GENERAL:

G-1. DESIGN LOADS AND GOVERNING CODES – 2003 INTERNATIONAL BUILDING CODE.

DESIGN DEAD LOADS:
STEEL JOIST / METAL DECK – 15 P.S.F.
ALLOWANCE FOR SUSPENDED CEILINGS, M.E.P. – 10 P.S.F.
FLOOR LIVE LOADS:
FIRST FLOOR SLAB ON GRADE – 100 PSF.
ROOF LOADS:
CODE PRESCRIBED SNOW LOAD WITH DRIFT EFFECTS
MINIMUM ROOF LIVE LOAD – 30 P.S.F.
LATERAL LOADS:
WIND:
BASIC WIND SPEED – 90 M.P.H. (3 SECOND GUST)
EXPOSURE – C
IMPORTANCE CATEGORY III
SEISMIC:
SEISMIC USE GROUP II
$S_S$ = 17.5%
$S_1$ = 6.4%
SITE CLASS = D
SEISMIC DESIGN CATEGORY = D
LATERAL LOAD RESISTING SYSTEM = LOAD BEARING C.M.U. SHEAR WALLS
RESPONSE MODIFICATION FACTOR = 2½
ROOF DECK DESIGN LOADS:
GROSS UPLIFT = 20 P.S.F.
GROSS UPLIFT AT EDGE ZONES = 20 P.S.F.
GROSS UPLIFT AT CORNER ZONES = 52 P.S.F.
DIAPHRAGM DESIGN LOAD = 250 P.L.F.

G-2. ASSUMED ALLOWABLE SOIL BEARING PRESSURE – 1,500 P.S.F.

G-3. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO CONSTRUCTION. NOTIFY THE RESIDENT ENGINEER OF ANY DISCREPANCY IMMEDIATELY.

G-4. COORDINATE STRUCTURAL SHEETS WITH ALL OTHER SHEETS FOR PIPE SIZES AND LOCATIONS, BEAM POCKETS, GRATING LEDGES, BLOCK OUTS, ELECTRICAL REQUIREMENTS AND ANCHOR BOLTED ATTACHMENTS.

G-5. CONTRACTOR IS RESPONSIBLE FOR ADEQUACY OF TEMPORARY SHORING INCLUDING MASONRY WALL SHORING TO RESIST LATERAL LOADS DURING CONSTRUCTION.

G-6. SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING PLANS FOR ADDITIONAL SLEEVES, INSERTS, ETC.

G-7. ALL SUBTERRANEAN STRUCTURES, UTILITIES, PIPING, ETC. IN THE AREA OF ALL EXCAVATIONS TO BE LOCATED AND MARKED BY CONTRACTOR PRIOR TO EARTH REMOVAL WORK. PIN FLAGS OR PAINT ARE ACCEPTABLE METHODS. CONTRACTOR TO MAINTAIN MARKERS UNTIL ALL EXCAVATION ACTIVITIES HAVE CEASED. COORDINATE WITH UTILITY OWNER.

G-8. THE CONTRACTOR IS SOLEY RESPONSIBLE FOR ALL SITE SAFETY AND ALL ACCIDENTS WHICH RESULT IN DEATH, PERSONAL INJURY OR DAMAGE TO PROPERTY ARISING OUT OF OR IN CONNECTION WITH PERFORMANCE OF THE WORK, WHETHER ADJACENT TO OR AT THE SITE.

G-9. NO PIPES OR SLEEVES FOR MECHANICAL TRADES SHALL PASS THROUGH STRUCTURAL MEMBERS WITHOUT APPROVAL OF THE STRUCTURAL ENGINEER.

G-10. ALL SECTIONS, DETAILS AND NOTES SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS ELSEWHERE UNLESS OTHERWISE SHOWN.

G-11. SHOP DRAWINGS PREPARED BY SUPPLIERS AND SUBCONTRACTORS SHALL BE REVIEWED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTING TO ENGINEER. STRUCTURAL ENGINEER'S REVIEW SHALL BE FOR SIZES AND GENERAL ARRANGEMENT ONLY. NO WORK SHALL BE STARTED WITHOUT SUCH REVIEW.

G-12. ALL ASTM DESIGNATIONS SHALL BE THE LATEST UNLESS NOTED OTHERWISE.

FOUNDATION:

F-1. ALL FOOTING EXCAVATIONS SHALL BE CLEAN AND FREE OF DEBRIS, STANDING WATER AND LOOSE SOIL AND BE INSPECTED AND APPROVED BY THE RESIDENT ENGINEER PRIOR TO PLACEMENT OF CONCRETE.

F-2. IN STRUCTURAL AREAS (WHERE STRUCTURES DERIVE SOME OR ALL SUPPORT FROM FILL-SUPPORTED FOUNDATIONS) AND SLABS-ON-GRADE, FILL SHALL BE COMPACTED TO 98 PERCENT OF STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D-698).

F-3. ALL FILL MATERIAL SHALL BE APPROVED FOR USE IN ADVANCE OF PLACEMENT BY THE RESIDENT ENGINEER. NO FILL SHALL BE PLACED OVER FROZEN, MUDDY OR OTHER DELETERIOUS MATERIAL. LIFT THICKNESS SHALL BE MINIMIZED TO ALLOW EFFICIENT COMPACTION. NO FILL MAY BE PLACED OVER A PREVIOUS LIFT THAT HAS NOT BEEN ADEQUATELY COMPACTED AND HAS BEEN ACCEPTED BY THE RESIDENT ENGINEER.

F-4. BACKFILL AGAINST FOUNDATION WALLS SHALL BE PLACED EVENLY ON EACH SIDE OF THE STRUCTURE TO ACHIEVE GENERALLY BALANCED LOADINGS.

CONCRETE:

C-1. ALL CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4,000 P.S.I. AND SHALL BE AIR-ENTRAINED AS SPECIFIED.

C-2. MATERIAL SUPPLIER SHALL CERTIFY FULL COMPLIANCE OF CONCRETE MIXES WITH ALL SPECIFIED REQUIREMENTS.

C-3. PITCH CONCRETE AS REQUIRED TO ALL FLOOR DRAINS.

C-4. ALL INTERIOR SLABS-ON-GRADE TO BE EXPOSED TO VIEW IN THE FINISHED WORK SHALL RECEIVE A SMOOTH TROWEL FINISH UNLESS OTHERWISE NOTED. ALL EXTERIOR CONCRETE SURFACES (E.G. SIDEWALKS) SHALL BE ROUGHENED BY BROOMING IN THE DIRECTION PERPENDICULAR TO THE MAIN TRAFFIC ROUTE IMMEDIATELY AFTER TROWEL FINISHING IS COMPLETED.

C-5. ALL REINFORCEMENT BARS SHALL CONFORM TO ASTM-A615 GRADE 60.

C-6. ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185.

C-7. PROTECTIVE COVERING FOR REINFORCEMENT BARS SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED ON THE PLANS:

| | |
|---|---|
| FOOTINGS | 3" |
| SLABS | 1" |
| WALLS | 1 1/2" |

C-8. ALL REINFORCEMENT BARS SHALL BE FABRICATED IN ACCORDANCE WITH THE LATEST CRSI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES AND SHALL BE CLEAN AND FREE OF GREASE AND SCALING RUST.

C-9. ALL CONCRETE WORK SHALL CONFORM TO: ACI 318, STANDARD BUILDING CODE FOR REINFORCED CONCRETE AND ACI 301, SPECIFICATION FOR STRUCTURAL CONCRETE FOR BUILDINGS.

C-10. FOR SLABS ON GRADE, UNLESS OTHERWISE DETAILED, PROVIDE 1/2" THICK PREMOLDED JOINT FILLER AND SEALANT TO ISOLATE THE SLAB FROM CONTACT WITH THE STRUCTURES ALONG ITS PERIMETER. SEE FOUNDATION DETAILS.

C-11. PROVIDE CONTROL OR CONSTRUCTION JOINTS IN SLAB ON GRADE AS SHOWN ON THE FOUNDATION PLAN.

C-12. A LEAN CONCRETE MUD SLAB 3" TO 4" THICK SHALL BE USED IN THE EXCAVATION IF THE BOTTOM OF THE EXCAVATION TENDS TO BECOME MUDDY AND SOFT DUE TO CONSTRUCTION ACTIVITY. LEAN CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 2,000 P.S.I.

C-13. ALL CONTROL JOINTS SHALL BE TOOLED OR SAWN, AND FILLED WITH SEALANT.

C-14. LAP ALL BARS AS FOLLOWS UNLESS OTHERWISE NOTED (CLASS B):

| | | | | | |
|---|---|---|---|---|---|
| #3 | 1'-4" | #4 | 1'-4" | #5 | 1'-10" |
| #6 | 2'-7" | #7 | 4'-2" | #8 | 5'-2" |
| #9 | 6'-4" | #10 | 7'-8" | #11 | 9'-0" |

STRUCTURAL STEEL:

S-1. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING REQUIREMENTS UNLESS OTHERWISE NOTED: PLATE & ANGLE STEEL: Fy=36 ksi, ASTM A36.

S-2. ALL DETAILING, FABRICATION, AND ERECTION OF STRUCTURAL STEEL MEMBERS SHALL BE IN ACCORDANCE WITH THE AISC-ASD "MANUAL OF STEEL CONSTRUCTION", NINTH EDITION.

S-3. ALL WELDING SHALL BE DONE IN ACCORDANCE WITH THE LATEST "AWS" SPECIFICATIONS BY CERTIFIED WELDERS. ALL WELDS SHALL BE MADE WITH E70XX ELECTRODES UNLESS NOTED OTHERWISE.

S-4. ANCHOR BOLTS FOR INSTALLED EQUIPMENT SHALL BE IN ACCORDANCE WITH EQUIPMENT SUPPLIER'S REQUIREMENTS.

S-5. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND DIMENSIONS PRIOR TO STRUCTURAL STEEL FABRICATION

S-6. THE CONTRACTOR SHALL FURNISH AND INSTALL MISCELLANEOUS STEEL (CURBS, HANGERS, BRACING, ETC.) AS CALLED FOR OR AS NECESSARY PER ARCHITECTURAL AND MECHANICAL/ELECTRICAL DRAWINGS.

S-7. WHENEVER CONSTRUCTION SCHEDULING REQUIRES THE ERECTION OF STRUCTURAL MEMBERS WHICH BY THEMSELVES WOULD BE CONSIDERED LATERALLY UNSTABLE, ADEQUATE TEMPORARY BRACING SHALL BE PROVIDED

S-8. ALL HEADED STUDS SHALL CONFORM TO ASTM SPECIFICATION A108.

NOTE:
THE IMPLIED PRESENCE OR ABSENCE OF UTILITIES IS NOT TO BE CONSTRUED BY THE OWNER, ENGINEER, CONTRACTOR, OR SUBCONTRACTORS TO BE AN ACCURATE AND COMPLETE REPRESENTATION OF UTILITIES THAT MAY OR MAY NOT EXIST ON THE CONSTRUCTION SITE. BURIED AND ABOVE-GROUND UTILITY LOCATION, IDENTIFICATION, AND MARKING ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. REROUTING, DISCONNECTION, PROTECTION, ETC. OF ANY UTILITIES MUST BE COORDINATED BETWEEN THE CONTRACTOR, UTILITY COMPANY, AND OWNER. SITE SAFETY, INCLUDING THE AVOIDANCE OF HAZARDS ASSOCIATED WITH BURIED AND ABOVE-GROUND UTILITIES, REMAINS THE RESPONSIBILITY OF THE CONTRACTOR.

MASONRY:

M-1. PROVIDE DOWELS BETWEEN FOUNDATIONS AND MASONRY WALLS EQUAL TO SIZE AND SPACING OF THE VERTICAL WALL REINFORCING, UNLESS OTHERWISE NOTED.

M-2. BOND BEAM LINTELS ARE REQUIRED AT ALL MASONRY WALL OPENINGS WITHOUT EXCEPTION.

M-3. SUBMIT REINFORCING SHOP DRAWINGS FOR MASONRY PRIOR TO FABRICATION IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.

M-4. SEE ARCHITECTURAL DRAWINGS FOR ALL MASONRY CONTROL JOINT REQUIREMENTS. PROVIDE CONTROL JOINTS IN MASONRY WALLS AT 20 FEET ON CENTER MAXIMUM UNLESS OTHERWISE NOTED ON THE ARCHITECTURAL DRAWINGS. CONTROL JOINTS SHALL BE LOCATED AT LEAST 32 INCHES FROM THE EDGE OF OPENINGS.

M-5. ALL CONCRETE MASONRY UNITS SHALL HAVE A NET AREA COMPRESSIVE STRENGTH OF 1,900 P.S.I. (MIN.). CONTRACTOR SHALL SUBMIT MATERIAL CERTIFICATES FOR APPROVAL.

M-6. ALL GROUT SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 2,500 P.S.I.

M-7. ALL CELLS WITH VERTICAL REINFORCEMENT SHALL BE GROUTED SOLID.

M-8. ALL LINTEL BEARINGS SHALL BE GROUTED TO THE FOUNDATION.

M-9. REINFORCEMENT TO BE AS CALLED FOR ON THE DRAWINGS AND SCHEDULES, ALL REINFORCEMENT BARS SHALL CONFORM TO ASTM-A615 GRADE 60.

M-10. MASONRY UNITS TO BE PLACED IN ONE – HALF RUNNING BOND, UNLESS OTHERWISE NOTED.

M-11. MASONRY DESIGN BASED ON INSPECTED WORKMANSHIP, f'm = 1,500 P.S.I.

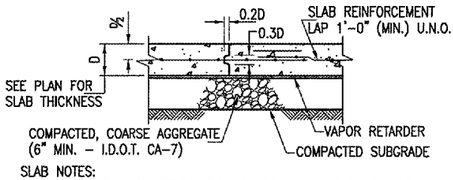
M-12. PROVIDE 10 GAGE BENT PLATES 4" x 4" x 1'-0" LONG @ 3'-0" O.C. EACH SIDE OF THE TOP OF ALL NON-STRUCTURAL MASONRY WALLS. ATTACH TO UNDERSIDE OF METAL ROOF DECK WITH 3 (MIN.) SELF DRILLING, SELF THREADING SCREWS (#12) AS REQUIRED BY THICKNESS OF BASE METAL. MAINTAIN 1" (MIN.) GAP BETWEEN TOP OF MASONRY WALL AND BOTTOM OF STRUCTURE.

M-13. UNLESS OTHERWISE SCHEDULED FOR ADDITIONAL REINFORCEMENT, EXTERIOR WALLS SHALL BE REINFORCED AS FOLLOWS: REINFORCE WITH #5 VERTICAL BARS AT 32" O.C., AND #4 HORIZONTAL BARS AT 48" O.C. WHERE WALL SECTION BETWEEN OPENINGS IS 32" OR LESS, REINFORCE EACH VERTICAL CELL WITH 2-#5 BARS, FULL HEIGHT OF WALL. REINFORCE FIRST VERTICAL CELL ADJACENT TO ANY WALL OPENING WITH 2-#5 BARS, FULL HEIGHT OF WALL. WHERE BOND BEAM LINTELS BEAR ON CMU, REINFORCE BEARING CELL(S) WITH 2-#5 BARS TO LINTEL BEARING AND REINFORCE FIRST VERTICAL CELL AT END OF LINTEL WITH 2-#5 BARS.

METAL DECK:

MD-1. THE MANUFACTURING, DETAILING AND ERECTION OF METAL DECK SHALL BE IN ACCORDANCE WITH THE STEEL DECK INSTITUTE SPECIFICATION.

MD-2. STRUCTURAL DIAPHRAGM ACTION SHALL BE PROVIDED BY THE METAL DECK AND ITS ATTACHMENTS. METAL DECK SHALL BE CONTINUOUS OVER AT LEAST 3 SPANS WITH JOINTS OVER SUPPORTING MEMBERS.




SLAB NOTES:
1. CONSTRUCTION OR CONTRACTION JOINTS SHALL BE PLACED AS INDICATED.
2. CONTRACTION JOINTS MAY BE SAWED JOINTS OR GROOVED JOINTS (.25D MIN. DEPTH). FILL ALL JOINTS WITH SEALANT. SAWING TO BE COMPLETED WITHIN THE FIRST 12 HOURS.

TYPICAL SLAB ON GRADE DETAIL

1 / S0.1

SCALE: NONE

## KEYED NOTES

(1) – 4" CONCRETE SLAB ON GRADE WITH 6x6-W5.0xW5.0 WELDED WIRE FABRIC ON VAPOR BARRIER ON 6" FREE-DRAINING COMPACTED GRANULAR FILL. SEE PLAN FOR TOP OF SLAB ELEVATION. SEE DETAIL 1/S0.1 FOR TYPICAL SLAB CONSTRUCTION JOINT.

(2) – ½" PREFORMED JOINT MATERIAL AND SEALANT.

(3) – OPEN WEB STEEL JOIST. SEE DETAIL 3/S0.1 FOR LOADING DIAGRAM. WELD TO SUPPORTS WITH 3/16" FILLET WELD 2" LONG TYPICAL EACH SIDE. PROVIDE CONTINUOUS TOP AND BOTTOM BRACING / BRIDGING AS REQUIRED PER JOIST SUPPLIER AND S.J.I.

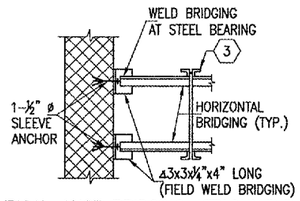
(4) – 8" CONCRETE MASONRY UNIT WITH #5@32" (VERTICAL) AND STANDARD #9 TRUSS TYPE JOINT REINFORCEMENT AT 16" CENTERS AND BOND BEAMS AT 48" CENTERS PER NOTE M-13 (HORIZONTAL).

(5) – 8" CONCRETE MASONRY UNIT BOND BEAM WITH 2-#5 BARS CONTINUOUS.

(6) – 1½" WIDE RIB METAL DECK, 20 GAGE, GALVANIZED. SEE DETAIL 4/S0.1 FOR TYPICAL ROOF DECK ATTACHEMENT.

(7) – SLAB CONSTRUCTION OR CONTRACTION JOINT SEE DETAIL 1/S0.1

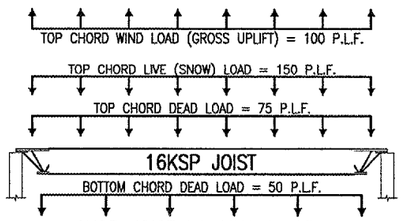
(8) – 10" CONCRETE EQUIPMENT PAD WITH #5@12" (CENTERED).




TYPICAL JOIST BRIDGING ATTACHMENT

2 / S0.1

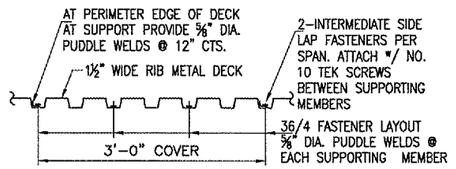
SCALE: NONE




16KSP JOIST LOADING DIAGRAM

3 / S0.1

SCALE: NONE




TYPICAL ROOF DECK ATTACHMENT

4 / S0.1

SCALE: NONE

DI022

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CHARLES R. WALGREEN FIELD

CONSTRUCT REPLACEMENT
AIRFIELD ELECTRICAL VAULT

AIP PROJECT NO. 3-17-0036-B8
IDA PROJECT NO. C73-3548

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GENERAL NOTES AND TYPICAL DETAILS

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S0.1
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