

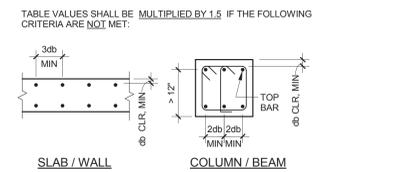
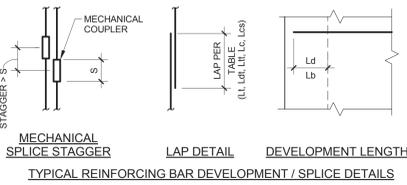
### NON-COATED REINFORCING BAR DEVELOPMENT AND SPLICE LENGTHS

f'c = 4000 PSI					ALL CONCRETE STRENGTHS			
BAR SIZE	Ld	Ldt	Lt	LtL	BAR SIZE	Lb	Lc	Lcs
#3	15	20	20	26	#3	9	12	12
#4	19	25	25	33	#4	11	13	12
#5	24	32	32	41	#5	14	16	15
#6	29	38	38	50	#6	17	19	17
#7	42	55	55	71	#7	20	22	20
#8	48	63	63	82	#8	22	25	23
#9	54	71	71	92	#9	25	29	26
#10	60	78	78	102	#10	28	32	29
#11	66	86	86	112	#11	31	35	31

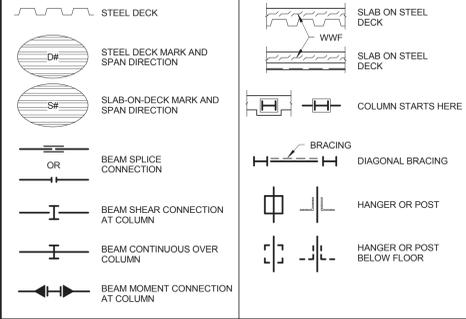
### EPOXY COATED REINFORCING BAR DEVELOPMENT AND SPLICE LENGTHS

f'c = 4000 PSI					ALL CONCRETE STRENGTHS			
BAR SIZE	Ld	Ldt	Lt	LtL	BAR SIZE	Lb	Lc	Lcs
#3	22	29	29	38	#3	9	12	12
#4	29	38	38	50	#4	11	13	12
#5	36	47	47	61	#5	14	16	15
#6	43	56	56	73	#6	17	19	17
#7	63	82	82	107	#7	20	22	20
#8	72	94	94	122	#8	22	25	23
#9	81	106	106	137	#9	25	29	26
#10	89	116	116	151	#10	28	32	29
#11	98	128	128	166	#11	31	35	31

- NOTES:**
- db = NOMINAL BAR DIAMETER  
Ld = TENSION DEVELOPMENT LENGTH  
Ldt = DEVELOPMENT LENGTH OF TOP BARS IN TENSION  
Lt = TENSION LAP SPLICE LENGTH  
LtL = TENSION LAP SPLICE LENGTH OF TOP BARS  
Lc = COMPRESSION DEVELOPMENT LENGTH  
Lcs = TIED COLUMN LAP SPLICE IN COMPRESSION  
Lcs = SPIRAL COLUMN LAP SPLICE IN COMPRESSION
  - REBAR DEVELOPMENT/SPLICE LENGTHS ARE BASED ON ACI 318; REINFORCEMENT YIELD STRENGTH, Fy = 60 KSI.
  - "TOP BARS" = HORIZONTAL BEAM, MAT. OR SLAB REINFORCING WITH MORE THAN 12" CAST BELOW.
  - ALL SPLICES SHALL BE TENSION SPLICES, UNO.



### STEEL SYMBOLS



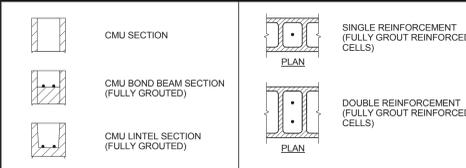
### STEEL MEMBERS

SHAPE	SECTION	ELEVATION	PLAN VIEW
W-SHAPE BEAM			
CHANNEL			
ANGLE			
DOUBLE ANGLE			
HOLLOW STRUCTURAL SECTION - RECTANGULAR			
HOLLOW STRUCTURAL SECTION - CIRCULAR (PIPE)			
OPEN WEB STEEL JOIST			

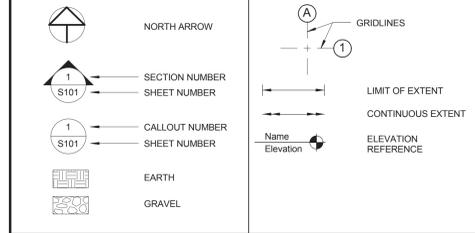
### PRECAST MEMBERS

SHAPE	SECTION	ELEVATION	PLAN VIEW
DOUBLE TEE			
GIRDER			
SPANDREL			
PLANK			
HOLLOW-CORE			

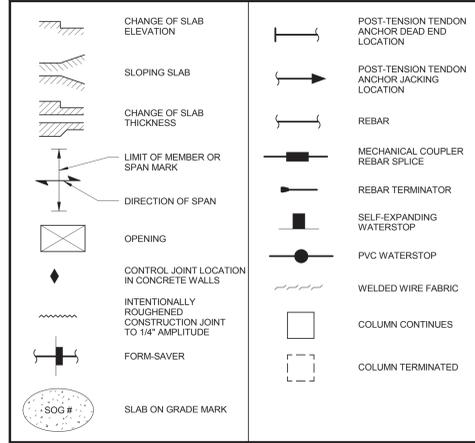
### MASONRY MEMBERS



### MISCELLANEOUS SYMBOLS



### CONCRETE SYMBOLS



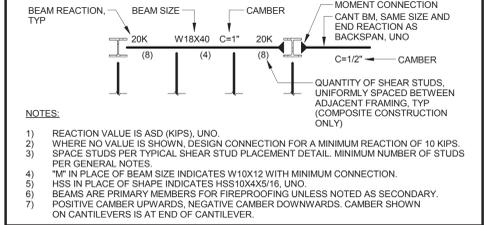
### CONNECTORS

CONNECTOR	SECTION	END/ALT VIEW
CAST-IN ANCHOR ROD		
POST-INSTALLED MECHANICAL ANCHOR		
POST INSTALLED ADHESIVE ANCHOR		
HEADED STUD		
BOLT		

### STRUCTURAL DRAWINGS ABBREVIATIONS

A/E	ARCHITECT/ENGINEER	JST	JOIST
ACI	AMERICAN CONCRETE INSTITUTE	JT	JOINT
ADDL	ADDITIONAL	KB	KNEE BRACE
ADJ	ADJACENT	KIP, K	1,000 POUNDS
AGGR	AGGREGATE	KO	KNOCK-OUT
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	KSI	KIPS PER SQUARE INCH
ALT	ALTERNATE	L	ANGLE OR LENGTH
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	LAB	LABORATORY
APA	AMERICAN PLYWOOD ASSOCIATION	LB	POUND
APPROX	APPROXIMATE	LF	LINEAL FOOT
AR	ANCHOR ROD	LN	LINEAL, LINEAR
ARCH	ARCHITECTURAL	LLH	LONG LEG HORIZONTAL
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	LLV	LONG LEG VERTICAL
AWS	AMERICAN WELDING SOCIETY	LONGIT	LONGITUDINAL
B	BOTTOM	LP	LOW POINT
BAL	BOTTOM OF BALANCE	LSL	LAMINATED STRAND LUMBER
BD	BOARD	LWT	LIGHT WEIGHT
BLDG	BUILDING	LVL	LAMINATED VENEER LUMBER
BLK	BLOCK	MAS	MASONRY
BLKG	BLOCKING	MATL	MATERIAL
BM	BEAM	MAX	MAXIMUM
BOT	BOTTOM	MB	MACHINE BOLT
BRG	BEARING	MC	MISCELLANEOUS CHANNEL
BRKT	BRACKET	MECH	MECHANICAL
BTWN	BETWEEN	MEMB	MEMBRANE
BU	BUILT UP	MEP	MECHANICAL / ELECTRICAL / PLUMBING
C	STANDARD CHANNEL	MFR	MANUFACTURER
CANT	CANTILEVER	MIN	MINIMUM
CC	CENTER TO CENTER	MISC	MISCELLANEOUS
CF	COLD FORMED	MO	MASONRY OPENING
CG	CENTER OF GRAVITY	MULT	MULTIPLE
CIP	CAST-IN-PLACE	N/A	NOT APPLICABLE
CJ	CONTROL JOINT OR CONSTRUCTION JOINT	NO	NUMBER
CJP	COMPLETE JOINT PENETRATION	NOM	NOMINAL
CL	CENTERLINE	NS	NEAR SIDE
CLR	CLEARANCE, CLEAR	NOT TO SCALE	NOT TO SCALE
CMU	CONCRETE MASONRY UNIT	OC	ON CENTER
COL	COLUMN	OD	OUTSIDE DIAMETER
CONC	CONCRETE	OF	OVERSIDE FACE
CONSTR	CONSTRUCTION	ODD	OVERN/DRAIN
CONST	CONTINUOUS	OH	OVERHEAD
CONTR	CONTRACTOR	OPPHD	OPPOSITE HAND
CTR	CENTER	ORIG	ORIGINAL
CTRD	CENTERED	OVS	OVERSIZED HOLE
CU FT	CUBIC FEET	OWJ	OPEN WEB JOIST
CU IN	CUBIC INCH	PC	PRECAST CONCRETE
CYD	CUBIC YARD	PERM	PERMANENT
DBA	DEFORMED BAR ANCHOR	PERM	PERMANENT
DBL	DOUBLE	PERP	PERPENDICULAR
DEG	DEGREE	PJP	PARTIAL JOINT PENETRATION
DEMO	DEMOLITION, DEMOLISH	PL	PLATE
DEPT	DEPARTMENT	PLF	POUNDS PER LINEAL FOOT
DET	DETAIL	PLYWD	PLYWOOD
DIA	DIAMETER	PREFAB	PREFABRICATED
DIAG	DIAGONAL	PREFR	PREFORMATION, PREPARE
DIAPHRAGM	DIAPHRAGM	PROJ	PROJECTION
DM	DIMENSION	PS	PRESTRESSED
DN	DOWN	PSF	POUNDS PER SQUARE FOOT
DO	DITTO	PSI	POUNDS PER SQUARE INCH
DP	DEEP	PSL	PARALLEL STRAND LUMBER
DWG	DRAWING	PT	POST-TENSIONED
DWL	DOWELS	R	RADIUS
EA	EACH	RD	ROOF DRAIN
EF	EACH FACE	REF	REFERENCE
EJ	EXPANSION JOINT	REINF	REINFORCEMENT, REINFORCE
ELEV	ELEVATION	REQD	REQUIRED
ELEC	ELECTRICAL	RO	ROUGH OPENING
ENCL	ENCLOSURE	RTU	ROOFTOP MECHANICAL UNIT
ENGR	ENGINEER	S	SLOPE
EQ	EDGE OF DECK	SCHED	SCHEDULE
EQJ	EDGE OF JOIST	SECT	SECTION
EOS	EDGE OF SLAB	SF	SQUARE FEET
EQPT	EQUAL	SHT	SHEET
ES	EACH SIDE	SIM	SIMILAR
EW	EACH WAY	SOG	SLAB-ON-GRADE
EX	EXISTING	SPA	SPACES, SPACE
EXP	EXPANSION	SPECS	SPECIFICATIONS
EXT	EXTERIOR	SQ	SQUARE
FD	FLOOR DRAIN	SS	STAINLESS STEEL
FDN	FOUNDATION	SSLT	SHORT SLOTTED HOLE
FIN	FINISH	STD	STANDARD
FLG	FLANGE	STIFF	STIFFENER
FLR	FLOOR	STL	STEEL
FS	FAR SIDE	STRUC	STRUCTURAL
FT	FEET	SYM	SYMMETRICAL
FTG	FOOTING	T & B	TOP AND BOTTOM
FTGD	FOOTING DRAIN	TJ	TOP OF
FV	FIELD VERIFY	TGB	TOP OF GRADE BEAM
GA	GAUGE	TBS	MECHANICAL TENSION BUTT SPLICE
GALV	GALVANIZED	TEMP	TEMPERATURE
GB	GRADE BEAM	THRU	THROUGH
GL	GLUED LAMINATED TIMBER (GLULAM)	TJL	PREFABRICATED WOOD I-JOIST
GRND	GROUND	TRANS	TRANSVERSE
GT	GIRDER TRUSS	TYP	TYPICAL
HAS	HEADED ANCHOR STUD	UL	UNDERWRITERS' LABORATORY INC.
HORIZ	HORIZONTAL	UNO	UNLESS NOTED OTHERWISE
HP	HIGH POINT	UT	ULTRA-SONIC TEST
HSS	HOLLOW STRUCTURAL SECTION	VERT	VERTICAL
HT	HIP TRUSS	W	WIDE FLANGE
HVAC	HEATING, VENTILATION, AIR CONDITIONING	W/	WITH
ID	INSIDE DIAMETER	WO	WITHOUT
IF	INSIDE FACE	WD	WOOD
IN	INCH	WH	WEEP HOLE
INCL	INCLUDE	WP	WORK POINT
INFO	INFORMATION	WT	WEIGHT, STRUCTURAL T
INSUL	INSULATION	WWF	WELDED WIRE FABRIC
INT	INTERIOR	XS	EXTRA STRONG (PIPE)
JBRG	JOIST BEARING	XXS	DOUBLE EXTRA STRONG (PIPE)

### BEAM LEGEND



### STRUCTURAL INDEX

SHEET #	SHEET NAME
S1001	ABBREVIATIONS AND SYMBOLS
S1002	STRUCTURAL GENERAL NOTES
S1003	SPECIAL INSP. NOTES AND TABLES
S1004	LOAD MAPS
S8101	FOUNDATION PLAN
SF101	LEVEL 1 - SLAB ON GRADE
SF102	LEVEL 2 - FRAMING PLAN
SF103	LEVEL 3 - FRAMING PLAN
SF201	SHEARWALL ELEVATIONS AND SCHEDULES
SF202	SHEARWALL ELEVATIONS AND SCHEDULES
SF203	SHEARWALL ELEVATIONS AND SCHEDULES
SF301	BUILDING SECTIONS AND ELEVATIONS
SF302	BUILDING SECTIONS AND ELEVATIONS
SF401	ENLARGED PLANS
SF402	ENLARGED PLANS
SF403	ENLARGED PLANS
SF501	TYPICAL FOUNDATION DETAILS
SF502	TYPICAL FOUNDATION DETAILS
SF503	FOUNDATION SECTIONS AND DETAILS
SF504	PILE / PILE CAP DETAILS / SCHEDULES
SF505	TYPICAL FRAMING SECTIONS AND DETAILS
SF506	TYPICAL FRAMING SECTIONS AND DETAILS
SF507	FRAMING SECTIONS AND DETAILS
SF508	FRAMING SECTIONS AND DETAILS
SF509	FRAMING SECTIONS AND DETAILS
SF510	MISCELLANEOUS DETAILS
SF901	AXONOMETRICS

### DEDUCT ALTERNATES

- DEDUCT PLANTING BY 50%.
  - DEDUCT NORTH PARKING AREA.
  - DEDUCT FALL DETERRENT FROM 2ND LEVEL.
  - DEDUCT PLANTING BY 100%.
  - DEDUCT THINSET BRICK.
  - DEDUCT CANOPY CONNECTOR.
  - DEDUCT FALL DETERRENT COMPLETELY.
  - DEDUCT SOUTH ELEVATOR (SHAFT TO REMAIN).
  - DEDUCT PARTIAL THIRD FLOOR (BETWEEN COLUMN LINES 1-4 TO B-C).
  - DEDUCT PARTIAL THIRD FLOOR (BETWEEN COLUMN LINES 4-9 TO B-C AND COLUMN LINES 1-9 TO C-D). DEDUCT ONE LEVEL FROM BOTH HRESSSTAR TOWERS AND ELEVATOR TOWER. ADD SIMPLE STAIR FROM LEVEL 2 TO LEVEL 3 ALONG COLUMN LINE B BETWEEN COLUMN LINE 7-8.
- REFER TO ALL SHEETS FOR INDICATION OF ALTERNATES. ALTERNATES WILL BE INDICATED WITH REFERENCE TAG. REFER TO SPECIFICATION SECTION 00-43.23 FOR ADDITIONAL INFORMATION.

**VA** U.S. Department of Veterans Affairs  
SALISBURY VAMC  
Dept. of Veterans Affairs  
1601 Brenner Ave.  
Salisbury, NC 28144

Professional Engineer Seal  
11/14/2014

**Structural** AMERICAN STRUCTUREPOINT  
7260 Shadeland Station  
Indianapolis, IN 46256  
Tele: 317-547-5580

**MEP Engineer** APOGEE CONSULTING GROUP  
7330 Chappel Hill Road, Suite 202  
Raleigh, NC 27607  
Tele: 919-858-7420

**Civil Engineer** GUIDON DESIGN INC.  
905 N. Capitol Ave.  
Indianapolis, IN 46204  
Tele: 317-800-6388

**Functional Design** CARL WALKER INC.  
14045 Ballantyne Corp. Place, Suite 380  
Charlotte, NC 28277  
Tele: 704-716-8000

PROJECT LEADER/ARCHITECT:  
**GUIDON DESIGN**  
905 N. CAPITOL AVE. SUITE 100 INDIANAPOLIS, IN. 46204  
317.800.6388 WWW.GUIDONDESIGN.COM  
SUSTAINABLE ARCHITECTURE + ENGINEERING

**BID SET**

Drawing Title: ABBREVIATIONS AND SYMBOLS  
Project Title: CONSTRUCT NEW PARKING GARAGE  
Project Number: 13.1044  
Building Number: Bldg 9  
Drawing Number: S1001

Approved for Design Concept: JOHN MONTGOMERY PROJECT ENGINEER 704-638-9000  
Location: W.G. (BILL) HEFNER VAMC  
Date: 11/14/2014  
Checked By: JAP  
Drawn By: BGC

Office of Facilities Management  
VA Project Number: 659-342  
U.S. Department of Veterans Affairs

**GENERAL**

THE STRUCTURE HAS BEEN DESIGNED FOR THE IN-SERVICE LOADS ONLY. THE METHODS, MEANS, PROCEDURES AND SEQUENCES OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE BUILDING IS COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCE TO INSURE SAFETY OF THE BUILDING AND ITS COMPONENTS DURING ERECTION. THIS INCLUDES THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING AND ETC. THE PLANS AND SPECIFICATIONS SHALL GOVERN.

THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH CIVIL, ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND PRECAST CONCRETE DRAWINGS AND SPECIFICATIONS.

THE GENERAL NOTES ON THE DRAWINGS ARE TO BE USED IN CONJUNCTION WITH THE FULL WRITTEN MATERIAL SPECIFICATIONS (IF ANY) FOR THE PROJECT. IF A DISCREPANCY OCCURS BETWEEN THE DRAWINGS AND THE FULL SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT SHALL APPLY.

NO PENETRATIONS THROUGH STRUCTURAL ELEMENTS, OTHER THAN THOSE SHOWN ON THE DRAWINGS, SHALL BE MADE WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER.

**CONCRETE MIX DESIGN SUBMITTAL**

THE CONTRACTOR SHALL SUBMIT FOR THE REVIEW OF THE STRUCTURAL ENGINEER A MIX DESIGN FOR EACH PROPOSED CLASS OF CONCRETE. EACH MIX DESIGN SHALL BE IDENTIFIED BY A MIX NUMBER OR OTHER UNIQUE IDENTIFICATION. THE CONTRACTOR SHALL NOT VARY FROM THE MIX DESIGNS NOR USE ANY CONCRETE OTHER THAN THE UTILITY COMPANIES IN-PERFORMING SERVICES AND FACILITIES IN OPERATION WITHOUT INTERRUPTION. REPAIR DAMAGED UTILITIES TO SATISFACTION OF UTILITY OWNER.

- 1. MIX DESIGN NUMBER OR UNIQUE IDENTIFICATION AND INTENDED LOCATION OF PLACEMENT
2. CEMENT TYPE, PROPORTION AND NAME OF MANUFACTURER,
3. FLY ASH PROPORTION (WHEN USED), LABORATORY ANALYSIS CERTIFICATION, AND NAME AND LOCATION OF SUPPLIER,
4. COURSE AGGREGATE PROPORTION, GRADATION REPORT, NAME AND LOCATION OF SUPPLIER,
5. FINE AGGREGATE PROPORTION, GRADATION REPORT, NAME AND LOCATION OF SUPPLIER,
6. MIXING WATER PROPORTION AND SOURCE,
7. ADMIXTURE DOSAGES, (PRODUCT NAMES) AND MANUFACTURER NAME(S),
8. FIBER REINFORCEMENT DOSAGE (WHEN USED), PRODUCT NAME AND MANUFACTURER NAME,
9. DESIGN 28-DAY COMPRESSIVE STRENGTH (FC),
10. DESIGN SLUMP RANGE,
11. DESIGN AIR-ENTRAINMENT (FOR CONCRETE REQUIRING ENTRAINED AIR),
12. STATISTICAL ANALYSIS OF LABORATORY STRENGTH TEST DATA IN ACCORDANCE WITH "STANDARD DEVIATION" DETERMINATION OUTLINED IN ACI 318.

**SHOP DRAWING SUBMITTALS**

THE CONTRACTOR SHALL PREPARE DETAILED SHOP DRAWINGS TO ENABLE HIM TO FABRICATE, ERECT AND CONSTRUCT ALL PARTS OF THE WORK IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS. THESE SHOP DRAWINGS WILL BE REVIEWED FOR GENERAL COMPLIANCE WITH THE DESIGN INTENT ONLY. THE CONTRACTOR IS RESPONSIBLE FOR ALL DIMENSIONS, ACCURACY AND FIT OF WORK.

ALL SHOP DRAWINGS SHALL BE REVIEWED BY THE CONTRACTOR PRIOR TO SUBMITTAL TO THE STRUCTURAL ENGINEER. DRAWINGS SUBMITTED WITHOUT CONTRACTOR'S REVIEW WILL BE RETURNED UNCHECKED.

SUBMIT HARD COPIES AND ELECTRONIC VERSIONS OF SHOP DRAWINGS. SUBMIT A MINIMUM OF THREE COPIES OF THE PRECAST CONCRETE SHOP DRAWINGS TO THE STRUCTURAL ENGINEER FOR REVIEW (ONE COPY SHALL BE RETAINED BY THE STRUCTURAL ENGINEER AND ONE COPY SHALL BE RETAINED BY THE VA). FOR ELECTRONIC VERSION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

SUBMIT SHOP DRAWINGS FOR EACH OF THE FOLLOWING ITEMS:

- 1. CONCRETE REINFORCEMENT
2. CONCRETE MASONRY REINFORCEMENT
3. STRUCTURAL STEEL (INCLUDING DESIGN CALCULATIONS SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED FOR ALL CONNECTIONS NOT SPECIFICALLY DETAILED ON THE DRAWINGS)
4. PRECAST CONCRETE COMPONENTS (PRECAST LINTELS, ARCHITECTURAL PRECAST)
5. PRECAST PLANKS
6. GLASS CURTAIN WALL SYSTEM (INCLUDING DESIGN CALCULATIONS AND CONNECTION DETAILS SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS CONSTRUCTED)
7. STRUCTURAL PRECAST CONCRETE (INCLUDING DESIGN CALCULATIONS, FRAMING LAYOUTS, MEMBER SIZES, MATERIALS AND CONNECTION DETAILS, SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS CONSTRUCTED) INCLUDING BUT NOT LIMITED TO:
a. LOAD BEARING PRECAST WALL PANELS
b. PRECAST COLUMN, BEAMS AND SPANDRELS
c. PRECAST DOUBLE TEES
8. PREFABRICATED CONCRETE FORMWORK SYSTEMS

**PRODUCT DATA SUBMITTALS**

THE CONTRACTOR SHALL SUBMIT FOR APPROVAL PRODUCT DATA FOR THE SPECIFIC ITEMS LISTED BELOW. CONTRACTOR SHALL NOT USE PRODUCTS OTHER THAN THOSE SUBMITTED WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER.

SUBMIT HARD COPIES OR ELECTRONIC VERSIONS OF PRODUCT DATA. FOR HARD COPY OPTION, SUBMIT A MINIMUM OF TWO COPIES OF PRODUCT DATA TO THE STRUCTURAL ENGINEER FOR REVIEW (ONE COPY SHALL BE RETAINED BY THE STRUCTURAL ENGINEER); FOR ELECTRONIC OPTION, SUBMIT PRODUCT DATA IN ADOBE PDF FORMAT.

- 1. FIBER REINFORCEMENT FOR CONCRETE
2. CONCRETE CURING COMPOUND
3. CONCRETE JOINT SEALANT
4. WATER STOP
5. MASONRY JOINT REINFORCEMENT
6. EXPANSION ANCHORS
8. NON-SHRINK GROUT

**FOUNDATIONS**

FOUNDATION EXCAVATIONS AND SOIL RELATED WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT NUMBER 70135144 PREPARED BY TERRACON CONSULTANTS, INC. DATED DECEMBER 18TH, 2013.

DESIGN NET SOIL PRESSURE:
SPREAD FOOTINGS: 2000 PSF
CONTINUOUS WALL FOOTINGS: 2000 PSF

FOUNDATIONS AND SOILS RELATED WORK SHALL BE INSPECTED BY A LICENSED GEOTECHNICAL ENGINEER. WRITTEN FIELD REPORTS SHALL BE FORWARDED TO THE STRUCTURAL ENGINEER AS SOON AS THEY BECOME AVAILABLE.

FOUNDATION CONDITIONS NOTED DURING CONSTRUCTION, WHICH DIFFER FROM THOSE DESCRIBED IN THE GEOTECHNICAL REPORT, SHALL BE REPORTED TO THE STRUCTURAL ENGINEER AND GEOTECHNICAL ENGINEER BEFORE FURTHER CONSTRUCTION IS ATTEMPTED.

EXCAVATIONS FOR SPREAD FOOTINGS, COMBINED FOOTINGS, CONTINUOUS FOOTINGS AND MAT FOUNDATIONS SHALL BE CLEANED AND HAND TAPPED TO UNIFORM SURFACE AND SHALL BE PROTECTED AND MAINTAINED UNIFORM UNTIL CONCRETE IS PLACED.

DESIGN ALLOWABLE PILE LOADS:
COMPRESSION: 180 KIPS
TENSION: 60 KIPS
LATERAL: 14 KIPS

FOR PURPOSES OF BIDDING, SEE SB101 FOR ESTIMATED PILE LENGTHS BELOW THE BOTTOM OF PILE CAP WHICH ACHIEVES EITHER 25 FEET OF PENETRATION INTO VERY DENSE SOIL OR BORING TERMINATION AT PARTIALLY WEATHERED ROCK AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER. THE GEOTECHNICAL REPORT INDICATES THAT THIS ELEVATION OF THIS STRATA VARIES ACROSS THE SITE. ACTUAL TIP ELEVATION TO BE DETERMINED BY SPECIFIED TESTING PROGRAM AND CRITERIA, SEE SPECIFICATIONS.

**BELOW-GRADE WALLS**

DO NOT BACKFILL AGAINST BELOW-GRADE CONCRETE (OR MASONRY) WALLS UNTIL THE CONCRETE (OR MASONRY ASSEMBLAGE) HAS REACHED ITS 28-DAY COMPRESSIVE STRENGTH.

WHERE BACKFILL IS REQUIRED ON BOTH SIDES OF BELOW-GRADE WALLS, BACKFILL EVENLY ON EACH SIDE OF EACH WALL TO PREVENT UNBALANCED SOIL LOADS AGAINST THE WALL.

UNLESS NOTED OTHERWISE, DO NOT BACKFILL AGAINST BASEMENT WALLS UNTIL THE BASEMENT AND GROUND FLOOR SLABS HAVE BEEN COMPLETELY INSTALLED AND REACHED THEIR 28-DAY COMPRESSIVE STRENGTH AND ALL FLOOR FRAMING AND SLAB CONNECTIONS TO THE BASEMENT WALLS HAVE BEEN COMPLETELY INSTALLED.

WHERE BASEMENT WALLS OCCUR, BACKFILL EVENLY ON ALL SIDES OF THE BUILDING TO PREVENT UNBALANCED SOIL LOADS AGAINST THE BASEMENT STRUCTURE, UNLESS NOTED OTHERWISE.

**AUGER CAST PILES**

CONTRACTOR SHALL BASE BIDS ON THE INDICATED NUMBER, DIAMETER AND DESIGN LENGTH. PILE CONTRACTOR SHALL SUBMIT WITH BID WRITTEN CERTIFICATION THAT CONTRACTOR HAS THE TECHNICAL QUALIFICATIONS, EXPERIENCE, TRAINED PERSONNEL, AND FACILITIES TO INSTALL AUGER CAST PILES AS INDICATED.

GROUT TO THE STRUCTURAL ENGINEER THE PROPOSED CONCRETE GROUT MIX DESIGN FOR REVIEW PRIOR TO COMMENCEMENT OF PILING OPERATIONS.

FLUIDIFIER SHALL CONFORM TO ASTM C 937. EXCEPT THAT EXPANSION SHALL NOT EXCEED 4 PERCENT. THE FLUIDIFIER SHALL BE A COMPOUND POSSESSING CHARACTERISTICS THAT WILL INCREASE THE FLOWABILITY OF THE MIXTURE, ASSIST IN THE DISPERSAL AND SMALLER AGGREGATES, AND NEUTRALIZE THE SETTING SHRINKAGE OF THE HIGH-STRENGTH CEMENT MORTAR.

LOCATE EXISTING UNDERGROUND UTILITIES BEFORE INSTALLING PILES. IF ADJACENT UTILITIES ARE TO REMAIN IN PLACE, PROVIDE PROTECTION FROM DAMAGE DURING PILING OPERATIONS. SHOULD UNCHARTED OR INCORRECTLY CHARTED PIPING OR OTHER UTILITIES BE ENCOUNTERED DURING EXCAVATION, ADAPT INSTALLATION PROCEDURE IF NECESSARY TO PREVENT DAMAGE TO UTILITIES. COOPERATE WITH OWNERS AND UTILITY COMPANIES IN PROVIDING SERVICES AND FACILITIES IN OPERATION WITHOUT INTERRUPTION. REPAIR DAMAGED UTILITIES TO SATISFACTION OF UTILITY OWNER.

PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS AND OTHER FACILITIES FROM DAMAGE CAUSED BY PILE INSTALLATION OPERATIONS.

ENGAGE A QUALIFIED LAND SURVEYOR OR PROFESSIONAL ENGINEER TO PERFORM SURVEYS, LAYOUTS AND MEASUREMENTS FOR AUGER CAST PILES.

RECORD AND MAINTAIN DETAILED INFORMATION PERTINENT TO EACH PILE AND COORDINATE WITH OWNERS TESTING AND INSPECTING AGENCY TO PROVIDE DATA FOR REQUIRED REPORTS.

CONSTRUCT TEST PILES OF SAME DIAMETER, LENGTH AND DEPTH AS PERMANENT PILES TO VERIFY PILE DESIGN LOAD AND TO DEMONSTRATE INSTALLER'S CONSTRUCTION METHODS, EQUIPMENT, STANDARDS OF WORKMANSHIP, AND TOLERANCES. UNLESS NOTED OTHERWISE ON THE DRAWINGS, CONSTRUCT TEST PILE AT LEAST 3 DIAMETERS CLEAR OF PERMANENT PILES.

TESTING SHALL BE PERFORMED BY THE CONTRACTOR IN ACCORDANCE WITH ASTM D1143 AND SHALL BE OBSERVED BY A REPRESENTATIVE OF THE OWNER'S TESTING AGENCY. IF OWNER DETERMINES THAT TEST PILE DOES NOT COMPLY WITH REQUIREMENTS, CAST AND TEST ADDITIONAL PILES UNTIL COMPLIANCE IS ASSURED.

INSTALL PILES TO DEPTHS AND ELEVATIONS INDICATED. CAST TOPS OF PILES SLOPPED WITH PILE AXIS, PLACE CONTINUOUS CENTER REINFORCING THROUGH THE HOLLOW-STEMMED AUGER PRIOR TO PLACEMENT OF GROUT. USE BAR SPACERS TO CENTER REINFORCING AND PLACE PROPERLY POSITION FOR EMBEDMENT IN PILE CAPS.

INSTALL PILES TO THE FOLLOWING TOLERANCES:
HORIZONTAL: MAXIMUM 3 INCHES FROM DESIGN LOCATION
TOP OF PILE: MAXIMUM 1 INCH FROM DESIGN TOP ELEVATION
PLUMBNESS: MAXIMUM 2 PERCENT FROM PLUMB

THE GEOTECHNICAL CONSULTANT SHALL CONTINUOUSLY INSPECT ALL PILE OPERATIONS. THE PILE CONTRACTOR SHALL COOPERATE WITH THE INSPECTOR IN THE PERFORMANCE OF THE PILING WORK. THE INSPECTOR SHALL IMMEDIATELY NOTIFY THE PILE CONTRACTOR AND THE STRUCTURAL ENGINEER IF ANY PILE IS NOT IN CONFORMANCE WITH THE DESIGN DOCUMENTS. IF THE STRUCTURAL ENGINEER DEEMS THAT ADDITIONAL OR ADDITIONAL PILES ARE REQUIRED, THE COST OF MODIFYING, REMOVING AND REPLACING PILES THAT ARE NOT IN CONFORMANCE SHALL BE BORNE BY THE PILE CONTRACTOR, AT NO ADDITIONAL COST TO THE OWNER. ABANDONED PILES SHALL BE CUT OFF A MINIMUM OF 12 INCHES BELOW THE BOTTOM OF THE PILE CAP AND WILL NOT BE PAID FOR BY THE OWNER.

PREPARE A MINIMUM OF SIX CONCRETE GROUT SPECIMENS FOR EACH DAY DURING WHICH PILES ARE PLACED. TEST TWO SPECIMENS AT 7 DAYS, TWO AT 28 DAYS, AND HOLD TWO IN RESERVE FOR LATER TESTING IF REQUIRED. CURE AND TEST IN ACCORDANCE WITH ASTM 109.

FOUNDATION WALLS AND GRADE BEAMS
1. COMPRESSIVE STRENGTH (28 DAYS): 4000 PSI
2. MAXIMUM SLUMP: 4 INCHES
3. MAXIMUM SLUMP FOR CONCRETE CONTAINING HIGH-RANGE WATER-REDUCING ADMIXTURE: 8 INCHES (AFTER ADMIXTURE IS ADDED TO CONCRETE WITH 2 TO 4 INCH SLUMP)

SLABS ON GRADE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION (ACI 302.1R).

PLACE CONCRETE IN A MANNER SO AS TO PREVENT SEGREGATION OF THE MIX. DELAY CURING AND SEALING OPERATIONS UNTIL THE CONCRETE HAS LOST SURFACE WATER SHEEN OR ALL FREE WATER. DO NOT SPRINKLE FREE CEMENT ON THE SLAB SURFACE.

PROVIDE CURING OF CONCRETE SLABS IMMEDIATELY AFTER FINISHING USING A SPRAYED ON DISSIPATING-RESIN LIQUID CURING COMPOUND CONFORMING TO ASTM C896, UNLESS NOTED OTHERWISE. ALL SCRUFFS OR ABRASIONS TO THE CURING MEMBRANE SHALL BE RECOATED DAILY. OTHER CURING METHODS MAY BE USED WITH APPROVAL BY THE STRUCTURAL ENGINEER.

SLABS ON GRADE IN LOBBIES SHALL RECEIVE A SMOOTH TROWEL FINISH, AND BE PLACED TO ACHIEVE THE FOLLOWING MINIMUM TOLERANCES:
OVERALL VALUES: FF = 3/8 FL = 2/8
LOCAL VALUES: FF = 2/8 FL = 1/8

THE MINIMUM LOCAL AREA SHALL BE ANY BAY DEFINED BY COLUMN LINES. UNLESS SHOWN OR NOTED OTHERWISE, PROVIDE CONTROL OR CONSTRUCTION JOINTS IN SLABS ON GRADE AT A MAXIMUM SPACING OF 36 TIMES THE SLAB THICKNESS. PROVIDE CONTROL JOINTS AT ALL COLUMN LOCATIONS. LOCATE JOINTS TO ELIMINATE RE-ENTRANT CORNERS AND TO CREATE SQUARE OR RECTANGULAR SECTIONS WITH MAXIMUM LONG SIDE TO SHORT SIDE RATIO OF 1.5 TO 1.

CONTROL JOINTS IN SLABS ON GRADE SHALL NOT RECEIVE JOINT FILLER MATERIAL, UNLESS NOTED OTHERWISE.

CONCRETE SLABS ON GRADE
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**CONCRETE**

REINFORCED CONCRETE HAS BEEN DESIGNED IN ACCORDANCE WITH THE BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318) AND COMMENTARY (ACI 318R).

MIXING, TRANSPORTING, AND PLACING OF CONCRETE SHALL CONFORM TO THE LATEST EDITION OF THE SPECIFICATIONS FOR STRUCTURAL CONCRETE (ACI 301). READY-MIXED CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF ASTM C94. IN CASE OF A DISCREPANCY, THE PLANS AND SPECIFICATIONS SHALL GOVERN.

CEMENT SHALL CONFORM TO ASTM C150, TYPE I.

FLY ASH SHALL CONFORM TO ASTM C618. CLASS C OR F. THE RATIO OF THE AMOUNT OF BEANS AND SMALLER AGGREGATES TO TOTAL CEMENTITIOUS MATERIALS IN THE MIX SHALL NOT EXCEED 25 PERCENT.

NORMAL WEIGHT AGGREGATES SHALL CONFORM TO ASTM C33.

WATER-REDUCING ADMIXTURES SHALL CONFORM TO ASTM C494.

AIR-ENTRAINING ADMIXTURES SHALL CONFORM TO ASTM C260 AND SHALL BE CERTIFIED BY THE MANUFACTURER TO BE COMPATIBLE WITH OTHER ADMIXTURES.

CALCIUM CHLORIDE ADMIXTURES OR ADMIXTURES CONTAINING MORE THAN 0.1 PERCENT CHLORIDE IONS SHALL NOT BE USED.

IN COLD WEATHER CONDITIONS, MIXING, PLACING, FINISHING, CURING AND PROTECTION OF CONCRETE SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF ACI 306R, COLD WEATHER CONCRETING.

IN HOT WEATHER CONDITIONS, MIXING, PLACING, FINISHING, CURING AND PROTECTION OF CONCRETE SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF ACI 305R, HOT WEATHER CONCRETING.

USE OF CONSTRUCTION JOINTS AT LOCATIONS OTHER THAN THOSE INDICATED ON THE DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW.

SLUMP FOR PUMPED CONCRETE SHALL BE MEASURED AT POINT OF DISCHARGE TO THE FORM.

NORMAL WEIGHT CONCRETE SHALL BE USED IN THE FOLLOWING AREAS AND SHALL HAVE THE PROPERTIES AS SHOWN BELOW:

FOOTINGS AND MATS
1. COMPRESSIVE STRENGTH (28 DAYS): 3000 PSI
2. MAXIMUM SLUMP: 4 INCHES
3. MAXIMUM SLUMP FOR CONCRETE CONTAINING HIGH-RANGE WATER-REDUCING ADMIXTURE: 8 INCHES (AFTER ADMIXTURE IS ADDED TO CONCRETE WITH 2 TO 4 INCH SLUMP)

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## SPECIAL INSPECTION SERVICES SCHEDULE - STEEL CONSTRUCTION

REFERENCED STANDARDS PER IBC, CHAPTER 17						
VERIFICATION AND INSPECTION TASK	TEST/INSPECTION	DESCRIPTION OF TEST/INSPECTION	APPLICABLE TO PROJECT (Y/N)	FREQUENCY		
FABRICATOR QUALITY CONTROL	INSPECTION	VERIFY THE FABRICATOR MEETS AISC CERTIFIED FABRICATOR REQUIREMENT LISTED IN THE PROJECT SPECIFICATIONS.	Y	ONE-TIME		
QUALITY	INSPECTION	VISUALLY INSPECT STEEL AS IT IS RECEIVED FOR POSSIBLE DAMAGE IN SHIPPING, WORKMANSHIP, AND PIECE MARKING.	Y	PERIODIC		
MILL TEST REPORTS	INSPECTION	REVIEW CERTIFIED MILL TEST REPORTS AND IDENTIFICATION MARKINGS ON WIDE-FLANGE SHAPES, HIGH-STRENGTH BOLTS, NUTS AND WELDING ELECTRODES.	Y	PERIODIC		
WELDED CONNECTIONS	INSPECTION	INSPECT FIELD WELDED CONNECTIONS AS FOLLOWS:	Y	CONTINUOUS		
		INSPECT <100% OF COMPLETE JOINT PENETRATION FIELD WELDS. ULTRASONIC TESTING OF ALL COMPLETE PENETRATIONS WELDS.	Y	CONTINUOUS		
		INSPECT <100% OF PARTIAL JOINT PENETRATION FIELD WELDS.	Y	CONTINUOUS		
		INSPECT <100% OF MULTI-PASS FILLET FIELD WELDS.	Y	CONTINUOUS		
		INSPECT <100% OF FILLET FIELD WELDS IN LATERAL-LOAD-RESISTING BRACED FRAMES AND MOMENT FRAMES.	Y	CONTINUOUS		
		INSPECT <100% OF OTHER FILLET FIELD WELDS.	Y	PERIODIC		
		VERIFY WELDING PROCEDURES ARE IN ACCORDANCE WITH AISC REQUIREMENTS.	Y	PERIODIC		
		INSPECT PRE-HEAT, POST-HEAT AND SURFACE PREPARATION BETWEEN PASSES.	Y	PERIODIC		
		VERIFY SIZE AND LENGTH OF FILLET WELDS.	Y	PERIODIC		
		VERIFY THAT WELDS ARE CLEAN, WELDER IDENTIFICATION IS LEGIBLE, SIZE, LENGTH AND LOCATION OF WELDS, VERIFY THAT WELDS MEET ACCEPTANCE CRITERIA, PLACEMENT OF REINFORCEMENT FILLETS, REMOVAL OF BACKING BARS AND WELD TABS AS REQUIRED, AND REPAIR ACTIVITIES.	Y	PERIODIC		
		INSPECT BOLTED CONNECTIONS AS FOLLOWS:	Y	CONTINUOUS		
		INSPECT <100% OF ALL PRE-TENSIONED AND SLIP-CRITICAL BOLTED CONNECTIONS.	Y	CONTINUOUS		
		INSPECT <100% OF BOLTED CONNECTIONS IN LATERAL-LOAD-RESISTING BRACED FRAMES AND MOMENT FRAMES.	Y	PERIODIC		
BOLTED CONNECTIONS	INSPECTION	INSPECT <20% OF ALL OTHER BOLTED CONNECTIONS.	Y	PERIODIC		
		FOR SLIP-CRITICAL BOLTED CONNECTIONS, VERIFY INSTALLATION IS PERFORMED IN ACCORDANCE WITH ONE OF THE FOLLOWING METHODS:	Y	CONTINUOUS		
		TURN-OF-NUT, ACCORDING TO RCSC'S "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A 325 OR A 490 BOLTS."	Y	CONTINUOUS		
		CALIBRATED WRENCH, ACCORDING TO RCSC'S "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A 325 OR A 490 BOLTS."	Y	CONTINUOUS		
		TIWIST-OFF TENSION CONTROL BOLT: ASTM F 1852.	Y	CONTINUOUS		
		DIRECT-TENSION CONTROL BOLT: ASTM F 1852.	Y	CONTINUOUS		
		FOR ALL BOLTED CONNECTIONS, VERIFY QUANTITY, SIZE AND GRADE OF BOLTS, REQUIRED SURFACE PREPARATION AND PROPER FIT-UP OF CONNECTED ELEMENTS.	Y	PERIODIC		
		VERIFY THAT STEEL MEMBER SIZES AND STEEL GRADE CONFORM TO THE CONTRACT DOCUMENTS AND APPROVED SHOP DRAWINGS.	Y	PERIODIC		
		STEEL FRAMING, DETAILS AND CONNECTORS	INSPECTION	INSPECT STEEL FRAME FOR COMPLIANCE WITH STRUCTURAL DRAWINGS, INCLUDING BRACING, MEMBER CONFIGURATION AND CONNECTION DETAILS AS FOLLOWS:	Y	PERIODIC
				CHECK THE INSTALLATION OF BASE PLATES FOR PROPER LEVELING AND VERIFY PROPER GROUT TYPE AND INSTALLATION PROCEDURES ARE FOLLOWED.	Y	PERIODIC
				INSPECT <100% OF BEAM AND GIRDER CONSTRUCTION AND ASSEMBLIES.	Y	PERIODIC
				INSPECT <100% OF ALL BRACED FRAME AND MOMENT FRAME ASSEMBLIES.	Y	CONTINUOUS
				INSPECT <100% OF THE COLUMN SPLICES AND BASE JOINTS FOR VERIFICATION THAT GAPS IN CONTACT BEARING DO NOT EXCEED 1/16 INCH. GAPS GREATER THAN 1/16 INCH SHALL BE REPORTED TO THE ENGINEER OF RECORD FOR ASSESSMENT.	Y	CONTINUOUS
INSPECT COMPOSITE STEEL BEAM SHEAR CONNECTORS AS FOLLOWS:	Y			CONTINUOUS		
OBSERVE THE WELDING OF SHEAR CONNECTORS. INSPECT STUDS FOR FULL 360 DEGREE FLASH.	N			CONTINUOUS		
INSPECT SIZE, NUMBER, POSITIONING AND WELDING OF SHEAR CONNECTORS.	N			CONTINUOUS		
RING TEST <100% OF SHEAR CONNECTORS WITH A 3 LB HAMMER.	N			PERIODIC		
BEND TEST ALL QUESTIONABLE STUDS TO 15 DEGREES.	N			CONTINUOUS		
INSPECT STEEL GRATING AS FOLLOWS:	N			PERIODIC		
VISUALLY INSPECT THE GRATING FOR DAMAGE DURING SHIPPING.	N			PERIODIC		
VERIFY THAT THE GRATING DEPTH, TYPE OR PROPERTIES, AND FINISH COMPLY WITH THE CONTRACT DOCUMENTS AND/OR APPROVED SHOP DRAWINGS.	N			PERIODIC		
COMPOSITE BEAM SHEAR CONNECTORS	TEST	VERIFY ALL GRATING ATTACHMENT TO THE SUPPORTING CONCRETE, STEEL, AND/OR MASONRY AS SPECIFIED IN THE CONTRACT DOCUMENTS AND/OR APPROVED SHOP DRAWINGS.	N	PERIODIC		
		GRATING	INSPECTION	INSPECT THE GRATING DEPTH, TYPE OR PROPERTIES, AND FINISH COMPLY WITH THE CONTRACT DOCUMENTS AND/OR APPROVED SHOP DRAWINGS.	N	PERIODIC
		VERIFY ALL GRATING ATTACHMENT TO THE SUPPORTING CONCRETE, STEEL, AND/OR MASONRY AS SPECIFIED IN THE CONTRACT DOCUMENTS AND/OR APPROVED SHOP DRAWINGS.	N	PERIODIC		

## SPECIAL INSPECTION SERVICES SCHEDULE - STEEL ROOF DECK

REFERENCED STANDARDS PER IBC, CHAPTER 17				
VERIFICATION AND INSPECTION TASK	TEST/INSPECTION	DESCRIPTION OF TEST/INSPECTION	APPLICABLE TO PROJECT (Y/N)	FREQUENCY
QUALITY	INSPECTION	VISUALLY INSPECT THE DECK PRIOR TO INSTALLATION FOR DAMAGE.	Y	PERIODIC
DECK MATERIAL	INSPECTION	VERIFY THAT THE DECK DEPTH, GAUGE, TYPE, PROPERTIES, AND FINISH COMPLY WITH THE CONTRACT DOCUMENTS.	Y	PERIODIC
DECK ATTACHMENT	INSPECTION	VERIFY THAT THE DECK ATTACHMENT TO THE SUPPORTING STEEL IS AS SPECIFIED IN THE CONTRACT DOCUMENTS.	Y	PERIODIC
DECK SUPPORT	INSPECTION	VERIFY THAT THE PROPER DECK SUPPORT IS USED AROUND OPENINGS.	Y	PERIODIC
DECK ACCESSORIES	INSPECTION	VERIFY THAT DECK ACCESSORIES ARE BEING INSTALLED ACCORDING TO THE CONTRACT DOCUMENTS AND APPROVED SHOP DRAWINGS.	Y	PERIODIC

## SPECIAL INSPECTION SERVICES SCHEDULE - SOILS AND EARTHWORK

REFERENCED STANDARDS PER IBC, CHAPTER 17				
VERIFICATION AND INSPECTION TASK	TEST/INSPECTION	DESCRIPTION OF TEST/INSPECTION	APPLICABLE TO PROJECT (Y/N)	FREQUENCY
FOOTING SUBGRADE	TEST	REFERENCE EARTHWORK SPECIFICATION FOR EXTENT OF TESTING REQUIRED.	Y	PERIODIC
COMPACTION OF SOILS	TEST	REFERENCE EARTHWORK SPECIFICATION FOR EXTENT OF TESTING REQUIRED.	Y	PERIODIC
CONTROLLED STRUCTURAL FILL	TEST	REFERENCE EARTHWORK SPECIFICATION FOR EXTENT OF TESTING REQUIRED.	Y	PERIODIC
FOOTING SUBGRADE MATERIAL	INSPECTION	INSPECT SOILS BELOW FOUNDATIONS AND SLABS FOR ADEQUATE COMPACTION AND BEARING CAPACITY PRIOR TO PLACEMENT OF CONCRETE.	Y	PERIODIC
EXCAVATION	INSPECTION	VERIFY EXCAVATIONS ARE EXTENDED TO THE PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	Y	PERIODIC
CLASSIFICATION OF CONTROLLED FILL	INSPECTION	1) INSPECT PLACEMENT, LIFT THICKNESS AND COMPACTION OF CONTROLLED FILL. 2) VERIFY EXTENT AND SLOPE OF FILL PLACEMENT.	Y	PERIODIC
USE OF PROPER MATERIALS	INSPECTION	VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF CONTROLLED FILL.	Y	CONTINUOUS
OBSERVATION OF SUBGRADE	INSPECTION	PRIOR TO PLACEMENT OF CONTROLLED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	Y	PERIODIC

## SPECIAL INSPECTION SERVICES SCHEDULE - CONCRETE CONSTRUCTION

REFERENCED STANDARDS PER IBC, CHAPTER 17				
VERIFICATION AND INSPECTION TASK	TEST/INSPECTION	DESCRIPTION OF TEST/INSPECTION	APPLICABLE TO PROJECT (Y/N)	FREQUENCY
MATERIAL TESTING	TEST	REFERENCE CAST-IN-PLACE CONCRETE SPECIFICATION FOR EXTENT OF TESTING REQUIRED.	-	-
QUALITY CONTROL	INSPECTION	VERIFY THAT QUALITY CONTROL TESTING IS PROVIDED IN ACCORDANCE WITH THE PROJECT REQUIREMENTS.	Y	PERIODIC
REINFORCING STEEL	INSPECTION	INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS (WHEN USED) AND PLACEMENT AS FOLLOWS:	Y	PERIODIC
		VERIFY THAT REINFORCEMENT SURFACES ARE FREE OF EXCESS RUST OR OTHER COATINGS THAT MAY ADVERSELY AFFECT BONDING CAPACITY. IF OILING OF FORMS IS REQUIRED, VERIFY THAT IT IS APPLIED BEFORE REINFORCING IS PLACED.	Y	PERIODIC
		VERIFY REINFORCING BARS FOR COMPLIANCE WITH CONTRACT DOCUMENTS AND APPROVED SHOP DRAWINGS AS FOLLOWS:	Y	PERIODIC
		MATERIAL GRADE, SIZE, QUANTITY, SPACING, AND LAYERING; BARS ARE ADEQUATELY TIED AND SUPPORTED ON CHAIRS OR BOLSTERS, PROPER HOOK TYPE AND LOCATION, SPACING, LOCATIONS AND REQUIRED LENGTH OF LAP; PROPER CLEARANCE AND COVER REQUIREMENTS FROM CONCRETE SURFACES; SUFFICIENT SPACING BETWEEN REINFORCEMENT FOR CONCRETE PLACEMENT; VERIFY THAT UNSCHEDULED/ADDITIONAL REINFORCING BARS SHOWN ON PLAN, IN DETAIL, OR SPECIFIED IN NOTES ARE PROVIDED AND ARE IN COMPLIANCE WITH CONTRACT DOCUMENTS AND APPROVED SHOP DRAWINGS.	Y	PERIODIC
		MECHANICAL SPLICES:	Y	PERIODIC
		(TENSION AND/OR COMPRESSION) ON THE PROJECT, VERIFY COMPLIANCE WITH SPECIFICATIONS AND CONFORMANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION. VERIFY THAT THE MANUFACTURER IS PRESENT FOR THE FIRST INSTALLATION OF EACH TYPE OF SPLICE ON THE PROJECT.	Y	CONTINUOUS
		VERIFY THAT WELDED WIRE REINFORCEMENT IS COMPOSED OF FLAT SHEETS, HAS PROPER WIRE GAGE AND SPACING, IS PROPERLY SUPPORTED, AND IS PROPERLY LAPPED.	Y	PERIODIC
		INSPECT HEADED STUD SHEAR REINFORCEMENT TO ENSURE THAT IT CONFORMS TO THE PROJECT REQUIREMENTS.	Y	PERIODIC
		REVIEW TYPE AND SPACING; VERIFY THAT REINFORCING IS ADEQUATELY SUPPORTED TO RESIST DISPLACEMENT OR SHIFTING DURING CONCRETE PLACEMENT; VERIFY WELDING OF REINFORCEMENT IS PERFORMED ACCORDING TO AISC REQUIREMENTS AND THAT IT IS INSPECTED BY THE TESTING LABORATORY.	Y	PERIODIC
		INSPECT BOLTS AND ANCHOR RODS TO BE CAST IN CONCRETE PRIOR TO PLACEMENT OF CONCRETE FOR SIZE, QUANTITY, LOCATION AND EMBEDMENT. INSPECT DURING PLACEMENT FOR PROPER CONCRETE CONSOLIDATION AROUND BOLTS AND ANCHORS.	Y	PERIODIC
		ALLOWABLE LOADS HAVE BEEN INCREASED PER PLAN NOTES.	Y	CONTINUOUS
		BOLTS AND/OR ANCHOR RODS USED IN LATERAL FORCE RESISTING SYSTEM AT THE FOLLOWING LOCATIONS: <LIST GRID LOCATIONS>	Y	CONTINUOUS
		<20% OF BOLTS AND/OR ANCHOR RODS USED ELSEWHERE.	Y	PERIODIC
REVIEW AND BECOME FAMILIAR WITH THE MIX DESIGNS SPECIFIED ON THE PROJECT. VERIFY MIX DESIGN PROVIDED BY THE CONTRACTOR IS CONSISTENT WITH REQUIREMENTS OF THE CONTRACT DOCUMENTS. REVIEW CONCRETE BATCH TICKETS TO PROPER MIX ID, TYPE OF CONCRETE AND STRENGTH FOR THE PLACEMENT LOCATION. VERIFY THAT WATER ADDED AT SITE (IF PERMITTED), DOES NOT EXCEED THAT ALLOWED BY THE MIX DESIGN.	Y	PERIODIC		
INSPECTION OF FORMED AREA	INSPECTION	VERIFY THAT ALL DEBRIS AND FOREIGN MATTER HAVE BEEN REMOVED BEFORE CONCRETE IS PLACED.	Y	PERIODIC
FORMWORK	INSPECTION	INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED. VERIFY FORMWORK USED IN COMPLIANCE WITH THE SPECIFICATIONS AND APPROVED SHOP DRAWINGS (WHEN REQUIRED).	Y	PERIODIC
MATERIAL SAMPLING AND TESTING	TEST	AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	Y	CONTINUOUS
CONCRETE PLACEMENT	INSPECTION	INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES AS FOLLOWS:	Y	CONTINUOUS
		VERIFY THE CONCRETE IS NOT OVER 90 MINUTES OLD AT TIME OF PLACEMENT; HOT-WEATHER OR COLD-WEATHER TECHNIQUES ARE BEING APPLIED AS REQUIRED; CONCRETE BEING DEPOSITED IN SUCH A MANNER THAT THE VERTICAL DROP DOES NOT EXCEED SIX FEET, AND THAT CONCRETE IS NOT PERMITTED TO DROP FREELY OVER REINFORCEMENT CAUSING SEGREGATION; CONCRETE IS PROPERLY VIBRATED; EMBEDDED ITEMS AND REINFORCING STEEL ARE NOT ADVERSELY ALTERED DURING PLACEMENT. NOTE IF ANYTHING WAS DISPLACED OR OTHERWISE ALTERED DURING PLACEMENT; VERIFY THAT THERE ARE NO COLD JOINTS WITHIN THE AREA OF THE POUR.	Y	CONTINUOUS
		VERIFY THE CURING PROCESS IS AS SPECIFIED IN THE CONTRACT DOCUMENTS AND THAT ANY CURING COMPOUND USED IS APPLIED IN ACCORDANCE WITH MANUFACTURER'S PRINTED APPLICATION INSTRUCTIONS.	Y	PERIODIC
CURING AND PROTECTION	INSPECTION	VERIFY THAT LOCATION OF VERTICAL AND HORIZONTAL CONSTRUCTION JOINTS FOR COMPLIANCE WITH THE CONSTRUCTION JOINT LOCATION PLAN SUBMITTED BY THE CONTRACTOR TO ENGINEER OF RECORD. VERIFY THAT REINFORCEMENT, DOWELS, KEYS, AND BULKHEADS AT CONSTRUCTION JOINTS ARE IN CONFORMANCE WITH THE CONTRACT DOCUMENTS.	Y	PERIODIC
CONSTRUCTION JOINTS	INSPECTION	VERIFY THAT LOCATION OF VERTICAL AND HORIZONTAL CONSTRUCTION JOINTS FOR COMPLIANCE WITH THE CONSTRUCTION JOINT LOCATION PLAN SUBMITTED BY THE CONTRACTOR TO ENGINEER OF RECORD. VERIFY THAT REINFORCEMENT, DOWELS, KEYS, AND BULKHEADS AT CONSTRUCTION JOINTS ARE IN CONFORMANCE WITH THE CONTRACT DOCUMENTS.	Y	PERIODIC

## SPECIAL INSPECTION SERVICES SCHEDULE - FOUNDATION WALLS AND PITS

REFERENCED STANDARDS PER IBC, CHAPTER 17				
VERIFICATION AND INSPECTION TASK	TEST/INSPECTION	DESCRIPTION OF TEST/INSPECTION	APPLICABLE TO PROJECT (Y/N)	FREQUENCY
CONCRETE PLACEMENT	INSPECTION	THE INSPECTOR MUST BE PRESENT FULL TIME DURING THE ENTIRE PLACEMENT OF THE FIRST +2- FOUNDATION CONCRETE POURS AND THEN MUST BE PRESENT AT THE START OF +100% OF OTHER CONCRETE POURS.	Y	PERIODIC
FORMWORK	INSPECTION	VERIFY THAT FORMS ARE PLUMB AND STRAIGHT, BRACED AGAINST MOVEMENT, AND LUBRICATED FOR REMOVAL.	Y	PERIODIC
DIMENSIONS	INSPECTION	VERIFY WALL/PIT DIMENSIONS.	Y	PERIODIC
EMBEDDED ITEMS	INSPECTION	VERIFY ANCHOR RODS AND/OR DOWELS ARE INSTALLED WITH THE EMBEDMENT AND PROJECTED LENGTHS AND IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.	Y	PERIODIC
REINFORCEMENT	INSPECTION	VERIFY PIT/WALL REINFORCEMENT PRIOR TO PLACEMENT OF CONCRETE.	Y	PERIODIC
WATERSTOPS	INSPECTION	VERIFY WATER STOPS ARE PROPERLY INSTALLED AND ANCHORED INTO POSITION PRIOR TO PLACEMENT OF CONCRETE.	Y	PERIODIC
BACKFILL OPERATIONS	INSPECTION	VERIFY THAT FOUNDATION AND PIT WALLS WITH UNEVEN BACKFILL CONDITIONS ARE NOT BACKFILLED UNTIL FLOOR CONSTRUCTION AT TOP OF WALL IS COMPLETE OR TEMPORARY BRACING IS PROVIDED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.	Y	PERIODIC
CONCRETE	INSPECTION	VERIFY CONCRETE PLACEMENT AS OUTLINED IN THIS INSPECTION PLAN.	Y	PERIODIC

## SPECIAL INSPECTION SERVICES SCHEDULE - FOUNDATIONS

REFERENCED STANDARDS PER IBC, CHAPTER 17				
VERIFICATION AND INSPECTION TASK	TEST/INSPECTION	DESCRIPTION OF TEST/INSPECTION	APPLICABLE TO PROJECT (Y/N)	FREQUENCY
CONCRETE PLACEMENT	INSPECTION	THE INSPECTOR MUST BE PRESENT FULL TIME DURING THE ENTIRE PLACEMENT OF THE FIRST +2- FOUNDATION CONCRETE POURS AND THEN MUST BE PRESENT AT THE START OF +100% OF OTHER CONCRETE POURS.	Y	PERIODIC
FOOTING SUBGRADE	INSPECTION	VERIFY APPROVAL OF THE FOOTING SUBGRADE PRIOR TO PLACEMENT OF FOUNDATION CONCRETE.	Y	PERIODIC
FORMWORK	INSPECTION	VERIFY THAT FORMS ARE PLUMB AND STRAIGHT, BRACED AGAINST MOVEMENT, AND LUBRICATED FOR REMOVAL.	Y	PERIODIC
EARTH-FORMED FOUNDATION	INSPECTION	FOR EARTH-FORMED FOUNDATIONS, VERIFY THAT EARTH FORMS ARE SUFFICIENTLY UNIFORM TO ALLOW FOR PROPER DIMENSIONS AND REQUIRED CONCRETE COVER OVER REINFORCEMENT.	Y	PERIODIC
DIMENSIONS	INSPECTION	VERIFY FOUNDATION DIMENSIONS.	Y	PERIODIC
EMBEDDED ITEMS	INSPECTION	VERIFY ANCHOR RODS AND/OR DOWELS ARE INSTALLED WITH THE EMBEDMENT AND PROJECTED LENGTHS AND IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.	Y	PERIODIC
REINFORCEMENT	INSPECTION	VERIFY FOUNDATION REINFORCEMENT PRIOR TO PLACEMENT OF CONCRETE.	Y	PERIODIC
CONCRETE	INSPECTION	VERIFY CONCRETE PLACEMENT AS OUTLINED IN THIS INSPECTION PLAN.	Y	PERIODIC

## SPECIAL INSPECTION SERVICES SCHEDULE - MASONRY CONSTRUCTION (LEVEL 1 INSPECTION)

REFERENCED STANDARDS PER IBC, CHAPTER 17						
VERIFICATION AND INSPECTION TASK	TEST/INSPECTION	DESCRIPTION OF TEST/INSPECTION	APPLICABLE TO PROJECT (Y/N)	FREQUENCY		
MATERIAL TESTING	TEST	REFERENCE MASONRY SPECIFICATION FOR EXTENT OF TESTING REQUIRED.	-	-		
QUALITY CONTROL	INSPECTION	VERIFY THAT QUALITY CONTROL TESTING IS PROVIDED IN ACCORDANCE WITH THE PROJECT REQUIREMENTS.	Y	PERIODIC		
MATERIALS	INSPECTION	VERIFY THE MATERIALS ARE STORED PROPERLY BEFORE PLACEMENT IN THE STRUCTURE.	Y	PERIODIC		
WALL LOCATIONS	INSPECTION	VERIFY THE WALL LOCATIONS AND THICKNESSES.	Y	PERIODIC		
CONTROL JOINTS	INSPECTION	VERIFY THE PROPER INSTALLATION OF CONTROL JOINTS, TYPE AND LOCATION.	Y	PERIODIC		
OPENINGS	INSPECTION	VERIFY THE PROPER INSTALLATION OF STRUCTURAL ELEMENTS AROUND OPENINGS INCLUDING LINTELS, SILL, AND DOOR OR WINDOW JAMBS INCLUDING MASONRY UNIT TYPE AND REINFORCEMENT.	Y	PERIODIC		
CONNECTIONS	INSPECTION	VERIFY THE MASONRY IS PROPERLY CONNECTED TO THE SUPPORTING STRUCTURE(S).	Y	PERIODIC		
REINFORCING STEEL	INSPECTION	INSPECTION OF REINFORCING STEEL AND PLACEMENT AS FOLLOWS:	Y	PERIODIC		
		VERIFY THAT REINFORCEMENT SURFACES ARE FREE OF EXCESS RUST OR OTHER COATINGS THAT MAY ADVERSELY AFFECT BONDING CAPACITY.	Y	PERIODIC		
		VERIFY REINFORCING BARS AND HORIZONTAL JOINT REINFORCEMENT FOR COMPLIANCE WITH CONTRACT DOCUMENTS AND APPROVED SHOP DRAWINGS AS FOLLOWS:	Y	PERIODIC		
		MATERIAL GRADE, SIZE, QUANTITY, SPACING, AND LAYERING; BARS ARE ADEQUATELY TIED AND SUPPORTED ON CHAIRS OR BOLSTERS, PROPER HOOK TYPE AND LOCATION, SPACING, LOCATIONS AND REQUIRED LENGTH OF LAP; PROPER CLEARANCE AND COVER REQUIREMENTS FROM MASONRY SURFACES; SUFFICIENT SPACING BETWEEN REINFORCEMENT FOR GROUT PLACEMENT; VERIFY THAT UNSCHEDULED/ADDITIONAL REINFORCING BARS SHOWN ON PLAN, IN DETAILS, OR SPECIFIED IN NOTES ARE PROVIDED AND ARE IN COMPLIANCE WITH CONTRACT DOCUMENTS AND APPROVED SHOP DRAWINGS.	Y	PERIODIC		
		EMBEDDED ITEMS	INSPECTION	INSPECT EMBEDDED ITEMS TO BE CAST IN MASONRY PRIOR TO PLACEMENT OF GROUT FOR SIZE, QUANTITY, LOCATION, POSITION AND EMBEDMENT. INSPECT DURING PLACEMENT FOR PROPER CONCRETE CONSOLIDATION EMBEDDED ITEMS.	Y	PERIODIC
		INSPECT THE MORTAR AND GROUT USED ON THE PROJECT AS FOLLOWS:	Y	PERIODIC		
		VERIFY THAT MORTAR AND GROUT MATERIALS COMPLY WITH THE CONTRACT DOCUMENTS AND APPROVED SUBMITTALS.	Y	PERIODIC		
		SITE-MIXED MORTAR: VERIFY THE MORTAR IS MIXED IN ACCORDANCE WITH SPECIFIED PROPORTIONS.	Y	PERIODIC		
		BAG-MIX MORTAR: VERIFY THE MORTAR IS MIXED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.	Y	PERIODIC		
		VERIFY PROPER MORTAR PLACEMENT.	Y	PERIODIC		
		GROUT BAG MIX: VERIFY THAT THE GROUT IS MIXED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.	Y	PERIODIC		
		READY-MIX GROUT: VERIFY THE MIX NUMBER AND GROUT STRENGTH.	Y	PERIODIC		
		PRIOR TO ANY GROUTING PROCEDURE, INSPECT THE GROUT SPACE TO VERIFY THAT IT IS CLEAN AND THAT CLEANOUTS, IF REQUIRED, ARE IN PLACE AND CONFORM TO THE CONTRACT DOCUMENTS.	Y	PERIODIC		
VERIFY THE PROPER GROUT PLACEMENT AND CONSOLIDATION.	Y	CONTINUOUS				
VERIFY THAT GROUT TESTING IS PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.	Y	PERIODIC				
PROTECTION	INSPECTION	VERIFY THE PROPER CONSTRUCTION TECHNIQUES ARE FOLLOWED FOR PROTECTION OF MASONRY DURING HOT-WEATHER AND/OR COLD-WEATHER CONSTRUCTION.	Y	PERIODIC		

### SPECIAL INSPECTION

SPECIAL INSPECTION IS A MANDATORY REQUIREMENT BY SECTION 7704.1 OF THE REFERENCED BUILDING CODE FOR VERIFYING CONFORMANCE OF THE CONSTRUCTION SPECIAL INSPECTION IS REQUIRED IN ADDITION TO ALL MATERIAL TESTS AND INSPECTIONS IDENTIFIED ELSEWHERE IN THE CONSTRUCTION DOCUMENTS.

THE GENERAL CONTRACTOR SHALL EMPLOY INDEPENDENT AGENCY(IES) OR INDIVIDUAL(S) TO PROVIDE SPECIAL INSPECTION FOR ITEMS AS INDICATED ON THE DRAWINGS.

THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON, WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL AND THE STRUCTURAL ENGINEER, FOR INSPECTION OF EACH PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.

"PERIODIC" SPECIAL INSPECTION IS DEFINED AS "THE PART-TIME OR INTERMITTENT OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK HAS BEEN OR IS BEING PERFORMED AND AT THE COMPLETION OF THE WORK". THE PERIODIC PERCENTAGES LISTED IN THE TABLES ARE A MINIMUM REQUIREMENT.

"CONTINUOUS" SPECIAL INSPECTION IS DEFINED AS "THE FULL-TIME OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK IS BEING PERFORMED".

THE CONTRACTOR SHALL COORDINATE WITH THE SPECIAL INSPECTOR SUFFICIENTLY IN ADVANCE OF WORK REQUIRING SPECIAL INSPECTION AND SHALL PROVIDE ACCESS TO THE SITE AND TO THE CONSTRUCTION DOCUMENTS (CURRENT DRAWINGS AND SPECIFICATIONS) FOR THE SPECIAL INSPECTOR TO CARRY OUT THE REQUIRED OPERATIONS.

THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK REQUIRING SPECIAL INSPECTION FOR CONFORMANCE TO THE CONSTRUCTION DOCUMENTS. ALL NON-CONFORMING WORK SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN, IF UNCORRECTED, TO THE IMMEDIATE ATTENTION OF THE STRUCTURAL ENGINEER.

THE SPECIAL INSPECTOR SHALL SUBMIT PERIODIC PROGRESS REPORTS TO THE CONTRACTOR AND STRUCTURAL ENGINEER IDENTIFYING ALL SPECIAL INSPECTION OPERATIONS PERFORMED. REPORTS SHALL BE SUBMITTED NO MORE THAN 7 DAYS FOLLOWING EACH SPECIAL INSPECTION OPERATION. REPORTS SHALL IDENTIFY THE ITEM(S) INSPECTED AND AN INDICATION OF WHETHER THE INSPECTED ITEMS WERE IN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS.

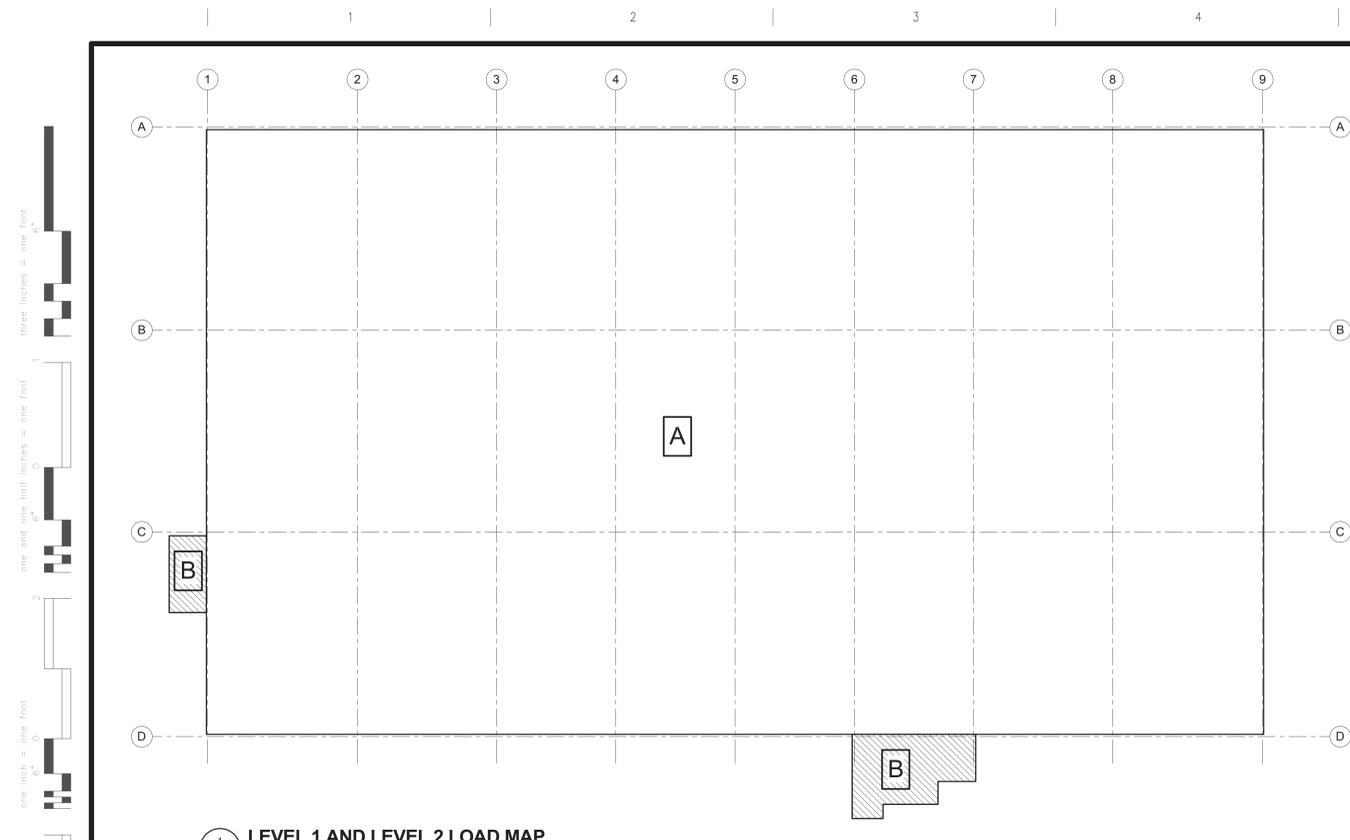
AT THE COMPLETION OF ALL WORK REQUIRING SPECIAL INSPECTION, THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT TO THE CONTRACTOR AND STRUCTURAL ENGINEER STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE SPECIAL INSPECTOR'S KNOWLEDGE, IN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS.

FAILURE TO CORRECT NON-CONFORMING WORK SHALL CONSTITUTE A BASIS FOR REJECTION OF THE WORK AND REMOVAL AND REPLACEMENT BY THE GENERAL CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER, INCLUDING, BUT NOT LIMITED TO:

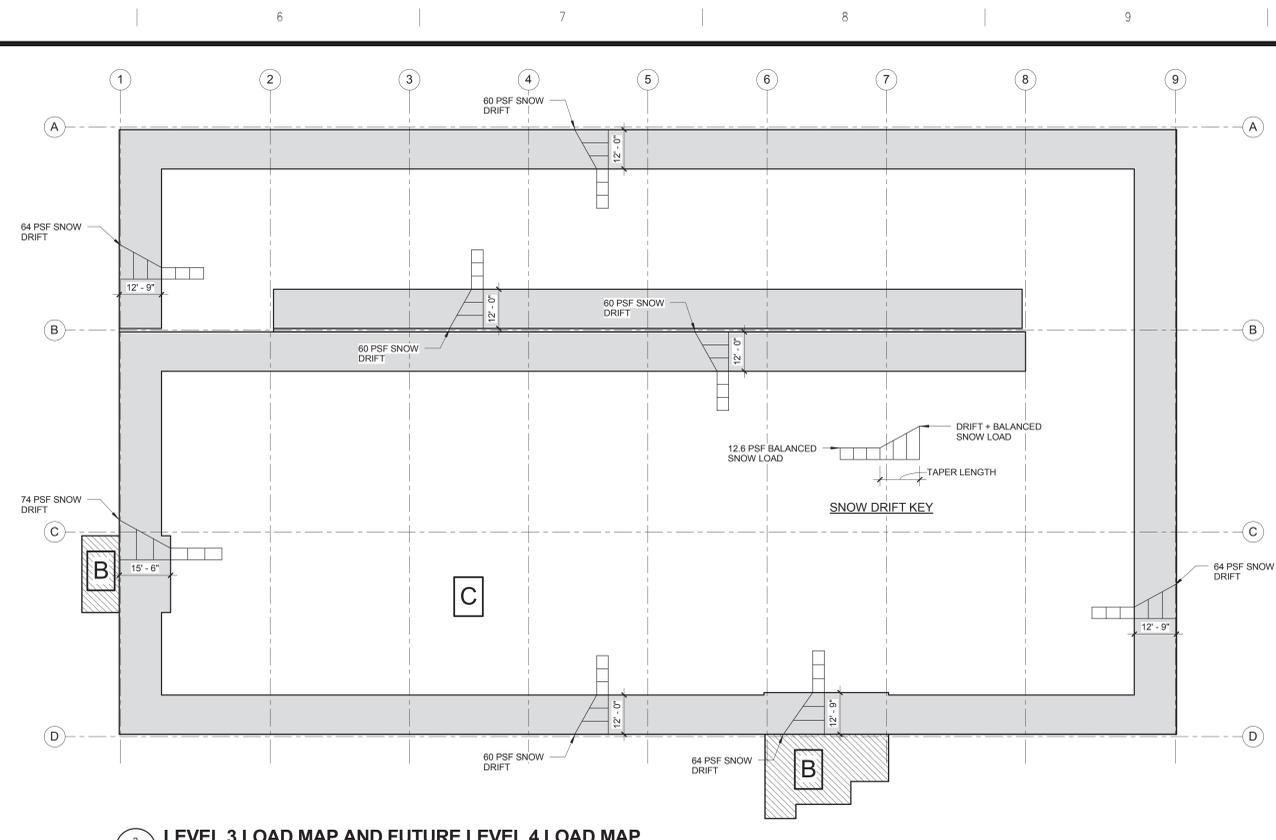
- THE COST OF REMOVAL AND REPLACEMENT OF ALL WORK FOR WHICH SPECIAL INSPECTION WAS REQUIRED BUT NOT PERFORMED DUE TO LACK OF COMMUNICATION BY THE CONTRACTOR, INCLUDING THE COST OF TESTING AND SPECIAL INSPECTION FOR THE REPLACEMENT WORK.
- THE COST OF ALL RELATED WORK MADE NECESSARY BY THE REMOVAL AND REPLACEMENT OF THE UNSPECTED WORK PER ITEM 1 ABOVE.
- THE COST FOR DESIGN PROFESSIONAL'S SERVICES RELATED TO ALL WORK FOR WHICH SPECIAL INSPECTION WAS REQUIRED BUT NOT PERFORMED AND SERVICES RELATED TO THE REPLACEMENT WORK.

CONFLICTING REQUIREMENTS, REPORTS, AND TEST RESULTS:

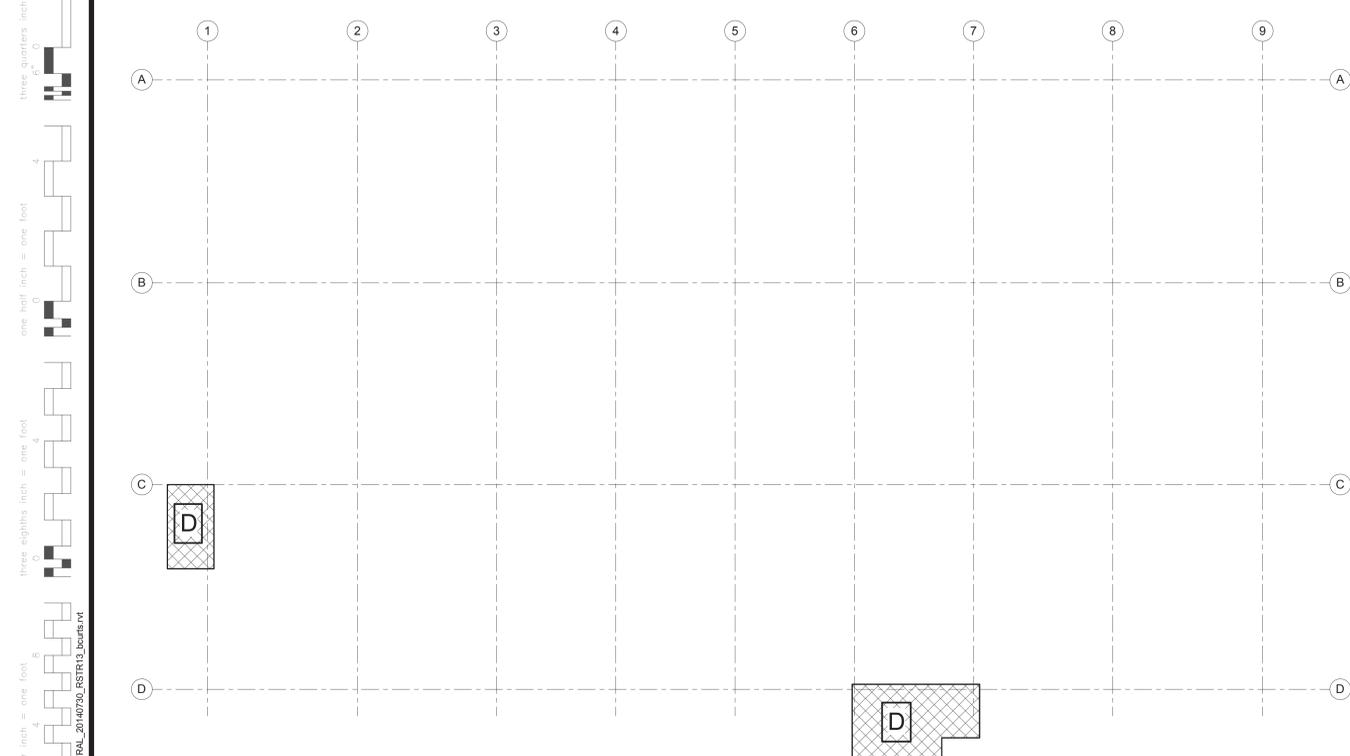
 <p><b>U.S. Department of Veterans Affairs</b> SALISBURY VAMC Dept. of Veterans Affairs 1601 Brenner Ave. Salisbury, NC 28144</p>	 <p>Professional Engineer No. 11142014</p>	<p><b>Structural</b> AMERICAN STRUCTUREPOINT 7260 Shadeland Station Indianapolis, IN 46256 Tel: 317-547-5580</p>	<p><b>MEP Engineer</b> APOGEE CONSULTING GROUP 7330 Chappel Hill Road, Suite 202 Raleigh, NC 27607 Tel: 919-858-7420</p>	<p><b>Civil Engineer</b> GUIDON DESIGN INC. 905 N. Capitol Ave. Suite 100 Indianapolis, IN 46204 Tel: 317-800-6388</p>	<p><b>Functional Design</b> CARL WALKER INC. 14045 Ballantyne Corp. Place, Suite 380 Charlotte, NC 28277 Tel: 704-716-8000</p>	<p>PROJECT LEADER/ARCHITECT:  905 N. CAPITOL AVE. SUITE 100 INDIANAPOLIS, IN. 46204 317.800.6388 WWW.GUIDONDESIGN.COM <b>SUSTAINABLE ARCHITECTURE + ENGINEERING</b></p>	<p>Drawing Title <b>SPECIAL INSP. NOTES AND TABLES</b> Approved for Design Concept: JOHN MONTGOMERY PROJECT ENGINEER 704-638-9000</p>	<p>Project Title CONSTRUCT NEW PARKING GARAGE Location W.G. (BILL) HEFNER VAMC Date 11/14/2014</p>	<p>Project Number 13.1044 Building Number Bldg 9 Drawing Number <b>S1003</b> Checked By: JAP Drawn By: BGC</p>	<p>OFFICE OF FACILITIES MANAGEMENT VA Project Number 659-342 </p>	
Revisions:		Date:									



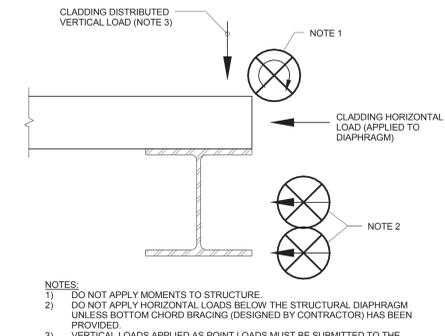
1  
S1004  
3/64" = 1'-0"



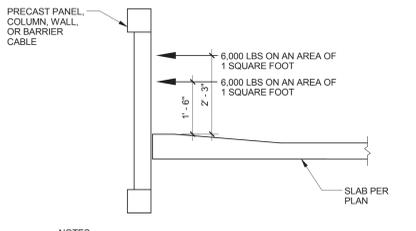
2  
S1004  
3/64" = 1'-0"



3  
S1004  
3/64" = 1'-0"



4  
S1004  
N.T.S.



5  
S1004  
N.T.S.

**PRECASTER SHALL ACCOUNT FOR FUTURE VERTICAL EXPANSION TO FUTURE LEVEL 4**

LOAD SCHEDULE						
MARK	OCCUPANCY / USE	SDL		SDL		SL
		LOAD (PSF)	DESCRIPTION	POINT LOAD (LBS)	DESCRIPTION	
A	TYP FLOOR	5	NOTE 1	--	--	40 (NR)
B	STAIRS	5	NOTE 1	--	--	100 (NR)
C	UPPER FLOOR	5	NOTE 1	--	--	40 (NR) 18 MINIMUM UNIFORM OR SEE LOAD MAP (DRIFT + BALANCED)
D	ROOF	5	NOTE 1	--	--	20 18 MINIMUM UNIFORM

NOTES:  
1. SDL INDICATES SUPERIMPOSED DEAD LOAD AND IS DEAD LOAD IN ADDITION TO THE SELF WEIGHT OF THE PRIMARY STRUCTURAL SYSTEM.  
2. (NR) INDICATES NON-REDUCIBLE LIVE LOAD.

FOUNDATION REACTION TABLE							
GRID LOCATION	SERVICE LEVEL AXIAL LOAD			GRID LOCATION	SERVICE LEVEL AXIAL LOAD		
	DEAD LOAD (KIPS)	LIVE LOAD (KIPS)	TOTAL LOAD (KIPS)		DEAD LOAD (KIPS)	LIVE LOAD (KIPS)	TOTAL LOAD (KIPS)
A-1	337	99	436	C-9	768	197	965
A-2	634	182	826	D-1	337	99	436
A-3	561	170	731	D-2	634	192	826
A-4	496	157	653	D-3	561	170	731
A-5	640	206	846	D-4	496	157	653
A-6	640	206	846	D-5	496	157	653
A-7	726	223	949	D-6	496	157	653
A-8	724	220	944	D-7	561	170	731
A-9	337	99	436	D-8	634	192	826
B-1	768	197	965	D-9	337	99	436
B-2	591	197	788				
B-8	591	197	788				
B-9	768	197	965				
C-1	768	197	965				
C-2	1132	377	1509				
C-3	997	334	1331				
C-4	873	308	1181				
C-5	873	308	1181				
C-6	873	308	1181				
C-7	997	334	1331				
C-8	1132	377	1509				

NOTES:  
1. FOUNDATION REACTIONS INCLUDE FUTURE VERTICAL EXPANSION TO LEVEL 4.

Revisions:	Date

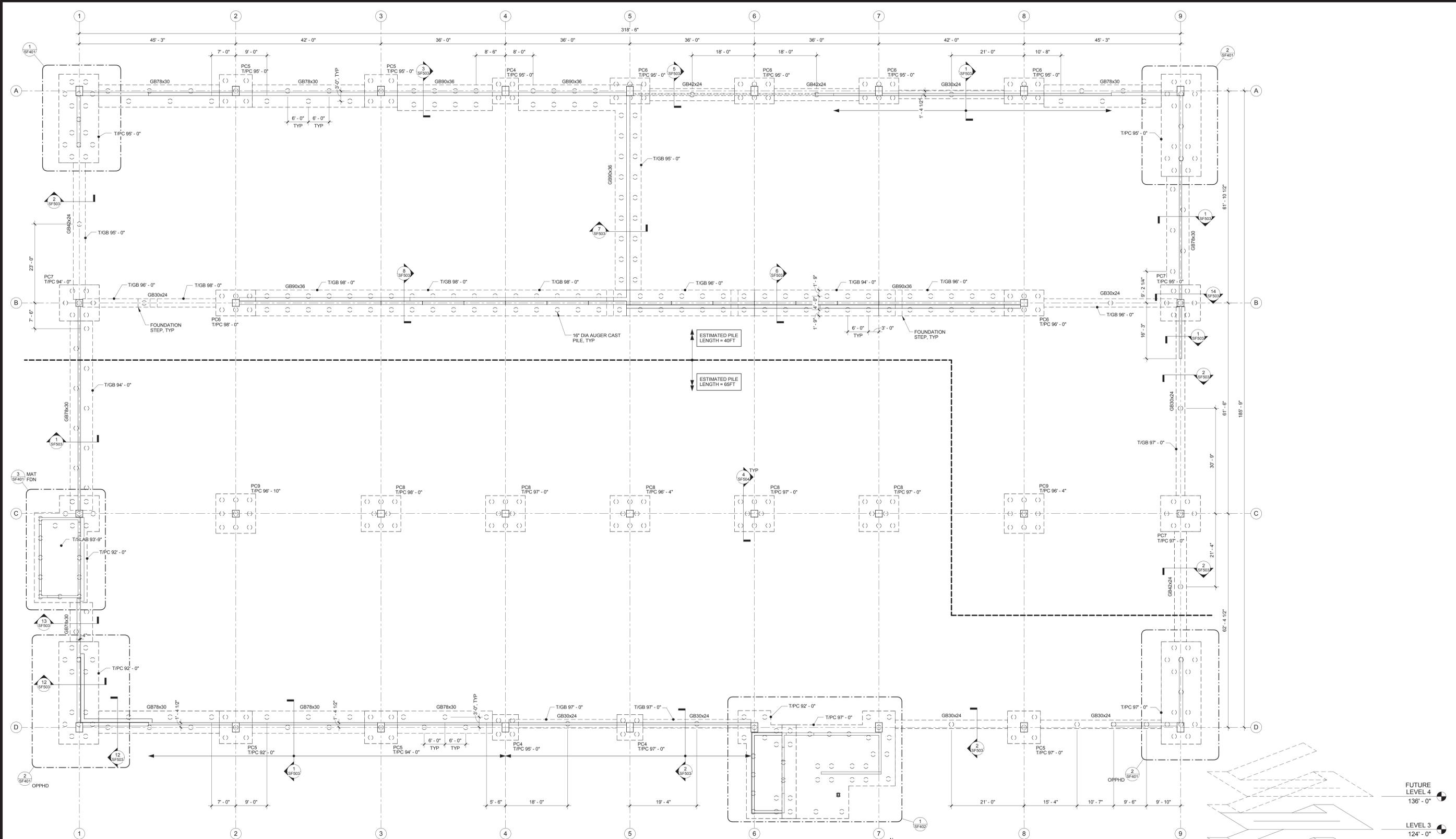
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SALISBURY VAMC  
Dept. of Veterans Affairs  
1601 Brenner Ave.  
Salisbury, NC 28144



<b>Structural</b> AMERICAN STRUCTUREPOINT 7260 Shadeland Station Indianapolis, IN 46256 Tele: 317-547-5580	<b>MEP Engineer</b> APOGEE CONSULTING GROUP 7330 Chappel Hill Road, Suite 202 Raleigh, NC 27607 Tele: 919-858-7420	<b>Civil Engineer</b> GUIDON DESIGN INC. 905 N. Capitol Ave. Suite 100 Indianapolis, IN 46204 Tele: 317-800-6388	<b>Functional Design</b> CARL WALKER INC. 14045 Ballantyne Corp. Place, Suite 380 Charlotte, NC 28277 Tele: 704-716-8000
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PROJECT LEADER/ARCHITECT:  
**GUIDON DESIGN**  
905 N. CAPITOL AVE. SUITE 100 INDIANAPOLIS, IN. 46204  
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SUSTAINABLE ARCHITECTURE + ENGINEERING

Drawing Title <b>LOAD MAPS</b>	Project Title CONSTRUCT NEW PARKING GARAGE	Project Number 13.1044	Office of Facilities Management
Approved for Design Concept: JOHN MONTGOMERY PROJECT ENGINEER 704-638-9000	Location W.G. (BILL) HEFNER VAMC	Building Number Bldg 9	VA Project Number 659-342
Date 11/14/2014	Checked By: JAP	Drawing Number S1004	Drawn By: BGC



**1 FOUNDATION PLAN**  
 3/32" = 1'-0"

- NOTES:
1. REFERENCE TOP OF SLAB (T/SLAB) ELEVATION = 100'-0" UNO (U.S.G.S. 717.83).
  2. TOP OF FILE CAP (T/PC) ELEVATION PER PLAN.
  3. REFER TO STRUCTURAL GENERAL NOTES, LEGEND, SCHEDULES, TYPICAL DETAILS, AND SPECIAL INSPECTION REQUIREMENTS FOR ADDITIONAL INFORMATION.
  4. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION AND DIMENSIONS.

- FUTURE LEVEL 4  
136'-0"
- LEVEL 3  
124'-0"
- LEVEL 2  
112'-0"
- LEVEL 1  
100'-0"

one eighth inch = one foot  
 one quarter inch = one foot  
 one half inch = one foot  
 three eighths inch = one foot  
 one inch = one foot  
 one and one half inches = one foot  
 three inches = one foot

BID SET

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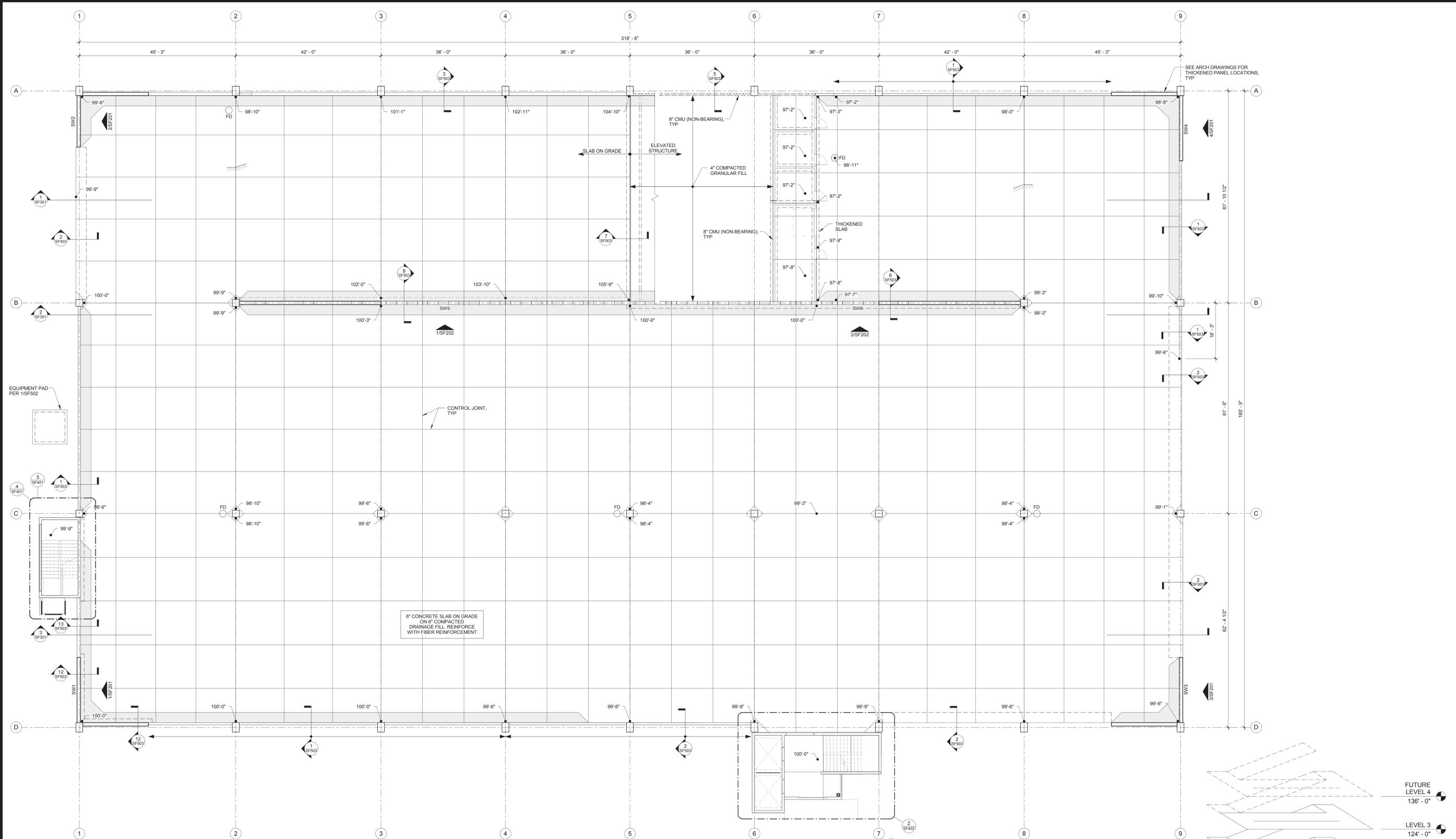
<b>Structural</b> AMERICAN STRUCTUREPOINT 7260 Shadeland Station Indianapolis, IN 46256 Tele: 317-547-5580	<b>MEP Engineer</b> APOGEE CONSULTING GROUP 7330 Chappel Hill Road, Suite 202 Raleigh, NC 27607 Tele: 919-858-7420	<b>Civil Engineer</b> GUIDON DESIGN INC. 905 N. Capitol Ave. Suite 100 Indianapolis, IN 46204 Tele: 317-800-6388	<b>Functional Design</b> CARL WALKER INC. 14045 Ballantyne Corp. Place, Suite 380 Charlotte, NC 28277 Tele: 704-716-8000
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 905 N. CAPITOL AVE. SUITE 100 INDIANAPOLIS, IN. 46204  
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Drawing Title <b>FOUNDATION PLAN</b>	Project Title CONSTRUCT NEW PARKING GARAGE	Project Number 13.1044	OFFICE OF FACILITIES MANAGEMENT
Approved for Design Concept: JOHN MONTGOMERY PROJECT ENGINEER 704-638-9000	Location W.G. (BILL) HEFNER VAMC	Building Number Bldg 9	VA Project Number 659-342
Date 11/14/2014	Checked By: JAP	Drawing Number <b>SB101</b>	Checked By: BGC

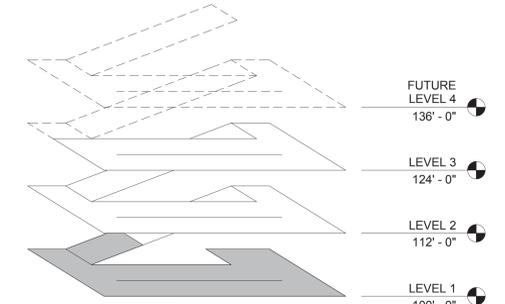


three inches = one foot  
 one and one half inches = one foot  
 one inch = one foot  
 three quarters inch = one foot  
 one half inch = one foot  
 three eighths inch = one foot  
 one quarter inch = one foot  
 one eighth inch = one foot



**LEVEL 1 - SLAB ON GRADE**  
 3/32" = 1'-0"

- NOTES:
- REFERENCE TOP OF SLAB (T/SLAB) ELEVATION = 100'-0" UNO (U.S.G.S. 717.83). SEE PLAN FOR SPOT ELEVATIONS. TOP OF SLAB ELEVATIONS DO NOT INCLUDE WASH CONCRETE. SEE TYPICAL PERIMETER EDGE OF SLAB ON GRADE DETAIL.
  - REFER TO STRUCTURAL GENERAL NOTES, LEGEND, SCHEDULES, TYPICAL DETAILS, AND SPECIAL INSPECTION REQUIREMENTS FOR ADDITIONAL INFORMATION.
  - SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION AND DIMENSIONS.
  - FD INDICATES A CAST IN FLOOR DRAIN. SEE TYPICAL DETAILS.
  - APPLY PENETRATING CONCRETE SEALER TO THE SURFACE OF THE ENTIRE SLAB ON GRADE.
  - SHADING INDICATES AREAS WHERE WASH IS REQUIRED. SEE TYPICAL SOG WASH DETAIL.
  - PLACE (1) #4 x 2'-6" MID-DEPTH OF SLAB AT 45 DEGREES AT EACH RE-ENTRANT CORNER.
  - GALVANIZE ALL EMBEDDED STRUCTURAL STEEL. SEE REINFORCING NOTES FOR REINFORCING STEEL EPOXY REQUIREMENTS.



Revisions:	Date

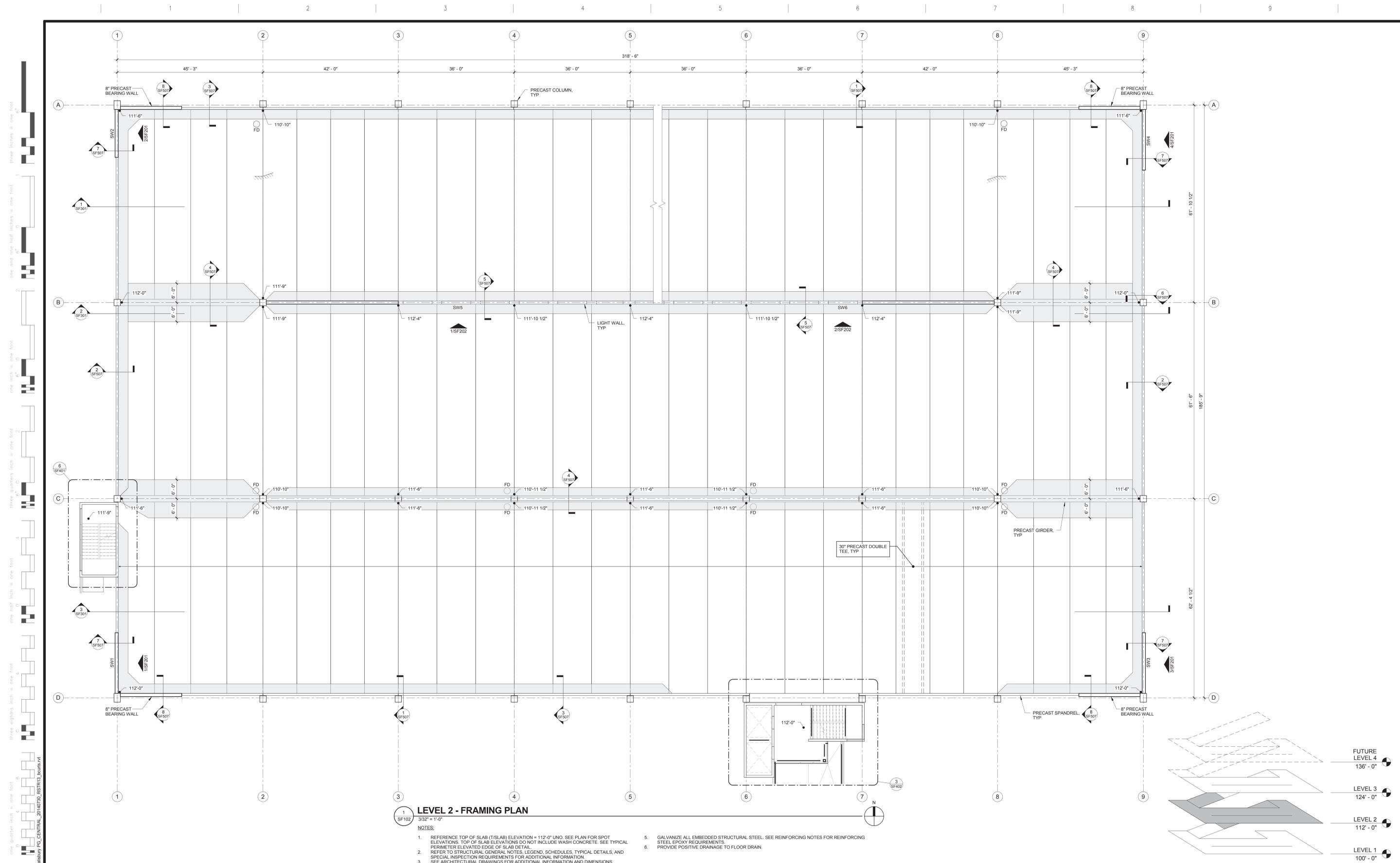
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 1601 Brenner Ave.  
 Salisbury, NC 28144

Professional Engineer Seal for Donald D. Coran, No. 11142014

<b>Structural</b> AMERICAN STRUCTUREPOINT 7260 Shadeland Station Indianapolis, IN 46256 Tele: 317-547-5580	<b>MEP Engineer</b> APOGEE CONSULTING GROUP 7330 Chappel Hill Road, Suite 202 Raleigh, NC 27607 Tele: 919-858-7420	<b>Civil Engineer</b> GUIDON DESIGN INC. 905 N. Capitol Ave. Suite 100 Indianapolis, IN 46204 Tele: 317-800-6388	<b>Functional Design</b> CARL WALKER INC. 14045 Ballantyne Corp. Place, Suite 380 Charlotte, NC 28277 Tele: 704-716-8000
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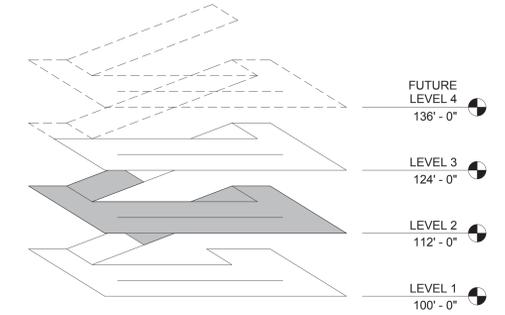
PROJECT LEADER/ARCHITECT:  
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Drawing Title <b>LEVEL 1 - SLAB ON GRADE</b>	Project Title CONSTRUCT NEW PARKING GARAGE	Project Number 13.1044	Office of Facilities Management
Approved for Design Concept: JOHN MONTGOMERY PROJECT ENGINEER 704-638-9000	Location W.G. (BILL) HEFNER VAMC	Drawing Number SF101	VA Project Number 659-342
Date 11/14/2014	Checked By: JAP	Drawn By: BGC	U.S. Department of Veterans Affairs



**LEVEL 2 - FRAMING PLAN**  
 3/32" = 1'-0"

- NOTES:**
- REFERENCE TOP OF SLAB (TISLAB) ELEVATION = 112'-0" UNO. SEE PLAN FOR SPOT ELEVATIONS. TOP OF SLAB ELEVATIONS DO NOT INCLUDE WASH CONCRETE. SEE TYPICAL PERIMETER ELEVATED EDGE OF SLAB DETAIL.
  - REFER TO STRUCTURAL GENERAL NOTES, LEGEND, SCHEDULES, TYPICAL DETAILS, AND SPECIAL INSPECTION REQUIREMENTS FOR ADDITIONAL INFORMATION.
  - SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION AND DIMENSIONS.
  - SHADING INDICATES AREAS WHERE WASH IS REQUIRED. SEE TYPICAL WASH AT ELEVATED SLAB EDGE DETAIL.
  - GALVANIZE ALL EMBEDDED STRUCTURAL STEEL. SEE REINFORCING NOTES FOR REINFORCING STEEL EPOXY REQUIREMENTS.
  - PROVIDE POSITIVE DRAINAGE TO FLOOR DRAIN.



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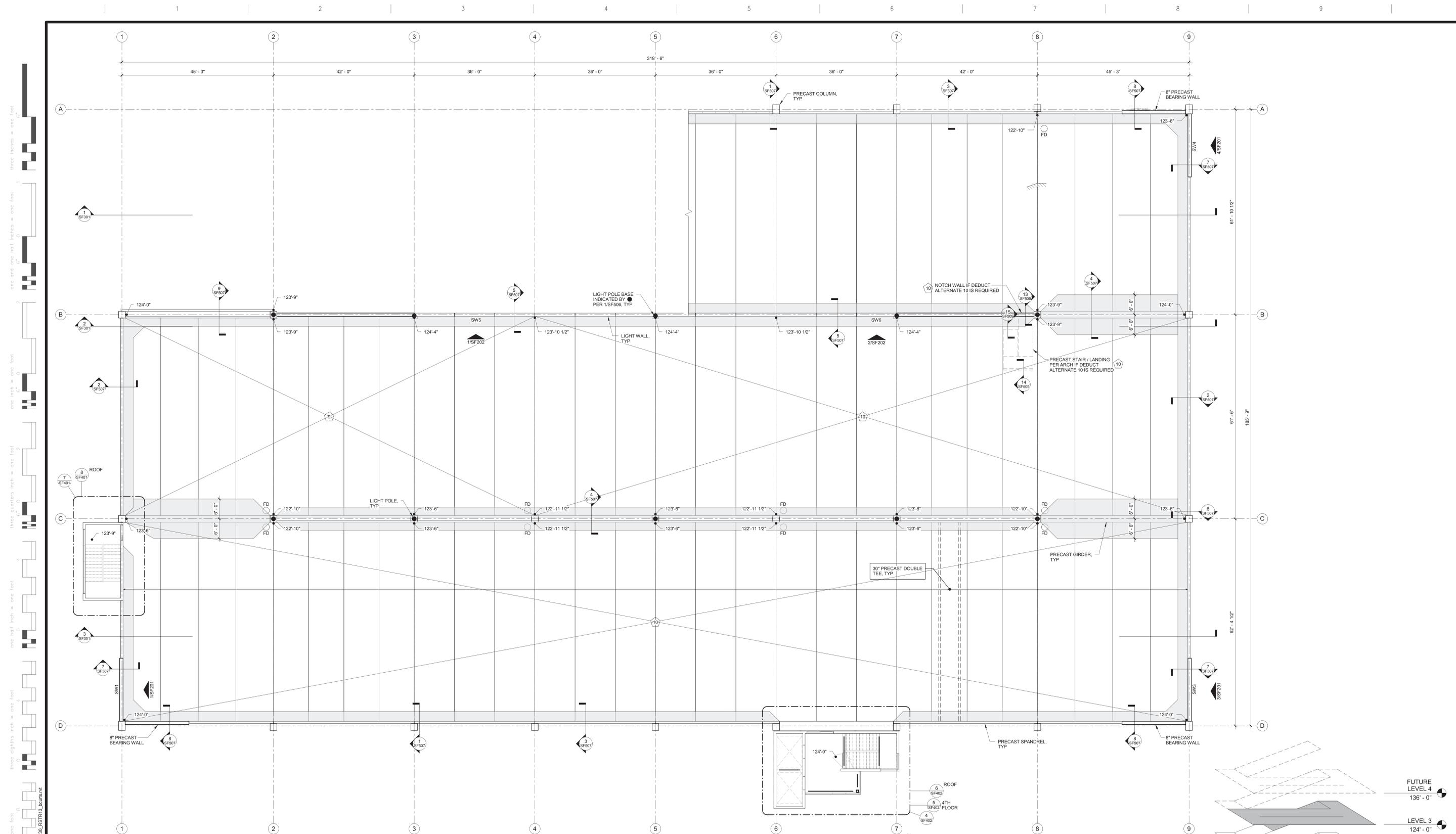


Structural	MEP Engineer	Civil Engineer	Functional Design
AMERICAN STRUCTUREPOINT 7260 Shadeland Station Indianapolis, IN 46256 Tele: 317-547-5580	APOGEE CONSULTING GROUP 7330 Chappel Hill Road, Suite 202 Raleigh, NC 27607 Tele: 919-858-7420	GUIDON DESIGN INC. 905 N. Capitol Ave. Suite 100 Indianapolis, IN 46204 Tele: 317-800-6388	CARL WALKER INC. 14045 Ballantyne Corp. Place, Suite 380 Charlotte, NC 28277 Tele: 704-716-8000

PROJECT LEADER/ARCHITECT:  
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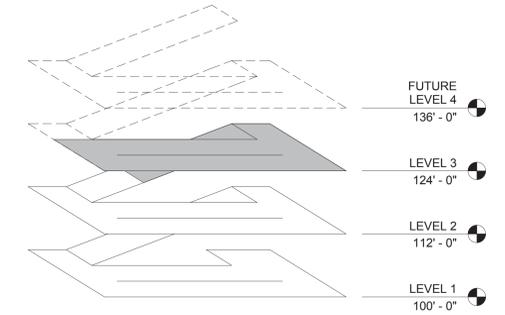
Drawing Title <b>LEVEL 2 - FRAMING PLAN</b>	Project Title CONSTRUCT NEW PARKING GARAGE	Project Number 13.1044	Office of Facilities Management
Approved for Design Concept: JOHN MONTGOMERY PROJECT ENGINEER 704-638-9000	Location W.G. (BILL) HEFNER VAMC	Building Number Bldg 9	VA Project Number 659-342
Date 11/14/2014	Checked By: JAP	Drawing Number SF102	Drawn By: BGC

one eighth inch = one foot  
 one quarter inch = one foot  
 one half inch = one foot  
 three quarters inch = one foot  
 one inch = one foot  
 one and one half inches = one foot  
 two inches = one foot  
 three inches = one foot  
 four inches = one foot  
 six inches = one foot  
 eight inches = one foot  
 ten inches = one foot  
 twelve inches = one foot  
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**LEVEL 3 - FRAMING PLAN**  
 3/32" = 1'-0"

- NOTES:
1. REFERENCE TOP OF SLAB (T/S LAB) ELEVATION = 124'-0" UNO. SEE PLAN FOR SPOT ELEVATIONS. TOP OF SLAB ELEVATIONS DO NOT INCLUDE WASH CONCRETE. SEE TYPICAL PERIMETER ELEVATED EDGE OF SLAB DETAIL.
  2. REFER TO STRUCTURAL GENERAL NOTES, LEGEND, SCHEDULES, TYPICAL DETAILS, AND SPECIAL INSPECTION REQUIREMENTS FOR ADDITIONAL INFORMATION.
  3. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION AND DIMENSIONS.
  4. SHADING INDICATES AREAS WHERE WASH IS REQUIRED. SEE TYPICAL WASH AT ELEVATED SLAB EDGE DETAIL.
  5. GALVANIZE ALL EMBEDDED STRUCTURAL STEEL. SEE REINFORCING NOTES FOR REINFORCING STEEL EPOXY REQUIREMENTS.
  6. PROVIDE POSITIVE DRAINAGE TO FLOOR DRAIN.
  7. PROVIDE VEHICLE BARRIER / FALL PROTECTION (PRECAST SPANDREL) FOR ALL DEDUCT ALTERNATES.



Revisions:	Date

**VA** U.S. Department of Veterans Affairs  
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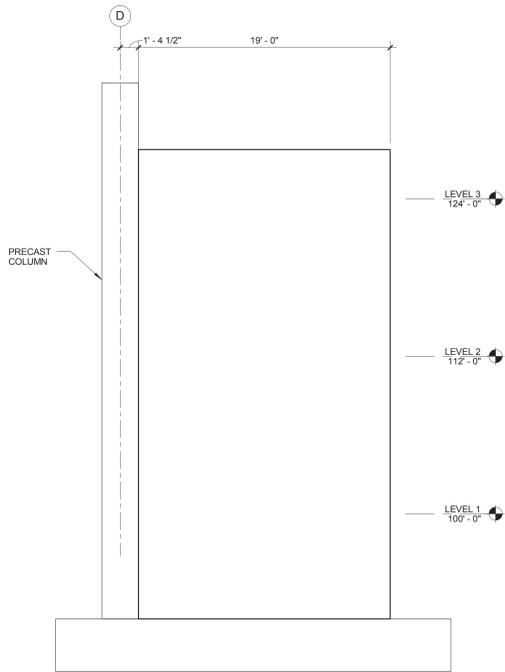


Structural	MEP Engineer	Civil Engineer	Functional Design
AMERICAN STRUCTUREPOINT 7260 Shadeland Station Indianapolis, IN 46256 Tele: 317-547-5580	APOGEE CONSULTING GROUP 7330 Chappel Hill Road, Suite 202 Raleigh, NC 27607 Tele: 919-858-7420	GUIDON DESIGN INC. 905 N. Capitol Ave. Suite 100 Indianapolis, IN 46204 Tele: 317-800-6388	CARL WALKER INC. 14045 Ballantyne Corp. Place, Suite 380 Charlotte, NC 28277 Tele: 704-716-8000

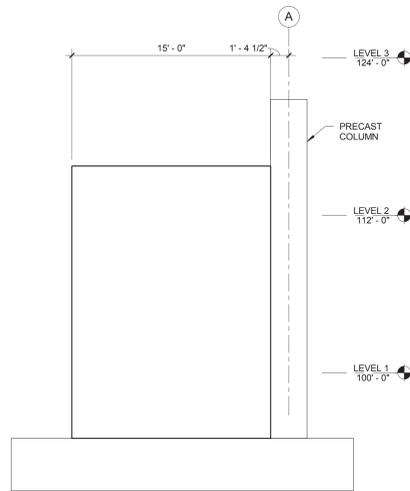
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Drawing Title <b>LEVEL 3 - FRAMING PLAN</b>	Project Title CONSTRUCT NEW PARKING GARAGE	Project Number 13.1044	Office of Facilities Management
Approved for Design Concept: JOHN MONTGOMERY PROJECT ENGINEER 704-638-9000	Location W.G. (BILL) HEFNER VAMC	Building Number Bldg 9	VA Project Number 659-342
Date 11/14/2014	Checked By: JAP	Drawing Number SF103	Drawn By: BGC

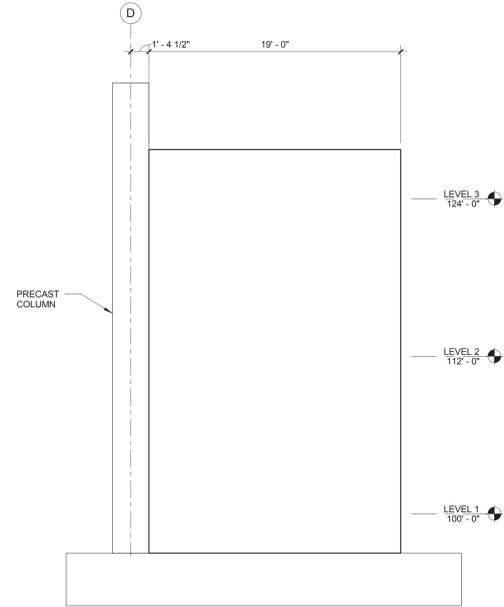
one eighth inch = one foot  
 one quarter inch = one foot  
 one half inch = one foot  
 three quarters inch = one foot  
 one inch = one foot  
 one and one half inches = one foot  
 two inches = one foot  
 three inches = one foot  
 four inches = one foot  
 six inches = one foot  
 eight inches = one foot  
 ten inches = one foot  
 twelve inches = one foot  
 C:\Revit\Revit Structure\2013\2012\_02231\_ST\_VA\_Salisbury\_Pkg\_CENTRAL\_20140730\_RSTR13\_borders.rvt



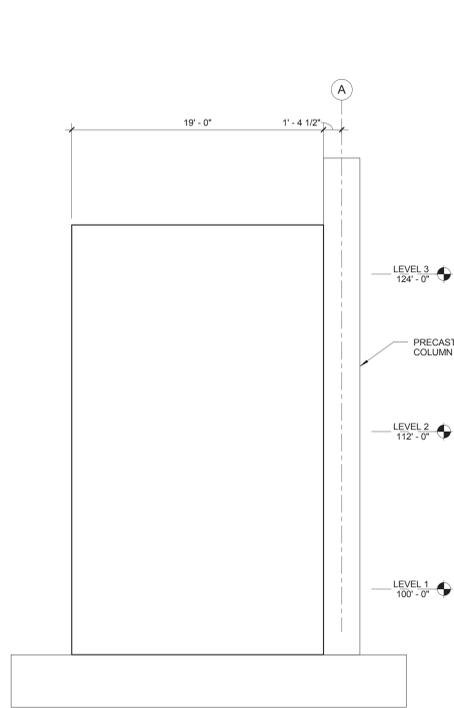
1 SHEARWALL ELEVATION GRID 1 - SW1  
3/16" = 1'-0"



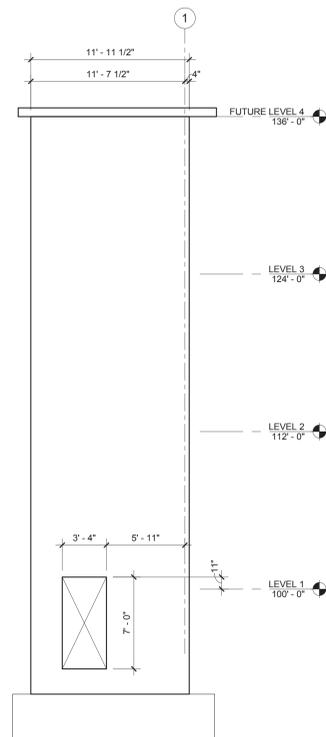
2 SHEARWALL ELEVATION GRID 1 - SW2  
3/16" = 1'-0"



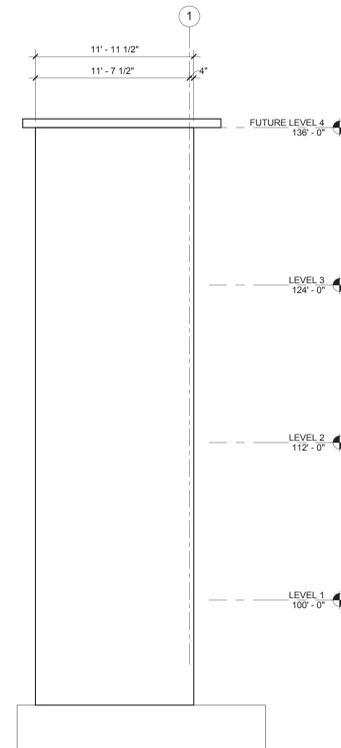
3 SHEARWALL ELEVATION GRID 9 - SW3  
3/16" = 1'-0"



4 SHEARWALL ELEVATION GRID 9 - SW4  
3/16" = 1'-0"



5 SHEARWALL ELEVATION - WEST STAIR TOWER - SW 11  
3/16" = 1'-0"



6 SHEARWALL ELEVATION - WEST STAIR TOWER - SW 12  
3/16" = 1'-0"

SHEARWALL SCHEDULE						
WALL	THICKNESS	LENGTH	REMARKS	DESIGN REACTIONS		
				DEAD LOAD (KIPS / FT)	LIVE LOAD (KIPS / FT)	TOTAL LOAD (KIPS / FT)
SW1	12"	19'-0"	-	9.0	0	9.0
SW2	12"	15'-0"	-	9.0	0	9.0
SW3	12"	19'-0"	-	9.0	0	9.0
SW4	12"	19'-0"	-	9.0	0	9.0
SW5	12"	113'-0"	-	33.5	10.9	44.4
SW6	12"	113'-0"	-	33.5	10.9	44.4
SW7	8"	6'-8"	-	14.4	5.3	19.7
SW8	8"	23'-4"	-	14.4	5.3	19.7
SW9	8"	12'-0"	-	7.8	3.5	11.3
SW10	8"	27'-3"	-	7.8	3.5	11.3
SW11	8"	11'-11"	-	10.0	3.5	13.5
SW12	8"	11'-11"	-	10.0	3.5	13.5

NOTE: REACTIONS INCLUDE FUTURE LEVEL 4. PRECASTER SHALL VERIFY WALL THICKNESSES. AT CONTRACTOR / PRECASTER OPTION WALL THICKNESS MAY BE REDUCED. 8" MINIMUM THICKNESS IS REQUIRED.

SHEARWALL LATERAL FORCE DISTRIBUTION SCHEDULE													
LEVEL	SW1 (KIPS)	SW2 (KIPS)	SW3 (KIPS)	SW4 (KIPS)	SW5 (KIPS)	SW6 (KIPS)	SW7 (KIPS)	SW8 (KIPS)	SW9 (KIPS)	SW10 (KIPS)	SW11 (KIPS)	SW12 (KIPS)	
(150'-7") HR	-	-	-	-	-	-	-	4	-	4	-	-	
(147'-7") LR	-	-	-	-	-	-	2.5	8	2.5	7.8	3.8	3.8	
(138'-11") MR	-	-	-	-	-	-	-	4	1	3.2	-	-	
4	153	131	153	153	279	279	3	10.2	3.2	10	3.8	3.8	
3	107	91	107	107	194	194	2.2	7	2.3	6.9	2.5	2.5	
2	53	45	53	53	97	97	1.2	3.6	1.2	3.5	1.4	1.4	
TOTAL AT FDN	V	313	267	313	313	570	570	8.9	36.8	10.2	35.4	11.5	11.5
	M	11216 K-FT	8906 K-FT	9651 K-FT	10277 K-FT	17004 K-FT	18144 K-FT	321 K-FT	1427 K-FT	374 K-FT	1372 K-FT	485 K-FT	485 K-FT

- PRECAST SHEARWALL NOTES:
- FORCES GIVEN ARE HORIZONTAL SEISMIC SHEAR FORCES UNLESS NOTED OTHERWISE AND SHALL BE USED WITH THE APPROPRIATE EQUATIONS FROM IBC2012 CODE TO DETERMINE THE MOST CRITICAL COMBINED EFFECT. FORCES SHOWN ARE REVERSIBLE AND STRENGTH LEVEL.
  - PRECASTER SHALL DESIGN ALL SHEARWALLS FOR THE GREATER FORCE OF SEISMIC AS SHOWN AND WIND AS DEFINED IN THE GENERAL NOTES.
  - PRECASTER SHALL VERIFY THAT SHEARWALL SEISMIC AND WIND FORCES DO NOT EXCEED THOSE SHOWN IN THE LATERAL FORCE SCHEDULE.
  - INCREASE FORCES FOR DIAPHRAGM AND CONNECTION DESIGN AS REQUIRED BY ASCE 7-10 AND IBC 2012.
  - PRECASTER SHALL DESIGN ALL PRECAST ELEMENTS INCLUDING REINFORCING, CONNECTIONS, AND LATERAL FORCE TRANSFER ELEMENTS. SEE PRECAST SPECIFICATION FOR MORE INFORMATION.
  - FOR SHEARWALL SIZES. SEE SHEARWALL ELEVATIONS AND SHEARWALL SCHEDULE.
  - SEE PLANS FOR SHEARWALL DESIGNATION.
  - SHEARWALLS AND COLUMNS SHALL BE CONNECTED WHERE APPLICABLE SO THAT THEY ACT AS ONE INTEGRAL UNIT.

PRECASTER SHALL ACCOUNT FOR FUTURE VERTICAL EXPANSION TO FUTURE LEVEL 4

Revisions:	Date

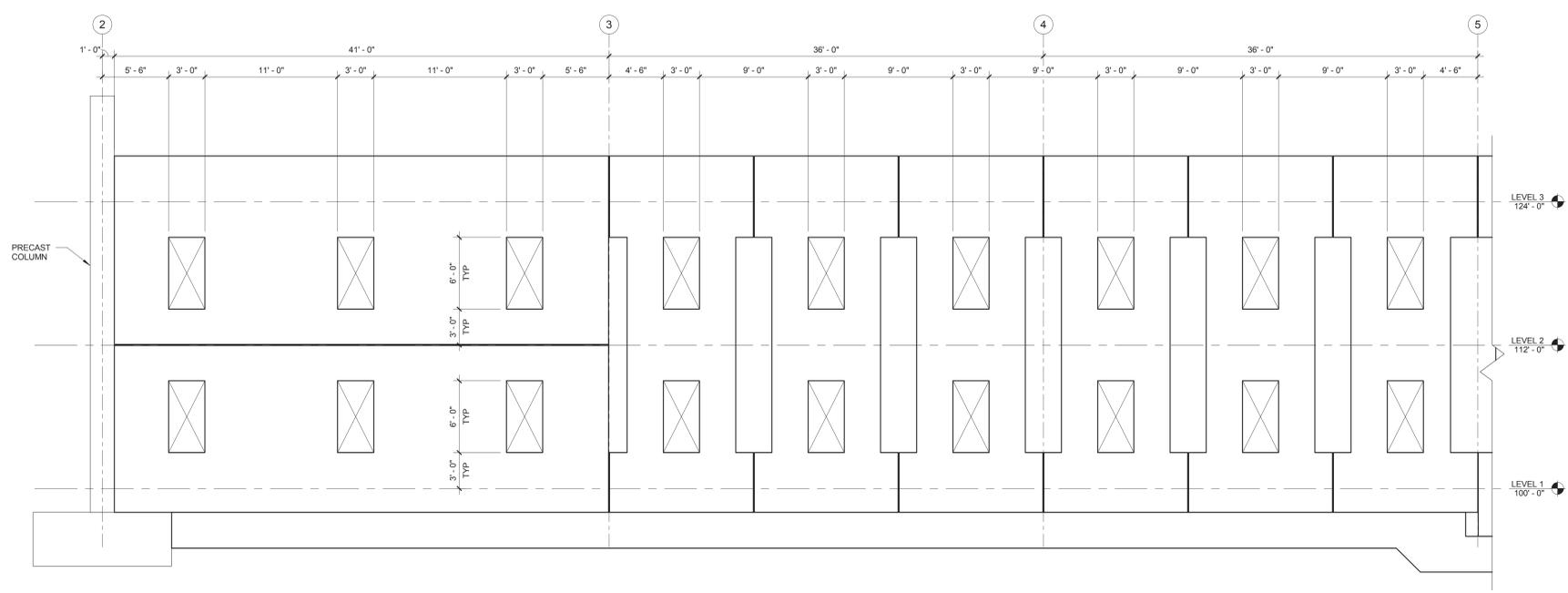
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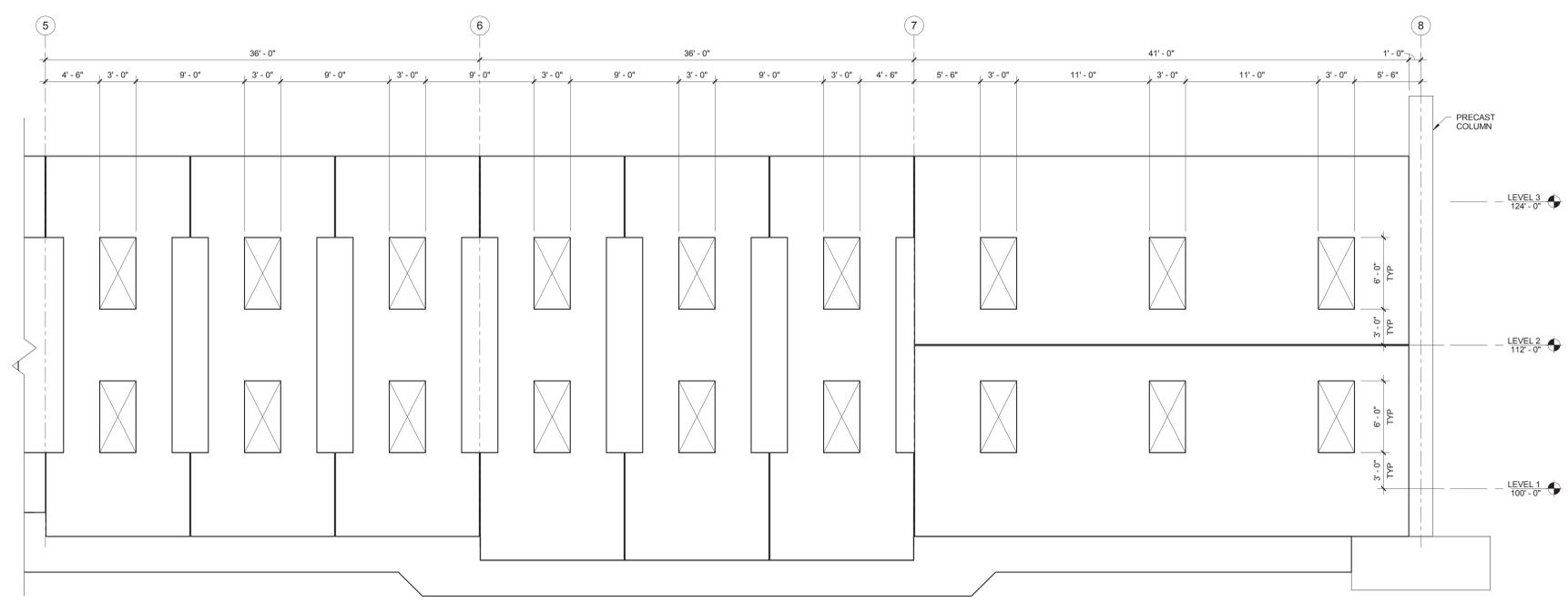
Structural	MEP Engineer	Civil Engineer	Functional Design
AMERICAN STRUCTUREPOINT 7260 Shadeland Station Indianapolis, IN 46256 Tele: 317-547-5580	APOGEE CONSULTING GROUP 7330 Chappel Hill Road, Suite 202 Raleigh, NC 27607 Tele: 919-858-7420	GUIDON DESIGN INC. 905 N. Capitol Ave. Suite 100 Indianapolis, IN 46204 Tele: 317-800-6388	CARL WALKER INC. 14045 Ballantyne Corp. Place, Suite 380 Charlotte, NC 28277 Tele: 704-716-8000

PROJECT LEADER/ARCHITECT:  
**GUIDON DESIGN**  
905 N. CAPITOL AVE. SUITE 100 INDIANAPOLIS, IN. 46204  
317.800.6388 WWW.GUIDONDESIGN.COM  
SUSTAINABLE ARCHITECTURE + ENGINEERING

Drawing Title <b>SHEARWALL ELEVATIONS AND SCHEDULES</b>		Project Title <b>CONSTRUCT NEW PARKING GARAGE</b>		Project Number <b>13.1044</b>		OFFICE OF FACILITIES MANAGEMENT	
Approved for Design Concept: <b>JOHN MONTGOMERY PROJECT ENGINEER 704-638-9000</b>		Location <b>W.G. (BILL) HEFNER VAMC</b>		Building Number <b>Bldg 9</b>		VA Project Number <b>659-342</b>	
Date <b>11/14/2014</b>		Checked By: <b>JAP</b>		Drawing Number <b>SF201</b>		U.S. Department of Veterans Affairs	



1 SHEARWALL ELEVATION GRID B - SW5  
3/16" = 1'-0"



2 SHEARWALL ELEVATION GRID B - SW6  
3/16" = 1'-0"

SHEARWALL SCHEDULE						
WALL	THICKNESS	LENGTH	REMARKS	DESIGN REACTIONS		
				DEAD LOAD (KIPS / FT)	LIVE LOAD (KIPS / FT)	TOTAL LOAD (KIPS / FT)
SW1	12"	19'-0"	-	9.0	0	9.0
SW2	12"	15'-0"	-	9.0	0	9.0
SW3	12"	19'-0"	-	9.0	0	9.0
SW4	12"	19'-0"	-	9.0	0	9.0
SW5	12"	113'-0"	-	33.5	10.9	44.4
SW6	12"	113'-0"	-	33.5	10.9	44.4
SW7	8"	6'-8"	-	14.4	5.3	19.7
SW8	8"	23'-4"	-	14.4	5.3	19.7
SW9	8"	12'-0"	-	7.8	3.5	11.3
SW10	8"	27'-3"	-	7.8	3.5	11.3
SW11	8"	11'-11"	-	10.0	3.5	13.5
SW12	8"	11'-11"	-	10.0	3.5	13.5

NOTE: REACTIONS INCLUDE FUTURE LEVEL 4. PRECASTER SHALL VERIFY WALL THICKNESSES. AT CONTRACTOR / PRECASTER OPTION WALL THICKNESS MAY BE REDUCED. 8" MINIMUM THICKNESS IS REQUIRED.

SHEARWALL LATERAL FORCE DISTRIBUTION SCHEDULE												
LEVEL	SW1 (KIPS)	SW2 (KIPS)	SW3 (KIPS)	SW4 (KIPS)	SW5 (KIPS)	SW6 (KIPS)	SW7 (KIPS)	SW8 (KIPS)	SW9 (KIPS)	SW10 (KIPS)	SW11 (KIPS)	SW12 (KIPS)
(150'-7") HR	-	-	-	-	-	-	-	4	-	4	-	-
(147'-7") LR	-	-	-	-	-	-	2.5	8	2.5	7.8	3.8	3.8
(138'-11") MR	-	-	-	-	-	-	-	4	1	3.2	-	-
4	153	131	153	153	279	279	3	10.2	3.2	10	3.8	3.8
3	107	91	107	107	194	194	2.2	7	2.3	6.9	2.5	2.5
2	53	45	53	53	97	97	1.2	3.6	1.2	3.5	1.4	1.4
TOTAL AT FDN	V 313	267	313	313	570	570	8.9	36.8	10.2	35.4	11.5	11.5
	M 11216 K-FT	8906 K-FT	9651 K-FT	10277 K-FT	17004 K-FT	18144 K-FT	321 K-FT	1427 K-FT	374 K-FT	1372 K-FT	485 K-FT	485 K-FT

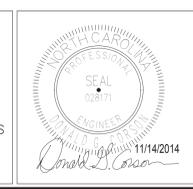
- PRECAST SHEARWALL NOTES:**
- FORCES GIVEN ARE HORIZONTAL SEISMIC SHEAR FORCES UNLESS NOTED OTHERWISE AND SHALL BE USED WITH THE APPROPRIATE EQUATIONS FROM IBC2012 CODE TO DETERMINE THE MOST CRITICAL COMBINED EFFECT. FORCES SHOWN ARE REVERSIBLE AND STRENGTH LEVEL.
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  - FOR SHEARWALL SIZES, SEE SHEARWALL ELEVATIONS AND SHEARWALL SCHEDULE.
  - SEE PLANS FOR SHEARWALL DESIGNATION.
  - SHEARWALLS AND COLUMNS SHALL BE CONNECTED WHERE APPLICABLE SO THAT THEY ACT AS ONE INTEGRAL UNIT.

**PRECASTER SHALL ACCOUNT FOR FUTURE VERTICAL EXPANSION TO FUTURE LEVEL 4**

one eighth inch = one foot  
one quarter inch = one foot  
one half inch = one foot  
three quarters inch = one foot  
one inch = one foot  
one and one half inches = one foot  
two inches = one foot  
three inches = one foot  
three quarters inch = one foot  
one half inch = one foot  
three eighths inch = one foot  
one quarter inch = one foot  
one eighth inch = one foot  
C:\Revised\Structure\2013\2012\_02231\_ST\_VA\_Salisbury\_PG\_CENTRAL\_20140230\_RSTR13.dwg  
11/14/2014

Revisions:	Date

**VA** U.S. Department of Veterans Affairs  
SALISBURY VAMC  
Dept. of Veterans Affairs  
1601 Brenner Ave.  
Salisbury, NC 28144



<b>Structural</b> AMERICAN STRUCTUREPOINT 7260 Shadeland Station Indianapolis, IN 46256 Tele: 317-547-5580	<b>MEP Engineer</b> APOGEE CONSULTING GROUP 7330 Chappel Hill Road, Suite 202 Raleigh, NC 27607 Tele: 919-858-7420	<b>Civil Engineer</b> GUIDON DESIGN INC. 905 N. Capitol Ave. Suite 100 Indianapolis, IN 46204 Tele: 317-800-6388	<b>Functional Design</b> CARL WALKER INC. 14045 Ballantyne Corp. Place, Suite 380 Charlotte, NC 28277 Tele: 704-716-8000
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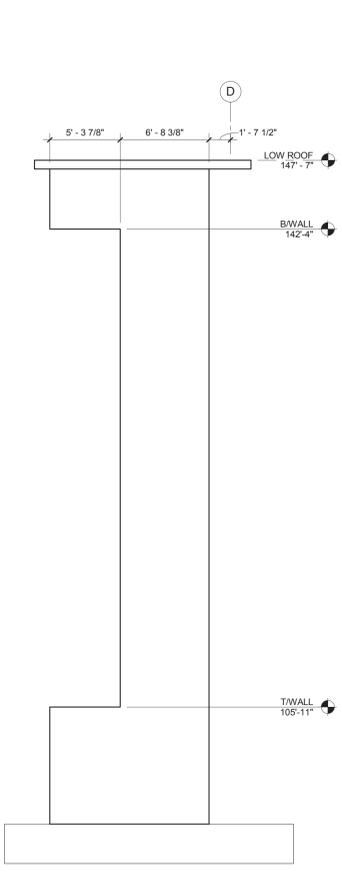
PROJECT LEADER/ARCHITECT:  
**GUIDON DESIGN**  
905 N. CAPITOL AVE. SUITE 100 INDIANAPOLIS, IN. 46204  
317.800.6388 WWW.GUIDONDESIGN.COM  
SUSTAINABLE ARCHITECTURE + ENGINEERING

BID SET			
Drawing Title <b>SHEARWALL ELEVATIONS AND SCHEDULES</b>	Project Title CONSTRUCT NEW PARKING GARAGE	Project Number 13.1044	OFFICE OF FACILITIES MANAGEMENT
Approved for Design Concept: JOHN MONTGOMERY PROJECT ENGINEER 704-638-9000	Location W.G. (BILL) HEFNER VAMC	Building Number Bldg 9	VA Project Number 659-342
Date 11/14/2014	Checked By: JAP	Drawn By: BGC	Drawing Number <b>SF202</b>
U.S. Department of Veterans Affairs		U.S. Department of Veterans Affairs	

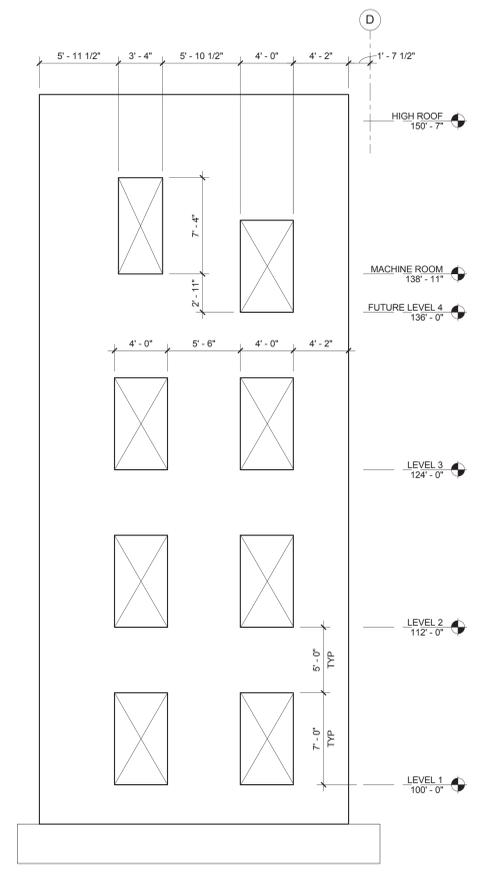
1 2 3 4 5 6 7 8 9

A  
B  
C  
D  
E  
F

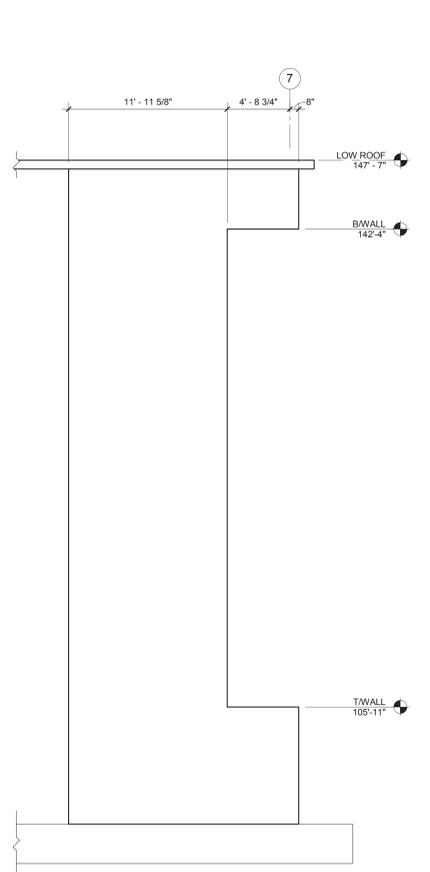
one eighth inch = one foot  
one quarter inch = one foot  
one half inch = one foot  
three eighths inch = one foot  
one inch = one foot  
one and one half inches = one foot  
two inches = one foot  
three inches = one foot



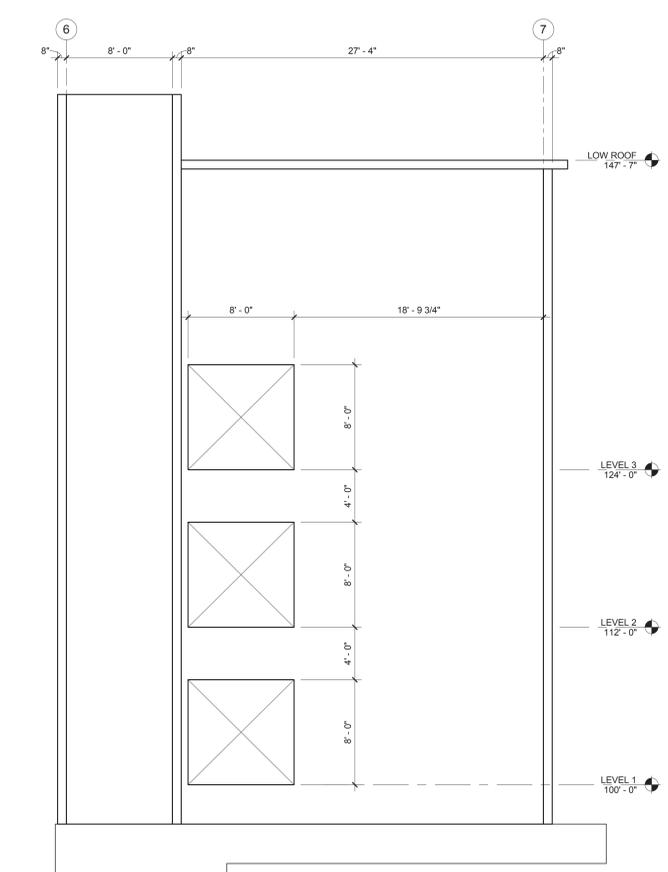
1 SF203  
**SHEARWALL ELEVATION - SOUTH STAIR TOWER - SW7**  
3/16" = 1'-0"



2 SF203  
**SHEARWALL ELEVATION - SOUTH STAIR TOWER - SW8**  
3/16" = 1'-0"



3 SF203  
**SHEARWALL ELEVATION - SOUTH STAIR TOWER - SW9**  
3/16" = 1'-0"



4 SF203  
**SHEARWALL ELEVATION - SOUTH STAIR TOWER - SW10**  
3/16" = 1'-0"

SHEARWALL SCHEDULE						
WALL	THICKNESS	LENGTH	REMARKS	DESIGN REACTIONS		
				DEAD LOAD (KIPS / FT)	LIVE LOAD (KIPS / FT)	TOTAL LOAD (KIPS / FT)
SW1	12"	19'-0"	-	9.0	0	9.0
SW2	12"	15'-0"	-	9.0	0	9.0
SW3	12"	19'-0"	-	9.0	0	9.0
SW4	12"	19'-0"	-	9.0	0	9.0
SW5	12"	113'-0"	-	33.5	10.9	44.4
SW6	12"	113'-0"	-	33.5	10.9	44.4
SW7	8"	6'-8"	-	14.4	5.3	19.7
SW8	8"	23'-4"	-	14.4	5.3	19.7
SW9	8"	12'-0"	-	7.8	3.5	11.3
SW10	8"	27'-3"	-	7.8	3.5	11.3
SW11	8"	11'-11"	-	10.0	3.5	13.5
SW12	8"	11'-11"	-	10.0	3.5	13.5

NOTE: REACTIONS INCLUDE FUTURE LEVEL 4. PRECASTER SHALL VERIFY WALL THICKNESSES AT CONTRACTOR / PRECASTER OPTION WALL THICKNESS MAY BE REDUCED. 8" MINIMUM THICKNESS IS REQUIRED.

SHEARWALL LATERAL FORCE DISTRIBUTION SCHEDULE												
LEVEL	SW1 (KIPS)	SW2 (KIPS)	SW3 (KIPS)	SW4 (KIPS)	SW5 (KIPS)	SW6 (KIPS)	SW7 (KIPS)	SW8 (KIPS)	SW9 (KIPS)	SW10 (KIPS)	SW11 (KIPS)	SW12 (KIPS)
(150'-7") HR	-	-	-	-	-	-	-	4	-	4	-	-
(147'-7") LR	-	-	-	-	-	-	2.5	8	2.5	7.8	3.8	3.8
(138'-11") MR	-	-	-	-	-	-	-	4	1	3.2	-	-
4	153	131	153	153	279	279	3	10.2	3.2	10	3.8	3.8
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TOTAL AT FDN	V	313	267	313	570	570	8.9	36.8	10.2	35.4	11.5	11.5
	M	11216 K-FT	8906 K-FT	9651 K-FT	10277 K-FT	17004 K-FT	18144 K-FT	321 K-FT	1427 K-FT	374 K-FT	1372 K-FT	485 K-FT

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**PRECASTER SHALL ACCOUNT FOR FUTURE VERTICAL EXPANSION TO FUTURE LEVEL 4**

Revisions:	Date

**VA** U.S. Department of Veterans Affairs  
 SALISBURY VAMC  
 Dept. of Veterans Affairs  
 1601 Brenner Ave.  
 Salisbury, NC 28144



Structural	MEP Engineer	Civil Engineer	Functional Design
<b>AMERICAN STRUCTUREPOINT</b> 7260 Shadeland Station Indianapolis, IN 46256 Tele: 317-547-5580	<b>APOGEE CONSULTING GROUP</b> 7330 Chappel Hill Road, Suite 202 Raleigh, NC 27607 Tele: 919-858-7420	<b>GUIDON DESIGN INC.</b> 905 N. Capitol Ave. Suite 100 Indianapolis, IN 46204 Tele: 317-800-6388	<b>CARL WALKER INC.</b> 14045 Ballantyne Corp. Place, Suite 380 Charlotte, NC 28277 Tele: 704-716-8000

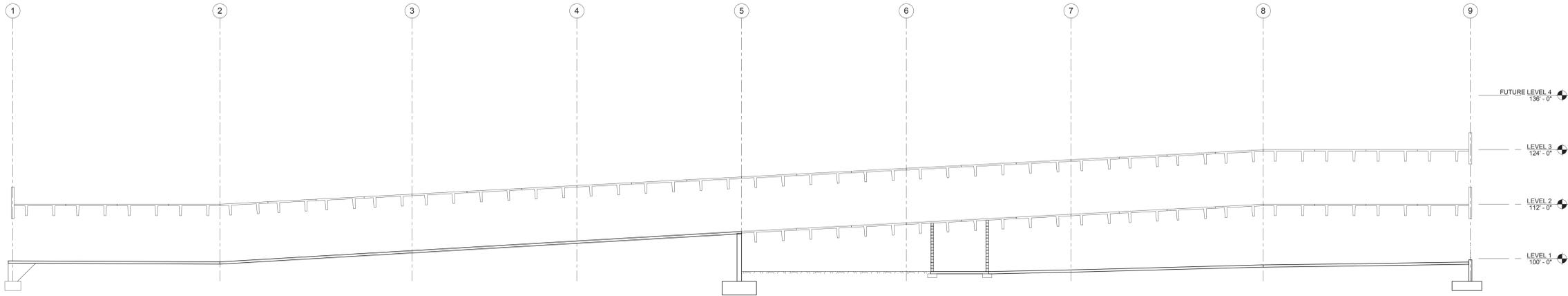
**PROJECT LEADER/ARCHITECT:**  
**GUIDON DESIGN**  
 905 N. CAPITOL AVE. SUITE 100 INDIANAPOLIS, IN. 46204  
 317.800.6388  
 WWW.GUIDONDESIGN.COM  
 SUSTAINABLE ARCHITECTURE + ENGINEERING

Drawing Title  
**SHEARWALL ELEVATIONS AND SCHEDULES**  
 Approved for Design Concept:  
**JOHN MONTGOMERY**  
 PROJECT ENGINEER  
 704-638-9000

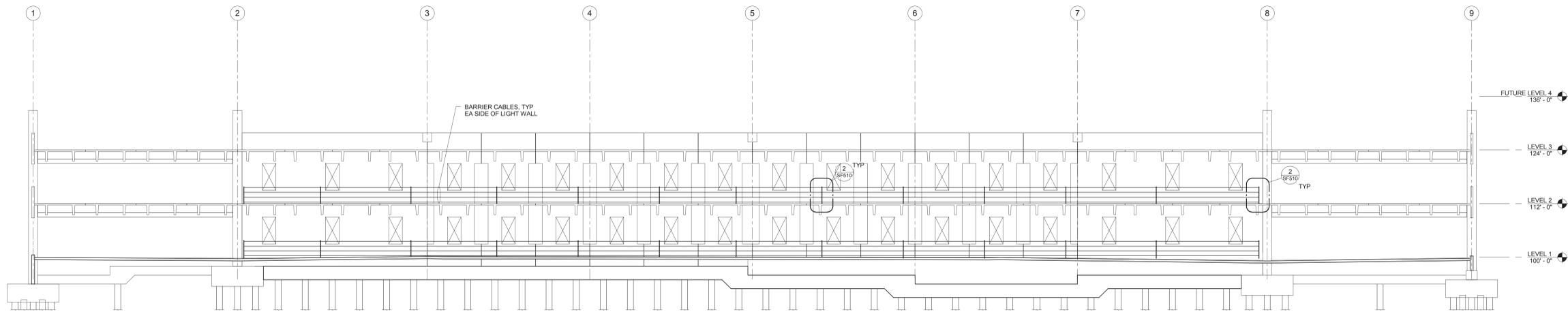
**BID SET**

Project Title CONSTRUCT NEW PARKING GARAGE	Project Number 13.1044	Office of Facilities Management
Location W.G. (BILL) HEFNER VAMC	Building Number Bldg 9	VA Project Number 659-342
Date 11/14/2014	Checked By: JAP	Drawn By: BGC
	Drawing Number <b>SF203</b>	

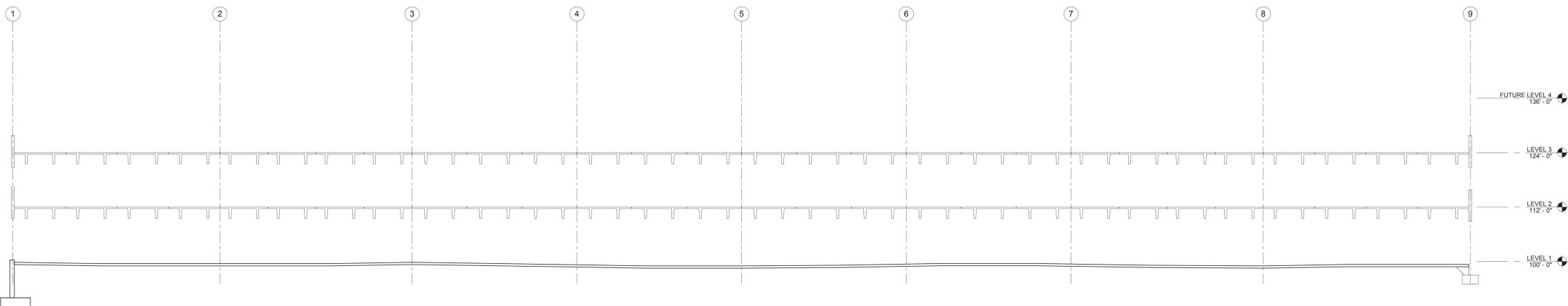
**VA** U.S. Department of Veterans Affairs



1 BUILDING SECTION AT GRID A.5  
SF301 3/32" = 1'-0"



2 BUILDING SECTION AT GRID B  
SF301 3/32" = 1'-0"



3 BUILDING SECTION AT GRID B.5  
SF301 3/32" = 1'-0"

one eighth inch = one foot  
 one quarter inch = one foot  
 three eighths inch = one foot  
 one half inch = one foot  
 one inch = one foot  
 three quarters inch = one foot  
 one and one half inches = one foot  
 three inches = one foot

Revisions:	Date

**VA** U.S. Department of Veterans Affairs  
 SALISBURY VAMC  
 Dept. of Veterans Affairs  
 1601 Brenner Ave.  
 Salisbury, NC 28144



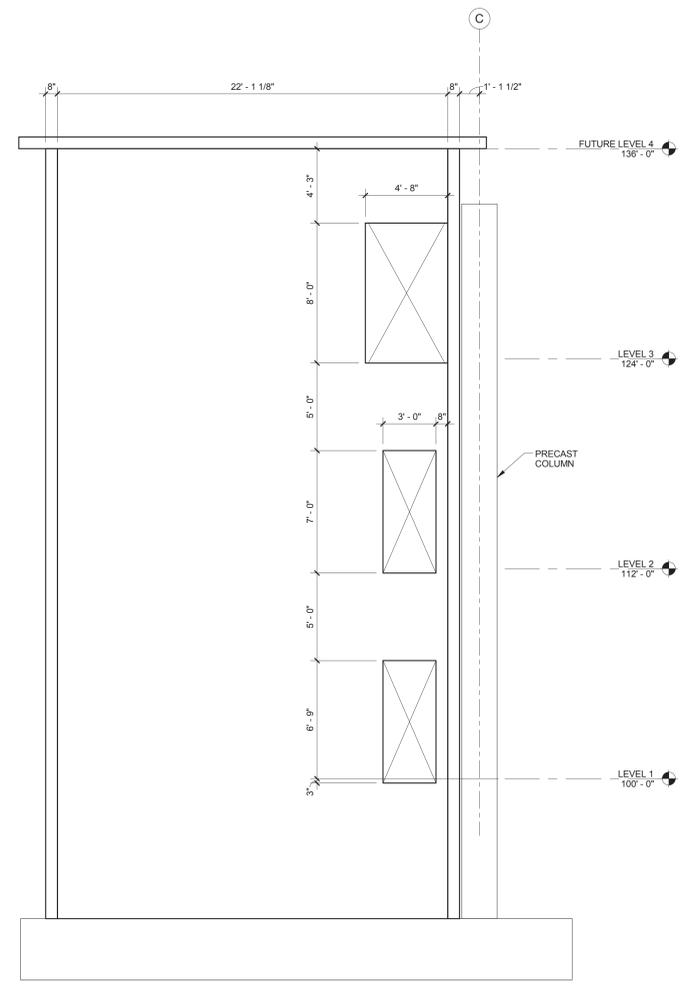
Structural	MEP Engineer	Civil Engineer	Functional Design
AMERICAN STRUCTUREPOINT 7260 Shadeland Station Indianapolis, IN 46256 Tele: 317-547-5580	APOGEE CONSULTING GROUP 7330 Chappel Hill Road, Suite 202 Raleigh, NC 27607 Tele: 919-858-7420	GUIDON DESIGN INC. 905 N. Capitol Ave. Suite 100 Indianapolis, IN 46204 Tele: 317-800-6388	CARL WALKER INC. 14045 Ballantyne Corp. Place, Suite 380 Charlotte, NC 28277 Tele: 704-716-8000

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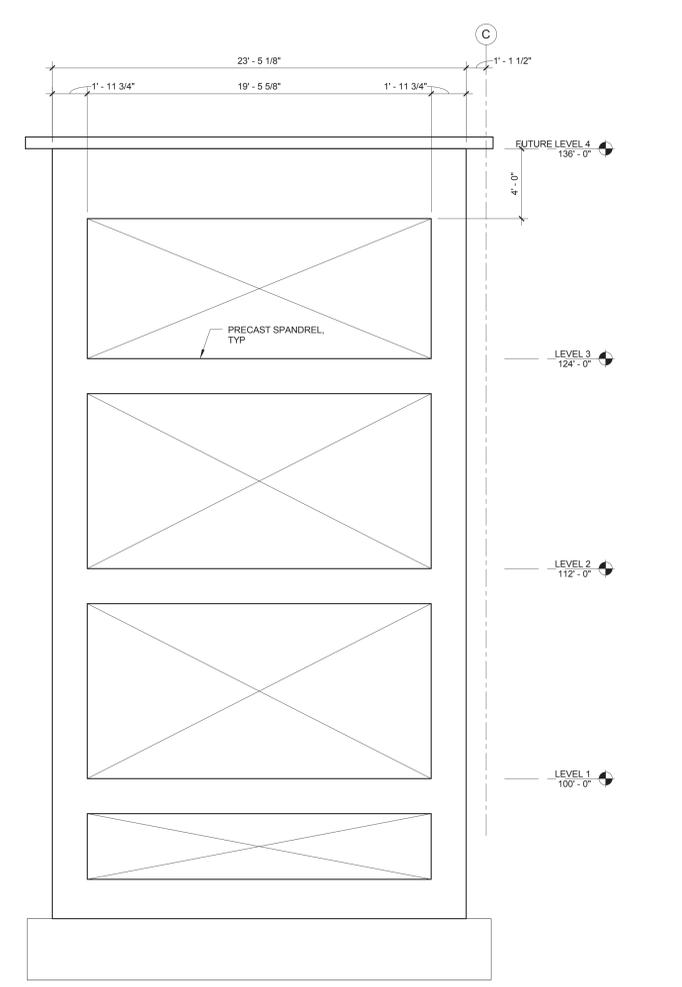
BID SET			
Drawing Title BUILDING SECTIONS AND ELEVATIONS	Project Title CONSTRUCT NEW PARKING GARAGE	Project Number 13.1044	OFFICE OF FACILITIES MANAGEMENT
Approved for Design Concept: JOHN MONTGOMERY PROJECT ENGINEER 704-638-9000	Location W.G. (BILL) HEFNER VAMC	Building Number Bldg 9	VA Project Number 659-342
Date 11/14/2014	Checked By: JAP	Drawing Number SF301	Drawn By: BGC



three inches = one foot  
 one and one half inches = one foot  
 one inch = one foot  
 three quarters inch = one foot  
 three eighths inch = one foot  
 one half inch = one foot  
 one quarter inch = one foot  
 one eighth inch = one foot  
 C:\Revised\Structure\2013\2012\_02231\_ST\_VA\_Salisbury\_PG\_CENTRAL\_20140730\_RSTR13\_borders.rvt



1 SF302 1/4" = 1'-0"  
**BUILDING ELEVATION - WEST STAIR TOWER EAST ELEVATION**



2 SF302 1/4" = 1'-0"  
**BUILDING ELEVATION - WEST STAIR TOWER WEST ELEVATION**

Revisions:	Date

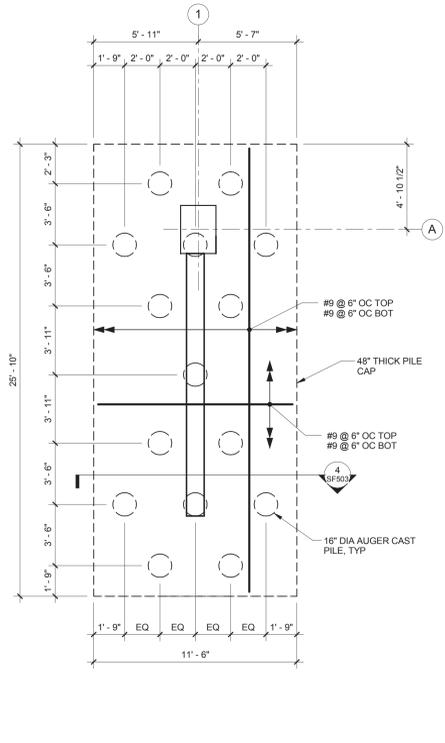
**VA** U.S. Department of Veterans Affairs  
 SALISBURY VAMC  
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 1601 Brenner Ave.  
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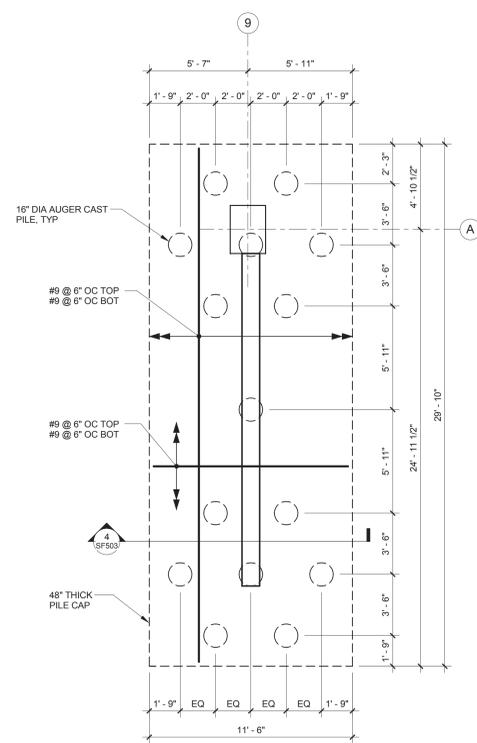
<b>Structural</b> AMERICAN STRUCTUREPOINT 7260 Shadeland Station Indianapolis, IN 46256 Tele: 317-547-5580	<b>MEP Engineer</b> APOGEE CONSULTING GROUP 7330 Chappel Hill Road, Suite 202 Raleigh, NC 27607 Tele: 919-858-7420	<b>Civil Engineer</b> GUIDON DESIGN INC. 905 N. Capitol Ave. Suite 100 Indianapolis, IN 46204 Tele: 317-800-6388	<b>Functional Design</b> CARL WALKER INC. 14045 Ballantyne Corp. Place, Suite 380 Charlotte, NC 28277 Tele: 704-716-8000
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PROJECT LEADER/ARCHITECT:  
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 905 N. CAPITOL AVE. SUITE 100 INDIANAPOLIS, IN. 46204  
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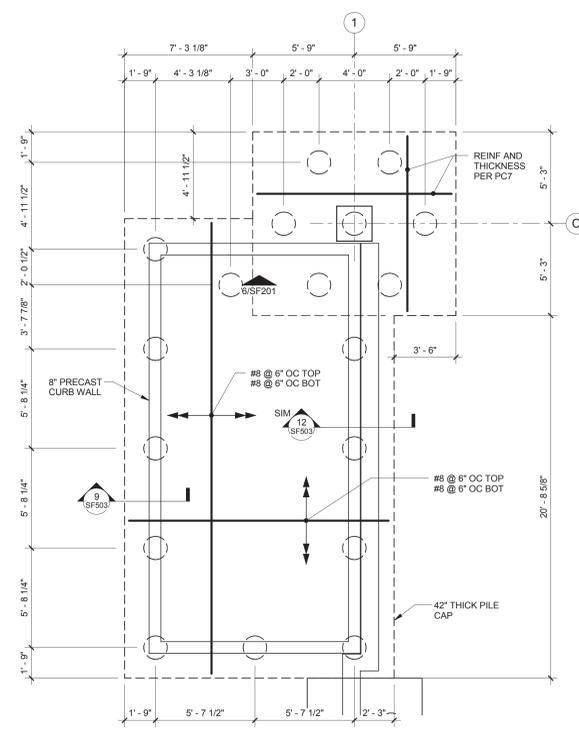
BID SET			
Drawing Title BUILDING SECTIONS AND ELEVATIONS	Project Title CONSTRUCT NEW PARKING GARAGE	Project Number 13.1044	OFFICE OF FACILITIES MANAGEMENT
Approved for Design Concept: JOHN MONTGOMERY PROJECT ENGINEER 704-638-9000	Location W.G. (BILL) HEFNER VAMC	Building Number Bldg 9	VA Project Number 659-342
Date 11/14/2014	Checked By: JAP	Drawing Number SF302	Drawn By: BGC



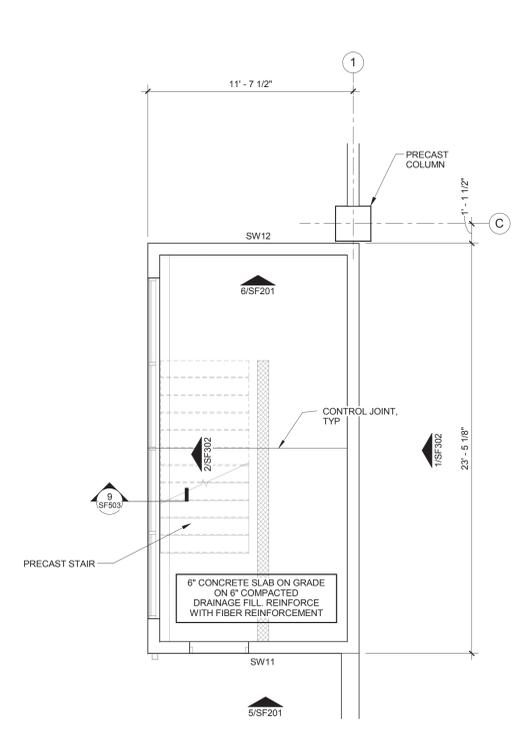
1 ENLARGED PILE CAP FOUNDATION  
1/4" = 1'-0"



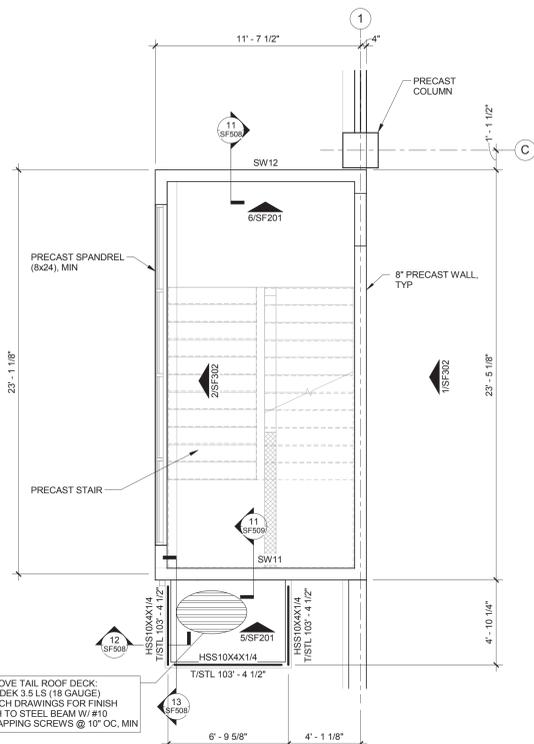
2 ENLARGED PILE CAP FOUNDATION  
1/4" = 1'-0"



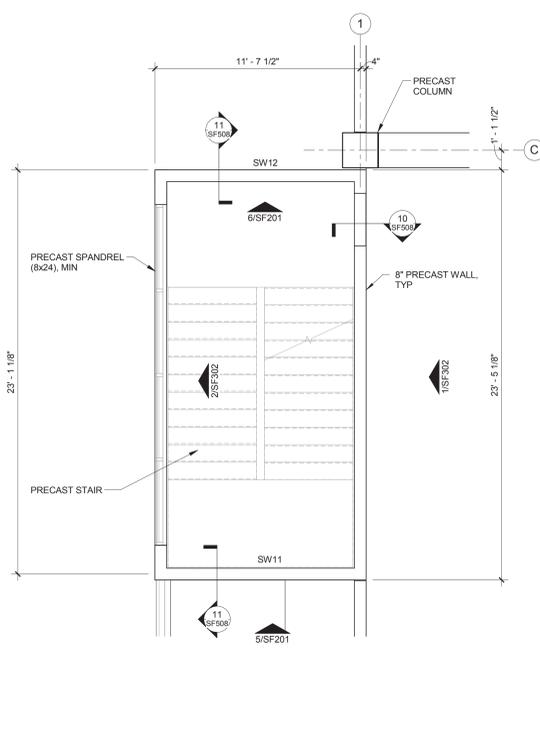
3 ENLARGED FOUNDATION PLAN - WEST STAIR TOWER  
1/4" = 1'-0"



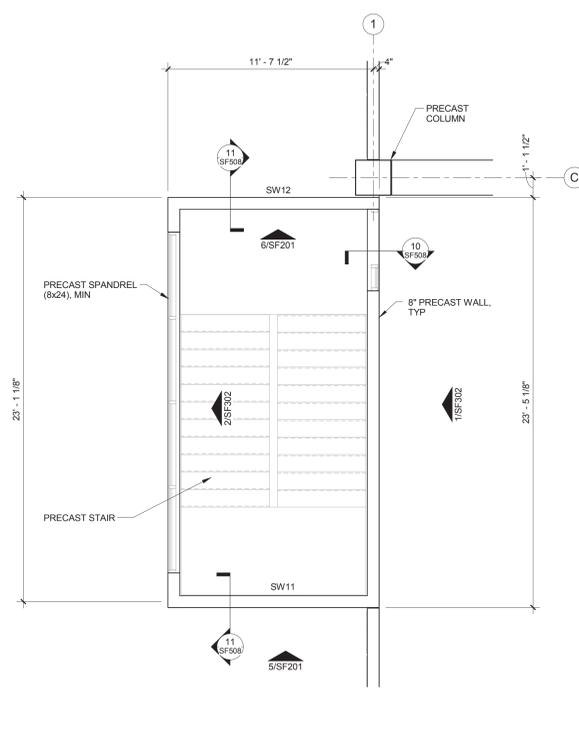
4 ENLARGED SLAB ON GRADE PLAN - WEST STAIR TOWER  
1/4" = 1'-0"



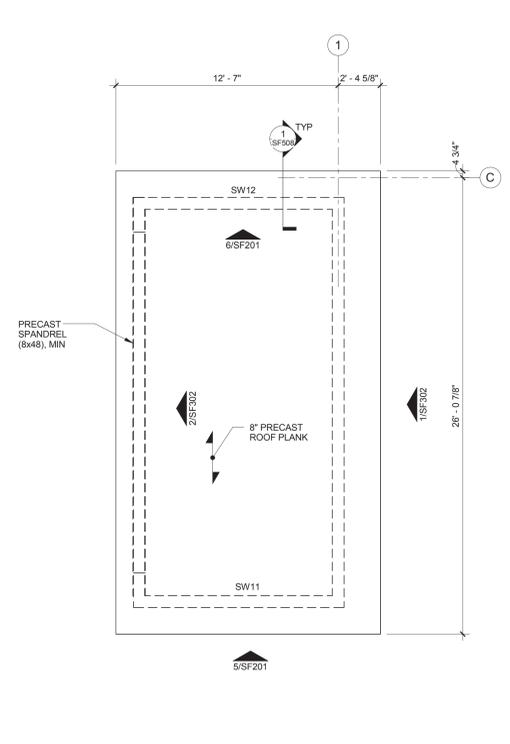
5 ENLARGED LEVEL 1 FRAMING PLAN - WEST STAIR TOWER  
1/4" = 1'-0"



6 ENLARGED LEVEL 2 FRAMING PLAN - WEST STAIR TOWER  
1/4" = 1'-0"



7 ENLARGED LEVEL 3 FRAMING PLAN - WEST STAIR TOWER  
1/4" = 1'-0"



8 ENLARGED ROOF FRAMING PLAN - WEST STAIR TOWER  
1/4" = 1'-0"

**VA** U.S. Department of Veterans Affairs  
SALISBURY VAMC  
Dept. of Veterans Affairs  
1601 Brenner Ave.  
Salisbury, NC 28144

**PROFESSIONAL ENGINEER**  
SEAL  
11/14/2014  
Donald D. Coran

**Structural** AMERICAN STRUCTUREPOINT  
7260 Shadeland Station  
Indianapolis, IN 46256  
Tele: 317-547-5580

**MEP Engineer** APOGEE CONSULTING GROUP  
7330 Chappel Hill Road, Suite 202  
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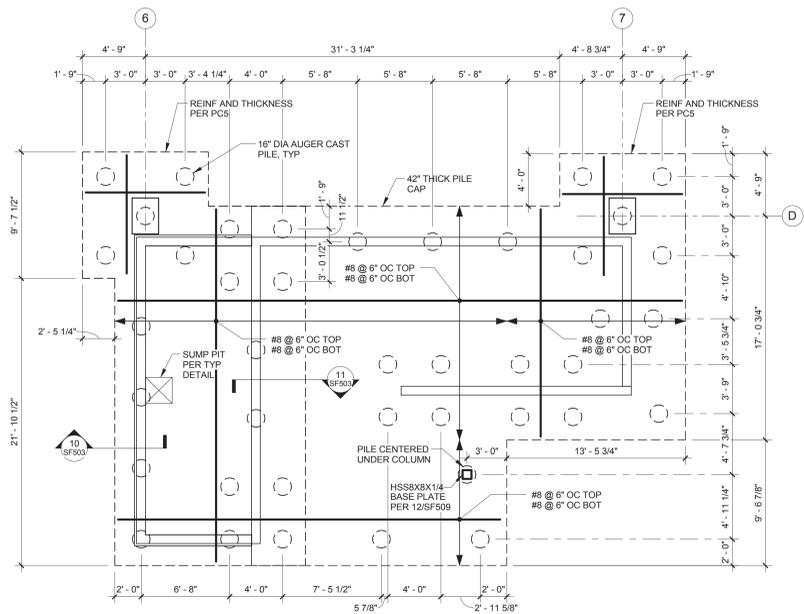
**Civil Engineer** GUIDON DESIGN INC.  
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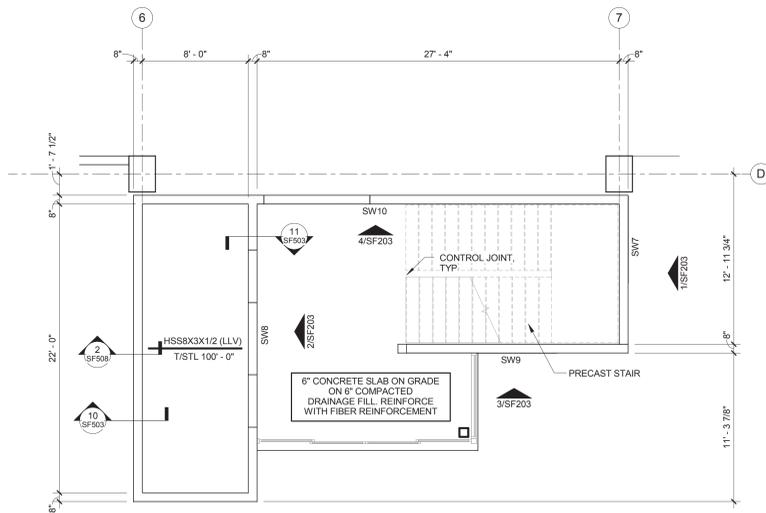
**PROJECT LEADER/ARCHITECT:**  
**GUIDON DESIGN**  
905 N. CAPITOL AVE. SUITE 100 INDIANAPOLIS, IN. 46204  
317.800.6388 WWW.GUIDONDESIGN.COM  
SUSTAINABLE ARCHITECTURE + ENGINEERING

Drawing Title <b>ENLARGED PLANS</b>		Project Title CONSTRUCT NEW PARKING GARAGE		Project Number 13.1044		OFFICE OF FACILITIES MANAGEMENT	
Approved for Design Concept: JOHN MONTGOMERY PROJECT ENGINEER 704-638-9000		Location W.G. (BILL) HEFNER VAMC		Building Number Bldg 9		VA Project Number 659-342	
Date 11/14/2014		Checked By: JAP		Drawing Number SF401		Date 11/14/2014	
Drawn By: BGC		Date 11/14/2014		Checked By: JAP		Date 11/14/2014	

one eighth inch = one foot  
one quarter inch = one foot  
one half inch = one foot  
three eighths inch = one foot  
one inch = one foot  
one and one half inches = one foot  
two inches = one foot  
three inches = one foot  
four inches = one foot  
five inches = one foot  
six inches = one foot  
seven inches = one foot  
eight inches = one foot  
nine inches = one foot  
ten inches = one foot  
eleven inches = one foot  
twelve inches = one foot  
thirteen inches = one foot  
fourteen inches = one foot  
fifteen inches = one foot  
sixteen inches = one foot  
seventeen inches = one foot  
eighteen inches = one foot  
nineteen inches = one foot  
twenty inches = one foot  
twenty one inches = one foot  
twenty two inches = one foot  
twenty three inches = one foot  
twenty four inches = one foot  
twenty five inches = one foot  
twenty six inches = one foot  
twenty seven inches = one foot  
twenty eight inches = one foot  
twenty nine inches = one foot  
thirty inches = one foot  
thirty one inches = one foot  
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thirty three inches = one foot  
thirty four inches = one foot  
thirty five inches = one foot  
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thirty eight inches = one foot  
thirty nine inches = one foot  
forty inches = one foot  
forty one inches = one foot  
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forty four inches = one foot  
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forty six inches = one foot  
forty seven inches = one foot  
forty eight inches = one foot  
forty nine inches = one foot  
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fifty one inches = one foot  
fifty two inches = one foot  
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fifty eight inches = one foot  
fifty nine inches = one foot  
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sixty one inches = one foot  
sixty two inches = one foot  
sixty three inches = one foot  
sixty four inches = one foot  
sixty five inches = one foot  
sixty six inches = one foot  
sixty seven inches = one foot  
sixty eight inches = one foot  
sixty nine inches = one foot  
seventy inches = one foot  
seventy one inches = one foot  
seventy two inches = one foot  
seventy three inches = one foot  
seventy four inches = one foot  
seventy five inches = one foot  
seventy six inches = one foot  
seventy seven inches = one foot  
seventy eight inches = one foot  
seventy nine inches = one foot  
eighty inches = one foot  
eighty one inches = one foot  
eighty two inches = one foot  
eighty three inches = one foot  
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eighty six inches = one foot  
eighty seven inches = one foot  
eighty eight inches = one foot  
eighty nine inches = one foot  
ninety inches = one foot  
ninety one inches = one foot  
ninety two inches = one foot  
ninety three inches = one foot  
ninety four inches = one foot  
ninety five inches = one foot  
ninety six inches = one foot  
ninety seven inches = one foot  
ninety eight inches = one foot  
ninety nine inches = one foot  
one hundred inches = one foot

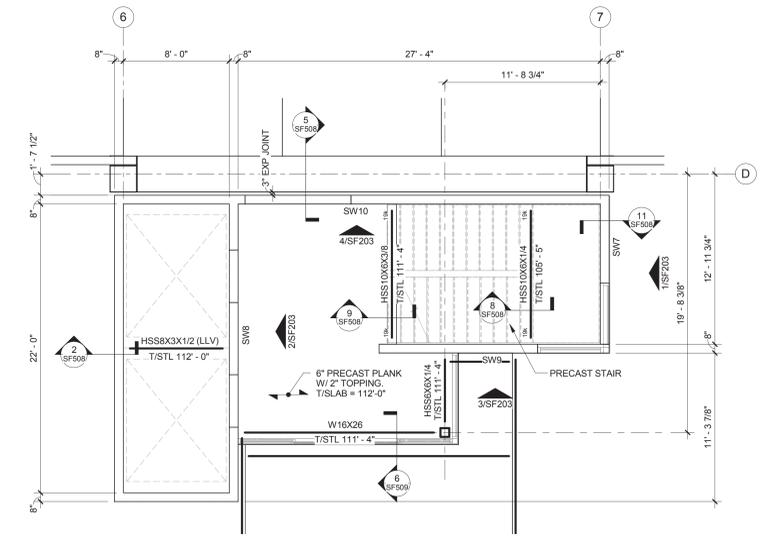


1 ENLARGED FOUNDATION PLAN - SOUTH STAIR TOWER  
3/16" = 1'-0"



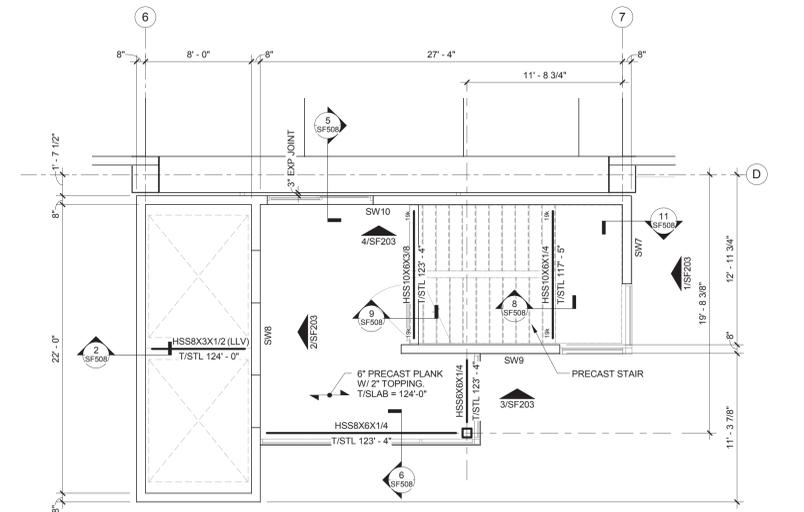
2 ENLARGED SLAB ON GRADE PLAN - SOUTH STAIR TOWER  
3/16" = 1'-0"

NOTES:  
1. PROVIDE END CAPS FOR ALL HSS MEMBERS



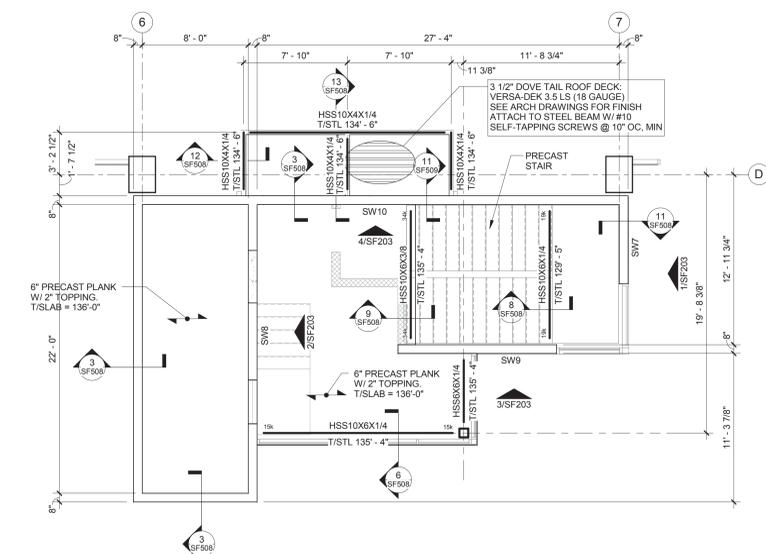
3 ENLARGED LEVEL 2 FRAMING PLAN - SOUTH STAIR TOWER  
3/16" = 1'-0"

NOTES:  
1. PROVIDE END CAPS FOR ALL HSS MEMBERS



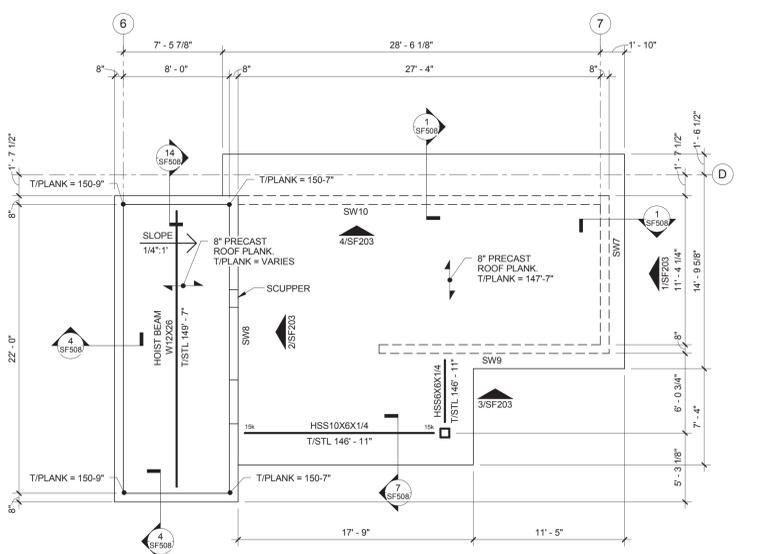
4 ENLARGED LEVEL 3 FRAMING PLAN - SOUTH STAIR TOWER  
3/16" = 1'-0"

NOTES:  
1. PROVIDE END CAPS FOR ALL HSS MEMBERS



5 ENLARGED LEVEL 4 FRAMING PLAN - SOUTH STAIR TOWER  
3/16" = 1'-0"

NOTES:  
1. PROVIDE END CAPS FOR ALL HSS MEMBERS



6 ENLARGED ROOF FRAMING PLAN - SOUTH STAIR TOWER  
3/16" = 1'-0"

NOTES:  
1. PROVIDE END CAPS FOR ALL HSS MEMBERS

**VA** U.S. Department of Veterans Affairs  
SALISBURY VAMC  
Dept. of Veterans Affairs  
1601 Brenner Ave.  
Salisbury, NC 28144



**Structural**  
AMERICAN STRUCTUREPOINT  
7260 Shadeland Station  
Indianapolis, IN 46256  
Tele: 317-547-5580

**MEP Engineer**  
APOGEE CONSULTING GROUP  
7330 Chappel Hill Road, Suite 202  
Raleigh, NC 27607  
Tele: 919-858-7420

**Civil Engineer**  
GUIDON DESIGN INC.  
905 N. Capitol Ave. Suite 100  
Indianapolis, IN 46204  
Tele: 317-800-6388

**Functional Design**  
CARL WALKER INC.  
14045 Ballantyne Corp. Place, Suite 380  
Charlotte, NC 28277  
Tele: 704-716-8000

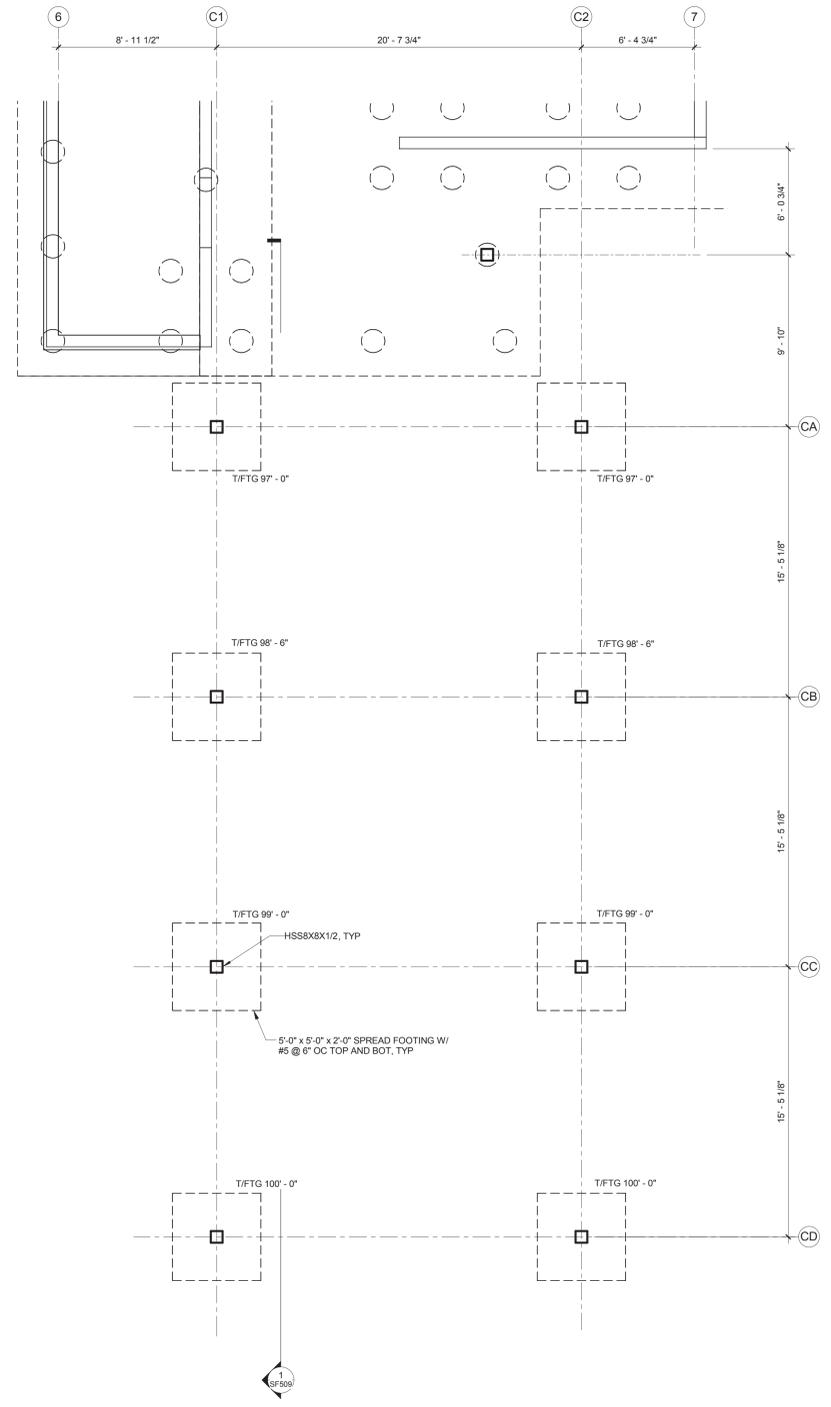
PROJECT LEADER/ARCHITECT:  
**GUIDON DESIGN**  
905 N. CAPITOL AVE. SUITE 100 INDIANAPOLIS, IN. 46204  
317.800.6388 WWW.GUIDONDESIGN.COM  
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BID SET			
Drawing Title <b>ENLARGED PLANS</b>	Project Title CONSTRUCT NEW PARKING GARAGE	Project Number 13.1044	OFFICE OF FACILITIES MANAGEMENT
Approved for Design Concept: JOHN MONTGOMERY PROJECT ENGINEER 704-638-9000	Location W.G. (BILL) HEFNER VAMC	Building Number Bldg 9	VA Project Number 659-342
Date 11/14/2014	Checked By: JAP	Drawing Number SF402	Drawn By: BGC

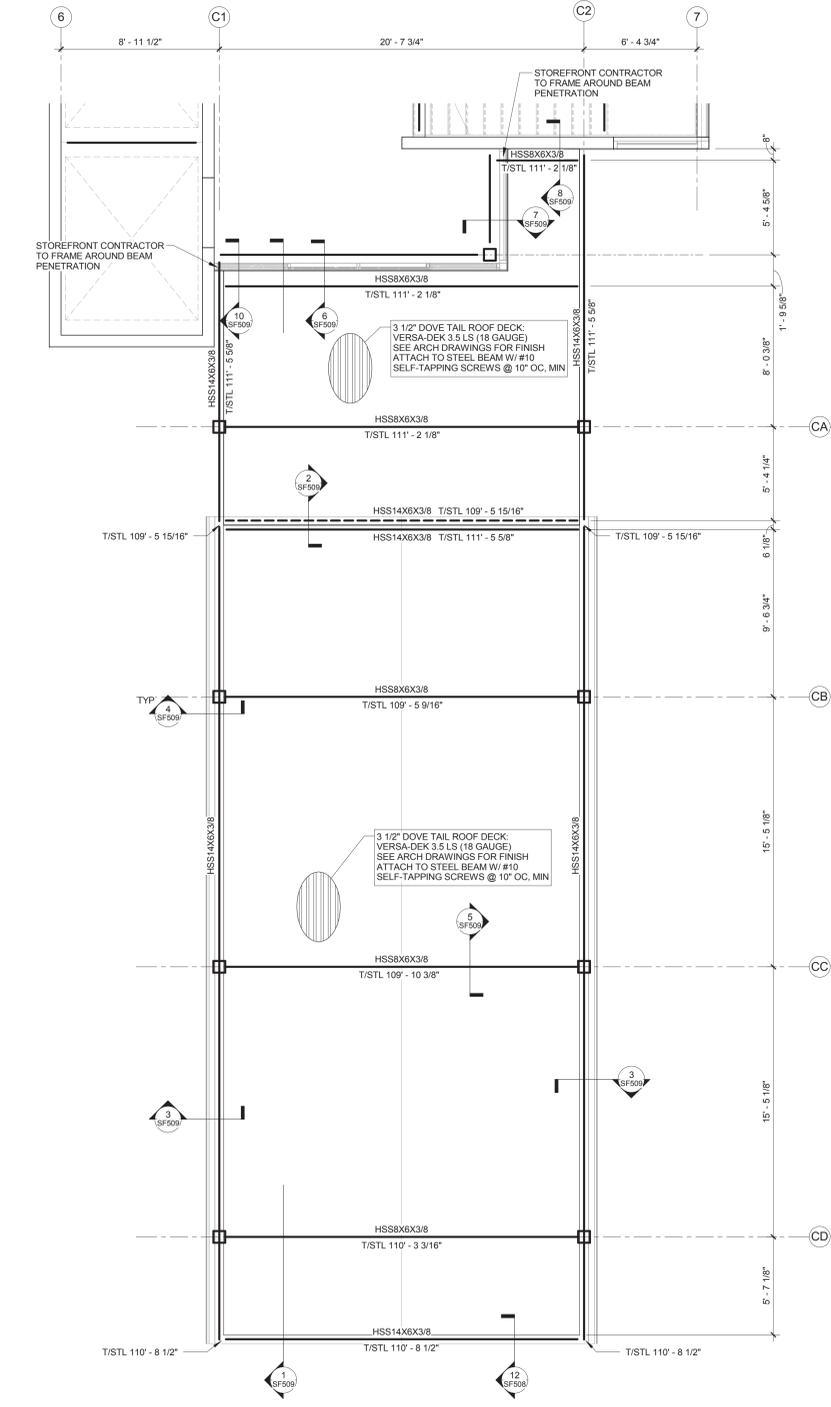
one eighth inch = one foot  
 one quarter inch = one foot  
 three eighths inch = one foot  
 one half inch = one foot  
 three quarters inch = one foot  
 one inch = one foot  
 one and one half inches = one foot  
 three inches = one foot

Revisions: \_\_\_\_\_ Date \_\_\_\_\_

one eighth inch = one foot  
 one quarter inch = one foot  
 three eighths inch = one foot  
 one half inch = one foot  
 three quarters inch = one foot  
 one inch = one foot  
 one and one half inches = one foot  
 two inches = one foot  
 three inches = one foot



1 ENLARGED FOUNDATION PLAN - WALKWAY CANOPY  
 1/4" = 1'-0"

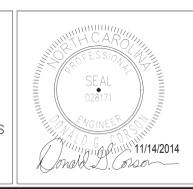


2 ENLARGED FRAMING PLAN - WALKWAY CANOPY  
 1/4" = 1'-0"

NOTES:  
 1. PROVIDE STEEL END CAPS FOR ALL HSS MEMBERS.

Revisions:	Date

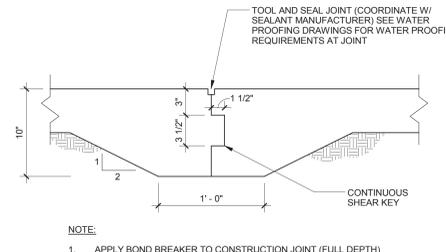
**VA** U.S. Department of Veterans Affairs  
 SALISBURY VAMC  
 Dept. of Veterans Affairs  
 1601 Brenner Ave.  
 Salisbury, NC 28144



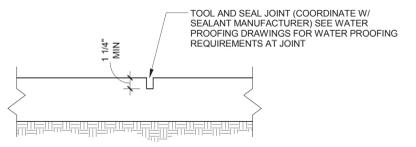
Structural	MEP Engineer	Civil Engineer	Functional Design
AMERICAN STRUCTUREPOINT 7260 Shadeland Station Indianapolis, IN 46256 Tel: 317-547-5580	APOGEE CONSULTING GROUP 7330 Chappel Hill Road, Suite 202 Raleigh, NC 27607 Tel: 919-858-7420	GUIDON DESIGN INC. 905 N. Capitol Ave. Suite 100 Indianapolis, IN 46204 Tel: 317-800-6388	CARL WALKER INC. 14045 Ballantyne Corp. Place, Suite 380 Charlotte, NC 28277 Tel: 704-716-8000

PROJECT LEADER/ARCHITECT:  
**GUIDON DESIGN**  
 905 N. CAPITOL AVE. SUITE 100 INDIANAPOLIS, IN. 46204  
 317.800.6388 WWW.GUIDONDESIGN.COM  
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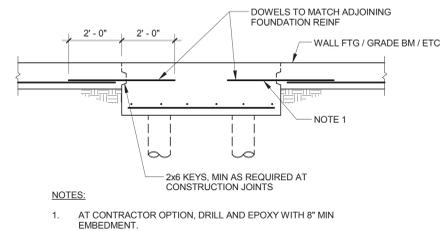
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Approved for Design Concept: <b>JOHN MONTGOMERY</b> PROJECT ENGINEER 704-638-9000		Location <b>W.G. (BILL) HEFNER VAMC</b>		Building Number <b>Bldg 9</b>		VA Project Number <b>659-342</b>	
Date <b>11/14/2014</b>		Checked By: <b>JAP</b>		Drawn By: <b>BGC</b>		Drawing Number <b>SF403</b>	



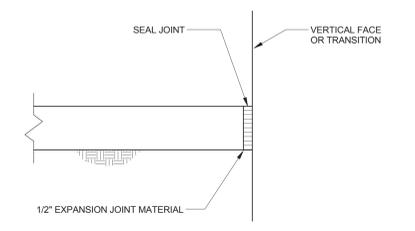
**1 TYPICAL SOG CONSTRUCTION JOINT DETAIL**  
SF501 N.T.S.



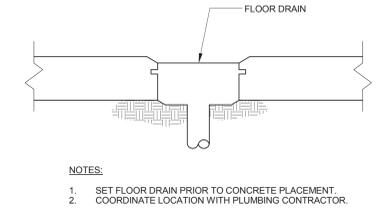
**2 TYPICAL SOG CONTROL JOINT DETAIL**  
SF501 N.T.S.



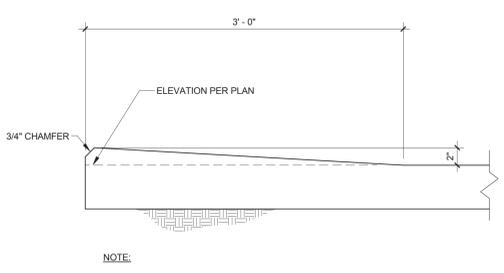
**3 TYPICAL FOUNDATION INTERSECTION**  
SF501 N.T.S.



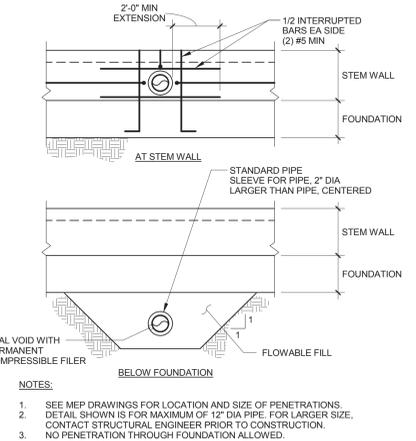
**4 TYPICAL SOG AT TRANSITION DETAIL**  
SF501 N.T.S.



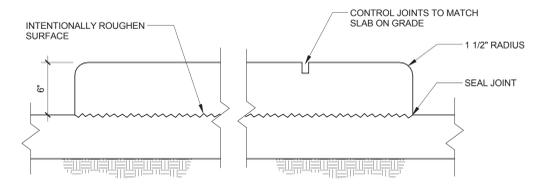
**5 TYPICAL FLOOR DRAIN DETAIL (SOG)**  
SF501 N.T.S.



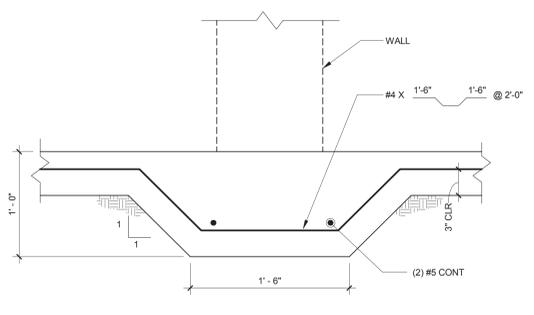
**6 TYPICAL (SOG) WASH DETAIL**  
SF501 N.T.S.



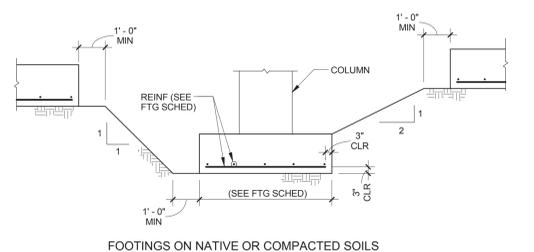
**7 TYPICAL FOOTING DETAIL AT PIPE PENETRATION**  
SF501 N.T.S.



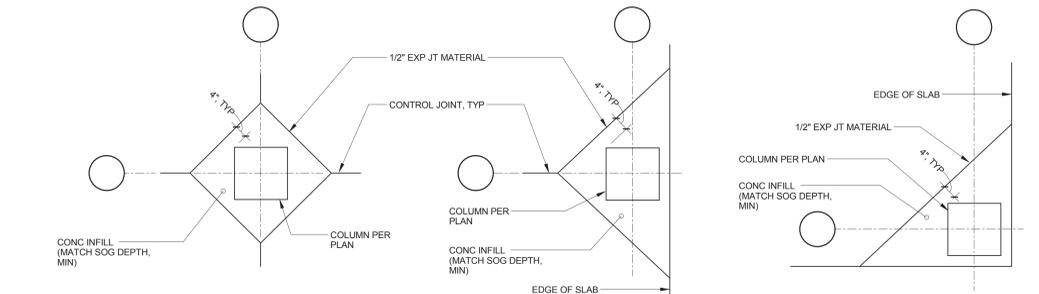
**8 TYPICAL ISLAND DETAIL**  
SF501 N.T.S.



**9 TYPICAL THICKENED SLAB AT NON-BEARING WALLS**  
SF501 N.T.S.



**10 TYPICAL COLUMN FTG/EXCAVATION LIMITS DETAIL**  
SF501 N.T.S.



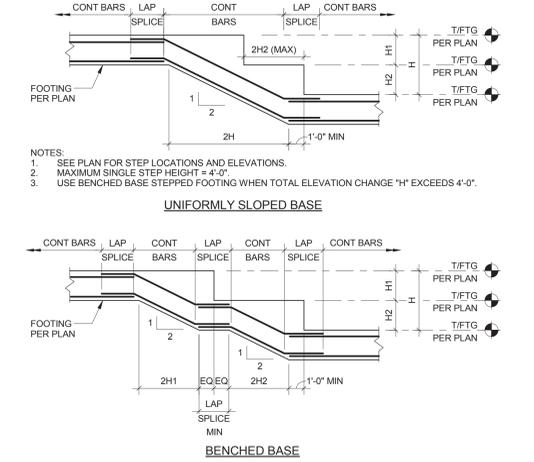
**11 TYPICAL COLUMN ISOLATION JOINT DETAIL**  
SF501 N.T.S.

GRADE BEAM SCHEDULE					
MARK	SIZE		REINFORCEMENT	TYPE	TIES
	WIDTH	DEPTH			
GB30x24	30"	24"	(4) #6 TOP & (4) #6 BOT	A	#4 TIES @ 12" OC
GB78x30	78"	30"	#7 @ 6" OC EW TOP & BOT	B	
GB90x36	90"	36"	#7 @ 6" OC EW TOP & BOT	B	

TYPES:		WIDTH (W)	DEPTH (D)
TYPE A	TYPE B		

**12 GRADE BEAM SCHEDULE**  
SF501 N.T.S.



**13 TYPICAL STEPPED FOUNDATION**  
SF501 N.T.S.

Revisions:	Date:

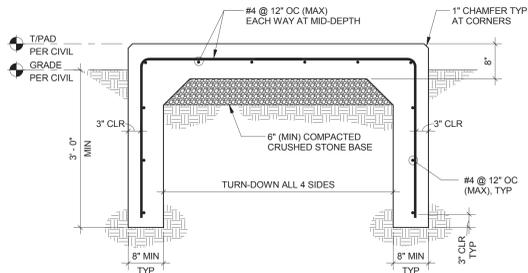
**VA** U.S. Department of Veterans Affairs  
SALISBURY VAMC  
Dept. of Veterans Affairs  
1601 Brenner Ave.  
Salisbury, NC 28144

Professional Engineer  
SEAL  
11/14/2014

Structural	MEP Engineer	Civil Engineer	Functional Design
AMERICAN STRUCTUREPOINT 7260 Shadeland Station Indianapolis, IN 46256 Tele: 317-547-5580	APOGEE CONSULTING GROUP 7330 Chappel Hill Road, Suite 202 Raleigh, NC 27607 Tele: 919-858-7420	GUIDON DESIGN INC. 905 N. Capitol Ave. Suite 100 Indianapolis, IN 46204 Tele: 317-800-6388	CARL WALKER INC. 14045 Ballantyne Corp. Place, Suite 380 Charlotte, NC 28277 Tele: 704-716-8000

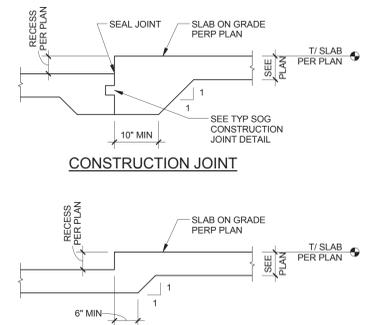
PROJECT LEADER/ARCHITECT:  
**GUIDON DESIGN**  
905 N. CAPITOL AVE. SUITE 100 INDIANAPOLIS, IN. 46204  
317.800.6388 WWW.GUIDONDESIGN.COM  
SUSTAINABLE ARCHITECTURE + ENGINEERING

Drawing Title <b>TYPICAL FOUNDATION DETAILS</b>	Project Title CONSTRUCT NEW PARKING GARAGE	Project Number 13.1044	Office of Facilities Management
Approved for Design Concept: JOHN MONTGOMERY PROJECT ENGINEER 704-638-9000	Location W.G. (BILL) HEFNER VAMC	Building Number Bldg 9	VA Project Number 659-342
Date 11/14/2014	Checked By: JAP	Drawing Number SF501	Drawn By: BGC

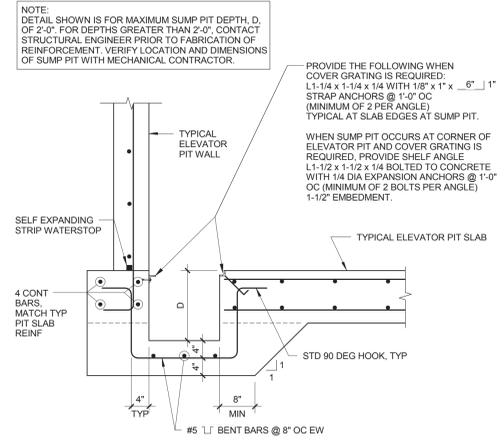


- NOTES:**
1. CONCRETE 28-DAY COMPRESSIVE STRENGTH = 4000 PSI, MINIMUM. AIR ENTRAINMENT = 6% +/- 1%. MAX W/C RATIO = 0.45. BROOM FINISH SURFACE.
  2. PROVIDE SAW-CUT CONTROL JOINTS SPACED NOT MORE THAN 24 TIMES THE SLAB THICKNESS CENTER-TO-CENTER. UNO. SEAL JOINTS WITH WEATHER-RESISTANT SEALANT.
  3. SEE PLANS FOR OVERALL PAD DIMENSIONS.
  4. COORDINATE EXACT LOCATION WITH CIVIL AND MECHANICAL DRAWINGS, AND EQUIPMENT SUPPLIER.

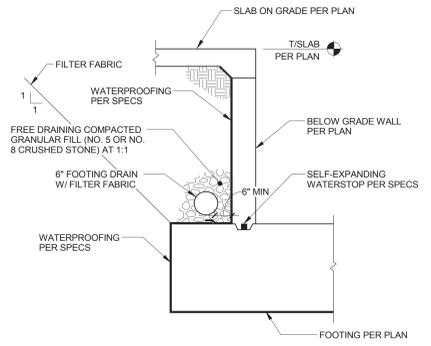
**1 EXTERIOR EQUIPMENT PAD DETAIL**  
N.T.S.



**2 TYPICAL SLAB RECESS**  
N.T.S.

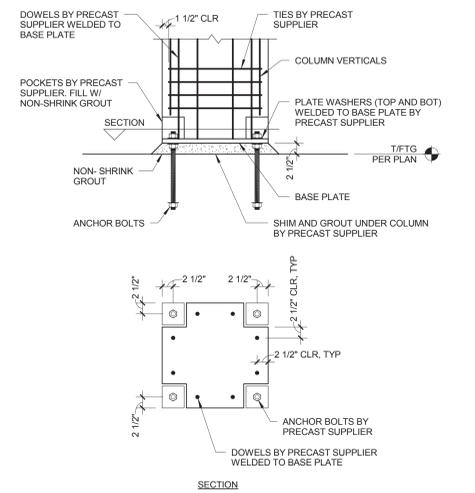


**3 TYPICAL SUMP PIT AT ELEVATOR PIT**  
3/4\"/>

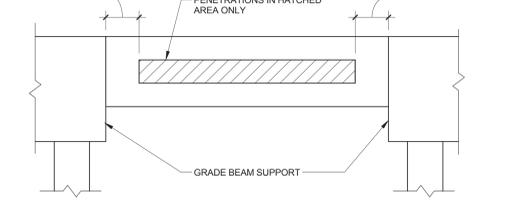
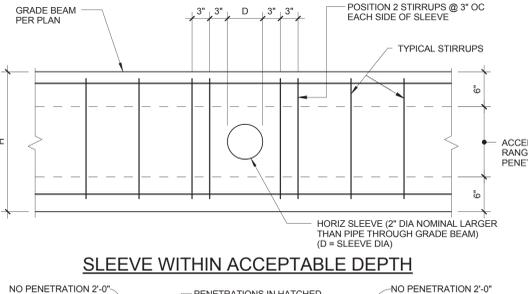


- NOTES:**
1. THIS DETAIL APPLIES TO ALL BELOW GRADE WALLS.
  2. REINFORCING IN SLAB, WALL, AND FOOTING NOT SHOWN FOR CLARITY.

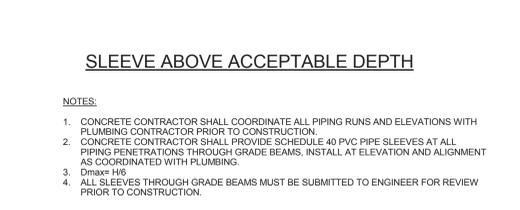
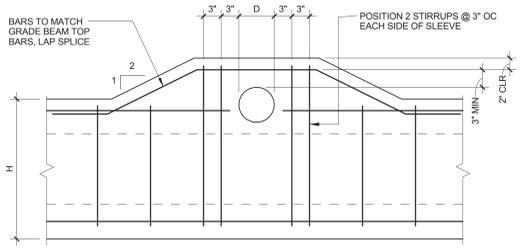
**4 TYPICAL WATERSTOP AND WATERPROOFING**  
N.T.S.



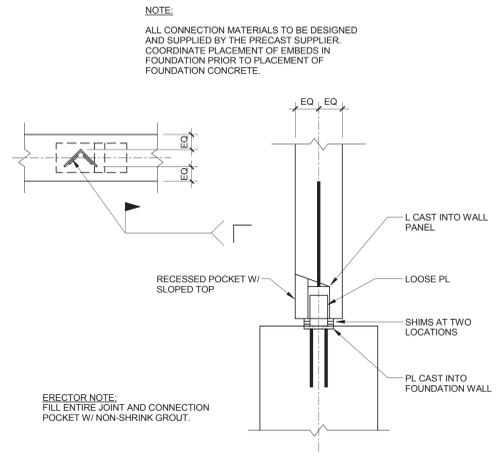
**5 TYPICAL PRECAST COLUMN BASE DETAIL**  
N.T.S.



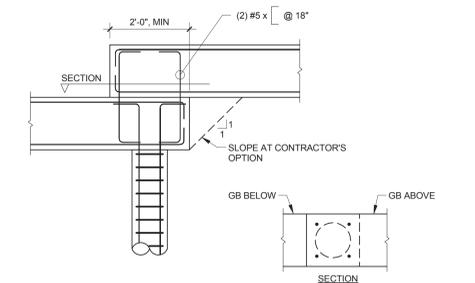
**6 TYPICAL PIPE SLEEVE PENETRATION THROUGH GRADE BEAM**  
N.T.S.



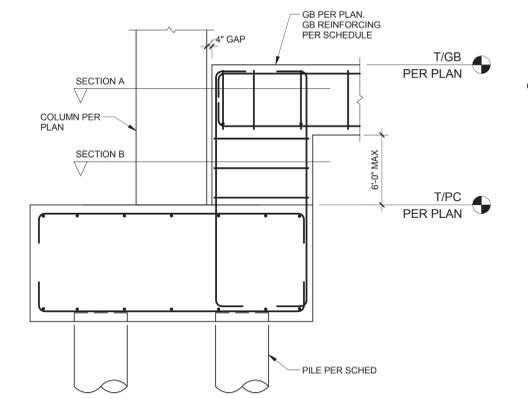
**7 SLEEVE ABOVE ACCEPTABLE DEPTH**  
N.T.S.



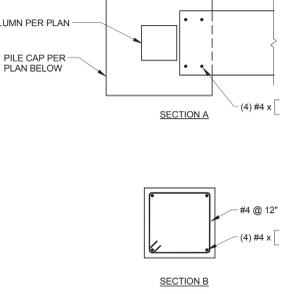
**10 TYPICAL PRECAST WALL PANEL TO FOUNDATION CONNECTION**  
N.T.S.



**11 TYPICAL GRADE BEAM STEP DETAIL**  
N.T.S.



**12 TYPICAL GRADE BEAM STEP AT PILE CAP**  
N.T.S.



**13 TYPICAL GRADE BEAM STEP AT PILE CAP**  
N.T.S.

<b>Structural</b> AMERICAN STRUCTUREPOINT 7260 Shadeland Station Indianapolis, IN 46256 Tele: 317-547-5580	<b>MEP Engineer</b> APOGEE CONSULTING GROUP 7330 Chappel Hill Road, Suite 202 Raleigh, NC 27607 Tele: 919-858-7420	<b>Civil Engineer</b> GUIDON DESIGN INC. 905 N. Capitol Ave. Suite 100 Indianapolis, IN 46204 Tele: 317-800-6388	<b>Functional Design</b> CARL WALKER INC. 14045 Ballantyne Corp. Place, Suite 380 Charlotte, NC 28277 Tele: 704-716-8000
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PROJECT LEADER/ARCHITECT:  
**GUIDON DESIGN**  
905 N. CAPITOL AVE. SUITE 100 INDIANAPOLIS, IN. 46204  
317.800.6388 WWW.GUIDONDESIGN.COM  
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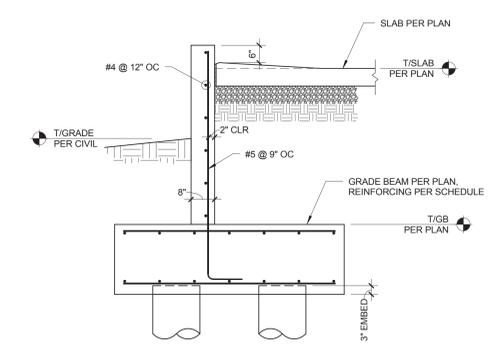
Drawing Title <b>TYPICAL FOUNDATION DETAILS</b>		Project Title CONSTRUCT NEW PARKING GARAGE		Project Number 13.1044		OFFICE OF FACILITIES MANAGEMENT	
Approved for Design Concept: JOHN MONTGOMERY PROJECT ENGINEER 704-638-9000		Location W.G. (BILL) HEFNER VAMC		Building Number Bldg 9		VA Project Number 659-342	
Date 11/14/2014		Checked By: JAP		Drawing Number SF502		U.S. Department of Veterans Affairs	

**VA** U.S. Department of Veterans Affairs  
SALISBURY VAMC  
Dept. of Veterans Affairs  
1601 Brenner Ave.  
Salisbury, NC 28144

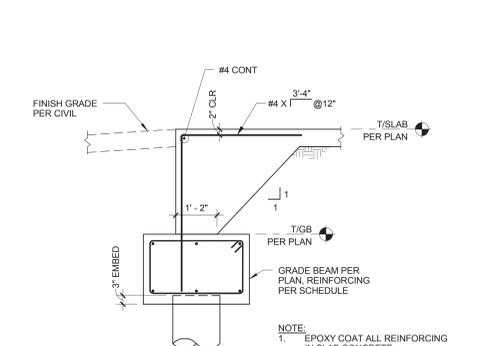
Professional Engineer Seal  
North Carolina  
SEAL 02871  
11/14/2014

Vertical scale on left: 1/8" = 1'-0", 1/4" = 1'-0", 3/8" = 1'-0", 1/2" = 1'-0", 3/4" = 1'-0", 1" = 1'-0", 1 1/4" = 1'-0", 1 1/2" = 1'-0", 1 3/4" = 1'-0", 2" = 1'-0", 2 1/4" = 1'-0", 2 1/2" = 1'-0", 2 3/4" = 1'-0", 3" = 1'-0", 3 1/4" = 1'-0", 3 1/2" = 1'-0", 3 3/4" = 1'-0", 4" = 1'-0", 4 1/4" = 1'-0", 4 1/2" = 1'-0", 4 3/4" = 1'-0", 5" = 1'-0", 5 1/4" = 1'-0", 5 1/2" = 1'-0", 5 3/4" = 1'-0", 6" = 1'-0", 6 1/4" = 1'-0", 6 1/2" = 1'-0", 6 3/4" = 1'-0", 7" = 1'-0", 7 1/4" = 1'-0", 7 1/2" = 1'-0", 7 3/4" = 1'-0", 8" = 1'-0", 8 1/4" = 1'-0", 8 1/2" = 1'-0", 8 3/4" = 1'-0", 9" = 1'-0", 9 1/4" = 1'-0", 9 1/2" = 1'-0", 9 3/4" = 1'-0", 10" = 1'-0".

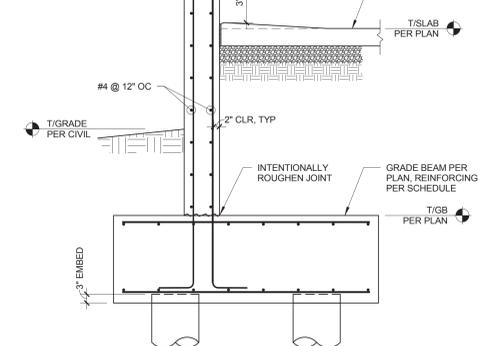
one and one half inches = one foot  
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 one half inch = one foot  
 three eighths inch = one foot  
 one quarter inch = one foot  
 three eighths inch = one foot  
 one eighth inch = one foot  
 one eighth inch = one foot



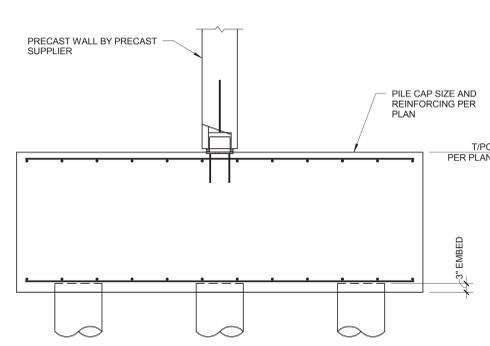
SECTION 1  
SF503 1/2" = 1'-0"



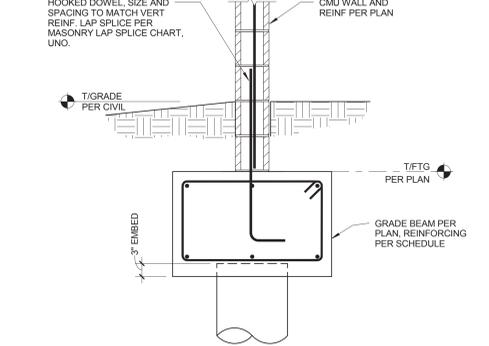
SECTION 2  
SF503 1/2" = 1'-0"



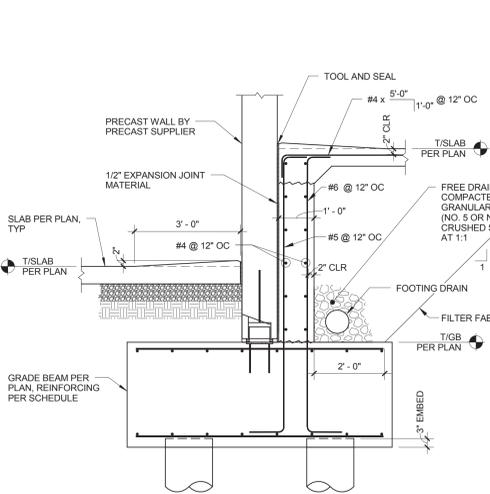
SECTION 3  
SF503 1/2" = 1'-0"



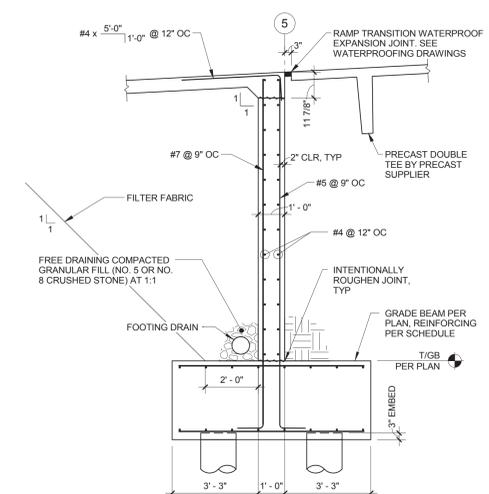
SECTION 4  
SF503 1/2" = 1'-0"



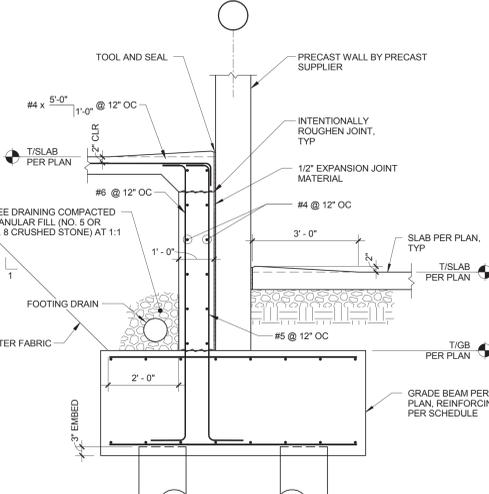
SECTION 5  
SF503 3/4" = 1'-0"



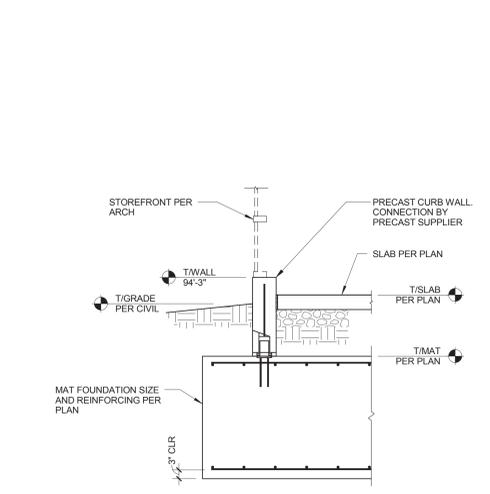
SECTION 6  
SF503 1/2" = 1'-0"



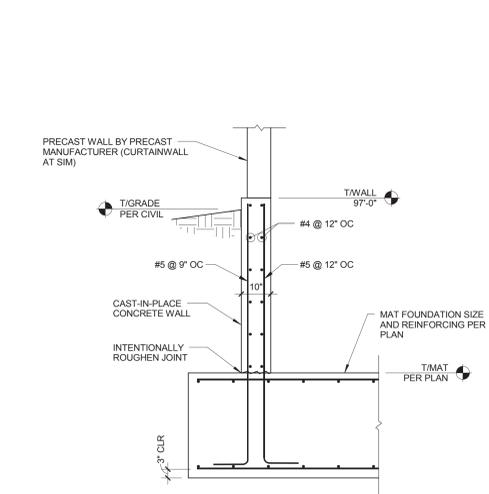
SECTION 7  
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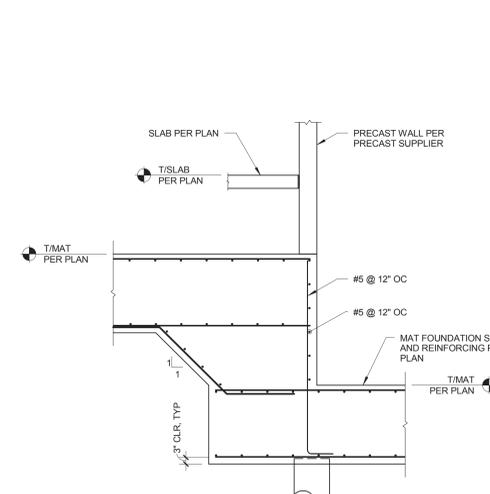
SECTION 8  
SF503 1/2" = 1'-0"



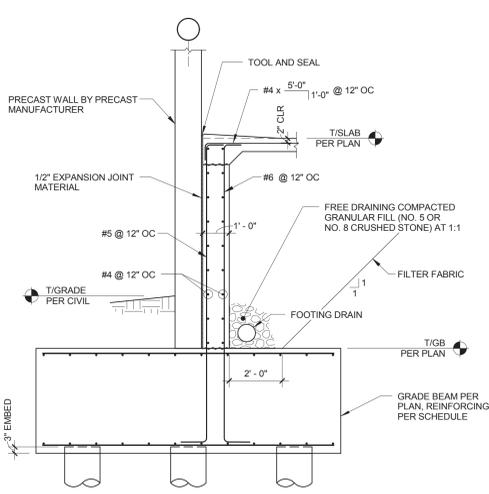
SECTION 9  
SF503 1/2" = 1'-0"



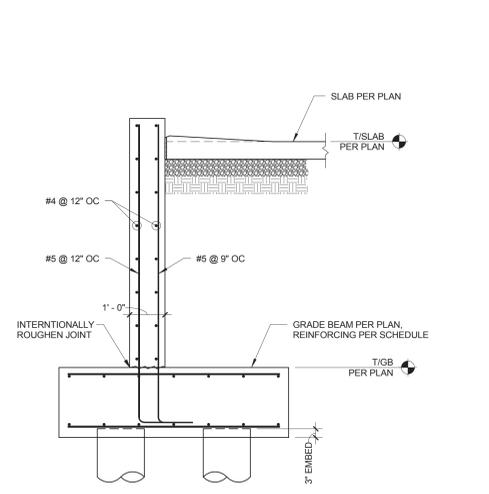
SECTION 10  
SF503 1/2" = 1'-0"



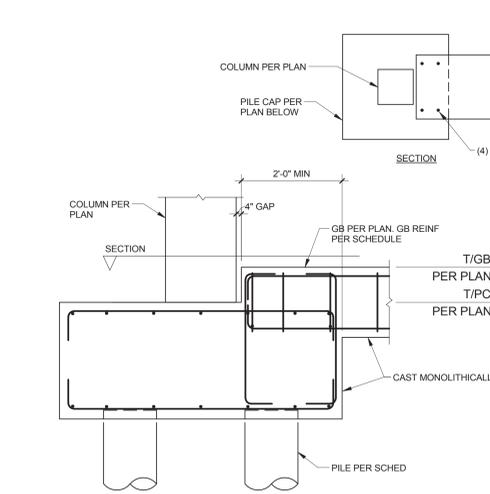
SECTION 11  
SF503 3/8" = 1'-0"



SECTION 12  
SF503 3/8" = 1'-0"



SECTION 13  
SF503 1/2" = 1'-0"



SECTION 14  
SF503 1/2" = 1'-0"

Revisions:	Date:

**VA** U.S. Department of Veterans Affairs  
 SALISBURY VAMC  
 Dept. of Veterans Affairs  
 1601 Brenner Ave.  
 Salisbury, NC 28144

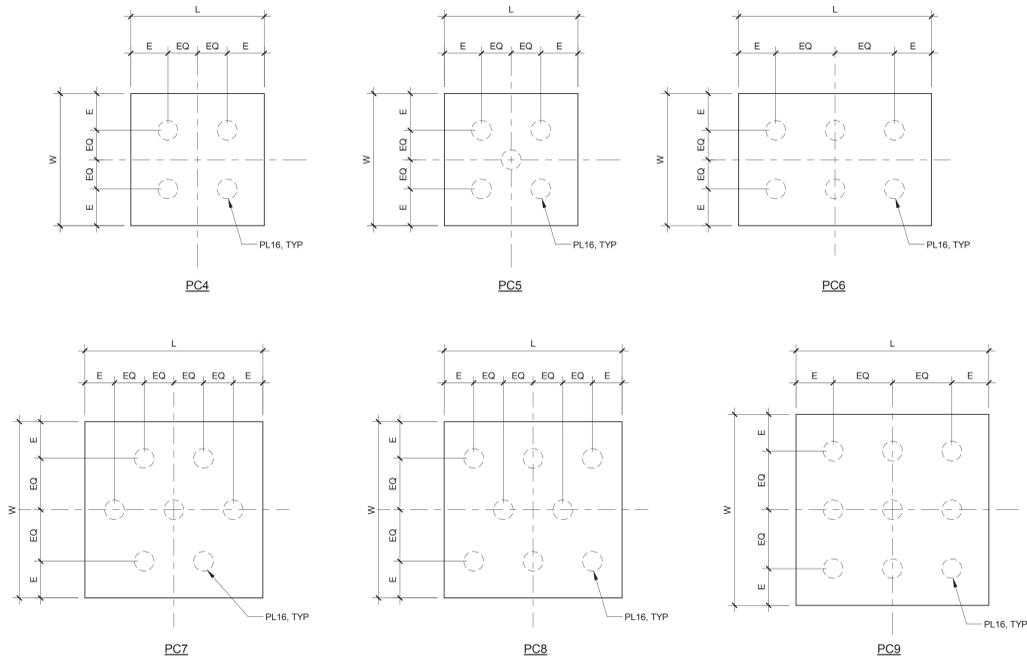


<b>Structural</b> AMERICAN STRUCTUREPOINT 7260 Shadeland Station Indianapolis, IN 46256 Tel: 317-547-5580	<b>MEP Engineer</b> APOGEE CONSULTING GROUP 7330 Chappel Hill Road, Suite 202 Raleigh, NC 27607 Tel: 919-858-7420	<b>Civil Engineer</b> GUIDON DESIGN INC. 905 N. Capitol Ave. Suite 100 Indianapolis, IN 46204 Tel: 317-800-6388	<b>Functional Design</b> CARL WALKER INC. 14045 Ballantyne Corp. Place, Suite 380 Charlotte, NC 28277 Tel: 704-716-8000
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PROJECT LEADER/ARCHITECT:  
**GUIDON DESIGN**  
 905 N. CAPITOL AVE. SUITE 100 INDIANAPOLIS, IN. 46204  
 317.800.6388 WWW.GUIDONDESIGN.COM  
 SUSTAINABLE ARCHITECTURE + ENGINEERING

Drawing Title <b>FOUNDATION SECTIONS AND DETAILS</b>		Project Title <b>CONSTRUCT NEW PARKING GARAGE</b>		Project Number 13.1044		OFFICE OF FACILITIES MANAGEMENT	
Approved for Design Concept: JOHN MONTGOMERY PROJECT ENGINEER 704-638-9000		Location W.G. (BILL) HEFNER VAMC		Building Number Bldg 9		VA Project Number 659-342	
Date 11/14/2014		Checked By: JAP		Drawing Number SF503		Drawn By: BGC	

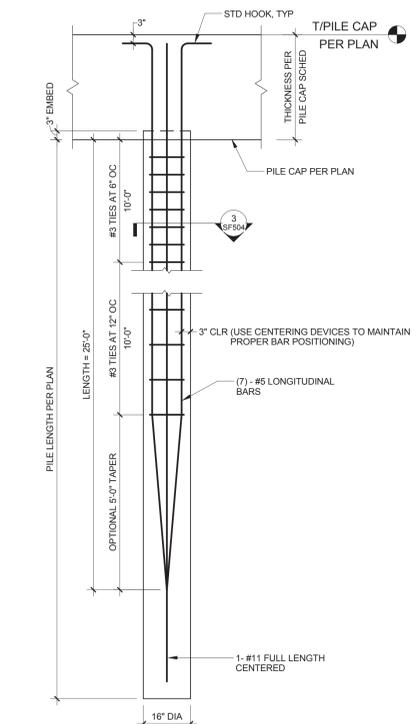
three inches = one foot  
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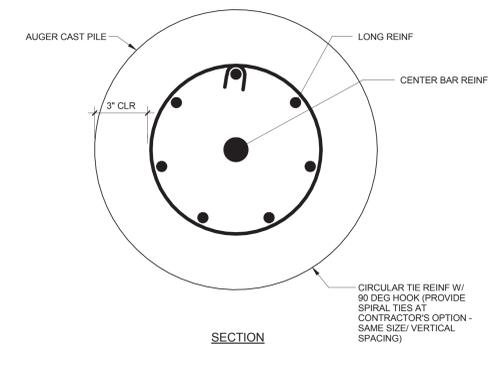
1 SF504 N.T.S. **TYPICAL PILE CAP DETAILS**

MARK	# OF PILES	PILE	CAP DIM			CAP BOT REINF				CAP TOP REINF				REMARKS	
			THK	L	W	QTY	SIZE	QTY	SIZE	QTY	SIZE	QTY	SIZE		
PC4	4	PL16	3'-4"	7'-6"	7'-6"	1'-9"	9	#9	9	#9	-	-	-	-	
PC5	5	PL16	3'-6"	9'-6"	9'-6"	1'-9"	12	#9	12	#9	-	-	-	-	NOTE 1
PC6	6	PL16	4'-6"	11'-6"	7'-6"	1'-9"	14	#9	14	#9	-	-	-	-	NOTE 1
PC7	7	PL16	4'-0"	11'-6"	10'-6"	1'-9"	15	#9	15	#9	-	-	-	-	NOTE 1
PC8	8	PL16	4'-4"	11'-6"	10'-6"	1'-9"	14	#10	14	#10	-	-	-	-	NOTE 1
PC9	9	PL16	4'-9"	11'-6"	11'-6"	1'-9"	15	#10	15	#10	-	-	-	-	NOTE 1

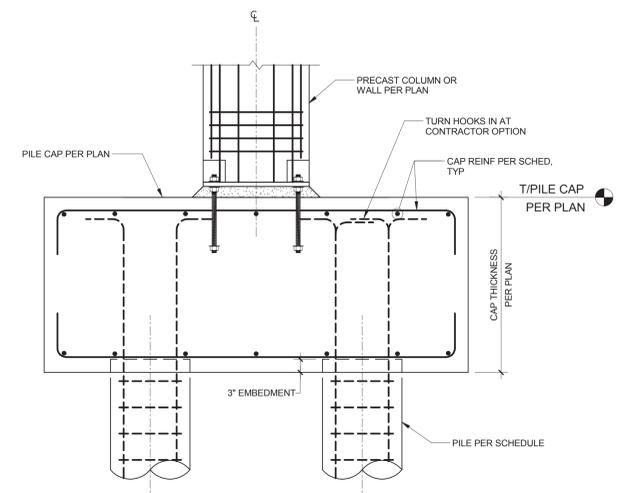
NOTES:  
 1. PROVIDE STANDARD HOOKS AT BOTH ENDS OF BARS.



2 SF504 N.T.S. **TYPICAL AUGER CAST PILE (PL16)**



3 SF504 N.T.S. **TYPICAL AUGER CAST PILE SECTION**



4 SF504 N.T.S. **TYPICAL PILE CAP SECTION**

Revisions:	Date

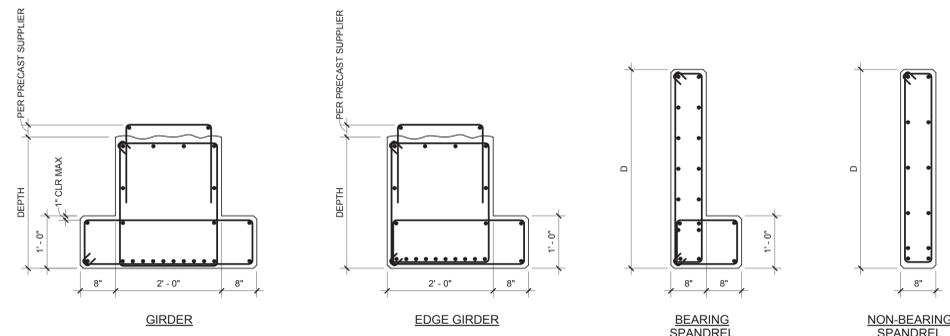
**VA** U.S. Department of Veterans Affairs  
 SALISBURY VAMC  
 Dept. of Veterans Affairs  
 1601 Brenner Ave.  
 Salisbury, NC 28144



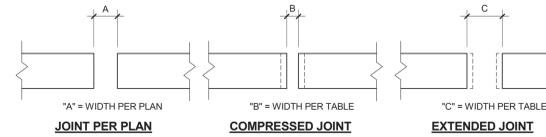
<b>Structural</b> AMERICAN STRUCTUREPOINT 7260 Shadeland Station Indianapolis, IN 46256 Tele: 317-547-5580	<b>MEP Engineer</b> APOGEE CONSULTING GROUP 7330 Chappel Hill Road, Suite 202 Raleigh, NC 27607 Tele: 919-858-7420	<b>Civil Engineer</b> GUIDON DESIGN INC. 905 N. Capitol Ave. Suite 100 Indianapolis, IN 46204 Tele: 317-800-6388	<b>Functional Design</b> CARL WALKER INC. 14045 Ballantyne Corp. Place, Suite 380 Charlotte, NC 28277 Tele: 704-716-8000
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PROJECT LEADER/ARCHITECT:  
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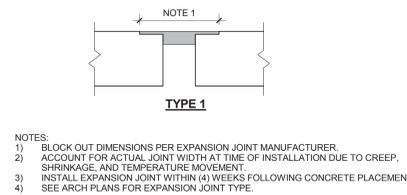
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Drawing Title <b>PILE / PILE CAP DETAILS / SCHEDULES</b>	Project Title CONSTRUCT NEW PARKING GARAGE	Project Number 13.1044	OFFICE OF FACILITIES MANAGEMENT
Approved for Design Concept: JOHN MONTGOMERY PROJECT ENGINEER 704-638-9000	Location W.G. (BILL) HEFNER VAMC	Building Number Bldg 9	VA Project Number 659-342
Date 11/14/2014	Checked By: JAP	Drawn By: BGC	Drawing Number <b>SF504</b>



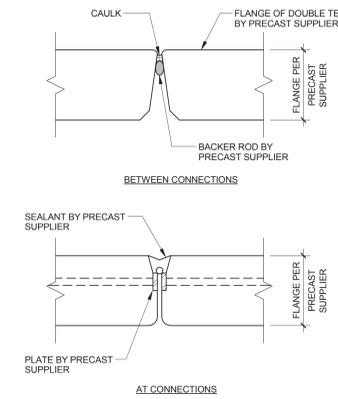
1 TYPICAL PRECAST BEAMS  
SF505 N.T.S.



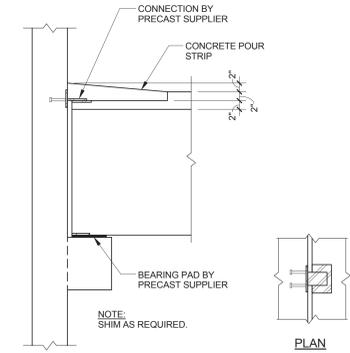
JOINT WIDTH TABLE			
MARK	PEDESTRIAN AREA	RAMP TRANSITION	ELEVATED
A	3"	3"	3"
B	2 1/2"	2 1/2"	2 1/2"
C	3 1/2"	3 1/2"	3 1/2"



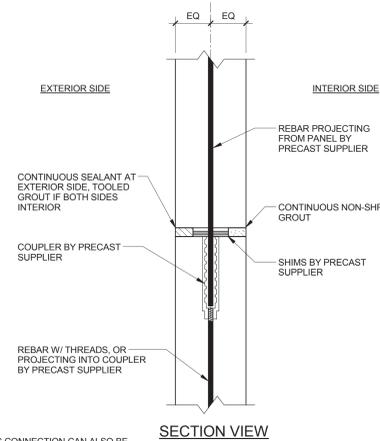
2 TYPICAL EXPANSION JOINT DETAILS  
SF505 N.T.S.



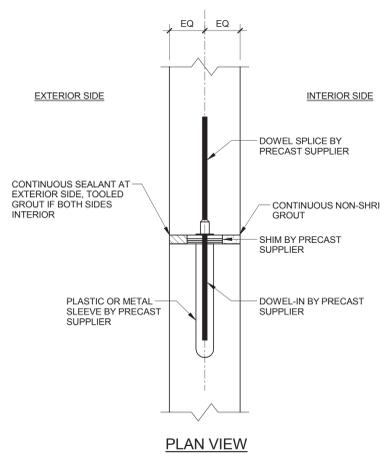
3 TYPICAL PRECAST DOUBLE TEE FLANGE CONNECTION  
SF505 N.T.S.



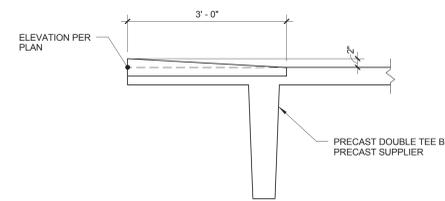
4 TYPICAL PRECAST DOUBLE TEE CONNECTION TO WALL PANEL WITH CORBEL  
SF505 N.T.S.



5 TYPICAL CONNECTION BETWEEN PRECAST WALL PANELS  
SF505 N.T.S.



6 TYPICAL CONNECTION BETWEEN PRECAST WALL PANELS  
SF505 N.T.S.



7 TYPICAL WASH AT (ELEVATED SLAB) EDGE DETAIL  
SF505 N.T.S.

Revisions:	Date:

**VA** U.S. Department of Veterans Affairs  
SALISBURY VAMC  
Dept. of Veterans Affairs  
1601 Brenner Ave.  
Salisbury, NC 28144

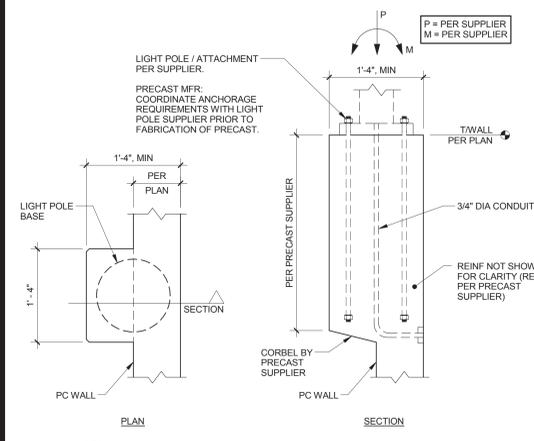
PROFESSIONAL SEAL  
11/14/2014  
Donald B. Corson

<b>Structural</b> AMERICAN STRUCTUREPOINT 7260 Shadeland Station Indianapolis, IN 46256 Tele: 317-547-5580	<b>MEP Engineer</b> APOGEE CONSULTING GROUP 7330 Chappel Hill Road, Suite 202 Raleigh, NC 27607 Tele: 919-858-7420	<b>Civil Engineer</b> GUIDON DESIGN INC. 905 N. Capitol Ave. Suite 100 Indianapolis, IN 46204 Tele: 317-800-6388	<b>Functional Design</b> CARL WALKER INC. 14045 Ballantyne Corp. Place, Suite 380 Charlotte, NC 28277 Tele: 704-716-8000
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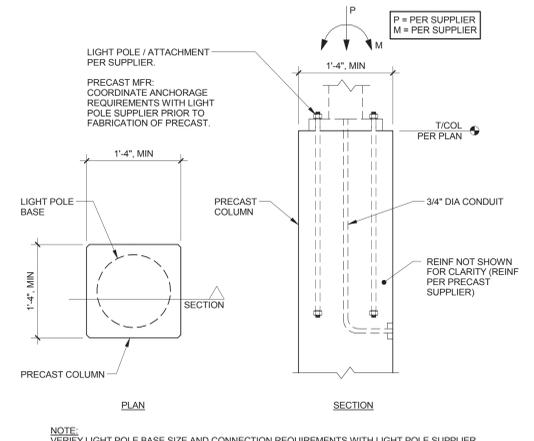
PROJECT LEADER/ARCHITECT:  
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905 N. CAPITOL AVE. SUITE 100 INDIANAPOLIS, IN. 46204  
317.800.6388 WWW.GUIDONDESIGN.COM  
SUSTAINABLE ARCHITECTURE + ENGINEERING

Drawing Title <b>TYPICAL FRAMING SECTIONS AND DETAILS</b>		Project Title CONSTRUCT NEW PARKING GARAGE		Project Number 13.1044	OFFICE OF FACILITIES MANAGEMENT
Approved for Design Concept: JOHN MONTGOMERY PROJECT ENGINEER 704-638-9000		Location W.G. (BILL) HEFNER VAMC		Building Number Bldg 9	
Date 11/14/2014	Checked By: JAP	Drawn By: BGC	Drawing Number <b>SF505</b>	VA Project Number 659-342	U.S. Department of Veterans Affairs

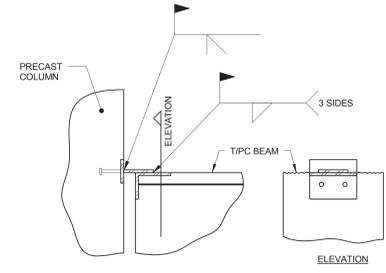
one eighth inch = one foot  
 one quarter inch = one foot  
 three eighths inch = one foot  
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 three inches = one foot



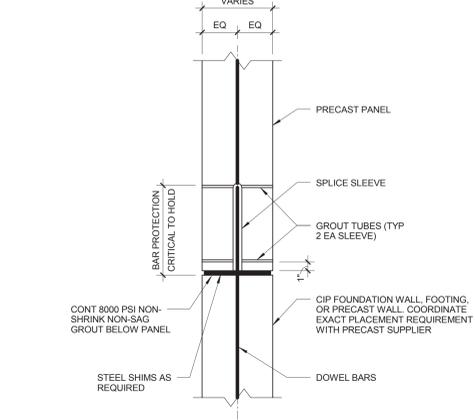
**1**  
 SF506 N.T.S.  
**TYPICAL LIGHT POLE BASE TO WALL DETAIL**  
 NOTE: VERIFY LIGHT POLE BASE SIZE AND CONNECTION REQUIREMENTS WITH LIGHT POLE SUPPLIER.



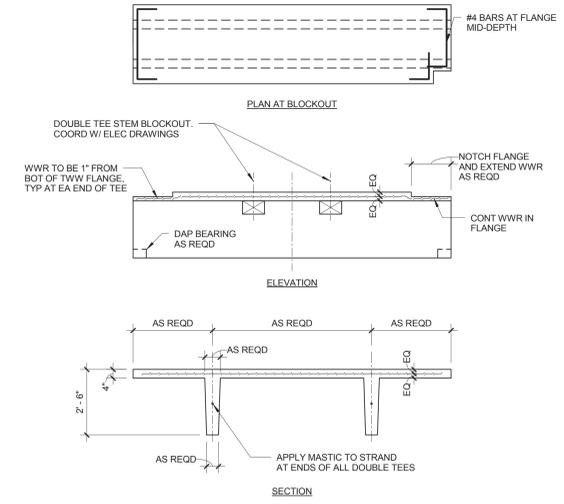
**2**  
 SF506 N.T.S.  
**TYPICAL LIGHT POLE BASE TO COLUMN DETAIL**  
 NOTE: VERIFY LIGHT POLE BASE SIZE AND CONNECTION REQUIREMENTS WITH LIGHT POLE SUPPLIER.



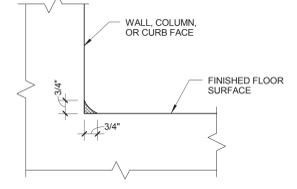
**3**  
 SF506 N.T.S.  
**TYPICAL PC BEAM TO COLUMN CONNECTION DETAIL**  
 NOTES:  
 1. ALL MATERIAL AND WELD REQUIREMENTS ARE PER THE PRECAST SUPPLIER.



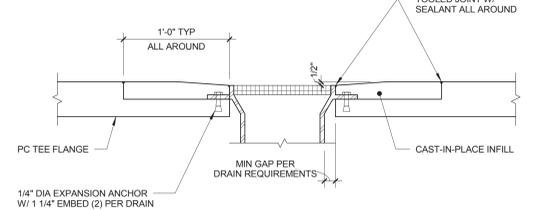
**4**  
 SF506 N.T.S.  
**TYPICAL PRECAST SHEAR WALL BASE CONNECTION DETAIL**



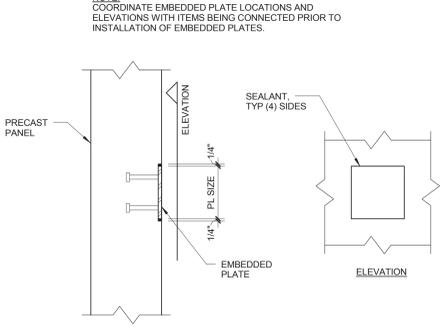
**5**  
 SF506 N.T.S.  
**TYPICAL PRETOPPED PC DOUBLE TEE DETAIL**



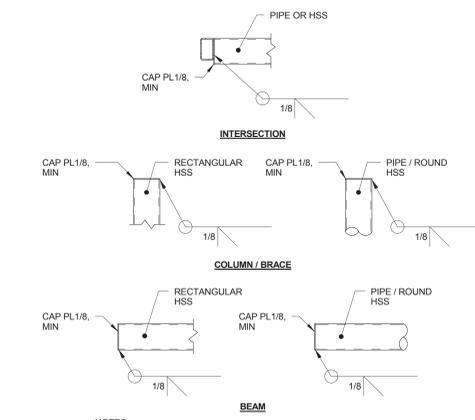
**6**  
 SF506 N.T.S.  
**TYPICAL COVE SEALANT**  
 NOTES:  
 1. PREPARE AND ALLOW FOR PRIMER TO CURE PROPERLY PRIOR TO INSTALLING SEALANT.  
 2. SEE SPECIFICATIONS FOR APPROVED MATERIALS.



**7**  
 SF506 N.T.S.  
**TYPICAL DRAIN INSTALLATION DETAIL (PRECAST FRAMING)**



**8**  
 SF506 N.T.S.  
**TYPICAL EMBEDDED PLATE DETAIL**  
 NOTE: COORDINATE EMBEDDED PLATE LOCATIONS AND ELEVATIONS WITH ITEMS BEING CONNECTED PRIOR TO INSTALLATION OF EMBEDDED PLATES.



**9**  
 SF506 N.T.S.  
**TYPICAL CAP PLATE DETAIL**  
 NOTES:  
 1. PROVIDE CAP PLATES AT ALL EXPOSED ENDS OF ALL HSS OR PIPE MEMBERS. PROVIDE CAP PLATES FOR ALL COLUMNS WHETHER EXPOSED TO VIEW OR NOT.

Revisions:	Date:

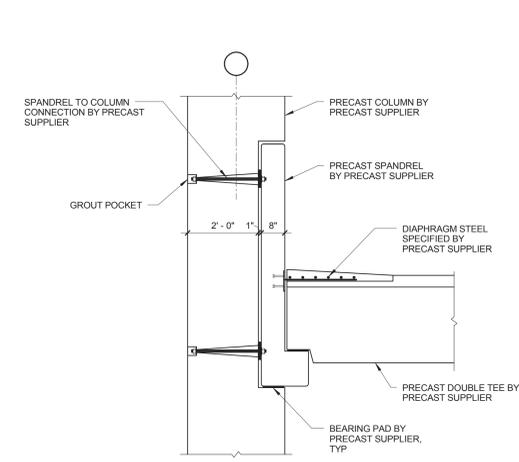
**U.S. Department of Veterans Affairs**  
 SALISBURY VAMC  
 Dept. of Veterans Affairs  
 1601 Brenner Ave.  
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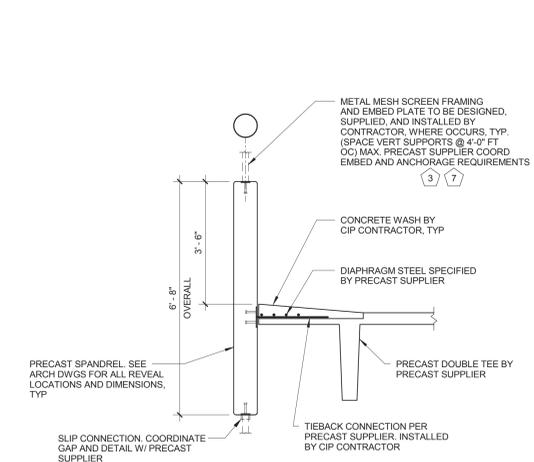
PROJECT LEADER/ARCHITECT:  
**GUIDON DESIGN**  
 905 N. CAPITOL AVE. SUITE 100 INDIANAPOLIS, IN. 46204  
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Drawing Title <b>TYPICAL FRAMING SECTIONS AND DETAILS</b>		Project Title CONSTRUCT NEW PARKING GARAGE		Project Number 13.1044		OFFICE OF FACILITIES MANAGEMENT	
Approved for Design Concept: JOHN MONTGOMERY PROJECT ENGINEER 704-638-9000		Location W.G. (BILL) HEFNER VAMC		Building Number Bldg 9		VA Project Number 659-342	
Date 11/14/2014		Checked By: JAP		Drawing Number SF506		Drawn By: BGC	

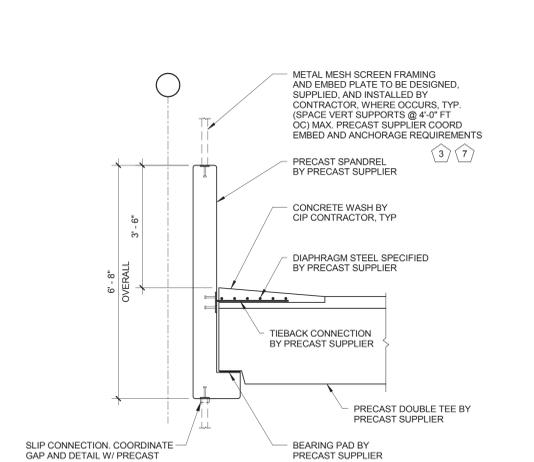
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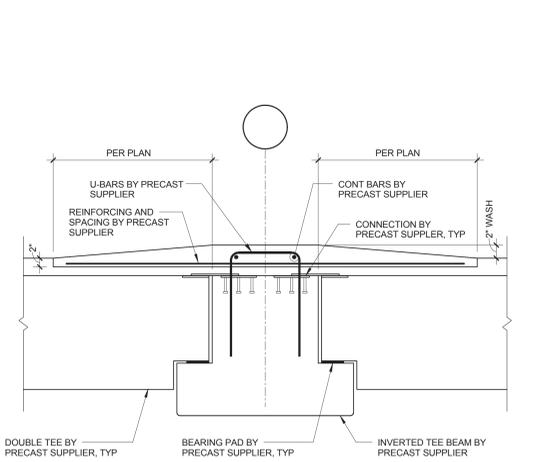
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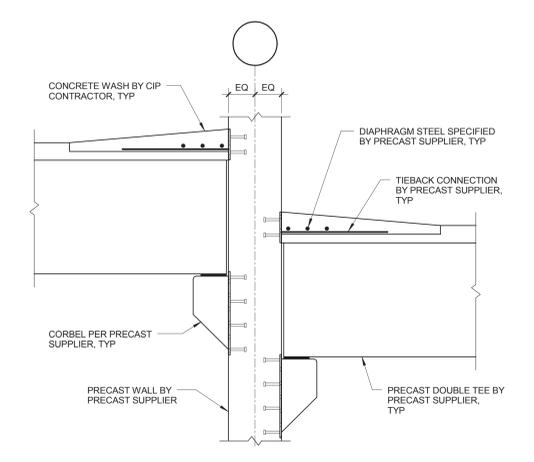
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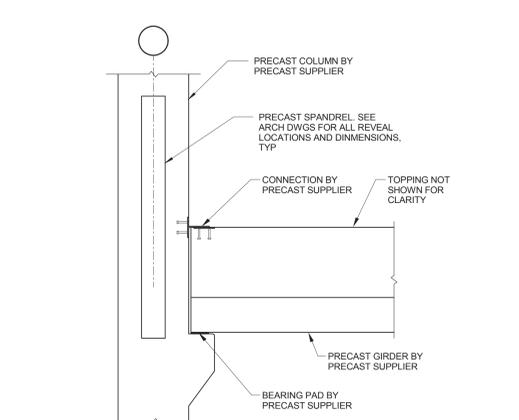
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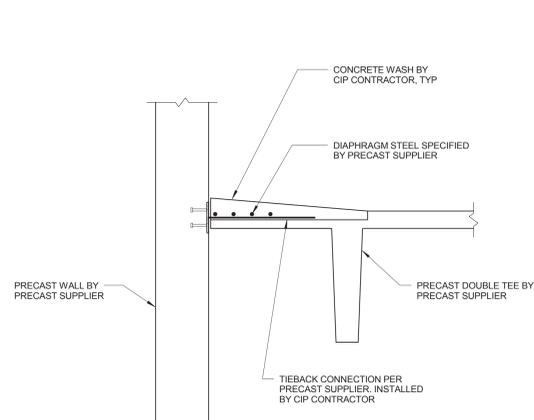
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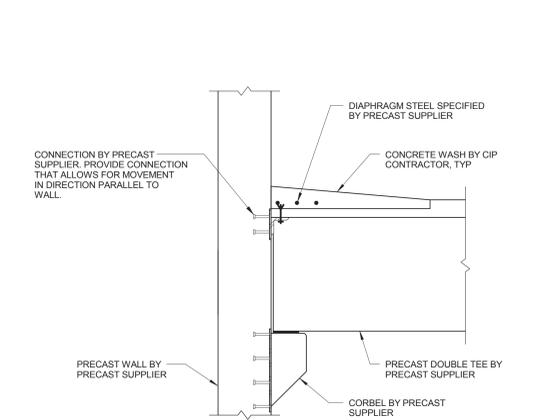
**5 SECTION**  
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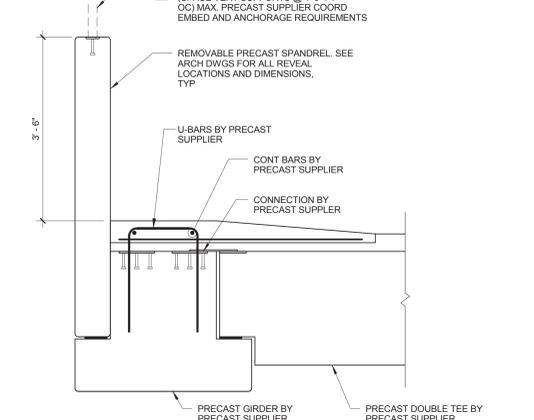
**6 SECTION**  
 SF507 1/2" = 1'-0"



**7 SECTION**  
 SF507 3/4" = 1'-0"



**8 SECTION**  
 SF507 3/4" = 1'-0"



**9 SECTION**  
 SF507 3/4" = 1'-0"

Revisions:	Date

**VA** U.S. Department of Veterans Affairs  
 SALISBURY VAMC  
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 1601 Brenner Ave.  
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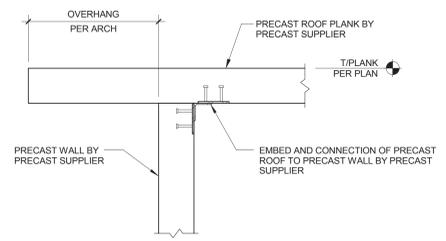


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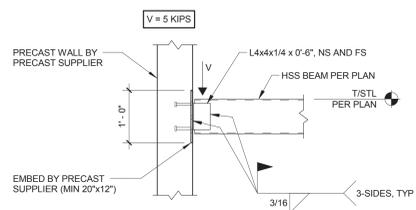
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Drawing Title <b>FRAMING SECTIONS AND DETAILS</b>		Project Title CONSTRUCT NEW PARKING GARAGE		Project Number 13.1044		OFFICE OF FACILITIES MANAGEMENT	
Approved for Design Concept: JOHN MONTGOMERY PROJECT ENGINEER 704-638-9000		Location W.G. (BILL) HEFNER VAMC		Building Number Bldg 9		VA Project Number 659-342	
Date 11/14/2014		Checked By: JAP		Drawing Number SF507		Drawn By: BGC	

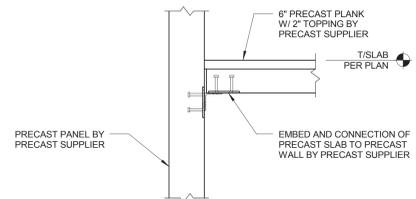
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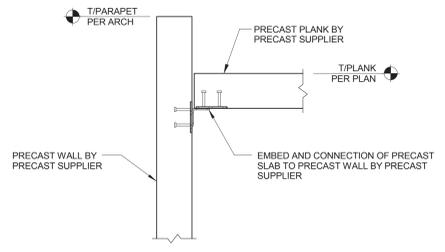
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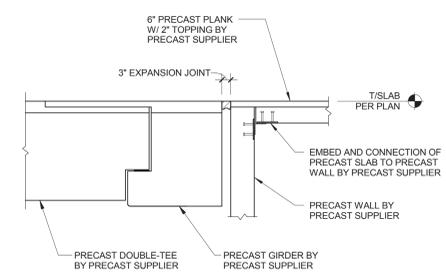
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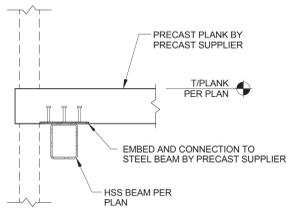
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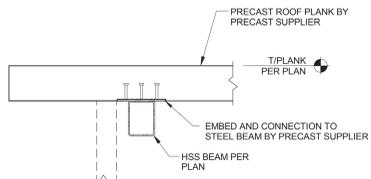
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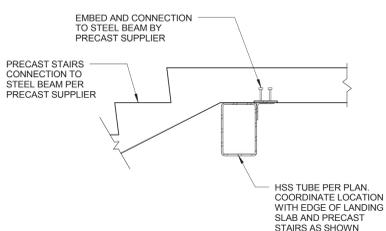
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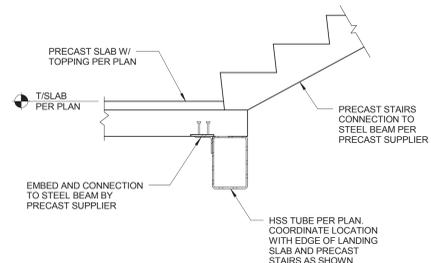
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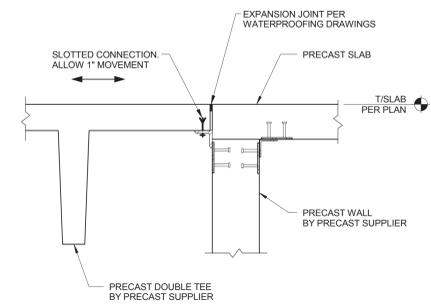
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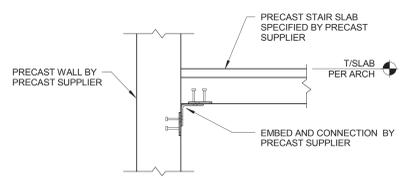
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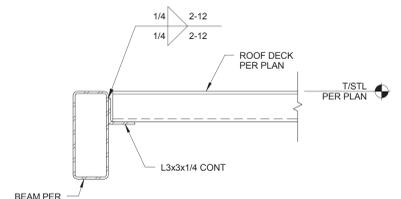
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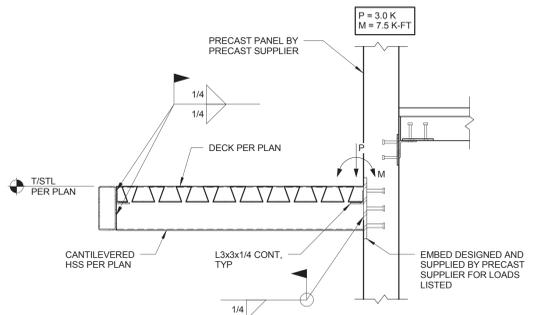
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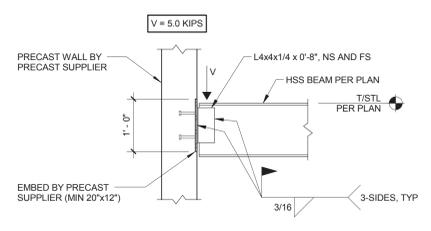
11 SECTION  
 SF508 3/4" = 1'-0"



12 SECTION  
 SF508 1 1/2" = 1'-0"



13 SECTION  
 SF508 3/4" = 1'-0"



14 SECTION  
 SF508 3/4" = 1'-0"

Revisions:	Date

**VA** U.S. Department of Veterans Affairs  
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 1601 Brenner Ave.  
 Salisbury, NC 28144

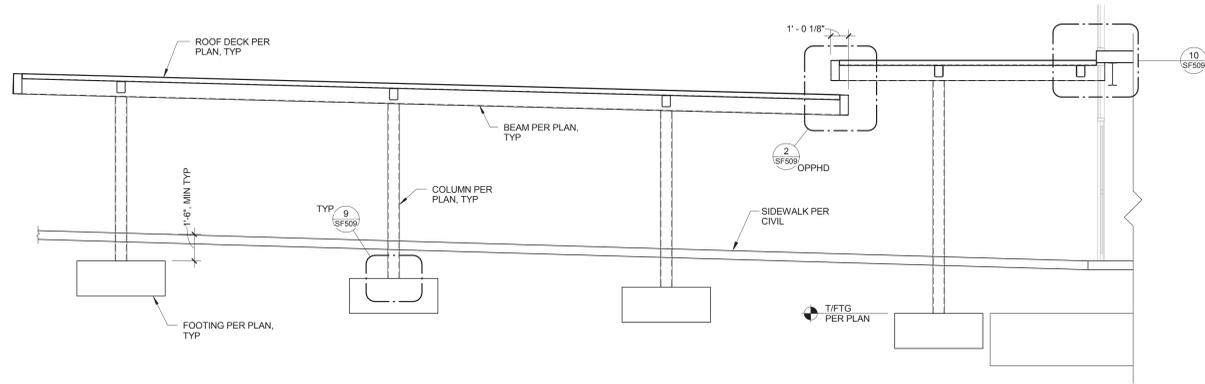
Professional Engineer Seal  
 NORTH CAROLINA  
 SEAL  
 028171  
 11/14/2014  
 Donald S. Coran

<b>Structural</b> AMERICAN STRUCTUREPOINT 7260 Shadeland Station Indianapolis, IN 46256 Tele: 317-547-5580	<b>MEP Engineer</b> APOGEE CONSULTING GROUP 7330 Chappel Hill Road, Suite 202 Raleigh, NC 27607 Tele: 919-858-7420	<b>Civil Engineer</b> GUIDON DESIGN INC. 905 N. Capitol Ave. Suite 100 Indianapolis, IN 46204 Tele: 317-800-6388	<b>Functional Design</b> CARL WALKER INC. 14045 Ballantyne Corp. Place, Suite 380 Charlotte, NC 28277 Tele: 704-716-8000
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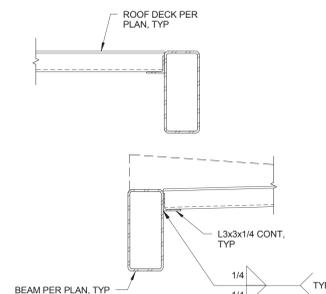
PROJECT LEADER/ARCHITECT:  
**GUIDON DESIGN**  
 905 N. CAPITOL AVE. SUITE 100 INDIANAPOLIS, IN. 46204  
 317.800.6388 WWW.GUIDONDESIGN.COM  
 SUSTAINABLE ARCHITECTURE + ENGINEERING

Drawing Title <b>FRAMING SECTIONS AND DETAILS</b>		Project Title CONSTRUCT NEW PARKING GARAGE		Project Number 13.1044		OFFICE OF FACILITIES MANAGEMENT	
Approved for Design Concept: JOHN MONTGOMERY PROJECT ENGINEER 704-638-9000		Location W.G. (BILL) HEFNER VAMC		Building Number Bldg 9		VA Project Number 659-342	
Date 11/14/2014		Checked By: JAP		Drawing Number SF508		U.S. Department of Veterans Affairs	

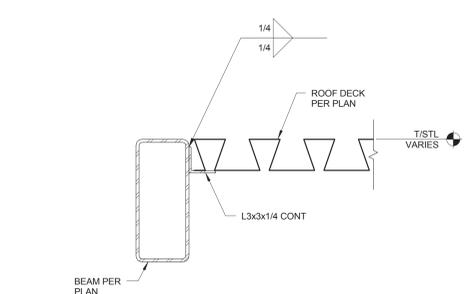
three inches = one foot  
 one and one half inches = one foot  
 one inch = one foot  
 three quarters inch = one foot  
 one half inch = one foot  
 three eighths inch = one foot  
 one eighth inch = one foot  
 one quarter inch = one foot  
 one eighth inch = one foot



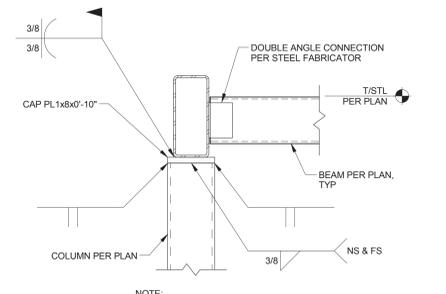
**1 WALKWAY CANOPY SECTION**  
 1/4" = 1'-0"



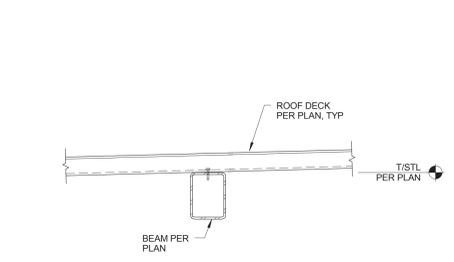
**2 SECTION**  
 1" = 1'-0"



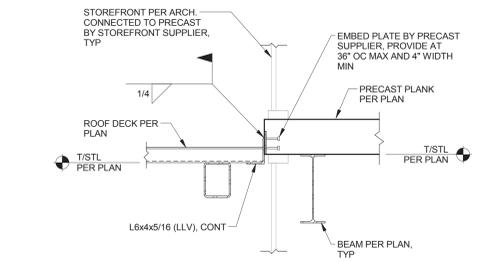
**3 SECTION**  
 1 1/2" = 1'-0"



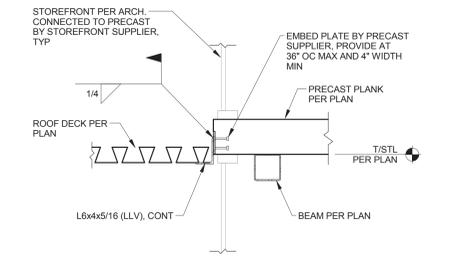
**4 SECTION**  
 1" = 1'-0"



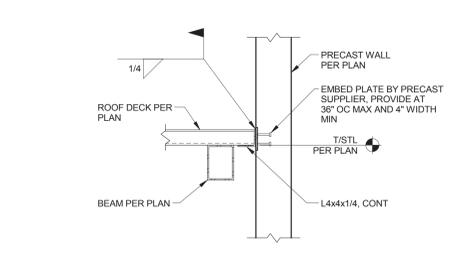
**5 SECTION**  
 1" = 1'-0"



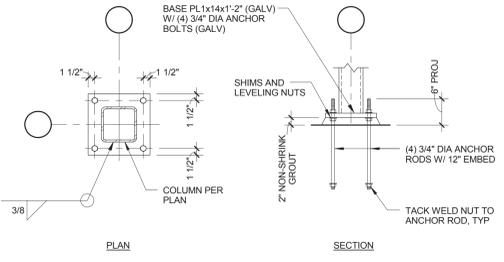
**6 SECTION**  
 3/4" = 1'-0"



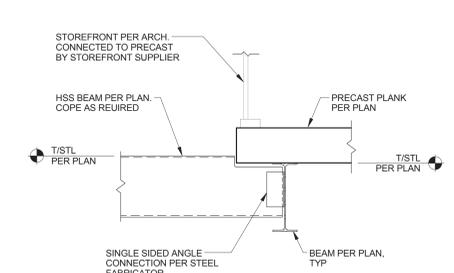
**7 SECTION**  
 3/4" = 1'-0"



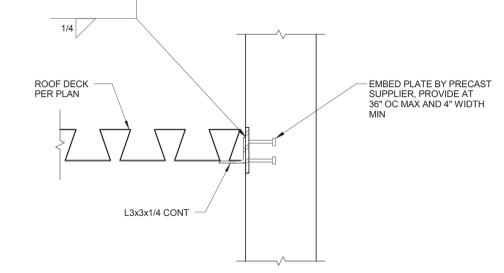
**8 SECTION**  
 3/4" = 1'-0"



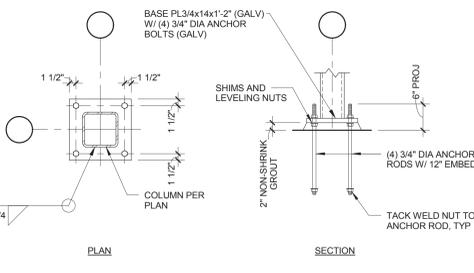
**9 TYPICAL CANOPY COLUMN BASE DETAIL**  
 N.T.S.



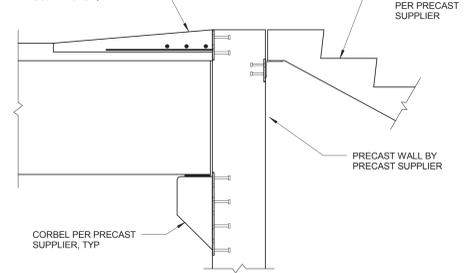
**10 SECTION**  
 3/4" = 1'-0"



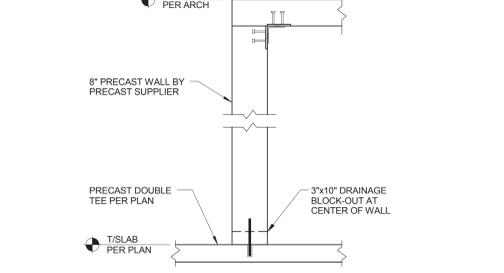
**11 SECTION**  
 1 1/2" = 1'-0"



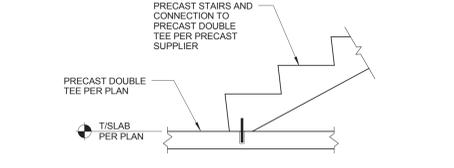
**12 ENLARGED COLUMN BASE DETAIL**  
 N.T.S.



**13 SECTION**  
 3/4" = 1'-0"



**14 SECTION**  
 3/4" = 1'-0"



**15 SECTION**  
 3/4" = 1'-0"

Revisions:	Date:

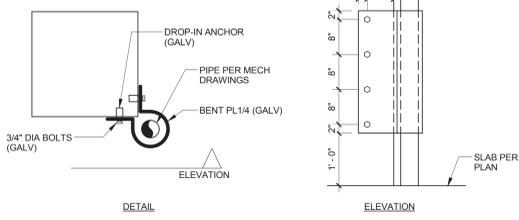
**VA** U.S. Department of Veterans Affairs  
 SALISBURY VAMC  
 Dept. of Veterans Affairs  
 1601 Brenner Ave.  
 Salisbury, NC 28144

**PROFESSIONAL SEAL**  
 NORTH CAROLINA  
 ENGINEER  
 DONALD B. CORAN  
 11/14/2014

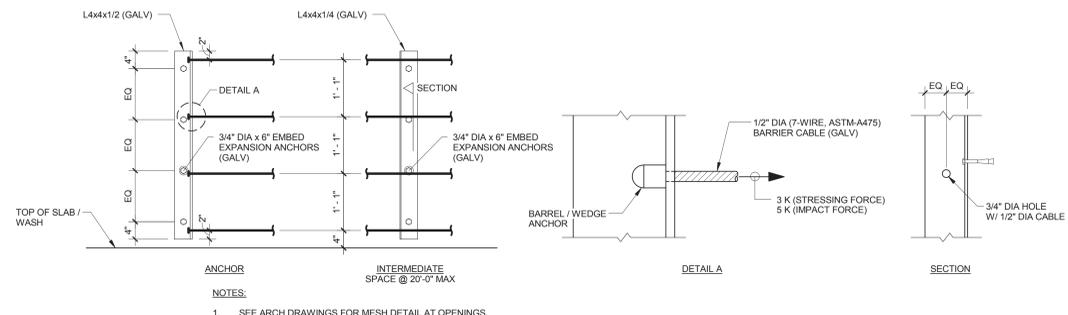
<b>Structural</b> AMERICAN STRUCTUREPOINT 7260 Shadeland Station Indianapolis, IN 46256 Tele: 317-547-5580	<b>MEP Engineer</b> APOGEE CONSULTING GROUP 7330 Chappel Hill Road, Suite 202 Raleigh, NC 27607 Tele: 919-858-7420	<b>Civil Engineer</b> GUIDON DESIGN INC. 905 N. Capitol Ave. Suite 100 Indianapolis, IN 46204 Tele: 317-800-6388	<b>Functional Design</b> CARL WALKER INC. 14045 Ballantyne Corp. Place, Suite 380 Charlotte, NC 28277 Tele: 704-716-8000
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PROJECT LEADER/ARCHITECT:  
**GUIDON DESIGN**  
 905 N. CAPITOL AVE. SUITE 100 INDIANAPOLIS, IN. 46204  
 317.800.6388 WWW.GUIDONDESIGN.COM  
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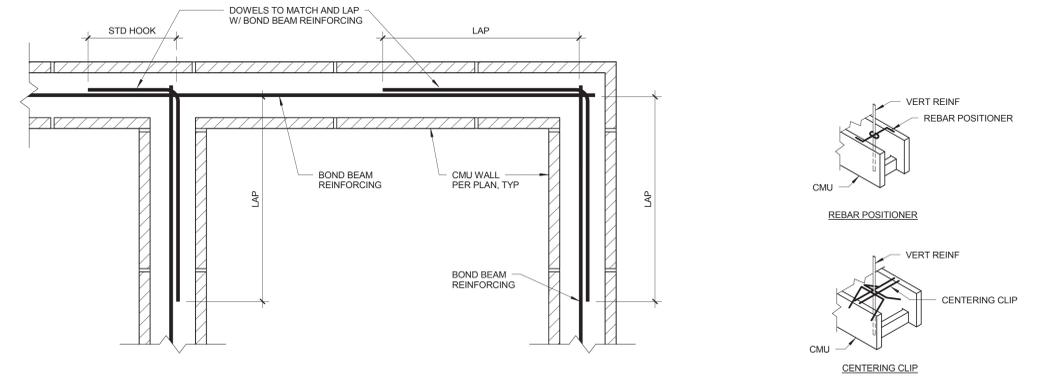
Drawing Title <b>FRAMING SECTIONS AND DETAILS</b>		Project Title CONSTRUCT NEW PARKING GARAGE		Project Number 13.1044	OFFICE OF FACILITIES MANAGEMENT
Approved for Design Concept: JOHN MONTGOMERY PROJECT ENGINEER 704-638-9000		Location W.G. (BILL) HEFNER VAMC	Drawing Number <b>SF509</b>	VA Project Number 659-342	U.S. Department of Veterans Affairs
Date 11/14/2014	Checked By: JAP	Drawn By: BGC			



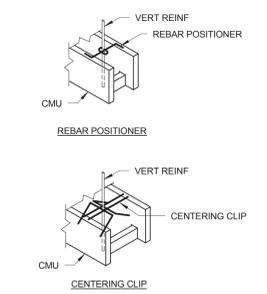
1 TYPICAL PIPE BENT PLATE WRAP DETAIL  
SF510 N.T.S.



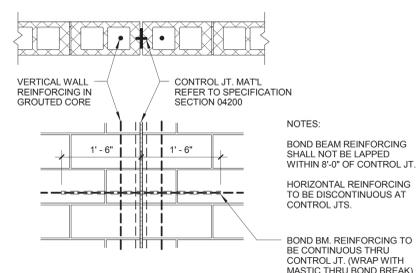
2 TYPICAL BARRIER CABLE DETAIL  
SF510 N.T.S.



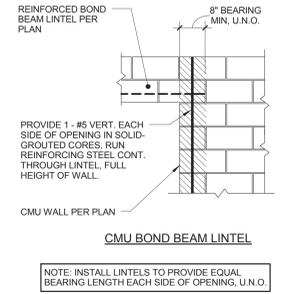
3 TYPICAL BOND BEAM REINFORCING DETAIL  
SF510 N.T.S.



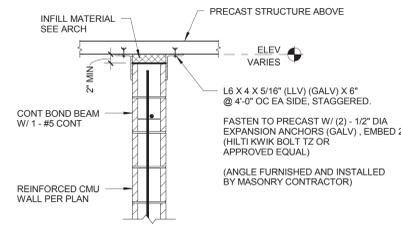
4 TYPICAL REBAR POSITIONER  
SF510 N.T.S.



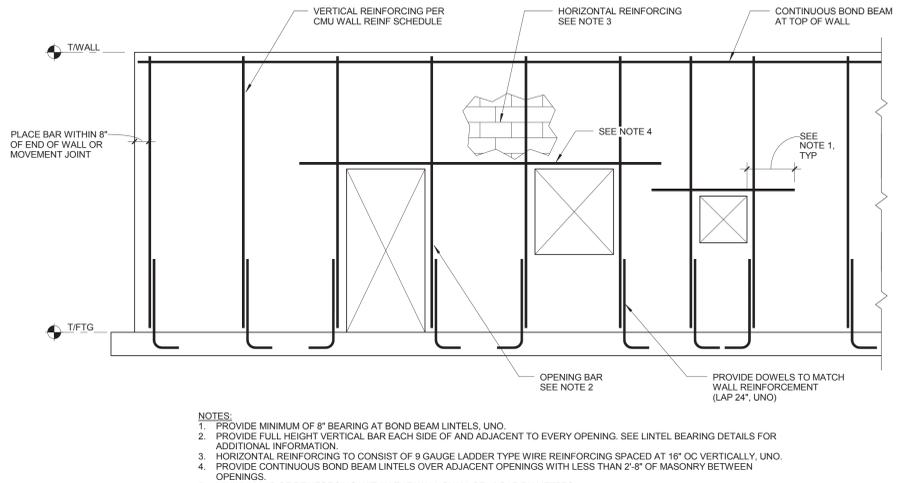
5 TYPICAL CMU CONTROL JOINT DETAIL  
SF510 N.T.S.



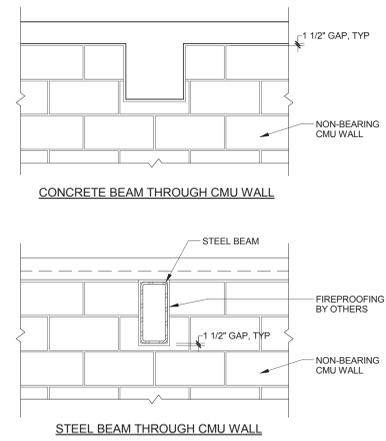
6 TYPICAL LINTEL BEARING DETAIL  
SF510 N.T.S.



7 TYPICAL NON-LOAD BEARING CMU WALL BRACING  
SF510 3/4" x 1'-0"



8 TYPICAL REINFORCING AT CMU WALLS  
SF510 N.T.S.



11 TYPICAL CMU NON-BEARING WALL DETAILS  
SF510 N.T.S.

**MASONRY REINFORCING STEEL LAP SPLICE CHART**

BAR SPLICE LENGTHS	
BAR	SPLICE LENGTHS
#3	27"
#4	36"
#5	45"
#6	54"
#7	63"
#8	72"
#9	82"

NOTES:  
BARS LARGER THAN #9 ARE REQUIRED TO BE SPLICED BY MECHANICAL CONNECTORS UNLESS SPECIFICALLY SHOWN ON PLANS.  
SPLICES BASED ON  $f_m$  TAKEN EQUAL TO 100% OF THE ALLOWABLE TENSILE STRESS OF 24000 PSI.  
BASED ON  $f_m \geq 1500$  PSI

9 TYPICAL MASONRY LAP SPLICE CHART  
SF510 N.T.S.

**CMU WALL REINFORCEMENT SCHEDULE**

WALL HIT (FT)	SIZE	REINFORCEMENT	REMARKS
13'-0" MAX	8"	#5 @ 48" OC VERT / #5 @ 48" OC HORIZ BOND BEAMS	ALL DOWEL BARS SHALL BE EPOXY COATED REINFORCING

NOTES:  
1) SEE THE STRUCTURAL DRAWINGS, ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR REQUIRED HORIZONTAL, BOND BEAM AND JOINT REINFORCEMENT AND REQUIRED ADDITIONAL VERTICAL REINFORCEMENT.  
2) PROVIDE MATCHING HOOKED DOWELS INTO THE FOUNDATION FOR ALL VERTICAL REINFORCEMENT. GROUT SOLID ALL CELLS CONTAINING VERTICAL REINFORCEMENT. LAP 40 x 40.  
3) POSITION DBL BAR REINFORCEMENT IN 12" CMU AS SHOWN BELOW. USE BAR POSITIONERS AS REQUIRED TO MAINTAIN PROPER ALIGNMENT.

10 CMU WALL REINFORCEMENT SCHEDULE  
SF510 N.T.S.

**LINTEL SCHEDULE**

MARK	SECTION	LENGTH	TYPE	NOTES
L1	8" W x 16" H	PER ARCH	A	TYPICAL, UNO

TYPES:  
[Diagram showing lintel types A and B]

LINTEL SCHEDULE NOTES:  
1. ALL LINTELS BEAR 0'-8" ONTO SUPPORTING WALLS, UNO.  
2. ALL STEEL LINTELS AND SHELF ANGLES IN EXTERIOR WALLS SHALL BE GALVANIZED.  
3. BOTTOM PLATES SHALL EXTEND THE FULL LENGTH OF THE LINTEL, INCLUDING BEARING LENGTH, UNO.  
4. AT CMU INFILL (SOAPS) AT STEEL LINTELS, PROVIDE METAL ANCHORAGE AT EVERY COURSE @ 16" OC TO TIE CMU TO STEEL.

12 LINTEL SCHEDULE  
SF510 N.T.S.

Revisions:

No.	Description	Date

**VA** U.S. Department of Veterans Affairs  
SALISBURY VAMC  
Dept. of Veterans Affairs  
1601 Brenner Ave.  
Salisbury, NC 28144

Professional Engineer Seal  
11/14/2014

**Structural** AMERICAN STRUCTUREPOINT  
7260 Shadeland Station  
Indianapolis, IN 46256  
Tele: 317-547-5580

**MEP Engineer** APOGEE CONSULTING GROUP  
7330 Chappel Hill Road, Suite 202  
Raleigh, NC 27607  
Tele: 919-858-7420

**Civil Engineer** GUIDON DESIGN INC.  
905 N. Capitol Ave. Suite 100  
Indianapolis, IN 46204  
Tele: 317-800-6388

**Functional Design** CARL WALKER INC.  
14045 Ballantyne Corp. Place, Suite 380  
Charlotte, NC 28277  
Tele: 704-716-8000

PROJECT LEADER/ARCHITECT:  
**GUIDON DESIGN**  
905 N. CAPITOL AVE. SUITE 100 INDIANAPOLIS, IN. 46204  
317.800.6388  
WWW.GUIDONDESIGN.COM  
SUSTAINABLE ARCHITECTURE + ENGINEERING

Drawing Title: **MISCELLANEOUS DETAILS**  
Approved for Design Concept: JOHN MONTGOMERY PROJECT ENGINEER 704-638-9000

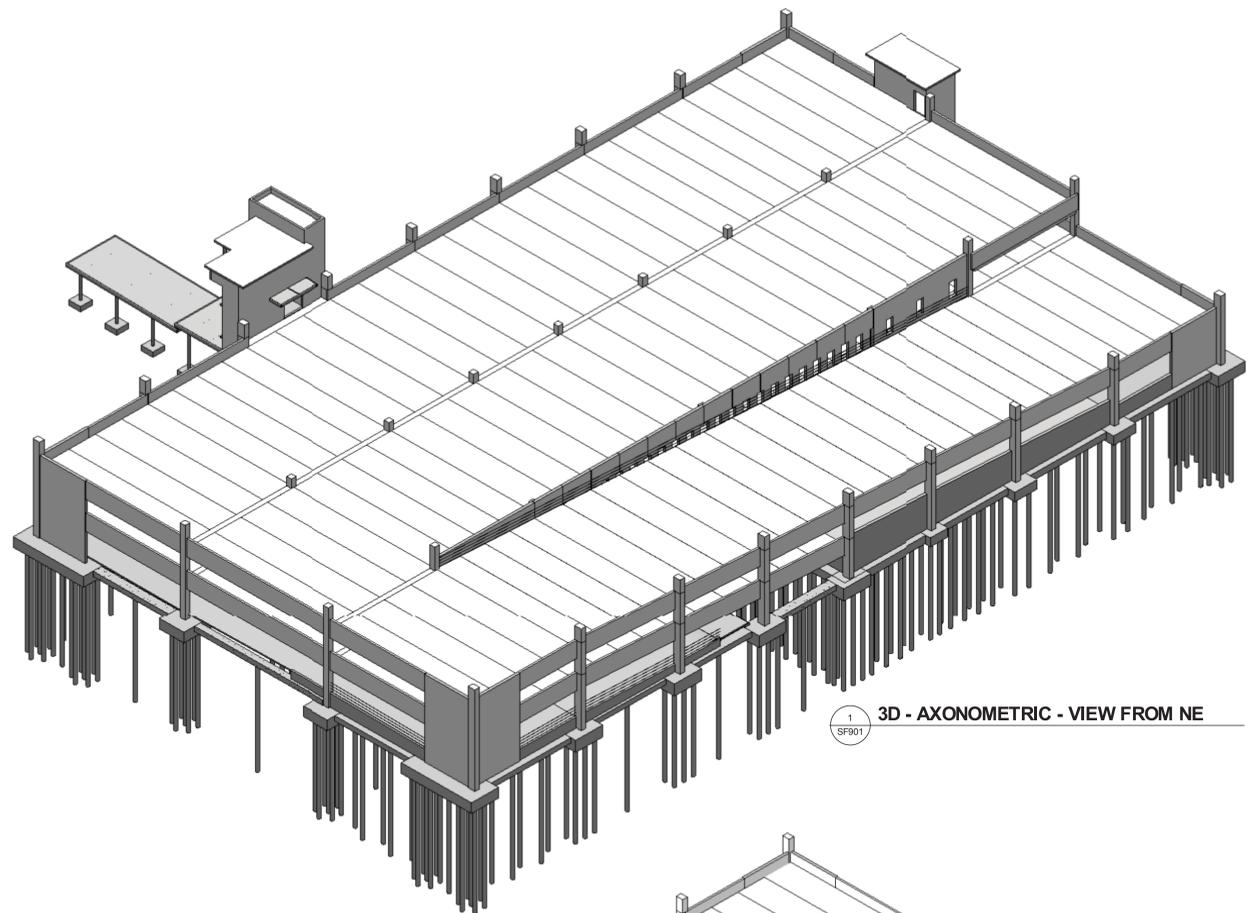
Project Title: **CONSTRUCT NEW PARKING GARAGE**  
Location: W.G. (BILL) HEFNER VAMC  
Date: 11/14/2014

Project Number: 13.1044  
Building Number: Bldg 9  
Drawing Number: SF510

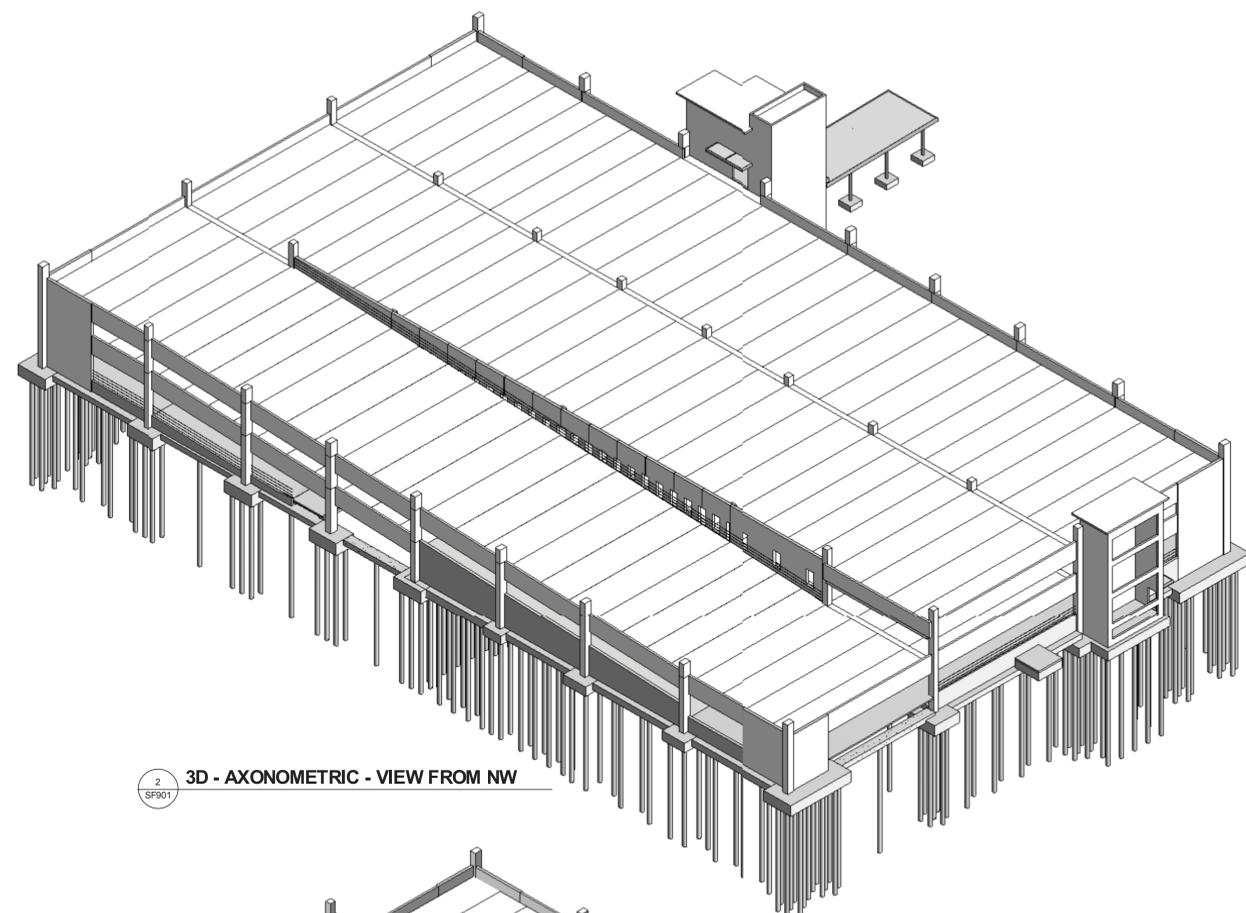
Checked By: JAP  
Drawn By: BGC

BID SET  
OFFICE OF FACILITIES MANAGEMENT  
VA Project Number: 659-342  
U.S. Department of Veterans Affairs

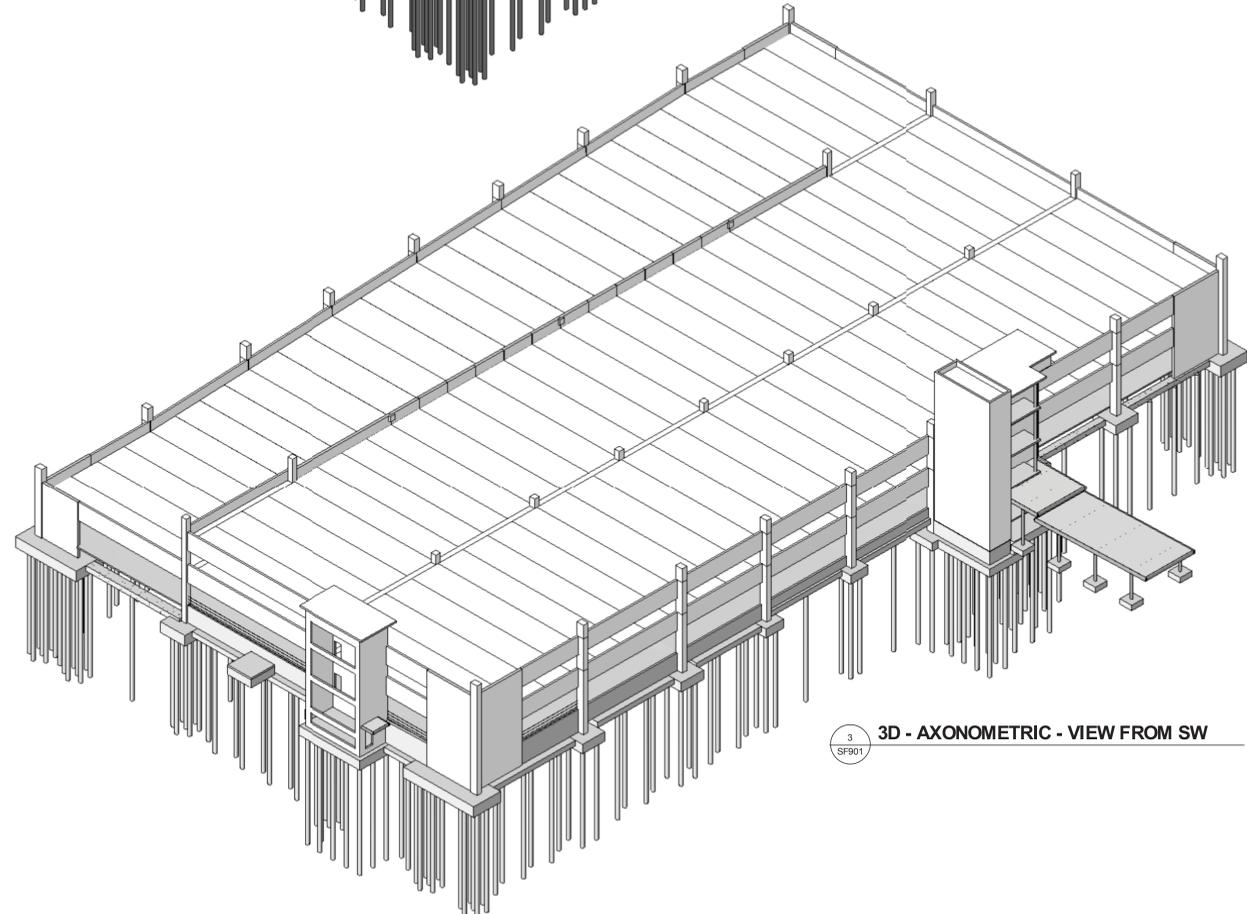
one eighth inch = one foot  
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 three eighths inch = one foot  
 one half inch = one foot  
 three quarters inch = one foot  
 one inch = one foot  
 one and one half inches = one foot  
 three inches = one foot



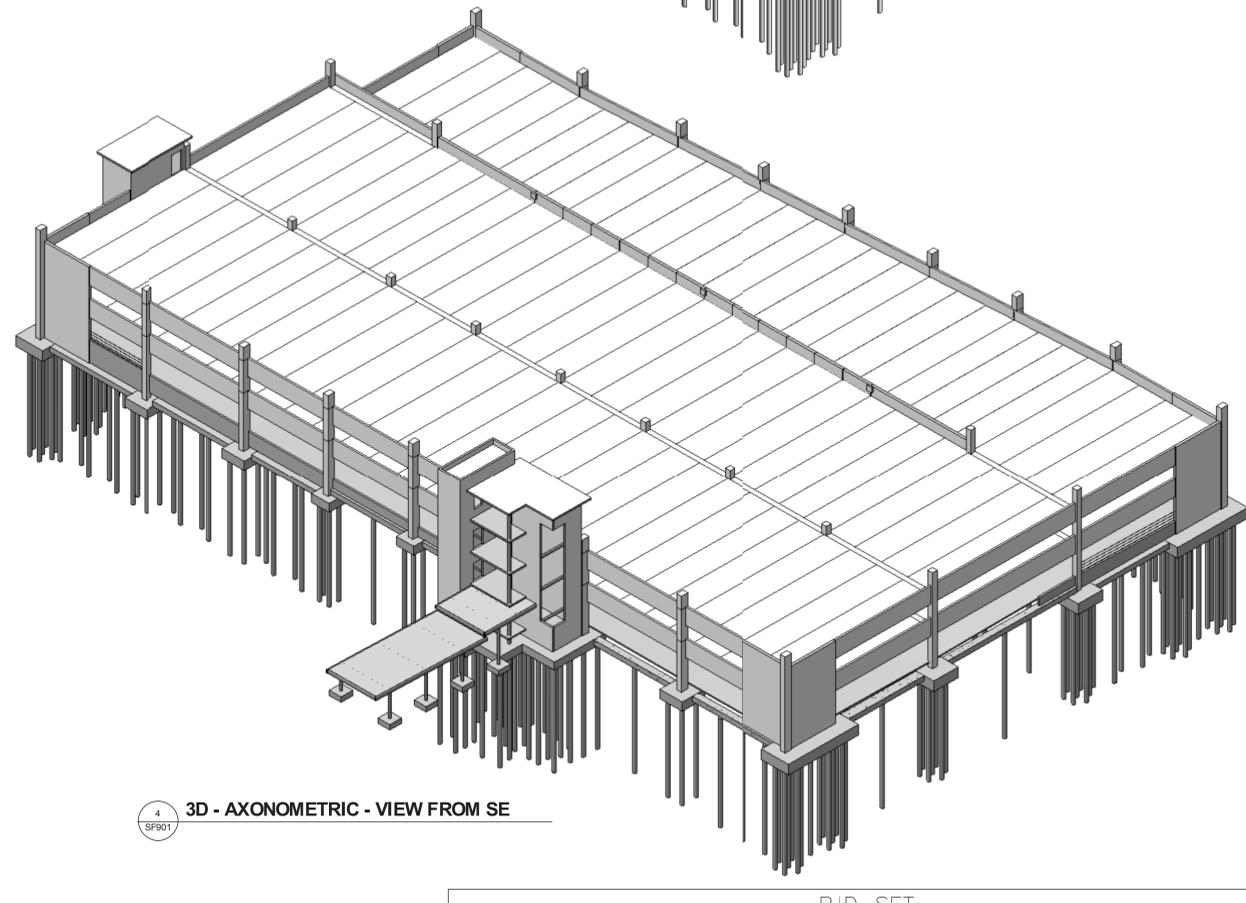
1 3D - AXONOMETRIC - VIEW FROM NE  
 SF901



2 3D - AXONOMETRIC - VIEW FROM NW  
 SF901



3 3D - AXONOMETRIC - VIEW FROM SW  
 SF901



4 3D - AXONOMETRIC - VIEW FROM SE  
 SF901

Revisions:	Date:

**VA** U.S. Department of Veterans Affairs  
 SALISBURY VAMC  
 Dept. of Veterans Affairs  
 1601 Brenner Ave.  
 Salisbury, NC 28144



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Drawing Title AXONOMETRICS		Project Title CONSTRUCT NEW PARKING GARAGE		Project Number 13.1044		OFFICE OF FACILITIES MANAGEMENT	
Approved for Design Concept: JOHN MONTGOMERY PROJECT ENGINEER 704-638-9000		Location W.G. (BILL) HEFNER VAMC		Building Number Bldg 9		VA Project Number 659-342	
Date 11/14/2014		Checked By: JAP		Drawing Number SF901		Drawn By: BGC	
						VA U.S. Department of Veterans Affairs	