACED BY CONTRACTOR AT HIS EXPENSE.
7. —— —— 2 CONDUCTORS W/GROUND RUN UNDERGROUND.
8. —— /// 4 CONDUCTORS W/GROUND RUN UNDERGROUND, ETC.
9. (1/E1) INDICATES DETAIL # / INDICATES SHEET #
10. ———— SERVICE LATERAL TRENCH
11. (LCC) LIGHTING CONTACTOR COIL.
12. ⊣⊢ LIGHTING CONTACTOR - CONTACTS. N.O. - LETTERS INDICATE COIL CONTROLLING CONTACTS.
13. ⊠ UNDERGROUND CONCRETE PULLBOX #3-1/2 (17.5"X12.5"X12.5" PREFAB CONCRETE WITH TRAFFIC COVER WHERE SUBJECT TO VEHICULAR TRAFFIC.

NOTES:
1. FOREIGN OBJECTS OR DEBRIES ARE NOT PERMITTED IN COMPLETED TRENCHES.
2. NO ROCKS ARE ALLOWED WITHIN 15" OF DIRECT BURIAL CABLES OR ANY DUCT WITHOUT CONCRETE ENCASEMENT. NATIVE BACKFILL CAPABLE OF PASSING THROUGH A 1/2" MESH SCREEN SHALL BE CONSIDERED TO BE ROCK FREE.
3. MINIMUM SWEEPS TO BE 48".
4. POWER DUCT REQUIRED TO BE ON PRIMARY SIDE WHEN RUN UNDER PROPOSED CONCRETE OR ASPHALT. VERIFY WITH OWNER.
5. POWER DUCT REQUIRED ON SECONDARY SHALL BE NON-METALLIC 4" CONDUIT TYPE ABS-DB. CONTRACTOR TO PROVIDE.
6. CONTRACTOR TO PROVIDE BENDS, SCHED. 80 AT POLE, SCHED. 40 AT PANEL AND PAD.
7. VERIFY EXACT LOCATION OF TRENCH WITH UTILITY COMPANY.
8. TRENCH NOT TO BE COVERED UNTIL POWER & UTILITY WIRES ARE INSTALLED
9. IF EXISTING BACKFILL DOES NOT PASS THROUGH A 1/2" SCREEN PLACE IMPORTED SAND 3" BELOW AND 6" ABOVE CABLES.

SERVICE TRENCH DETAIL (2/E1)
NO SCALE

LANDSCAPE ARCHITECTURE AND PLANNING
515 W. COMMONWEALTH, SUITE 205
FULLERTON, CA 92632 (714)773-
ASLA
Heimberger Hirsch

Project;
RUTLAND PARK
CITY OF RIVERSIDE
RUTLAND AVE
RIVERSIDE CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
JOSEPH M. ROLAND
NO. E 9333
AUG 31 1989
ELECTRICAL
STATE OF CALIFORNIA

ENGINEERING, INC.
CONSULTING ELECTRICAL ENGINEERS
(619) 242-3369

Date; MARCH 20, 1989
Design; HEIMBERGER
Job No; 88007

Description; As Built
ELECTRICAL SITE PLAN

Sheet 20 OF 22
DWG. # E-1
P-0418

KEY NOTES:

1. USE CAUTION WHEN TRENCHING. STORM DRAINS IN AREA.
2. REF ARCHITECTURAL SHEETS FOR EXACT LOCATION OF POLE FOOTINGS.
3. COORD EXACT LOCATION OF SERVICE TRENCH AND TRANSFORMER WITH ELECTRIC UTILITY AND CITY OF RIVERSIDE.
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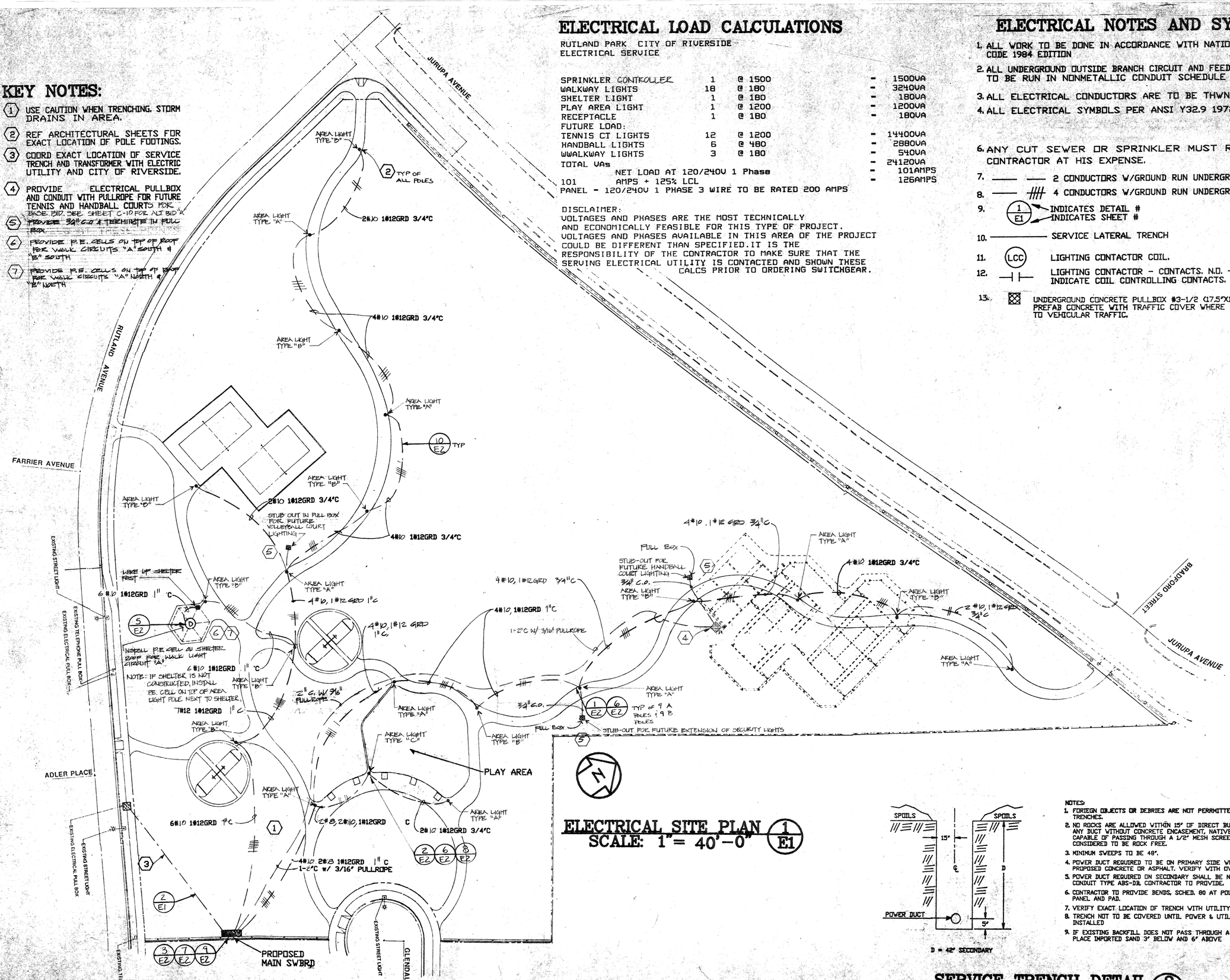

ELECTRICAL SITE PLAN (1/E1)
SCALE: 1" = 40'-0"

ELECTRICAL LOAD CALCULATIONS

RUTLAND PARK CITY OF RIVERSIDE
ELECTRICAL SERVICE

SPRINKLER CONTROLLER	1	@ 1500	-	1500VA
WALKWAY LIGHTS	18	@ 180	-	3240VA
SHELTER LIGHT	1	@ 180	-	180VA
PLAY AREA LIGHT	1	@ 1200	-	1200VA
RECEPTACLE	1	@ 180	-	180VA
FUTURE LOAD:				
TENNIS CT LIGHTS	12	@ 1200	-	14400VA
HANDBALL LIGHTS	6	@ 480	-	2880VA
WWALKWAY LIGHTS	3	@ 180	-	540VA
TOTAL VAs			-	24120VA
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101 AMPS + 125% LCL			-	126AMPS

PANEL - 120/240V 1 PHASE 3 WIRE TO BE RATED 200 AMPS

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ELECTRICAL NOTES AND SYMBOLS

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NOTES:
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2. NO ROCKS ARE ALLOWED WITHIN 15" OF DIRECT BURIAL CABLES OR ANY DUCT WITHOUT CONCRETE ENCASEMENT, NATIVE BACKFILL CAPABLE OF PASSING THROUGH A 1/2" MESH SCREEN SHALL BE CONSIDERED TO BE ROCK FREE.
3. MINIMUM SWEEPS TO BE 48".
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7. VERIFY EXACT LOCATION OF TRENCH WITH UTILITY COMPANY.
8. TRENCH NOT TO BE COVERED UNTIL POWER & UTILITY WIRES ARE INSTALLED
9. IF EXISTING BACKFILL DOES NOT PASS THROUGH A 1/2" SCREEN PLACE IMPORTED SAND 3" BELOW AND 6" ABOVE CABLES.

SERVICE TRENCH DETAIL (2/E1)
NO SCALE

AUG 18 1989

LANDSCAPE ARCHITECTURE AND PLANNING
515 W. COMMONWEALTH, SUITE 205
FULLERTON, CA 92632 (714) 773-0973
Heimberger Hirsch ASLA

Project;
RUTLAND PARK
CITY OF RIVERSIDE
RUTLAND AVE
RIVERSIDE CALIFORNIA

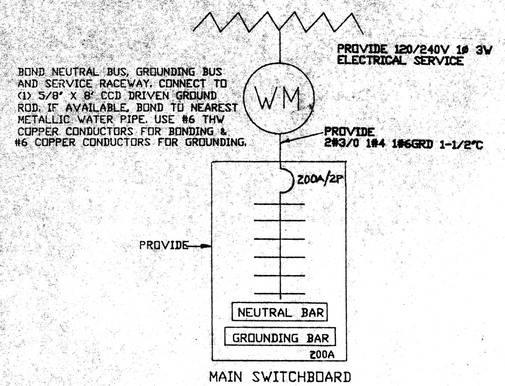
REGISTERED PROFESSIONAL ENGINEER
JOSEPH M. NOZZAN
NO. E 9333
AUG 31 1989
ELECTRICAL
STATE OF CALIFORNIA

ENGINEERING, INC.
CONSULTING ELECTRICAL ENGINEERS
(619) 242-3369

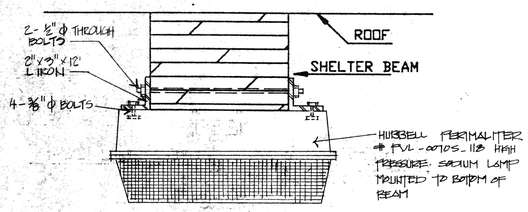
Date; MARCH 28, 1989
Design; HEIMBERGER
Job No; 88007

Description;
ELECTRICAL SITE PLAN

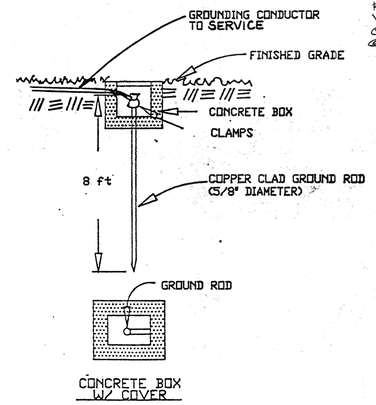
Sheet 20 OF 22
DWG. # E-1
P-0418



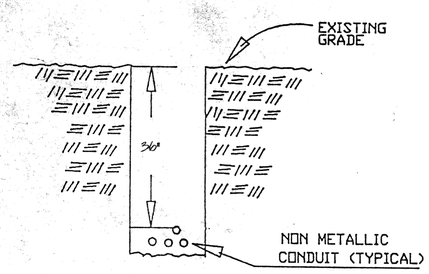
A.C SINGLE LINE DIAGRAM (3/E2)
NO SCALE



FIXTURE D SHELTER LIGHT MOUNTING DETAIL (5/E2)
NO SCALE

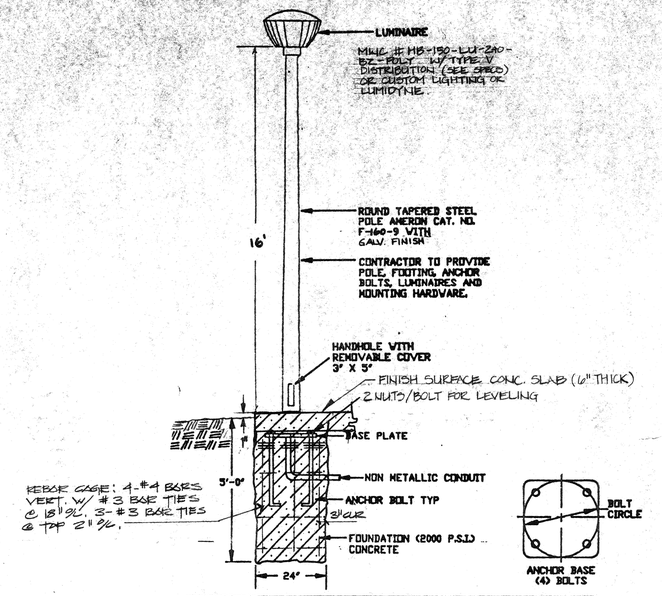


MADE ELECTRODE GROUND SYSTEM (9/E2)
NO SCALE



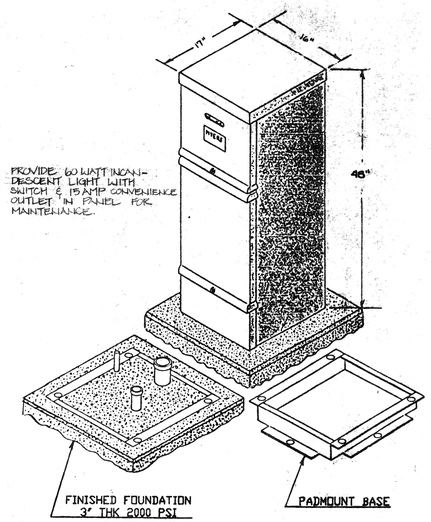
NOTES:
1. LAY CONDUIT, FILL, COMPACT TO 90%, MATCH SURROUNDINGS.

BRANCH CIRCUIT TRENCH DETAIL (10/E2)
NO SCALE



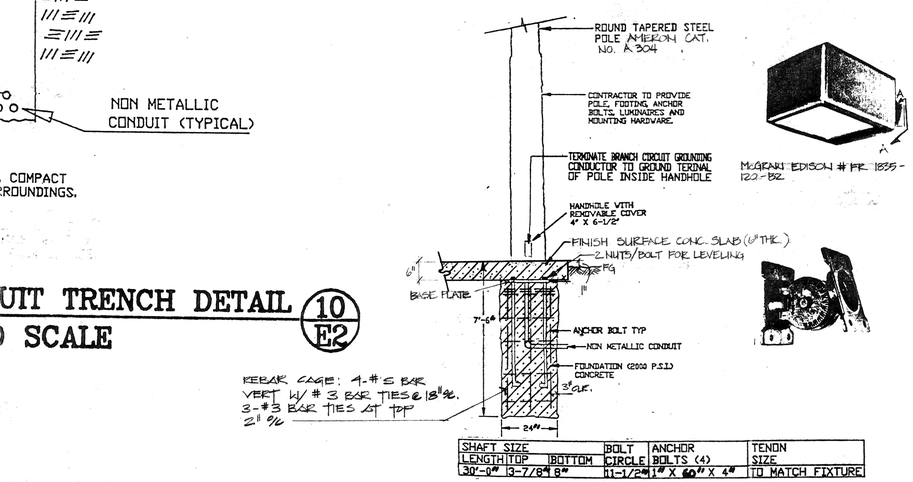
SHAFT SIZE			BOLT	ANCHOR	TENON
LENGTH	TOP	BOTTOM	CIRCLE	BOLTS (4)	SIZE
16'-0"	3-7/8"	6"	9-1/2"	3/4" X 36" X 4"	2-3/8" OD X 3-1/4"

FIXTURES A & B WALKWAY LUMINAIRE DETAIL (1/E2)
NO SCALE



NOTES:
1. PROVIDE WITH GALVANIZED ANCHOR BOLTS. (NOT SHOWN)
2. PROVIDE IN NEMA 3R ENCLOSURE, CONSTRUCTED OF 10 GA. STEEL

SWITCHBOARD SERVICE PEDESTAL ELEVATION (7/E2)
NO SCALE



SHAFT SIZE			BOLT	ANCHOR	TENON
LENGTH	TOP	BOTTOM	CIRCLE	BOLTS (4)	SIZE
30'-0"	3-7/8"	8"	11-1/2"	1" X 60" X 4"	TO MATCH FIXTURE

FIXTURE C PLAY AREA LUMINAIRE DETAIL (2/E2)
NO SCALE

LUMINAIRE AIMING DATA (8/E2)

PLAY AREA
RUTLAND PARK

AVERAGE FOOTCANDLES =	6.54
MAXIMUM FOOTCANDLES =	21.66
MINIMUM FOOTCANDLES =	2.14
MAX./MIN. RATIO =	10.1 : 1
AVG./MIN. RATIO =	3.0 : 1

THE FOLLOWING LUMINAIRE(S) WERE USED IN THIS COMPUTATION:

LUMINAIRE TYPE 1 : PHOTOMETRIC TEST NO. 2688
150W HPS
SPAULD VA-150-HPS-16
NEMA. LUMEN RATING = 16000 LMS.
MAINTENANCE FACTOR = 0.81

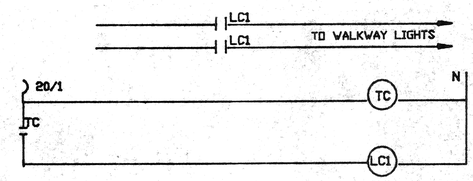
LUMINAIRE TYPE 2 : PHOTOMETRIC TEST NO. 2452
1000W HPS
SPAULD CEII-1000-HPS-3
NEMA. LUMEN RATING = 140000 LMS.
MAINTENANCE FACTOR = 0.81
*** LUMINAIRE TILT ANGLE = 70.00 DEGREES ***

LIST OF LUMINAIRE POSITIONS AND ORIENTATIONS

LUMINAIRE ORIENTATION IS MEASURED FROM THE FORWARD Y DIRECTION.

POLE NO.	LUMINAIRE NO.	LUMINAIRE TYPE	X CO-ORD. FEET	Y CO-ORD. FEET	HEIGHT ABOVE PAVEMENT	ORIENTATION ANGLE
1	1	1	5.00	17.00	16.00	0.0
2	1	1	0.00	95.00	16.00	0.0
3	1	1	90.00	100.00	16.00	0.0
4	1	2	79.36	49.23	30.00	220.0
4	2	2	79.23	50.64	30.00	310.0

TOTAL NO. OF LUMINAIRES = 5



NOTE:
1. MOUNT TIME CLOCK AND CONTACTORS IN SERVICE PEDESTAL.
2. RATING OF CONTACTS TO MATCH RATING OF CIRCUIT BREAKERS.
3. ALL CONTROL WIRING TO BE #12 THWN/THHN CU.
4. PROVIDE TIMECLOCK, CONTACTORS AND CONTROLS FOR BOTH A AND B WALKWAY LIGHTS AND PLAY AREA LIGHTS. 3 TOTAL

CIRCUIT "A" (#2 and #4) TO BE ON AT DUSK AND OFF AT DAWN (P.E. CONT.)
CIRCUIT "B" (#3 and #5) TO BE ON AT DUSK AND OFF AT CURFEW (P.E./T.C. OVERRIDE)
PROVIDE SEPERATE CONTACTOR FOR EACH CIRCUIT AND SEPERATE H.O.A. SWITCH FOR EACH CIRCUIT @ PANEL.

TIMED CONTACTOR CONTROL OF WALKWAY/PLAY AREA LIGHTS (6/E2)
NO SCALE

LANDSCAPE ARCHITECTURE AND PLANNING
515 W. COMMONWEALTH, SUITE 205
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ASLA
Heimberger Hirsch

Project;
RUTLAND PARK
CITY OF RIVERSIDE
RUTLAND AVE
RIVERSIDE CALIFORNIA

DREW ENGINEERING, INC.
CONSULTING ELECTRICAL ENGINEERS
(619) 242-3369

Date; MARCH 23, 1989
Design; HEIMBERGER
Job No; 88007

Description;
A.C. SINGLE LINE DIAGRAM

Sheet 21 of 22
DWG. #E2
P-0418

REGISTERED PROFESSIONAL ENGINEER
JOSEPH M. NOVAK
NO. E 9333
AUG 31 1988
ELECTRICAL
STATE OF CALIFORNIA

AUG 18 1989

AC BREAKER ASSIGNMENTS

TYPE	MYERS	PANEL MAIN SWBRD	
VOLTS	120/240	LOCATION REF SITE PLAN	
PHASE	1	FEEDER REF A.C. SINGLE LINE	
WIRE	3	AMPS	200
M.C.B.	200AMPS	MOUNTING	PAD

CKT #	DESCRIPTION LOCATION	LOAD TYPE	VOLT AMPS	PH	AMPS AMPS	P O L E	B.C. CONDR	GRD WIRE
1	SPRINKLER	MISC	1500	A	20	1	#10	#12
2	WALKWAY LIGHTS-A	LITES	840	A	20	2	#10	#12
3	WALKWAY LIGHTS-B	LITES	756	B	--		#10	
4	WALKWAY LIGHTS-A	LITES	840	B	20	2	#10	#12
5	WALKWAY LIGHTS-B	LITES	756	A	--		#10	#12
6	PLAY AREA LIGHTS	LITES	1200	A	20	2	#10	#12
7	SHELTER LIGHT	MISC	168	B	20	1	#10	#12
8	PLAY AREA LIGHTS	LITES	1200	B	--		#10	
9	LTG CONTACTORS	MISC	500	A	20	1	#10	#12
10	SPACE			A				
11	SPACE			B				
12	SPACE			B				
13	SPACE			A				
14	SPACE			A				
15	SPACE			B				
16	SPACE			B				
17	SPACE			A				
18	SPACE			A				
19	SPACE			B				
20	SPACE			B				
21	SPACE			A				
22	SPACE			A				
23	SPACE			B				
24	SPACE			B				

TOTAL VOLTAMPS 7760
AMPS/LEG 32 AMP
PANELBOARD

PERCENT CONDUIT FILL

*** RUTLAND PARK ***

*** #	INSULATION	CONDUCTOR	QTY	CONDUIT	FILL
1	THW	10	2		
	THW	12	1	1/2 INCH	29.1 % (Allowable 40%)
2	THW	10	4		
	THW	12	1	3/4 INCH	28.5 % (Allowable 40%)
3	THW	8	2		
	THW	10	7		
	THW	12	1	1 INCH	24.9 % (Allowable 40%)
4	THW	8	2		
	THW	10	4		
	THW	12	1	1 INCH	31.7 % (Allowable 40%)
5	THW	10	6		
	THW	12	1	1 INCH	24.9 % (Allowable 40%)
6	THW	10	7		
	THW	12	1	1 INCH	32.2 % (Allowable 40%)

VOLTAGE DROP CALCULATIONS

VOLTAGE DROP.....****
RUTLAND PARK WALKWAY LIGHTING ERROR FACTOR
02/21/89 WATTS---> 150.0000 1.000
240 VOLTS X 5% = 12.000 VOLTS
#10 COPPER -----> 0.0013 OHMS/FOOT
'A' SOUTH

OUTLET	DISTANCE (FT)	VD
10	0	0
9	0	0
8	0	0
7	0	0
6	0	0
5	0	0
4	400	3.0240
3	170	0.9639
2	200	0.7560
1	200	0.3780
		5.1219<-- VOLTAGE DROP
		2.1341<---% VOLTAGE DROP

VOLTAGE DROP.....****
RUTLAND PARK WALKWAY LIGHTIERROR FACTOR
02/21/89 WATTS---> 150.00
240VOLTS X 5% = 12.00 VOLTS
#10 COPPER -----> 0.0013 OHMS/FOOT
'B' SOUTH

OUTLET	DISTANCE (FT)	VD
10	0	0
9	0	0
8	0	0
7	0	0
6	620	7.0308
5	120	1.1340
4	70	0.5292
3	100	0.5670
2	200	0.7560
1	200	0.3780
TOT DIST	----------	10.3950 VOLTAGE DROP
	----------	4.3313% VOLTAGE DROP

VOLTAGE DROP.....****
RUTLAND PARK WALKWAY LIGHTING ERROR FACTOR
02/21/89 WATTS---> 150.0000 1.000
240 VOLTS X 5% = 12.000 VOLTS
#10 COPPER -----> 0.0013 OHMS/FOOT
'A' NORTH

OUTLET	DISTANCE (FT)	VD
10	0	0
9	0	0
8	0	0
7	0	0
6	360	4.0824
5	0	0
4	120	0.9072
3	200	1.1340
2	260	0.9828
1	220	0.4158
		7.5225<-- VOLTAGE DROP
		3.1343<---% VOLTAGE DROP

VOLTAGE DROP.....****
RUTLAND PARK WALKWAY LIGHTIERROR FACTOR
02/21/89 WATTS---> 150.00
240VOLTS X 5% = 12.00 VOLTS
#10 COPPER -----> 0.0013 OHMS/FOOT
'B' NORTH

OUTLET	DISTANCE (FT)	VD
10	0	0
9	0	0
8	0	0
7	0	0
6	0	0
5	0	0
4	0	0
3	570	3.2319
2	230	0.8694
1	200	0.3780
TOT DIST	----------	4.4793 VOLTAGE DROP
	----------	1.8654% VOLTAGE DROP

*** RUTLAND PARK ***

	TYPE	CONDUCTOR	VOLTS	AMPS/LEG	LOOP DIST.
PLAYGRND	CU	10	240	8.34	440

THIS CIRCUIT HAS A VOLTAGE DROP OF 4.40352 VOLTS WHICH = 1.8348 %
3 % ALLOWED

TENNIS	CU	6	240	12	1200

THIS CIRCUIT HAS A VOLTAGE DROP OF 7.056 VOLTS WHICH = 2.94 %
3 % ALLOWED

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Project;

RUTLAND PARK
CITY OF RIVERSIDE
RUTLAND AVE
RIVERSIDE CALIFORNIA

Revision	By
Rev 1 2/22/89 Per Plan Check	acc

ENGINEERING, INC.
CONSULTING ELECTRICAL ENGINEERS
(619) 242-3369

Date; MARCH 20, 1989
Design;
Job No; 88007

Description;
A.C. BREAKER ASSIGNMENT

Sheet 22 OF 22
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P-0418