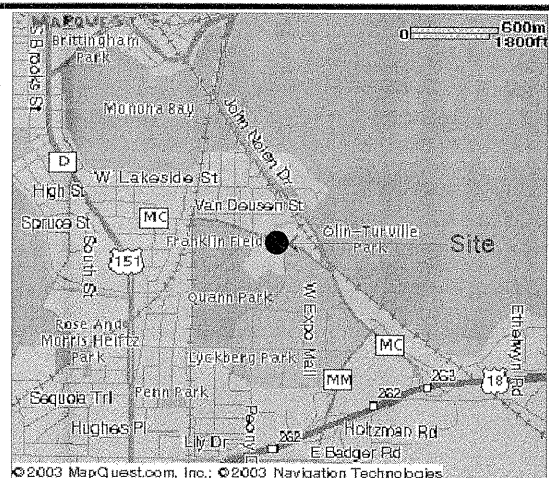


City of Madison Water Utility Administration and Vehicle Storage Buildings

Madison, Wisconsin

BrayAssociates ARCHITECTS, INC.

1468 North High Point Road
Middleton, WI 53562
Phone: (608) 831-5775 (Vehicle Storage Bldg)
Fax: (608) 831-2619
Phone: (920) 459-4200 (Administration Bldg)
Fax: (920) 459-4205
Internet: www.brayarch.com



SITE LOCATION MAP



STATE LOCATION MAP

Post Bid Addendum

Date:

3.16.04

Includes Addendum Numbers 1, 2 and 3 and
Post Bid addendum items

Construction Documents

Date:

10.27.03

Contract Number
W5472

PROJECT NO.
2519

Consultants

Interior Design Bray Associates Architects, Inc.

1468 N. High Point Rd.
Middleton, WI 53562
Phone: (608) 831-5775
FAX: (608) 831-2619

Civil Graef, Anhalt, Schloemer & Associates, Inc.

McAllen Office suites
5126 West Terrace Drive, Suite 111
Madison, WI 53718-8348
Phone: (608) 242-1550
FAX: (608) 242-0787

Landscaping Graef, Anhalt, Schloemer & Associates, Inc.

McAllen Office suites
5126 West Terrace Drive, Suite 111
Madison, WI 53718-8348
Phone: (608) 242-1550
FAX: (608) 242-0787

Structural Graef, Anhalt, Schloemer & Associates, Inc.

McAllen Office suites
5126 West Terrace Drive, Suite 111
Madison, WI 53718-8348
Phone: (608) 242-1550
FAX: (608) 242-0787

Plumbing HEIN Engineering Group

319 W. Beltline Hwy. Suite 111
Madison, WI 53713
Phone: (608) 288-9260
FAX: (608) 288-9282

Heating/Ventilating Air Conditioning HEIN Engineering Group

319 W. Beltline Hwy. Suite 111
Madison, WI 53713
Phone: (608) 288-9260
FAX: (608) 288-9282

Fire Protection HEIN Engineering Group

319 W. Beltline Hwy. Suite 111
Madison, WI 53713
Phone: (608) 288-9260
FAX: (608) 288-9282

Electrical HEIN Engineering Group

319 W. Beltline Hwy. Suite 111
Madison, WI 53713
Phone: (608) 288-9260
FAX: (608) 288-9282

Sheet Index

GENERAL

A-001 COVER SHEET

CIVIL

C1-01 TOPOGRAPHICAL SURVEY
C1-02 GRADING UTILITY AND EROSION CONTROL PLAN
C1-03 PAVEMENT MARKING AND LAYOUT PLAN
C1-04 PROPOSED SANITARY SEWER
C5-01 SITE DETAILS
C5-02 SITE DETAILS
C5-03 SITE DETAILS

LANDSCAPING

L1-01 IRRIGATION PLAN
L1-02 LANDSCAPING PLAN
L5-01 IRRIGATION DETAILS
L5-02 LANDSCAPE DETAILS

ARCHITECTURAL

A-101 CODE COMPLIANCE PLANS
A-102 FIRST FLOOR SLAB PLAN
A-103 FIRST FLOOR PLAN
A-104 SECOND FLOOR SLAB PLAN
A-105 SECOND FLOOR PLAN
A-106 FIRST FLOOR REFLECTED CEILING PLAN
A-107 SECOND FLOOR REFLECTED CEILING PLAN
A-108 ROOF PLAN
A-201 BUILDING ELEVATIONS
A-301 BUILDING SECTIONS AND WALL SECTIONS
A-302 BUILDING SECTIONS AND WALL SECTIONS
A-303 BUILDING SECTIONS AND WALL SECTIONS
A-304 BUILDING SECTIONS AND WALL SECTIONS
A-305 BUILDING SECTIONS AND WALL SECTIONS
A-306 BUILDING SECTIONS AND WALL SECTIONS
A-307 BUILDING SECTIONS AND WALL SECTIONS
A-308 BUILDING SECTIONS AND WALL SECTIONS
A-401 INTERIOR ELEVATIONS AND FLOOR PATTERNS
A-402 ENLARGED PLANS, WALL TYPES, EXTERIOR WATER FEATURE
A100VS VEHICLE STORAGE BUILDING CODE COMPLIANCE
A101VS VEHICLE STORAGE BUILDING FOUNDATION PLAN
A102VS VEHICLE STORAGE BUILDING FLOOR PLAN
A103VS VEHICLE STORAGE BUILDING REFLECTED CEILING PLAN
A104VS VEHICLE STORAGE BUILDING ROOF PLAN
A201VS VEHICLE STORAGE BUILDING EXTERIOR ELEVATIONS
A301VS VEHICLE STORAGE BUILDING BUILDING SECTIONS
A501VS VEHICLE STORAGE BUILDING DETAILED WALL SECTIONS

STRUCTURAL

S0-1 DESIGN SPECIFICATIONS AND GENERAL NOTES
S1-01 FOUNDATION PLAN
S1-02 SECOND FLOOR FRAMING PLAN
S1-03 ROOF FRAMING PLAN
S1-04 VEHICLE STORAGE BUILDING FOUNDATION PLAN
S1-05 VEHICLE STORAGE BUILDING ROOF PLAN
S5-01 CONCRETE DETAILS
S5-11 STEEL DETAILS
S5-12 STEEL DETAILS
S5-21 MASONRY DETAILS
S6-01 GRADE BEAM SCHEDULE
S6-02 GRADE BEAM SCHEDULE

METHANE GAS EXTRACTION

MP2 UNDER FLOOR VENT SYSTEM MAIN BUILDING
MP1-04 VEHICLE STORAGE BUILDING METHANE PIPING PLAN
MP5-01 METHANE PIPING

PLUMBING

P-1 FIRST FLOOR UNDERGROUND PLUMBING PLAN
P-2 FIRST FLOOR PLUMBING PLAN
P-3 SECOND FLOOR PLUMBING PLAN
P-4 VEHICLE STORAGE BUILDING PLUMBING PLAN
P-5 PLUMBING RISER
P-6 PLUMBING RISER
P-7 PLUMBING SCHEDULES
P-8 PLUMBING DETAILS

HEATING/VENTILATING AIR CONDITIONING

H-1 FIRST FLOOR - HVAC DUCTWORK PLAN
H-2 FIRST FLOOR - HVAC PIPING PLAN
H-3 SECOND FLOOR - HVAC DUCTWORK PLAN
H-4 SECOND FLOOR - HVAC PIPING PLAN
H-5 AIR HANDLING AND BOILER ROOMS - HVAC PLANS
H-6 VEHICLE STORAGE BUILDING HVAC PLAN
H-7 HVAC SCHEDULES
H-8 HVAC DETAILS

ELECTRICAL

SU-1 SITE UTILITY PLAN
E-1 FIRST FLOOR ELECTRICAL LIGHTING PLAN
E-2 SECOND FLOOR ELECTRICAL LIGHTING PLAN
E-3 FIRST FLOOR ELECTRICAL POWER/LV PLAN
E-4 SECOND FLOOR ELECTRICAL POWER/LV PLAN
E-5 VEHICLE STORAGE BUILDING ELECTRICAL PLAN
E-6 ELECTRICAL SCHEDULES
E-7 ELECTRICAL SCHEDULES DETAILS
E-8 ELECTRICAL DETAILS AND SCHEMATICS

AS BUILT

DESIGN SPECIFICATIONS	
- DESIGN IS IN ACCORDANCE WITH THE STATE OF WISCONSIN ENROLLED COMMERCIAL BUILDING CODE AS AMENDED TO DATE.	
- MINIMUM 28 DAY CONCRETE CYLINDER STRENGTH SHALL BE:	
FOOTINGS	3000 PSI
GRADE BEAMS/PILE CAPS	4000 PSI
FOUNDATION WALLS	4000 PSI
SLABS ON GRADE	4000 PSI
STRUCTURAL SLAB AND BEAM SYSTEM	4000 PSI
- REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60.	
- CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C 90 TYPE II, NORMAL WEIGHT UNITS.	
- CONCRETE MASONRY BRICK SHALL CONFORM TO ASTM C 82 GRADE SW.	
- MORTAR SHALL CONFORM TO ASTM C 270 TYPE S AT BLOCK AND TYPE N AT BRICK.	
- MASONRY GROUT SHALL CONFORM TO ASTM C 476 MINIMUM COMPRESSIVE STRENGTH f'c = 3000 PSI.	
- MINIMUM COMPRESSIVE STRENGTH OF UNREINFORCED CONCRETE MASONRY CONSTRUCTION SHALL BE f'm = 1500 PSI.	
- MINIMUM COMPRESSIVE STRENGTH OF REINFORCED CONCRETE MASONRY CONSTRUCTION SHALL BE f'm = 1500 PSI.	
- STRUCTURAL STEEL W AND HP-SHAPES SHALL CONFORM TO ASTM A992, GRADE 50.	
- STRUCTURAL STEEL PLATES, ANGLES, CHANNELS, AND OTHER ROLLED MEMBERS SHALL CONFORM TO ASTM A36 OR A572 GRADE 50.	
- RECTANGULAR OR SQUARE HSS MEMBERS SHALL CONFORM TO ASTM A500, GRADE B.	
- ROUND HSS MEMBERS SHALL CONFORM TO ASTM A500, GRADE B.	
- STEEL PIPE SHALL CONFORM TO A53 GRADE B.	
- STATED BEARING CAPACITY FOR SPREAD FOOTINGS IS 1000 PSF, BASED UPON SOILS REPORT DATED AUGUST 15, 2003, AS PREPARED BY CGC, INC.	
- PILE CAPACITY IS 85 TONS PER PILE USING HP 10X57, BASED UPON SOILS REPORT DATED OCTOBER 13, 2003, AS PREPARED BY CGC, INC.	
- DESIGN LIVE LOADS:	
GRAVITY	
SNOW	
FLAT ROOF SNOW, (P _f) = 25 PSF	
P _g = 30 PSF	
EXPOSURE FACTOR, C _e = 1.0	
IMPORTANCE FACTOR, I = 1.0	
THERMAL FACTOR, C _t = 1.1	
UNBALANCED LOAD:	
UPPER ROOF, 45 PSF LEeward AND 10 PSF WINDWARD	
LOWER ROOF, 55 PSF LEeward AND 10 PSF WINDWARD	
DRIFT AT LOW ROOF	
65 PSF TO 0 PSF AT 15'-0" FROM WALL. (TO BE SUPERIMPOSED ON FLAT ROOF OR UNBALANCED SNOW LOAD).	
FLOORS	100 PSF
STACK ROOMS	150 PSF
STAIRS	100 PSF
MECHANICAL	125 PSF
TRUSS WALKWAY	80 PSF
WIND PRESSURES	
MAIN WINDFORCE-RESISTING SYSTEM	
LATERAL 20 PSF	
V = 90 MPH	
IMPORTANCE FACTOR, I = 1.0	
EXPOSURE B	
UPLIFT ON CANOPIES	
35 PSF	
COMPONENTS AND CLADDING	

AREA	EFFECTIVE WIND AREA, [SQ FT]
	1 20 30 100 200 >500
1	-20.2 PSF -20.2 PSF -18.9 PSF -17.7 PSF -16.4 PSF -15.1 PSF -13.8 PSF
2	-31.7 PSF -31.7 PSF -29.9 PSF -28.2 PSF -26.4 PSF -24.6 PSF -22.8 PSF
3	-43.3 PSF -43.3 PSF -41.0 PSF -38.6 PSF -36.3 PSF -34.0 PSF -31.7 PSF
4 (+)	13.8 PSF 13.8 PSF 13.8 PSF 12.9 PSF 11.9 PSF 10.9 PSF 10.0 PSF
4 (-)	-13.8 PSF -13.8 PSF -13.8 PSF -13.2 PSF -12.5 PSF -11.9 PSF -11.3 PSF
5 (+)	13.8 PSF 13.8 PSF 13.8 PSF 12.9 PSF 11.9 PSF 10.9 PSF 10.0 PSF
5 (-)	-25.3 PSF -25.3 PSF -25.3 PSF -22.8 PSF -20.2 PSF -17.7 PSF -15.1 PSF
*SEE IBC FIGURE 1609.6(2) FOR DIAGRAMS, a = 10 FT.	

SEISMIC DESIGN CRITERIA	
SEISMIC USE GROUP 1	
SPECTRAL RESPONSE COEFFICIENTS	
S _{0S} = 0.188 6	
SITE CLASS E	
S _{D1} = 0.105 G	
SEISMIC FORCE RESISTING SYSTEM: CMU SHEAR WALLS	
DESIGN BASE SHEAR:	
ANALYSIS PROCEDURE: STATIC	
- RESISTANCE TO LATERAL LOADS ON STRUCTURE IS PROVIDED BY MASONRY SHEAR WALLS, FLOOR DIAPHRAGMS, AND ROOF DIAPHRAGMS. CONTRACTOR SHALL PROVIDE SUFFICIENT TEMPORARY BRACING UNTIL ALL LATERAL SUPPORT SYSTEMS ARE IN PLACE AND FUNCTIONAL.	
- ALL STRUCTURAL FRAMING AND CONNECTIONS HAVE BEEN DESIGNED FOR THE FINAL COMPLETED CONDITION AND HAVE NOT BEEN INVESTIGATED FOR POTENTIAL LOADINGS ENCOUNTERED DURING STEEL ERECTION AND CONSTRUCTION. ANY INVESTIGATION OF THE STRUCTURAL FRAMING AND CONNECTIONS FOR ADEQUACY DURING THE STEEL ERECTION AND CONSTRUCTION PROCESS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.	
- CONTRACTOR IS RESPONSIBLE FOR ALL MEANS AND METHODS OF CONSTRUCTION AND ALL JOB SITE SAFETY.	
- PROVISIONS ARE INCLUDED FOR THE FOLLOWING FUTURE ADDITIONS: 1-STORY 40' ADDITION EAST OF 12 LINE. 2-STORY ADDITION SOUTH OF A LINE BETWEEN LINES 3 AND 7 (60' AT FIRST FLOOR AND 40' AT SECOND FLOOR). NO VERTICAL EXPANSION.	

GENERAL NOTES	
EARTHWORK	
- FOOTINGS SHALL BE CAST ON UNDISTURBED SUBSOIL. IF DESIGN CAPACITY IS NOT ENCOUNTERED AT THE ELEVATIONS SHOWN, FOOTINGS MUST BE LOWERED. CONSULT ARCHITECT BEFORE PROCEEDING.	
- NO HOLES, TRENCHES, OR DISTURBANCES OF THE SOIL SHALL BE ALLOWED WITHIN THE VOLUME DESCRIBED BY 45 DEGREE CONES TO THE BOTTOM EDGE OF THE FOOTING. IF SUCH ARE REQUIRED, FOOTINGS MUST BE LOWERED.	
- BACKFILL EVENLY ON EACH SIDE OF FOUNDATION WALLS AND RETAINING WALLS.	
- DO NOT BACKFILL AGAINST BASEMENT WALLS UNTIL FLOOR SYSTEM IS IN PLACE AND FASTENED OR UNTIL WALLS ARE ADEQUATELY BRACED. BRACING SHALL BE DESIGNED BY THE CONTRACTOR.	
- TOPSOIL OR FILL BELOW SLABS ON GRADE SHALL BE REMOVED. SUBGRADE UNDER SLABS SHALL BE BANKRUN GRAVEL COMPACTED TO 6-INCH LAYERS.	
- BACKFILL AGAINST INTERIOR FOUNDATION WALLS SHALL BE BANKRUN GRAVEL COMPACTED TO MAXIMUM 6-INCH LAYERS.	
- BACKFILL AGAINST EXTERIOR FOUNDATION WALLS SHALL BE BANKRUN GRAVEL COMPACTED TO MAXIMUM 6-INCH LAYERS.	
- PROVIDE MINIMUM 24 INCHES OF WASHED STONE OVER ALL DRAIN TILES AND 4 INCHES BELOW.	
CONCRETE	
- FORMWORK SHALL BE DESIGNED IN ACCORDANCE WITH THE ACI MANUAL OF STANDARD PRACTICE.	
- REINFORCING STEEL SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH THE ACI MANUAL OF STANDARD PRACTICE UNLESS OTHERWISE NOTED.	
- LAP ALL WALL BARS 30 DIAMETERS UNLESS OTHERWISE DETAILED. LAP WELDED WIRE MESH 6 INCHES (6").	
- LAP TOP AND BOTTOM GRADE BEAM BARS WITH CLASS B LAPS UNLESS OTHERWISE DETAILED. LAP WELDED WIRE MESH 6 INCHES (6").	
- PROVIDE COLUMN AND WALL DOWELS OF THE SAME SIZE AND NUMBER AS THE RESPECTIVE COLUMN AND WALL REINFORCING UNLESS OTHERWISE DETAILED.	
- PROVIDE TWO (2) #4 BARS AS STIRRUP CARRY BARS WHERE NO TOP STEEL IS AVAILABLE TO HOLD STIRRUPS.	
- WHEREVER AN APPROVED PIPE OR CONDUIT EXTENDS THROUGH A BEAM, PROVIDE ONE ADDITIONAL STIRRUP ON EACH SIDE OF THE OPENING.	
- CONCRETE PROTECTION FOR REINFORCING BARS SHALL BE AS FOLLOWS:	
FOOTINGS & PILE CAPS 3"	
GRADE BEAMS 2"	
SLABS & WALLS (EXPOSED TO GROUND OR WEATHER) 1-1/2"	
WATER FEATURE 3" UNLESS NOTED OTHERWISE	
- SLABS ON GRADE SHALL BE CAST ALLOWING A SUFFICIENT NUMBER OF JOINTS TO ADEQUATELY CONTROL SHRINKAGE CRACKING. SAWCUTTING SHALL BE DONE AS SOON AS SAWCUT WILL NOT LAVEL CONCRETE OR WITHIN 16 HOURS MAXIMUM OF INITIAL POURING OPERATION. MAXIMUM SIZE OF PANELS 16 FT X 16 FT. GENERALLY, JOINTS SHALL OCCUR ON COLUMN CENTERLINES.	
- INTERIOR SLABS ON GRADE SHALL BE AS NOTED ON THE PLANS AND REINFORCED WITH 1-1/2 LBS PER CUBIC YARD POLYPROPYLENE FIBER.	
- EXTERIOR SLABS ON GRADE SHALL BE 6-INCH THICK AND REINFORCED WITH 1-1/2 LBS PER CUBIC YARD POLYPROPYLENE FIBER.	
- EXTERIOR WALKS SHALL BE PER THE SITE CIVIL DRAWINGS.	
- ALLOW AT LEAST 24 HOURS BEFORE POURING ADJACENT WALL SECTIONS BETWEEN CONSTRUCTION JOINTS. MAXIMUM LENGTH OF POUR TO BE 50 FEET, UNLESS CRACK INDUCERS ARE USED AS DETAILED ON THE DRAWINGS.	
- CONTRACTOR SHALL NOTIFY THE ARCHITECT AT LEAST 24 HOURS PRIOR TO PLACING CONCRETE.	
- CONSTRUCTION JOINTS IN BEAMS, JOISTS OR SLABS TO BE LOCATED BETWEEN THE 1/4 POINT AND CENTERLINE OF SPAN AND SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.	
- DO NOT PLACE OR CUT HOLES IN CONCRETE SLABS, BEAMS, COLUMNS, OR WALLS WITHOUT PRIOR APPROVAL OF THE ENGINEER.	
- EXTERIOR EXPOSED CONCRETE SHALL BE AIR-ENTRAINED. MINIMUM AIR CONTENT SHALL BE 6 PERCENT.	
- CAMBER CONCRETE MEMBERS FOR DEAD LOAD DEFLECTION BY ADJUSTING FORMS.	
- CONTRACTOR SHALL INCLUDE ADDITIONAL CONCRETE FOR STRUCTURAL SLABS TO ACCOUNT FOR DEFLECTION IN BEAMS, GIRDERS, DECK AND/OR FORM WORK.	
- PIPES AND CONDUITS EMBEDDED IN OR PASSING THROUGH STRUCTURAL MEMBERS MUST BE APPROVED BY THE STRUCTURAL ENGINEER. PIPE AND CONDUITS EMBEDDED IN CONCRETE SHALL NOT BE LARGER IN OUTSIDE DIAMETER AT ITS WIDEST POINT OR FITTING THAN 2 INCHES NOR 1/3 OF THE THICKNESS OF THE SLAB, BEAM, OR WALL.	
- ELECTRICAL CONDUIT OR PIPES EMBEDDED IN OR PASSING THROUGH FLOORS, WALLS, OR BEAMER SHALL BE LOCATED AND PLACED SO THAT: 1. THEY ARE NOT CLOSER THAN THREE DIAMETERS ON CENTER. 2. THE CONCRETE COVER IS NOT LESS THAN 2" 3. THEY RUN BETWEEN REINFORCING AND DO NOT DISPLACE IT IN ANY MANNER.	

PRECAST CONCRETE	
- PRECAST CONCRETE MEMBERS SHALL BE DESIGNED IN ACCORDANCE WITH THE ACI BUILDING CODE AS AMENDED TO DATE.	
- PRECAST CONCRETE SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE ACI MANUALS AND THE AFOREMENTIONED CONCRETE PROVISIONS.	
- PRECAST CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER DESIGN AND REINFORCING OF PRECAST CONCRETE FOR HANDLING AND ERECTION STRESSES.	
- PRECAST MEMBERS SHALL BE ATTACHED AND SUPPORTED BY THE STRUCTURE AS INDICATED ON THE DRAWINGS. (DEVIATION FROM THESE LOCATIONS WILL CONSTITUTE MEANS FOR REJECTION OF MEMBERS.)	
- PRECAST MEMBERS SHALL BE DESIGNED AND REINFORCED FOR SELF-WEIGHT AND ALL SUPERIMPOSED LOADS SHOWN ON THE DRAWINGS.	
- PRECAST MEMBERS SHALL BE CAPABLE OF SAFELY SUPPORTING ANY CONCENTRATED LOADS INDICATED BY THE STRUCTURAL, MECHANICAL, AND ARCHITECTURAL DRAWINGS.	
- PRECAST CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS (HANGERS, CLIPS, PLATES, HEADERS, ANCHORAGES, ETC.) WHICH MUST BE PRECAST INTO THE CONCRETE UNLESS OTHERWISE NOTED OR REQUIRED FOR CONNECTION OF PRECAST TO STRUCTURE.	
- CONTRACTOR SHALL COORDINATE LOCATIONS OF ALL HOLES OR OPENINGS WITH RESPECTIVE TRADES BEFORE FABRICATION. ANY DEVIATION FROM THESE LOCATIONS OR ADDITIONAL OPENINGS MUST BE APPROVED BY THE FABRICATOR.	
- MAXIMUM ALLOWABLE CAMBER 1-1/2 INCH.	
- FIRE RATING OF PRECAST PLANK SHALL BE AS NOTED ON THE ARCHITECTURAL DRAWINGS.	
- GROUT IN PRECAST MEMBER KEYWAYS SHALL BE NON-SHRINK GROUT f'c = 4000 PSI.	

CONCRETE MASONRY	
- PRODUCTION, AND CONSTRUCTION OF CONCRETE MASONRY SHALL BE IN ACCORDANCE WITH THE BUILDING CODE REQUIREMENTS FOR CONCRETE MASONRY STRUCTURE, ACI 530.1, LATEST EDITION, AND THE NCM TECHNICAL GUIDE.	
- COLD WEATHER CONSTRUCTION SHALL BE IN COMPLIANCE WITH NCM "RECOMMENDED PRACTICES AND GUIDE SPECIFICATIONS FOR COLD WEATHER MASONRY AND CONSTRUCTION."	
- INSPECTED WORKMANSHIP STRESS VALUES WERE USED IN DESIGN. APPROPRIATE INSPECTION SHALL BE REQUIRED.	
- STRENGTH OF CONCRETE MASONRY SHOWN IS BASED ON NET AREA OF UNIT.	
- ALL MASONRY SHALL BE NORMAL WEIGHT UNITS IN ACCORDANCE WITH ACI.	
- CALCIUM CHLORIDE OR ADMIXTURES CONTAINING CALCIUM CHLORIDE SHALL NOT BE USED.	
- MASONRY WALLS SHALL BE ADEQUATELY BRACED TO RESIST WIND FORCES UNTIL PERMANENT DESIGN SUPPORTS ARE IN PLACE AND FUNCTIONAL. THE CONTRACTOR SHALL DESIGN BRACING.	
- PROVIDE DOWELS INTO FOUNDATION THE SAME SIZE AND NUMBER AS WALL REINFORCING.	
- LAP REINFORCING BARS 48 DIAMETERS.	
- CONCRETE MASONRY WALL SHALL BE REINFORCED AT EVERY OTHER BED JOINT WITH 9 GAGE TRUSS TYPE JOINT REINFORCEMENT.	
- VERTICAL BARS SHOWN ON THE DESIGN DRAWINGS SHALL BE PLACED IN CONTINUOUS UNOBSTRUCTED CELL OF NOT LESS THAN 3" X 4".	
- ALL BOND BEAM AND PLASTER SHALL BE REINFORCED AS SHOWN ON THE DESIGN DRAWINGS AND FILLED WITH GROUT.	
- ALL DOOR AND WINDOW JAMBS SHALL BE GROUTED SOLID 8-INCHES WIDE UNLESS SHOWN OTHERWISE. PROVIDE 2 FULL HEIGHT BARS, SIZE TO MATCH WALL REINFORCING, ADJACENT TO GROUTED CORE.	
- WHERE NOT SHOWN OTHERWISE, MINIMUM SOLID GROUTED MASONRY BELOW BEAM REACTIONS SHALL BE 16 INCHES DEEP BY 32 INCHES LONG.	
- WHERE NOT SHOWN OTHERWISE MINIMUM SOLID GROUTED MASONRY BELOW LINTEL REACTIONS SHALL BE 16 INCHES DEEP BY 16 INCHES LONG.	
- PROVIDE VERTICAL CONTROL JOINTS AT INTERSECTING WALLS WHERE CMU IS SUPPORTED AT BOTH FOUNDATION AND SECOND FLOOR FRAMING.	

STRUCTURAL STEEL	
- STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE AISC "MANUAL OF STEEL CONSTRUCTION," ALLOWABLE STRESS DESIGN, NINTH EDITION OR THE AISC "MANUAL OF STEEL CONSTRUCTION," LOAD AND RESISTANCE FACTOR DESIGN, THIRD EDITION AND THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES," MARCH 7, 2000 EDITION.	
- ALL STRUCTURAL AND MISCELLANEOUS STEEL WHICH SHALL REMAIN EXPOSED TO VIEW SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE AISC "SPECIFICATION FOR ARCHITECTURALLY EXPOSED STRUCTURAL STEEL" WITHOUT GAPS OR OPEN JOINTS.	
- STEEL JOIST FABRICATION AND ERECTION SHALL CONFORM TO THE STANDARD SPECIFICATIONS OF THE STEEL JOIST INSTITUTE. JOISTS SHALL BE MANUFACTURED WITH HOT-ROLLED TOP AND BOTTOM CHORD MEMBERS.	
- STEEL DECK FABRICATION AND ERECTION SHALL CONFORM TO THE STANDARD SPECIFICATIONS OF THE STEEL DECK INSTITUTE.	
- ALL WELDING SHALL COMPLY WITH AWS D11.1 USING E70XX ELECTRODES. ALL WELDING TO BE DONE BY AWS PREQUALIFIED WELDERS, CERTIFIED FOR WELDS MADE. PROVIDE CONTINUOUS MINIMUM SIZED WELDS PER AISC REQUIREMENTS, UNLESS NOTED OTHERWISE.	
- THE MINIMUM SIZE OF FILLET WELDS SHALL BE AS SPECIFIED IN TABLE J2.4 IN THE AISC MANUAL OF STEEL CONSTRUCTION.	
- MINIMUM STRENGTH OF WELDED CONNECTIONS: UNLESS NOTED OTHERWISE ON THE DRAWINGS, ALL SHOP AND FIELD WELDS SHALL DEVELOP THE FULL TENSILE STRENGTH OF THE MEMBER OF ELEMENT JOINED. ALL MEMBERS WITH MOMENT CONNECTIONS, NOTED ON THE DRAWINGS, SHALL BE WELDED TO DEVELOP THE FULL FLEXURAL CAPACITY OF THE MEMBER, UNLESS NOTED OTHERWISE ON THE DRAWINGS.	
- BOLTED CONNECTIONS SHALL BE MADE WITH ASTM A-325 HIGH STRENGTH BOLTS (MIN 3/4-INCH DIAMETER), NON-COMPOSITE STEEL CONNECTIONS SHALL SUPPORT, AS A MINIMUM, ONE-HALF THE TOTAL UNIFORM LOAD CAPACITY SHOWN IN THE AISC TABLES OF UNIFORM LOAD CONSTANTS FOR THE GIVEN BEAM, SPAN, AND STEEL SPECIFIED, UNLESS OTHERWISE DETAILED. BEAM-TO-BEAM, BEAM-TO-BEAM-TO-COLUMN FRAMING CONNECTIONS SHALL BE MADE WITH DOUBLE ANGLES UNLESS OTHERWISE DETAILED.	
- ALL STRUTS, HANGERS, AND BRACES SHALL HAVE CONNECTIONS DESIGNED TO DEVELOP THE FULL ALLOWABLE TENSILE STRENGTH OF THE MEMBER UNLESS THE DESIGN FORCE IS INDICATED ON THE DRAWINGS, IN WHICH CASE THE CONNECTIONS SHALL BE DESIGNED FOR THE FORCE INDICATED.	
- COLUMN BASE PLATES SHALL HAVE OVERSIZED HOLES WITH PLATE WASHERS (MIN 3/8-INCH THICK) PROVIDED WITH ANCHOR RODS.	
- GROUT UNDER BASE PLATES IN ACCORDANCE WITH THE AISC-CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES.	
- WHERE BEAMS SUPPORT JOISTS FROM ONLY ONE SIDE, JOIST SEAT SHALL EXTEND ONE INCH 1" BEYOND BEAM CENTERLINE.	
- JOIST SHALL BE DESIGNED FOR UPLIFT DUE TO WIND PRESSURES FOR COMPONENTS AND CLADDING LESS TO PSF. JOIST SUPPLIER SHALL PROVIDE ALL ADDITIONAL BRIDGING AND BRACING AS REQUIRED BY THE STEEL JOIST INSTITUTE.	
- ROOF DECK SHALL BE WIDE RIB PROFILE, 1-1/2-INCH DEEP AND 20 GAGE THICKNESS UNLESS OTHERWISE SHOWN ON THE DRAWINGS.	
- STEEL ROOF DECK SHALL BE SECURELY FASTENED TO ALL STRUCTURAL SUPPORTS BY FASTENING THE 1ST, 2ND, 3RD, 4TH, 5TH, 6TH AND 7TH RIBS OF 36-INCH WIDE DECK. FASTENERS SHALL BE #12 TEK SCREWS. IN NO CASE SHALL FASTENERS BE SPACED GREATER THAN 12 INCHES ON CENTER.	
- ROOF DECK SHALL BE SECURELY FASTENED TO ALL PERIMETER STRUCTURAL SUPPORTS IN EVERY RIB. IN NO CASE SHALL FASTENERS BE SPACED GREATER THAN 6 INCHES ON CENTER. FASTENERS SHALL BE #12 TEK SCREWS.	
- ROOF DECK SIDELAPS FASTENERS SHALL BE SPACED 3 PER SPAN. MAXIMUM FASTENER SPACING SHALL NOT EXCEED 16" O.C. FASTENERS SHALL BE #10 TEK SCREWS.	
- FLOOR DECK SHALL BE WIDE RIB PROFILE, 3-INCH DEEP AND 20 GAGE THICKNESS UNLESS OTHERWISE SHOWN ON THE DRAWINGS.	
- FLOOR DECK SHALL BE SECURELY FASTENED TO ALL STRUCTURAL SUPPORTS BY FASTENING THE 1ST, 3RD, 5TH AND 7TH RIBS OF 36-INCH WIDE DECK. FASTENERS SHALL BE 5/8-INCH DIAMETER PUDDLE WELDS. IN NO CASE SHALL WELDS BE SPACED GREATER THAN 12 INCHES ON CENTER.	
- FLOOR DECK SIDELAPS FASTENERS SHALL BE SPACED 1 PER SPAN. FASTENERS SHALL BE 5/8-INCH DIAMETER PUDDLE WELDS.	
- FLOOR AND ROOF DECK END LAPS SHALL BE 2 INCH MINIMUM AND SHALL OCCUR AT SUPPORTS. LOCATE AT VALLEYS AND RIDGES.	
- WHERE CONTINUOUS DIAPHRAGM CHORD ANGLES ARE INDICATED, PROVIDE A FULL PENETRATION WELD AT THE SPLICE LOCATIONS.	
- CLEAN, PREPARE, AND SHOP PRIME EXTERIOR EXPOSED STRUCTURAL STEEL MEMBERS IN ACCORDANCE WITH S.S.P.C. STANDARDS SP-1 AND SP-6.	
- CLEAN, PREPARE, AND SHOP PRIME INTERIOR EXPOSED STRUCTURAL STEEL MEMBERS IN ACCORDANCE WITH S.S.P.C. STANDARDS SP-1 AND SP-3.	
- ALL STRUCTURAL STEEL PERMANENTLY EXPOSED TO THE WEATHER, INCLUDING MASONRY SHELF ANGLES, SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123, UNLESS OTHERWISE NOTED.	
- REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL MISCELLANEOUS STEEL.	
COLD-FORMED STEEL FRAMING	
- DESIGN, FABRICATION, AND ERECTION OF COLD-FORMED STEEL FRAMING SHALL BE IN ACCORDANCE WITH THE AISI DESIGN MANUAL AS AMENDED TO DATE. ALL FRAMING MEMBERS SHOWN ON PLANS ARE SCHEMATIC AND ARE SHOWN FOR INTENT ONLY.	
- ALL STEEL STUD FRAMING AND CONNECTIONS TO BE DESIGNED BY SUPPLIER. THE DESIGN CALCULATIONS SHALL BE SEALED BY A PROFESSIONAL STRUCTURAL ENGINEER WHO HAS EXPERIENCE IN THIS WORK AND IS REGISTERED IN THE STATE OF NEW MEXICO.	
- LIVE LOAD DEFLECTION CRITERIA FOR COMPONENTS SHALL BE AS FOLLOWS:	
EXTERIOR WALL STUDS L/240 (AND NOT TO EXCEED 1 INCH) (AND NOT TO EXCEED 1 1/4-INCH AT WINDOW OPENINGS) (L/720 FOR BRICK OR STONE VENEER) (L/360 FOR WALL STUDS W/ATTACHED DRYWALL) (L/180 WHEN NO CEILING IS SUPPORTED)	
ROOF PURLINS L/240	
- MINIMUM STUDS AND TRACK AT EXTERIOR OF BUILDING SHALL BE 6" X 20 GAUGE (0.0347 INCH).	
- LOAD BEARING STUDS VERTICALLY SUPPORTING MASONRY SHALL BE DESIGNED TO CARRY ALL GRAVITY LOADS AND LATERAL FORCES INCLUDING BUT NOT LIMITED TO DEAD LOADS, LIVE LOADS, WIND LOADS AND AXIAL LOAD ECCENTRICITY.	
- LOAD BEARING STUDS NOT VERTICALLY SUPPORTING MASONRY SHALL BE DESIGNED TO CARRY ALL GRAVITY LOADS AND LATERAL FORCES INCLUDING BUT NOT LIMITED TO DEAD LOADS, LIVE LOADS, WIND LOADS AND AXIAL LOAD ECCENTRICITY.	
- NON-LOAD BEARING STUDS NOT VERTICALLY SUPPORTING MASONRY SHALL TRANSFER LATERAL LOADS TO STRUCTURE BY MEANS OF SLIDE CLIPS, DEFLECTION TRACKS OR OTHER MEANS TO ALLOW FOR VERTICAL AND HORIZONTAL MOVEMENT OF PRIMARY STRUCTURAL MEMBERS.	
- SPLICES IN AXIALLY LOADED STUDS ARE NOT PERMITTED.	
- STUDS, TRACK AND ACCESSORIES SHALL BE GALVANIZED WITH A MINIMUM G-90 COATING PER ASTM A-653.	
- STUDS SHALL BE PLUMBED, ALIGNED AND SECURELY ATTACHED TO FLANGES OR WEBS OF LOWER TRACK. STUDS SHALL BE SEALED TIGHT TO TRACK WEBS PRIOR TO ATTACHMENT.	
- JOINTS SHALL BE LOCATED DIRECTLY OVER BEARING STUDS OR A LOAD DISTRIBUTION MEMBER SHALL BE PROVIDED AT THE TOP OF THE WALL.	
- REFER TO ARCHITECTURAL WALL SECTIONS AND DETAILS FOR ADDITIONAL INFORMATION.	
- ALL MEMBERS 0.0566 INCH MINIMUM THICKNESS OR THICKER (16 GAGE) SHALL BE OF MINIMUM 50 KSI STEEL. ALL MEMBERS OF 0.0451 INCH MINIMUM THICKNESS OR THINNER (18 GAGE OR HIGHER) AND ALL ACCESSORIES SHALL BE OF MINIMUM 33 KSI STEEL.	
- STEEL STUD ERECTOR SHALL CONSTRUCT ALL LIGHTGAGE FRAMING IN A MANNER THAT PROTECTS LATERAL STABILITY OF THE STRUCTURE.	
- ALL WELDS PERFORMED ON GALVANIZED LIGHTGAGE COMPONENTS SHALL BE COATED WITH ZINC RICH PAINT FOR CORROSION PROTECTION IN ACCORDANCE WITH ASTM A780. CONTRACTOR SHALL NOTIFY THE ARCHITECT TO ALLOW ADEQUATE TIME FOR WELDS TO BE REVIEWED BEFORE SYSTEMS ARE ENCLOSED.	
- STEEL STUD WALLS SHALL BE DESIGNED AND CONSTRUCTED TO PROVIDE REQUIRED CAPACITIES TO CARRY CONSTRUCTION LOADS. CONTRACTOR SHALL PROVIDE NECESSARY BRIDGING OR ATTACHMENT TO WALL SHEATHING BEFORE STRUCTURAL COMPONENTS ARE LOADED.	

WOOD TRUSSES

- WOOD PLATE CONNECTED TRUSSES SHALL BE DESIGNED, MANUFACTURED, AND ERECTED IN ACCORDANCE WITH THE STATE OF WISCONSIN BUILDING CODE AND THE TRUSS PLATE INSTITUTE.
- SHOP DRAWINGS AND OTHER ITEMS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION. ALL SHOP DRAWINGS SHALL BE REVIEWED AND STAMPED BY THE GENERAL CONTRACTOR BEFORE SUBMITTAL TO THE ENGINEER. THE ENGINEER'S REVIEW WILL BE BASED ON THE CONTRACT DOCUMENTS. THE ENGINEER'S REVIEW DOES NOT RELIEVE THE CONTRACTOR OF THE SOLE RESPONSIBILITY TO REVIEW, CHECK AND COORDINATE THE SHOP DRAWINGS PRIOR TO SUBMISSION. THE CONTRACTOR REMAINS SOLELY RESPONSIBLE FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF SHOP DRAWINGS AS THEY PERTAIN TO MEMBER SIZES, DETAILS, DIMENSIONS, ETC.
- TRUSS MANUFACTURER SHALL PROVIDE ALL TRUSS-TO-TRUSS CONNECTIONS.
- ALL ROOF TRUSSES SHALL BE SECURED TO THE TOP PLATES WITH SIMPSON TYPE UPLIFT CONNECTORS. THE TRUSS SUPPLIER SHALL DESIGN CONNECTORS.
- CONTRACTOR SHALL PROVIDE AND ERECT ALL BRACING, BRIDGING, AND BLOCKING REQUIRED BY THE MANUFACTURER AND THE TRUSS PLATE INSTITUTE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY BRACING OF TRUSSES UNTIL PERMANENT BRACING IS IN PLACE.
- DOUBLE 2 X 4 CONTINUOUS BLOCKING SHALL BE PROVIDED AT THE PEAK OF THE RIDGE.
- WOOD TRUSSES SHALL BE DESIGNED BY THE MANUFACTURER TO SUPPORT THE FOLLOWING LOADS:
 - A. GRAVITY LOADING CASE
 - TOP CHORD LOAD
 - LIVE LOAD - SEE ABOVE LIVE LOADS
 - DEAD LOAD - 10 PSF (ON THE SURFACE AREA)
 - ADDITIONAL 5 PSF AT TRUSSES SUPPORTING INFL. FRAMING AT EXTENSIONS OF ADJOINING ROOFS
 - BOTTOM CHORD LOAD
 - DEAD LOAD - 10 PSF
 - B. WIND LOAD
 - JOIST SHALL BE DESIGNED FOR UPLIFT DUE TO WIND PRESSURES FOR COMPONENTS AND CLADDING LESS TO PSF.
- THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY AND PERMANENT BRACING AS REQUIRED FOR SAFE ERECTION AND PERFORMANCE OF THE TRUSSES, THE GUIDELINES SET FORTH BY THE TRUSS PLATE INSTITUTE PUBLICATION "HIB-91 COMMENTARY AND RECOMMENDATIONS FOR HANDLING, INSTALLING AND BRACING METAL PLATE CONNECTED WOOD TRUSSES" SHALL BE A MINIMUM REQUIREMENT.
- TRUSS MEMBERS AND COMPONENTS SHALL NOT BE CUT, NOTCHED, DRILLED NOR OTHERWISE ALTERED IN ANY WAY WITHOUT THE WRITTEN APPROVAL OF THE TRUSS MANUFACTURER.

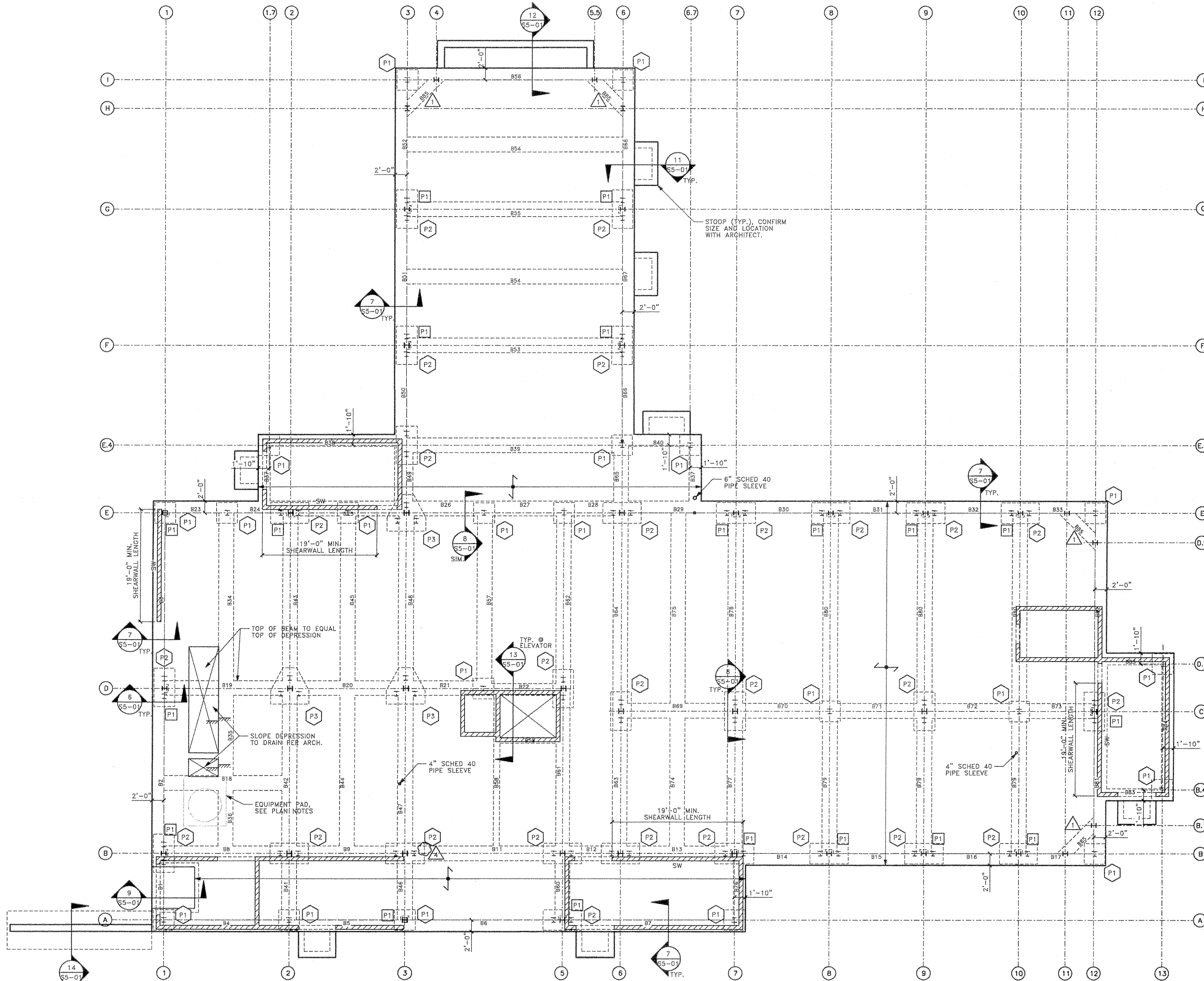
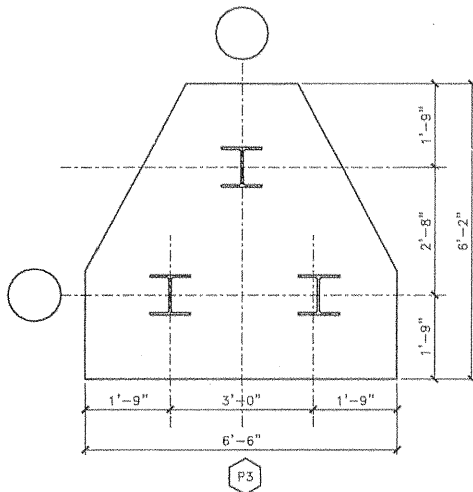
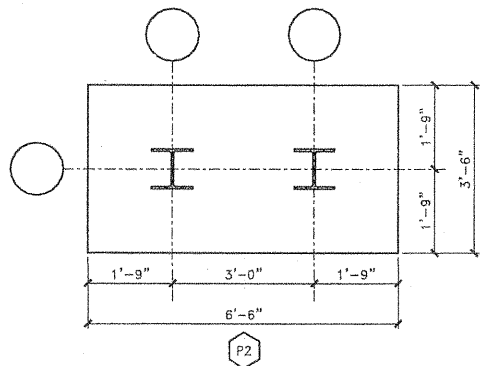
WOOD FRAMING

- ERECTION OF ALL WOOD FRAMING SHALL CONFORM TO THE NATIONAL FOREST PRODUCTS ASSOCIATION DESIGN SPECIFICATIONS, AMERICAN PLYWOOD ASSOCIATION AND THE STATE OF WISCONSIN BUILDING CODE, LATEST EDITION.
- THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE DRAWINGS OF ALL OTHER DISCIPLINES AND THE SPECIFICATIONS. THE CONTRACTOR SHALL VERIFY THE COMPLIANCE OF ALL MATERIALS AND METHODS OF CONSTRUCTION WITH THE REQUIREMENTS OF THE SPECIFICATIONS. THE CONTRACTOR SHALL VERIFY THE CORRECTNESS OF THE DIMENSIONS, SPACING, CHANGES, HANGERS, INSERTS, ANCHORS, HOLES AND OTHER ITEMS TO BE PLACED OR SET IN THE STRUCTURAL WORK.
- DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONFLICTS OR DISCREPANCIES SPECIFICALLY SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO APPROVAL BY THE ENGINEER.
- ALL STRUCTURAL SYSTEMS RELATING TO WOOD FRAMING WHICH ARE TO BE COMPOSED OF COMPONENTS TO BE FIELD ERECTED SHALL BE SUPERVISED BY THE SUPERINTENDING ENGINEER OR QUALIFIED PERSONNEL. HANDLING, STORAGE AND ERECTION IN ACCORDANCE WITH THE SUPPLIER'S INSTRUCTIONS AND REQUIREMENTS.
- LOADING APPLIED TO THE STRUCTURE DURING THE PROCESS OF CONSTRUCTION SHALL NOT EXCEED THE SAFE LOAD-CARRYING CAPACITY OF THE STRUCTURAL MEMBERS. THE LIVE LOADING USED IN THE DESIGN OF THIS STRUCTURE ARE INDICATED IN THE "DESIGN SPECIFICATIONS". DO NOT APPLY ANY CONSTRUCTION LOADS UNTIL STRUCTURAL FRAMING IS PROPERLY CONNECTED TOGETHER AND UNTIL ALL TEMPORARY BRACING IS IN PLACE.
- ROOF DECK SHALL BE 5/8 INCH APA RATED SHEATHING, EXPOSURE 1. SEE SHEATHING LAYOUT AND FASTENING SCHEDULE.
- FLOOR DECK SHALL BE 3/4 INCH APA RATED SHEATHING, EXPOSURE 1. SEE SHEATHING LAYOUT AND FASTENING SCHEDULE.
- WALL AND SOFFIT SHEATHING SHALL BE 1/2-INCH APA RATED SHEATHING, EXPOSURE 2.
- NAILING OF ROOF SHEATHING (AND SOFFIT SHEATHING) SHALL BE:
 - 10 d at 4" ON CENTER AT PANEL EDGES
 - 10 d at 6" ON CENTER AT INTERMEDIATE FRAMING MEMBERS
- INSTALL ALL SHEATHING WITH THE LONG DIMENSIONS OF THE PANEL ACROSS THE JOISTS. SHEATHING WITH PANEL CONTINUOUS OVER TWO OR MORE SPANS, STAGGER PANEL END JOINTS, BLOCK PANEL EDGES WITH 2X FRAMING, ALLOW 1/8" SPACING AT PANEL ENDS AND EDGES UNLESS OTHERWISE RECOMMENDED BY THE SHEATHING MANUFACTURER.
- ALL NAILING SHALL BE CAREFULLY DRIVEN AND NOT OVERDRIVEN. THE USE OF STAPLES IS PROHIBITED FROM USE.
- WALL AND ROOF SHEATHING NAILS SHALL BE HOT DIPPED GALVANIZED.
- CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL REQUIRED SHEAR WALL ANCHORS.
- LAMINATED MEMBERS SHALL BE CAMBERED FOR DL DEFLECTION.
- HANGER CONNECTIONS SHALL DEVELOP THE SHEAR STRENGTH OF THE TRUSS, BEAM, OR JOIST.
- WOOD MEMBERS BEARING ON CONCRETE AND MASONRY WALLS SHALL HAVE 1/2-INCH AIR SPACES AROUND SIDES AND ENDS OF MEMBERS. BEAM ENDS SHALL HAVE THE TOP CORNERS NOTCHED TO ALLOW BEAMS TO FALL OUT OF BEARING POCKETS FREELY IN THE EVENT OF FIRE EXPOSURE.
- NAILING OF WOOD FRAMING MEMBERS SHALL CONFORM TO THE MINIMUM NAILING SCHEDULE.
- ALL FRAMING EXPOSED TO THE WEATHER OR IN CONTACT WITH MASONRY OR CONCRETE SHALL BE PRESSURE-TREATED IN ACCORDANCE WITH THE AMERICAN WOOD PRESERVATION ASSOCIATION (AWPA) REQUIREMENTS. ALL CUTS AND HOLES SHALL BE COMPLETED BEFORE TREATMENT. CUTS AND HOLES DUE TO THE ON-SITE FABRICATION SHALL BE BRUSHED WITH 2 COATS OF COPPER NAPHTHENATE SOLUTION (AWPA 22) TO A MINIMUM OF 28 INCHES IN PENETRATION (FOR AWPA STD. M4).
- PROVIDE AS A MINIMUM DOUBLE JOISTS UNDER ALL PARTITIONS WHICH RUN PARALLEL WITH JOISTS AND UNDER ALL CONCENTRATED LOADS FROM DOWN ABOVE.
- PREFABRICATED METAL JOIST HANGERS, HURRICANE CLIPS, HOLD-DOWN ANCHORS AND OTHER ACCESSORIES SHALL BE AS MANUFACTURED BY "SIMPSON STRONG-TIE COMPANY" OR APPROVED EQUAL. INSTALL ALL ACCESSORIES PER THE MANUFACTURER'S REQUIREMENTS. ALL STEEL SHALL HAVE A MINIMUM THICKNESS OF 0.04 INCHES (PER ASTM A446, GRADE A) AND BE GALVANIZED (COATING G60).
- ALL JOISTS SHALL BE POSITIONED WITH THE NATURAL CAMBER TURNED UP.

PILE CAP SCHEDULE			
MARK	DEPTH	# OF PILES	REINFORCING (BOTTOM)
P1	3'-4"	1	7-#6 EACH WAY
P2	3'-4"	2	11-#6 LONG BARS 5-#6 SHORT BARS
P3	3'-4"	3	8-#8 3 WAYS

NOTES:

- SEE PILE CAP LAYOUTS FOR ADDITIONAL WIDTH & LENGTH
- PILE CAPS ARE CENTERED ON COLUMN CENTERLINES U.N.O.
- 180 DEG. HOOK ON END OF ALL REINFORCING.
- PILE DESIGN CAPACITY = 85 TONS, SEE GENERAL NOTES.
- PILE CAPS TO BE PLACED BENEATH BEAMS.



FIRST FLOOR/
FOUNDATION PLAN
1/8"=1'-0"

- TYPICAL CONCRETE SLAB = 8" FLAT SLAB W/ #5@12" O.C. T&B PRIMARY REINFORCING. #4@12" O.C. T&B PERPENDICULAR TO PRIMARY REINFORCING. SEE DETAIL 4/SS-01 FOR ADDITIONAL INFORMATION. TOP OF SLAB ELEVATION = 100'-0" U.N.O.
- TOP OF LEDGE ELEVATION, SEE ARCHITECTURAL DRAWINGS.
- FOR STEEL COLUMNS, SEE SCHEDULE ON SHEETS S1-02 & S1-03.
- BX = BEAM MARK, SEE SCHEDULE ON S6-01 & S6-02.
- FOR TYPICAL REINFORCEMENT CUT-OFF LENGTHS, SEE 4/SS-01.
- / = SLAB DEPRESSION, SEE 2/SS-01. SEE ARCH. FOR ADDITIONAL INFORMATION.
- FOR TYPICAL SLAB CONSTRUCTION JOINT, SEE 3/SS-01.
- FOR TYPICAL BEAM CONSTRUCTION JOINT, SEE 5/SS-01.
- P = PILE. ALL PILES SHALL BE HP10x57 WITH 85 TON MINIMUM CAPACITY. SEE ALSO SHEET SS-01 UNDER DESIGN SPECIFICATIONS. SEE SPEC. SECTION 02463 FOR NOTE ON DESIGN LENGTHS. SEE SCHEDULE FOR ADDITIONAL INFORMATION.
- PX = PILE CAP, SEE SCHEDULE.
- P1 = 16"x16" PIER W/ 4-#8 VERT. W/STD HOOKS INTO PILE CAP. #3 TIES @16" O.C., TYP.
- I = COLUMN, SEE S1-02 FOR SIZES.
- = SPAN OF PRIMARY REINFORCING.
- SUBMIT LOCATIONS FOR ALL CONSTRUCTION JOINTS TO ENGINEER FOR REVIEW.
- CLADDING BACK-UP SYSTEM SHALL BE 8" CMU W/ #5@48" O.C. OR METAL STUDS. SEE ARCH FOR LOCATIONS.
- FOR TYPICAL CMU DETAILS SEE 1 THRU 13 ON SS-21.
- EQUIPMENT PADS BY GENERAL CONTRACTOR. REINFORCEMENT FOR EQUIPMENT PADS SHALL BE #4@12" O.C. E.W. TOP & BOTTOM OF PADS IF OVER 6" THICK. IF 6" OR LESS PROVIDE #4@12" O.C. E.W. CENTERED. COORDINATE SIZE & LOCATION W/ MECH. PLANS.
- FOR STOOP LOCATIONS & DIMENSIONS SEE ARCH. DRAWINGS.
- FOR ADDITIONAL INFORMATION REFER TO DESIGN SPECIFICATIONS & GENERAL NOTES ON SS-01.
- ALL PENETRATIONS THROUGH BEAMS SHALL BE VERIFIED BY THE ENGINEER OF RECORD BEFORE POURING CONCRETE, UNLESS NOTED OTHERWISE. ALL SLEEVES SHALL BE SCHEDULE 40 PIPE. COORDINATE LOCATIONS W/ MECHANICAL CONTRACTOR.
- = 8" LOAD BEARING CMU WALLS.
- TYPICAL:
 - #5 VERTS @48" O.C.
 - 2-3/16" WIRE HORIZ. JOINT REINF. @16" O.C.
- SW = SHEAR WALL:
 - #8 VERTS. @8" O.C. @ ENDS TYPICALLY.
 - #4 VERTS @2" O.C. TYP.
 - 2-3/16" WIRE HORIZ. JOINT REINF. @8" O.C.
- STAIR WALLS:
 - 2-#4 VERTS @8" O.C. @ ENDS
 - #4 VERTS @2" O.C. TYP.
 - 2-3/16" WIRE HORIZ. JOINT REINF. @8" O.C.
 - HORIZ. BOND BEAMS @48" O.C. W/ 2-#5@48" O.C.

BrayAssociates
ARCHITECTS, INC.

1668 NORTH HIGH POINT ROAD
MIDDLETON, WI 53562

PHONE (608) 831-5775
FAX (608) 831-2619

PROJECT

CITY OF
MADISON
WATER
UTILITY

MADISON,
WISCONSIN

PROJECT NUMBER

2519

OWNER

CITY OF MADISON

CONSULTANTS



6125 West Terrace Drive
Madison, WI 53719
TEL 608-261-2277
FAX 608-261-2277
Web Site www.graef.com

SEAL/SIGNATURE

AS BUILT

ISSUED FOR
CONSTRUCTION
DOCUMENTS

ITEM	DATE
DD	08-26-03
ISSUED TO BID	08-27-03
ADDENDUM #1	08-28-03
POST BID	
ADDENDUM #4	03-06-04

DRAWN BY: RJC

CHECKED BY: BES

SHEET TITLE
FOUNDATION PLAN

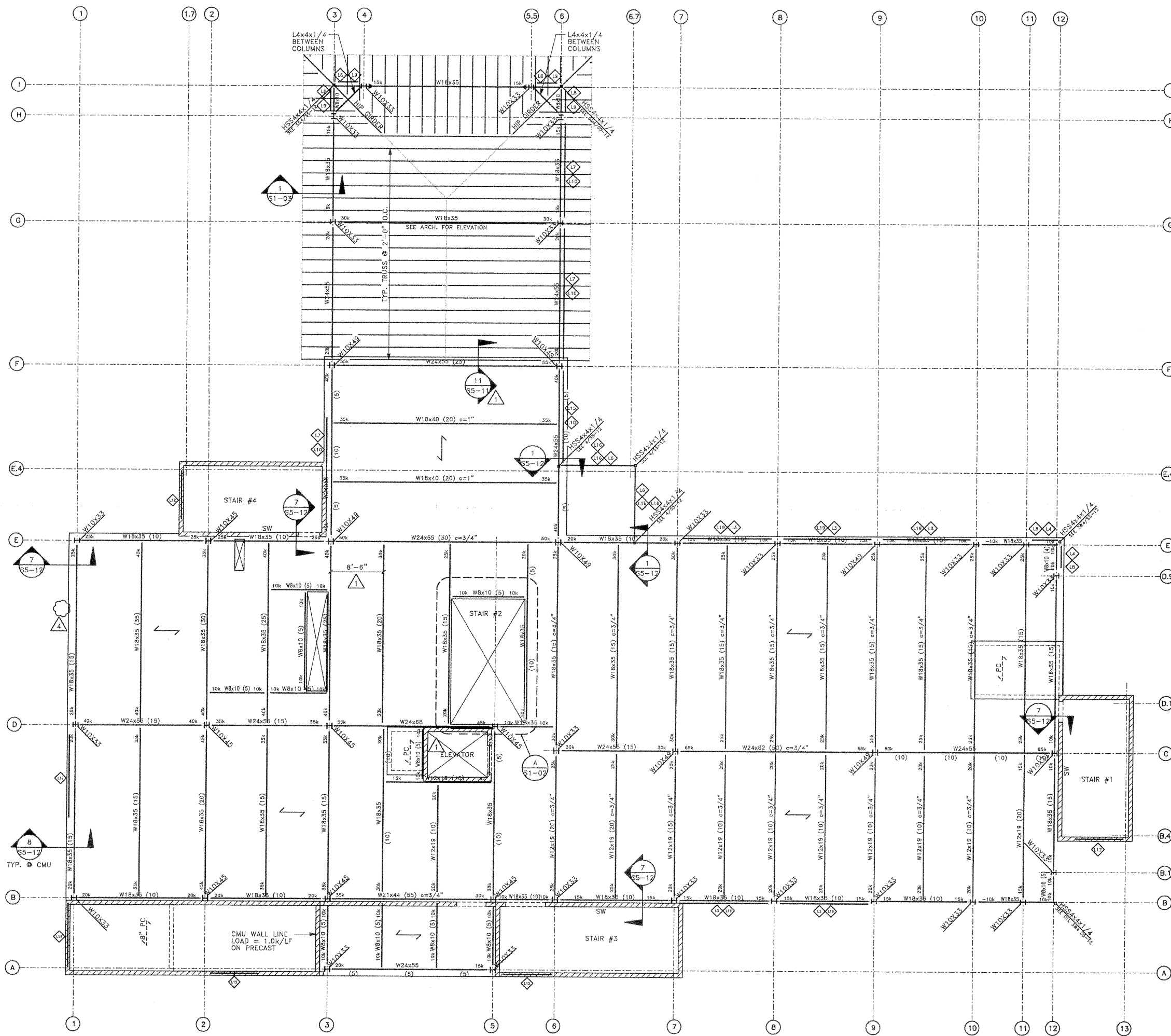
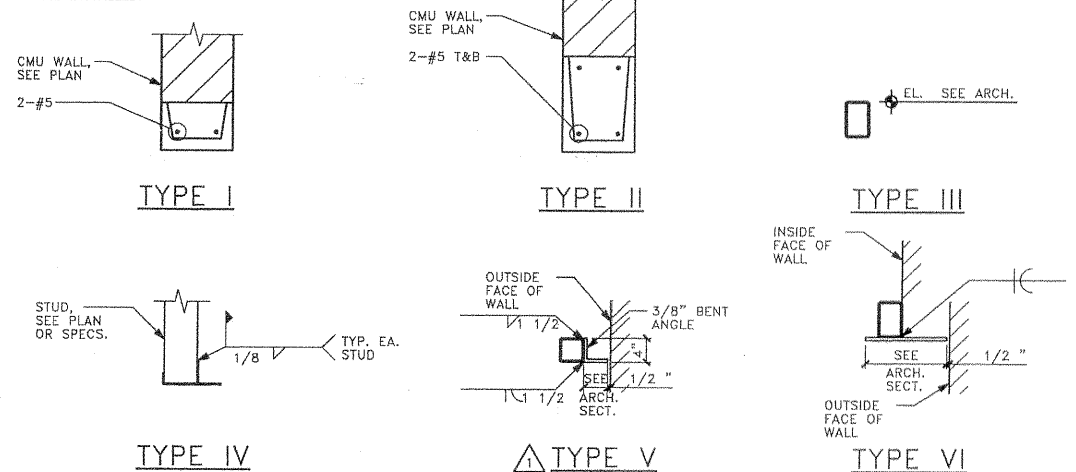
SHEET NUMBER

SI-01

LINTEL SCHEDULE

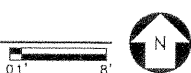
MARK	TYPE	SIZE	BEARING LENGTH (IN)	COMMENTS
1	I	8x8	8"	OPENINGS < 4'-0"
2	II	8x16	8"	OPENINGS < 6'-0"
3	III	HSS6x4x1/2 (LLV)	SEE DETAIL 16/S5-11	
4	III	HSS6x4x1/2 (LLV)	SEE DETAILS 16&17/S5-11	
5	III	HSS6x4x1/2 (LLV)	SEE DETAILS 17/S5-11 & 2-S5/12	
6	IV	L6x4x5/16 (LLH)	8"	
7	V	HSS6x4x1/4	SEE DETAIL 16/S5-11	
8	V	W/3/8" CONT. PLATE	SEE DETAIL 16/S5-11	
9	III	HSS6x4x3/16 (LLV)	SEE DETAIL 17/S5-11	
10	III	HSS6x4x3/16 (LLV)	SEE DETAIL 17/S5-11	
11	VI	HSS6x4x1/4	SEE DETAIL 17/S5-11	
12	VI	HSS6x4x1/4	SEE DETAIL 17/S5-11	
13	VI	HSS6x4x1/4	SEE DETAIL 17/S5-11	
14	V	HSS6x4x1/4	SEE DETAIL 17/S5-11	
15	V	W/3/8" CONT. PLATE	SEE DETAIL 17/S5-11	
16	V	HSS6x4x3/16 (LLV)	SEE DETAIL 17/S5-11	
17	V	HSS6x4x3/16 (LLV)	SEE DETAIL 17/S5-11	
18	V	HSS6x4x3/16 (LLV)	SEE DETAIL 17/S5-11	
19	V	HSS6x4x3/16 (LLV)	SEE DETAIL 17/S5-11	
20	V	HSS6x4x3/16 (LLV)	SEE DETAIL 17/S5-11	
21	V	HSS6x4x3/16 (LLV)	SEE DETAIL 17/S5-11	
22	V	HSS6x4x3/16 (LLV)	SEE DETAIL 17/S5-11	
23	V	HSS6x4x3/16 (LLV)	SEE DETAIL 17/S5-11	
24	V	HSS6x4x3/16 (LLV)	SEE DETAIL 17/S5-11	
25	V	HSS6x4x3/16 (LLV)	SEE DETAIL 17/S5-11	
26	V	HSS6x4x3/16 (LLV)	SEE DETAIL 17/S5-11	
27	V	HSS6x4x3/16 (LLV)	SEE DETAIL 17/S5-11	
28	V	HSS6x4x3/16 (LLV)	SEE DETAIL 17/S5-11	
29	V	HSS6x4x3/16 (LLV)	SEE DETAIL 17/S5-11	
30	V	HSS6x4x3/16 (LLV)	SEE DETAIL 17/S5-11	
31	V	HSS6x4x3/16 (LLV)	SEE DETAIL 17/S5-11	
32	V	HSS6x4x3/16 (LLV)	SEE DETAIL 17/S5-11	
33	V	HSS6x4x3/16 (LLV)	SEE DETAIL 17/S5-11	
34	V	HSS6x4x3/16 (LLV)	SEE DETAIL 17/S5-11	
35	V	HSS6x4x3/16 (LLV)	SEE DETAIL 17/S5-11	
36	V	HSS6x4x3/16 (LLV)	SEE DETAIL 17/S5-11	
37	V	HSS6x4x3/16 (LLV)	SEE DETAIL 17/S5-11	
38	V	HSS6x4x3/16 (LLV)	SEE DETAIL 17/S5-11	
39	V	HSS6x4x3/16 (LLV)	SEE DETAIL 17/S5-11	
40	V	HSS6x4x3/16 (LLV)	SEE DETAIL 17/S5-11	
41	V	HSS6x4x3/16 (LLV)	SEE DETAIL 17/S5-11	

NOTES:
1. SEE ARCH. FOR SIZE AND LOCATION OF ALL OPENINGS.
2. PROVIDE MINIMUM 8" BEARING EACH END.
3. SCHEDULE APPLIES ONLY TO LINTELS NOT OTHERWISE SHOWN.
4. CONTRACTOR TO PROVIDE TEMP. SHORING UNTIL MASONRY HAS PROPERLY SET. (3 DAYS MIN.)
5. PROVIDE 3/8" DIA. HOLES @ 2'-8" O.C. CENTER HOLES IN VERTICAL FACES OF TUBES. FILL TUBES W/FOAM INSULATION AFTER TUBES ARE INSTALLED.

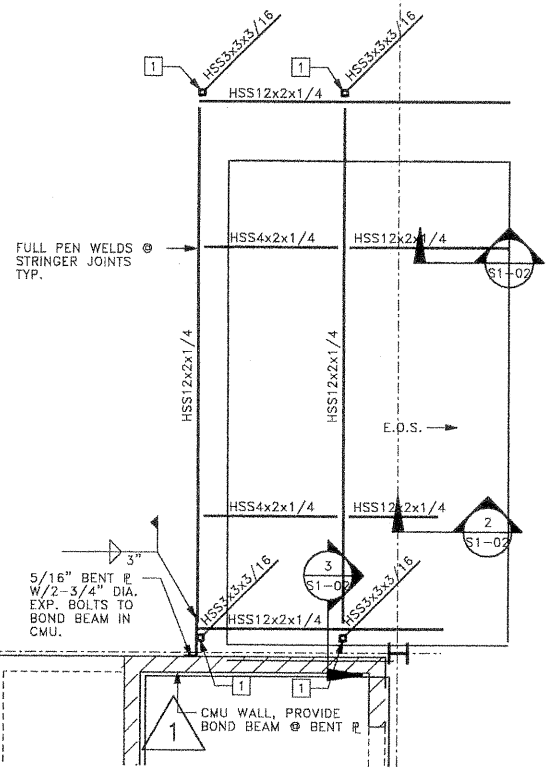


SECOND FLOOR
FRAMING PLAN

1/8"=1'-0"

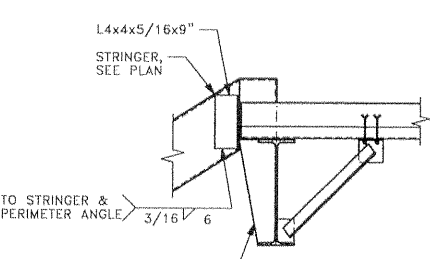


- TOP OF STEEL ELEVATION = 113'-10" UNLESS NOTED (+/-) ON THE PLAN.
- FLOOR = 3" CONCRETE SLAB OVER 3" 20GA. COMPOSITE DECK (6" TOTAL THICKNESS). REINFORCE W/6x6-W21x45.1 WWF. TOP OF SLAB ELEVATION = 114'-4" U.N.O.
- FOR TYPICAL COMPOSITE DECK DETAILS SEE 1, & 3 THRU 13/S5-11.
- SW = SHEAR WALL.
- #5 VERTS. @8" O.C. @ ENDS.
- #4 VERTS. @72" O.C. TYP.
- 2-3/16" WIRE HORIZ. JOINT REIN. @8" O.C.
- STAIR WALLS:
- 2-#4 VERTS. @8" O.C. @ ENDS
- #4 VERTS. @72" O.C. TYP.
- 2-3/16" WIRE HORIZ. JOINT REIN. @8" O.C.
- HORIZ. BOND BEAMS @48" O.C. W/2-#5 @48" O.C.
- OPENING IN COMPOSITE FLOOR SLAB, SEE 2/S5-11.
- E.O.S. = EDGE OF SLAB. SEE ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION.
- SEE 14/S5-11 FOR COLUMN BASE PLATE INFORMATION.
- CLADDING BACK-UP SYSTEM SHALL BE 8" CMU OR METAL STUDS. SEE ARCH FOR LOCATIONS.
- FOR TYPICAL CMU DETAILS SEE 1 THRU 13 ON S5-21.
- EQUIPMENT PADS BY GENERAL CONTRACTOR; COORDINATE SIZE & LOCATION W/MECH. PLANS.
- FOR ADDITIONAL INFORMATION REFER TO DESIGN SPECIFICATIONS & GENERAL NOTES ON S0-01.
- FOR CMU LINTELS SEE SCHEDULE.
- FOR ATTACHMENT OF EXTERIOR CMU TO FLOOR DIAPHRAGM SEE 8/S5-12.
- MOMENT CONNECTION, SEE 9/S5-12.



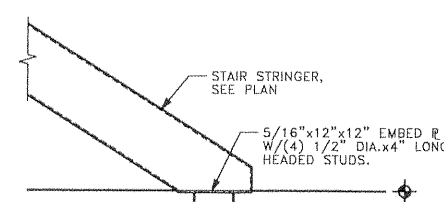
ENLARGED PLAN
GRAND STAIR

1/4"=1'-0"



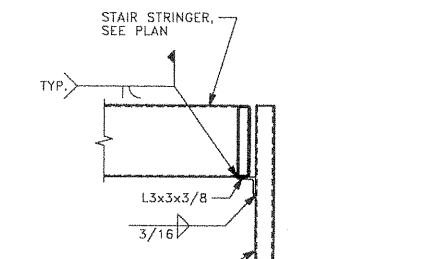
DETAIL

3/4"=1'-0"



DETAIL

3/4"=1'-0"



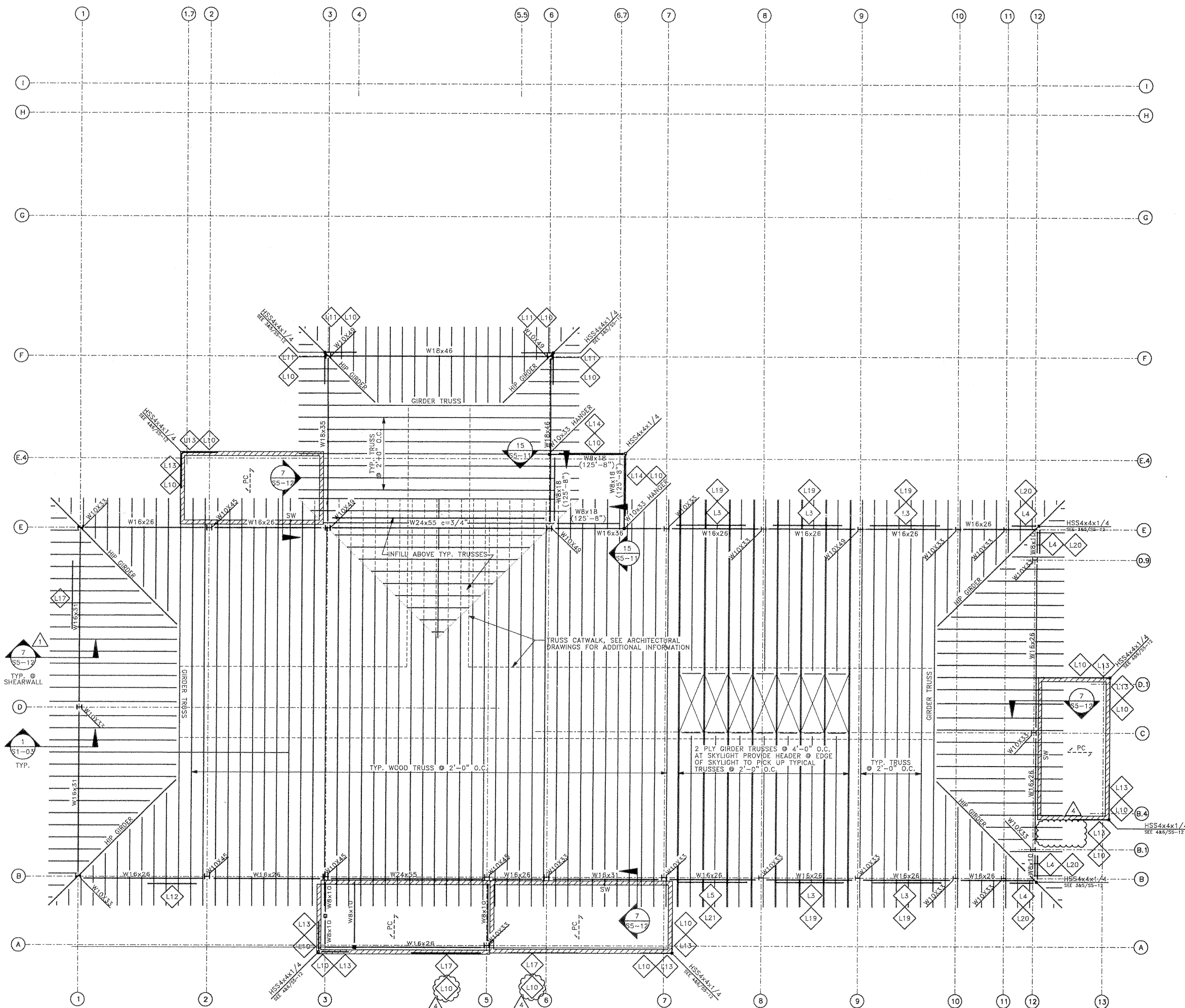
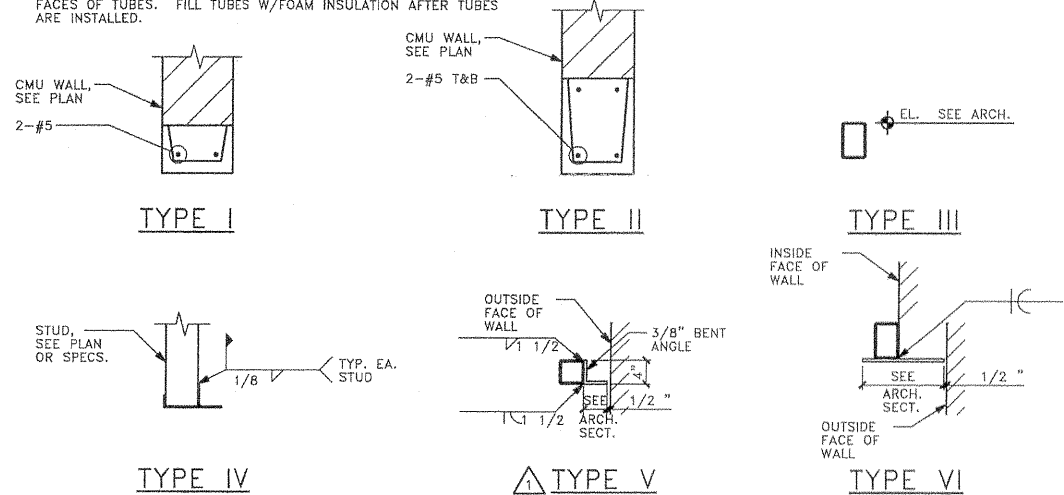
DETAIL

3/4"=1'-0"

LINTEL SCHEDULE

MARK	TYPE	SIZE	BEARING LENGTH (IN)	COMMENTS
1	I	8x8	8"	OPENINGS < 4'-0"
2	II	8x16	8"	OPENINGS < 6'-0"
3	III	HSS6x4x1/2 (LLV)	SEE DETAIL 16/SS-11	
4	III	HSS6x4x1/2 (LLV)	SEE DETAILS 16&17/SS-11	
5	III	HSS6x4x1/2 (LLV)	SEE DETAILS 17/SS-11 & 2-SS/12	
6	IV	L6x4x5/16 (LLH)	8"	
7	V	HSS6x6x1/4	SEE DETAIL 16/SS-11	
8	V	W/3/8" CONT. PLATE	SEE DETAIL 17/SS-11 @ HSS4x4 CORNER COL.	
9	III	HSS6x4x3/16 (LLV)	SEE DETAIL 16/SS-11	
10	III	HSS6x4x3/16 (LLV)	SEE DETAIL 17/SS-11 @ HSS4x4 CORNER COL.	
11	V	HSS6x6x1/4	TUBE LINTEL TO BEAR 8" ON CMU	TUBE @ WINDOW MULLION SEE ARCH. WALL SECTIONS
12	V	W/3/8" CONT. PLATE	TUBE LINTEL TO BEAR 8" ON CMU	FASTEN TUBE TO FACE OF STUDS BY STUD MFRS.
13	VI	HSS8x4x1/2 (LLV)	8"	END REACTION ON LINTEL IS 1500#. STUD MFR. TO PROVIDE OLD STUDS UNDER LINTEL
14	VI	HSS8x4x1/2 (LLV)	8"	GROUT CMU SOLID UNDER LINTEL BRG. FULL HEIGHT OF WALL.
15	VI	HSS8x4x1/4 (LLV)	SEE DETAIL 8/SS-12 @ HSS4x4 CORNER COL.	MYER ENDS OF TUBES @ 90° AND WELD TOGETHER
16	VI	W/3/8" PLATE	GROUT MASONRY 8" SOLID UNDER COL. FULL HT.	PROVIDE WELD PLATES IN PRECAST ENDS FOR TUBE
17	V	HSS6x6x1/4	SEE DETAIL 16/SS-11	
18	V	W/3/8" CONT. PLATE	SEE DETAIL 17/SS-11 @ HSS4x4 CORNER COL.	
19	V	HSS6x6x3/8 (LLV)	SEE DETAIL 17/SS-11 EXTEND LINTEL TO	SEE DETAIL 16/SS-11 @ W/6 COLUMN
20	V	W/3/8" x 4" V-T-AZL LEG	HSS4x4 TUBE AND CONNECT TO TUBE COLUMN	
21	V	HSS6x6x1/4	SEE DETAIL 17/SS-11 @ HSS4x4 EA. END	
22	V	HSS6x6x3/8 (LLV)	8"	GROUT CMU SOLID UNDER LINTEL BRG. FULL HEIGHT OF WALL.
23	V	W/3/8" CONT. PLATE	8"	GROUT CMU SOLID UNDER LINTEL BRG. FULL HEIGHT OF WALL.
24	V	HSS6x6x1/4	8"	GROUT CMU SOLID UNDER LINTEL BRG. FULL HEIGHT OF WALL.
25	V	HSS6x6x3/8 (LLV)	SEE DETAIL 16/SS-11 EA. END	
26	V	W/3/8" CONT. PLATE	SEE DETAIL 17/SS-11	
27	V	HSS6x6x1/4 (LLV)	SEE DETAIL 17/SS-11	
28	V	W/3/8" CONT. PLATE	BEAR 8" ON MASONRY	GROUT CMU SOLID UNDER LINTEL BRG. FULL HEIGHT OF WALL.

NOTES:
1. SEE ARCH. FOR SIZE AND LOCATION OF ALL OPENINGS.
2. PROVIDE MINIMUM 8" BEARING EACH END.
3. SCHEDULE APPLIES ONLY TO LINTELS NOT OTHERWISE SHOWN.
4. CONTRACTOR TO PROVIDE TEMP. SHORING UNTIL MASONRY HAS
PROPERLY SET, (3 DAYS MIN).
5. PROVIDE 5/8" DIA. HOLES @ 2'-8" O.C. CENTER HOLES IN VERTICAL
FACES OF TUBES. FILL TUBES W/FOAM INSULATION AFTER TUBES
ARE INSTALLED.



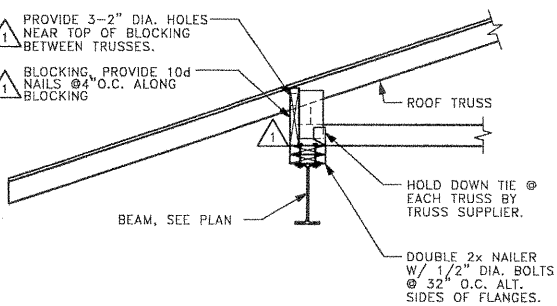
ROOF FRAMING PLAN

1/8"=1'-0"

0' 1' 2'



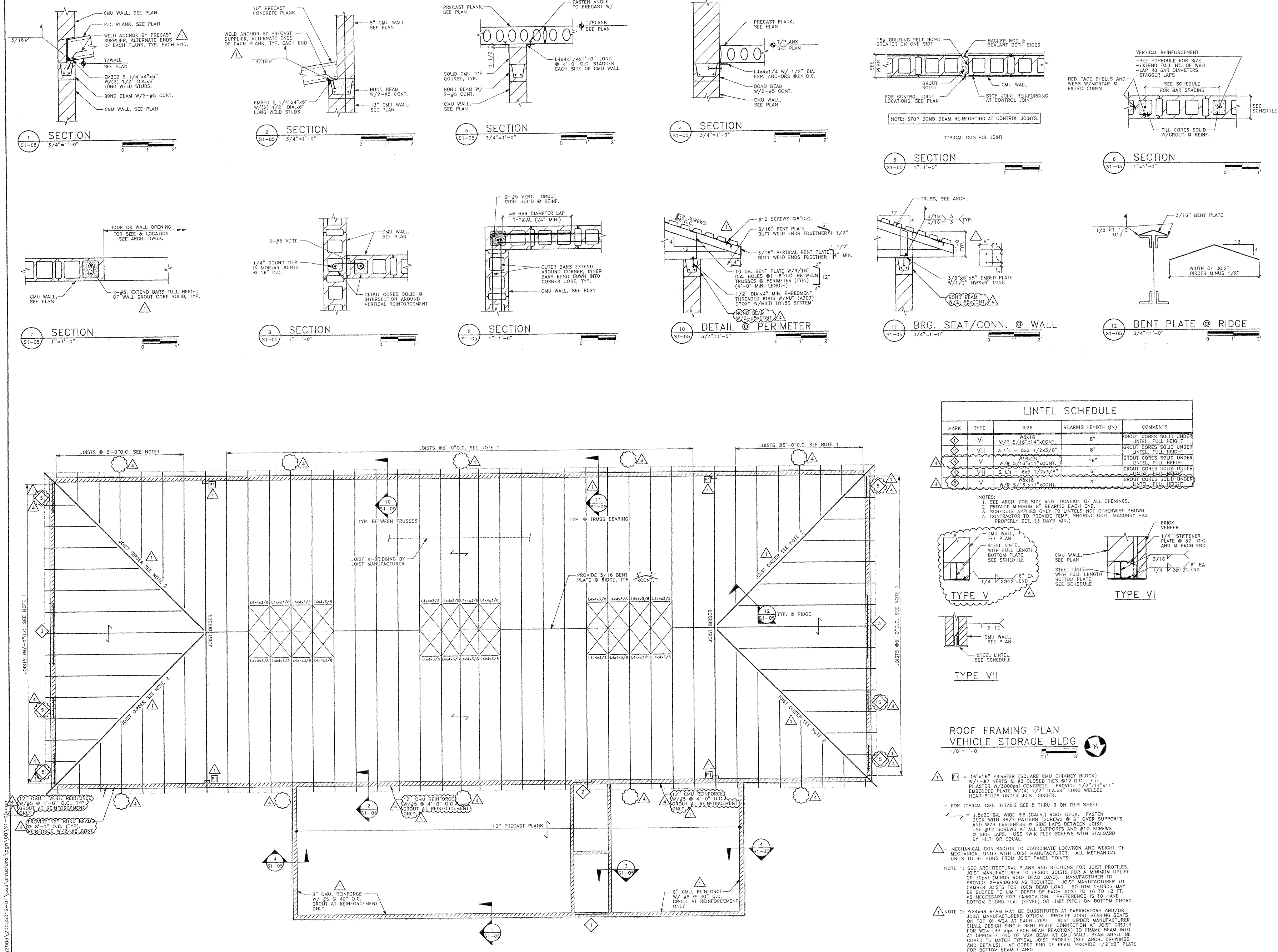
- TOP OF STEEL ELEVATION = 128'-11" UNLESS NOTED (+/-) ON THE PLAN.
- L-PC = 6" UNTOPPED PRECAST PLANK. SEE TYPICAL DETAILS 7, 8 & 12/SS-21 FOR BEARING CONDITIONS.
- SEE 14/SS-11 FOR COLUMN BASE PLATE INFORMATION.
- CLADDING BACK-UP SYSTEM SHALL BE 8" CMU OR METAL STUDS. SEE ARCH. FOR LOCATIONS.
- FOR TYPICAL CMU DETAILS SEE 1 THRU 13 ON SS-21.
- FOR ADDITIONAL INFORMATION REFER TO DESIGN SPECIFICATIONS & GENERAL NOTES ON SD-01.
- FOR CMU LINTELS SEE SCHEDULE.
- ROOF DIAPHRAGM: 5/8" PLYWOOD TYPICAL, SEE GENERAL NOTES ON SHEET SD-01 FOR NAILING PATTERN AND REQUIRED BLOCKING.
- FOR PERIMETER ATTACHMENT OF EXTERIOR CMU TO ROOF DIAPHRAGM SEE 8/SS-12 (SIM).
- TYPICAL ROOF TRUSSES AND GIRDER TRUSSES AT ROOF ARE WOOD, SEE SPECS.
- 8" LOAD BEARING CMU WALLS.
- TYPICAL:
 - #5 VERTS @ 48" O.C.
 - 3/16" WIRE HORIZ. JOINT REINF. @ 16" O.C.
 - SW = SHEAR WALL: #8 VERTS @ 8" O.C. @ ENDS TYPICALLY.
 - #4 VERTS @ 22" O.C. TYP.
 - 3/16" WIRE HORIZ. JOINT REINF. @ 8" O.C.
 - STAIR WALLS:
 - 2-#4 VERTS @ 8" O.C. @ ENDS
 - 4 VERTS @ 22" O.C. TYP.
 - 3/16" WIRE HORIZ. JOINT REINF. @ 8" O.C.
 - HORIZ. BOND BEAMS @ 48" O.C. W/2-#5 @ 48" O.C.

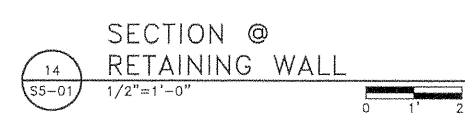


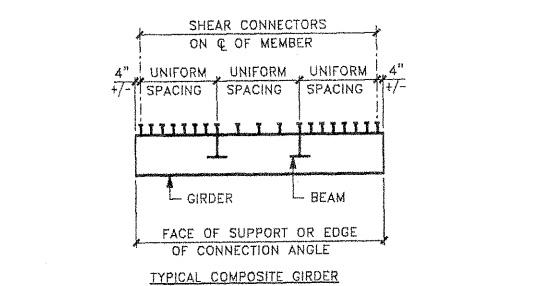
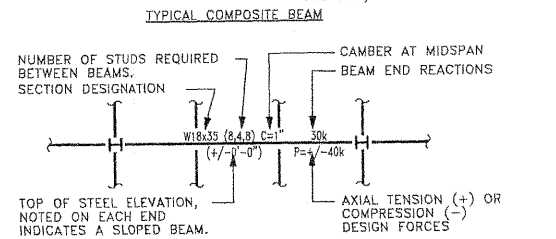
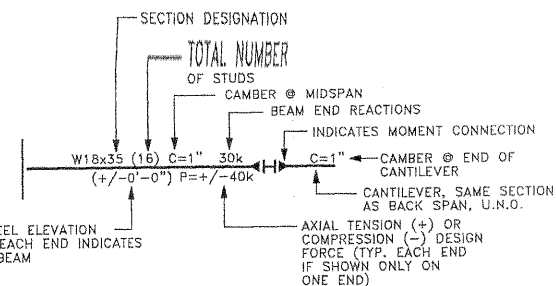
SECTION

3/4"=1'-0"

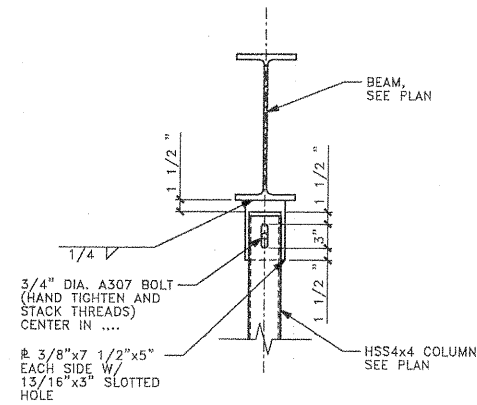
0' 1' 2'



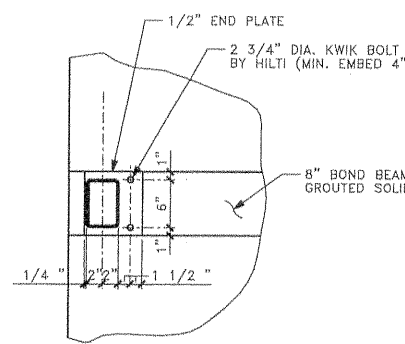




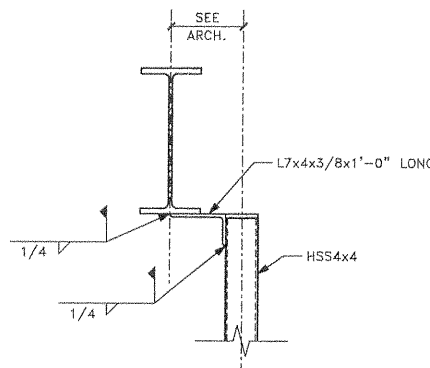
1. PROVIDE CONNECTION DESIGN BASED ON END REACTIONS AND TYPE OF CONNECTION INDICATED ON THE DRAWINGS. END REACTIONS SHOWN ON THE DRAWINGS ARE WORKING LOADS. IF THE FABRICATOR DESIGNS CONNECTIONS USING LRFD, A 1.5 LOAD FACTOR SHALL BE USED.
2. MINIMUM NUMBER OF BOLTS ARE AS FOLLOWS: UNLESS MORE ARE REQUIRED PER NOTE 1.
1. W8, W10, OR W12: 2
2. W14 OR W18: 3
3. W24 OR W27: 4
4. W30 OR W36: 5
5. W40 OR W44: 6
6. W50 OR W54: 7
7. W60 OR W66: 8
8. W70 OR W74: 9
9. W80 OR W84: 10
10. W90 OR W94: 11
11. W100 OR W104: 12
12. W120 OR W124: 13
13. W140 OR W144: 14
14. W160 OR W164: 15
15. W180 OR W184: 16
16. W200 OR W204: 17
17. W240 OR W244: 18
18. W280 OR W284: 19
19. W300 OR W304: 20
20. W360 OR W364: 21
21. W400 OR W404: 22
22. W480 OR W484: 23
23. W540 OR W544: 24
24. W600 OR W604: 25
25. W660 OR W664: 26
26. W720 OR W724: 27
27. W780 OR W784: 28
28. W840 OR W844: 29
29. W900 OR W904: 30
30. W960 OR W964: 31
31. W1020 OR W1024: 32
32. W1080 OR W1084: 33
33. W1140 OR W1144: 34
34. W1200 OR W1204: 35
35. W1260 OR W1264: 36
36. W1320 OR W1324: 37
37. W1380 OR W1384: 38
38. W1440 OR W1444: 39
39. W1500 OR W1504: 40
40. W1560 OR W1564: 41
41. W1620 OR W1624: 42
42. W1680 OR W1684: 43
43. W1740 OR W1744: 44
44. W1800 OR W1804: 45
45. W1860 OR W1864: 46
46. W1920 OR W1924: 47
47. W1980 OR W1984: 48
48. W2040 OR W2044: 49
49. W2100 OR W2104: 50
50. W2160 OR W2164: 51
51. W2220 OR W2224: 52
52. W2280 OR W2284: 53
53. W2340 OR W2344: 54
54. W2400 OR W2404: 55
55. W2460 OR W2464: 56
56. W2520 OR W2524: 57
57. W2580 OR W2584: 58
58. W2640 OR W2644: 59
59. W2700 OR W2704: 60
60. W2760 OR W2764: 61
61. W2820 OR W2824: 62
62. W2880 OR W2884: 63
63. W2940 OR W2944: 64
64. W3000 OR W3004: 65
65. W3060 OR W3064: 66
66. W3120 OR W3124: 67
67. W3180 OR W3184: 68
68. W3240 OR W3244: 69
69. W3300 OR W3304: 70
70. W3360 OR W3364: 71
71. W3420 OR W3424: 72
72. W3480 OR W3484: 73
73. W3540 OR W3544: 74
74. W3600 OR W3604: 75
75. W3660 OR W3664: 76
76. W3720 OR W3724: 77
77. W3780 OR W3784: 78
78. W3840 OR W3844: 79
79. W3900 OR W3904: 80
80. W3960 OR W3964: 81
81. W4020 OR W4024: 82
82. W4080 OR W4084: 83
83. W4140 OR W4144: 84
84. W4200 OR W4204: 85
85. W4260 OR W4264: 86
86. W4320 OR W4324: 87
87. W4380 OR W4384: 88
88. W4440 OR W4444: 89
89. W4500 OR W4504: 90
90. W4560 OR W4564: 91
91. W4620 OR W4624: 92
92. W4680 OR W4684: 93
93. W4740 OR W4744: 94
94. W4800 OR W4804: 95
95. W4860 OR W4864: 96
96. W4920 OR W4924: 97
97. W4980 OR W4984: 98
98. W5040 OR W5044: 99
99. W5100 OR W5104: 100
100. W5160 OR W5164: 101
101. W5220 OR W5224: 102
102. W5280 OR W5284: 103
103. W5340 OR W5344: 104
104. W5400 OR W5404: 105
105. W5460 OR W5464: 106
106. W5520 OR W5524: 107
107. W5580 OR W5584: 108
108. W5640 OR W5644: 109
109. W5700 OR W5704: 110
110. W5760 OR W5764: 111
111. W5820 OR W5824: 112
112. W5880 OR W5884: 113
113. W5940 OR W5944: 114
114. W6000 OR W6004: 115
115. W6060 OR W6064: 116
116. W6120 OR W6124: 117
117. W6180 OR W6184: 118
118. W6240 OR W6244: 119
119. W6300 OR W6304: 120
120. W6360 OR W6364: 121
121. W6420 OR W6424: 122
122. W6480 OR W6484: 123
123. W6540 OR W6544: 124
124. W6600 OR W6604: 125
125. W6660 OR W6664: 126
126. W6720 OR W6724: 127
127. W6780 OR W6784: 128
128. W6840 OR W6844: 129
129. W6900 OR W6904: 130
130. W6960 OR W6964: 131
131. W7020 OR W7024: 132
132. W7080 OR W7084: 133
133. W7140 OR W7144: 134
134. W7200 OR W7204: 135
135. W7260 OR W7264: 136
136. W7320 OR W7324: 137
137. W7380 OR W7384: 138
138. W7440 OR W7444: 139
139. W7500 OR W7504: 140
140. W7560 OR W7564: 141
141. W7620 OR W7624: 142
142. W7680 OR W7684: 143
143. W7740 OR W7744: 144
144. W7800 OR W7804: 145
145. W7860 OR W7864: 146
146. W7920 OR W7924: 147
147. W7980 OR W7984: 148
148. W8040 OR W8044: 149
149. W8100 OR W8104: 150
150. W8160 OR W8164: 151
151. W8220 OR W8224: 152
152. W8280 OR W8284: 153
153. W8340 OR W8344: 154
154. W8400 OR W8404: 155
155. W8460 OR W8464: 156
156. W8520 OR W8524: 157
157. W8580 OR W8584: 158
158. W8640 OR W8644: 159
159. W8700 OR W8704: 160
160. W8760 OR W8764: 161
161. W8820 OR W8824: 162
162. W8880 OR W8884: 163
163. W8940 OR W8944: 164
164. W9000 OR W9004: 165
165. W9060 OR W9064: 166
166. W9120 OR W9124: 167
167. W9180 OR W9184: 168
168. W9240 OR W9244: 169
169. W9300 OR W9304: 170
170. W9360 OR W9364: 171
171. W9420 OR W9424: 172
172. W9480 OR W9484: 173
173. W9540 OR W9544: 174
174. W9600 OR W9604: 175
175. W9660 OR W9664: 176
176. W9720 OR W9724: 177
177. W9780 OR W9784: 178
178. W9840 OR W9844: 179
179. W9900 OR W9904: 180
180. W9960 OR W9964: 181
181. W10020 OR W10024: 182
182. W10080 OR W10084: 183
183. W10140 OR W10144: 184
184. W10200 OR W10204: 185
185. W10260 OR W10264: 186
186. W10320 OR W10324: 187
187. W10380 OR W10384: 188
188. W10440 OR W10444: 189
189. W10500 OR W10504: 190
190. W10560 OR W10564: 191
191. W10620 OR W10624: 192
192. W10680 OR W10684: 193
193. W10740 OR W10744: 194
194. W10800 OR W10804: 195
195. W10860 OR W10864: 196
196. W10920 OR W10924: 197
197. W10980 OR W10984: 198
198. W11040 OR W11044: 199
199. W11100 OR W11104: 200
200. W11160 OR W11164: 201
201. W11220 OR W11224: 202
202. W11280 OR W11284: 203
203. W11340 OR W11344: 204
204. W11400 OR W11404: 205
205. W11460 OR W11464: 206
206. W11520 OR W11524: 207
207. W11580 OR W11584: 208
208. W11640 OR W11644: 209
209. W11700 OR W11704: 210
210. W11760 OR W11764: 211
211. W11820 OR W11824: 212
212. W11880 OR W11884: 213
213. W11940 OR W11944: 214
214. W12000 OR W12004: 215
215. W12060 OR W12064: 216
216. W12120 OR W12124: 217
217. W12180 OR W12184: 218
218. W12240 OR W12244: 219
219. W12300 OR W12304: 220
220. W12360 OR W12364: 221
221. W12420 OR W12424: 222
222. W12480 OR W12484: 223
223. W12540 OR W12544: 224
224. W12600 OR W12604: 225
225. W12660 OR W12664: 226
226. W12720 OR W12724: 227
227. W12780 OR W12784: 228
228. W12840 OR W12844: 229
229. W12900 OR W12904: 230
230. W12960 OR W12964: 231
231. W13020 OR W13024: 232
232. W13080 OR W13084: 233
233. W13140 OR W13144: 234
234. W13200 OR W13204: 235
235. W13260 OR W13264: 236
236. W13320 OR W13324: 237
237. W13380 OR W13384: 238
238. W13440 OR W13444: 239
239. W13500 OR W13504: 240
240. W13560 OR W13564: 241
241. W13620 OR W13624: 242
242. W13680 OR W13684: 243
243. W13740 OR W13744: 244
244. W13800 OR W13804: 245
245. W13860 OR W13864: 246
246. W13920 OR W13924: 247
247. W13980 OR W13984: 248
248. W14040 OR W14044: 249
249. W14100 OR W14104: 250
250. W14160 OR W14164: 251
251. W14220 OR W14224: 252
252. W14280 OR W14284: 253
253. W14340 OR W14344: 254
254. W14400 OR W14404: 255
255. W14460 OR W14464: 256
256. W14520 OR W14524: 257
257. W14580 OR W14584: 258
258. W14640 OR W14644: 259
259. W14700 OR W14704: 260
260. W14760 OR W14764: 261
261. W14820 OR W14824: 262
262. W14880 OR W14884: 263
263. W14940 OR W14944: 264
264. W15000 OR W15004: 265
265. W15060 OR W15064: 266
266. W15120 OR W15124: 267
267. W15180 OR W15184: 268
268. W15240 OR W15244: 269
269. W15300 OR W15304: 270
270. W15360 OR W15364: 271
271. W15420 OR W15424: 272
272. W15480 OR W15484: 273
273. W15540 OR W15544: 274
274. W15600 OR W15604: 275
275. W15660 OR W15664: 276
276. W15720 OR W15724: 277
277. W15780 OR W15784: 278
278. W15840 OR W15844: 279
279. W15900 OR W15904: 280
280. W15960 OR W15964: 281
281. W16020 OR W16024: 282
282. W16080 OR W16084: 283
283. W16140 OR W16144: 284
284. W16200 OR W16204: 285
285. W16260 OR W16264: 286
286. W16320 OR W16324: 287
287. W16380 OR W16384: 288
288. W16440 OR W16444: 289
289. W16500 OR W16504: 290
290. W16560 OR W16564: 291
291. W16620 OR W16624: 292
292. W16680 OR W16684: 293
293. W16740 OR W16744: 294
294. W16800 OR W16804: 295
295. W16860 OR W16864: 296
296. W16920 OR W16924: 297
297. W16980 OR W16984: 298
298. W17040 OR W17044: 299
299. W17100 OR W17104: 300
300. W17160 OR W17164: 301
301. W17220 OR W17224: 302
302. W17280 OR W17284: 303
303. W17340 OR W17344: 304
304. W17400 OR W17404: 305
305. W17460 OR W17464: 306
306. W17520 OR W17524: 307
307. W17580 OR W17584: 308
308. W17640 OR W17644: 309
309. W17700 OR W17704: 310
310. W17760 OR W17764: 311
311. W17820 OR W17824: 312
312. W17880 OR W17884: 313
313. W17940 OR W17944: 314
314. W18000 OR W18004: 315
315. W18060 OR W18064: 316
316. W18120 OR W18124: 317
317. W18180 OR W18184: 318
318. W18240 OR W18244: 319
319. W18300 OR W18304: 320
320. W18360 OR W18364: 321
321. W18420 OR W18424: 322
322. W18480 OR W18484: 323
323. W18540 OR W18544: 324
324. W18600 OR W18604: 325
325. W18660 OR W18664: 326
326. W18720 OR W18724: 327
327. W18780 OR W18784: 328
328. W18840 OR W18844: 329
329. W18900 OR W18904: 330
330. W18960 OR W18964: 331
331. W19020 OR W19024: 332
332. W19080 OR W19084: 333
333. W19140 OR W19144: 334
334. W19200 OR W19204: 335
335. W19260 OR W19264: 336
336. W19320 OR W19324: 337
337. W19380 OR W19384: 338
338. W19440 OR W19444: 339
339. W19500 OR W19504: 340
340. W19560 OR W19564: 341
341. W19620 OR W19624: 342
342. W19680 OR W19684: 343
343. W19740 OR W19744: 344
344. W19800 OR W19804: 345
345. W19860 OR W19864: 346
346. W19920 OR W19924: 347
347. W19980 OR W19984: 348
348. W20040 OR W20044: 349
349. W20100 OR W20104: 350
350. W20160 OR W20164: 351
351. W20220 OR W20224: 352
352. W20280 OR W20284: 353
353. W20340 OR W20344: 354
354. W20400 OR W20404: 355
355. W20460 OR W20464: 356
356. W20520 OR W20524: 357
357. W20580 OR W20584: 358
358. W20640 OR W20644: 359
359. W20700 OR W20704: 360
360. W20760 OR W20764: 361
361. W20820 OR W20824: 362
362. W20880 OR W20884: 363
363. W20940 OR W20944: 364
364. W21000 OR W21004: 365
365. W21060 OR W21064: 366
366. W21120 OR W21124: 367
367. W21180 OR W21184: 368
368. W21240 OR W21244: 369
369. W21300 OR W21304: 370
370. W21360 OR W21364: 371
371. W21420 OR W21424: 372
372. W21480 OR W21484: 373
373. W21540 OR W21544: 374
374. W21600 OR W21604: 375
375. W21660 OR W21664: 376
376. W21720 OR W21724: 377
377. W21780 OR W21784: 378
378. W21840 OR W21844: 379
379. W21900 OR W21904: 380
380. W21960 OR W21964: 381
381. W22020 OR W22024: 382
382. W22080 OR W22084: 383
383. W22140 OR W22144: 384
384. W22200 OR W22204: 385
385. W22260 OR W22264: 386
386. W22320 OR W22324: 387
387. W22380 OR W22384: 388
388. W22440 OR W22444: 389
389. W22500 OR W22504: 390
390. W22560 OR W22564: 391
391. W22620 OR W22624: 392
392. W22680 OR W22684: 393
393. W22740 OR W22744: 394
394. W22800 OR W22804: 395
395. W22860 OR W22864: 396
396. W22920 OR W22924: 397
397. W22980 OR W22984: 398
398. W23040 OR W23044: 399
399. W23100 OR W23104: 400
400. W23160 OR W23164: 401
401. W23220 OR W23224: 402
402. W23280 OR W23284: 403
403. W23340 OR W23344: 404
404. W23400 OR W23404: 405
405. W23460 OR W23464: 406
406. W23520 OR W23524: 407
407. W23580 OR W23584: 408
408. W23640 OR W23644: 409
409. W23700 OR W23704: 410
410. W23760 OR W23764: 411
411. W23820 OR W23824: 412
412. W23880 OR W23884: 413
413. W23940 OR W23944: 414
414. W24000 OR W24004: 415
415. W24060 OR W24064: 416
416. W24120 OR W24124: 417
417. W24180 OR W24184: 418
418. W24240 OR W24244: 419
419. W24300 OR W24304: 420
420. W24360 OR W24364: 421
421. W24420 OR W24424: 422
422. W24480 OR W24484: 423
423. W24540 OR W24544: 424
424. W24600 OR W24604: 425
425. W24660 OR W24664: 426
426. W24720 OR W24724: 427
427. W24780 OR W24784: 428
428. W24840 OR W24844: 429
429. W24900 OR W24904: 430
430. W24960 OR W24964: 431
431. W25020 OR W25024: 432
432. W25080 OR W25084: 433
433. W25140 OR W25144: 434
434. W25200 OR W25204: 435
435. W25260 OR W25264: 436
436. W25320 OR W25324: 437
437. W25380 OR W25384: 438
438. W25440 OR W25444: 439
439. W25500 OR W25504: 440
440. W25560 OR W25564: 441
441. W25620 OR W25624: 442
442. W25680 OR W25684: 443
443. W25740 OR W25744: 444
444. W25800 OR W25804: 445
445. W25860 OR W25864: 446
446. W25920 OR W25924: 447
447. W25980 OR W25984: 448
448. W26040 OR W26044: 449
449. W26100 OR W26104: 450
450. W26160 OR W26164: 451
451. W26220 OR W26224: 452
452. W26280 OR W26284: 453
453. W26340 OR W26344: 454
454. W26400 OR W26404: 455
455. W26460 OR W26464: 456
456. W26520 OR W26524: 457
457. W26580 OR W26584: 458
458. W26640 OR W26644: 459
459. W26700 OR W26704: 460
460. W26760 OR W26764: 461
461. W26820 OR W26824: 462
462. W26880 OR W26884: 463
463. W26940 OR W26944: 464
464. W27000 OR W27004: 465
465. W27060 OR W27064: 466
466. W27120 OR W27124: 467
467. W27180 OR W27184: 468
468. W27240 OR W27244: 469
469. W27300 OR W27304: 470
470. W27360 OR W27364: 471
471. W27420 OR W27424: 472
472. W27480 OR W27484: 473
473. W



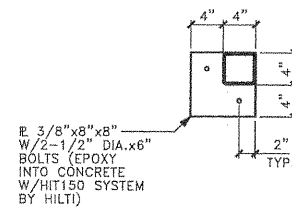
1 SECTION
S5-12 1"=1'-0"



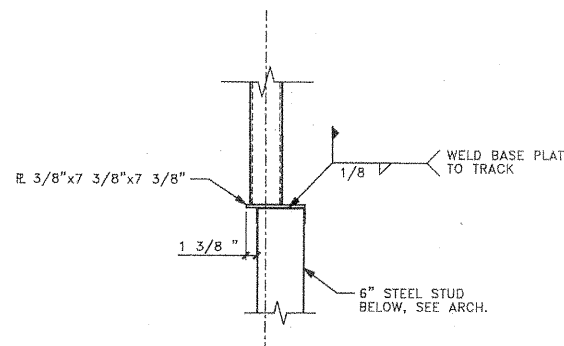
2 SECTION
S5-12 1"=1'-0"



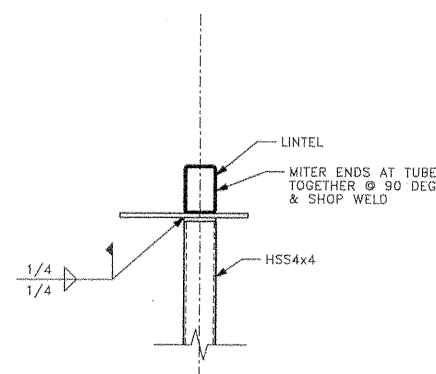
3 SECTION
S5-12 1"=1'-0"



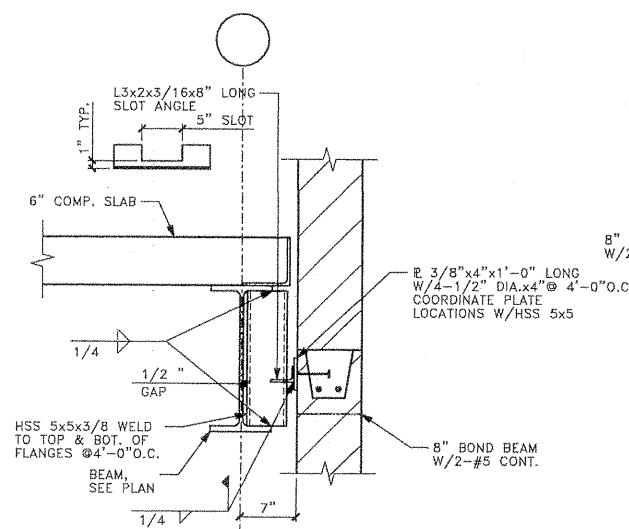
4 SECTION
S5-12 1"=1'-0"



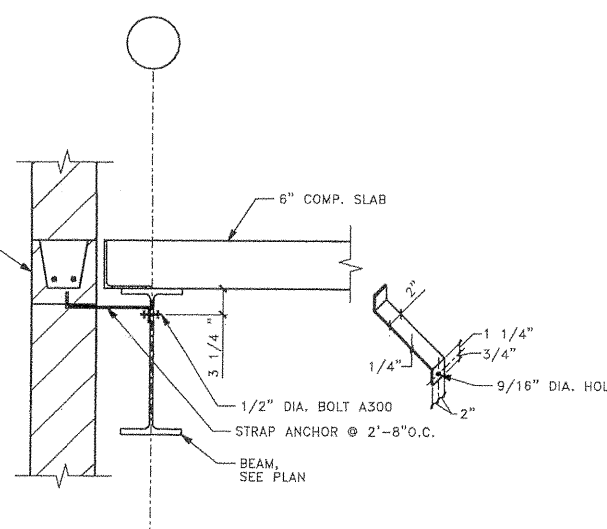
5 SECTION
S5-12 1"=1'-0"



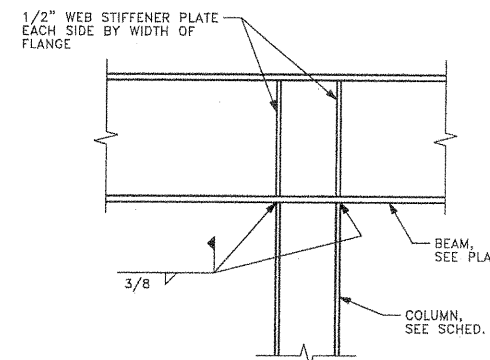
6 SECTION
S5-12 1"=1'-0"



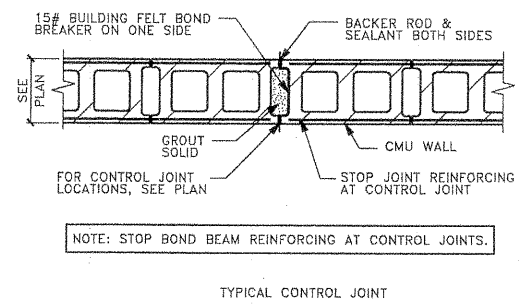
7 SECTION
S5-12 1"=1'-0"



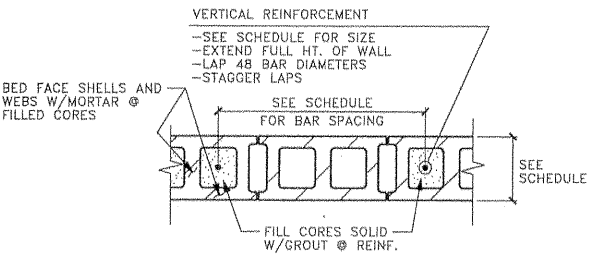
8 SECTION
S5-12 1"=1'-0"



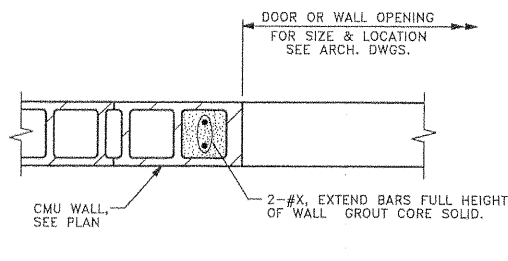
9 SECTION
S5-12 1"=1'-0"



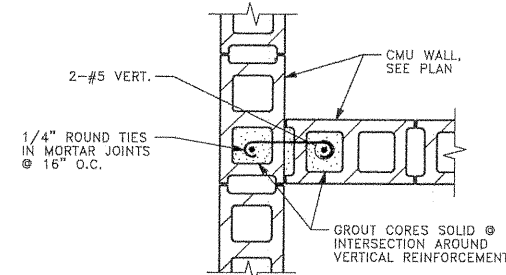
1 SECTION
S5-21 1"=1'-0"



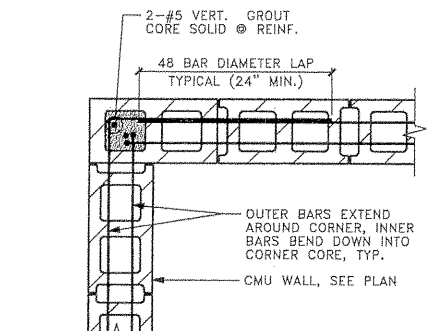
2 SECTION
S5-21 1"=1'-0"



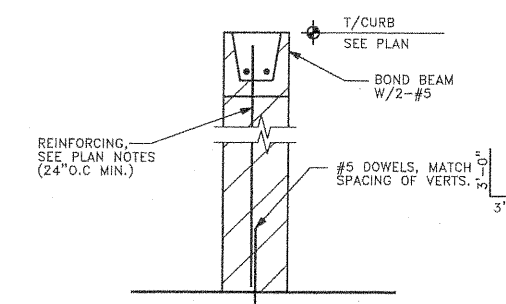
3 SECTION
S5-21 1"=1'-0"



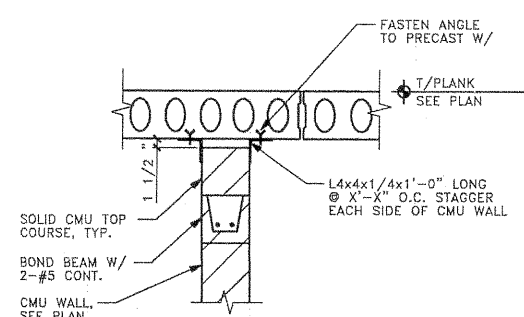
4 SECTION
S5-21 1"=1'-0"



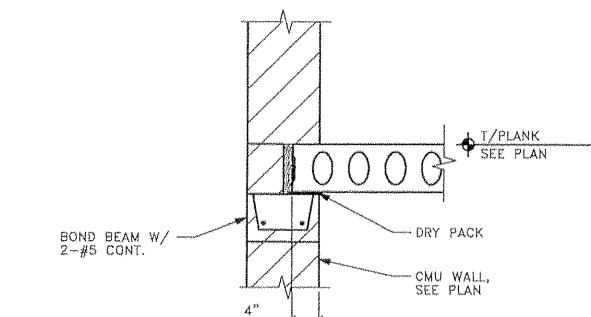
5 SECTION
S5-21 1"=1'-0"



6 SECTION
S5-21 1"=1'-0"



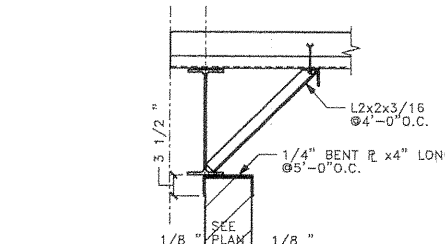
7 SECTION
S5-21 3/4"=1'-0"



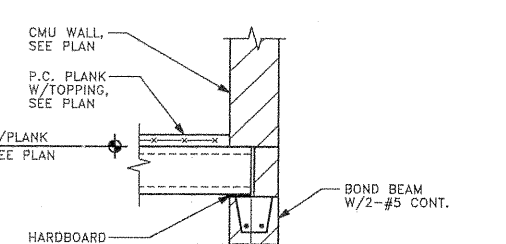
8 SECTION
S5-21 3/4"=1'-0"

9 NOT USED
S5-21 3/4"=1'-0"

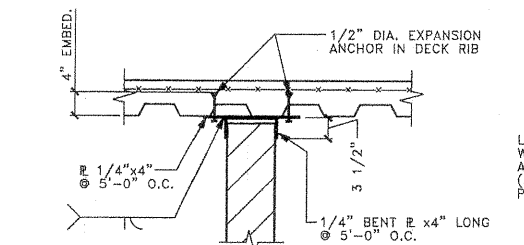
10 NOT USED
S5-21 3/4"=1'-0"



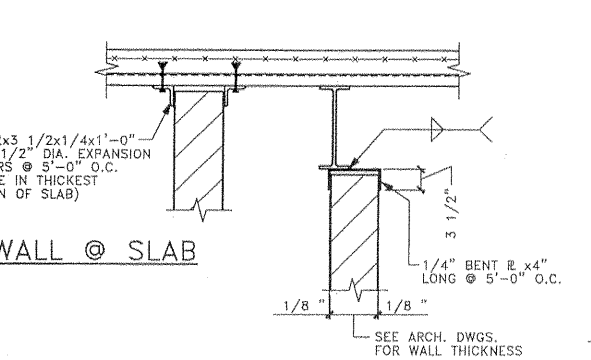
11 WALL @ BEAM
S5-21 3/4"=1'-0"



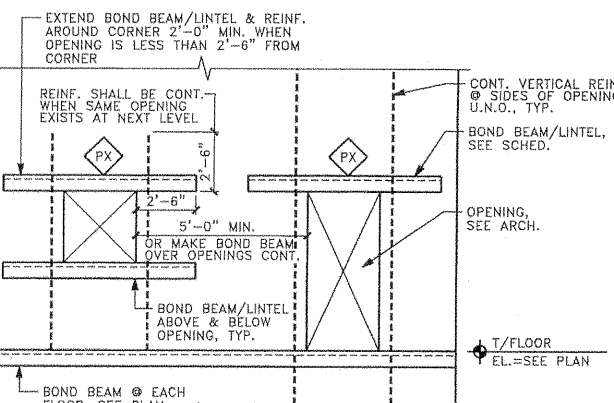
12 SECTION
S5-21 3/4"=1'-0"



WALL PARALLEL TO DECK
NOTE: FILL ALL VOIDS BETWEEN TOP OF MASONRY WALL AND BOTTOM OF DECK WITH A FIRE-RESISTIVE FILLER MATERIAL WHERE REQUIRED.
13 TYPICAL CMU CONNECTIONS
S5-21 3/4"=1'-0"

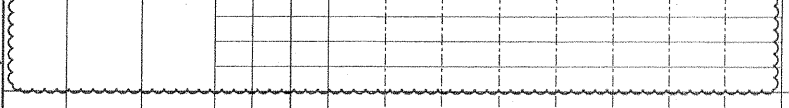


WALL @ SLAB
WALL @ BEAM
14 TYPICAL CMU CORE WALL ELEVATION
S5-21 N.T.S.



14 TYPICAL CMU CORE WALL ELEVATION
S5-21 N.T.S.
PX - SEE PLAN SHEETS FOR LINTELS

GRADE BEAM SCHEDULE

MARK	SIZE		QTY	SIZE	LOC	REINFORCEMENT						STIRRUPS			REMARKS
	B (in)	D (in)				Left Support			Right Support			SIZE	TYPE	SPACING	
						Adj. C/L Span	L/4	C/L	3L/4	Adj. C/L Span					
B1	24		3 #7 T				4'-0"		7'-4"	13'-8"		#4	T1	Bal@9"	
			7 #7 T										CLS		
			3 #8 B												
B2	24		3 #7 T						14'-3"	14'-8"		#4	T1	Bal@18"	
			3 #7 T							14'-9"			CLS		
			4 #8 B				0'-4"		27'-8"						
B3	24											#4	T1	Bal@18"	
			4 #7 T						15'-2"				CLS		
			4 #8 B												
B4	24	42	3 #7 T				11'-0"		10'-2"	9'-10"		#4	T1	Bal@18"	
			3 #7 T										CLS		
			4 #6 B				21'-0"								
B5	24	42	4 #7 T						9'-8"	13'-4"		#4	T1	Bal@18"	
			3 #6 B						0'-4"				CLS		
B6	24	42	3 #7 T						13'-2"	14'-10"		#4	T1	Bal@18"	
			3 #7 T						13'-2"				CLS		
			5 #6 B				0'-4"								
B7	24	42	3 #7 T						13'-2"			#4	T1	Bal@18"	
			2 #7 T						2'-4"				CLS		
			5 #6 B												
			2 #6 B				25'-4"								
B8	30	18	10 #6 T									#3	T2	12@3" (LE)	
			11 #6 T						21'-0"				CLS	13@3" (RE)	
			6 #6 B				18'-3"							Bal@6"	
B9	30		9 #6 T							6'-4"		#3	T2	Bal@3"	
			6 #6 B						0'-4"				CLS		
			4 #6 B				2'-9"		2'-9"						
															
B11	30	60	4 #6 T						6'-2"			#3	T2	Bal@24"	
			6 #7 B										CLS		
B12	30	18	7 #6 T						5'-10"			#3	T2	Bal@6"	
			4 #6 B										CLS		
B13	30	18	7 #6 T						7'-10"			#3	T2	Bal@6"	
			6 #6 B				19'-10"						CLS		
			2 #6 B				2'-9"		2'-9"						
B14	24		3 #6 T						8'-2"	7'-10"		#3	T1	Bal@9"	
			3 #6 B				15'-10"						CLS		
B15	24		3 #6 T						8'-2"	7'-10"		#3	T1	Bal@9"	
			3 #6 B				15'-10"						CLS		
B16	24		3 #6 T						8'-2"	6'-10"		#3	T1	Bal@9"	
			3 #6 B				15'-10"						CLS		
B17	24		3 #6 T						6'-10"			#3	T1	Bal@9"	
			3 #6 B				12'-10"						CLS		
			4 #5 T				7'-3"								
B18	30	18	4 #5 T									#3	T2	Bal@6"	
			9 #7 B										CLS		
			7 #7 T				7'-1"								
B19	30	18	9 #7 T						21'-0"			#3	T2	Bal@6"	
			6 #7 B				18'-3"						CLS		
			5 #7 B												
B20	30		8 #7 T						7'-4"			#3	T2	Bal@3"	
			6 #7 B						0'-4"				CLS		
			7 #7 B				2'-9"		2'-9"						
B21	30	18	4 #7 T						5'-10"	7'-2"		#3	T2	Bal@6"	
			4 #7 B				12'-10"								
B22	24	60							8'-2"			#3	T1	Bal@9"	
			3 #7 T						13'-2"				CLS		
			3 #7 B				5'-0"		5'-3"	5'-8"					
B23	24		3 #5 T									#3	T1	Bal@9"	
			3 #5 B				10'-0"						CLS		
B24	24		8 #5 T						5'-2"			#3	T1	Bal@9"	
			3 #5 B				0'-4"		10'-8"				CLS		
B25	24		9 #5 T						7'-3"	8'-4"		#3	T1	Bal@6"	
			9 #5 B						0'-4"				CLS	Bal@6"	

GRADE BEAM SCHEDULE

MARK	SIZE					REINFORCEMENT						STIRRUPS			REMARKS
	B (in)	D (in)				Left Support			Right Support			SIZE	TYPE	SPACING	
			Qty	Size	Loc	Adj. C/L Span	L/4	C/L	3L/4	Adj. C/L Span					
B26	30	18	4	#5	T							#3			
			4	#5	B										
B27	30	18	4	#5	T							#3			
			4	#5	B										
B28	30	18	8	#5	T							#3			
			4	#5	B										
B29	24		4	#5	T							#3	T1	Bal#9"	CLS
			2	#5	T										
			8	#5	B										
B30	24		3	#5	T							#3	T1	Bal#9"	CLS
			3	#5	B										
B31	24		3	#5	T							#3	T1	Bal#9"	CLS
			3	#5	B										
B32	24		4	#5	T							#3	T1	Bal#9"	CLS
			3	#5	B										
B33	24		3	#5	T							#3	T1	Bal#9"	CLS
			3	#5	B										
			2	#5	B										
B34	30	24	9	#6	T							#3	T2	18#6" (LE)	CLS
			7	#6	T										
			6	#6	B										
B35	30	18	4	#6	T							#3	T2	13#6" to C/L	CLS
			5	#6	B										
B36	30	18	4	#6	T							#3	T2	5#6" (RE)	CLS
			6	#6	B										
B37	24		3	#5	T							#3	T1	Bal#9"	CLS
			3	#5	T										
			3	#6	B										
B38	24	42	4	#5	T							#4	T1	Bal#18"	CLS
			3	#5	T										
			3	#7	T										
B39	30	30	10	#6	T							#4	T2	13#12" (LE)	CLS
			6	#7	B										
			6	#7	B										
B40	24		3	#5	T							#4	T1	Bal#9"	CLS
			3	#7	B										
B41	30	18	4	#8	T							#3	T2	22#6" (LE)	CLS
			7	#8	T										
B42	30	24	5	#8	T							#3	T2	23#6" (RE)	CLS
			6	#7	B										
B43	30	24	4	#8	T							#3	T2	18#6" (LE)	CLS
			4	#7	B										
B44	30	24	4	#5	T							#3	T2	8#6" (LE)	CLS
			12	#5	T										
B45	30	24	4	#8	T							#3	T2	22#6" (LE)	CLS
			5	#8	B										
B46	30	18	4	#7	T							#3	T2	20#6" (RE)	CLS
			8	#7	T										
B47	30	18	10	#7	T							#3	T2	20#6" (LE)	CLS
			8	#7	B										
B48	30	24	6	#7	T							#3	T2	20#6" (LE)	CLS
			5	#7	B										
B49	24	24	3	#7	T							#3	T1	Bal#9"	CLS
			3	#7	B										
B50	24		4	#7	T							#3	T1	Bal#9"	CLS
			3	#7	B										

GRADE BEAM SCHEDULE

MARK	SIZE		REINFORCEMENT										STIRRUPS		REMARKS	
	B (in)	D (in)	LEFT Support					RIGHT Support					SIZE	TYPE		SPACING
			Adj. C/L Span	L/4	C/L	3L/4	Adj. C/L Span	Adj. C/L Span								
B51	24	42	3 #7 T						#3	T1	BalØ9"					
B52	24	42	3 #7 B						#3	T1	BalØ9"					
B53	30	30	7 #7 T						#4	T2	11Ø12" (LE)					
B54	30	30	6 #7 B						#4	T2	12Ø12" (RE)					
B55	30	30	4 #5 T						#4	T2	10Ø12" (LE)					
B56	24	42	4 #8 B						#4	T1	10Ø18"					
B57	30	24	4 #8 T						#3	T2	18Ø6" (LE)					
B58	12	60	2 #5 T						#3	T1	18Ø6" (RE)					
B59	12	60	2 #5 T						#3	T1	7Ø21" (LE)					
B60	30	18	2 #5 T						#3	T1	6Ø21" (RE)					
B61	28	60	4 #7 T						#3	T1	2Ø21" (LE)					
B62	30	24	7 #7 T						#3	T1						
B63	30	18	4 #7 B						#3	T1						
B64	30	24	8 #7 T						#3	T1						
B65	24	24	8 #7 T						#3	T1						
B66	24	42	5 #6 B						#3	T1						
B67	24	42	3 #7 T						#3	T1						
B68	24	42	2 #7 T						#3	T1						
B69	24	42	7 #6 B						#3	T1						
B70	24	42	3 #7 T						#3	T1						
B71	24	42	2 #7 T						#3	T1						
B72	24	42	7 #6 B						#3	T1						
B73	24	42	3 #7 T						#3	T1						
B74	24	42	2 #7 T						#3	T1						
B75	24	42	7 #6 B						#3	T1						
B76	24	42	3 #7 T						#3	T1						
B77	24	42	2 #7 T						#3	T1						
B78	24	42	7 #6 B						#3	T1						
B79	24	42	3 #7 T						#3	T1						
B80	24	42	2 #7 T						#3	T1						
B81	24	42	7 #6 B						#3	T1						
B82	24	42	3 #7 T						#3	T1						
B83	24	42	2 #7 T						#3	T1						
B84	24	42	7 #6 B						#3	T1						
B85	24	42	3 #7 T						#3	T1						
B86	24	42	2 #7 T						#3	T1						
B87	24	42	7 #6 B						#3	T1						
B88	24	42	3 #7 T						#3	T1						
B89	24	42	2 #7 T						#3	T1						
B90	24	42	7 #6 B						#3	T1						
B91	24	42	3 #7 T						#3	T1						
B92	24	42	2 #7 T						#3	T1						
B93	24	42	7 #6 B						#3	T1						
B94	24	42	3 #7 T						#3	T1						
B95	24	42	2 #7 T						#3	T1						
B96	24	42	7 #6 B						#3	T1						
B97	24	42	3 #7 T						#3	T1						
B98	24	42	2 #7 T						#3	T1						
B99	24	42	7 #6 B						#3	T1						
B100	24	42	3 #7 T						#3	T1						
B101	24	42	2 #7 T						#3	T1						
B102	24	42	7 #6 B						#3	T1						
B103	24	42	3 #7 T						#3	T1						
B104	24	42	2 #7 T						#3	T1						
B105	24	42	7 #6 B						#3	T1						
B106	24	42	3 #7 T						#3	T1						
B107	24	42	2 #7 T						#3	T1						
B108	24	42	7 #6 B						#3	T1						
B109	24	42	3 #7 T						#3	T1						
B110	24	42	2 #7 T						#3	T1						
B111	24	42	7 #6 B						#3	T1						
B112	24	42	3 #7 T						#3	T1						
B113	24	42	2 #7 T						#3	T1						
B114	24	42	7 #6 B						#3	T1						
B115	24	42	3 #7 T						#3	T1						
B116	24	42	2 #7 T						#3	T1						
B117	24	42	7 #6 B						#3	T1						
B118	24	42	3 #7 T						#3	T1						
B119	24	42	2 #7 T						#3	T1						
B120	24	42	7 #6 B						#3	T1						
B121	24	42	3 #7 T						#3	T1						
B122	24	42	2 #7 T						#3	T1						
B123	24	42	7 #6 B						#3	T1						
B124	24	42	3 #7 T						#3	T1						
B125	24	42	2 #7 T						#3	T1						
B126	24	42	7 #6 B						#3	T1						
B127	24	42	3 #7 T						#3	T1						
B128	24	42	2 #7 T						#3	T1						
B129	24	42	7 #6 B						#3	T1						
B130	24	42	3 #7 T						#3	T1						
B131	24	42	2 #7 T						#3	T1						
B132	24	42	7 #6 B						#3	T1						
B133	24	42	3 #7 T						#3	T1						
B134	24	42	2 #7 T						#3	T1						
B135	24	42	7 #6 B						#3	T1						
B136	24	42	3 #7 T						#3	T1						
B137	24	42	2 #7 T						#3	T1						
B138	24	42	7 #6 B						#3	T1						
B139	24	42	3 #7 T						#3	T1						
B140	24	42	2 #7 T						#3	T1						
B141	24	42	7 #6 B						#3	T1						
B142	24	42	3 #7 T						#3	T1						
B143	24	42	2 #7 T						#3	T1						
B144	24	42	7 #6 B						#3	T1						
B145	24	42	3 #7 T						#3	T1						
B146	24	42	2 #7 T						#3	T1						
B147	24	42	7 #6 B						#3	T1						
B148	24	42	3 #7 T						#3	T1						
B149	24	42	2 #7 T						#3	T1						
B150	24	42	7 #6 B						#3	T1						
B151	24	42	3 #7 T													

BEAM NOTES:

- BEAM BOTTOM BAR SUPPORTS IN ACCORDANCE WITH ACI DETAILING MANUAL. (PLASTIC TIPPED)
- PLACING TOLERANCES FOR ALL REINFORCING TO CONFORM TO CRSI RECOMMENDED PRACTICES FOR PLACING REINFORCING BARS.
- SEE TYPICAL BEAM DIAGRAM DETAIL 3 THIS SHEET FOR INFORMATION PERTAINING TO BEAM SCHEDULE UNLESS NOTED OTHERWISE IN SCHEDULE.
- PROVIDE INDIVIDUAL SHOP DRAWING PLANS AND SCHEDULES FOR ALL FLOORS.
- WHEN CONTINUOUS TOP BARS ARE INDICATED IN SCHEDULE PROVIDE CLASS B TENSION LAP SPICE AT CENTER SPAN OF BEAM.
- CAMBER PER SPECIFICATIONS UNLESS NOTED IN SCHEDULE.
- SEE S6-02 FOR BEAM DIAGRAM.
- CONCRETE BEAM SCHEDULE IS SHOWN FOR INTENT. CONTRACTOR/REINFORCER IS RESPONSIBLE FOR DETAILING AND COORDINATING ALL BAR LENGTHS TO ASSURE INTENT OF SCHEDULED ITEMS IS SATISFIED.

TYPICAL STIRRUP TYPE DIAGRAM
(UNLESS SHOWN OTHERWISE ON BEAM SECTION)

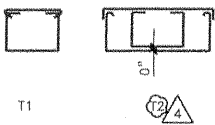
T1 T2

03/09/2006
08:25:30 AM
K:\Jobs\2003\20035012-01\cadd\structural\gen\00\S6-02.dgn

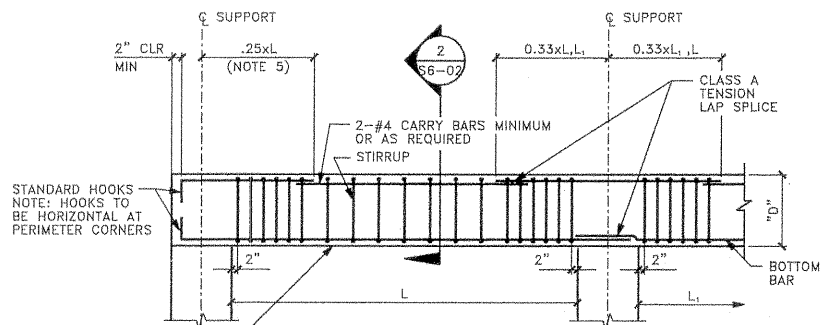
GRADE BEAM SCHEDULE															
MARK	SIZE		REINFORCEMENT					STIRRUPS			REMARKS				
	B (in)	D (in)	QTY	SIZE	LOC	Left Support			Right Support			SIZE	TYPE	SPACING	
						Adj. C/L Span	L/4	C/L	3L/4	Adj. C/L Span					
B73	30	18	4	#5	T	5'	8'-7"								
			4	#5	B		12'-10"								
			4	#5	T										
B74	30	18	9	#7	T		13'-4"			→			#3	T2	6@6" (LE)
			5	#7	B		24'-0"							CLS	20@6" (RE)
			3	#7	T		8'-0"								
B76	24		5	#7	T		5'-4"			→			#3	T1	8@9"
			3	#7	B									CLS	
B77	30	18	12	#7	T					→			#3	T2	16@6" (LE)
			4	#7	B		0'-4"			23'-8"				CLS	15@6" (RE)
						5'									
B78	30	24	7	#7	T								#3	T2	23@6" (LE)
			6	#7	B		0'-5"							CLS	21@6" (RE)
			4	#9	T		7'-1"								
			9	#9	T					→			#3	T2	18@6" (LE)
B79	30	18												CLS	18@6" (RE)
			6	#8	B		24'-0"								
						5'									
B80	30	24	6	#9	T								#3	T2	24@6" (LE)
			5	#8	B									CLS	24@6" (RE)
B81	24	42	3	#8	T		12'-0"			12'-1"			#4	T1	Bal@18"
			3	#8	T					18'-11"					
			3	#8	T					10'-11"				CLS	
			5	#7	B		24'-0"			→					
						5'									
B82	24	42	4	#8	T					16'-10"			#4	T1	Bal@18"
			6	#7	B										
			3	#7	T		2'-0"							CLS	
B83	24		3	#7	T		10'-2"						#3	T1	8@9"
														CLS	
			3	#5	B										
B84	24	42	3	#7	T		11'-0"						#4	T1	Bal@18"
			3	#7	T					11'-10"					
			6	#6	B									CLS	
						5'									
B75	30	24	4	#5	T								#3	T2	24@6" (LE)
														CLS	14@6" (RE)
			9	#8	B										
			6	#8	T										
B85	24	24	6	#8	B								#3	T1	8@9"
														CLS	

BEAM NOTES:

1. BEAM BOTTOM BAR SUPPORTS IN ACCORDANCE WITH ACI DETAILING MANUAL. (PLASTIC TIPPED)
2. PLACING TOLERANCES FOR ALL REINFORCING TO CONFORM TO CRSI RECOMMENDED PRACTICES FOR PLACING REINFORCING BARS.
3. SEE TYPICAL BEAM DIAGRAM DETAIL 3 THIS SHEET FOR INFORMATION PERTAINING TO BEAM SCHEDULE UNLESS NOTED OTHERWISE IN SCHEDULE.
4. PROVIDE INDIVIDUAL SHOP DRAWING PLANS AND SCHEDULES FOR ALL FLOORS.
5. WHEN CONTINUOUS TOP BARS ARE INDICATED IN SCHEDULE PROVIDE CLASS B TENSION LAP SPLICE AT CENTER SPAN OF BEAM.
6. CAMBER PER SPECIFICATIONS UNLESS NOTED IN SCHEDULE.
7. SEE S6-02 FOR BEAM DIAGRAM.
8. CONCRETE BEAM SCHEDULE IS SHOWN FOR INTENT. CONTRACTOR/REINF. FABRICATOR IS RESPONSIBLE FOR DETAILING AND COORDINATING ALL BAR LENGTHS TO ASSURE INTENT OF SCHEDULED ITEMS IS SATISFIED.

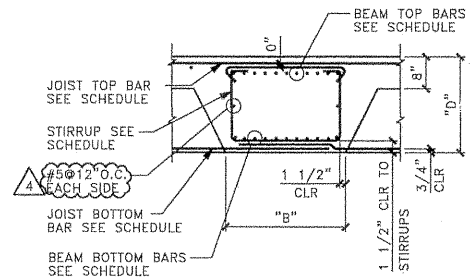


TYPICAL STIRRUP TYPE DIAGRAM
(UNLESS SHOWN OTHERWISE ON BEAM SECTION)



1 TYPICAL BEAM DIAGRAM
1/2"=1'-0"

LOCATE TOP STEEL 1 1/2" CLEAR DISTANCE FROM TOP OF BEAM TO STIRRUPS FOR BEAMS ORIENTED N-S, AND 2 1/2" CLEAR DISTANCE FROM TOP OF BEAM TO STIRRUPS FOR BEAMS ORIENTED E-W.



2 SECTION
1/2"=1'-0"

BrayAssociates
ARCHITECTS, INC.

1468 NORTH HIGH POINT ROAD
MIDDLETON, WI 53562

PHONE (608) 831-5775
FAX (608) 831-2619

PROJECT

CITY OF
MADISON
WATER
UTILITY

MADISON,
WISCONSIN

PROJECT NUMBER

2519

OWNER

CITY OF MADISON

CONSULTANTS



2121 West Terrace Drive
Madison, WI 53713
TEL 608-261-1000
FAX 608-261-1007
Web Site: www.graff.com

SEAL/SIGNATURE

AS BUILT

ISSUED FOR

CONSTRUCTION
DOCUMENTS

ITEM DATE

DD 08-26-03

ISSUED TO BID 10-27-03

ADDENDUM #1 12-11-03

POST BID ADDENDUM #2 03-08-04

DRAWN BY: RJC

CHECKED BY: BES

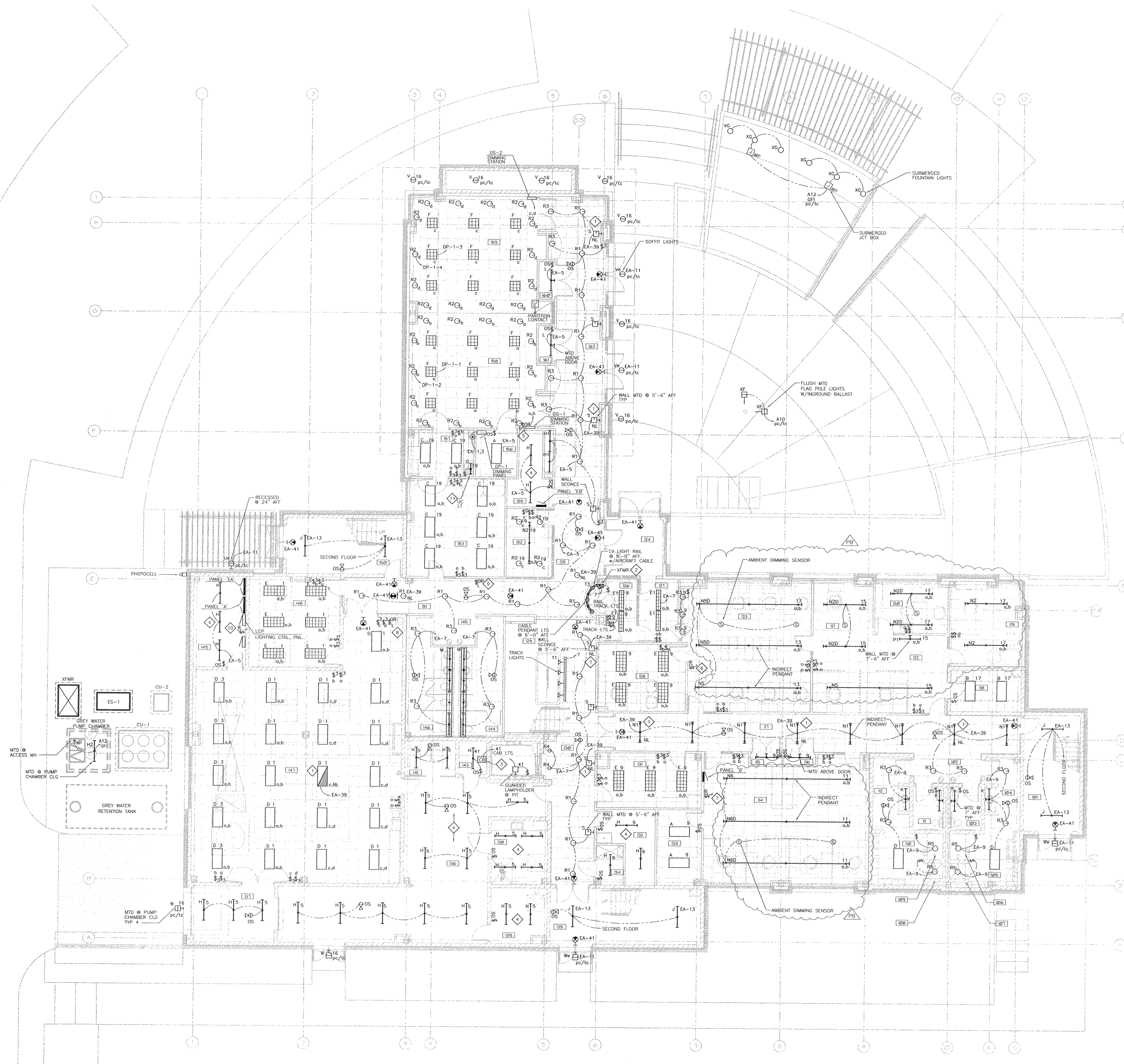
SHEET TITLE

GRADE BEAM
SCHEDULE

SHEET NUMBER

S6-02

Drawing name: W:\ARCHITECT\BRAY\MADISON WATER UTILITY\ELEC\1.dwg
Plotted on: Mar 20, 2006 - 4:30pm



FIRST FLOOR - ELECTRICAL LIGHTING PLAN
1/8" = 1'-0"



GENERAL NOTES:

- ELECTRIC CONTRACTORS MUST FIELD VERIFY FINAL CEILING LAYOUT WITH GENERAL CONTRACTOR.
- ALL LIGHTING CIRCUITS WIRED THRU LIGHTING CONTROL PANEL 'LCP', EXCEPT EXT. & NIGHT LIGHTS.
- ALL LIGHTING CIRCUITS SERVED FROM PANEL 'A' OR PANEL 'EA' AS SHOWN ON THE DRAWINGS.

ELECTRICAL PLAN NOTES:

- TYPICAL NIGHT LIGHT FIXTURE w/2 BALLASTS: 1 LAMP/BALLAST UNSWITCHED FOR NIGHT LIGHT CIRCUIT.
- MOUNT REMOTE BALLAST (T3 RAIL) ABOVE CEILING WITH LOCAL DISCONNECT TOGGLE SWITCH.
- PROVIDE LOCKABLE 15A/1P CIRCUIT BREAKER SWITCH FOR ELEVATOR CAB. LIGHTS WITH LABEL.
- SUSPEND STRIP LIGHTS FROM CEILING BELOW DUCTWORK WITH CHAIN HANGER AS NECESSARY FOR PROPER LIGHTING PATTERN & COVERAGE. COORDINATE FINAL FIXTURE LOCATIONS WITH OTHER TRADES.
- LOW-VOLTAGE LIGHTING OVERRIDE SWITCH FOR ROOMS 158 & 159.
- LOW-VOLTAGE LIGHTING OVERRIDE SWITCH FOR ROOMS 118, 119, 120, 121, 123, 125, 128, & 131-133.
- LOW-VOLTAGE LIGHTING OVERRIDE SWITCH FOR ROOM 114.
- LOW-VOLTAGE LIGHTING OVERRIDE SWITCH FOR ROOMS 147 & 148.
- LOW-VOLTAGE LIGHTING OVERRIDE SWITCH FOR ROOMS 152, 153 & 157.
- COORDINATE UC LIGHT MOUNTING HEIGHT WITH G.C. & CASEWORK.
- LOW-VOLTAGE EXTERIOR LIGHTING OVERRIDE SWITCH.

NOTE: ALL PIPING AND MATERIALS ABOVE PLENUM CEILINGS ARE REQUIRED TO BE U.L. LISTED FOR INSTALLATION IN PLENUMS FOR SMOKE AND FIRE RATINGS.

ROOM NAME LIST:

Item	Date
ISSUED FOR SETS	8/26/03
ISSUED FOR BID	10/27/03
ADDENDUM #1	1/31/04
POST BID ADDENDUM	3/18/04
AS-BUILT DRAWINGS	1/13/06

101	STAIR #1
102	ALCOVE
103	MEN'S TOILET
104	MEN'S LAV
105	MEN'S LOCKER
106	SHOWER
107	SHOWER
108	SHOWER
109	SHOWER
110	WOMEN'S LOCKER
111	WOMEN'S TOILET
112	WOMEN'S LAV
113	METER READERS/
114	SERVICE INSPECTORS
115	CLOSET
116	CLOSET
117	CORRIDOR
118	VAULT
119	FINANCE MANAGER
120	ACCOUNTANT
121	ADMIN. ASST.
122	FINANCE OPEN OFFICE
123	CUSTOMER SERVICE/OPEN OFFICE
124	ENTRANCE LOBBY
125	LOBBY
126	RECEPTION
127	CUSTOMER SERVICE LOBBY
128	CUSTOMER SERVICE MANAGER
129	STAIR #2
130	CORRIDOR
131	WORKROOM
132	JANITOR/RECYCLE
133	STORAGE
134	MUD ROOM
135	STAIR #3
136	INVENTORY STORAGE
137	RECEIVING
138	BEAD BLAST
139	PAINTING
140	-
141	LEAD WORKER
142	-
143	ELEVATOR EQUIPMENT
144	MEN
145	ALCOVE
146	WOMEN
147	WATER METER SHOP
148	ADMIN. ASST.
149	ELECTRICAL
150	STAIR #4
151	CORRIDOR
152	CONFERENCE
153	LUNCH ROOM
154	-
155	COMMUNICATIONS ROOM
156	STORAGE
157	KITCHEN
158	MEETING ROOM
159	MEETING ROOM
160	CLOSET
161	CLOSET
162	CORRIDOR

BrayAssociates
ARCHITECTS, INC.

1468 NORTH HIGH POINT ROAD
MIDDLETON, WI 53562

PHONE (608) 831-5775
FAX (608) 831-2619

Project:
City of
Madison
Water
Utility

Madison,
Wisconsin

Project Number
2519

Owner
City of Madison

Consultants

HEIN
Engineering
Group
314 W. BELTLINE HWY
SUITE III
MADISON, WI 53713
Phone: (608) 288-4260
Fax: (608) 288-4282
E-MAIL: hein@tis.com

PROJECT NO. H313

Seal/Signature

Issued for
Construction
Documents

Item	Date
ISSUED FOR SETS	8/26/03
ISSUED FOR BID	10/27/03
ADDENDUM #1	1/31/04
POST BID ADDENDUM	3/18/04
AS-BUILT DRAWINGS	1/13/06

Drawn by: DAS

Checked by: MH

SHEET TITLE
FIRST FLOOR -
ELECTRICAL -
LIGHTING PLAN
As-Built Drawing

Sheet Number

E-1

Copyright © 2003 Bray Associates Architects Inc.

Item	Date
ISSUED FOR DD'S	8/26/03
ISSUED FOR BID	10/27/03
ADDENDUM #1	12/1/03
POST BID ADDENDUM	3/16/04
AS-BUILT DRAWINGS	1/10/08

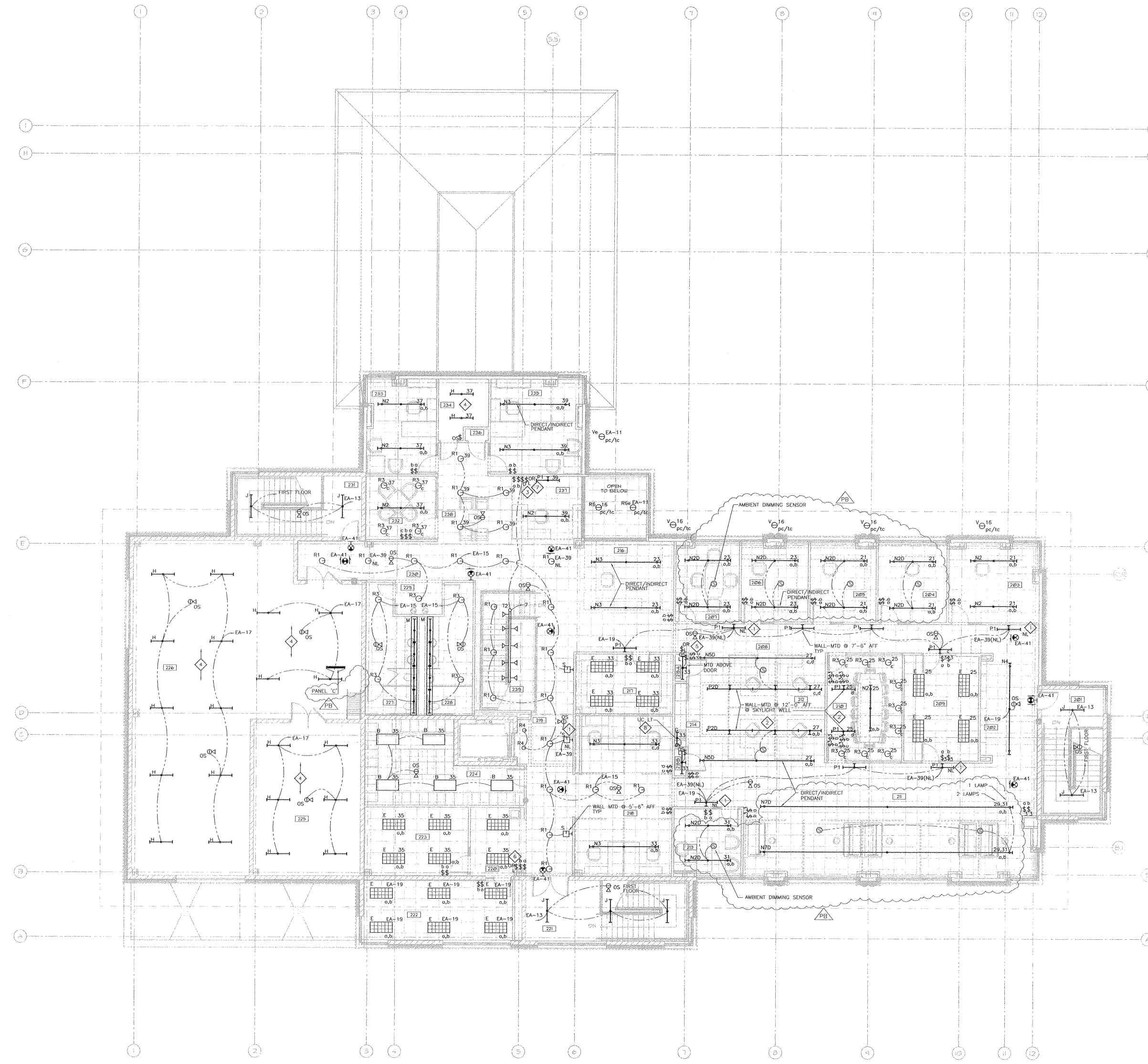
GENERAL NOTES:

- ELECTRIC CONTRACTORS MUST FIELD VERIFY FINAL CEILING LAYOUT WITH GENERAL CONTRACTOR.
- ALL LIGHTING CIRCUITS WIRED THRU LIGHTING CONTROL PANEL "LCP", EXCEPT EXIT & NIGHT LIGHTS.
- ALL LIGHTING CIRCUITS SERVED FROM PANEL 'A' OR PANEL 'EA' AS SHOWN ON THE DRAWINGS.

ELECTRICAL PLAN NOTES:

- TYPICAL NIGHT LIGHT FIXTURE w/2 BALLASTS: 1 LAMP/BALLAST UNSWITCHED FOR NIGHT LIGHT CIRCUIT.
- WALL MOUNT FIXTURES IN SKYLIGHT WELL @ 12'-0" AFF. COORDINATE FINAL LOCATION WITH G.C.
- PROVIDE LOW-VOLTAGE MANUAL DIMMER WITH ON/OFF SWITCH FOR TRACK T2 FIXTURES.
- SUSPEND STRIP LIGHTS FROM CEILING BELOW DUCTWORK WITH CHAIN HANGER AS NECESSARY FOR PROPER LIGHTING PATTERN & COVERAGE. COORDINATE FINAL FIXTURE LOCATIONS WITH OTHER TRADES.
- LOW-VOLTAGE LIGHTING OVERRIDE SWITCH FOR ROOMS 202-218.
- LOW-VOLTAGE LIGHTING OVERRIDE SWITCH FOR ROOMS 220,22, 223 & 224.
- LOW-VOLTAGE LIGHTING OVERRIDE SWITCH FOR ROOMS 219, 239, 230, 227, 228, 232-238.
- COORDINATE UC LIGHT MOUNTING HEIGHT WITH G.C. & CASEWORK.

NOTE: ALL PIPING AND MATERIALS ABOVE PLENUM CEILINGS ARE REQUIRED TO BE U.L. LISTED FOR INSTALLATION IN PLENUMS FOR SMOKE AND FIRE RATINGS.

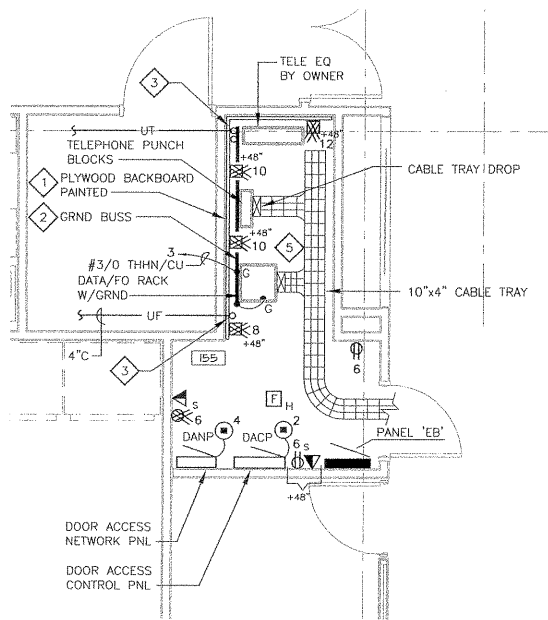


SECOND FLOOR - ELECTRICAL LIGHTING PLAN
1/8" = 1'-0"



ROOM NAME LIST:

- 201 STAIR #1
- 202 CATALOG
- 203 PRINCIPAL ENGINEER
- 204 ENGINEER
- 205 ENGINEER
- 206 ENGINEER
- 207 PLANS
- 208 CIRCULATION
- 209 PRINTING
- 210 CONFERENCE
- 211 ENGINEERING TECH/OPEN OFFICE
- 212 INSPECTOR/OPEN OFFICE
- 213 SUPERVISOR
- 214 ALCOVE
- 215A CLOSET
- 215B CLOSET
- 216 OPERATIONS CLERK
- 217 WORKROOM
- 218 WATER QUALITY OPEN OFFICE
- 219 PASSAGE
- 220 MEETING
- 221 STAIR #3
- 222 SCADA
- 223 ELECTRONICS TECH
- 224 ACTIVE RECORDS
- 225 BOILER ROOM
- 226 AIR HANDLING ROOM
- 227 WOMEN
- 228 MEN
- 229 ALCOVE
- 230 CORRIDOR
- 231 STAIR #4
- 232 CONFERENCE
- 233 ADMIN. SERVICES
- 234 RECORD STORAGE
- 235 GENERAL MANAGER
- 236 CLOSET
- 237 ADMINISTRATION/OPEN OFFICE
- 238 WAITING AREA
- 239 STAIR #2



**COMMUNICATIONS RM 155
ELECTRICAL POWER/LV PLAN**
1/4" = 1'-0"

- GENERAL NOTES:**
- A. COORDINATE ALL FLOOR PENETRATIONS WITH GENERAL CONTRACTOR - FLOOR IS REINFORCED STRUCTURAL FLOOR WITH REIN. CAPS. SLEEVE & SEAL ALL FLOOR OPENINGS WATER & GAS TIGHT.
 - B. NO ELECTRICAL OUTLET BOXES SHALL BE INSTALLED BACK-TO-BACK IN THE SAME STUD SPACE.
 - C. COORDINATE ALL CATV & VOICE/DATA OUTLET FINAL LOCATIONS WITH GEN. CONTRACTOR & OWNER.
 - D. PROVIDE ULL APPROVED FIRE-STOPPING MATERIALS AT ALL RATED WALL/FLOOR PENETRATIONS.
 - E. REFER TO ARCHITECTURAL CASEWORK ELEVATION SHEETS FOR FINAL DEVICE LOCATIONS.
 - F. VERIFY FINAL LOCATION OF FLUSH FLOOR DEVICES WITH GENERAL CONTRACTOR.

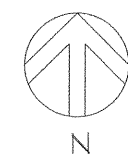
- ELECTRICAL PLAN NOTES:**
- 1. MOUNT 3/4"x48" PAINTED PLYWOOD AT 24" AFF. IN COMM. RM. 155 AS SHOWN.
 - 2. MOUNT 1/4"x4" DRILLED GROUND BUS (EQUAL TO SAUNDERS BROS. SB-476) AT 36" AFF. WITH INSULATED STANDOFFS (SB-1155) AND SUPPORT BRACKETS AS SHOWN ON DRAWING FOR COMM. RM. 155. GROUND ALL RACKS WITH #1/0 CU GROUND CONDUCTOR.
 - 3. EXTEND UT & UF CONDUITS UP INTO ROOM WITH 36" RADIUS SWEEP ELBOW. TERMINATE AT 4" AFF.
 - 4. SUSPEND CABLE TRAY BASKETS WITH THREADED ROD SUPPORTS TO ROOF DECK. COORDINATE ROUTING WITH DUCTWORK, PIPING, EQUIPMENT & OTHER TRADES. CABLE TRAY IS TO BE SHARED BY ALL TRADES FOR LOW-VOLTAGE SIGNAL/COMMUNICATION CABLEING.
 - 5. COORDINATE FINAL PLACEMENT OF CABLE TRAY AND DROPS WITH CABLING RACKS & OWNER'S EQUIPMENT FINAL LOCATIONS.
 - 6. FIRE ALARM BELL BY F.P.C., WIRED BY E.C.
 - 7. COORDINATE FIRE PROTECTION WIRING & FIRE ALARM MONITORING REQUIREMENTS WITH FIRE PROTECTION CONTRACTOR.
 - 8. INTERLOCK FOUNTAIN PUMPS WITH FOUNTAIN CONTROL PANEL FURNISHED BY FOUNTAIN EQUIPMENT CONTRACTOR. COORDINATE LEVEL AND MOTORIZED FULL VALVES WITH FOUNTAIN EQUIPMENT CONTRACTOR & P.C. PROVIDE WATERTIGHT NON-METALLIC RACEWAYS TO ALL FOUNTAIN PUMPS WITH GROUND FAULT CB AND DEDICATED GROUND CONDUCTOR.
 - 9. BOND FOUNTAIN REINFORCING RODS AND METAL COMPONENTS TO GROUND (#8 THHN/CU) PER NEC 680-22.
 - 10. COORDINATE ELEVATOR EQUIPMENT FIRE ALARM MONITORING REQUIREMENTS WITH STATE ELEVATOR INSPECTOR AND G.C.
 - 11. COORDINATE WIRING TO GRAY WATER BOOSTER PUMPS, CONTROL PANEL, SUMP PUMP AND RECEPTACLE WITH P.C. PROVIDE NON-METALLIC RACEWAY UNDERGROUND AND WITHIN PUMP CHAMBER WITH DEDICATED GROUND CONDUCTORS. SEAL ALL PENETRATIONS BELOW GRADE WATERTIGHT.
 - 12. ELECTRIFIED OFFICE PARTITION BY OTHERS. VOICE/DATA CABLEING SHALL BE INSTALLED WITH JACKS AS INDICATED IN PARTITION LOW-VOLTAGE RACEWAY. POWER WIRING TO TERMINATION IN PARTITIONS (PARTITIONS PRE-WIRED). PROVIDE 3/4" (LIQUID TIGHT) WHIP FOR VOICE/DATA AND 1/2" POWER (LIQUID TIGHT) WHIP FROM FLUSH FLOOR (PONE-THRU FTS) OR FLUSH-WALL JUNCTION BOXES AS INDICATED. VERIFY FINAL PARTITION CONNECTION LOCATIONS PRIOR TO ROUGH-IN.
 - 13. EXTEND 1/2" CONDUIT TO DOOR OPERATORS FROM EACH PUSH PLATE SWITCH WITH 4"x4"x2" JCT. BOX. COORDINATE FINAL POWER & CONTROL WIRING REQUIREMENTS WITH GENERAL CONTRACTOR.
 - 14. SLEEVE TWO (2) 1" CONDUITS OR OTHER SIZE AS INDICATED WITH INSULATED BUSHING AT BOTH ENDS FROM EACH ROOM CEILING SPACE INTO THE CORRIDOR/COMMON CEILING SPACE TO SERVE AS RACEWAYS FOR
 - 15. PROVIDE PILOT-LIGHT SWITCH FOR PAINT BOOTH EXHAUST FAN AND LIGHT PROVIDED BY OWNER. FIELD VERIFY CONNECTIONS AND FINAL LOCATIONS.

NOTE: ALL PIPING AND MATERIALS ABOVE PLENUM CEILINGS ARE REQUIRED TO BE ULL LISTED FOR INSTALLATION IN PLENUMS FOR SMOKE AND FIRE RATINGS.

ROOM NAME LIST:

- 101 STAIR #1
- 102 ALCOVE
- 103 MEN'S TOILET
- 104 MEN'S LAV
- 105 MEN'S LOCKER
- 106 SHOWER
- 107 SHOWER
- 108 SHOWER
- 109 WOMEN'S LOCKER
- 110 WOMEN'S TOILET
- 111 WOMEN'S LAV
- 112 WOMEN'S LOCKER
- 113 WOMEN'S TOILET
- 114 METER READERS/ SERVICE INSPECTORS
- 115 CLOSET
- 116 CLOSET
- 117 CORRIDOR
- 118 VAULT
- 119 FINANCE MANAGER
- 120 ACCOUNTANT
- 121 ADMIN. ASST.
- 122 FINANCE OPEN OFFICE
- 123 CUSTOMER SERVICE/OPEN OFFICE
- 124 ENTRANCE LOBBY
- 125 LOBBY
- 126 RECEPTION
- 127 CUSTOMER SERVICE LOBBY
- 128 CUSTOMER SERVICE MANAGER
- 129 STAIR #2
- 130 CORRIDOR
- 131 WORKROOM
- 132 JANITOR/RECYCLE
- 133 STORAGE
- 134 HUD ROOM
- 135 STAIR #3
- 136 INVENTORY STORAGE
- 137 RECEIVING
- 138 BEAD BLAST
- 139 PAINTING
- 140
- 141 LEAD WORKER
- 142
- 143 ELEVATOR EQUIPMENT
- 144 MEN
- 145 ALCOVE
- 146 WOMEN
- 147 WATER METER SHOP
- 148 ADMIN. ASST.
- 149 ELECTRICAL
- 150 STAIR #4
- 151 CORRIDOR
- 152 CONFERENCE
- 153 LUNCH ROOM
- 154
- 155 COMMUNICATIONS ROOM
- 156 STORAGE
- 157 KITCHEN
- 158 MEETING ROOM
- 159 MEETING ROOM
- 160 CLOSET
- 161 CLOSET
- 162 CORRIDOR

FIRST FLOOR - ELECTRICAL POWER/LV PLAN
1/8" = 1'-0"



Drawing name: W:\ARCHITECTS\BRAY MADISON WATER UTILITY\ELECTRICAL.dwg
Plotted on: Mar 20, 2006 - 4:54pm

BrayAssociates
ARCHITECTS, INC.

1468 NORTH HIGH POINT ROAD
MIDDLETON, WI 53562

PHONE (608) 831-5775
FAX (608) 831-2619

Project:
**City of
Madison
Water
Utility**

Madison,
Wisconsin

Project Number
2519

Owner
City of Madison

Consultants

**HEIN
Engineering
Group**

314 W. BELTLINE HWY
SUITE 111
MADISON, WI 53713
Phone: (608) 268-4260
Fax: (608) 268-4292
E-MAIL: hein@hls.com

PROJECT NO. H215

Seal/Signature

Issued for
**Construction
Documents**

Item	Date
ISSUED FOR EDS	02/05/03
ISSUED FOR BID	10-27-03
ADDENDUM #1	12/11/03
POST BID ADDENDUM	3/14/04
AS-BUILT DRAWINGS	10/10/06

Drawn by: DAS

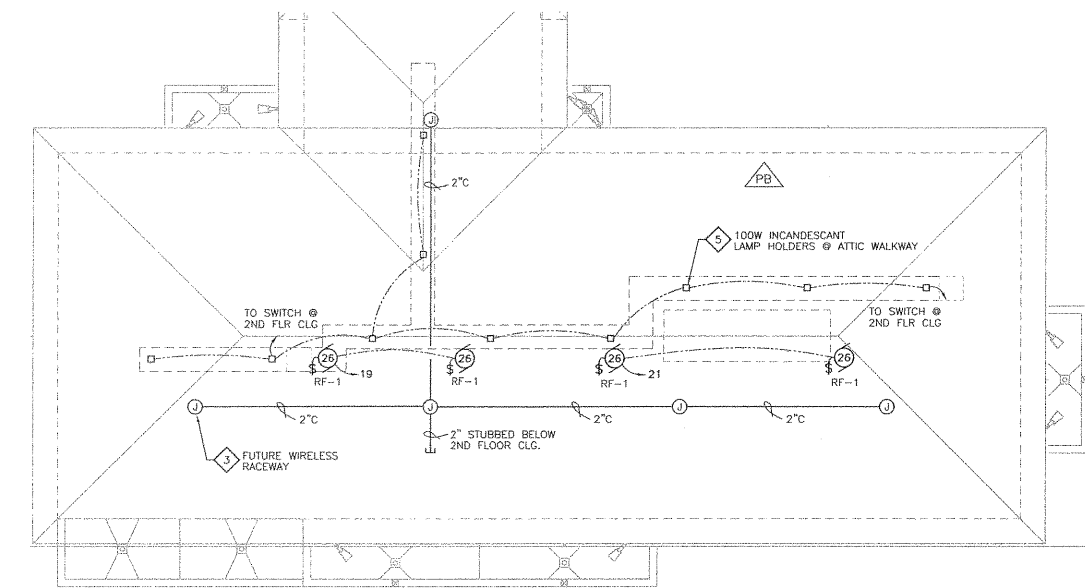
Checked by: MH

Sheet Title
**FIRST FLOOR -
ELECTRICAL -
POWER/LV PLAN**

Sheet Number
E-3

Copyright © 2003 Bray Associates Architects Inc.

Item	Date
ISSUED FOR BIDS	06/02/02
ISSUED FOR BID	10/27/03
ADDENDUM #1	12/11/03
POST BID ADDENDUM	3/19/04
CR #0	10/30/04
AS-BUILT DRAWINGS	10/15/05



ROOF - ELECTRICAL POWER/LV PLAN

1/16" = 1'-0"

GENERAL NOTES:

- COORDINATE ALL FLOOR PENETRATIONS WITH GENERAL CONTRACTOR. FLOOR IS REINFORCED STRUCTURAL FLOOR WITH PILE CAPS. SLEEVE & SEAL ALL FLOOR OPENINGS WATER & GAS TIGHT.
- NO ELECTRICAL OUTLET BOXES SHALL BE INSTALLED BACK-TO-BACK IN THE SAME STUD SPACE.
- COORDINATE ALL CATV & VOICE/DATA OUTLET FINAL LOCATIONS WITH GEN. CONTRACTOR & OWNER.
- PROVIDE U.L. APPROVED FIRE-STOPPING MATERIALS AT ALL RATED WALL/FLOOR PENETRATIONS.
- REFER TO ARCHITECTURAL CASEWORK ELEVATION SHEETS FOR FINAL DEVICE LOCATIONS.

NOTE: ALL CIRCUITS FOR POWER SHOWN ARE SERVED FROM PANEL "C" UNLESS INDICATED OTHERWISE.

ELECTRICAL PLAN NOTES:

- SUSPEND CABLE TRAY BASKETS WITH THREADED ROD SUPPORTS TO ROOF DECK. COORDINATE ROUTING WITH DUCTWORK, PIPING, EQUIPMENT & OTHER TRADES. CABLE TRAY IS TO BE SHARED BY ALL TRADES FOR LOW-VOLTAGE SIGNAL/COMMUNICATION CABLEING.
- ELECTRIFIED OFFICE PARTITION BY OTHERS. VOICE/DATA CABLEING SHALL BE INSTALLED WITH JACKS AS INDICATED IN PARTITION LOW-VOLTAGE RACEWAY. POWER WIRING TO TERMINATION IN PARTITIONS (PARTITIONS PRE-WIRED). PROVIDE 3/4" (LIQUID TIGHT) WHIP FOR VOICE/DATA AND 1/2" POWER (LIQUID TIGHT) WHIP FROM FLUSH FLOOR (POKE-THRU FITS) OR FLUSH-WALL JUNCTION BOXES AS INDICATED. VERIFY FINAL PARTITION CONNECTION LOCATIONS PRIOR TO ROUGH-IN.
- PROVIDE RACEWAY SYSTEM FOR FUTURE WIRELESS TELE./COM. WIRING.
- SLEEVE TWO (2) 1" CONDUITS OR OTHER SIZE AS INDICATED WITH INSULATED BUSHING AT BOTH ENDS FROM EACH ROOM CEILING SPACE INTO THE CORRIDOR/COMMON CEILING SPACE TO SERVE AS RACEWAYS FOR
- PROVIDE PILOT LIGHT SWITCH AND TEN (10) INCANDESCENT LAMP HOLDERS (100W/119; SPACED 20 FT APART) FOR ATTIC ILLUMINATION WITH TWO (2) RECEPTACLES (ONE AT EACH END). VERIFY FINAL TWO ATTIC ACCESS LOCATIONS WITH G.C.

NOTE: ALL PIPING AND MATERIALS ABOVE PLENUM CEILINGS ARE REQUIRED TO BE U.L. LISTED FOR INSTALLATION IN PLENUMS FOR SMOKE AND FIRE RATINGS.

ROOM NAME LIST:

- 201 STAIR #1
- 202 CATALOGS
- 203 PRINCIPAL ENGINEER
- 204 ENGINEER
- 205 ENGINEER
- 206 ENGINEER
- 207 PLANS
- 208 CIRCULATION
- 209 PRINTING
- 210 CONFERENCE
- 211 ENGINEERING TECH/OPEN OFFICE
- 212 SUPERVISOR
- 213 ALCOVE
- 214 CLOSET
- 215 CLOSET
- 216 OPERATIONS CLERK
- 217 WORKROOM
- 218 WATER QUALITY OPEN OFFICE
- 219 PASSAGE
- 220 MEETING
- 221 STAIR #3
- 222 SCADA
- 223 ELECTRONICS TECH
- 224 ACTIVE RECORDS
- 225 BOILER ROOM
- 226 AIR HANDLING ROOM
- 227 WOMEN
- 228 MEN
- 229 ALCOVE
- 230 CORRIDOR
- 231 STAIR #4
- 232 CONFERENCE
- 233 ADMIN. SERVICES
- 234 RECORD STORAGE
- 235 GENERAL MANAGER
- 236 CLOSET
- 237 ADMINISTRATION/OPEN OFFICE
- 238 WAITING AREA
- 239 STAIR #2

SECOND FLOOR - ELECTRICAL POWER/LV PLAN

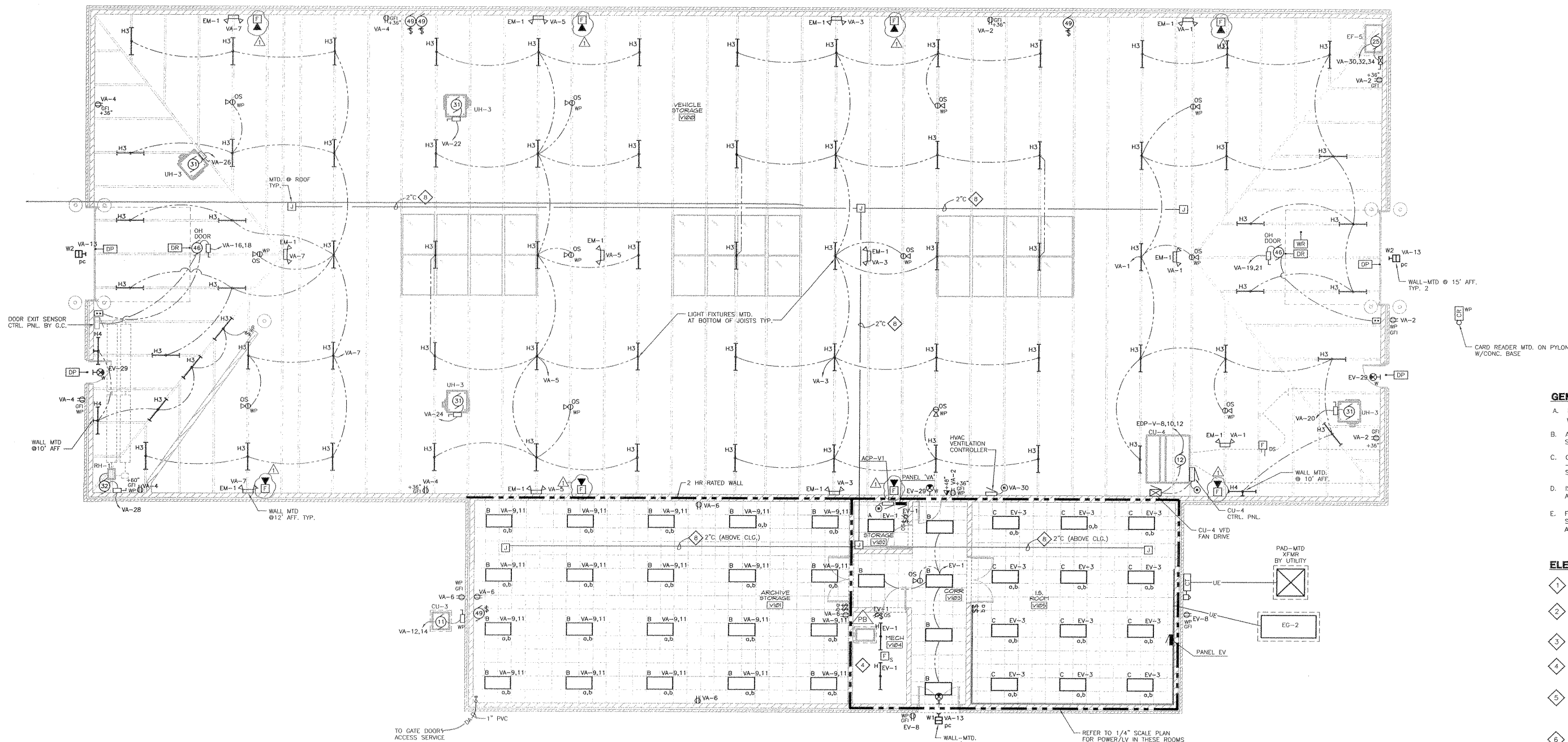
1/8" = 1'-0"



Plotted on: Mar 20, 2005 - 4:17pm

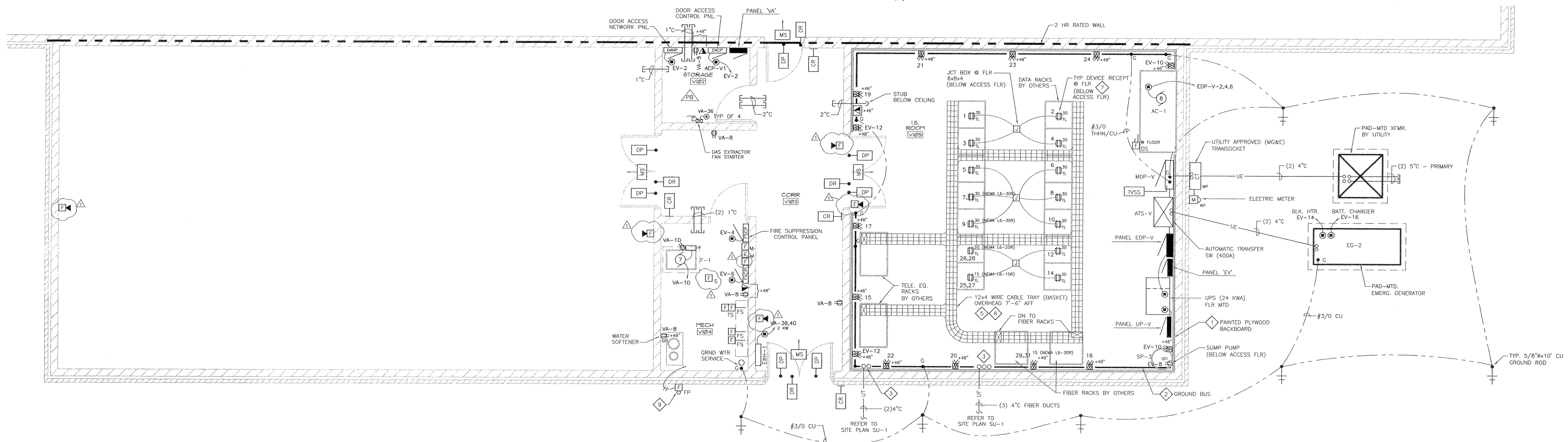
Drawing name: W:\ARCHITECT\BRAY\MADISON WATER UTILITY\ELEC\EA.dwg

Item	Date
ISSUED FOR CDS	8/26/03
ISSUED FOR BID	10/27/03
ADDENDUM #1	1/11/02
POST-BID ADDENDUM	2/19/04
AS-BUILT DRAWINGS	1/13/06



VEHICLE STORAGE BLDG - ELECTRICAL PLAN

1/8" = 1'-0"



I.S. ROOM V105 - ELECTRICAL POWER/LV PLAN

1/4" = 1'-0"

Drawing name: W:\ARCHITECTS\BRAY MADISON WATER UTILITY\ELEC\EG.dwg Plotted on: Mar 20, 2008 - 4:50pm

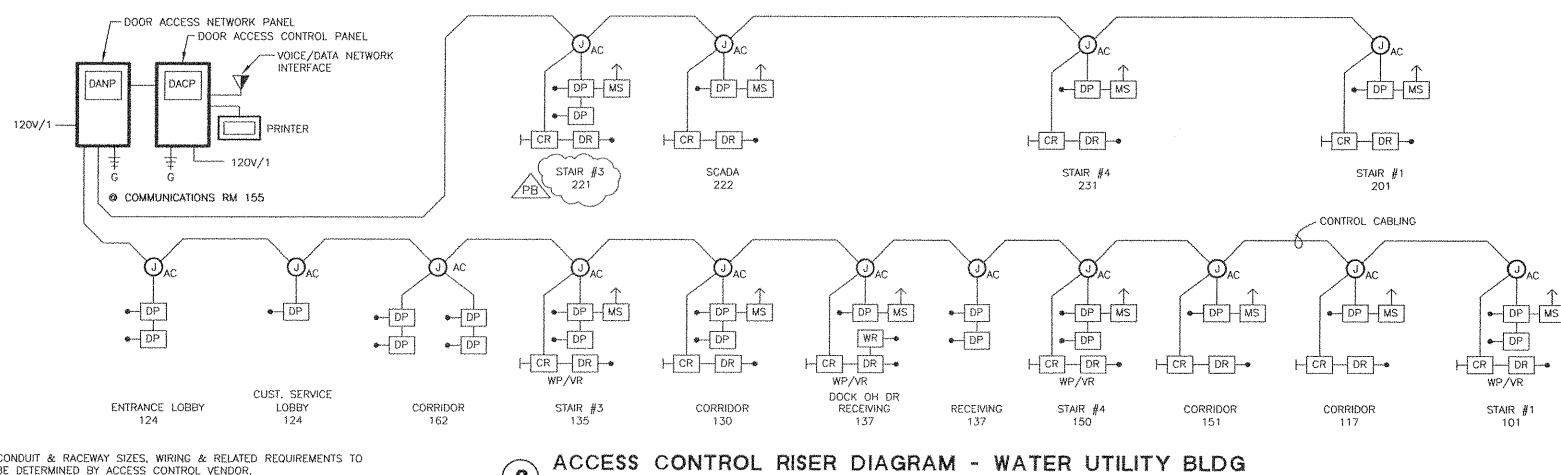
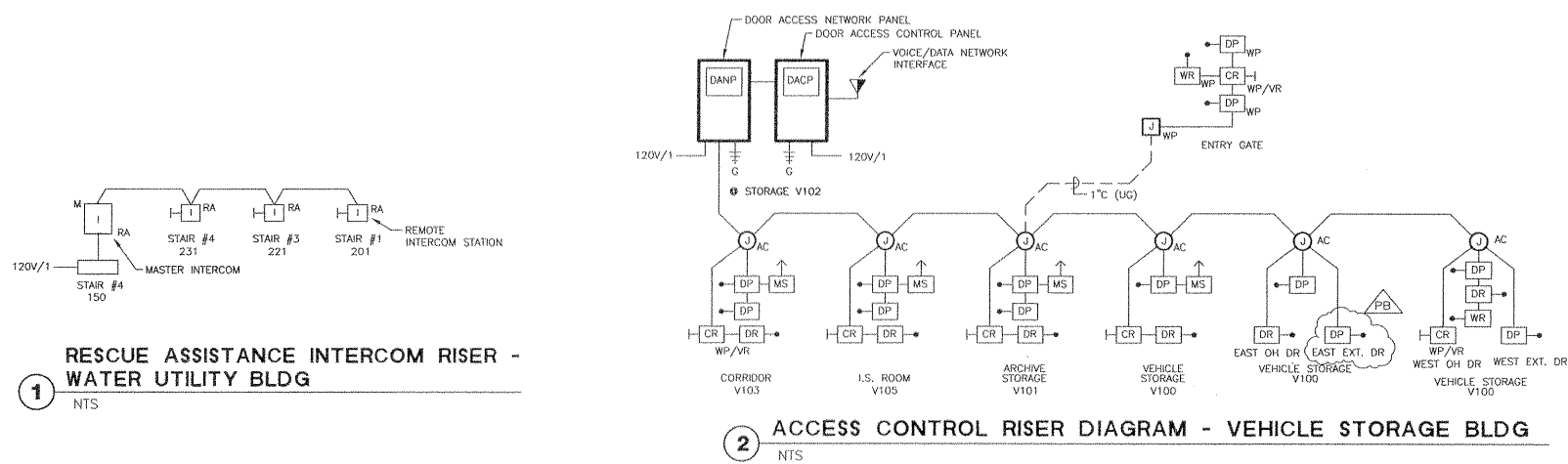
ELECTRICAL MOTOR/EQUIPMENT SCHEDULE																									
TAG	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
PANEL NO.	MSB	EA	MSB	EA	MSB	EA	VA	EDP-V	MSB	EA	VA	EDP-V	SEE PLAN	SEE PLAN	EA	EA	EA	EA	C	EA	A	A	A	C	VA
CIRCUIT	2,4,6	44,46,48	8,10,12	50,52,54	14,16,18	62,64	10	2,4,6	-	50,56,60	12,14	8,10,12	SEE PLAN	SEE PLAN	61	63	65,67,69	SEE PLAN	13	71	83	56	47	15	30,32,34
BREAKER	110	35	50	15	45	25	15	125	300	60	30	60	20	20	20	20	15	20	15	20	20	15	15	15	15
POLE	3	3	3	3	3	3	2	1	3	3	3	2	3	1	1	1	3	1	1	1	1	1	1	1	3
WIRING	3+G	3+G	3+G	3+G	3+G	3+G	2+G	2+G	3+G	3+G	3+G	2+G	2+G	2+G	2+G	2+G	3+G	2+G	2+G	2+G	2+G	2+G	2+G	2+G	2+G
TYPE	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU
SIZE	#2	#10	#10	#12	#12	#8	#8	#12	#1/0	350MCM	#6	#10	#6	#12	#12	#12	#12	#12	#12	#12	#12	#12	#12	#12	#12
COND.	1-1/4"	1/2"	3/4"	1/2"	3/4"	3/4"	1/2"	1-1/2"	2-1/2"	1"	1/2"	1"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
ELECTRICAL HP (KW)	25	5	7-1/2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
VOLT	208	208	208	208	208	208	115	208	208	208	208	208	208	208	208	208	208	208	208	208	208	208	208	208	208
PHASE	3	3	3	3	3	3	1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
FLA (MCA)	78 (90)	17.5 (21.0)	25.3 (31.0)	4.8 (6)	28.9 (33.1)	16.6 (18.5)	7.1 (9.6)	114.3 (140.9)	228.4 (244)	30.2 (37)	15.5 (19.2)	32.2 (40)	1.6 (2.0)	5.4 (6.8)	6.0 (7.5)	6.0 (7.5)	4.8 (6.0)	4.4 (5.5)	1.3 (1.6)	1.3 (1.6)	2.6 (3.3)	5.8 (7.3)	4.4 (5.5)	5.8 (7.3)	4.8 (6.0)
STARTER TYPE	w/VFD	w/VFD	w/VFD	w/VFD	W/ UNIT	W/ UNIT	M.S.	w/VFD	W/ UNIT	W/ UNIT	W/ UNIT	W/VFD	W/UNIT	W/UNIT	W/ UNIT	W/ UNIT	w/VFD	M.S.	M.S.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
SIZE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BY	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.
CONTROL TYPE	BAS	BAS	BAS	BAS	BAS	BAS	STAT	STAT	BAS	STAT	STAT	STAT	W/UNIT	W/UNIT	W/UNIT	W/UNIT	W/UNIT	W/UNIT	W/UNIT	W/UNIT	W/UNIT	W/UNIT	W/UNIT	W/UNIT	W/UNIT
BY	T.C.C.	T.C.C.	T.C.C.	T.C.C.	T.C.C.	T.C.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.
DISCONNECT TYPE	w/VFD	w/VFD	w/VFD	w/VFD	W/UNIT	W/UNIT	NEMA 1	W/UNIT	NEMA 3P	NEMA 3P	NEMA 3P	NEMA 3P	W/UNIT	W/UNIT	W/UNIT	W/UNIT	W/UNIT	NEMA 1	NEMA	MEN 1	1,5	T.S.	T.S.	T.S.	T.S.
SIZE	15	15	15	15	15	15	15	15	400	60	30	60	60	60	60	60	60	60	15	15	15	15	15	15	15
FUSE	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
BY	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.
REMARKS	AIR HANDLING UNIT AH-1	AIR HANDLING UNIT AH-2	RETURN FAN RF-1	RETURN FAN RF-2	HEAT EXCHANGER HX-1	HEAT EXCHANGER HX-2	FURNACE F-1	AIR COND UNIT AC-1	COND UNIT CU-1	COND UNIT CU-2	COND UNIT CU-3	COND UNIT CU-4	FP VAN BOX P-1,2-1,15	FP VAN BOX P-1,16,17, P-2,1-2,3	BOILER B-1	BOILER B-2	HW PUMP P-162	HW BOILER PUMPS P-344	HW COND PUMP P-5	HW COND PUMP P-6	EXHAUST FAN ELEV. EQ. NH ET-1	ACD HODD EXHAUST FAN ET-2	WALL EXHAUST FAN ET-3	WALL EXHAUST FAN ET-4	(V5.3) WALL EXHAUST FAN ET-5
① PROVIDE GREEN WIRE GROUND TO ALL MOTORS AND EQUIPMENT PER NEC 250-95. ② HVAC-TYPE CIRCUIT BREAKER. ③ DUAL ELEMENT TIME DELAY FUSES. ④ GFI CB ⑤ INTERLOCK BOILER PUMP WITH BOILER OPERATION. ⑥ VFD SUPPLIED WITH DUAL MOTOR OUTPUT & ALTERNATOR. ⑦ DUPLEX PUMPS: PROVIDE 208 VOLTS/3 PHASE FEEDER TO CONTROL PANEL. COORDINATE FINAL WIRING REQUIREMENTS WITH PUMP CONT. ⑧ COORDINATE FINAL WIRING REQUIREMENTS FOR ELEVATOR EQUIP. WITH ELEVATOR EQUIP. VENDOR & G.C. ⑨ PROVIDE SHUNT TRIP CB FOR ELEVATOR POWER SHUTDOWN WITH HEAT DETECTOR ACTIVATION. ⑩ COORDINATE FINAL WIRING REQUIREMENTS FOR WATER FEATURE/FOUNTAIN EQUIP. WITH EQUIP. VENDOR & G.C. E.C. = ELECTRICAL CONTRACTOR H.C. = HVAC CONTRACTOR P.C. = PLUMBING CONTRACTOR G.C. = GENERAL CONTRACTOR BAS = BUILDING AUTOMATION SYSTEM MAC = MAGNETIC STARTER FVH = FULL VOLTAGE NON-REVERSING COMB S/D = COMBINATION STARTER/DISCONNECT M.S. = MANUAL STARTER VFD = VARIABLE SPEED DRIVE HOA = HAND-OFF-AUTO SWITCH T.U. = THERMAL UNIT F.T.S. = FUSED TOGGLE SWITCH T.S. = TOGGLE SWITCH P.L. = PILOT LIGHT S.C. = SPEED CONTROL SWITCH N.R. = NOT REQUIRED G.D. = GENERAL DUTY H.D. = HEAVY DUTY																									

ELECTRICAL MOTOR/EQUIPMENT SCHEDULE (CONT.)																									
TAG	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
PANEL NO.	C	EA	EA	EA	EA	VA	VA	C	A	A	C	A	B		SEE PLAN	MSB	B	MSB	A	A	VA	A	C	VA	MSB
CIRCUIT	SEE PLAN	SEE PLAN	SEE PLAN	SEE PLAN	SEE PLAN	SEE PLAN	28	1,3,5	7,9	65	23	23	81	26	SEE PLAN	32,34,36	21,23		40	42	SEE PLAN	44	11		38,40
BREAKER	20	20	20	20	20	15	15	50	25	20	20	20	20	20	20	50	60 (GFI)	125	25	20	20	20	20	20	60
POLE	1	1	1	1	1	1	1	3	2	1	1	1	1	1	1	3	2	3	1	1	2	1	1	1	3
WIRING	3+G	2+G	2+G	2+G	2+G	2+G	2+G	3+G	2+G	2+G	2+G	2+G	2+G	2+G	2+G	3+G	2+G	3+G	2+G	2+G	2+G	2+G	2+G	2+G	3+G
TYPE	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU	THHN/CU
SIZE	#12	#12	#12	#12	#12	#12	#12	#8	#12	#12	#12	#12	#12	#12	#12	#8	#6	#1	#12	#12	#12	#12	#12	#12	#6
COND.	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	3/4"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	3/4"	3/4"	1-1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1"
ELECTRICAL HP (KW)	1/6	1/15	1/25	1/20	1/8	1/4	FRAC	(13.8)	(3.4)	1/2	(0.75)	1/25	1/4	1/4	1/4	2	2	30	3/4	1/2	1	1/2	1	1	10
VOLT	115	115	115	115	115	115	115	208	208	115	115	120	120	120	120	208	208	208	115	115	208	115	115	115	208
PHASE	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	3	1	3	1	1	1	1	1	1	3
FLA (MCA)	4.3 (5.4)	1.3	0.7 (0.9)	2.1	1.7	5.8 (7.3)	3.0 (3.8)	38.2 (48)	16.6 (21)	6.7 (8.4)	6 (7.5)	0.74	8.2 (10.3)	8.2 (10.3)	35.7 (45)	31 (37)	92 (115)	13.8 (17)	9.8 (12.3)	8.8 (11)	9.8 (12.3)	7.4	2.8	30.6 (38.3)	
STARTER TYPE	N.R.	w/UNIT	w/UNIT	M.S.	M.S.	M.S.	M.S.	w/UNIT	w/UNIT	w/UNIT	w/UNIT	N.R.	w/UNIT	w/UNIT	w/UNIT	w/UNIT	w/UNIT	w/UNIT	w/UNIT	w/UNIT	M.S.	w/UNIT	M.S.	w/UNIT	w/UNIT
SIZE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BY	-	H.C.	H.C.	E.C.	E.C.	E.C.	E.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.
CONTROL TYPE	STAT	STAT	STAT	STAT	STAT	STAT	STAT	STAT	STAT	STAT	STAT	STAT	STAT	STAT	STAT	STAT	STAT	STAT	STAT	STAT	STAT	STAT	STAT	STAT	STAT
BY	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.
DISCONNECT TYPE	T.S.	w/UNIT	w/UNIT	NEMA 1	NEMA 1	NEMA 1	NEMA 1	w/UNIT	w/UNIT	w/UNIT	w/UNIT	T.S.	GFI RECEPTACLE	GFI RECEPTACLE	GFI RECEPTACLE	w/UNIT	w/UNIT	w/UNIT	w/UNIT	w/UNIT	w/UNIT	w/UNIT	w/UNIT	w/UNIT	w/UNIT
SIZE	-	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
FUSE	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
BY	H.C.	H.C.	H.C.	E.C.	E.C.	E.C.	E.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.	H.C.
REMARKS	ROOF EXHAUST FAN RF-1	CABINET HEATER CH-1	CABINET HEATER CH-2	UNIT HEATER UH-1	UNIT HEATER UH-2	UNIT HEATER UH-3	RADIANT HEATER RH-1	ELECTRIC HUMIDIFIER HM-1	ELECTRIC HUMIDIFIER HM-2	GARAGE DISPOSER GD	GAS WATER HEATER WH	RECIRCULATION PUMP RCP	ELEVATOR SP-1	SUMP PUMP SP-2	SUMP PUMP SP-3	BOOSTER PUMP BP-1	FOUNTAIN PUMP FP-1 & 2	ELEVATOR E-1	LOADING DOCK	OH DOOR OPERATOR W.U.	OH DOOR OPERATOR W.U.	OH FIRE DOOR OPERATOR W.U.	GAS EXTRACTOR FANS - W.V.	GAS EXTRACTOR FANS - W.V.	AIR COMPRESSOR AC

PANEL VA (VEHICLE STORAGE)									
AMPS MAIN		225 MCA	VOLTS PHASE 120/208 3			MOUNTING LOCATION		SURFACE STORAGE V102	
BRKR	DESCRIPTION	CIRCUIT WATT NO.	PHASELOADS A B C	CIRCUIT NO.	WATT	DESCRIPTION	BRKR		
A P	1	1000	1	1920	2	900	RECEPTACLE V100	A P	
20 1	1 LVS V100	1200	3	2160	4	900	RECEPTACLE V100	20 1	
20 1	1 LVS V100	900	5	1800	6	1800	RECEPTACLE V101+EXT	20 1	
20 1	1 LVS V100	1320	7	2640	8	1080	RECEPTACLE V102-V104	20 1	
20 1	1 LVS V101	1200	9	2400	10	10320	FURNACE F-1	20 1	
20 1	1 EXT. LVS	600	11	2250	12	1850	CONDENSING UNIT CU3	20 1	
20 1	1 GATE OPER.	1200	15	2160	14	1650	CONDENSING UNIT CU3	20 1	
20 1	1 GATE OPER.	1200	17	2100	18	900	V100 OH DOORS	20 1	
20 2	1 V100 OH DOORS	900	19	1650	20	700	V100 OH-3	20 1	
20 1	1 V100 OH DOORS	900	21	1600	22	700	V100 OH-3	20 1	
		23		700	24	700	V100 OH-3	15 1	
		25	700	26	700	V100 OH-3	15 1		
		27	960	28	960	V100 OH-3	15 1		
		29	580	30	580	V100 OH-3	15 1		
		31	580	32	580	V100 OH-3	15 1		
		33	580	34	780	V100 OH-3	15 3		
		35	320	36	320	GAS EXTRACTION E/F	20 1		
		37	1000	38	1000	EW-1 & V103	20 2		
		39	1000	40	1000	EW-1 & V103	20 2		
		41	10,350	9,970	7,950				
ESTIMATED DEMAND LOAD:					28,270 78.5	TOTAL CONNECTED LOADS:		28,270 78.5	WATTS AMPS
PANEL UP-V (UPS)									
AMPS MAIN		225 100-508	VOLTS PHASE 120/208 3			MOUNTING LOCATION		SURFACE IS ROOM V105	
BRKR	DESCRIPTION	CIRCUIT WATT NO.	PHASELOADS A B C	CIRCUIT NO.	WATT	DESCRIPTION	BRKR		
A P	1 RECEPTACLE FLR	1600	1	3200	2	1600	RECEPTACLE FLR	A P	
30 1	1 RECEPTACLE FLR	1600	2	3200	3	1600	RECEPTACLE FLR	30 1	
30 1	1 RECEPTACLE FLR	1600	5	3200	6	1600	RECEPTACLE FLR	30 1	
30 1	1 RECEPTACLE FLR	1600	7	3200	8	1600	RECEPTACLE FLR	30 1	
30 1	1 RECEPTACLE FLR	1600	9	3200	10	1600	RECEPTACLE FLR	30 1	
30 1	1 RECEPTACLE FLR	1600	11	3200	12	1600	RECEPTACLE FLR	30 1	
30 1	1 RECEPTACLE FLR	1600	13	3200	14	1600	RECEPTACLE FLR	30 1	
30 1	1 RECEPTACLE FLR	1600	15	3200	16	1600	RECEPTACLE FLR	30 1	
20 1	1 RECEPTACLE @ TELE RACKS	1200	17	2400	18	1200	RECEPTACLE @ F.D. RACK	20 1	
20 1	1 RECEPTACLE @ TELE RACKS	1200	19	2400	20	1200	RECEPTACLE @ F.D. RACK	20 1	
20 1	1 RECEPTACLE @ WALL	360	21	720	22	360	RECEPTACLE @ WALL	20 1	
20 1	1 RECEPTACLE @ WALL	360	23	720	24	360	RECEPTACLE @ WALL	20 1	
20 1	1 RECEPTACLE @ WALL	360	25	720	26	360	RECEPTACLE @ WALL	20 1	
		27		28					
		29		30					
		31		32					
		33		34					
		35		36					
		37		38					
		39		40					
		41	10,320	9,520	9,520				
ESTIMATED DEMAND LOAD:					29,360 81.6	TOTAL CONNECTED LOADS:		29,360 81.6	WATTS AMPS

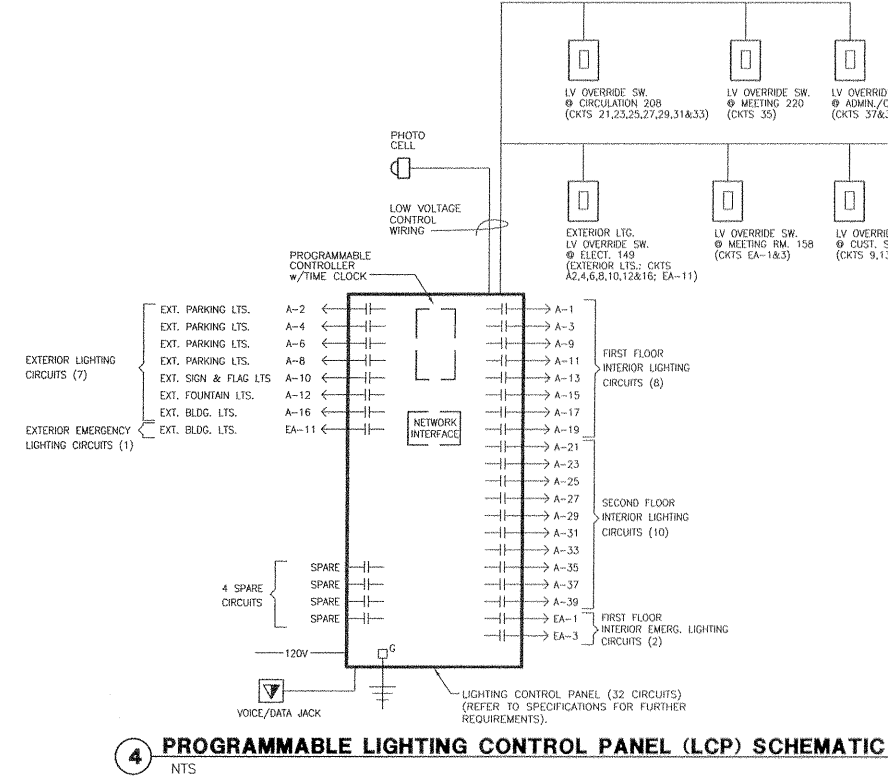
Diagram illustrating the Ambient Daylighting Wiring Schematic. The system includes a 120V leg with N (Neutral) and L (Line) wires. The L wire is switched. The wiring connects to three Dimming Fluorescent Ballasts. The control wiring, labeled #18 THHN/CU CONTROL WIRING (CLASS 2) IN SEPARATE RACEWAY SYSTEM, connects the ballasts to an Ambient Daylighting Sensor (located on the ceiling) and to additional ballasts.

Drawing name: W:\ARCHITECT\BRAY\MADISON WATER UTILITY\ELEC\E7.dwg Plotted on: Mar 20, 2006 - 4:53pm

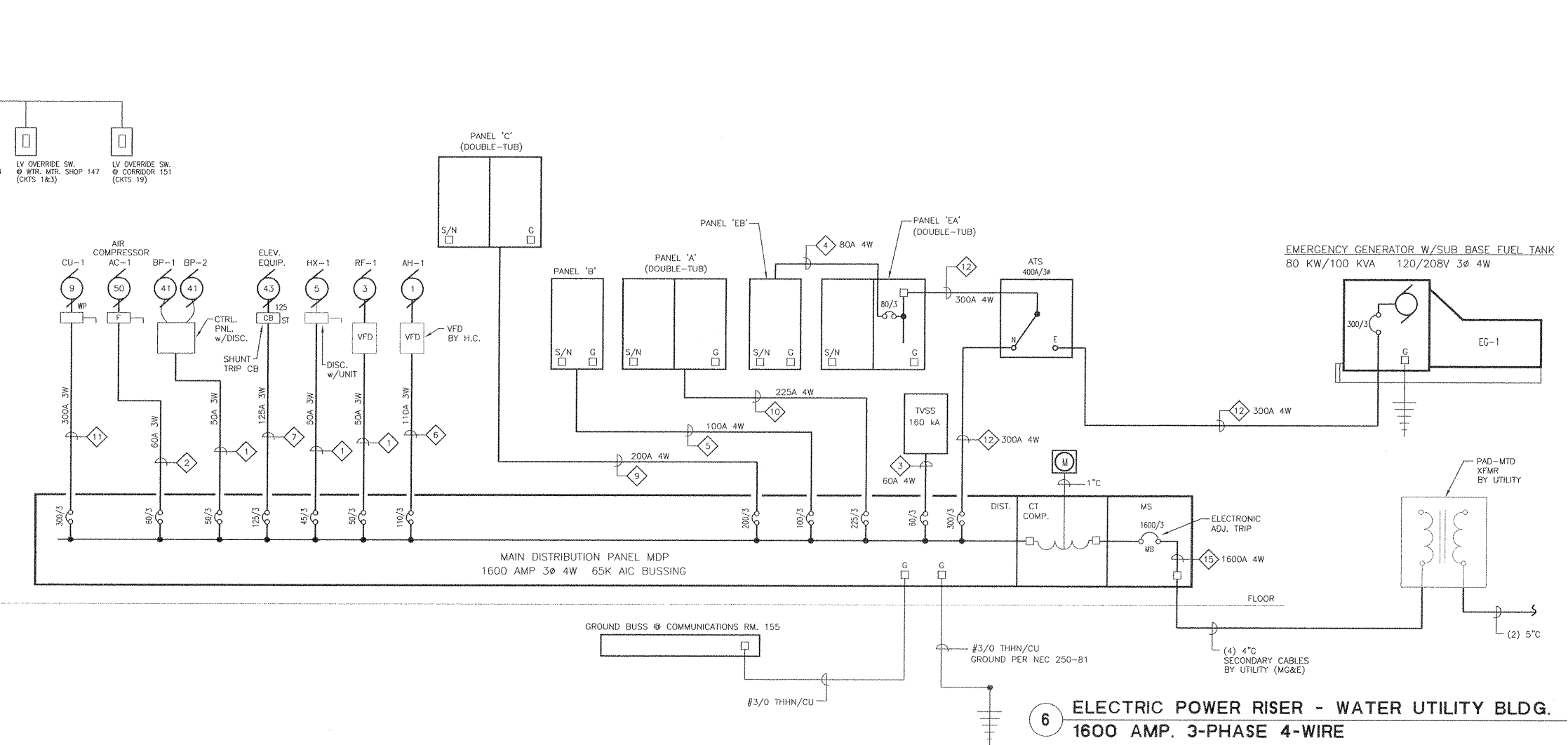


NOTE:
1. CONDUIT & RACEWAY SIZES, WIRING & RELATED REQUIREMENTS TO BE DETERMINED BY ACCESS CONTROL VENDOR.
2. ALL WIRING INCLUDING IN EXIST CONDUIT TO ACCESSIBLE LOCATIONS.
3. ALL FINISH WALL DEVICES ARE FLUSH-MOUNTED.
WP = WEATHER-PROOF ENCLOSURE
VR = VANDAL RESISTANT

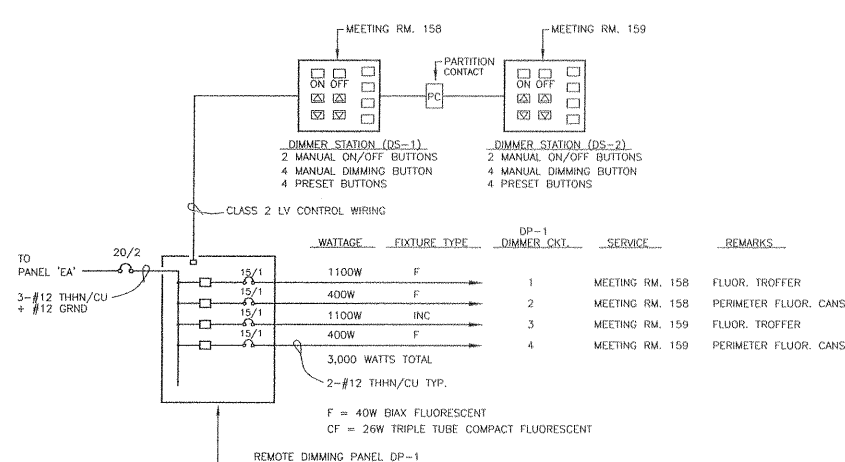
3 ACCESS CONTROL RISER DIAGRAM - WATER UTILITY BLDG
NTS



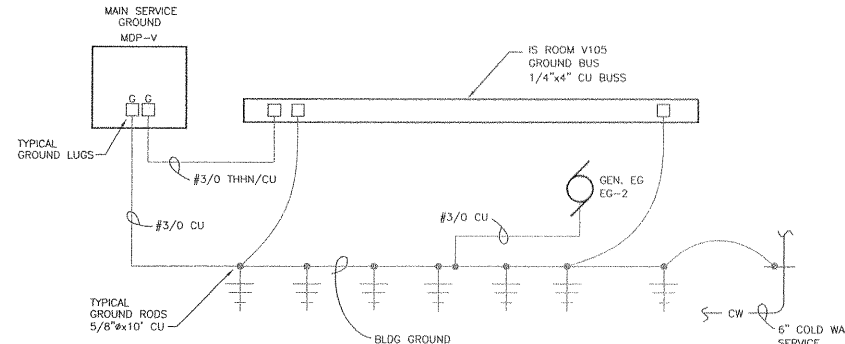
4 PROGRAMMABLE LIGHTING CONTROL PANEL (LCP) SCHEMATIC
NTS



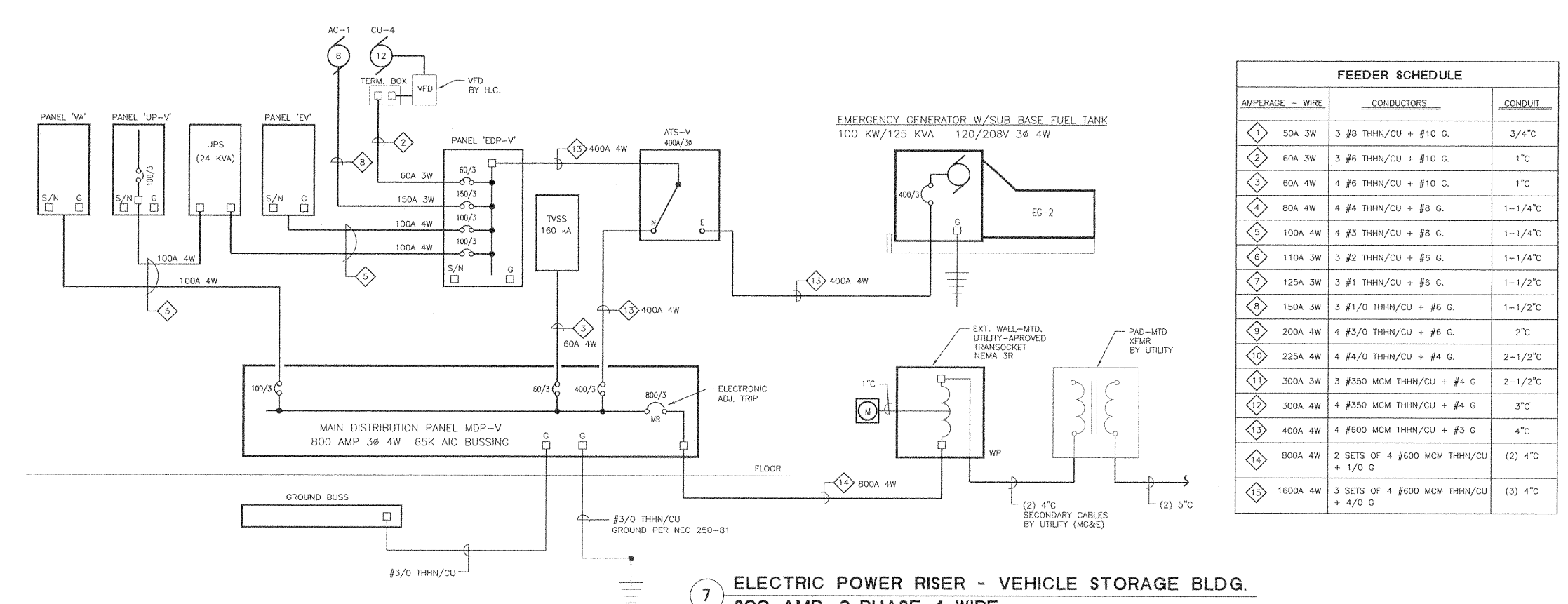
6 ELECTRIC POWER RISER - WATER UTILITY BLDG.
1600 AMP. 3-PHASE 4-WIRE



5 LIGHTING DIMMER CONTROL PANEL RISER (DP-1)
NTS



1 VEHICLE STORAGE BLDG. GROUNDING SCHEMATIC
NTS



7 ELECTRIC POWER RISER - VEHICLE STORAGE BLDG.
800 AMP. 3-PHASE 4-WIRE

FEEDER SCHEDULE			
AMPERAGE - WIRE	CONDUCTORS	CONDUIT	
50A 3W	3 #8 THHN/CU + #10 G.	3/4"	
60A 3W	3 #6 THHN/CU + #10 G.	1"	
60A 4W	4 #6 THHN/CU + #10 G.	1"	
80A 4W	4 #4 THHN/CU + #8 G.	1-1/4"	
100A 4W	4 #3 THHN/CU + #8 G.	1-1/4"	
110A 3W	3 #2 THHN/CU + #6 G.	1-1/4"	
125A 3W	3 #1 THHN/CU + #6 G.	1-1/2"	
150A 3W	3 #1/0 THHN/CU + #6 G.	1-1/2"	
200A 4W	4 #3/0 THHN/CU + #6 G.	2"	
225A 4W	4 #4/0 THHN/CU + #4 G.	2-1/2"	
300A 3W	3 #350 MCM THHN/CU + #4 G.	2-1/2"	
300A 4W	4 #350 MCM THHN/CU + #4 G.	3"	
400A 4W	4 #600 MCM THHN/CU + #3 G.	4"	
800A 4W	2 SETS OF 4 #600 MCM THHN/CU + 1/0 G.	(2) 4"	
1600A 4W	3 SETS OF 4 #600 MCM THHN/CU + 4/0 G.	(3) 4"	