

NOTES:
 1. FOR OUTDOOR PANEL MOUNTING, CONCRETE PAD SHALL BE 6" WIDER THAN PANEL HOUSING. TOP OF SLAB SHALL BE 2" ABOVE ADJACENT GRADE.

CODE REQUIREMENTS

PERFORMANCE OF THE WORK OF THIS CONTRACT SHALL CONFORM TO THE REQUIREMENTS OF APPLICABLE GOVERNING CODES AND ORDINANCES INCLUDING THE FOLLOWING:

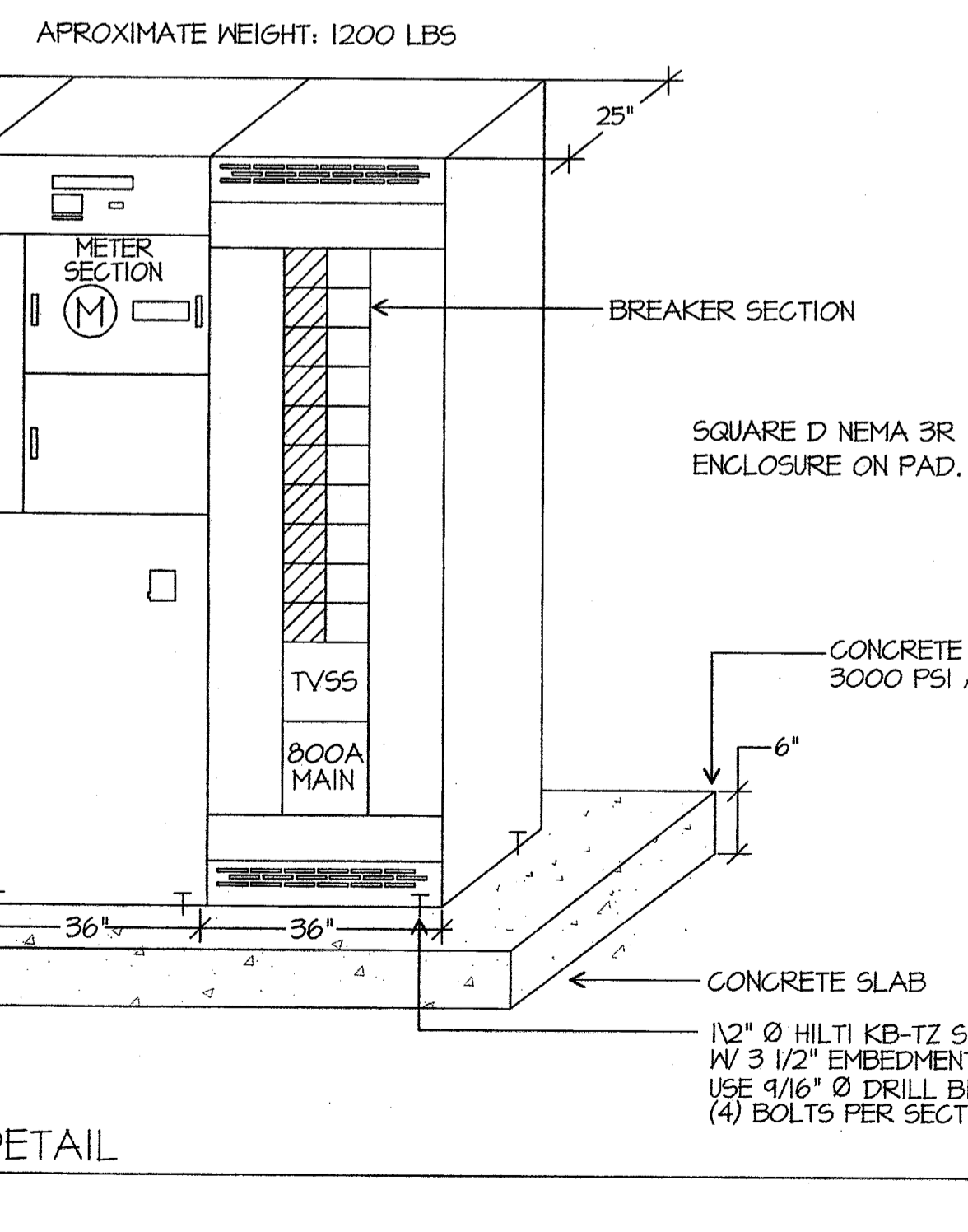
2007	BUILDING STANDARDS ADMINISTRATIVE CODE, PART 1, TITLE 24, C.C.R.
2007	CALIFORNIA BUILDING CODE, PART 2, TITLE 24 C.C.R. (2006 IBC, VOLUMES 1-3 WITH CALIFORNIA AMENDMENTS)
2007	CALIFORNIA ELECTRICAL CODE, PART 3, TITLE 24 C.C.R. (2005 N.E.C. WITH CALIFORNIA AMENDMENTS)
2007	CALIFORNIA MECHANICAL CODE, PART 4, TITLE 24 C.C.R. (2006 U.M.C. WITH CALIFORNIA AMENDMENTS)
2007	CALIFORNIA PLUMBING CODE, PART 5, TITLE 24 C.C.R. (2006 U.P.C. WITH CALIFORNIA AMENDMENTS)
2007	CALIFORNIA ENERGY CODE, PART 6, TITLE 24 C.C.R.
2007	CALIFORNIA FIRE CODE, PART 9, TITLE 24 C.C.R. (2006 I.F.C. WITH CALIFORNIA AMENDMENTS)
2007	CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24 C.C.R. TITLE 19 C.C.R. PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS.
NFPA 13	AUTOMATIC SPRINKLER SYSTEM -----2002 EDITION
NFPA 14	STANDPIPE SYSTEM -----2003 EDITION
NFPA 17A	WET CHEMICAL SYSTEM -----2002 EDITION
NFPA 24	PRIVATE SERVICE MAINS -----2002 EDITION
NFPA 72	NATIONAL FIRE ALARM CODE -----2002 EDITION (NOTE SEE UL STANDARDS 1971 FOR ("VISUAL DEVICES"))

GENERAL NOTES

- VISIT JOB SITE AND VERIFY EXISTING CONDITIONS PRIOR TO BID.
- THE ELECTRICAL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND ALL APPLICABLE LOCAL ORDINANCES, WHERE PLANS CALL FOR A HIGHER STANDARD THAN APPLICABLE CODES, THE PLANS SHALL GOVERN.
- CONDUIT RUNS ARE SHOWN DIAGRAMMATICALLY. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD TO SUIT FIELD CONDITIONS.
- ALL ELECTRICAL EQUIPMENT, APPLIANCES AND LIGHTING FIXTURES SHALL BE LISTED BY A RECOGNIZED TEST LAB AND BEAR THAT LABEL OF APPROVAL.
- CONTRACTOR SHALL FURNISH, INSTALL AND CONNECT ALL MATERIAL AND EQUIPMENT FOR THIS WORK UNLESS OTHERWISE NOTED.
- FURNISH DISCONNECT SWITCHES AT REMOTE MOTORS.
- ALL SPACES AS INDICATED ON PANELS OR SWITCHBOARD SHALL BE COMPLETE WITH HARDWARE AND BUSSING FOR FUTURE BREAKER OR SWITCH.
- CHECK ARCHITECTURAL PLANS FOR DOOR SWINGS BEFORE INSTALLING SWITCH OUTLETS.
- GROUNDING AND BONDING SHALL BE PER CODE PLUS ANY ADDITIONAL PROVISIONS SPECIFIED OR SHOWN ON DRAWINGS.
- ALL CONDUIT RUNS SHALL CONTAIN A CODE SIZED GROUND CONDUCTOR.
- THESE PLANS ARE NOT COMPLETE UNTIL APPROVED BY THE AUTHORITY HAVING JURISDICTION.
- ALL CONDUCTORS SHALL BE IN CONDUIT.
- ALL CONDUCTORS SHALL BE COPPER WITH TYPE THHN/THWN INSULATION.

SYMBOLS

- CONDUIT EXISTING
 - CONDUIT CONCEALED IN WALL OR CEILING
 - CONDUIT CONCEALED UNDER FLOOR OR BELOW GRADE
 - CONDUIT STUBBED OUT AND CAPPED
 - CONDUIT TURNED UP
 - CONDUIT TURNED DOWN
 - ⋮ HATCH MARKS INDICATE NO. OF #12 WIRES IN CODE SIZED CONDUIT (3) MAX. IN 1/2" C., (5) MAX. IN 3/4" C., (8) MAX. IN 1" C., NO MARKS = 2#12
 - A-3 HOME RUN: LETTER INDICATES PANEL, NUMBER(S) INDICATES CIRCUIT(S).
 - SAWCUT
 - GROUND CONNECTION
 - DISTRIBUTION SWITCHBOARD OR PANEL
 - PANEL, BRANCH CIRCUIT TYPE, SURFACE AND FLUSH SIGNAL TERMINAL CABINET, SURFACE & FLUSH
 - FLUORESCENT FIXTURE
 - OUTLET DATA: BAR INDICATES WALL MOUNT, LETTER INDICATES SWITCH CONTROL, NO. INDICATES CIRCUIT. SURFACE FIXTURE ON FLUSH OUTLET.
 - RECESSED FIXTURE WITH JUNCTION BOX FOR THRU WIRING
 - EXIT LIGHT WITH ARROWS AS SHOWN ON PLANS, WALL AND CEILING MOUNT.
 - LOW LEVEL EXIT SIGN, +6" AFF, +4" FROM DOOR JAMB
 - LIGHT FIXTURE DESIGNATION, LETTER INDICATES TYPE, NO. INDICATES WATTAGE. SEE FIXTURE SCHEDULE.
 - MECHANICAL EQUIPMENT DESIGNATION. SEE MECHANICAL DRAWINGS.
 - SPECIAL RECEPTACLE - SEE PLAN
 - METER
 - FLUSH FLOOR RECEPTACLE
 - RECEPTACLE, DUPLEX, 15A, 125V, NEMA 5-15R +18" U.N.O.
 - DUPLEX RECEPTACLE MTD. ABOVE BACKSPLASH
 - DUPLEX RECEPTACLE W/LOWER HALF SWITCHED
 - GFI GROUND FAULT CIRCUIT INTERRUPTING RECEPTACLE
 - DOUBLE DUPLEX RECEPTACLE
 - CEILING RECEPTACLE
 - RECEPTACLE, DUPLEX, 20A, 125V, NEMA 5-20R +18" U.N.O.
 - JUNCTION BOX 4" SQUARE, 1-1/2" DEEP U.N.O.
 - THERMOSTAT F.B.O. +48"
 - MOTOR, NO. INDICATES HORSEPOWER
 - CLOCK OUTLET +7"-6" U.N.O.
 - DISCONNECT SWITCH, NON-FUSED
 - DISCONNECT SWITCH FUSED HORSEPOWER RATED OR SIZED AS NOTED
 - COMBINATION MAGNETIC STARTER WITH DISCONNECT SWITCH AND FUSES
 - MAGNETIC MOTOR STARTER W/OVERLOADS IN EACH PHASE
 - RECESSED SPEAKER
 - PUSHBUTTON
 - PHOTOCELL
 - SMOKE DETECTOR
 - TELEPHONE/COMPUTER/DATA OUTLET, TWO GANG BOX W/1 GANG COVERPLATE & GROMMETTED OPENING +18" U.N.O.
 - CABLE TV OUTLET +18" U.N.O.
 - MOTION SENSOR
 - EXISTING SWITCH
 - SINGLE POLE SWITCH
 - DOUBLE POLE SWITCH
 - THREE WAY SWITCH
 - SWITCH W/PILOT LT.
 - MANUAL MOTOR STARTER
 - FACP FIRE ALARM CONTROL PANEL
 - GFI GROUND FAULT CIRCUIT INTERRUPTING
 - LST LABOR SAVING TANDEM
 - MLO MAIN LUGS ONLY WITH CONDUIT ONLY
 - W.P. WEATHERPROOF
 - F.B.O. FURNISHED BY OTHERS, INSTALL & CONNECT UNLESS NOTED OTHERWISE
 - N.E.C. NATIONAL ELECTRICAL CODE
 - N.I.C. NOT IN CONTRACT
 - (E) EXISTING
 - (N) NEW
 - (R) REMOVE
 - (RL) RELOCATE
 - S/M SURFACE MOUNT
 - U/G UNDERGROUND
 - CWP COLD WATER PIPE
 - AFP ABOVE FINISHED FLOOR
 - HACR HEATING AND AIR CONDITIONING RATED CIRCUIT BREAKER
 - N.L. NIGHT LIGHT
- NOTE: NOT ALL SYMBOLS SHOWN ARE USED ON THIS PROJECT.



MSB "AC" MOUNTING DETAIL
 SCALE: NONE

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Revision Description:
 10/15/09
 ADDENDUM 1

Project Name & Address:
MUNSEY ELEMENTARY SCHOOL
10 NEW PORTABLE CLASSROOMS
 BAKERSFIELD CITY SCHOOL DISTRICT
 3801 BRAVE AVE. BAKERSFIELD, CA 93309

Issue Date: 05/02/06
 Date: 05/02/06
 Designer: DESIGNER
 DR: DRAFTER
 PC: CJM

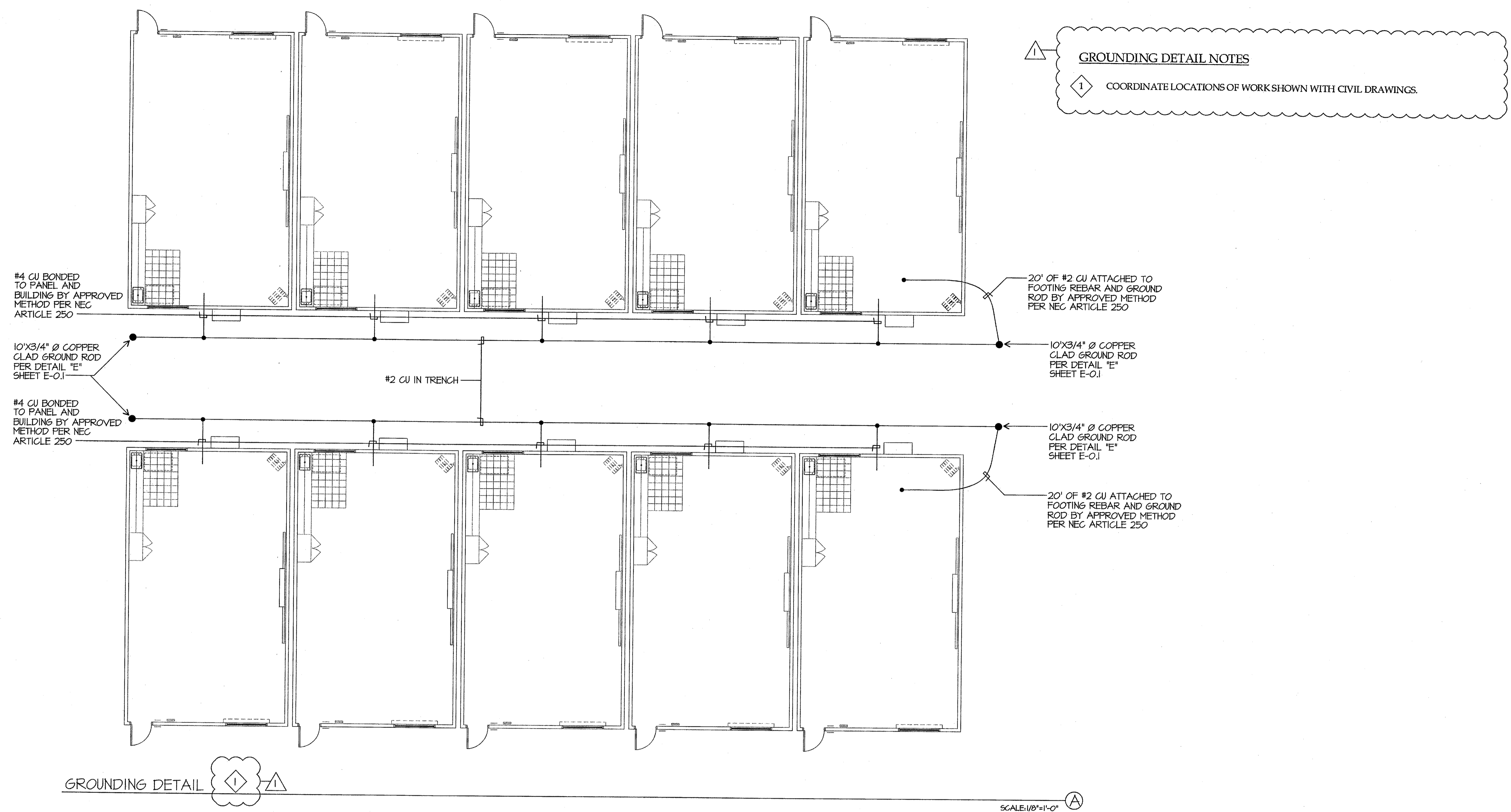
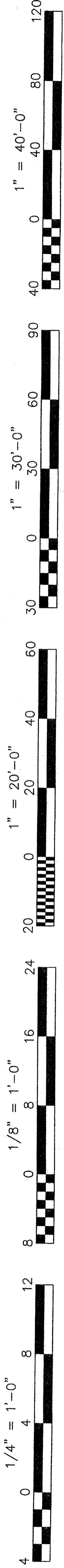
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 Stamp(s):

Stamp(s):

Job No.: **3832**
 Sheet No.: **E-0**
 Release: **APPENDUM 1**
 CURTIS MCNALLY

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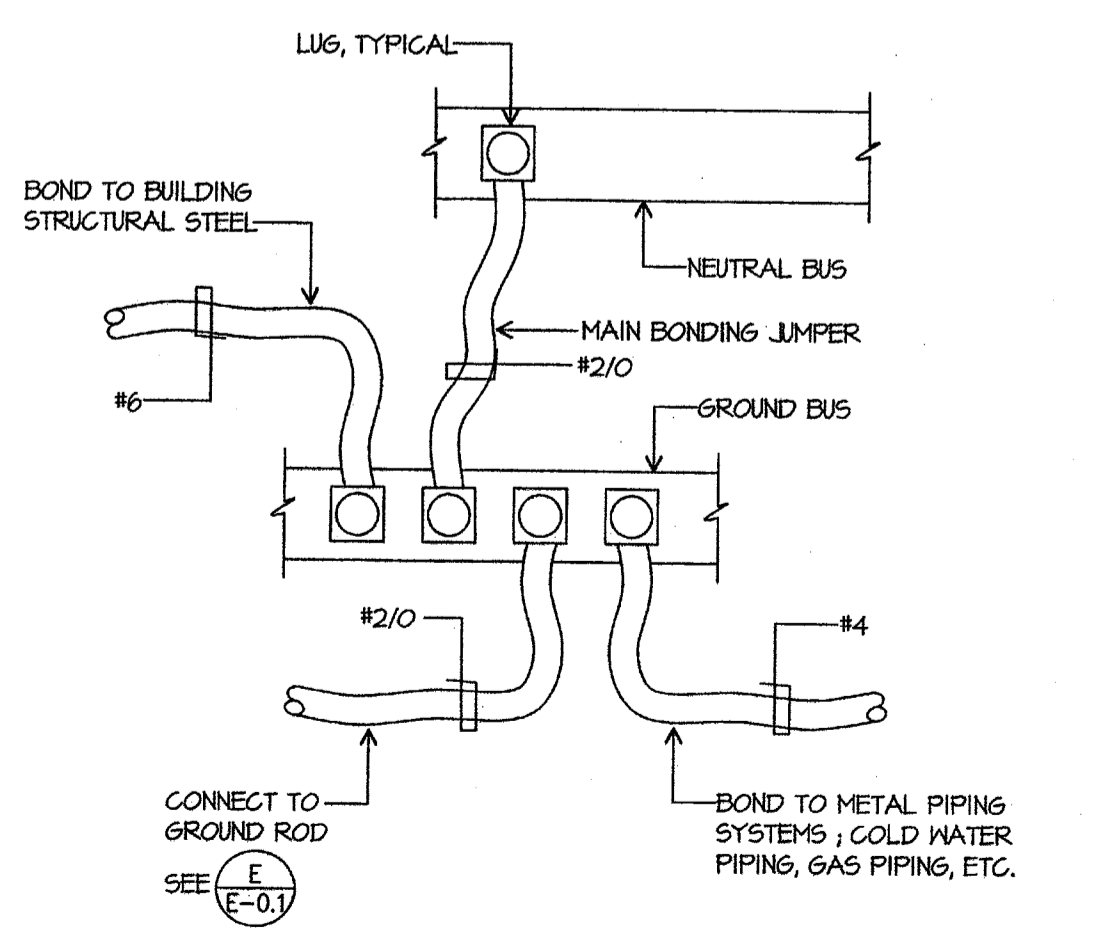


GROUNDING DETAIL NOTES

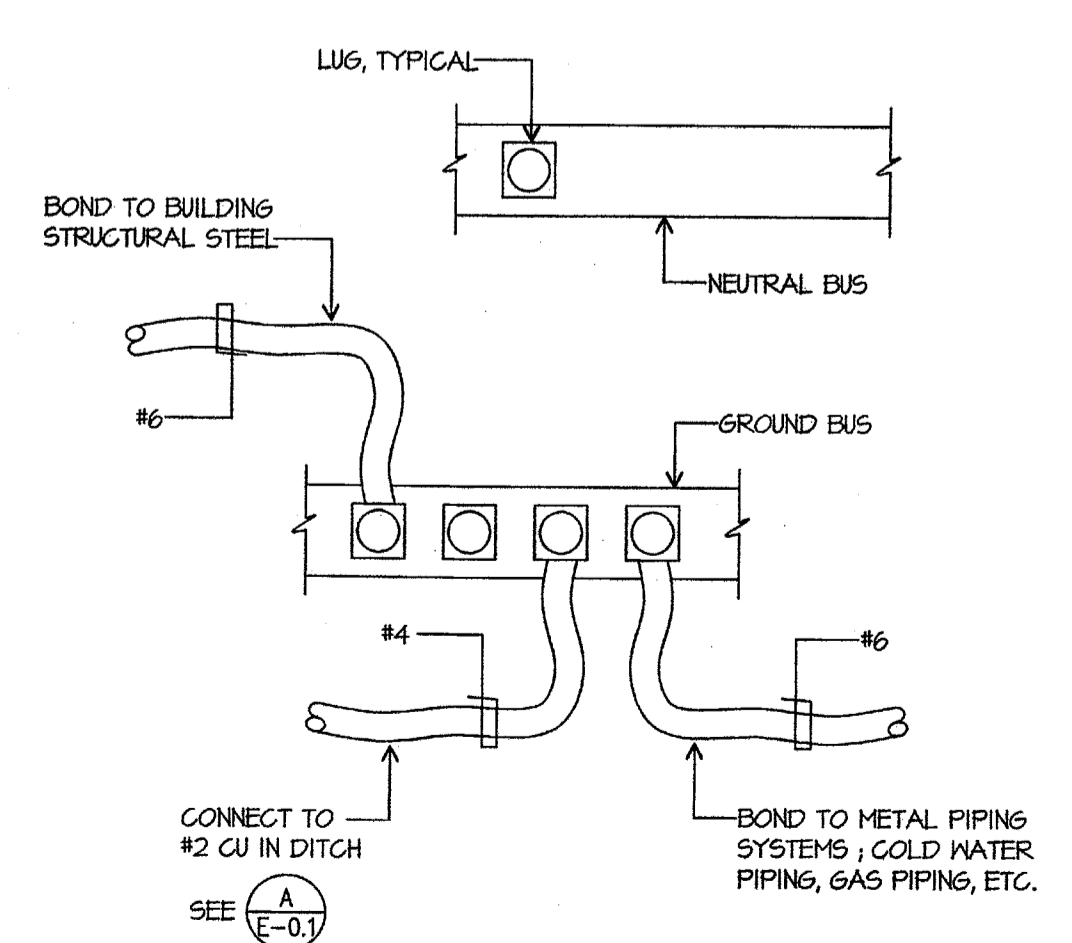
1 COORDINATE LOCATIONS OF WORK SHOWN WITH CIVIL DRAWINGS.

GROUNDING DETAIL

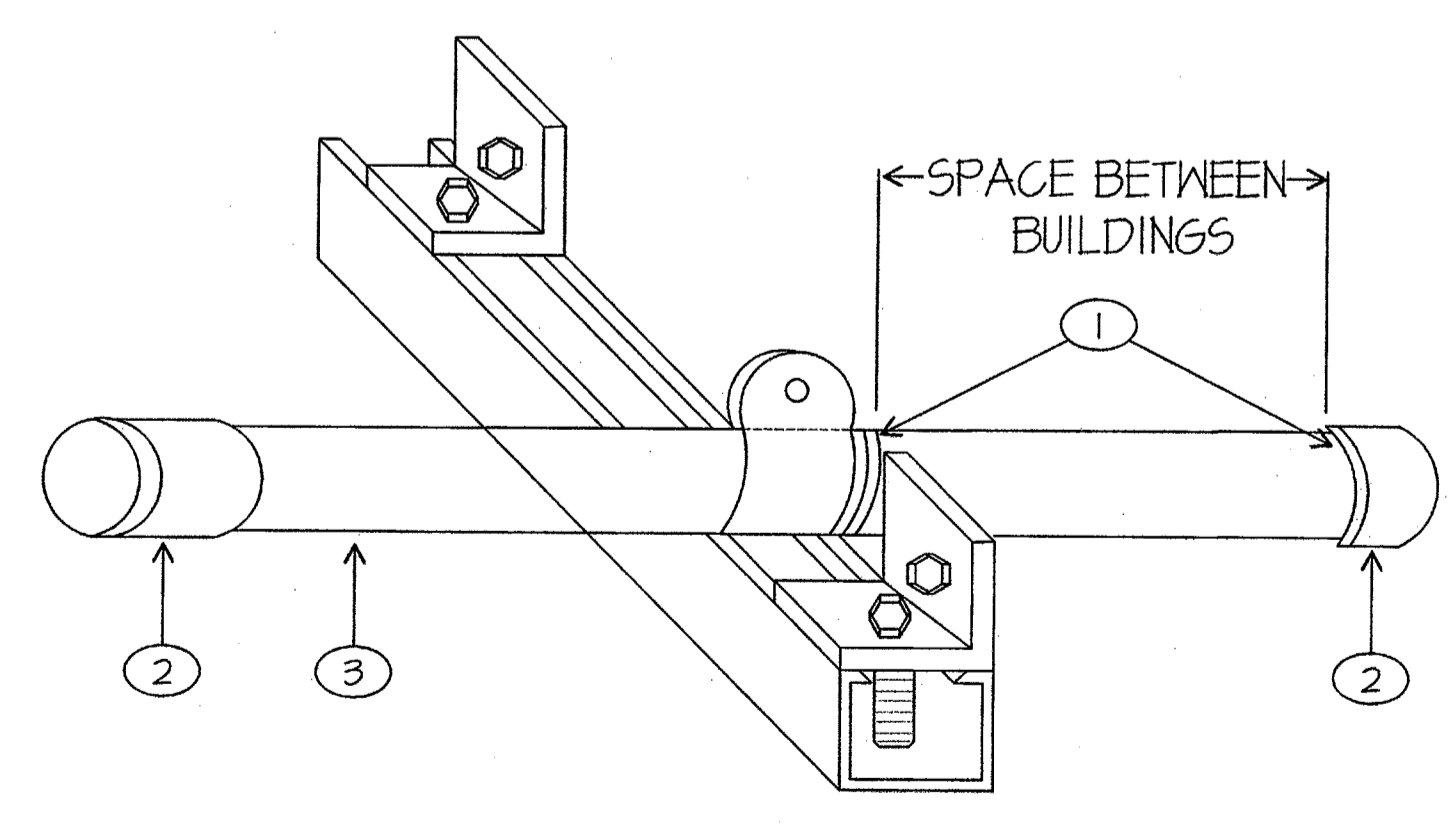
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BONDING DIAGRAM "MSB"
SCALE: NONE

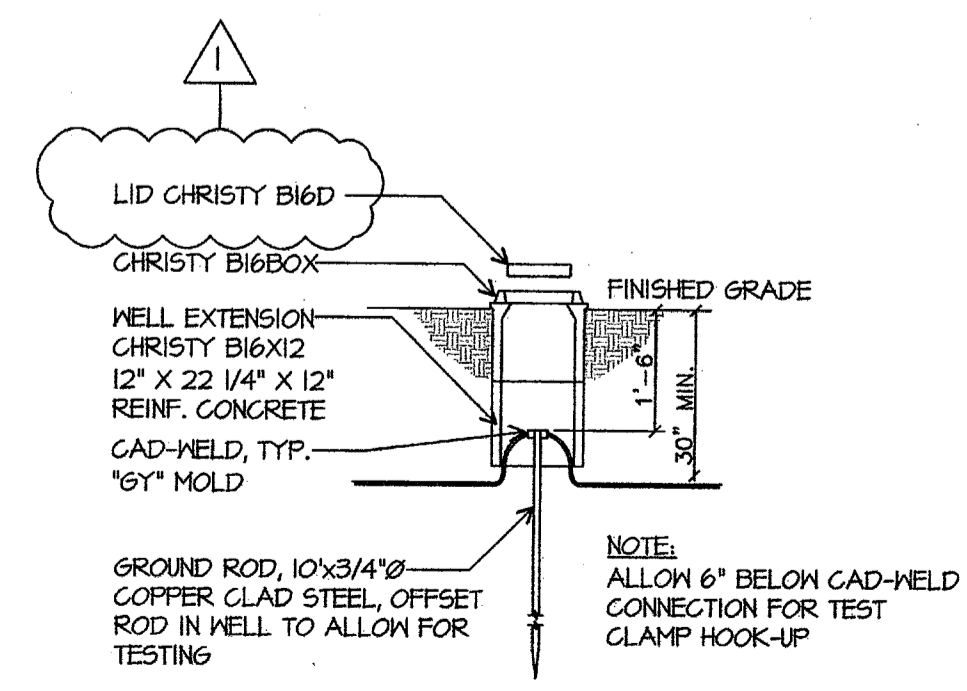


BONDING DIAGRAM PORTABLE PANEL
SCALE: NONE



CONDUIT SLEEVE SUPPORT WALL MOUNTED UNISTRUT BRACKETS FOR ONE OR MORE CONDUITS
SCALE: NONE

- 1 FOAM FILL AND FIRE CAULK THE WALLS AFTER CONDUITS ARE INSTALLED.
- 2 INSULATED THROAT SET SCREW CONNECTOR
- 3 USE OF EMT IS ACCEPTABLE FOR SLEEVE INSTALLATION.



GROUND ACCESS BOX

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Revision:	ADDENDUM 1	Rev. Date:	10/15/09
Revision Description:		Rev. Date:	

Issue Date: 05/02/06
Date: 05/02/06
Designer: DR
Drafter: FC
C.M.

Project Name & Address:
MUNSEY ELEMENTARY SCHOOLS
10 NEW PORTABLE CLASSROOMS
BAKERSFIELD CITY SCHOOL DISTRICT
3801 BRAVE AVE. BAKERSFIELD, CA 93309

Sheet Title:
SINGLE LINE DIAGRAM SYMBOLS
DETAILS, GENERAL NOTES

Stamp(s):

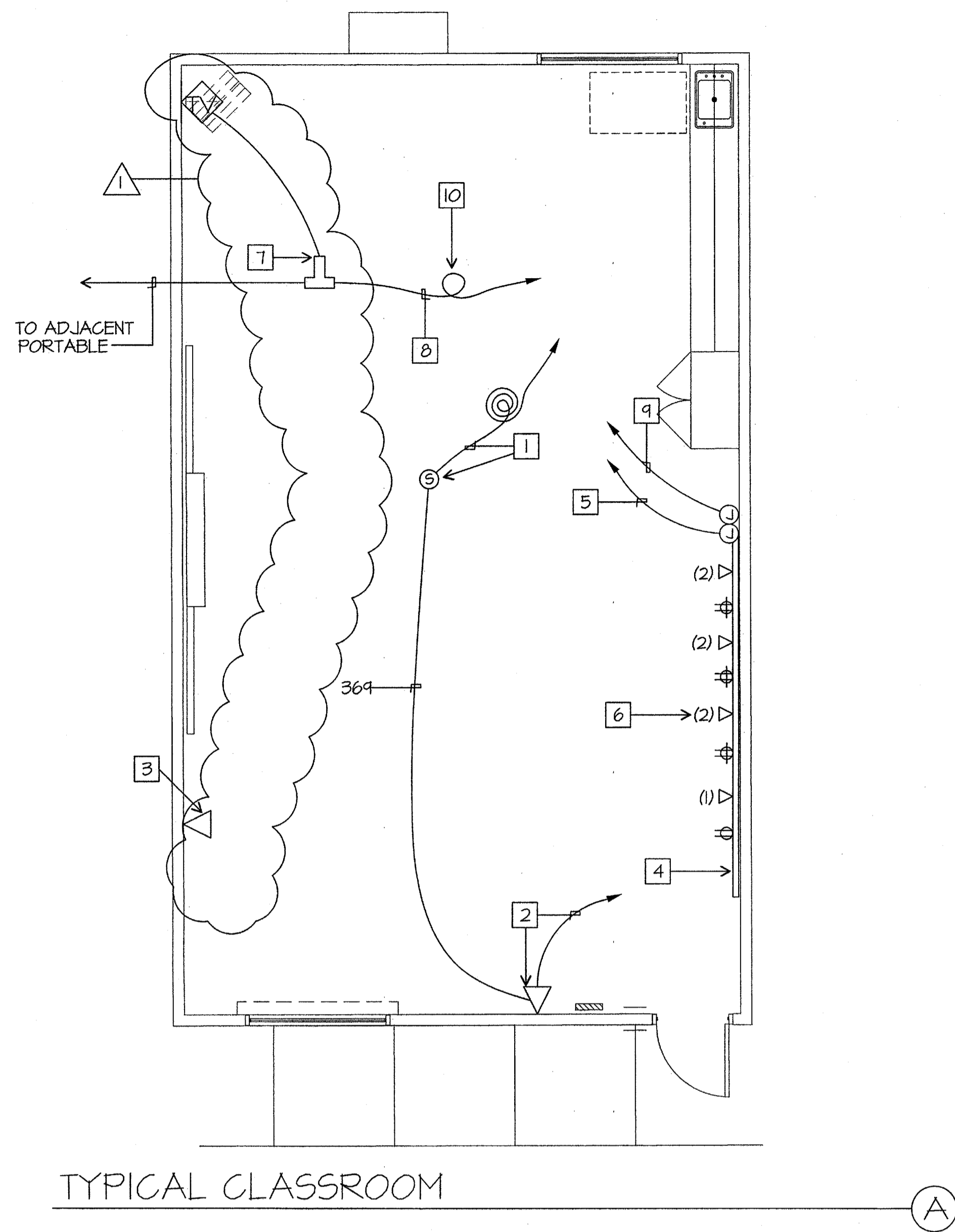
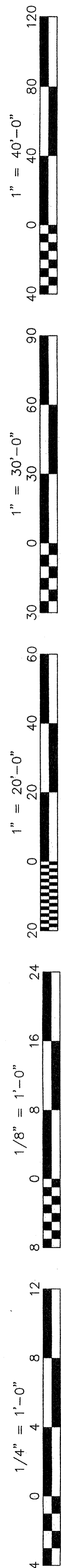
Job No.: **3832**

Sheet No.: **E-0.1**

Release: **APPENDUM #1**
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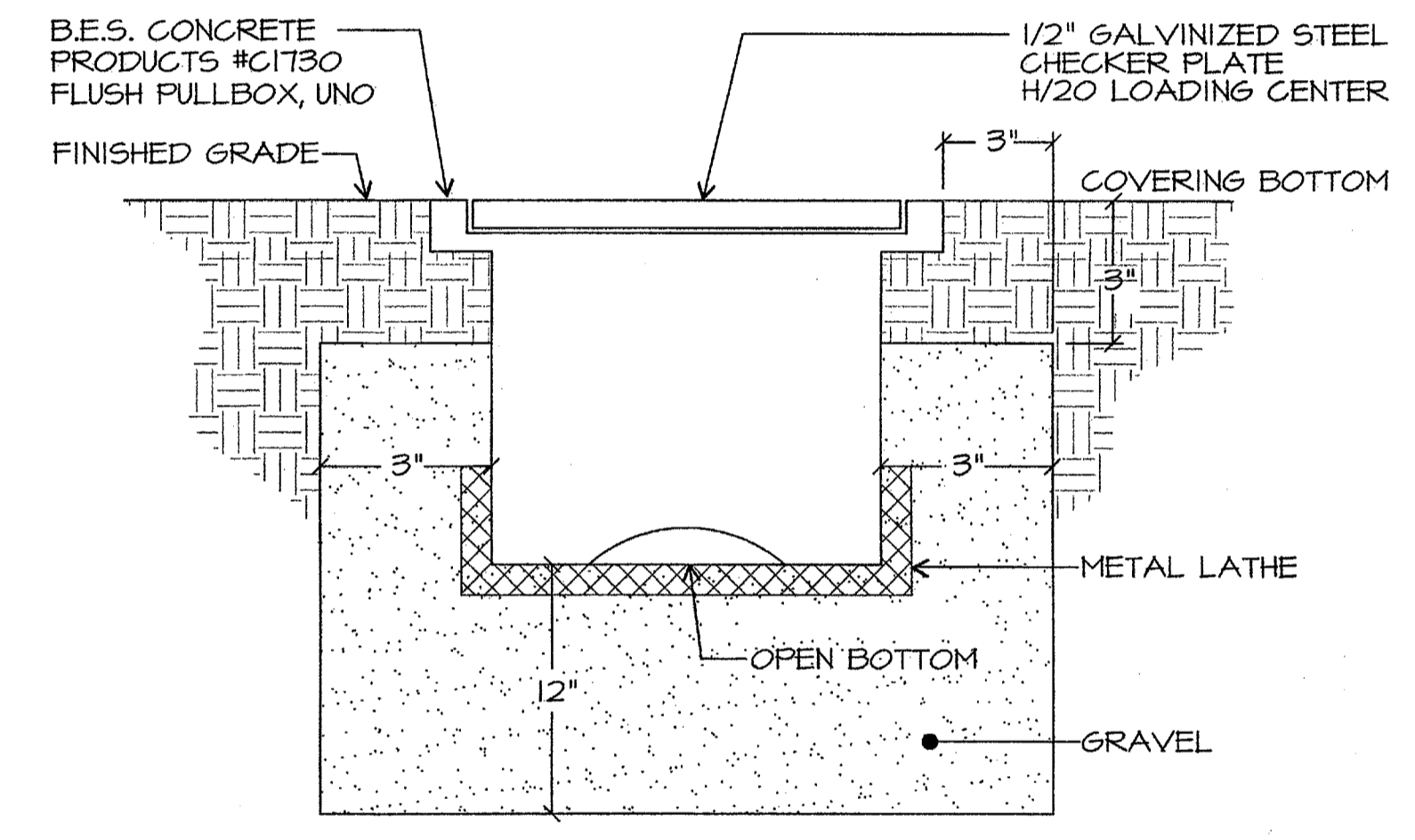
JMPE
LICENSED PROFESSIONAL ENGINEER
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No. C 28966
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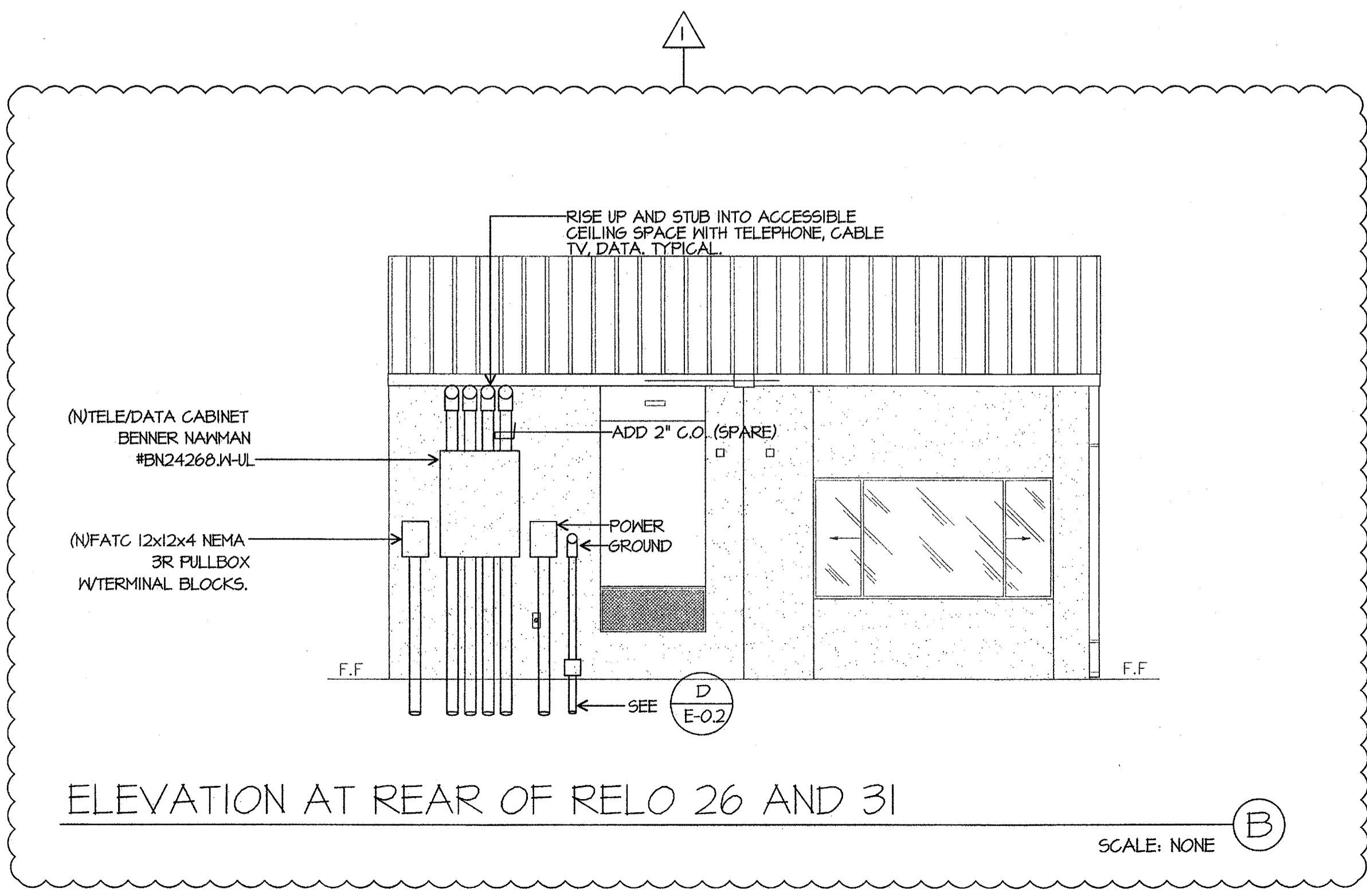


TYPICAL CLASSROOM NOTES

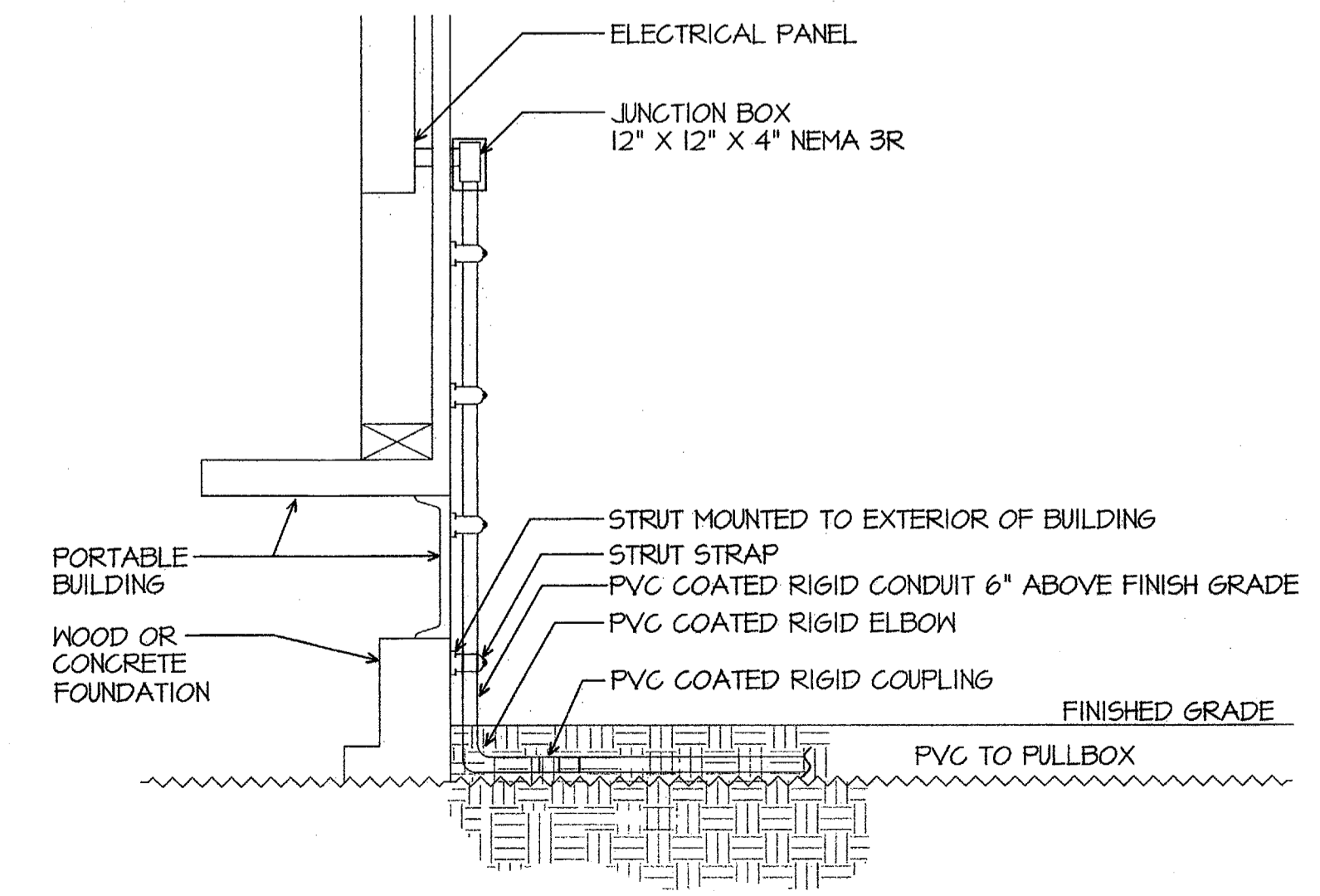
- 1 PROVIDE (ATLAS MODEL #SD72-W 25W/70W OR EQUAL) CEILING MOUNTED SPEAKER. PROVIDE A DEDICATED WESTPENN 369 CABLE BACK TO THE TERMINAL CABINET. TERMINATE ON 66 BLOCK. TERMINATE SHIELDED CABLE ON SPEAKER. PROVIDE 3 SERVICE LOOPS OF CABLE AT EACH SPEAKER LOCATION.
- 2 PROVIDE (CORTELCO EASYTOUCH MODEL #240085-VOE-21F, COLOR SANDSTONE) TELEPHONE WITH RJ11 JACK AT EXISTING OUTLET. EXTEND 369 CABLE FROM SPEAKER, USE ONE OF TWO PAIR LEFT FOR TELEPHONE CONNECTION. PROVIDE ONE DEDICATED CAT 5 CABLE, (GENERAL CABLE #5500) TO IDF CABINET (FUTURE SPARE).
- 3 PROVIDE RJ45 DATA JACK AT (E) OUTLET. ROUTE (1) CAT5 CABLE (GENERAL CABLE #5500) BACK TO NEAREST IDF CABINET AND TERMINATE ON PATCH PANEL.
- 4 SURFACE MOUNT WIREMOLD BRAND, TWO COMPARTMENT 5400 SERIES RACEWAY WITH SPLIT COVER. CONTRACTOR SHALL PROVIDE ALL ACCESSORIES, FITTINGS, FACEPLATES AND DEVICES FOR A COMPLETE SYSTEM. COORDINATE EXACT LOCATION WITH ROBERT VAN TASSLE, SUPERVISOR, PLANNING AND CONSTRUCTION BAKERSFIELD CITY SCHOOL DISTRICT, 661-631-5884. MOUNT AT 18" A.F.F.
- 5 PROVIDE (7) CAT5 CABLES BACK TO CLOSEST IDF AND TERMINATE ON PATCH PANEL.
- 6 NUMBER SIGNIFIES THE QUANTITY OF RJ45 JACKS AT DATA LOCATION. CONTRACTOR SHALL PROVIDE AND INSTALL CABLE, JACKS AND TERMINATIONS.
- 7 PROVIDE BLONDER TONGUE T-TAPS WITH QUAD SHIELD COMPRESSION TERMINATIONS. CABLE CONTINUES TO ADJACENT PORTABLE CLASSROOM. INTERIOR TV CABLE SHALL BE RG6 QUAD SHIELD CABLE. PROVIDE 12' OF EXTRA CABLE PER CLASSROOM. COORDINATE WITH GARY TAYLOR, NETWORK SYSTEMS ENGINEER FOR BAKERSFIELD CITY SCHOOL DISTRICT, 661-631-4745.
- 8 FROM COMMUNICATION TERMINAL CABINET.
- 9 TO SPARE 120V CIRCUIT IN CLASSROOM PANEL. PROVIDE 20/1 CIRCUIT BREAKER AS NEEDED.
- 10 PROVIDE 2' SERVICE LOOP, TYPICAL.



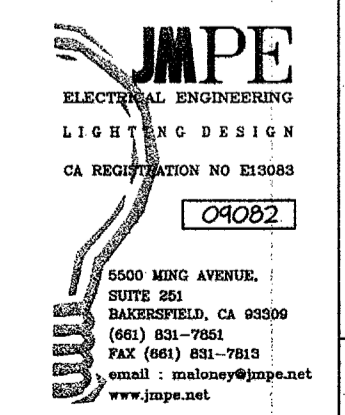
FLUSH PULLBOX DETAIL
SCALE: NONE (C)



ELEVATION AT REAR OF RELO 26 AND 31
SCALE: NONE (B)



TYPICAL PORTABLE CONNECTION
SCALE: NONE (D)



JMPE/JOB#: 04082/DATE: 10-15-04 AC

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Revision	Description	Rev. Date	Rev. Date
1	ADDENDUM 1	10/16/09	

Sheet Title: **SINGLE LINE DIAGRAM, SYMBOLS, DETAILS, GENERAL NOTES**
Project Name & Address: **MUNSEY ELEMENTARY SCHOOL 10 NEW PORTABLE CLASSROOMS**
BAKERSFIELD CITY SCHOOL DISTRICT
3801 BRAVE AVE. BAKERSFIELD, CA 93309

Issue Date:	Date:	Designer:	DR:	PC:	CJM
	05/02/06				

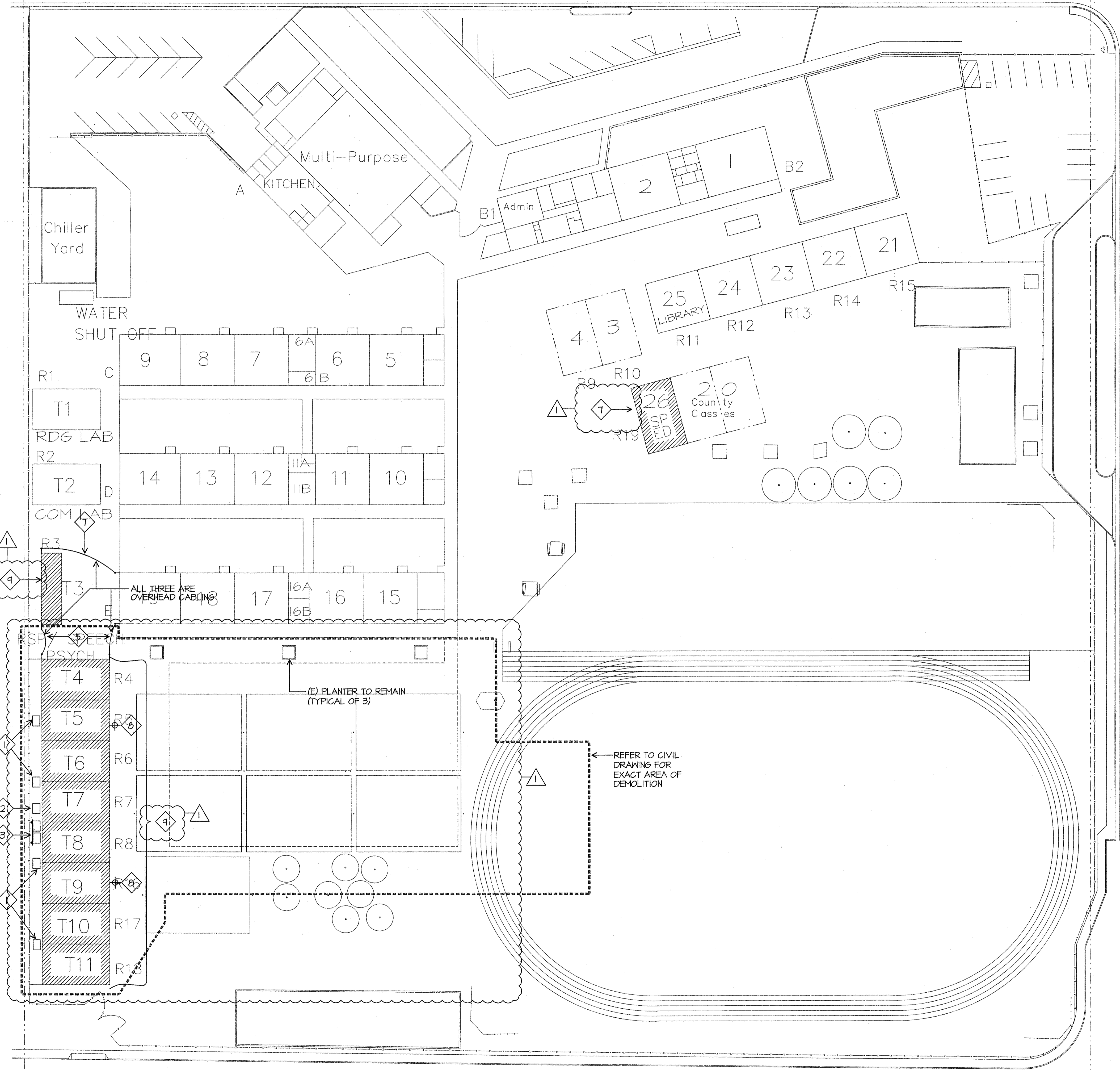
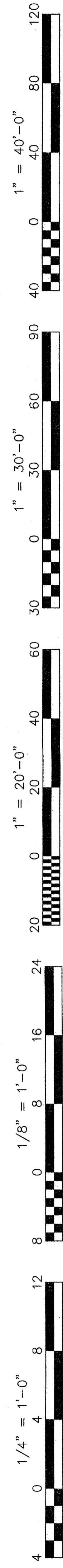
DSA Identification Stamp:

Stamp(s):

Job No.: **3832**

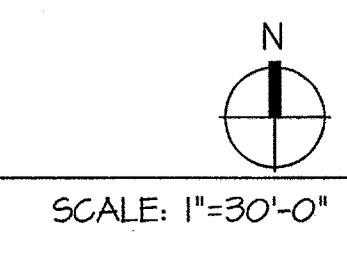
Sheet No.: **E-0.2**

Release: **ADDENDUM #1**
CURTIS MCNALLY



- DEMOLITION SITE ELECTRICAL PLAN NOTES**
- 1 REMOVE EXISTING CONDUCTORS FROM RELOCATED BUILDING PANELS AND CONDUITS BACK TO EXISTING CONCRETE PULL BOX.
 - 2 EXISTING CONCRETE PULL BOX TO REMAIN (N-36 PULL BOX.)
 - 3 DISCONNECT EXISTING FEEDER CONDUCTORS AND REMOVE FROM PANEL TO EXISTING CONCRETE PULL BOX. BACKBOARD AND PANELS TO REMAIN.
 - 4 AFTER PG&E HAS DISCONNECTED SERVICE AND REMOVED EXISTING METER, PROVIDE A BLANK METER SOCKET COVER.
 - 5 REMOVE EXISTING OVERHEAD CABLING FROM T4 TO T3 AND T4 TO ROOM 19. CUT CABLES AT T4 AND T3 AND REMOVE ANY RISER. CUT CABLES AT ROOM 19 AND WEATHER PROOF THE CABLE ENDS.
 - 6 REMOVE EXISTING ABOVE GROUND 12 X 12 X 4 NEMA 3R J-BOXES AND UNISTRUT SUPPORTS COMPLETELY. INSTALL (N) N-9 CONCRETE PULL BOXES OVER (E) CONDUITS. SET BOXES FLUSH TO EXISTING GRADE (TYPICAL).
 - 7 REMOVE EXISTING OVERHEAD SERVICE CONDUCTORS FROM T-3 BACK TO ROOM 19. REMOVE AT RISER ON ROOM 19 AND WEATHER PROOF THE CONDUCTOR ENDS. REMOVE RISER FROM PANEL ON T-3.
 - 8 REMOVE EXISTING RISER SUPPORTS AND EXTERIOR FLOOD LIGHTS.
 - 9 EXISTING BUILDING TO REMAIN UNTIL NEW BUILDINGS ARE COMPLETED.

DEMOLITION SITE ELECTRICAL PLAN



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Professional Engineer
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Revision:	ADDENDUM 1	Rev. Date:	10/15/09
Revision Description:		Revision:	
Revision:		Revision Description:	

DEMOLITION SITE ELECTRICAL PLAN

Project Name & Address:
MUNSEY ELEMENTARY SCHOOL
10 NEW PORTABLE CLASSROOMS
 BAKERSFIELD CITY SCHOOL DISTRICT
 3801 BRAVE AVE. BAKERSFIELD, CA 93309

Issue Date:	Date:	Designer:	DR:	PC:
	05/02/06	DESIGNER	DRAFTER	CJM

DSA Identification Stamp:

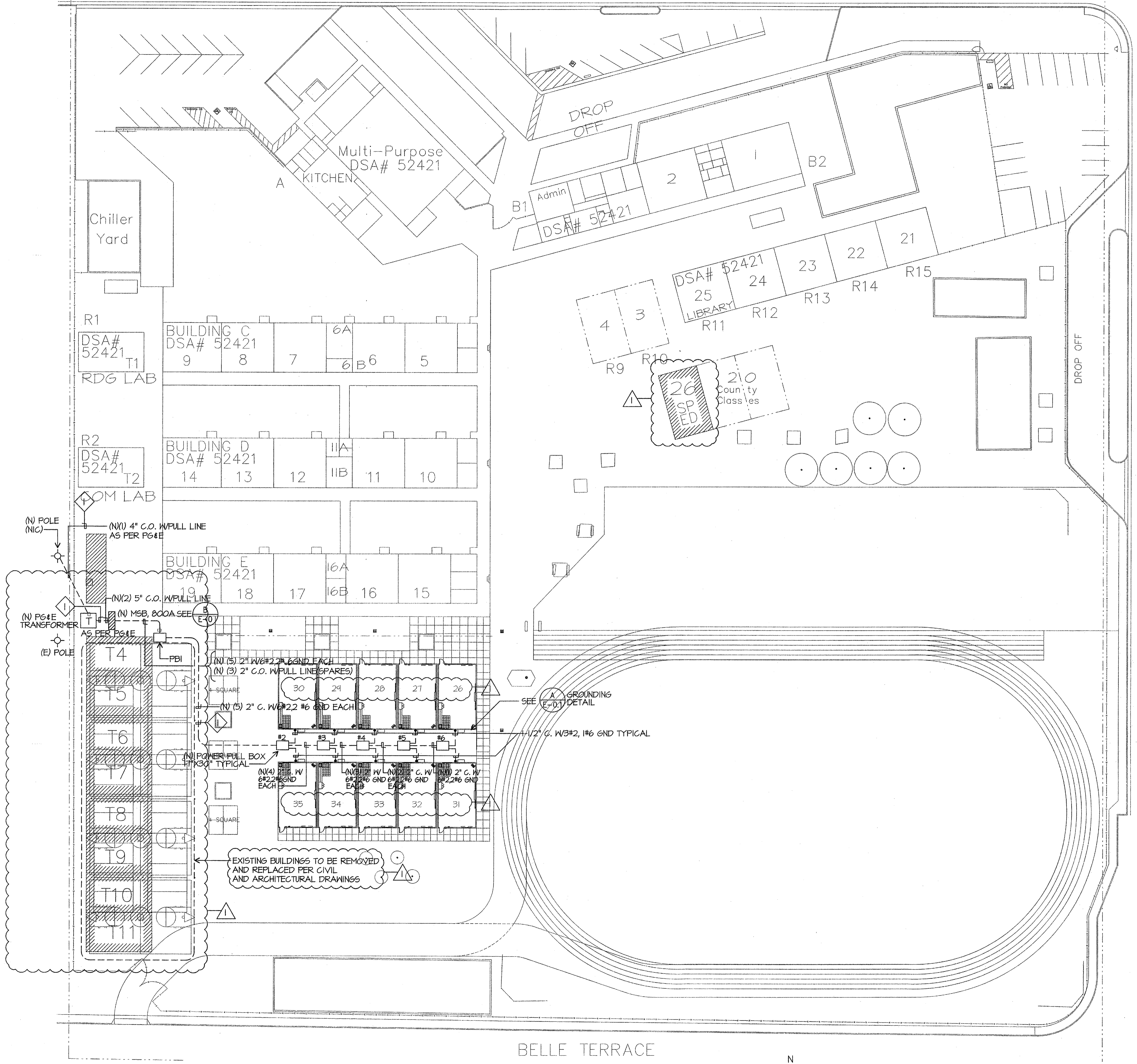
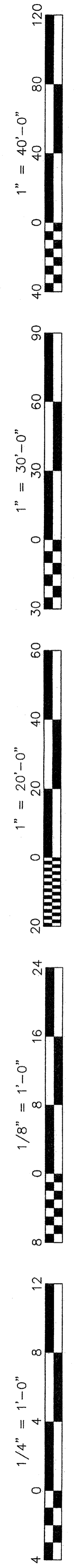
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Job No.: **3832**

Sheet No.: **E-1**

Release: **ADDENDUM #1**

JMPE/JOB#: 04082/DATE: 10-15-09 AC
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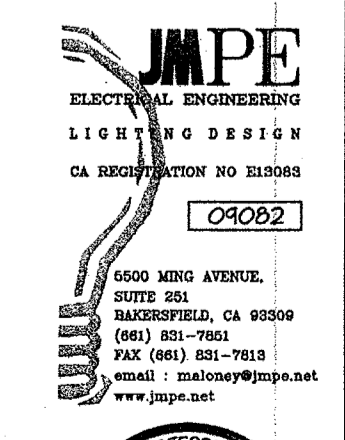


ELECTRICAL SITE PLAN NOTES

- 1 SAWCUT AND REPAIR TO MATCH EXISTING. BORING IS AN ACCEPTABLE METHOD OF CONDUIT INSTALLATION. PROVIDE METHOD OF PROCEDURE FOR BORING TO ENGINEER FOR REVIEW AND APPROVAL. DETAIL BORING PROCEDURE. IDENTIFY TYPE OF CONDUIT TO BE USED IN BORE.

SITE ELECTRICAL PLAN

SCALE: 1"=30'-0"



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Revision	Revision Description	Rev. Date	Rev. Date
1	ADDENDUM 1	10/15/09	

Sheet Title: **SITE ELECTRICAL PLAN**

Issue Date: 05/02/06

Designer: DR. C.J.M.

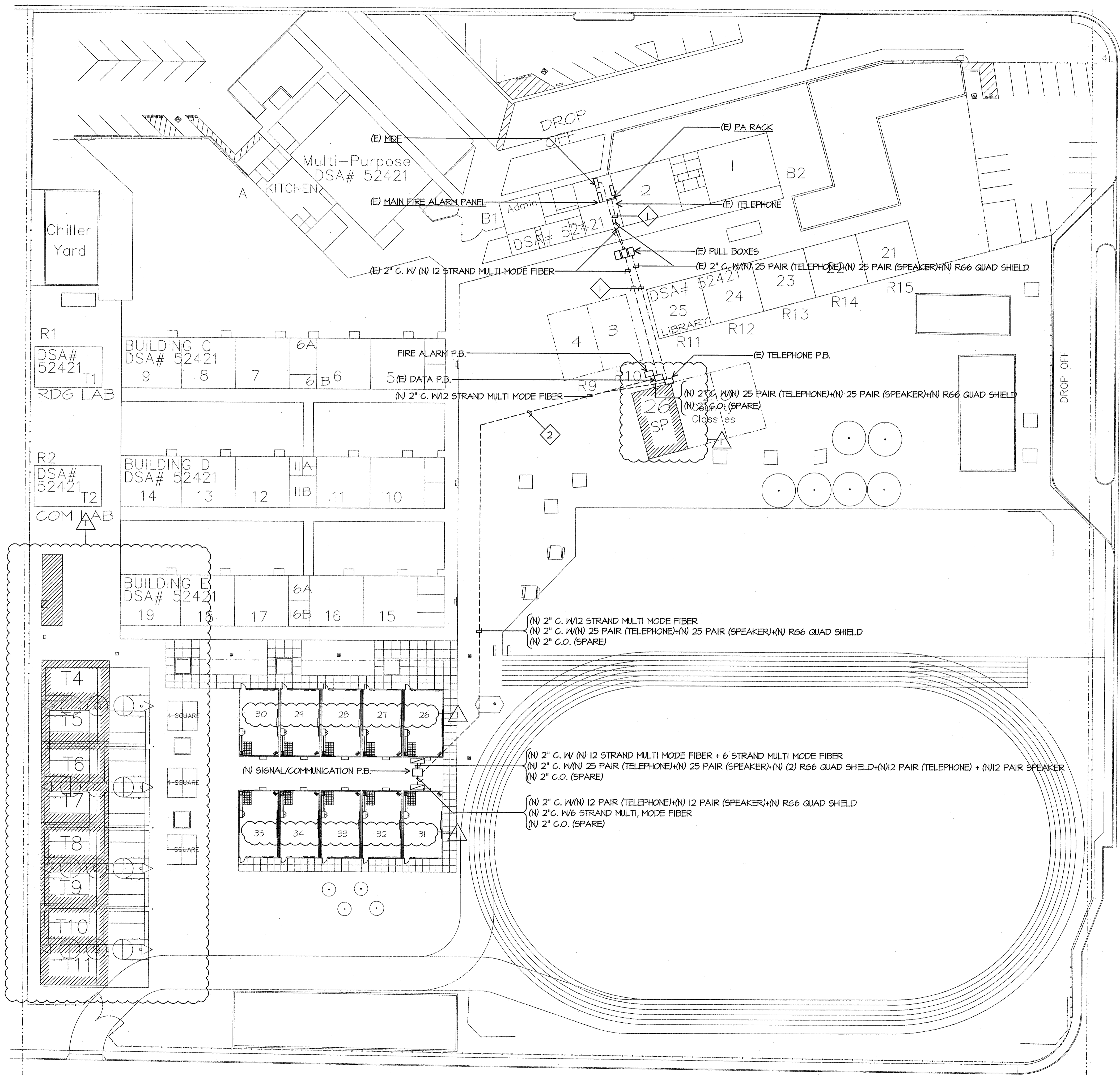
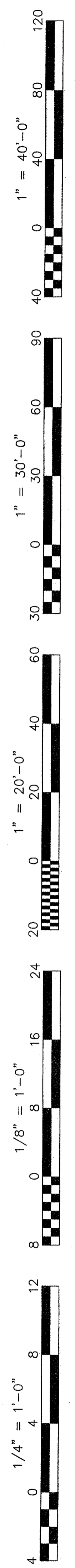
Project Name & Address: **MUNSEY ELEMENTARY SCHOOLS 10 NEW PORTABLE CLASSROOMS**
BAKERSFIELD CITY SCHOOL DISTRICT
3801 BRAVE AVE. BAKERSFIELD, CA 93309

Job No.: **3832**

Sheet No.: **E-1.1**

Release: **APPENDUM 1**

JMPE/IOB#:09082/DATE:10-15-09 AG/CN



- SITE COMMUNICATION PLAN NOTES**
- 1 PULL NEW CABLES IN EXISTING CONDUIT. PULL PAST EXISTING CABLES.
 - 2 SAWCUT AND REPAIR TO MATCH EXISTING. BORING IS AN ACCEPTABLE METHOD OF CONDUIT INSTALLATION. PROVIDE METHOD OF PROCEDURE FOR BORING TO ENGINEER FOR REVIEW AND APPROVAL. DETAIL BORING PROCEDURE. IDENTIFY TYPE OF CONDUIT TO BE USED IN BORE.

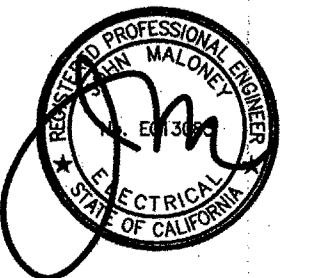
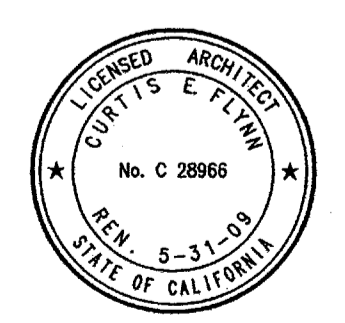
SITE COMMUNICATION PLAN

SCALE: 1"=30'-0"

SOUTH REAL ROAD

BELLE TERRACE

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Job No.: **3832**

Sheet No.: **E-2**

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Rev. No.	Date	Description
1	10/15/09	ADDENDUM 1

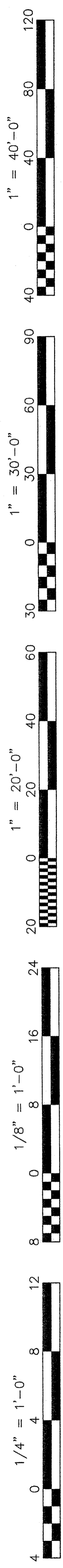
SITE COMMUNICATION PLAN

Project Name & Address:
MUNSEY ELEMENTARY SCHOOL
10 NEW PORTABLE CLASSROOMS
 BAKERSFIELD CITY SCHOOL DISTRICT
 3801 BRAVE AVE. BAKERSFIELD, CA 93309

Issue Date: 05/02/06
 Designer: DESIGNER
 DR: DRAFTER
 PC: CJM

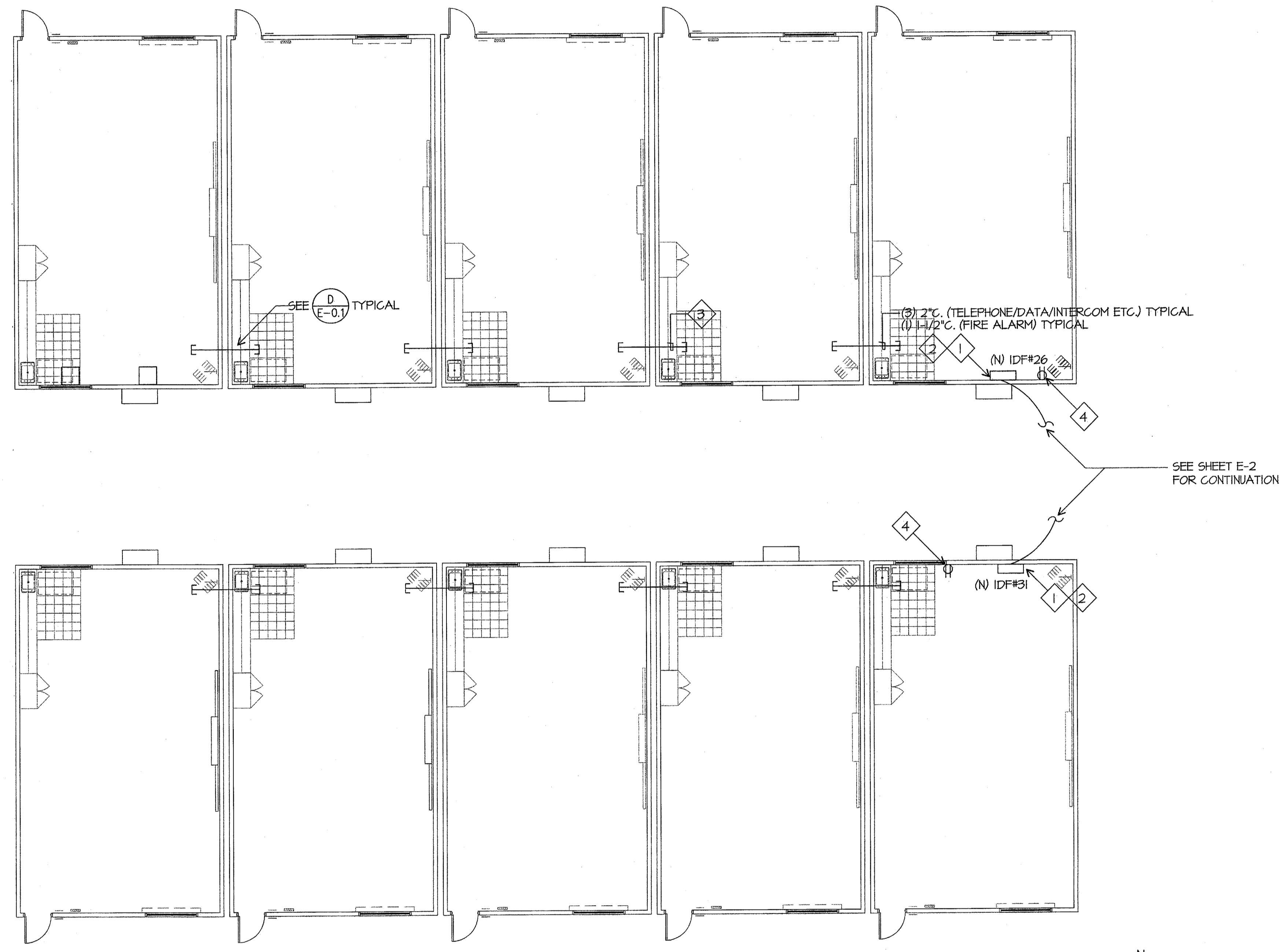
DSA Identification Stamp:

Stamp(s):

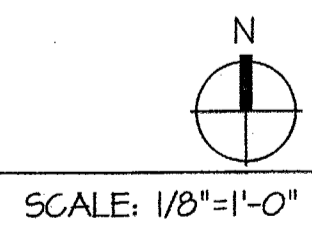


COMMUNICATION PLAN NOTES

- 1 CONNECT TO SPARE 20/1 CIRCUIT BREAKER IN PANEL PROVIDED WITH CLASSROOM.
- 2 PROVIDE (1) RE4 EQUIPMENT CABINETS WITH (1) 48 PORT PATCH PANEL, AMO BCSD CONNECTORS, BY HUBBELL COMPANY. COORDINATE WITH GARY TAYLOR, NETWORK SYSTEMS ENGINEER FOR BAKERSFIELD CITY SCHOOL DISTRICT, 661-631-4745.
- 3 SUPPORT CABLE EVERY 5' VIA J-HOOKS, INSTALLED AT LEAST 8" ABOVE CEILING ON PERIMETER WALLS, TYPICAL.
- 4 ADD RECEPTACLE NEXT TO (N) IDF. PROVIDE 20/1 CIRCUIT BREAKER FROM PANEL PROVIDED WITH PORTABLE. PROVIDE MATERIALS NEEDED FOR DEDICATED CIRCUIT TO BE USED FOR INTRUSION POWER SUPPLY. COORDINATE REQUIREMENTS WITH BAKERSFIELD CITY SCHOOL VENDOR MORGAN CLAYTON, 661-397-5511.



COMMUNICATION PLAN



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Rev. No.	Rev. Date	Rev. Description

COMMUNICATION PLAN

MUNSEY ELEMENTARY SCHOOL
10 NEW PORTABLE CLASSROOMS
BAKERSFIELD CITY SCHOOL DISTRICT
3801 BRAVE AVE. BAKERSFIELD, CA 93309

Issue Date:	Date: 05/02/06	Designer: DESIGNER	DR: DRAFTER	PC: CJM
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DSA Identification Stamp:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT

05-112985

AC: [Signature]
DATE: SEP 24 2006

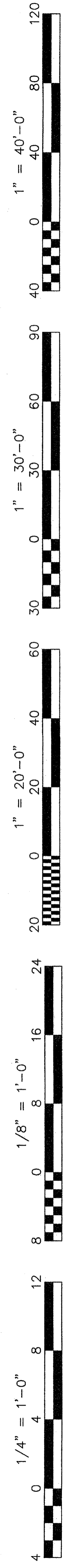
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JMPE
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LIGHTING DESIGN
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Job No.: **3832**

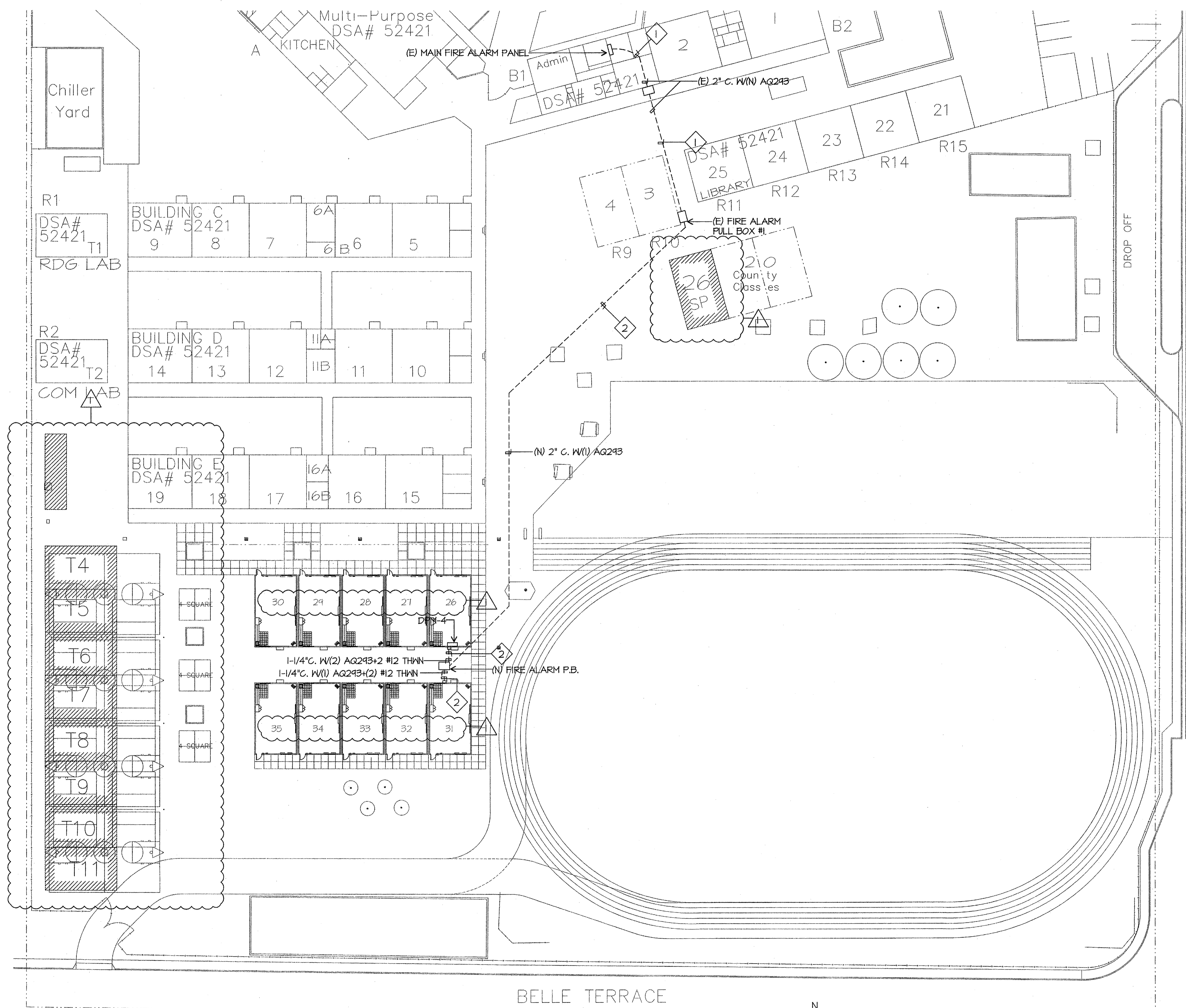
Sheet No.: **E-2.1**

Release: JMPE/JOB#:04082/DATE:04-04-09 AC CURTIS MCNALLY



SITE FIRE ALARM PLAN NOTES

- 1 PULL NEW CABLES IN EXISTING CONDUIT. PULL PAST EXISTING CABLES.
- 2 SAWCUT AND REPAIR TO MATCH EXISTING. BORING IS AN ACCEPTABLE METHOD OF CONDUIT INSTALLATION. PROVIDE METHOD OF PROCEDURE FOR BORING TO ENGINEER FOR REVIEW AND APPROVAL. DETAIL BORING PROCEDURE. IDENTIFY TYPE OF CONDUIT TO BE USED IN BORE.



SITE FIRE ALARM PLAN

SCALE: 1"=30'-0"

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Revision Description:	ADDENDUM 1
Revision:	10/16/09
Rev. Date:	

SITE FIRE ALARM PLAN

MUNSEY ELEMENTARY SCHOOL
10 NEW PORTABLE CLASSROOMS
 BAKERSFIELD CITY SCHOOL DISTRICT
 3801 BRAVE AVE. BAKERSFIELD, CA 93309

Issue Date:	05/02/06
Designer:	DESIGNER
DR:	DRAFTER
PC:	CJM

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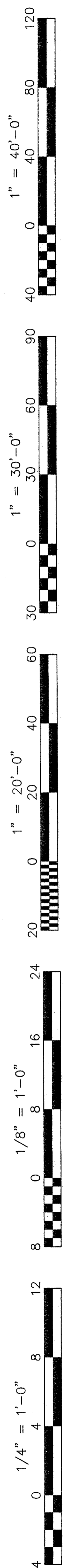
JMPE
 LICENSED ELECTRICAL ENGINEERING
 LIGHTING DESIGN
 CA REGISTRATION NO. 813043

CURTIS E. TAYLOR
 LICENSED ARCHITECT
 No. C 28966
 REG. 5-31-99
 STATE OF CALIFORNIA

Job No.: **3832**

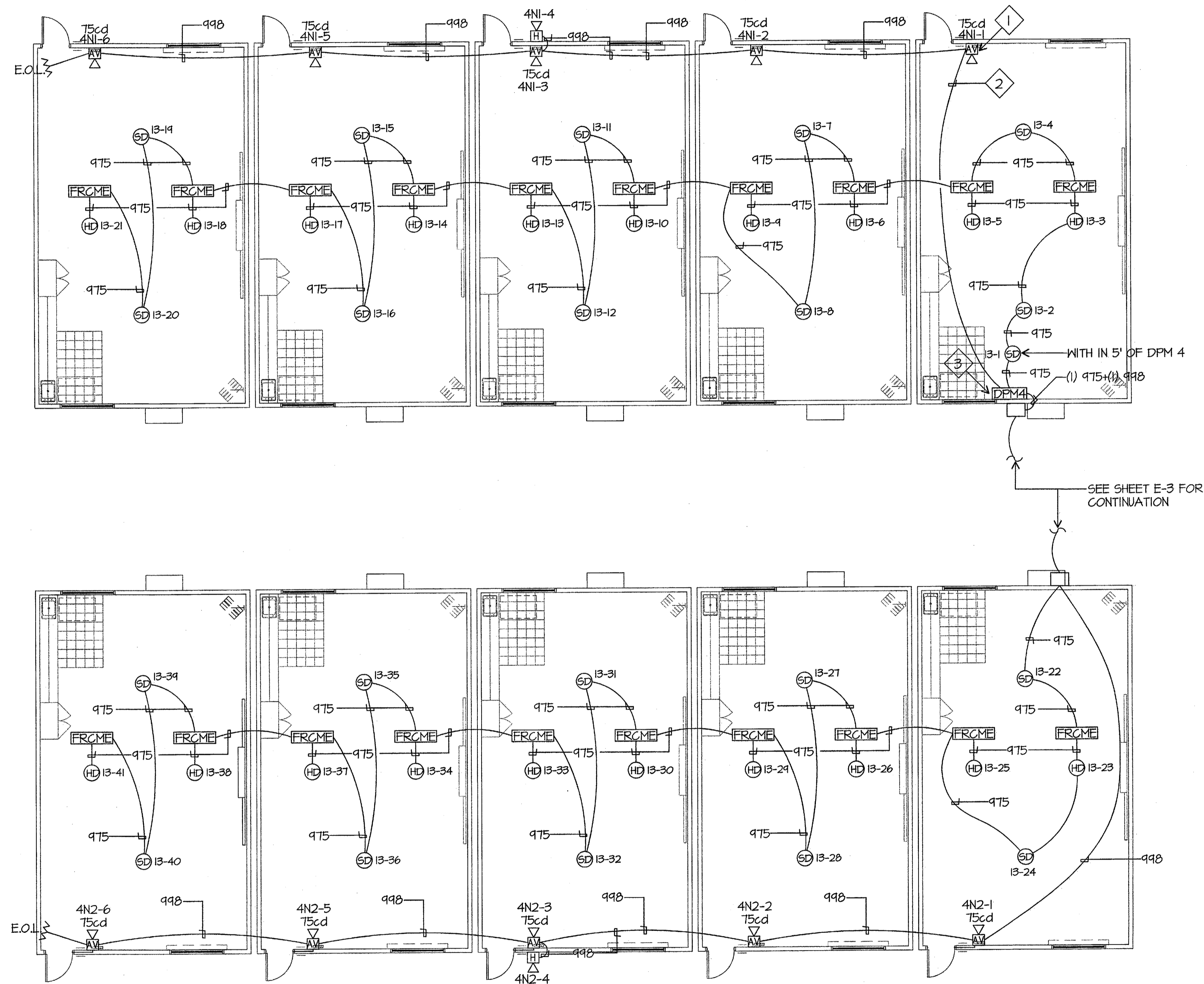
Sheet No.: **E-3**

Professional Engineer
 Electrical
 State of California

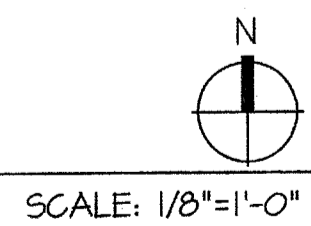


FIRE ALARM PLAN NOTES

- 1 FIRE ALARM CABLE SHALL BE INSTALLED IN 3/4" CONDUIT IN WALLS, TYPICAL.
- 2 SUPPORT FIRE ALARM CABLE EVERY 5' VIA J-HOOKS INSTALLED AT LEAST 8" ABOVE CEILING ON PERIMETER WALLS, TYPICAL.
- 3 PROVIDE 20/1 CIRCUIT BREAKER PER NFPA 72 FOR DPM.



FIRE ALARM PLAN



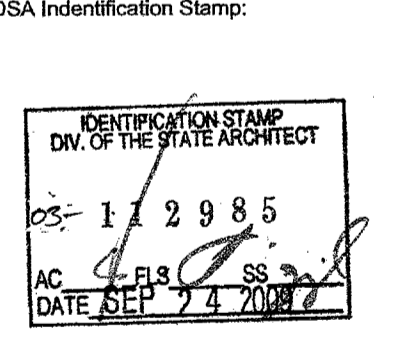
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Rev. Date:	Rev. Date:	Rev. Date:	Rev. Date:
Revision Description:	Revision Description:	Revision Description:	Revision Description:

FIRE ALARM PLAN
MUNSEY ELEMENTARY SCHOOL
10 NEW PORTABLE CLASSROOMS
 BAKERSFIELD CITY SCHOOL DISTRICT
 3801 BRAVE AVE. BAKERSFIELD, CA 93309

Issue Date:	Date:	05/02/06
Designer:	DR:	DESIGNER
DRAFTER:	FC:	DRAFTER
CHECKER:		C.J.M.

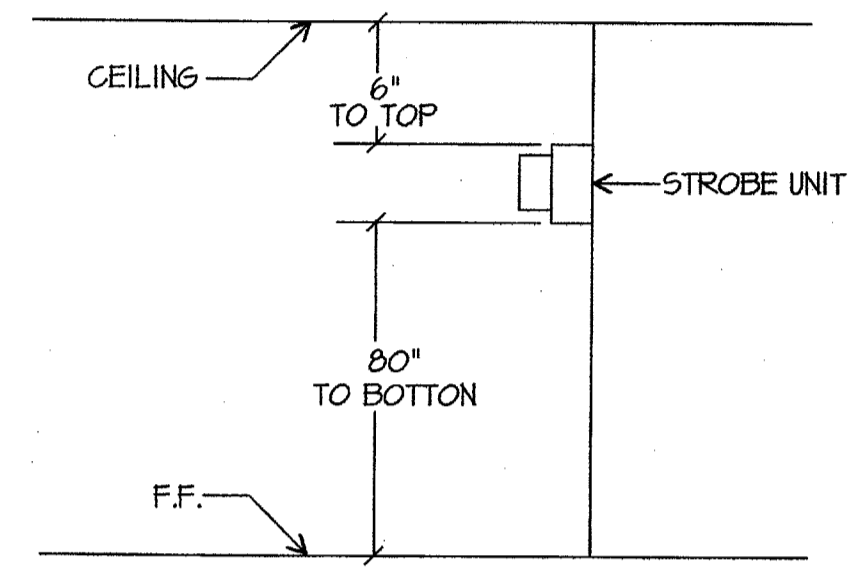
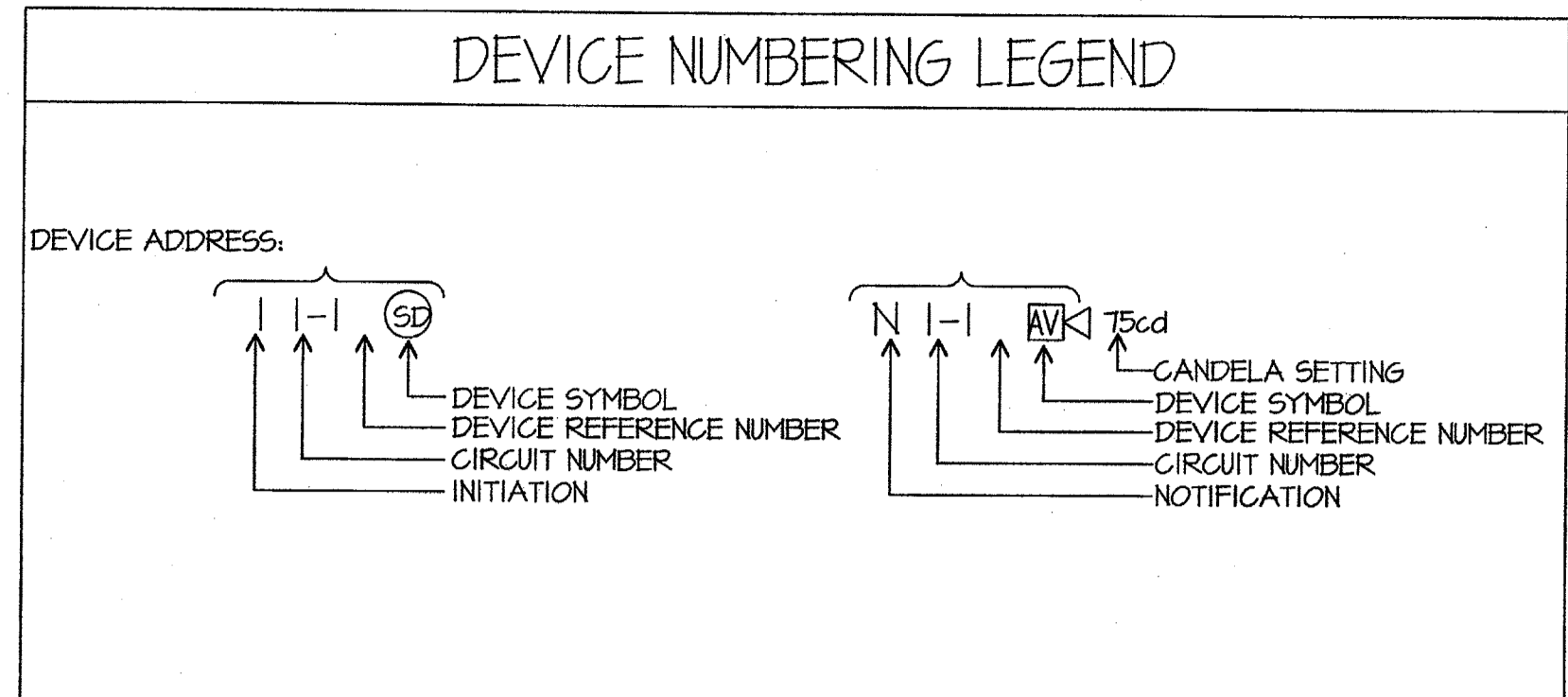
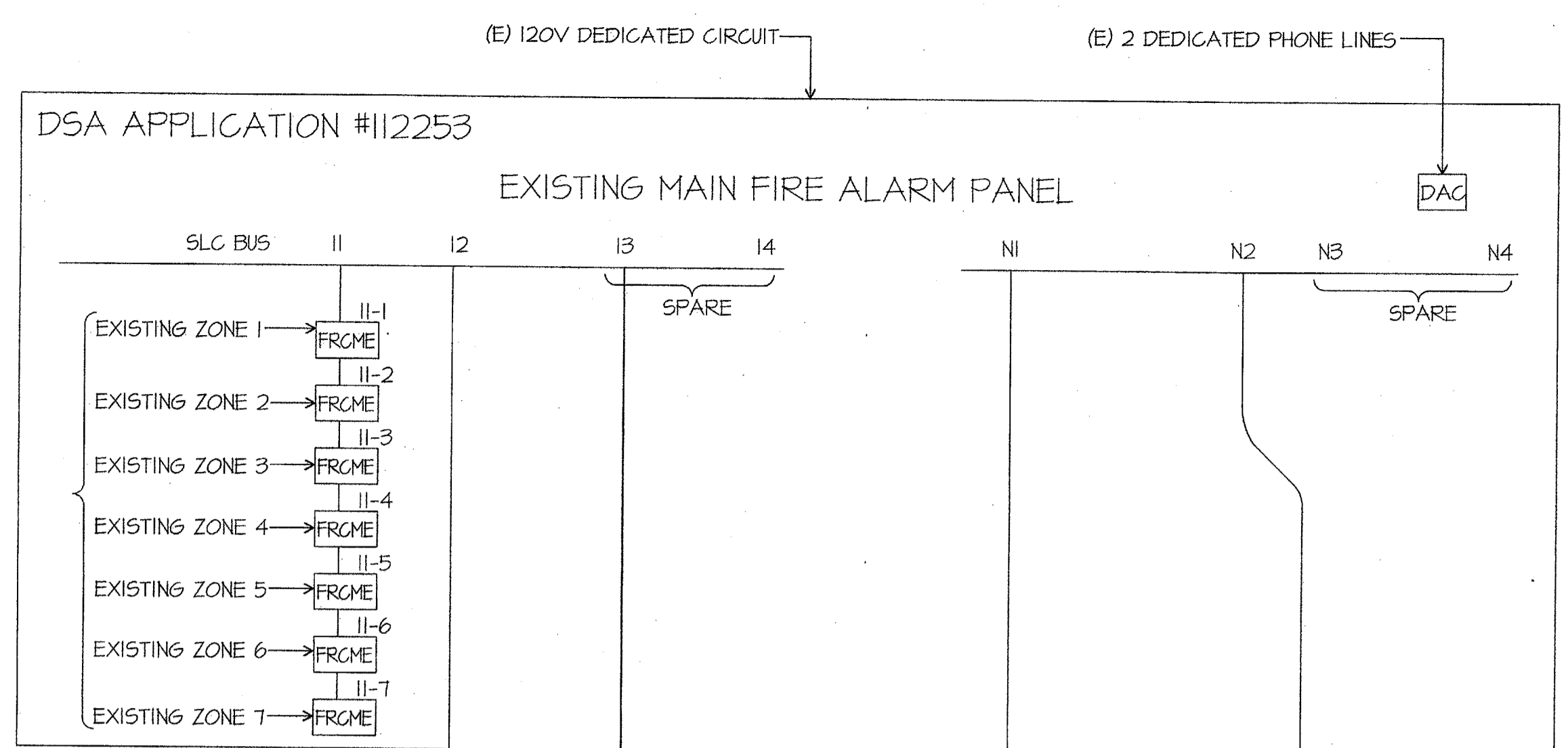
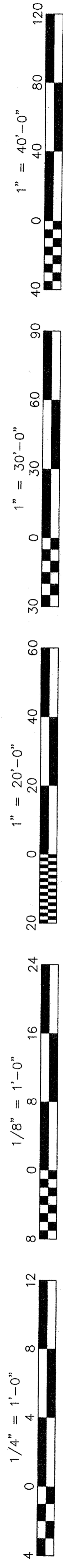


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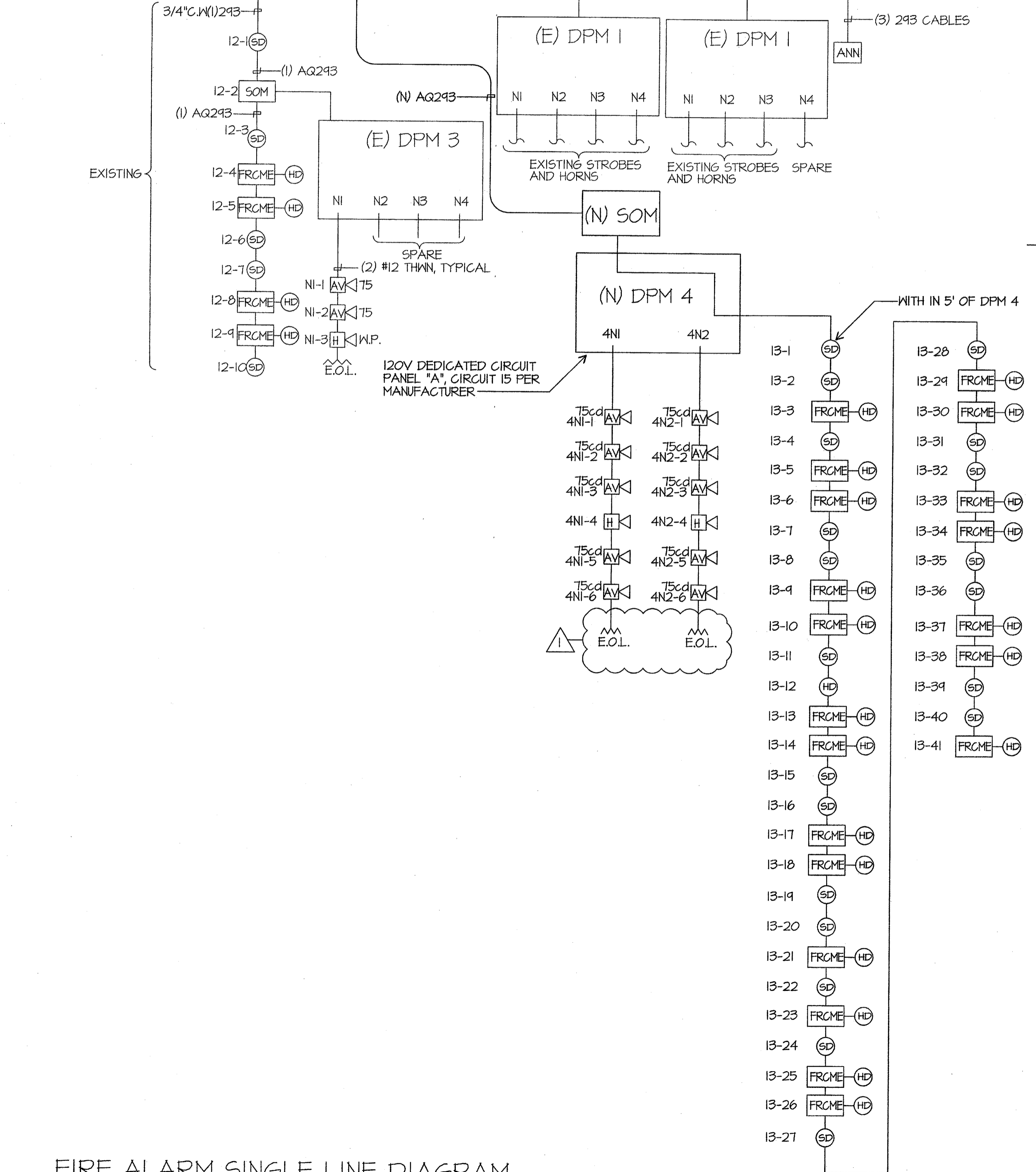
Job No.: **3832**

Sheet No.: **E-3.1**



HORN/STROBE MOUNTING DETAIL
SCALE: NONE

CONTRACTOR SHALL DISCONNECT AND RECONNECT ALL ZONES ASSOCIATED WITH EXISTING BUILDINGS ON CAMPUS AND PROVIDE TESTING FOR POSITIVE REPORTING. PROVIDE FIRE WATCH DURING IMPAIRMENT OF SYSTEM, PER NFPA & CFC (CHAPTER 14 + 9)



FIRE ALARM SINGLE LINE DIAGRAM
SCALE: NONE

FIRE ALARM BATTERY CALCULATION-EXISTING MASTER PANEL FIRENET 2127

EQUIPMENT DESCRIPTION	QUANTITY	SUPERVISORY CURRENT (AMPERES)		ALARM CURRENT (AMPERES)			
		EXISTING	NEW	EACH	SUB-TOTAL	EACH	SUB-TOTAL
MASTER PANEL	1			0.1	0.1	0.1	0.1
REMOTE ANNUNCIATOR PANEL	1			0.15	0.15	0.27	0.27
SUPERVISED OUTPUT MODULE	3		1	0.0003	0.0012	0.0003	0.0012
FAST RESPONSE CONTACT MODULE	11		20	0.00055	0.01705	0.008	0.248
DIGITAL ALARM COMMUNICATOR	1			0.02	0.02	0.02	0.02
SMOKE DETECTOR	3		21	0.00039	0.00936	0.00039	0.00936
HEAT DETECTOR	4		20	0.00035	0.0084	0.00035	0.0084
SUB TOTAL AMPERES				0.30601	AMPERS	0.65696	AMPERS
SUB TOTAL AMPERE-HOURS				x 24 HOURS		x 0.084 HOURS	
				7.34424	A.H.	0.055185	A.H.
TOTAL REQUIRED AMPERE-HOURS FOR DISTRIBUTED POWER MODULE						7.399425	A.H.
BATTERY NON-LINEAR DISCHARGE CHARACTERISTIC FACTOR						x 1.2	
TOTAL MINIMUM AMPERE HOURS REQUIRED						8.87931	A.H.
EXISTING BATTERY CAPACITY						24.00	A.H.

FIRE ALARM BATTERY CALCULATION-NEW DISTRIBUTED POWER MODULE 4

EQUIPMENT DESCRIPTION	QUANTITY	SUPERVISORY CURRENT (AMPERES)		ALARM CURRENT (AMPERES)			
		EXISTING	NEW	EACH	SUB-TOTAL	EACH	SUB-TOTAL
DISTRIBUTED POWER MODULE			1	0.075	0.075	0.175	0.175
AUDIBLE/VISUALS	75		10		0	0.121	1.21
HORN EXTERIOR			2		0	0.062	0.124
SUB TOTAL AMPERES			0	0.075	0	1.509	AMPERS
SUB TOTAL AMPERE-HOURS				x 24 HOURS		x 0.084 HOURS	
				1.8	A.H.	0.126756	A.H.
TOTAL REQUIRED AMPERE-HOURS FOR DISTRIBUTED POWER MODULE						1.926756	A.H.
BATTERY NON-LINEAR DISCHARGE CHARACTERISTIC FACTOR						x 1.2	
TOTAL MINIMUM AMPERE HOURS REQUIRED						2.312107	A.H.
PROVIDED BATTERY CAPACITY						7.00	A.H.

FIRE ALARM SYMBOL LIST MATRIX

SYMBOL	DEVICE	MFR & CAT#	REMARKS	CSFM LISTING
DPM	NAC POWER EXTENDER	HOCHIKI FN-642-ULADA		7315-0410:166
SD	SMOKE DETECTOR	HOCHIKI ALG-V	WITH HSB-NSA-6 BASE	7272-0410:149
HD	HEAT DETECTOR	HOCHIKI DFE-190	WITH NS6-100 BASE	7270-0410:119
FRCME	FAST RESPONSE CONTACT MODULE	HOCHIKI DCP-FRCME		7300-0410:150
SOM	SUPERVISED OUTPUT MODULE	HOCHIKI SOM		7300-0410:150
AV	HORN STROBE	WHEELOCK AS24MCW 90dBA		7125-0785:131
H W.P.	HORN	WHEELOCK ASWP 99dBA	EXTERIOR W.P. HORN	7125-0785:131

FIRE ALARM SEQUENCE OF OPERATION

	INITIATION	AREA SMOKE DETECTOR	AREA THERMAL DETECTOR	AC POWER FAILURE
RESPONSE				
ANNUNCIATE AT FIRE CONTROL ROOM				YES (TROUBLE)
ALARM AND TROUBLE		YES	YES	
ANNUNCIATE AT 24 HOUR ATTEND LOCATION				YES (TROUBLE)
ALARM AND TROUBLE		YES	YES	
ALARM		YES	YES	YES
CENTRAL STATION MONITORING		YES	YES	YES

VOLTAGE DROP CALCULATIONS

CIRCUIT	2x	LENGTH x	AMPS x	RESISTANCE x	= VOLTS	VOLTAGE DROP
4N1	2	150	0.667	0.00205	0.410	1.71 %
4N2	2	170	0.667	0.00205	0.465	1.94 %

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DR: DRAFTER
PC: CJM

Project Name & Address:
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BAKERSFIELD CITY SCHOOL DISTRICT
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Sheet Title:
FIRE ALARM SINGLE LINE DIAGRAM CALCULATIONS

Revision:
10/15/09
Revision Description:
ADDENDUM 1

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Job No.: **3832**
Sheet No.: **E-3.2**
Release: **ADDENDUM #1**
CURTIS MCNALLY