

GENERAL NOTES

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1. THE CONSTRUCTION MANAGER SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS AT THE SITE BEFORE ORDERING ANY MATERIALS AND BEGINNING ANY WORK, THE CONSTRUCTION MANAGER SHALL FIELD SURVEY AND ESTABLISH THE EXISTING BUILDING DIMENSIONS WHERE NEW CONSTRUCTION ADJUTS EXISTING BUILDINGS. THIS FIELD SURVEY SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO THE FOLLOWING: DIMENSIONS OF EXISTING BUILDING FACE INCLUDING ALL FENESTRATIONS, PROJECTIONS, ETC, PLUMBNESS OF WALLS, FLOOR AND ROOF ELEVATIONS, AND ALL OTHER PERTINENT DIMENSIONS. THIS FIELD SURVEY SHALL BE FOR THE USE BY ALL CONTRACTORS AND SHALL BE SUBMITTED TO THE OWNER AND ENGINEER FOR RECORD ONLY.
2. THE CONSTRUCTION MANAGER SHALL BE RESPONSIBLE FOR ALL WORK AND COORDINATION INVOLVED TO PROVIDE ALL OPENINGS SHOWN ON THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS. CONSTRUCTION MANAGER SHALL PROVIDE FRAMING AND ALL CONNECTIONS AND COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS. (NOTE - NOT ALL OPENINGS ARE SHOWN ON THE STRUCTURAL DRAWINGS.)
3. ALL CONTRACTORS SHALL BE RESPONSIBLE TO ENSURE PROPER STORAGE OF MATERIAL IS MAINTAINED SO AS NOT TO CAUSE OVERLOADING OF THE EXISTING OR NEW STRUCTURE DURING PERFORMANCE OF THIS WORK. CONSTRUCTION MANAGER TO COORDINATE.
4. ALL CONTRACTORS SHALL VERIFY AND/OR ESTABLISH ALL EXISTING CONDITIONS AND DIMENSIONS AT THE SITE BEFORE ORDERING ANY MATERIAL AND COMMENCEMENT OF ANY WORK.
5. IF THE EXISTING CONDITIONS DO NOT PERMIT THE INSTALLATION OF THE WORK IN ACCORDANCE WITH THE DETAILS AS SHOWN, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY AND PROVIDE A SKETCH OF THE CONDITION WITH HIS PROPOSED MODIFICATION TO THE DETAILS GIVEN ON THE CONTRACT DOCUMENTS. THE FINAL INSTALLATION SHALL BE DONE AS REQUIRED BY THE ENGINEER.
6. ALL STRUCTURAL STEEL ANGLES ATTACHED TO THE STRUCTURAL STEEL TO SUPPORT THE ARCHITECTURAL BUILDING SKIN MATERIALS (METAL PANEL SYSTEM AND MASONRY, ETC.) NOT PART OF EACH WALL SYSTEM SHOWN ON STRUCTURAL AND/OR ARCHITECTURAL DRAWINGS ARE TO BE PROVIDED UNDER THE METAL FABRICATIONS SECTION 05500 OF THE SPECIFICATIONS. CONTRACTOR MUST COORDINATE DETAILS SHOWN ON STRUCTURAL DRAWINGS WITH ARCHITECTURAL DRAWINGS. CONSTRUCTION MANAGER SHALL BE RESPONSIBLE TO ASSIGN WHO FURNISHES AND INSTALLS ALL SUCH SUPPORTING ANGLES SHOWN ON THE DRAWINGS AND REQUIRED BY THE RESPECTIVE SUBCONTRACTORS AND/OR TRADES.
7. THE CONTRACTOR SHALL VERIFY ALL OPENINGS SHOWN ON THE STRUCTURAL DRAWINGS WITH THE DIMENSIONS AND LOCATIONS SHOWN ON THE ARCHITECTURAL DRAWINGS AS WELL AS DRAWINGS OF OTHER TRADES PRIOR TO CONSTRUCTION.
8. ALL NEW OPENINGS IN EXISTING CONCRETE FLOOR SLABS SHALL BE MADE USING A CONCRETE SAW, WHERE CUTS BECOME ROUGH THEY SHALL BE MADE CLEAN WITH EPOXY CONCRETE TO THE REQUIRED OPENING SIZE.
9. THE CONTRACTOR TO COORDINATE ALL RELATED TRADE ACTIVITY REGARDING SHUT DOWNS, RE-ROUTING, TEMPORARY INSTALLATION, ETC. NECESSARY FOR THIS INSTALLATION WITH OWNER'S REPRESENTATIVE.
10. THE CONSTRUCTION MANAGER SHALL ESTABLISH SPECIFIC MEANS AND METHODS FOR INSTALLATION AND SHALL COORDINATE THE WORK FOR ALL CONTRACTORS AND COMPLY WITH OWNER'S REQUIREMENTS.
11. COORDINATE WITH EQUIPMENT MANUFACTURERS FOR EXACT SIZE, LOCATION, ETC. OF PITS, CAST-IN ITEMS, WALLS, ETC. BEFORE LAYOUT, ORDERING ANY MATERIAL OR COMMENCEMENT OF ANY WORK.

CONCRETE NOTES

1. ALL CONCRETE INCLUDING FOUNDATIONS, WALLS, PIERS, SLABS, BEAMS, PEDESTALS, EQUIPMENT PADS, SIDEWALKS, ETC. SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS. ALL REINFORCING STEEL SHALL BE A615, GRADE 60 ALL MESH SHALL BE ASTM A185.
2. ALL CONCRETE WORK SHALL BE CURED FOR A MINIMUM OF 7 DAYS IN ACCORDANCE WITH ACI STANDARDS.
3. CONTRACTOR SHALL VERIFY THE DIMENSIONS OF AND INSTALL IN THE FORMS ALL SLOTS, SLEEVES, ANCHOR BOLTS, MASONRY ANCHORS, POCKETS, ETC. AS REQUIRED FOR OTHER TRADES.
4. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR CONCRETE EQUIPMENT PADS AND FOUNDATIONS REQUIRED.
5. SEE SECTIONS AND DETAILS FOR ALL EQUIPMENT OPENINGS, DEPRESSIONS, ETC. CONTRACTOR SHALL COORDINATE EQUIPMENT REQUIREMENTS WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING CONTRACTORS.
6. EXPANSION FASTENERS (BOLTS) INSTALLED TO EXISTING OR NEW CONCRETE CONSTRUCTION SHALL NOT BE INSTALLED CLOSER THAN 4 INCHES TO THE EDGE OF THE CONCRETE, AND MUST AVOID ANY REINFORCING.
7. FOR ADDITIONAL REQUIREMENTS, SEE TYPICAL DETAILS AND THE SPECIFICATIONS.
8. ALL EXTERIOR CONCRETE AT THE CONTAINMENT AREAS SHALL BE COATED WITH A POLYMER/VINYL ESTER LINING. SEE SPECIFICATION SECTION 096680.

FOUNDATION NOTES

1. ALL FOOTINGS SHALL BEAR ON UNDISTURBED STRATUM HAVING A MINIMUM ALLOWABLE BEARING PRESSURE OF 2000 PSF, VERIFIED IN THE FIELD BY A GEOTECHNICAL ENGINEER HIRED BY THE OWNER, UNLESS OTHERWISE NOTED.
2. ALL FOUNDATION ELEMENTS SHALL BE CENTERED ON THE COLUMN CENTERLINES, UNLESS OTHERWISE NOTED.
3. THE CONTRACTOR SHALL PROVIDE ALL DEWATERING AS REQUIRED DURING THE EXCAVATION AND CONSTRUCTION OF THE FOUNDATION WORK INCLUDING PREVENTIVE MEASURES RELATED TO EXCAVATION STABILITY, SEE SPECIFICATIONS.
4. BOTTOM OF NEW FOOTING ELEVATION INDICATED THIS (...) IN PLAN. BOTTOM OF EXISTING FOOTING ELEVATION INDICATED THIS (...) IN PLAN.
5. ALL EXISTING UNDERGROUND UTILITIES IN THE AREA OF THE NEW CONSTRUCTION SHALL BE RELOCATED UNLESS OTHERWISE NOTED ON THE DRAWINGS BEFORE ANY NEW FOUNDATION WORK IS STARTED. EXISTING SITE ELEMENTS AND UTILITIES, MANHOLES, CATCH BASINS, ETC. ADJACENT TO NEW CONSTRUCTION EXCAVATIONS SHALL BE PROTECTED BY SHEETING AND/OR SHORING. THIS PROTECTION SHALL BE PROVIDED AND DESIGNED BY THE CONSTRUCTION MANAGER AND HIS REGISTERED PROFESSIONAL ENGINEER, LICENSED IN THE COMMONWEALTH OF VIRGINIA WHO SHALL BE TOTALLY RESPONSIBLE FOR ITS DESIGN AND INSTALLATION.
6. THE CONTRACTOR SHALL COORDINATE ALL FOUNDATION WORK WITH ALL UNDERGROUND UTILITIES. ALL NEW UNDERGROUND UTILITIES OR PIPES SHALL NOT BE PLACED BELOW SPREAD FOOTINGS. IF ANY SUCH CONDITION OCCURS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND DROP THE BOTTOM OF FOOTING TO CLEAR THE PIPE.
7. CONTRACTOR SHALL COORDINATE ALL FOUNDATION WORK WITH ALL UNDERGROUND UTILITIES. EXTREME CARE SHALL BE TAKEN DURING EXCAVATION AND CONSTRUCTION OF NEW FOUNDATION WORK SO AS NOT TO DISTURB THE EXISTING CONSTRUCTION AND UTILITIES.
8. BACKFILL AGAINST WALLS SHALL FOLLOW THE CRITERIA NOTED. AS A MINIMUM, WALLS MUST HAVE REACHED THEIR 28 DAY DESIGN STRENGTH OR BE IN PLACE 14 DAYS, WHICHEVER IS LONGER. FOR EXTERIOR AND INTERIOR WALLS, BACKFILL SHALL BE PLACED EVENLY ON BOTH SIDES TO THE FLOOR SUBGRADE LEVEL. EQUIPMENT USED TO COMPACT THE BACKFILL WILL BE SUCH AS TO LIMIT PRESSURES ON THE WALLS TO THE DESIGN VALUES AND TO BE REVIEWED AND ACCEPTED BY THE OWNER'S GEOTECHNICAL ENGINEER.
9. PROVIDE STANDARD STEEL PIPE SLEEVES FOR ALL PIPES PASSING THROUGH NEW CONCRETE WALLS AND NEATLY CORED HOLES A MINIMUM OF ONE PIPE SIZE LARGER THAN NEW PIPE THROUGH EXISTING CONCRETE WALLS WHERE SHOWN ON THE DRAWINGS. COORDINATE CORED HOLES WITH SEALANT, ETC. REQUIREMENTS WITH RELATED SPECIFICATIONS. SEE TYPICAL DETAIL ON DRAWING S5.6.
10. WHERE THE EXCAVATION FOR SERVICE LINE TRENCHES IS LOWER THAN AND CLOSER THAN A 1.5H:1V SLOPE TO THE BOTTOM OF A NEW OR EXISTING COLUMN OR WALL FOOTING, BACKFILL THE EXCAVATION WITH LEAN MIX CONCRETE. TOP OF FILL TO BE ON A 1.5H:1V SLOPE FROM BOTTOM OF ADJACENT FOUNDATIONS.
11. THE TEST BORINGS FOR THIS PROJECT WERE PERFORMED BY:
GEOCONCEPTS ENGINEERING, INC
18955 HIGHLAND VISTA DRIVE
SUITE 170
ASHBURN, VA 20147
A COPY OF THE SOILS AND FOUNDATION INVESTIGATION ANALYSIS REPORT IS INCLUDED IN THE SPECIFICATION FOR INFORMATION ONLY.
12. FOR ADDITIONAL REQUIREMENTS SEE TYPICAL DETAILS AND THE SPECIFICATIONS.

MASONRY WALL NOTES

1. ALL CONCRETE MASONRY UNITS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 1900 PSI WITH TYPE S MORTAR. (fm = 1500 PSI)
2. PROVIDE TEMPORARY BRACING FOR MASONRY WALLS DURING ENTIRE ERECTION OF WALLS AND UNTIL THE MORTAR HAS DEVELOPED ADEQUATE STRENGTH. TEMPORARY BRACES SHALL NOT BE REMOVED UNTIL AT LEAST 7 DAYS HAVE ELAPSED SINCE THE WALL WAS COMPLETELY ERECTED.
3. ALL 8" MASONRY WALLS SHALL BE REINFORCED WITH #5@32" VERTICAL, MINIMUM, UNLESS NOTED OTHERWISE. DOWEL ALL MASONRY WALLS TO CONCRETE SLABS. DOWEL SIZE AND SPACING TO MATCH VERTICAL WALL REINFORCING.
4. PROVIDE CONTINUOUS BOND BEAMS AT THE FOLLOWING LOCATIONS:
 - WHERE INDICATED IN SECTIONS AND DETAILS ON THE DRAWINGS.
 - AT THE TOP OF ALL MASONRY WALLS (WITHIN TOP 2 COURSES)
 - AT EVERY 10'-0" O.C. OF MASONRY WALL HEIGHT.
 - AT THE TOP OF PARAPETS
 - AT THE TOP OF ALL MASONRY WALLS BELOW STRIP WINDOW SILLS.REINFORCE BOND BEAMS AS INDICATED, OR WITH 2-#5 CONTINUOUS MINIMUM.
5. FILL MASONRY WALL CORES CONTAINING REINFORCING WITH FINE GROUT WITH A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS. ALSO FILL CMU CORES UNDER COPING AND PRECAST BEARING (MAXIMUM TWO COURSES).
6. FOR ADDITIONAL REQUIREMENTS SEE TYPICAL DETAILS AND THE SPECIFICATIONS.

STRUCTURAL STEEL NOTES

1. ALL STRUCTURAL STEEL WIDE FLANGE MEMBERS TO BE ASTM A992 GRADE 50. ALL STRUCTURAL STEEL BASE PLATES AND MOMENT PLATES TO BE ASTM A572 GRADE 50. ALL HOLLOW STRUCTURAL STEEL MEMBERS SHALL BE ASTM A500 GRADE B. ALL STRUCTURAL STEEL ANGLES, CHANNELS AND OTHER PLATES TO BE A36.
2. THE STRUCTURAL STEEL CONTRACTOR SHALL VERIFY IN THE FIELD BY A SURVEY ALL EXISTING CONDITIONS CONNECTED WITH HIS WORK INCLUDING ANCHOR BOLT LOCATIONS PRIOR TO ORDERING ANY MATERIAL OR COMMENCEMENT OF ANY WORK.
3. THE STRUCTURAL STEEL CONTRACTOR SHALL PROVIDE SATISFACTORY BRACING OF THE EXISTING AND NEW STEEL FRAME UNTIL ALL NEW FRAMING AND THE METAL DECK IS ERECTED AND FINAL CONNECTIONS ARE COMPLETE AND THE CONCRETE SLABS ON METAL DECK ARE PLACED.
4. ALL STRUCTURAL STEEL MEMBERS, I.E. SHELF ANGLES, CHANNELS, ETC. WHICH DIRECTLY SUPPORT THE ARCHITECTURAL BUILDING SKIN SHALL BE FABRICATED AND ERECTED TO WITHIN 3/16" OF THE THEORETICAL SUPPORT POSITION SHOWN ON THE CONTRACT DOCUMENTS. ALL SUCH MEMBERS WHICH BUTT SHALL HAVE THE SAME POSITION AT THE BUTT LINE TO ENSURE A CONTINUOUS SURFACE FOR SUPPORT ACROSS THE BUTT LINE.
5. ALL SHIMS USED IN POSITIONING THE STRUCTURAL STEEL FOR SUPPORTING THE ARCHITECTURAL BUILDING SKIN SHALL BE FULL BEARING STEEL FINGER SHIMS AND UPON FINAL ALIGNMENT ALL SUCH SHIMS SHALL BE TACK WELDED TOGETHER AS WELL AS TO THE CONFINING STEEL TOP AND BOTTOM.
6. ALL STRUCTURAL STEEL DIRECTLY EXPOSED TO THE WEATHER SHALL BE HOT DIPPED GALVANIZED AND TOUCHED UP WITH ZRC WHERE ABRADED OR AFTER WELDING (SEE SPECIFICATIONS).
7. MAIN SUPPORT MEMBERS FOR THE METAL DECK ARE SHOWN ON THE CONTRACT DRAWINGS. DURING PREPARATION, SUBMISSION, AND REVIEW OF SHOP DRAWINGS ANY ADDITIONAL SUPPORT OR ATTACHMENT DETAILS REQUIRED TO ESTABLISH THE METAL DECK AT THE REQUIRED ELEVATION SHALL BE PROVIDED BY THE STRUCTURAL STEEL CONTRACTOR AT NO ADDITIONAL COST.
8. STRUCTURAL STEEL ERECTOR: NOTE THAT SEQUENCE OF ERECTION TO BE COORDINATED AS REQUIRED FOR AREAS SUPPORTED BY CANTILEVERS. ALL MOMENT CONNECTIONS AND/OR OTHER CONNECTIONS FOR CANTILEVERED FRAMING SHALL HAVE TEMPORARY BRACING AND SUPPORT OF CANTILEVER FRAMING UNTIL ALL FINAL CONNECTIONS ARE COMPLETED AND INSPECTED BY THE TESTING AND INSPECTION AGENCY, AND THE RESULTS ACCEPTED PRIOR TO ERECTING FRAMING SUPPORTED BY THE CANTILEVER ENDS.
9. ALL MASONRY AND BRICK ANCHORS SHALL BE SHOP WELDED TO THE STRUCTURAL STEEL FRAMING AND COLUMNS BY THE STRUCTURAL STEEL CONTRACTOR. SEE SPECIFICATIONS FOR SPACING ETC.
10. ANY FIELD WELDING TO ANY EXISTING JOIST OR OTHER THIN MEMBER SHALL BE PERFORMED WITH EXTREME CARE SO AS TO AVOID EXCESSIVE DAMAGE TO THE BASE METAL.
11. FOR ADDITIONAL REQUIREMENTS, SEE TYPICAL DETAILS AND THE SPECIFICATIONS.

METAL DECK NOTES

1. ALL METAL DECK SHALL CONFORM TO THE REQUIREMENTS OF THE STEEL DECK INSTITUTE (SDI).
2. FOR ADDITIONAL INFORMATION SEE THE SPECIFICATIONS.

SPECIAL INSPECTION NOTES

1. SPECIAL INSPECTIONS ARE REQUIRED IN ACCORDANCE WITH IBC SECTION 1704
 - A. INSPECTION OF EARTHWORK
 - B. INSPECTION OF CAST IN PLACE CONCRETE / REINFORCEMENT
 - C. INSPECTION OF STRUCTURAL STEEL
 - D. INSPECTION OF REINFORCED MASONRY
2. SEE SPECIFICATION SECTION 014100 FOR ADDITIONAL INSPECTION REQUIREMENTS.

METAL PANEL SYSTEM NOTES

1. METAL PANEL SYSTEM MANUFACTURER SHALL COORDINATE, DESIGN, AND PROVIDE ALL GIRTS, TUBES AND OTHER SUPPORTS REQUIRED TO PROPERLY SUPPORT AND ATTACH THE METAL PANEL SYSTEM TO THE SUPERSTRUCTURE. DESIGN SHALL BE PERFORMED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE COMMONWEALTH OF VIRGINIA.
2. METAL PANEL SYSTEM MANUFACTURER SHALL MAKE ALLOWANCES FOR ALL BUILDING TOLERANCES BEAM DEFLECTIONS AND TEMPERATURE EXPANSIONS WITH ALL CONNECTIONS AND SHALL COORDINATE WITH OTHER WALL SYSTEM CONTRACTORS AS REQUIRED.
3. METAL PANEL SYSTEM MANUFACTURER IS RESPONSIBLE TO PROVIDE A BOND BREAKER MATERIAL BETWEEN ALL CONNECTIONS OF ALUMINUM AND STRUCTURAL STEEL.
4. THE DESIGN AND DETAILING OF THE METAL PANEL SYSTEM IS THE COMPLETE RESPONSIBILITY OF THE METAL PANEL SYSTEM MANUFACTURER. THE METAL PANEL SYSTEM SHALL BE DESIGNED TO MINIMIZE DEFLECTIONS AS REQUIRED BY THE SPECIFICATIONS. SEE ARCHITECTURAL DRAWINGS FOR LOCATION AND DIMENSIONS.
5. FOR ADDITIONAL REQUIREMENTS, SEE TYPICAL DETAILS AND THE SPECIFICATIONS.

IBC 2006

DESIGN LIVE LOADS

ROOF DESIGN LIVE LOADS

PROCESS SUPPORT BUILDING (PSB)

TYPICAL ROOF 30 PSF

GUARDHOUSE

SEE SPECIFICATIONS FOR LOADING CRITERIA

SNOW LOADS

GROUND SNOW LOAD, Pg=15 PSF
FLAT ROOF SNOW LOAD, Pf=15 PSF
SNOW EXPOSURE FACTOR, Ce=1.0
SNOW LOAD IMPORTANCE FACTOR, I=1.0
THERMAL FACTOR, Ct=1

LATERAL LOADS - WIND

WIND LOAD DESIGN PARAMETERS:

BASIC WIND SPEED, V=110 MPH
WIND LOAD IMPORTANCE FACTOR, I=1.0
WIND EXPOSURE, B
INTERNAL PRESSURE COEFFICIENT, GCpi=±0.18

PSB AND GUARDHOUSE

WIND LOAD ON STRUCTURAL FRAME:

HEIGHT, 0 FEET TO 15 FEET 19 PSF

WIND LOADS ON COMPONENTS AND CLADDING:

COMPONENT LOCATION **
TYPICAL WALL 24 PSF
WALL CORNERS 30 PSF
TYPICAL ROOF 22 PSF
ROOF PERIMETER 37 PSF
ROOF CORNER 55 PSF
PARAPET 71 PSF

LATERAL LOADS - SEISMIC

SEISMIC LOAD INFORMATION FOR STRUCTURAL FRAME:

SEISMIC OCCUPANCY CATEGORY II
SEISMIC IMPORTANCE FACTOR, I=1.00
SHORT PERIOD MAPPED SPECTRAL RESPONSE ACCELERATION Ss=0.127
1-SECOND MAPPED SPECTRAL RESPONSE ACCELERATION S1=0.05
LONG PERIOD TRANSITION PERIOD Tl=8
SITE CLASS D
SHORT PERIOD SPECTRAL RESPONSE COEFFICIENT Sps=0.135
1-SECOND PERIOD SPECTRAL RESPONSE COEFFICIENT S1s=0.08
SEISMIC DESIGN CATEGORY, B
ANALYSIS PROCEDURE
RESPONSE MODIFICATION FACTOR, EQUIV. LAT. FORCE R=3*

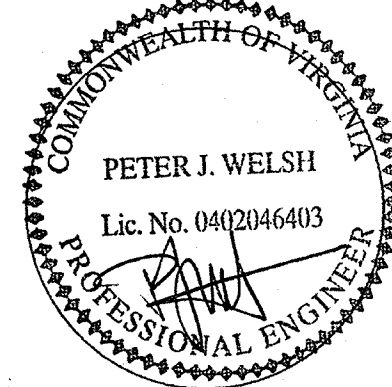
PSB

BASIC SEISMIC-FORCE-RESISTING SYSTEM OSMF
SEISMIC RESPONSE COEFFICIENT Cs=0.045
APPROX. DESIGN BASE SHEAR 5 KIPS

* LATERAL SYSTEM NOT REQUIRED TO BE SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE IN ACCORDANCE WITH AISC 341 OR AISI LATERAL.

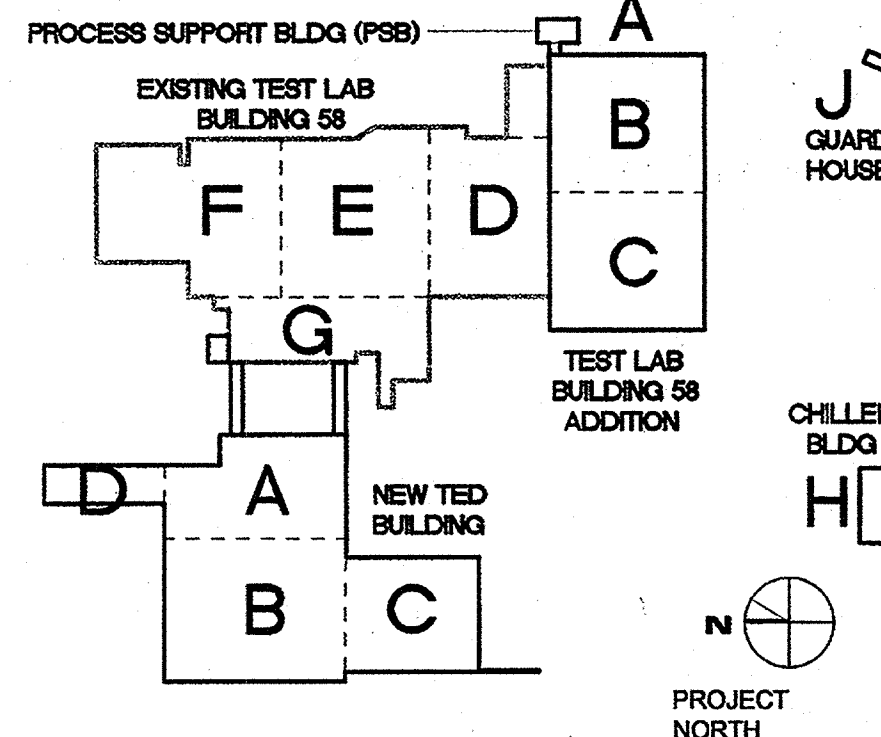
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Structural Leader
Structural Designer
Structural Designer

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TECHNICAL ENGINEERING & DEVELOPMENT FACILITY (TEDF)

12000 JEFFERSON AVENUE, NEWPORT NEWS, VIRGINIA 23606

REV	ZONE	DESCRIPTION	APPR.	DATE

REVISIONS			
FACILITY USERS		FACILITIES & LOGISTICS	
APPROVED	DATE	DESIGNER	DATE
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APPROVED	-	DRAWN	-
-	-	JRM	-
APPROVED	-	CHECKED	-
-	-	-	-
APPROVED	-	APPROVED	-
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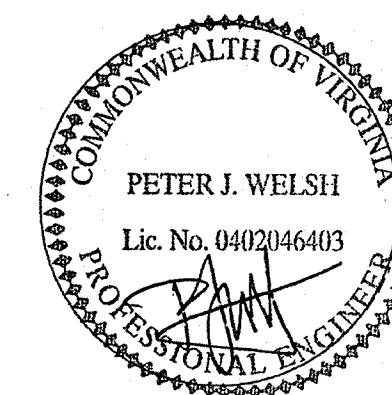
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TITLE: GENERAL NOTES
ISSUE NO.1

SCALE	DRAWING NUMBER	SHEET	REV
N.T.S.	100011-116-S1-STE	SG.5	-

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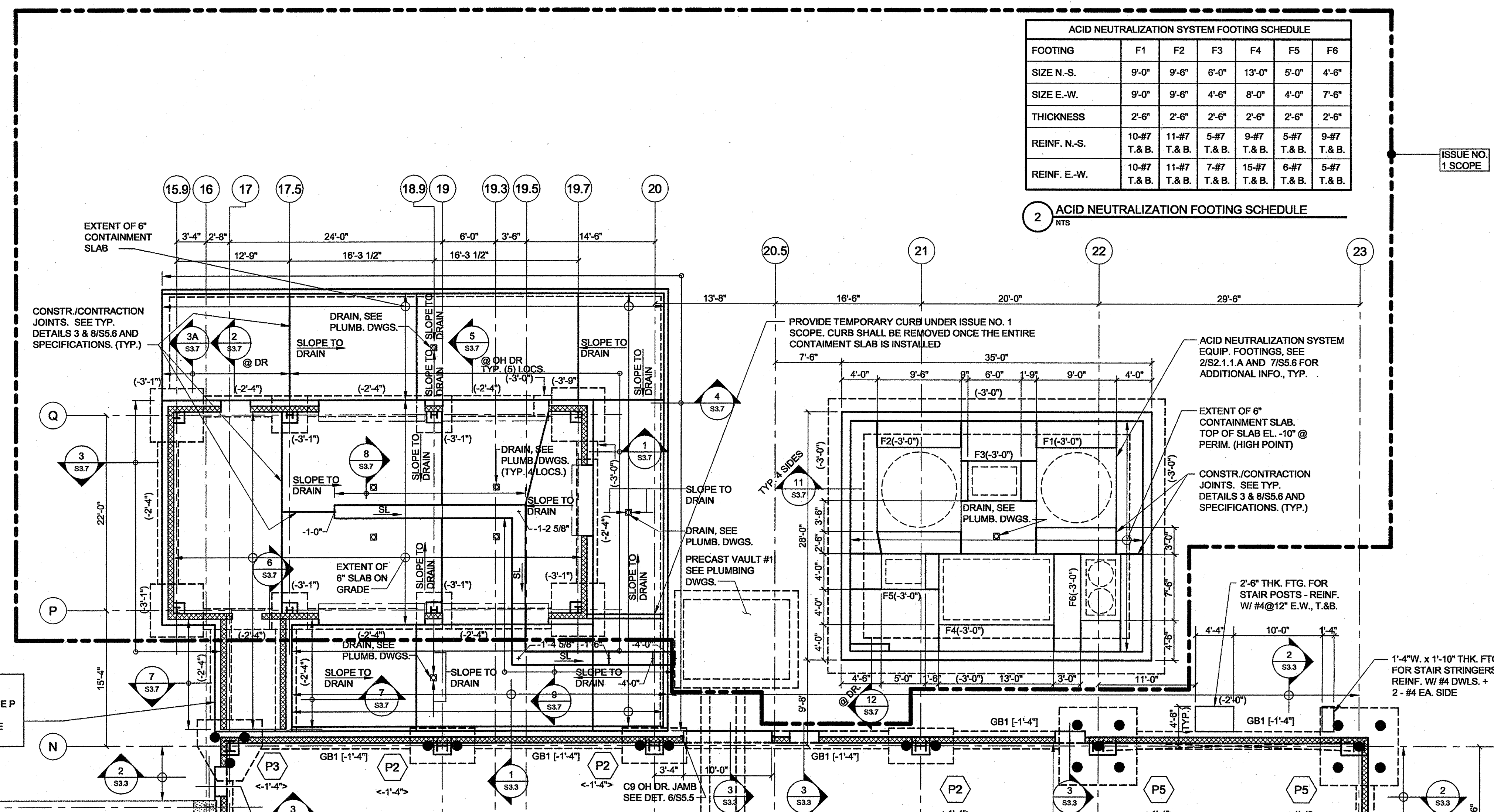


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ACID NEUTRALIZATION SYSTEM FOOTING SCHEDULE						
FOOTING	F1	F2	F3	F4	F5	F6
SIZE N-S.	9'-0"	9'-6"	6'-0"	13'-0"	5'-0"	4'-6"
SIZE E-W.	9'-0"	9'-6"	4'-6"	8'-0"	4'-0"	7'-6"
THICKNESS	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"	2'-6"
REINF. N-S.	10-#7 T.&B.	11-#7 T.&B.	5-#7 T.&B.	9-#7 T.&B.	5-#7 T.&B.	9-#7 T.&B.
REINF. E-W.	10-#7 T.&B.	11-#7 T.&B.	7-#7 T.&B.	15-#7 T.&B.	6-#7 T.&B.	5-#7 T.&B.

2 ACID NEUTRALIZATION FOOTING SCHEDULE
NTS



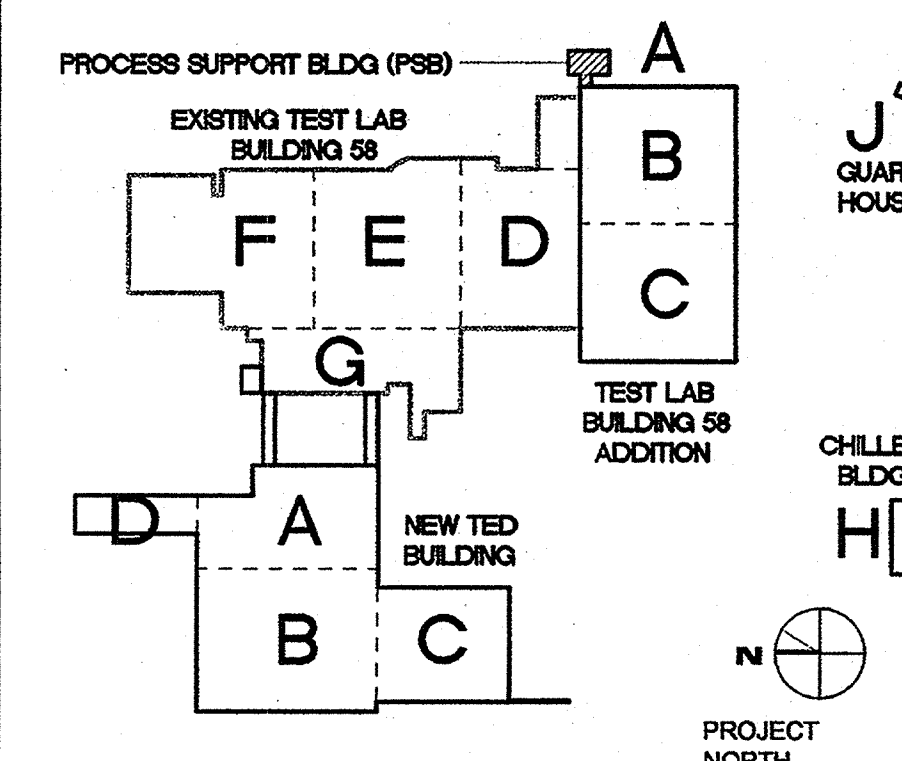
NOTE:
CONNECTOR CONSTRUCTION (EXTENT OF SECTION 7/S3.7) AND CONTAINMENT SLAB WEST OF COLUMN LINE P SHALL BE CONSTRUCTED AFTER THE TEST LAB ADDITION IS BUILT. EXCLUDE THIS WORK FROM ISSUE NO. 1 SCOPE.

1 PSB FOUNDATION & FIRST FLOOR PLAN - SEGMENT A
1/8" = 1'-0"

(UNLESS NOTED OTHERWISE)

- TOP OF FLOOR SLAB ELEVATION 0'-0". ACTUAL ELEVATION 40'-0". NEW SLAB TO MATCH EXISTING SLAB ELEVATION OF THE EXISTING TEST LAB BUILDING. SEE ARCH. DWGS. FOR SLAB SLOPES AND SPOT ELEVATIONS NOT SHOWN.
- PROVIDE A 6 INCH NORMAL WEIGHT CONCRETE SLAB ON GRADE REINFORCED WITH #4 @ 6" O.C., E.W. (TYP.)
- EXTERIOR CONTAINMENT CONCRETE SLABS SHOWN ON PLAN TO BE A 6 INCH CONCRETE SLABS ON GRADE REINFORCED WITH #4 @ 6" O.C., E.W.. ALL CONCRETE IN THIS AREA TO BE COATED WITH A POLYMER/VINYL ESTER LINING. SEE SPECIFICATION SECTION 096600.

- BOTTOM OF FOOTING ELEVATION INDICATE THUS (...) IN PLAN.
- SEE DRAWING SG.5 FOR ADDITIONAL NOTES AND DRAWING S5.6 FOR TYPICAL DETAILS.
- SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.



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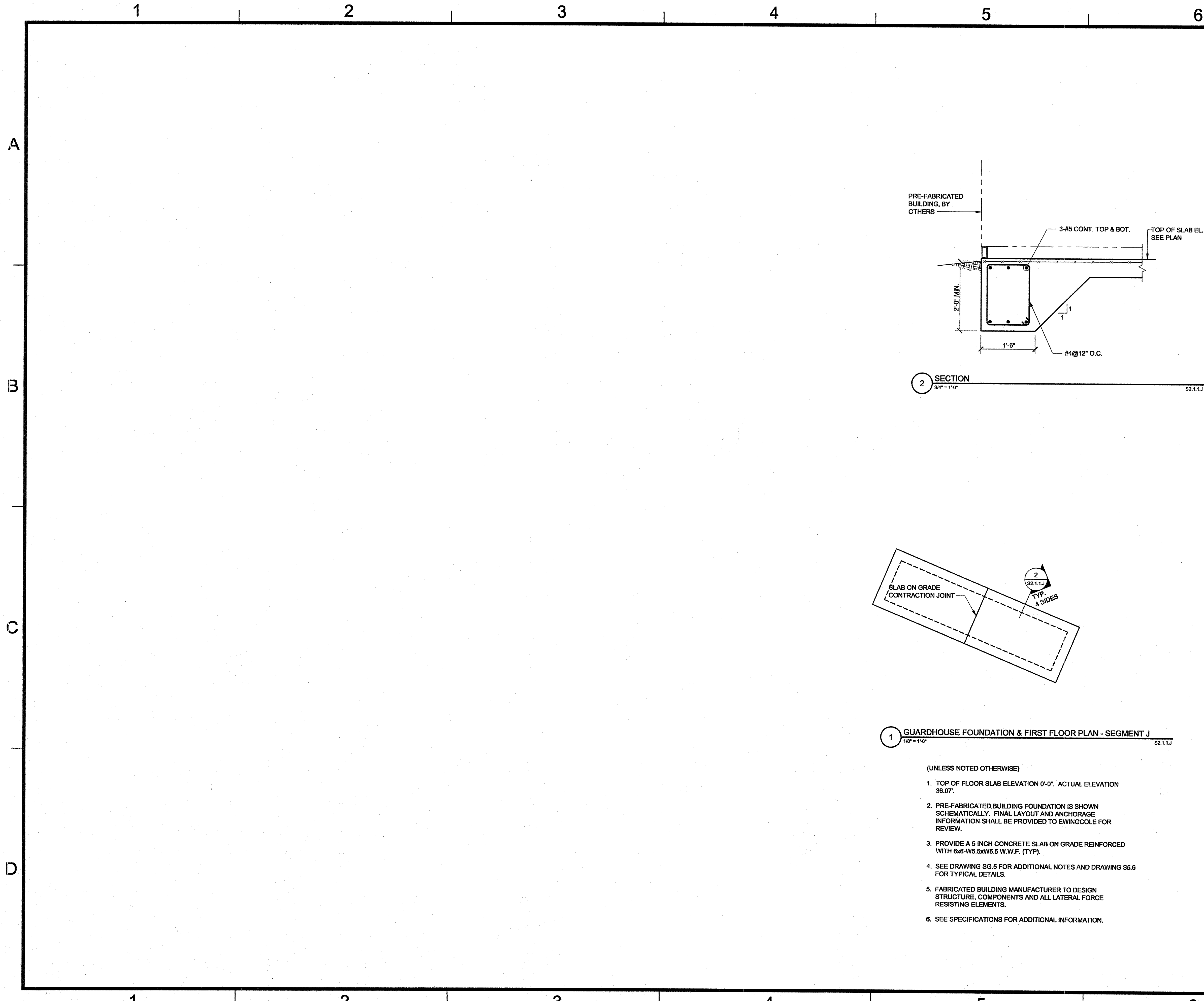
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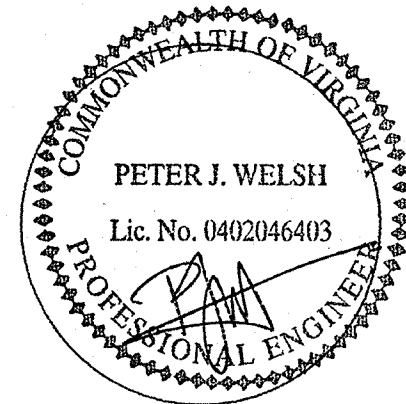
TITLE:
**PSB FOUNDATION & FRAMING PLAN
- SEGMENT A**

SCALE	DRAWING NUMBER	SHEET	REV
AS NOTED	100011-117-S2-SITE	S2.1.1A	-



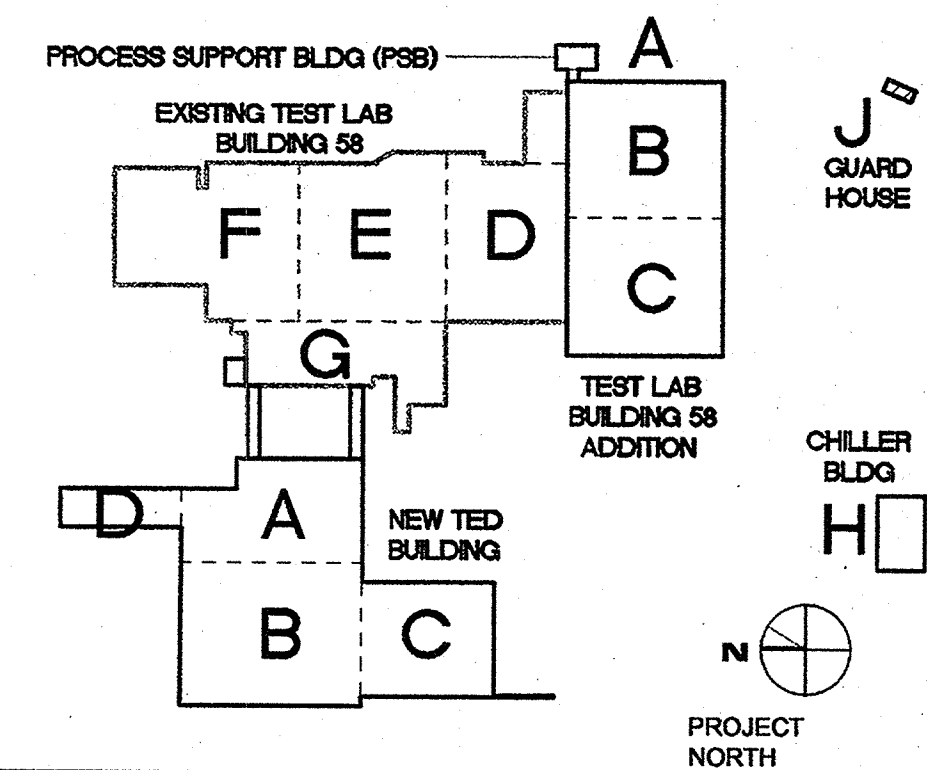
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APPROVED	DATE	CHECKED	DATE
APPROVED	DATE	APPROVED	DATE

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TITLE:
**GUARDHOUSE BUILDING PLANS AND SECTIONS
- SEGMENT J**

SCALE	DRAWING NUMBER	SHEET	REV
AS NOTED	100011-118-S3-SITE	S2.1.1.J	-

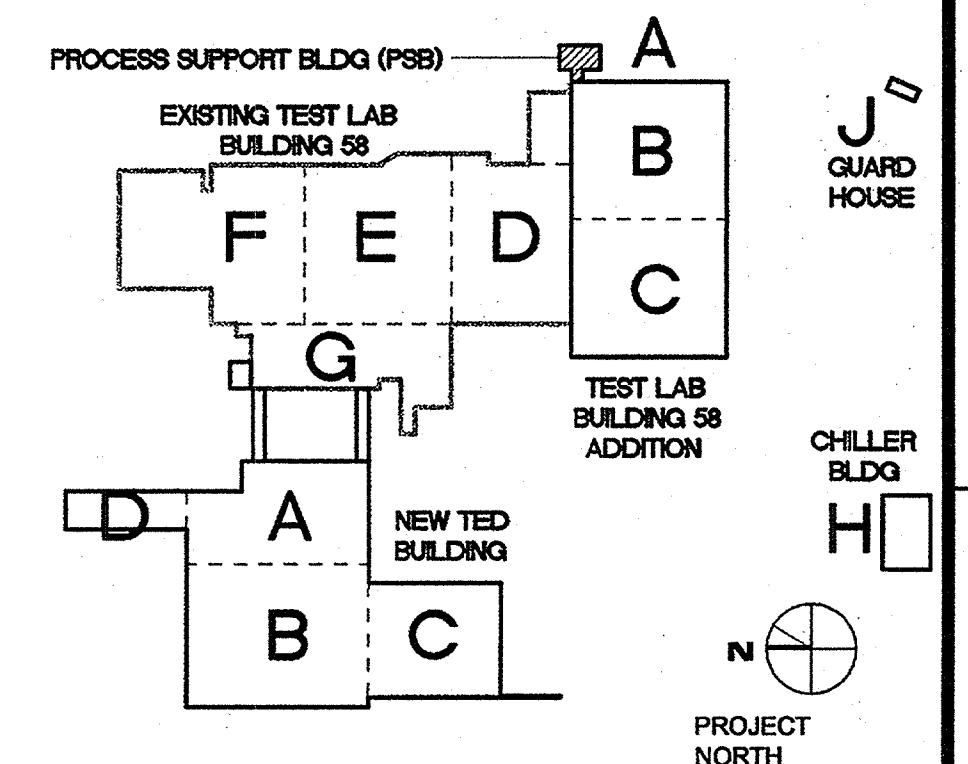


2 PSB COLUMN SCHEDULE
NO SCALE



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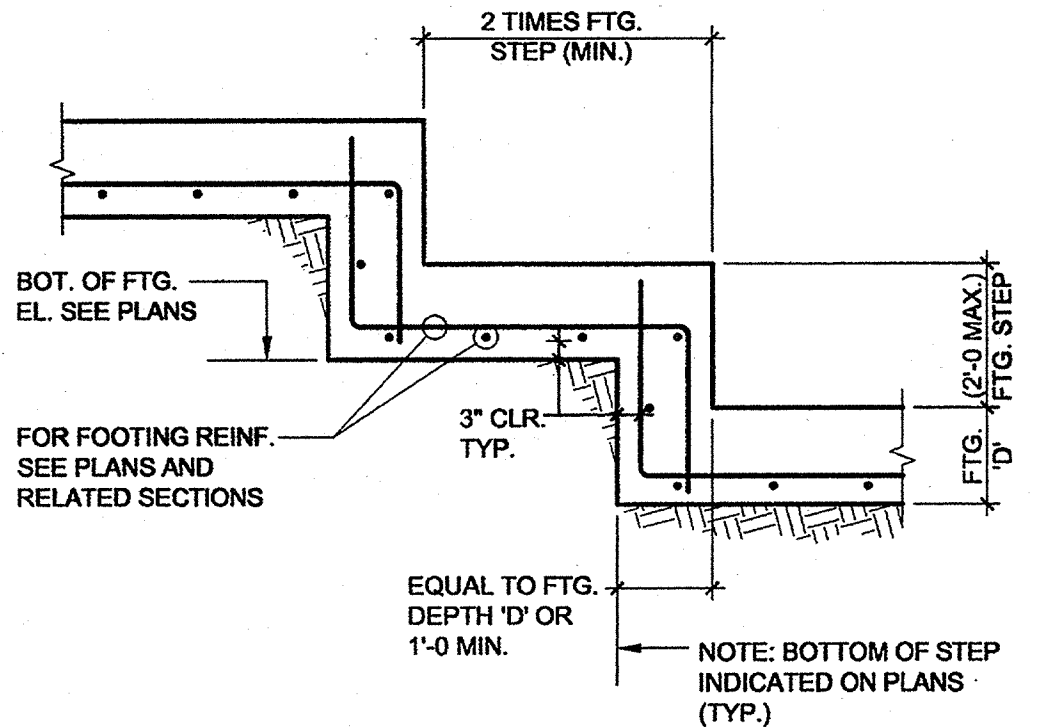
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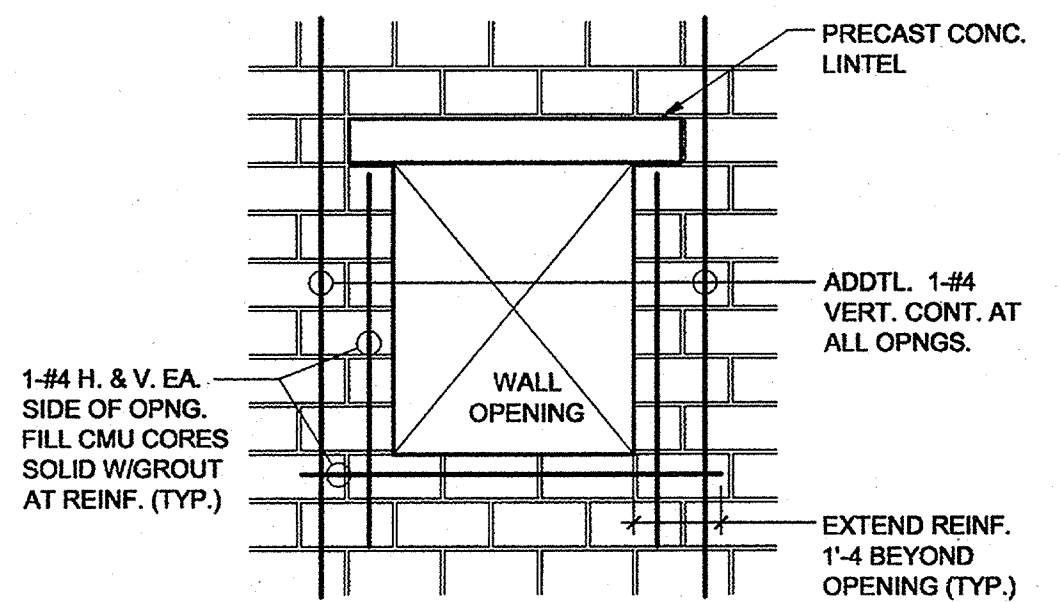
TITLE: PSB ROOF FRAMING PLAN AND DETAILS
- SEGMENT A

SCALE	DRAWING NUMBER	SHEET	REV
AS NOTED	100011-119-S4-STE	S2.1.2.A	-

NOTE:
1. COORDINATE STEP LOCATION WITH PLANS. FIRST STEP FROM COLUMN FOOTING MINIMUM 2'-0".

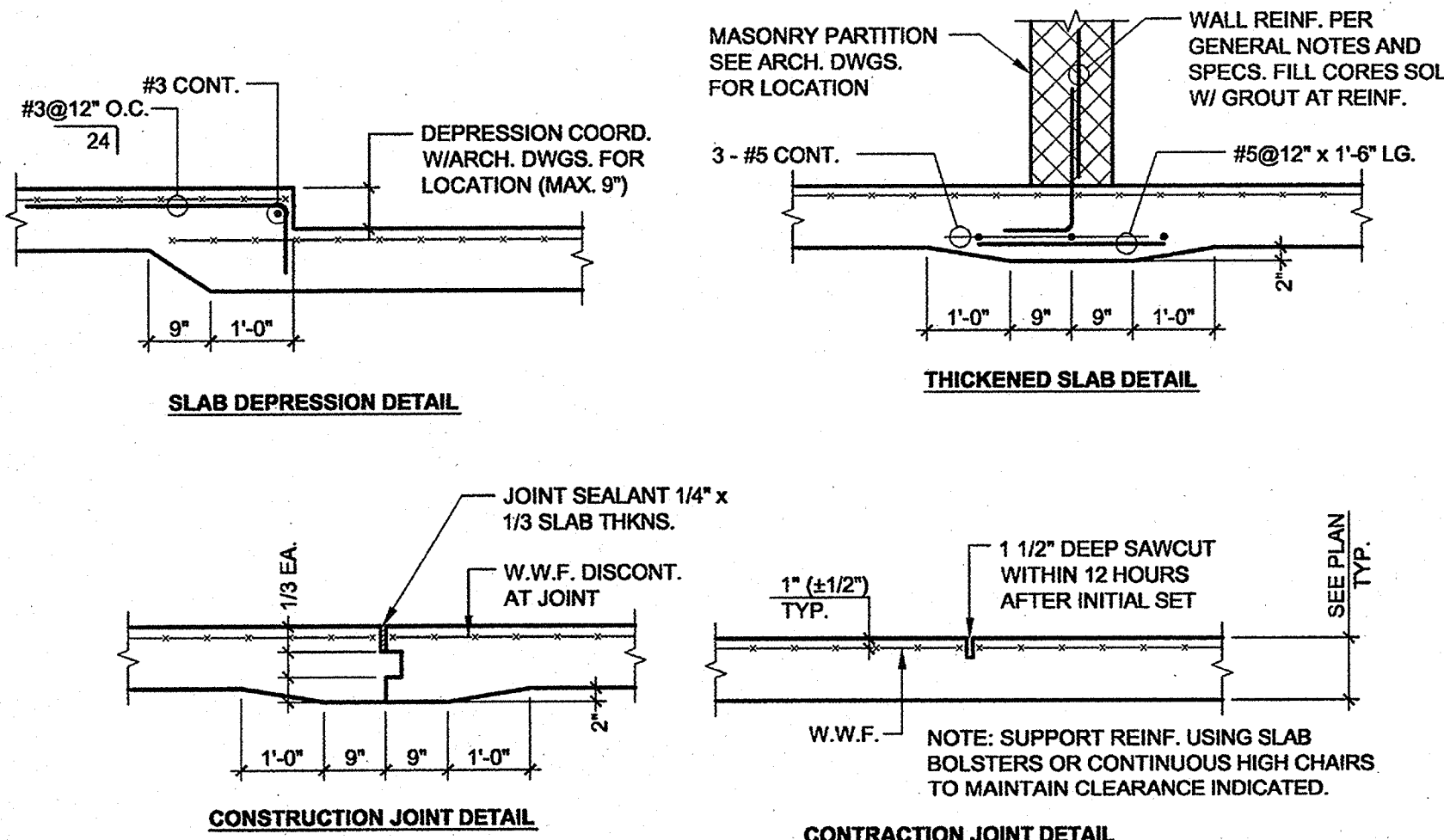


10 TYPICAL DETAIL - STEPPED FTG. WITH BOTTOM REINF. NO SCALE SS.6

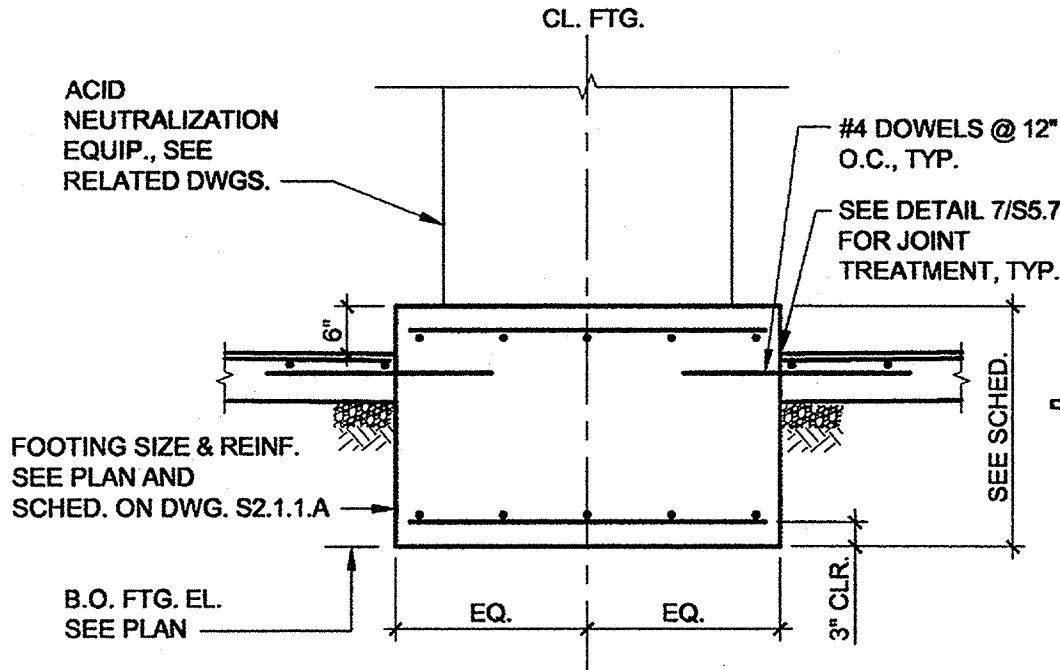


NOTE:
1. CMU LINTELS TO BE SHORED UNTIL MORTAR & GROUT EACH REACH ITS SPECIFIED 28 DAY COMPRESSIVE STRENGTH.
2. WHERE LENGTH OF WALL BETWEEN OPENINGS IS 2'-8" AND LESS, PROVIDE HORIZONTAL JOINT REINFORCEMENT EVERY COURSE.
3. SEE ARCH./MECH./PLUMB/ELECT. DWGS. FOR SIZE AND LOCATION OF WALL OPENINGS.

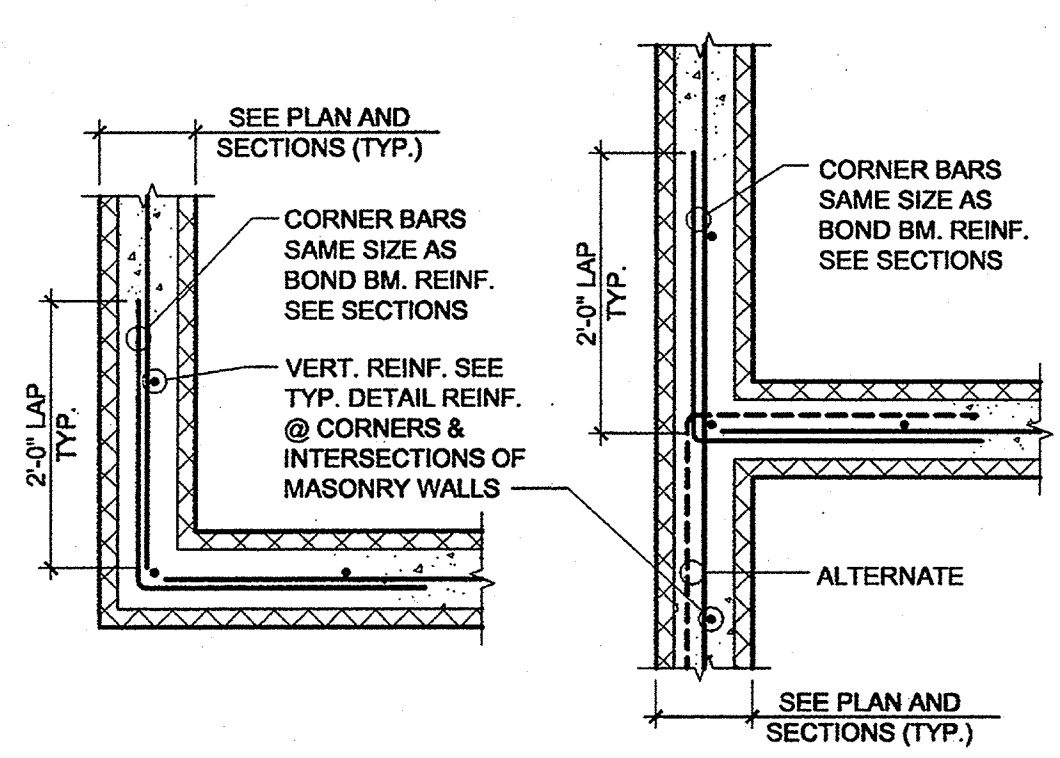
9 TYPICAL DETAIL - REINF. AT MASONRY WALL OPENINGS NO SCALE SS.6



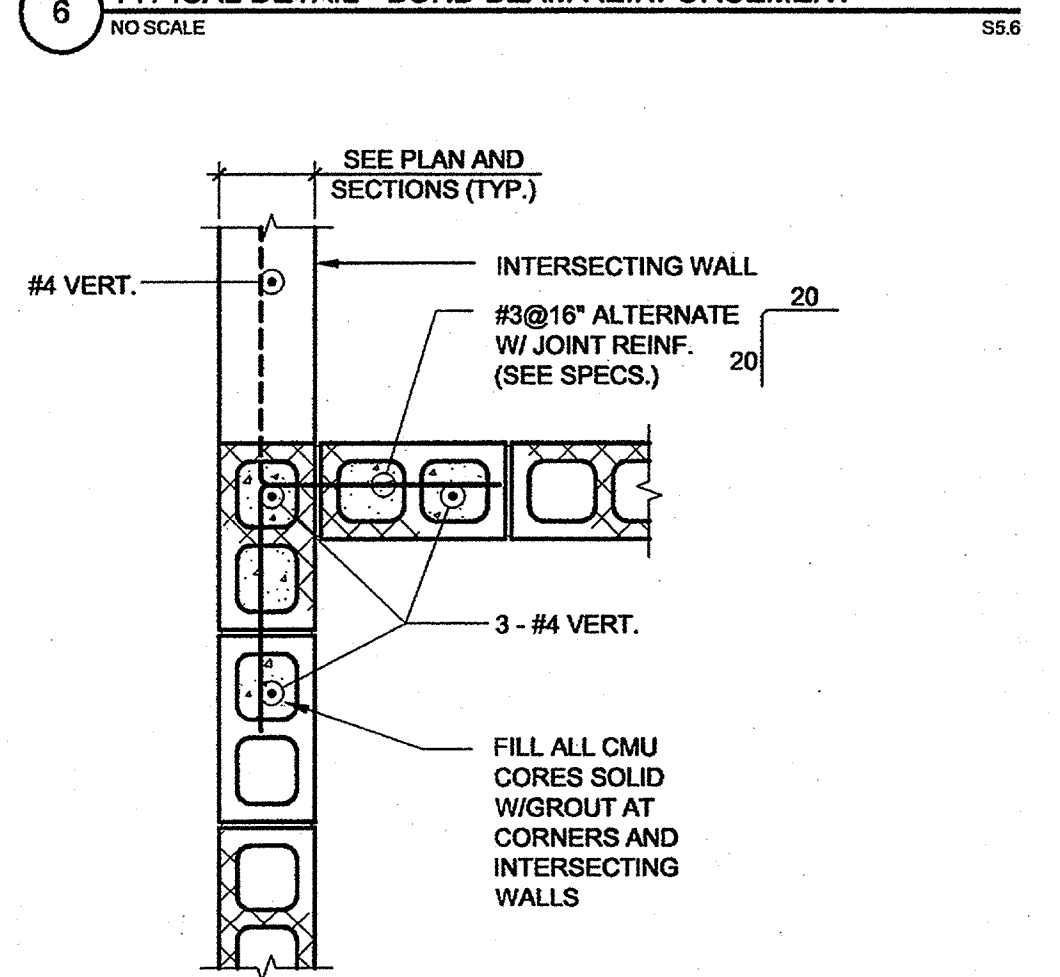
8 TYPICAL DETAIL - SLAB ON GRADE NO SCALE SS.6



7 TYPICAL DETAIL - SPREAD FOOTING AT ACID NEUTRALIZATION NO SCALE SS.6



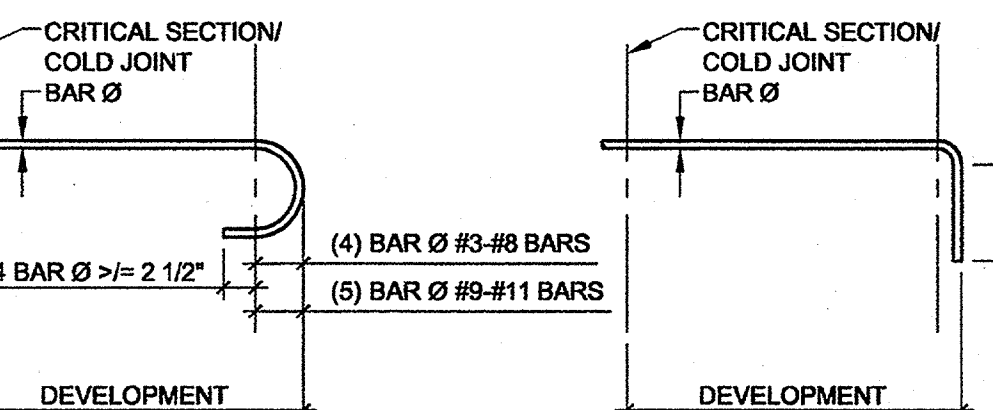
6 TYPICAL DETAIL - BOND BEAM REINFORCEMENT NO SCALE SS.6



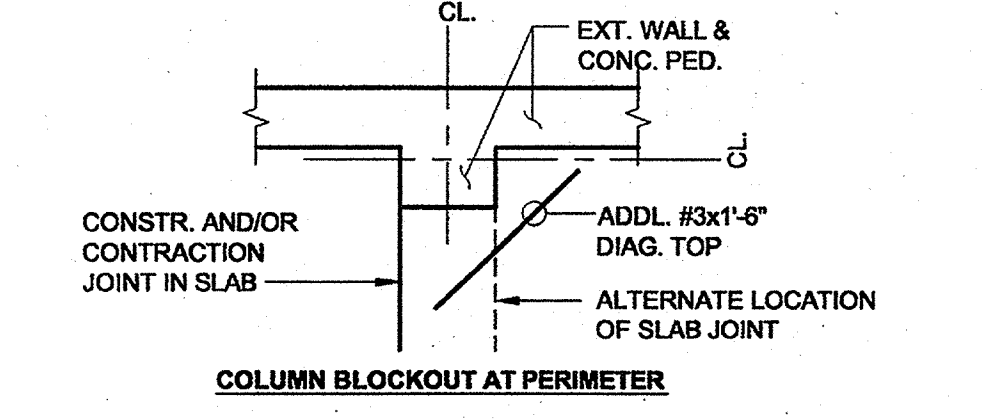
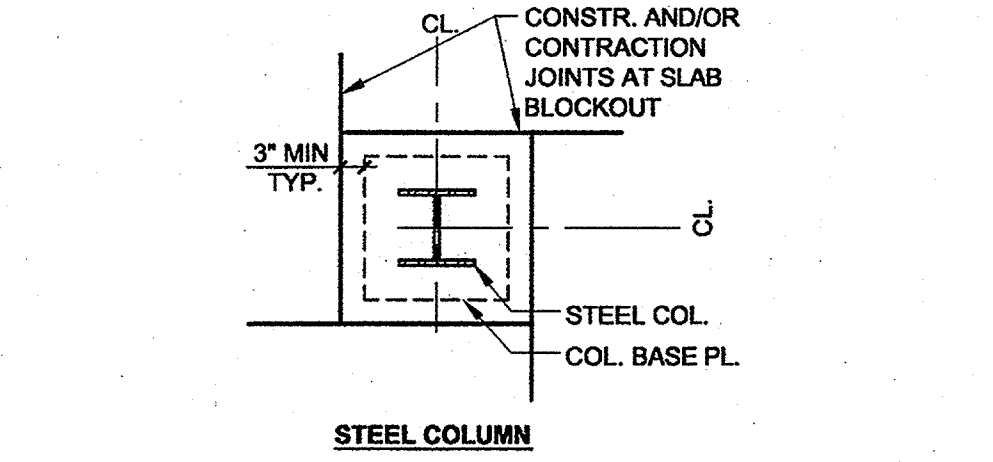
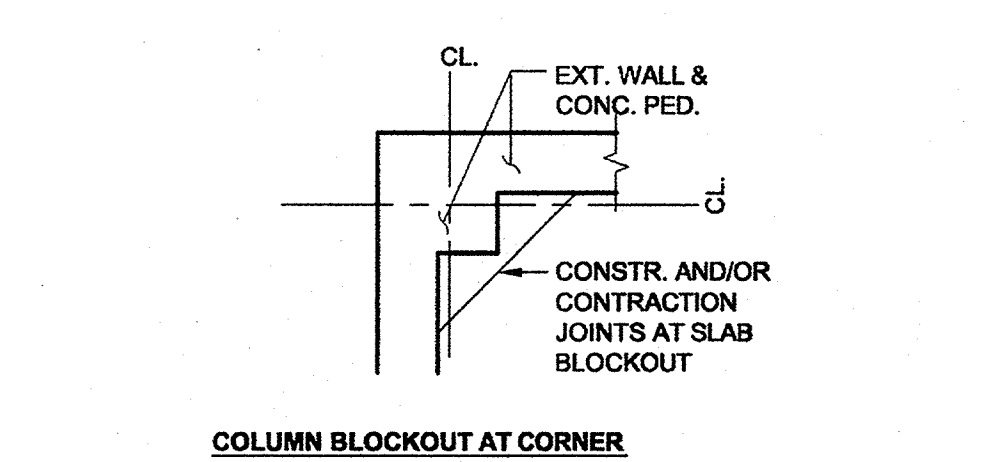
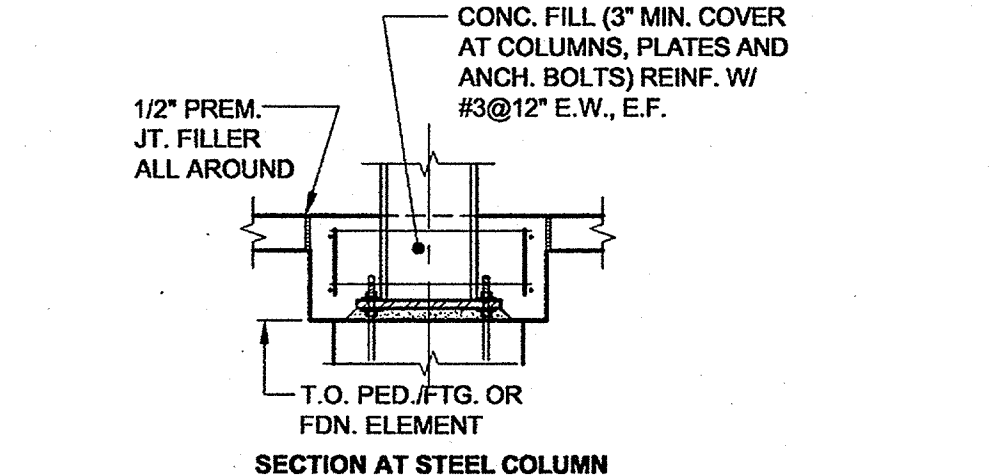
5 TYPICAL DETAIL - REINF. AT CORNERS AND INTERSECTIONS OF MASONRY WALLS NO SCALE SS.6

STANDARD HOOK TENSION DEVELOPMENT LENGTHS (UNCOATED BARS) (IN.)

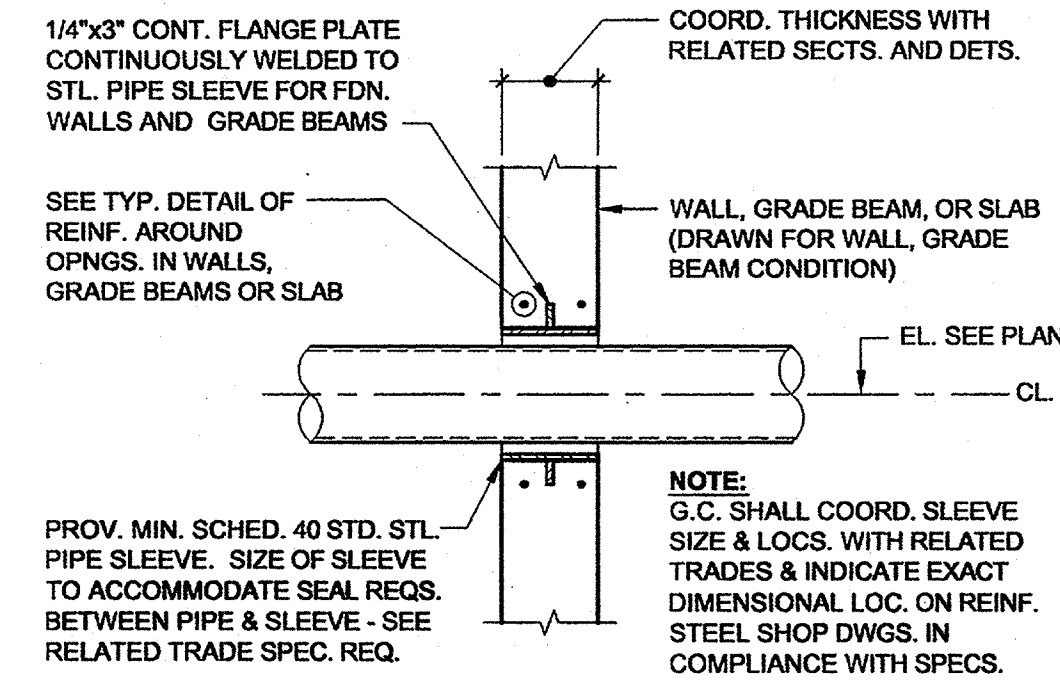
BAR SIZE	3,000 PSI CONCRETE		4,000 PSI CONCRETE		5,000 PSI CONCRETE	
	NW CONC.	LW CONC.	NW CONC.	LW CONC.	NW CONC.	LW CONC.
#3	9	11	8	10	7	9
#4	11	15	10	13	9	12
#5	14	18	12	16	11	14
#6	17	22	15	19	13	17
#7	20	25	17	22	15	20
#8	22	29	19	25	17	23
#9	25	33	22	28	20	25
#10	28	36	24	31	22	28
#11	31	40	27	34	24	31



4 TYPICAL DETAIL - STANDARD HOOK DEVELOPMENT LENGTHS NO SCALE SS.6



3 TYPICAL DETAIL - JOINTS AT COLUMN FOR SLAB ON GRADE NO SCALE SS.6



2 TYPICAL DETAIL - PIPE/CONDUIT SLEEVE THRU FOUNDATION WALL GRADE BEAM OR SLAB NO SCALE SS.6

TENSION DEVELOPMENT LENGTHS (UNCOATED BARS)

BAR SIZE	4,000 PSI CONCRETE			
	Ld PER SPACING AND COVER			
	CASE 1		CASE 2	
	TOP BARS	OTHERS	TOP BARS	OTHERS
#3	19	15	28	22
#4	25	19	37	29
#5	31	24	47	36
#6	37	29	56	43
#7	54	42	81	63
#8	62	48	93	71
#9	70	54	105	81
#10	79	61	118	91
#11	87	67	131	101

TENSION SPLICE LENGTHS (UNCOATED BARS)

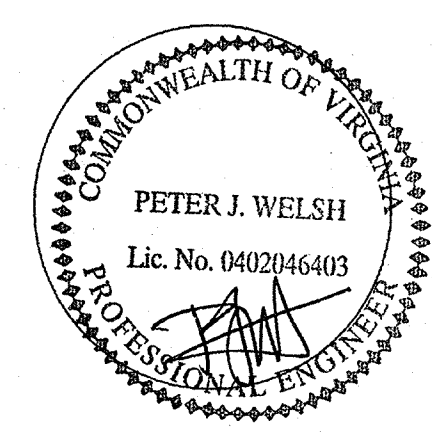
BAR SIZE	4,000 PSI CONCRETE			
	LAP LENGTH PER SPACING AND COVER			
	CASE 1		CASE 2	
	TOP BARS	OTHERS	TOP BARS	OTHERS
#3	24	19	36	28
#4	32	25	48	37
#5	40	31	60	47
#6	48	37	72	56
#7	70	54	106	81
#8	80	62	121	93
#9	91	70	136	105
#10	102	79	153	118
#11	113	87	170	131

- NOTES ON BAR SPLICE
- CASE 1 - BEAMS AND COLUMNS: CONCRETE COVER ≥ db, C-C. BAR SPACING ≥ 2db AND WITH STIRRUPS OR TIES THROUGHOUT Ld NOT LESS THAN THE CODE MINIMUM. OTHER MEMBERS: CONCRETE COVER ≥ db, C-C. BAR SPACING ≥ 3db.
 - CASE 2 BEAMS AND COLUMNS: CONCRETE COVER < db AND C-C. BAR SPACING < 2db. OTHER MEMBERS: CONCRETE COVER < db OR C-C. BAR SPACING < 3db.
 - VERTICAL COLUMN REINFORCING SHALL BE A CONTINUOUS BAR WHENEVER POSSIBLE, IF SPLICES ARE REQUIRED USE LAP LENGTHS SHOWN AND SUBMIT FOR ENGINEER'S APPROVAL.
 - SPLICES FOR VERTICAL BARS IN WALLS SHALL BE AS SHOWN. SPLICES FOR HORIZONTAL BARS SHALL BE LOCATED: (A) AT PIERS (COLUMNS) FOR INSIDE REBARS (B) IN BETWEEN PIERS FOR OUTSIDE REBARS.
 - SPLICES AND DEVELOPMENT LENGTHS FOR EPOXY COATED REBARS SHALL BE INCREASED BY 20 PERCENT FROM THE VALUES SHOWN IN THE TABLES.
 - ALL SPLICES SHALL BE CLASS B TENSION LAP SPLICES. (UNLESS OTHERWISE NOTED)
 - ALL LENGTHS SHOWN ARE IN INCHES.
 - TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST BELOW BARS.

1 TYPICAL DETAIL - TENSION DEVELOPMENT AND LAP SPLICE LENGTHS FOR UNCOATED BARS NO SCALE SS.6

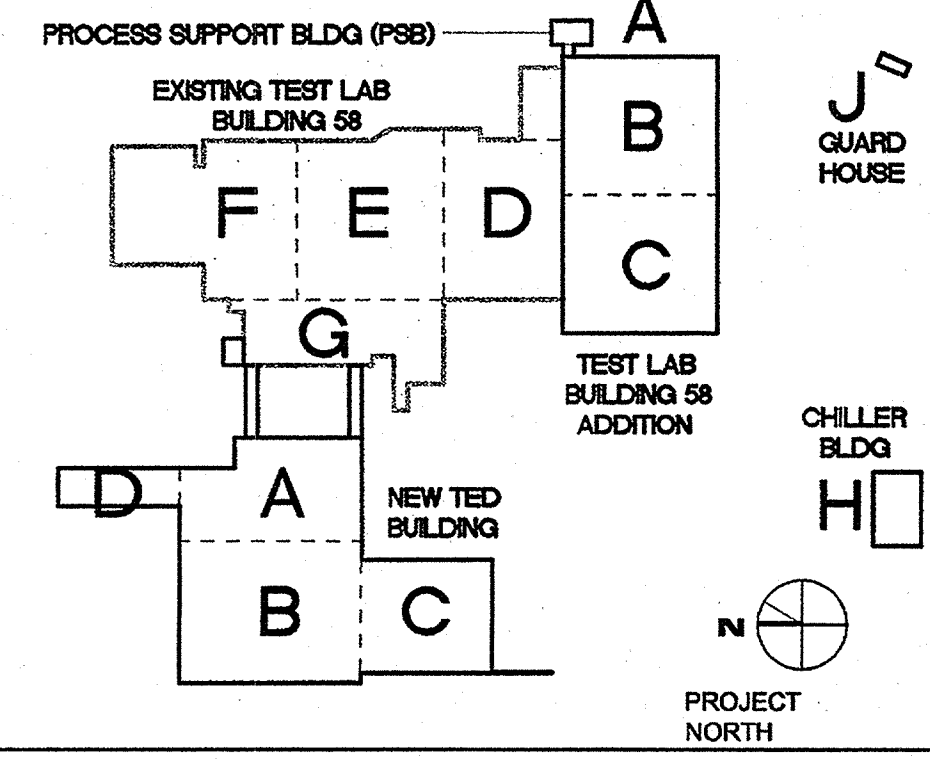
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TECHNICAL ENGINEERING & DEVELOPMENT FACILITY (TEDF)
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REV	ZONE	DESCRIPTION	APPR.	DATE
1		ISSUE NO. 1 / EPP		02/08/10

FACILITY USERS		FACILITIES & LOGISTICS	
APPROVED	DATE	DESIGNER	DATE
APPROVED		DRAWN	
APPROVED		JRM	
APPROVED		CHECKED	
APPROVED		APPROVED	

Jefferson Lab

TITLE: **TYPICAL DETAILS**
ISSUE NO. 1

SCALE	DRAWING NUMBER	SHEET	REV
NO SCALE	100011-121-S&STE	S5.6	-

1. PREPARE:
1. ABRASIVE BLAST CRACK AND CONCRETE SURFACE, APPROXIMATELY 10" ON EACH SIDE OF THE CRACK.
2. PRIME AREA, WHICH WILL RECEIVE THE CEILCOTE EJ4 (5" TO 6" ON EACH SIDE OF THE JOINT) WITH CEILCOTE 380 PRIMER @ 2-5 MILS (WFT). MIX PER DATA SHEET INSTRUCTIONS. ALLOW TO CURE.
3. REPAIR ROUGH AREAS WITH PRIMER AND S-1 OR S-11 POWDER, DEPENDING ON SIZE OF REPAIR.
4. FOR FLOORS, APPLY CEILCOTE EJ4 WITH A TROWEL AT 80-120 MILS, 5" TO 6" ON EITHER SIDE OF CONSTRUCTION JOINT AND FILL JOINT. USE EJ4 WHEN SLOPE OF FLOOR EXCEEDS 1/4" PER FOOT. ALLOW TO CURE.
5. LAYOUT AND SATURATE FIBERGLASS MAT (1 1/2 OZ.). USE CEILCOTE 680 PRIMER FOR EPOXY AND CEILCOTE CEILLINE SATURANT OR CEILCOTE 380 PRIMER FOR POLYESTER OR VINYL ESTER SYSTEMS. BE SURE TO OVERLAP ON BOTH SIDES OF THE CEILCOTE CEILLINE BASECOAT AT LEAST 3-4 INCHES.
6. WHILE LAYER OF MAT IS STILL WET, REPEAT WITH A SECOND LAYER OF 1 1/2 OZ. MAT. REMOVE ENTRAPPED AIR WITH A RIBBED ROLLER. NO WHITE SPOTS SHOULD BE OBVIOUS ON FIBERGLASS.
7. ALLOW TO CURE.
8. AFTER CURING (GENERALLY THE NEXT DAY), GRIND OFF ANY IMPERFECTIONS OR PROTRUSIONS AND FEATHER EDGES.
9. PROCEED WITH NORMAL INSTALLATION OR REPAIR PROCEDURE OF PRODUCT.
10. THIS IS DESIGNED TO HANDLE APPROXIMATELY 50-60 MILS CRACK MOVEMENT.

5 TYPICAL DETAIL - ROOF OPENING

4 TYPICAL DETAIL - LATERAL MOMENT CONNECTION

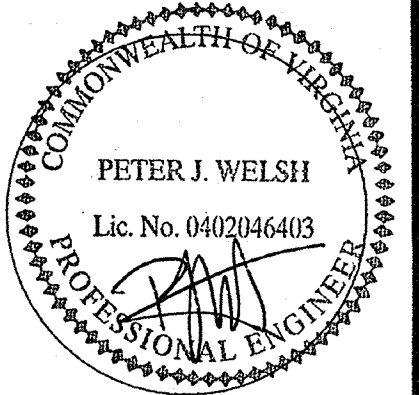
3 TYPICAL DETAIL
MECHANICAL EQUIPMENT ROOF CURB MOUNTING
NO SCALE

2 TYPICAL DETAIL - CONNECTIONS
NO SCALE

1 TYPICAL DETAIL - METAL DECK
NO SCALE

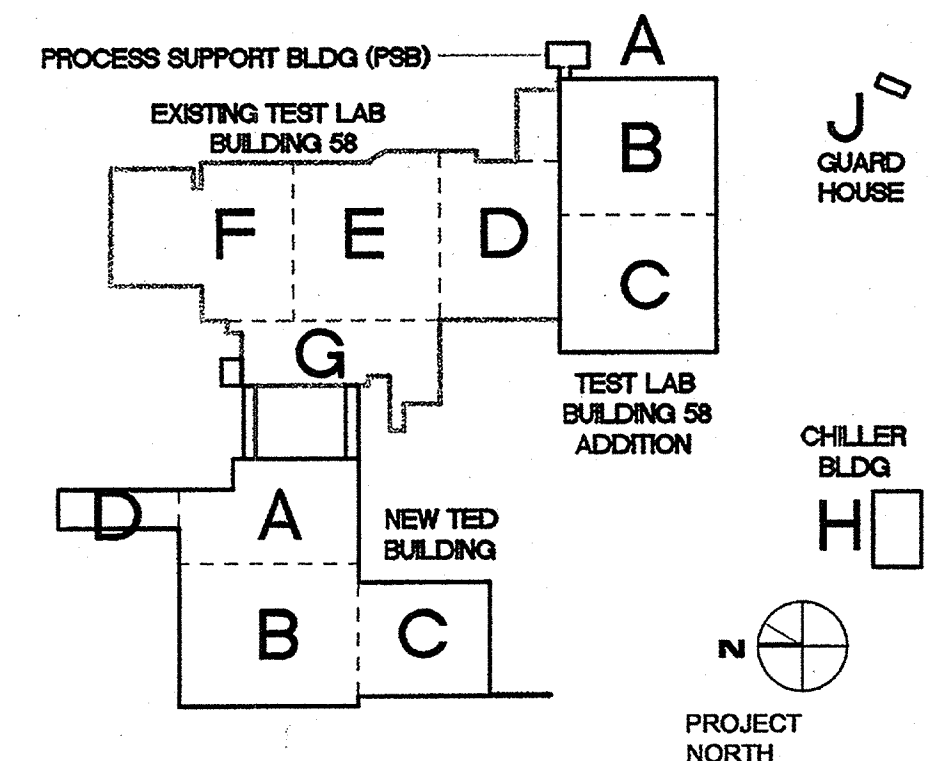
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--	--	JRM	--
APPROVED		CHECKED	
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APPROVED		APPROVED	
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TITLE: TYPICAL DETAILS
ISSUE NO. 1

SCALE	DRAWING NUMBER	SHEET	REV
NO SCALE	100011-122-S7-STE	S5.7	-