

# HIDALGO COUNTY PRECINCT 4 MEMORIAL PARK PHASE I

107 SUNFLOWER RD.  
EDINBURG, TEXAS 78542

## CONSTRUCTION DOCUMENTS

SEPTEMBER 27, 2018



COUNTY OF HIDALGO  
2802 S. HIGHWAY BUSINESS 281  
EDINBURG, TEXAS 78542

HIDALGO COUNTY JUDGE  
RAMON GARCIA

COMMISSIONER PRECINCT 1  
AC. CUELLAR, JR.

COMMISSIONER PRECINCT 2  
EDUARDO "EDDIE" CANTU

COMMISSIONER PRECINCT 3  
JOE M. FLORES

COMMISSIONER PRECINCT 4  
JOSEPH PALACIOS



THE WARREN GROUP  
ARCHITECTS, INC.  
1801 SOUTH SECOND ST. SUITE 330  
McALLEN, TX 78503  
956 . 994 . 1900



ARCHITECTURAL ABBREVIATIONS

NOTE: NOT ALL ABBREVIATIONS ARE USED

℄	CENTERLINE
ACOUST	ACOUSTICAL
ACT	ACOUSTICAL CEILING TILE
ACP	ACOUSTICAL CEILING PANEL
ADA	AMERICANS WITH DISABILITIES ACT
AESS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL
AFF	ABOVE FINISH FLOOR
ALT	ALTERNAT(–E, –IVE)
ANSI	AMERICAN NATIONAL STANDARD INSTITUTE
APPROX	APPROXIMAT(–E, –LY)
ARCH	ARCHITECT (–URAL)
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AVG	AVERAGE
BLDG	BUILDING
BM	BENCH MARK
BOL	BOLLARD
BFF	BELOW FINISH FLOOR
CH	CEILING HEIGHT
CMU	CONCRETE MASONRY UNIT
CNTR	COUNTER
COL	COLUMN
COLS	COLUMNS
CONC	CONCRETE
COORD	COORDINATE
CPT	CARPET
CJ	CONTROL JOINT
CT	CERAMIC TILE
DEMO	DEMOLISH OR DEMOLITION
DET	DETAIL(–S)
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIM	DIMENSION(–S)
DL	DOCK LEVELER
D.L.P.	DOUBLE HEAD LIGHT POLE
DR	DOOR
DS	DOWN SPOUT
DWG(S)	DRAWING(–S)
(E)	EXISTING
EA	EACH
EW	EMERGENCY EYE–WASH
EWWS	EMERGENCY EYE–WASH AND SHOWER
EF	EACH FACE OR EXHAUST FAN
EIFS	EXTERIOR INSULATION AND FINISH SYSTEM
ELEV	ELEVATION
ELEC	ELECTRIC(–AL)
EMERG	EMERGENCY
EOD	EDGE OF DOCK
EQ	EQUAL(–LY)
EQUIP	EQUIPMENT
EXT	EXTERIOR
EW	EACH WAY
EP	ELECTRICAL POWER & METER CAN
(F)	FIXTURE
FA	FIRE ALARM
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FACTORY FINISH, FINISH FLOOR
FH	FIRE HYDRANT
FLR	FLOOR
FRT	FIRE–RETARDANT TREATED
FTG	FOOTING
FURN	FURNITURE
GA	GRADE
GDL	GROUND LEVEL
GYP	GYPSUM
HB	HOSE BIB
HC	(HANDICAP) ACCESSIBLE
HGT,HT	HEIGHT
HORIZ	HORIZONTAL
HVAC	HEATING, VENTILATION & AIR CONDITIONING
IN	INCH(–ES)
JB,J–BOX	JUNCTION BOX
JST	JOIST
JT	JOINT
LAV	LAVATORY
MAX	MAXIMUM
MECH	MECHANICAL
MFR	MANUFACTURER
MH	MANHOLE
MTL	METAL
MIN	MINIMUM
N	NORTH
N/A	NOT APPLICABLE
NEC	NATIONAL ELECTRICAL CODE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
NOP	KNOCK–OUT PANEL
OC	ON CENTER
OTS	OPEN TO STRUCTURE
PERF	PERFORAT(–E, –ED, –ES, –ATION)
PL	PROPERTY LINE, PLATE
PLAM	PLASTIC LAMINATE
PLBG	PLUMBING
PLYWD	PLYWOOD
PNL	PANEL
PROJ	PROJECT(–TION)
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
P.J.	PANEL JOINT
RAD	RADIUS
REF	REFER, REFERENCE
REQ	REQUIRED
RL	RISER LINE (STAIRS)
RR	RESTROOM
SCH	SCHEDULE
SHT	SHEET
S.L.P.	SINGLE HEAD LIGHT POLE
SPECS	SPECIFICATIONS
SQ	SQUARE
SO FT	SQUARE FEET
SQ IN	SQUARE INCHES
STD	STANDARD
STOR	STORAGE
STRUCT	STRUCTURE
S/W	SIDEWALK
SYM	SYMMETRICAL
TEMP	TEMPORARY
T.C.	TRENCH COVER
VCT	VINYL COMPOSTION TILE
VERT	VERTICAL
W/	WITH
W/O	WITHOUT
XFMR	TRANSFORMER

SYMBOLS

ANNOTATION

BUILDING ELEVATION REFERENCE

BUILDING SECTION REFERENCE

WALL SECTION REFERENCE

DETAIL REFERENCE

NORTH ARROW

INTERIOR ELEVATION REFERENCE

STRUCTURAL GRID

ELEVATION OF ARCHITECTURAL ELEMENT

ROOM/SPACE IDENTIFIER  
ROOM NAME  
ROOM NUMBER

TITLE MARK  
REFERENCE NUMBER

BREAK MARK

REFERENCE TO SHEET WHERE WORK  
THIS SIDE OF MATCHLINE IS DRAWN

PARTITION TYPE

WINDOW TYPE REFERENCE

DOOR TYPE REFERENCE

DOOR REFERENCE NUMBER

ACCESSORY KEY

EQUIPMENT KEY

REVISION NUMBER

CEILING HEIGHT MARKER

PLUMBING – CIVIL

L.P.  
LIGHT POLE WITH A 36" HIGH  
CONCRETE BASE

FH  
FIRE HYDRANTS

IRR  
IRRIGATION PIPE

NOTE: NOT ALL SYMBOLS ARE USED. SEE OTHER SPECIFIC SYMBOL LEGENDS ON EACH DRAWING WHERE OCCURS.

GENERAL NOTES

THE GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, AND A201 LATEST EDITION OF THE AMERICAN INSTITUTE OF ARCHITECTS, ARE HEREBY MADE PART OF CONTRACT DOCUMENTS TO THE SAME EXTENT AS IF BOUND HEREIN.

THE CONTRACTOR SHALL PROVIDE ADEQUATE CONTRACTOR'S LIABILITY AND "ALL RISK" INSURANCE TO COVER 100% OF THE COST OF THE PROJECT. PROVIDE WORKMEN'S COMPENSATION AS REQUIRED BY LAW AND PROVIDE OTHER INSURANCE REQUIRED BY GENERAL CONDITIONS, LANDLORD, LAW OR CODE.

ALL SUBCONTRACTORS MUST BE PRE–APPROVED BY HIDALGO COUNTY PRECINCT 4 AUTHORIZED REPRESENTATIVES AND THE WARREN GROUP ARCHITECTS INC.

GENERAL CONTRACTOR AND SUBCONTRACTORS SHALL PROVIDE, PRIOR TO CONSTRUCTION, UNIT PRICES FOR ALL WORK SHOWN. THESE PRICES SHALL BE VALID FOR THE DURATION OF THE PROJECT AND USED FOR ALL SUBMISSIONS REGARDING ADDITIONS OR DELETIONS TO SCOPE OF WORK.

UNLESS OTHERWISE STIPULATED, THE GENERAL CONTRACTOR SHALL PROVIDE AND PAY FOR ALL MATERIALS, LABOR, TAXES, WATER, TOOLS, EQUIPMENT, LIGHT, POWER, TRANSPORTATION AND OTHER FACILITIES NECESSARY FOR THE EXECUTION AND COMPLETION OF THE WORK.

THE CONTRACTOR AND HIS SUB–CONTRACTORS SHALL KEEP WORK AREA IN A CLEAN AND ORDERLY MANNER, REMOVING DEBRIS ON A ROUTINE BASIS.

CONTRACTOR REVIEW:

GENERAL CONTRACTOR IS RESPONSIBLE FOR CHECKING ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSION FOR ACCURACY AND CONFIRMING THAT WORK IS BUILDABLE, AS SHOWN, BEFORE SUBMITTING FINAL PRICING AND PROCEEDING WITH CONSTRUCTION. FAILURE TO REPORT A CONFLICT IN THE CONTRACT DOCUMENTS SHALL BE DEEMED EVIDENCE THAT THE CONTRACTOR HAS ELECTED TO PROCEED IN THE MORE EXPENSIVE MANNER.

CONTRACTOR IS RESPONSIBLE TO PERFORM ALL WORK IN ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES HAVING JURISDICTION.

PROJECT TEAM

OWNER:

Hidalgo County Commissioner Precinct 4  
1051 N Doolittle Rd,  
Edinburg, Texas 78542  
956.363.3112

ARCHITECT:

The Warren Group Architects, Inc.  
Contact: Laura Nassiri Warren, AIA.  
1801 S. 2nd St, Suite 330  
McAllen, Texas 78503  
956.994.1900  
956.994.1962 fax  
lwarren@twgarch.com

CIVIL ENGINEER:

South Texas Infrastructure Group  
Contact: Julio Cerda, P.E.  
900 S. Stewart Road, Suite13  
Mission, Texas 78572  
956.424.3335  
956.424.3132 fax  
julio@southtexasig.com

STRUCTURAL ENGINEER:

Solorio, Inc.  
Contact: Simon Solorio  
108 Cleo Dawson,  
Mission, Texas 78572  
956.631.1500  
simon@solorio.com

MEP ENGINEER:

MEP Solutions Engineering  
Contacts: Luis Javier Pena, PE  
Abram L. Dominguez, PE  
600 E Beaumont Ave. Suite 2  
McAllen, Texas 78501  
956.664.2727  
956.664.2726 fax  
jpena@mepsolutionsengineering.com  
adominguez@mepsolutionsengineering.com

LANDSCAPE AND IRRIGATION

Earth Irrigation & Landscaping LTD.  
Contact: Jude Tanguma  
1101 E Violet Ave,  
McAllen, Texas 78504  
956.631.6686  
jude@earthirrigation.com

MATERIALS

CAST IN PLACE CONCRETE

WOOD BLOCKING

PRECAST CONCRETE

ROUGH WOOD

STEEL

FINISH WOOD

METAL STUDS

PLYWOOD

GLASS

RIGID INSULATION

CONCRETE MASONRY UNITS

BATT INSULATION

LANDSCAPE AREA

CODE CHECK

GENERAL - PROJECT IDENTIFICATION

LIST OF APPLICABLE CODES (TITLES & EDITIONS)  
–TEXAS ACCESSIBILITY STANDARDS (TAS), 2012 EDITION.  
–INTERNATIONAL BUILDING CODE (IBC), 2015 EDITION.  
–INTERNATIONAL ENERGY CONSERVATION CODE(IECC), 2015 EDITION.

LIST OF APPLICABLE ORDINANCES AND JURISDICTIONS  
CITY OF EDINBURG CODE OF ORDINANCES, CURRENT EDITION.

PROJECT DESCRIPTION

APPROXIMATE SITE AREA: (NEW FACILITY) 16.83 ACRES

ZONING / ORDINANCE REQUIREMENTS

–PARKING REQUIREMENTS  
PARKING REQUIRED: N/A  
EXISTING PARKING: 45 SPACES  
FUTURE PARKING PROVIDED: 90 SPACES

ACCESSIBILITY DESIGN CRITERIA (TAS-ADA)

EXTERIOR ACCESSIBLE PARKING SPACES ADA– TABLE 208.2  
REQUIRED: 4 ACC PK SPACES  
EXISTING PROVIDED: 2 ACC PK SPACES  
NEW PROVIDED: 6 ACC PK SPACES

NOTES:

1. ALL REQUIRED PERMITS MUST BE OBTAINED FROM THE CITY OF EDINBURG BUILDING INSPECTIONS BEFORE THE BUILDING IS OCCUPIED.

VICINITY MAP

HIDALGO COUNTY PRECINCT 4 MEMORIAL PARK  
EDINBURG, TX 78542

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ALL CONSTRUCTION SHALL COMPLY WITH AMERICAN'S WITH DISABILITIES ACT, PUBLIC LAW 101–336 AND TAS COMPLIANT.

GENERAL CONTRACTOR IS RESPONSIBLE FOR CHECKING ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS FOR ACCURACY AND CONFIRMING THAT WORK IS BUILDABLE, AS SHOWN, BEFORE SUBMITTING FINAL PRICING FOR THE WORK IN QUESTION OR RELATED WORK.

INDEX OF DRAWINGS

ARCHITECTURAL DRAWINGS

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G0.01 GENERAL NOTES

A1.01 SITE PLAN  
A1.02 PARTIAL SITE PLAN, ELEVATIONS, & SECTIONS  
A1.03 PARTIAL SITE PLAN, ELEVATIONS, & SECTIONS  
A1.04 PARTIAL SITE PLAN, ELEVATIONS, & SECTIONS

STRUCTURAL DRAWINGS

S101 GENERAL NOTES  
S102 GENERAL NOTES  
S201 FOUNDATION PLAN  
S202 FOUNDATION PLAN  
S204 FOUNDATION PLAN  
S401 TYPICAL CONCRETE DETAILS  
S402 FOUNDATION DETAILS  
S403 TYPICAL CMU DETAILS

M.E.P. DRAWINGS

E1.00 ELECTRICAL SPECIFICATIONS  
E1.01 ELECTRICAL SITE PLAN  
E1.02 ENLARGED ELECTRICAL SECTIONS  
E2.01 ELECTRICAL LEGENDS, SCHEDULES & RISERS

LANDSCAPE & IRRIGATION DRAWINGS

L1.0 LANDSCAPE PLAN  
L2.0 IRRIGATION PLAN

THE WARREN GROUP ARCHITECTS, INC.

1801 SOUTH SECOND ST. SUITE 330  
McALLEN, TX 78503  
956 . 994 . 1900  
twgarch.com

THESE DRAWINGS AND INFORMATION CONTAINED HEREIN ARE PROPERTY AND THE SOLE PROPERTY OF THE WARREN GROUP ARCHITECTS, INC. THEY MAY NOT BE REUSED, REPRODUCED OR ALTERED IN ANY WAY WITHOUT PRIOR WRITTEN APPROVAL FROM AND APPROPRIATE COMPENSATION TO THE WARREN GROUP ARCHITECTS INC.

APPROVED BY

DESCRIPTION

REVISION

DATE

PROPOSED

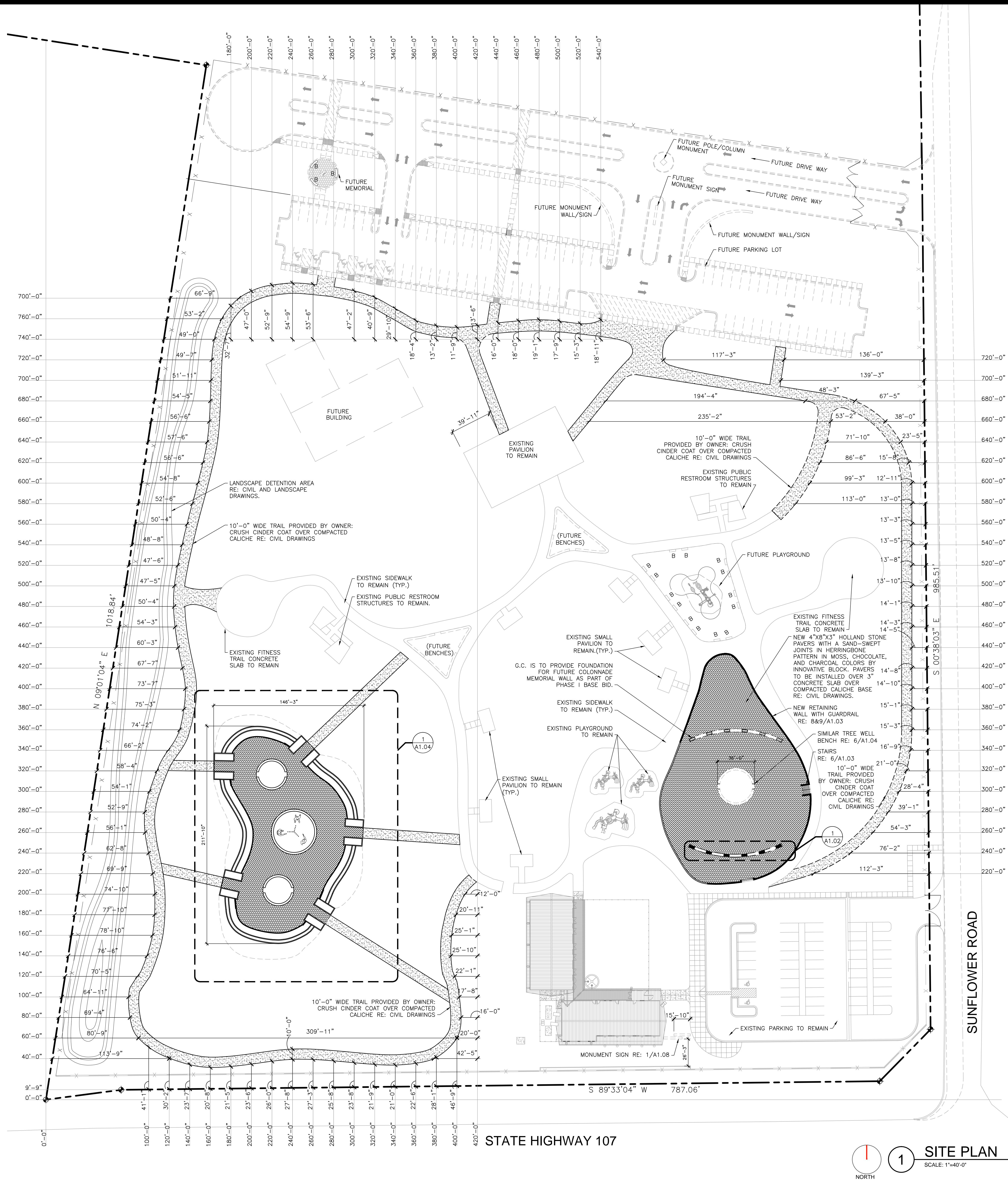
HIDALGO COUNTY PRECINCT 4 MEMORIAL PARK PHASE 1

107 SUNFLOWER RD  
EDINBURG, TEXAS 78542

PROJECT 1341701  
DATE 09/27/2018  
REVISED

G0.01  
GENERAL NOTES,  
ABBREVIATIONS & SYMBOLS





## SHEET NOTES

1. REFER SHEET G0.01 AND SPECIFICATIONS FOR ALTERNATES DESCRIPTION.

## SHEET LEGEND

- CRUSHED CINDER PEDESTRIAN TRAIL TO BE PROVIDED BY OWNER RE: CIVIL DRAWINGS.
- NEW 4"x8"x3" HOLLAND STONE PAVERS WITH A SAND-SWEPT JOINTS IN HERRINGBONE PATTERN IN MOSS, CHOCOLATE, AND CHARCOAL COLORS BY INNOVATIVE BLOCK. PAVERS TO BE INSTALLED OVER 3" CONCRETE SLAB OVER COMPACTED CALICHE RE: CIVIL DRAWINGS.
- ATHLETIC SURFACING
- B= FUTURE PRECAST CONCRETE BENCH
- X= EXISTING WROUGHT IRON FENCE TO REMAIN
- X= FUTURE NEW 8'-0" HIGH COATED WIRE FENCE EQ. TO: CLASSIC FENCE PANEL 8FT X 8FT PROVIDED BY DESIGNMASTER FENCING SYSTEM FOR INFORMATION CALL 01-800-332-2376 OR WWW.DESIGNMASTERFENCE.COM
- TO BE BUILD IN THE FUTURE



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REVISION	DATE	APPROVED BY	DESCRIPTION



PROPOSED  
**HIDALGO COUNTY  
PRECINCT 4  
MEMORIAL PARK  
PHASE 1**

107 SUNFLOWER RD  
EDINBURG, TEXAS 78542

PROJECT 1341701  
DATE 09/27/2018  
REVISED

**A1.01**  
SITE PLAN



REVISION	DATE	DESCRIPTION



PROPOSED

**HIDALGO COUNTY  
PRECINCT 4  
MEMORIAL PARK  
PHASE 1**

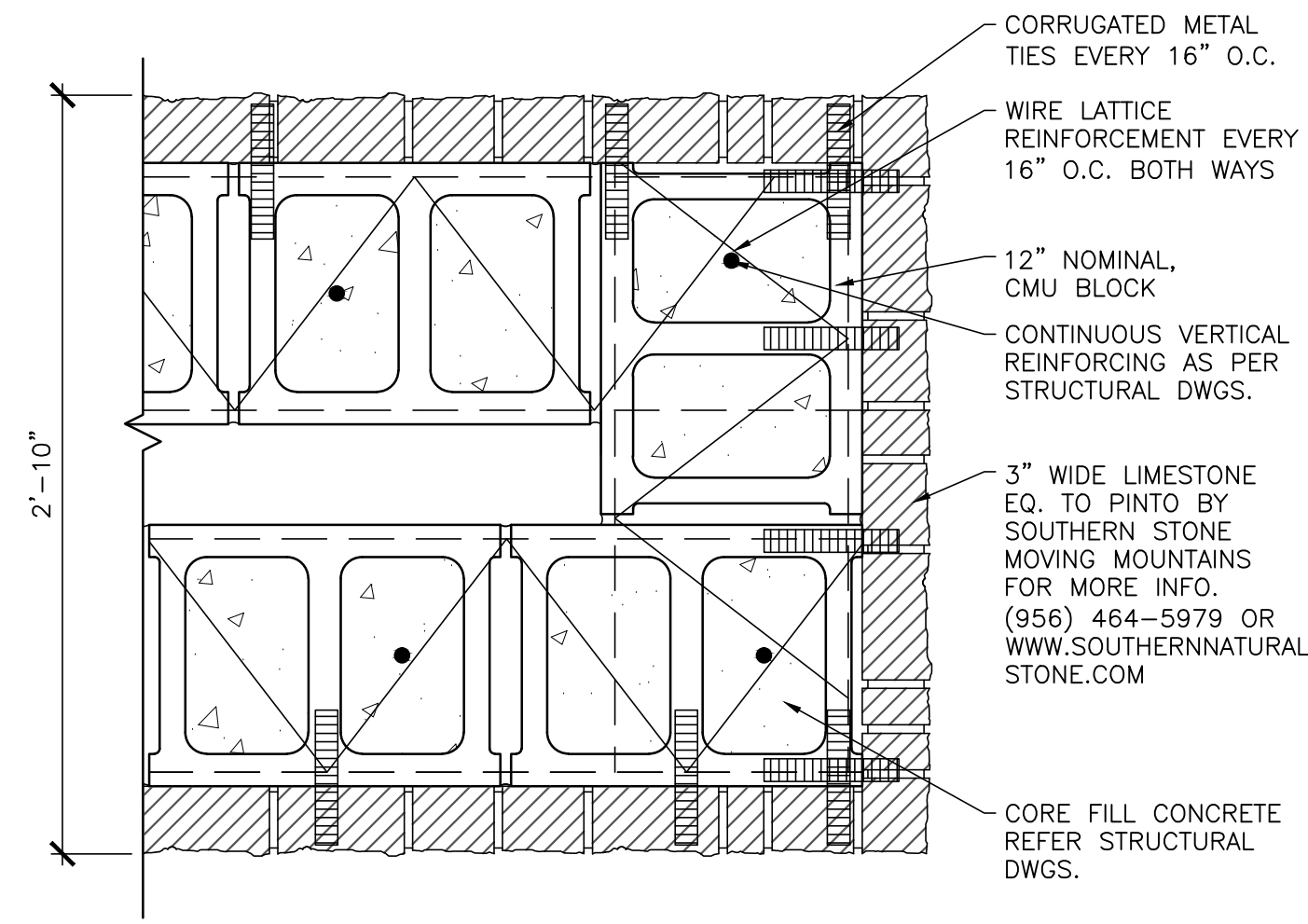
107 SUNFLOWER RD  
EDINBURG, TEXAS 78542

PROJECT 1341701  
DATE 09/27/2018  
REVISED

**A1.02**  
PARTIAL SITE PLAN,  
ELEVATIONS, & SECTIONS

## SHEET NOTES

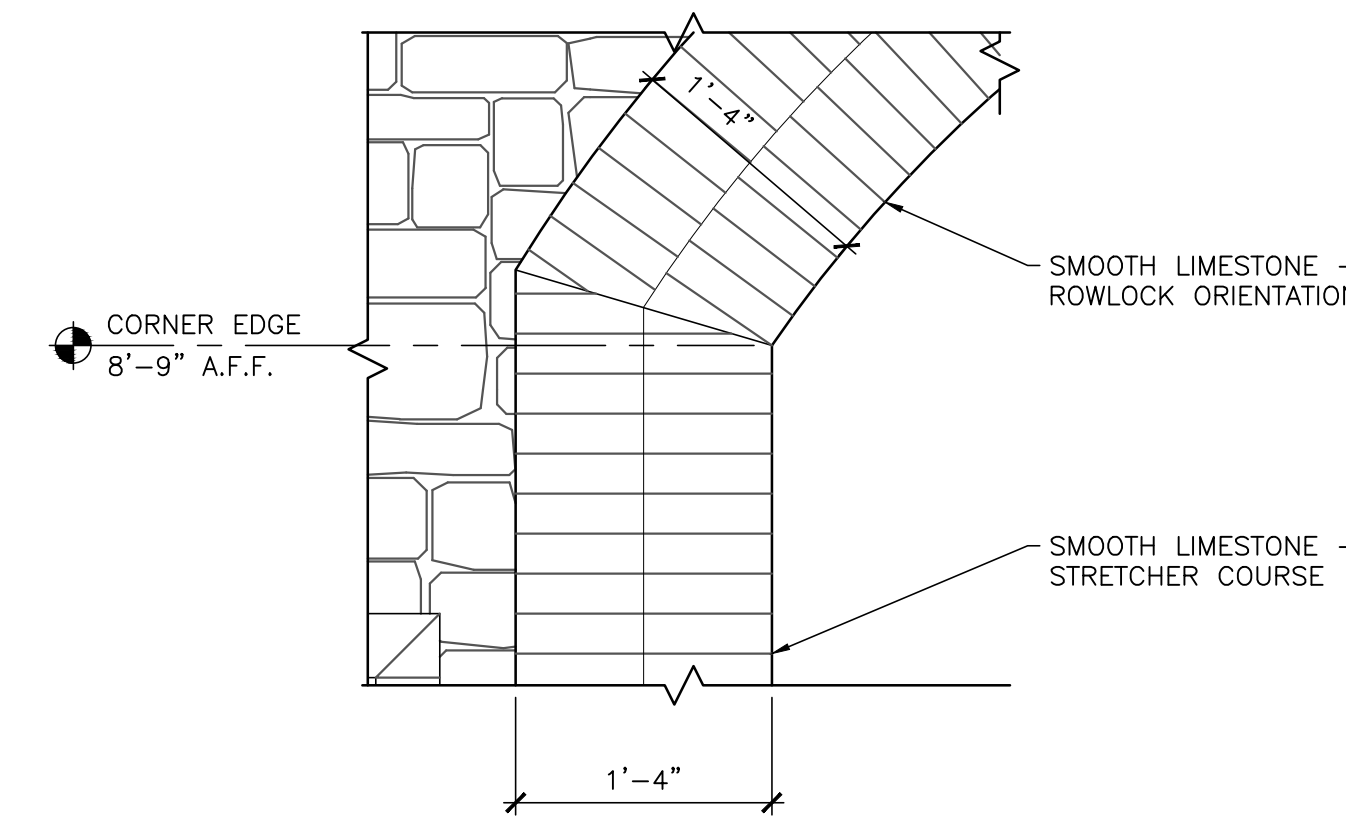
1. REFER SHEET G0.01 AND SPECIFICATIONS FOR ALTERNATES DESCRIPTION.



**8 WALL DETAIL**

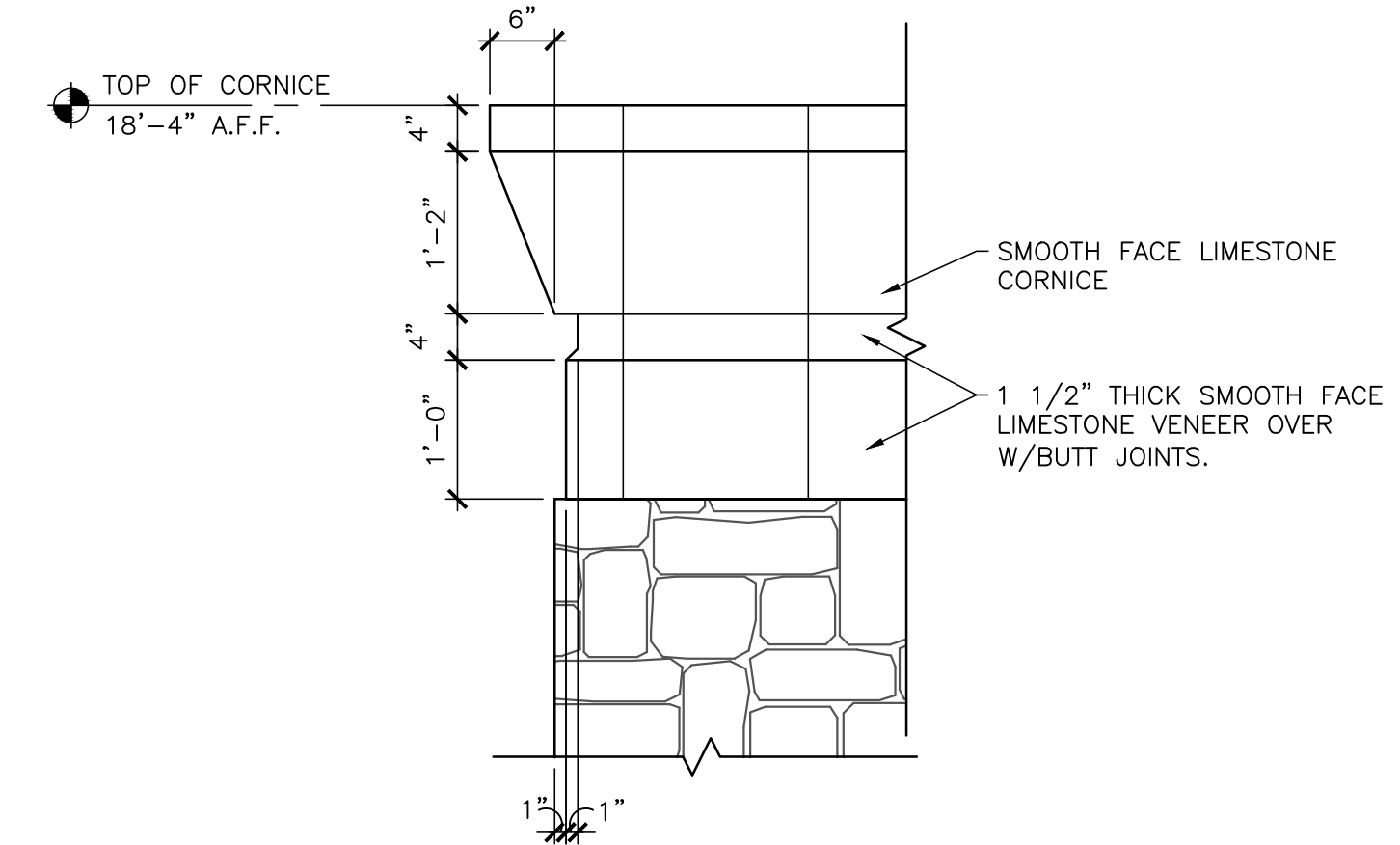
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SHEET\_DETAIL\_005



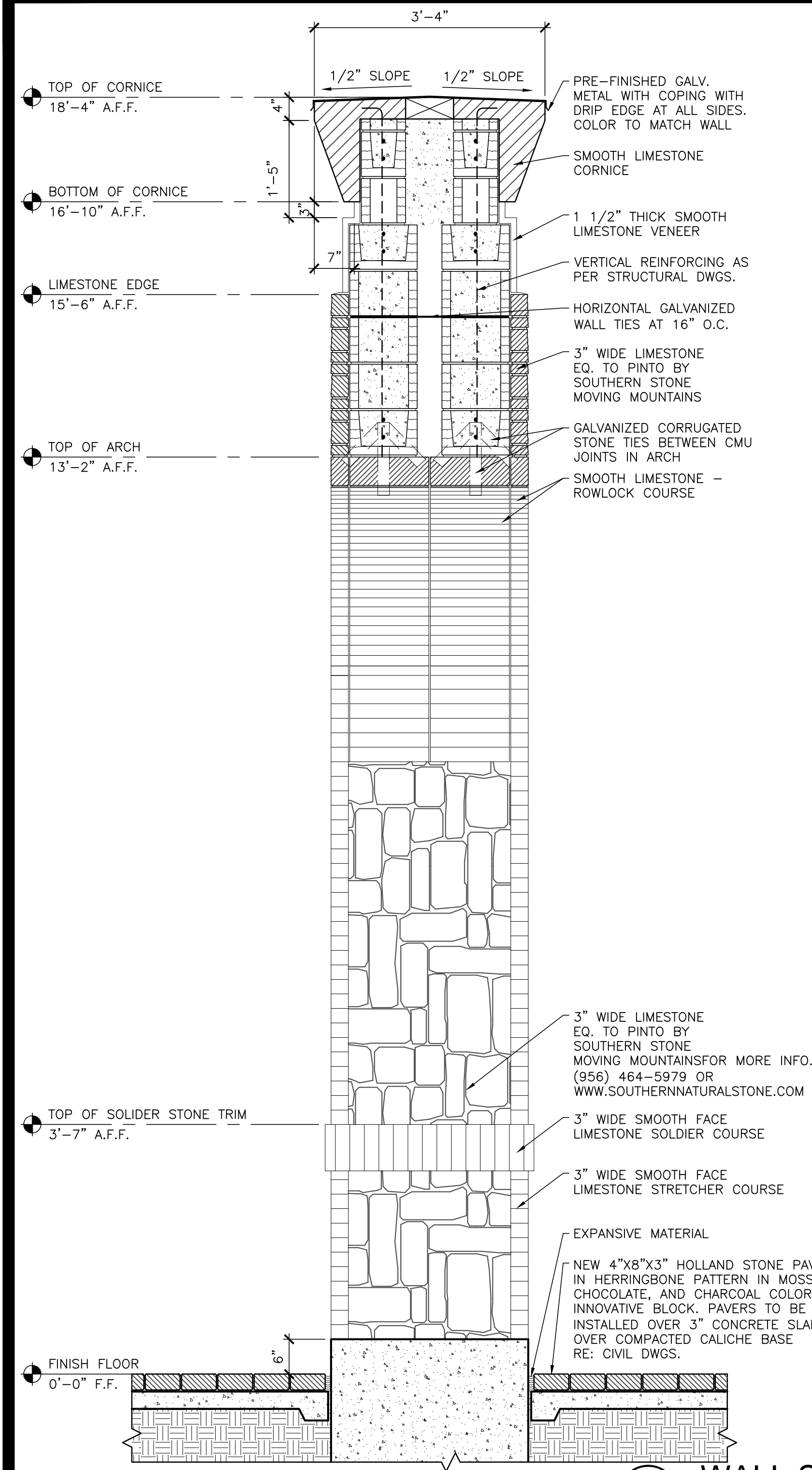
**5 ELEVATION DETAIL**

SCALE: 1/1"=1'-0"



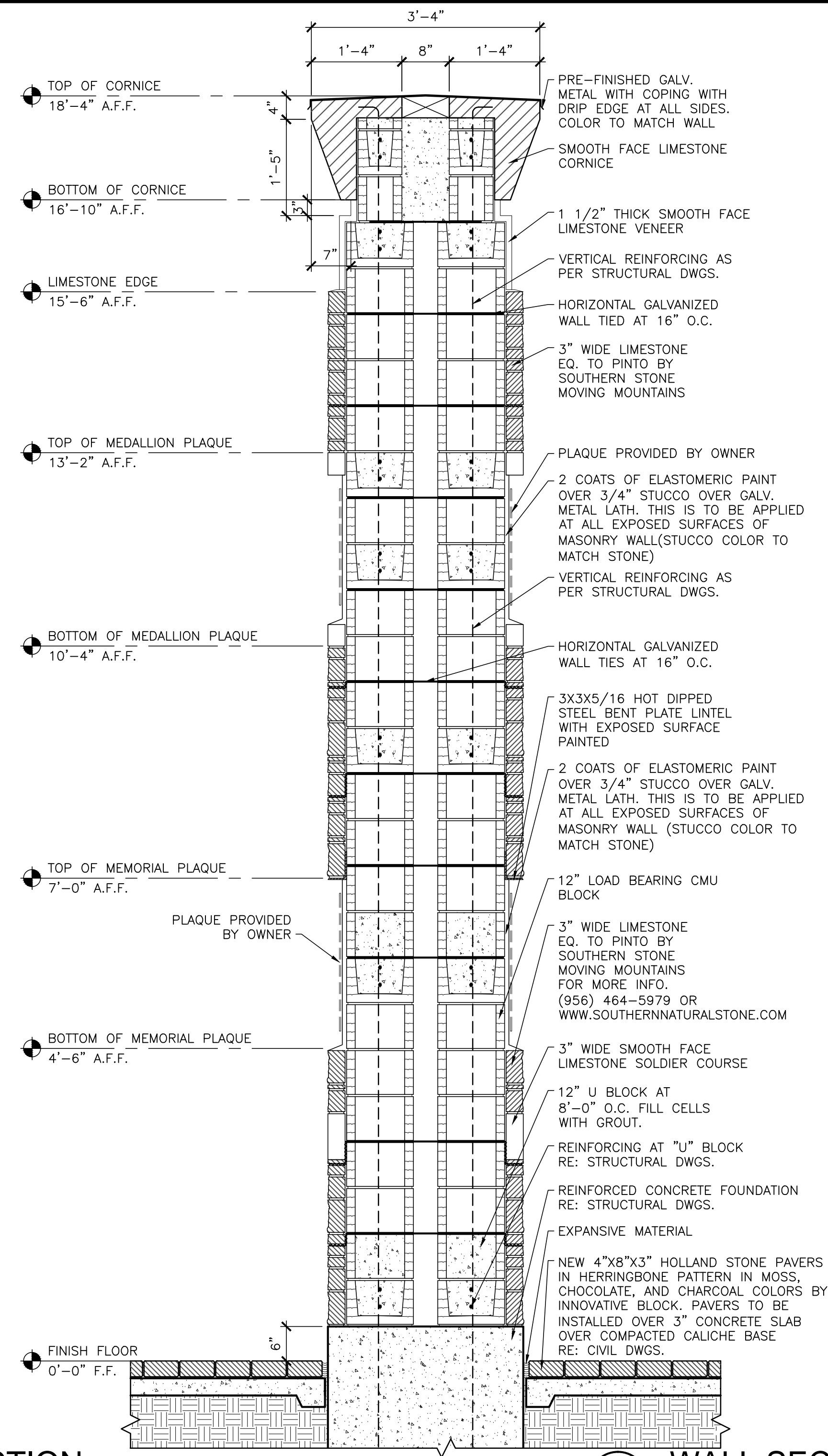
**4 CORNICE DETAIL**

SCALE: 3/4"=1'-0"



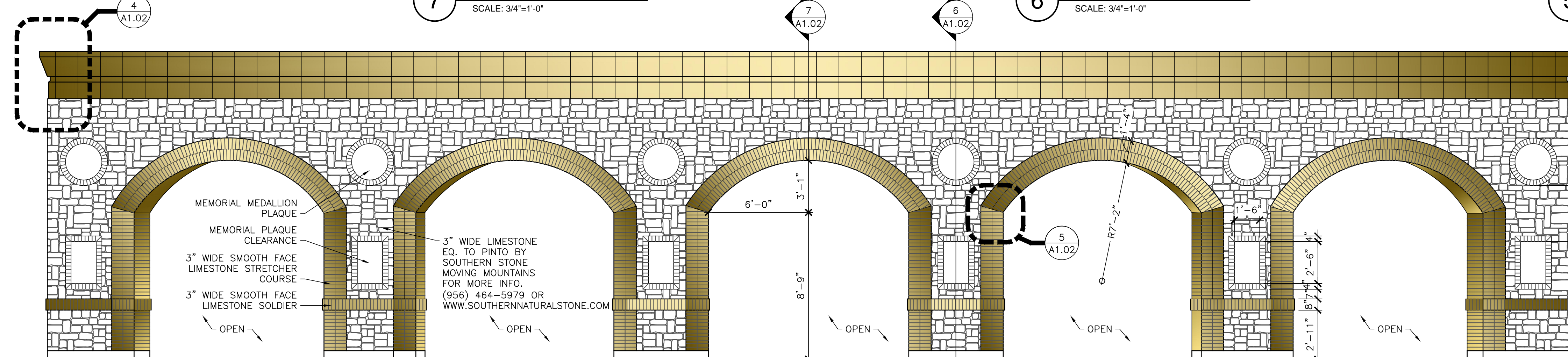
**7 WALL SECTION**

SCALE: 3/4"=1'-0"



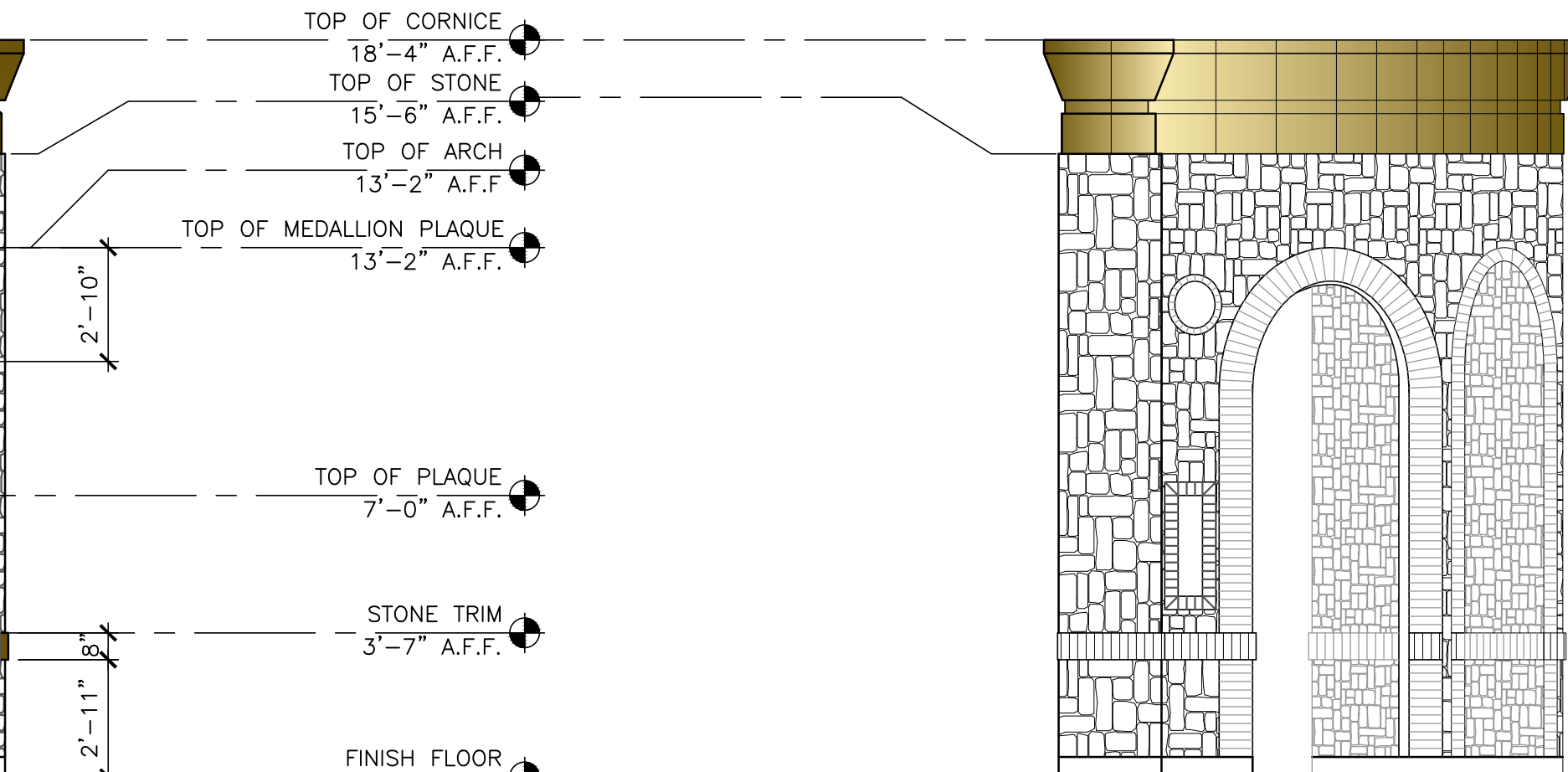
**6 WALL SECTION**

SCALE: 3/4"=1'-0"



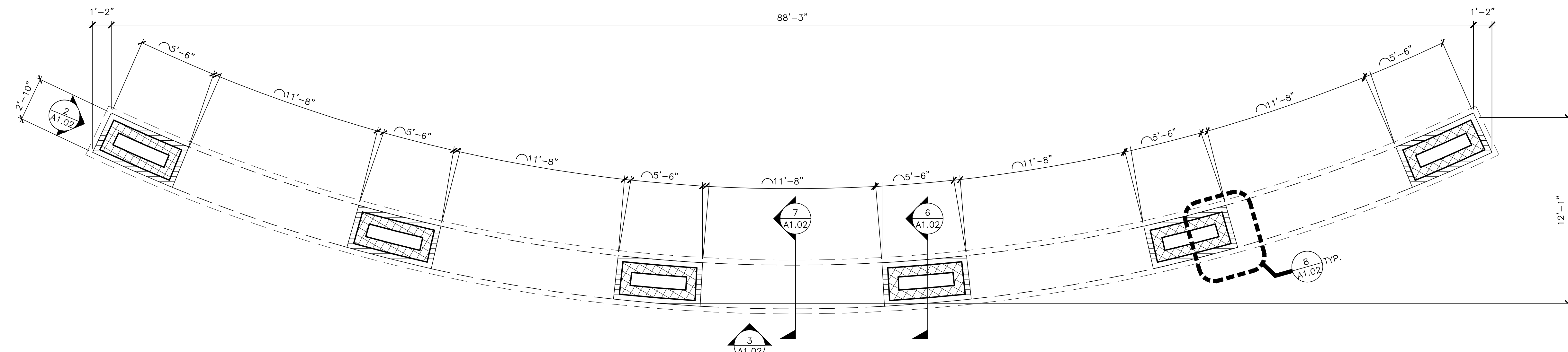
**3 NORTH/SOUTH ELEVATION**

SCALE: 1/4"=1'-0"



**2 WEST/EAST ELEVATION**

SCALE: 1/4"=1'-0"



**1 PARTIAL SITE PLAN AT  
COLONNADE MEMORIAL**

SCALE: 1/4"=1'-0"



SHEET NOTES

1. REFER SHEET G0.01 AND SPECIFICATIONS FOR ALTERNATES DESCRIPTION.



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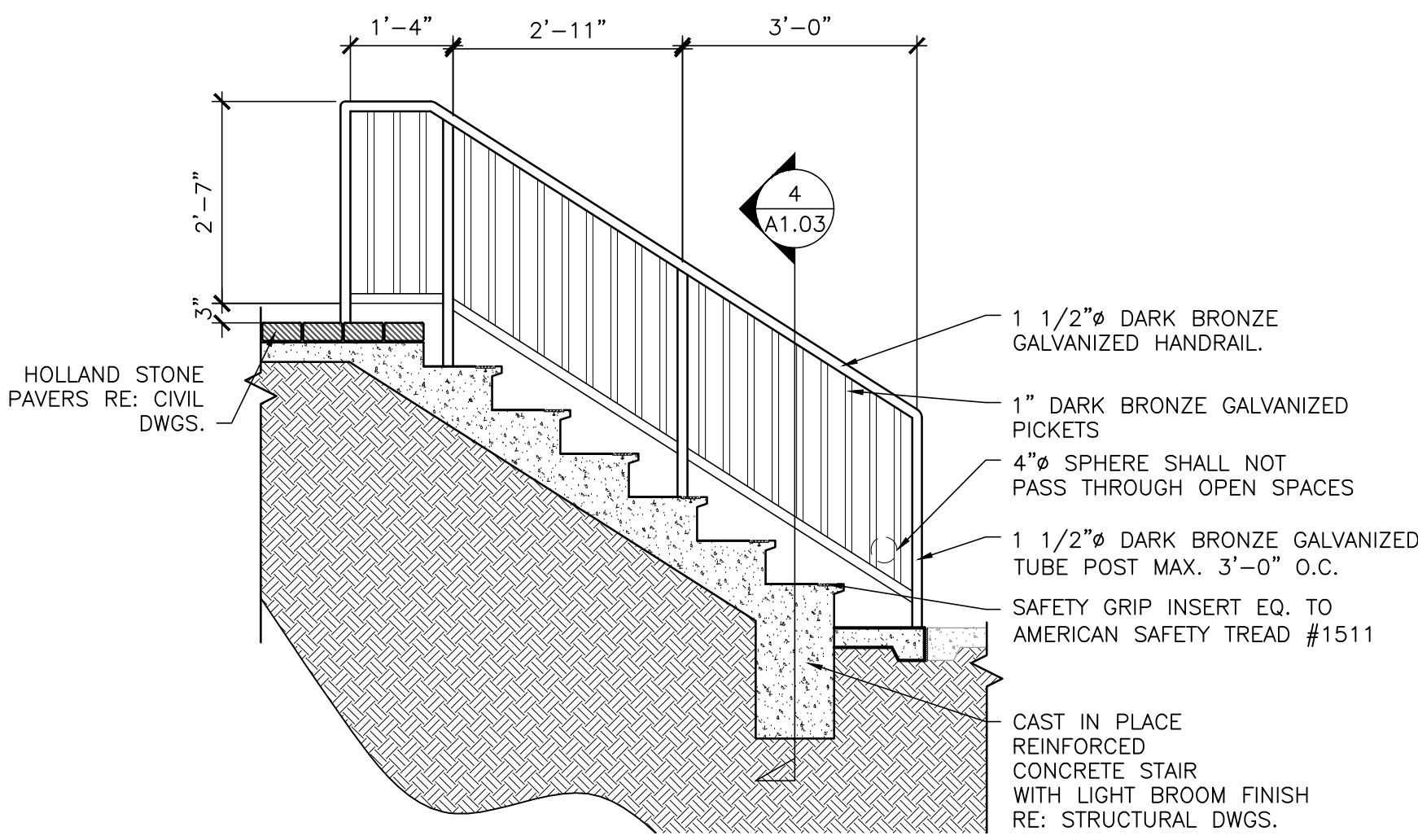
REVISION	DATE	DESCRIPTION



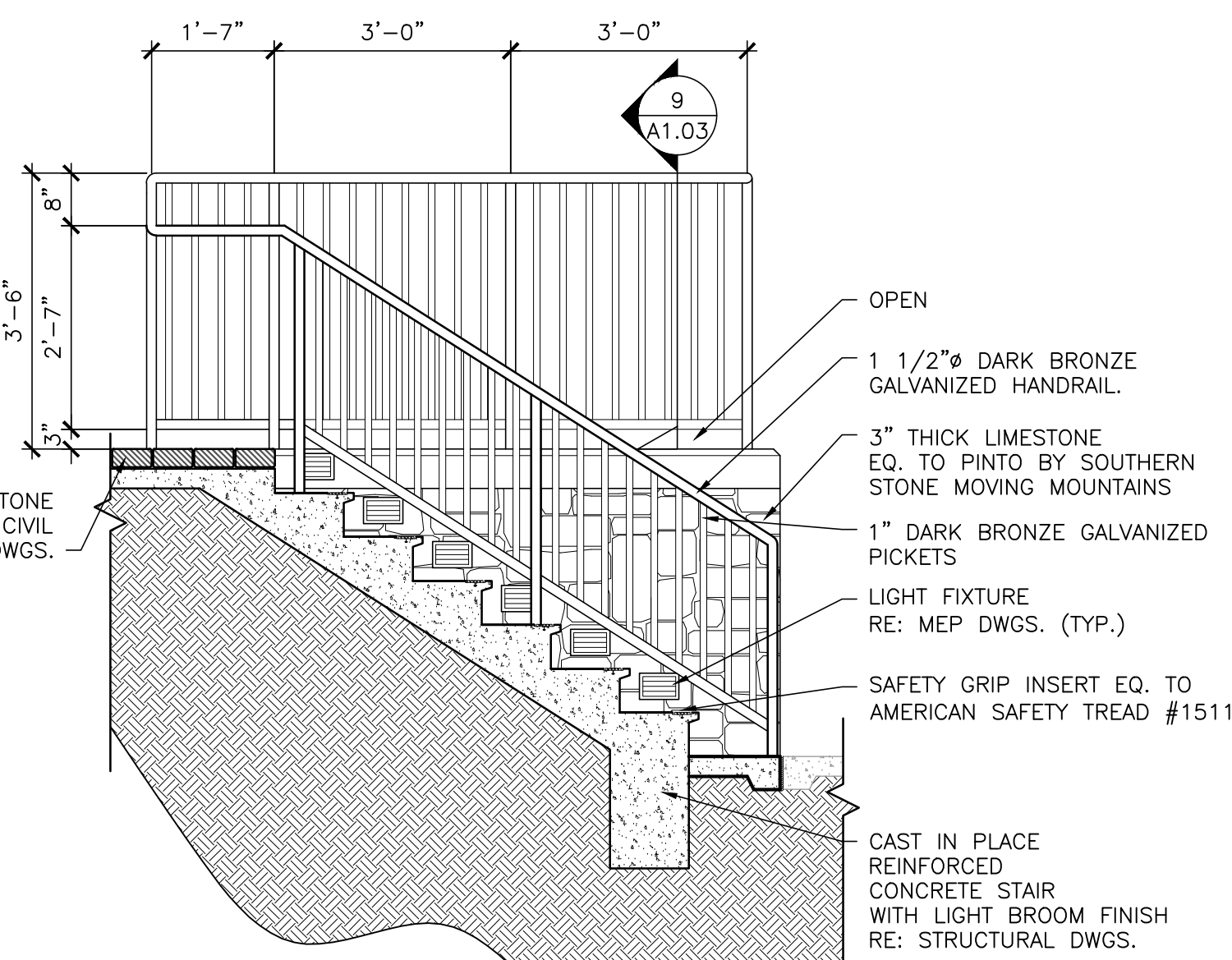
PROPOSED  
**HIDALGO COUNTY  
PRECINCT 4  
MEMORIAL PARK  
PHASE 1**  
107 SUNFLOWER RD  
EDINBURG, TEXAS 78542

PROJECT 1341701  
DATE 09/27/2018  
REVISED

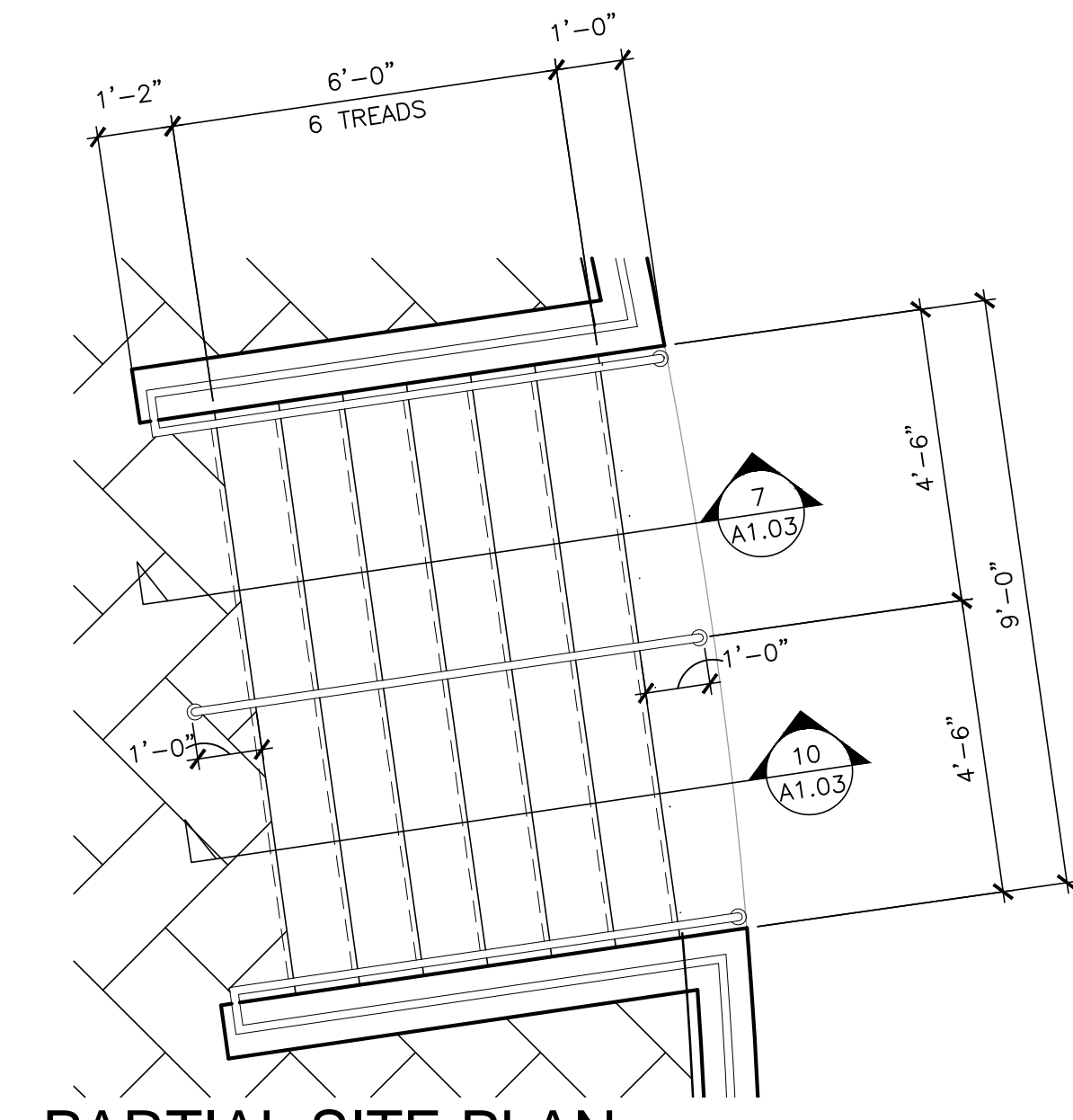
**A1.03**  
PARTIAL SITE PLAN,  
ELEVATIONS, & SECTIONS



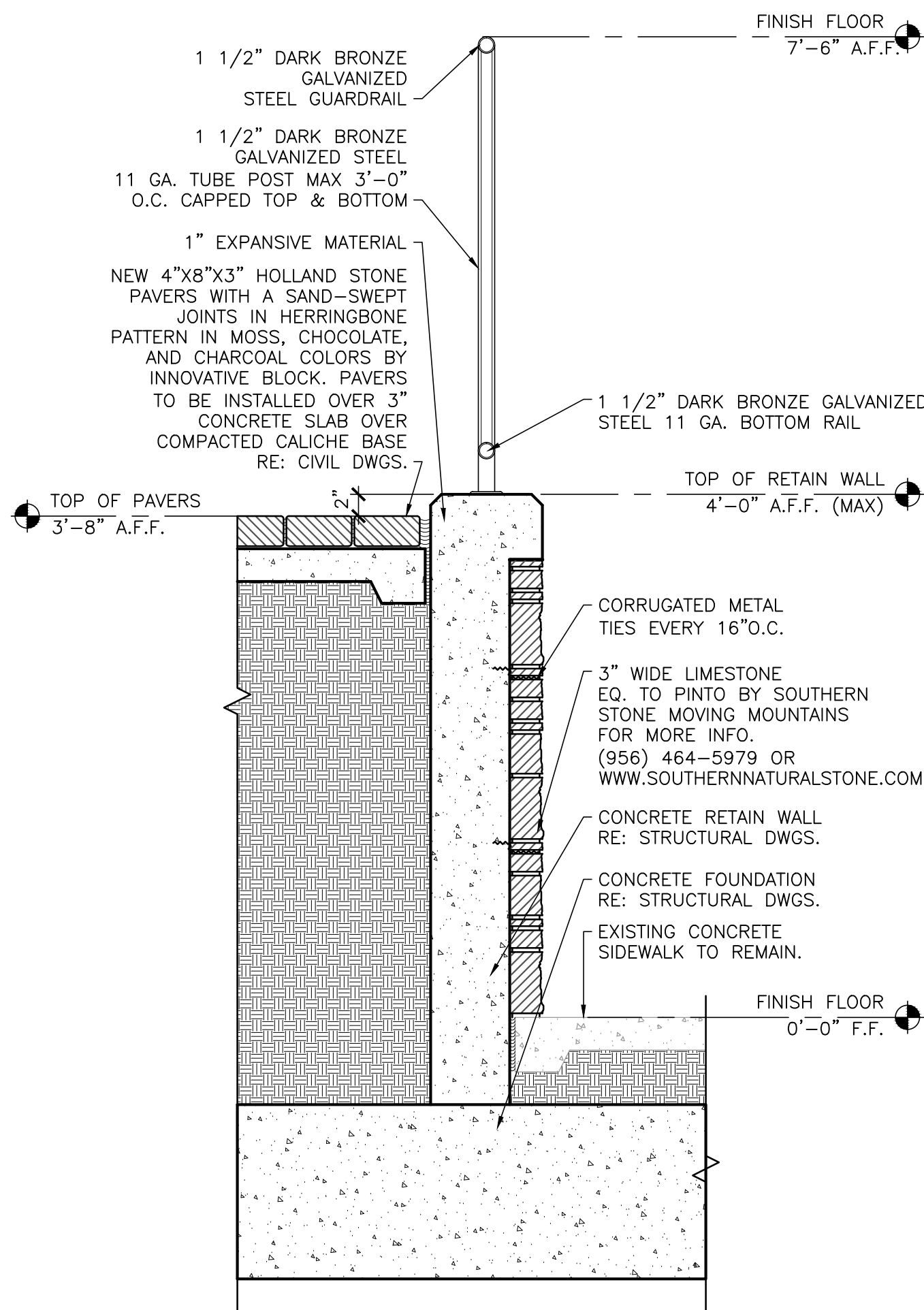
**STAIR  
SECTION DETAIL**  
10 SCALE: 1/2"=1'-0"



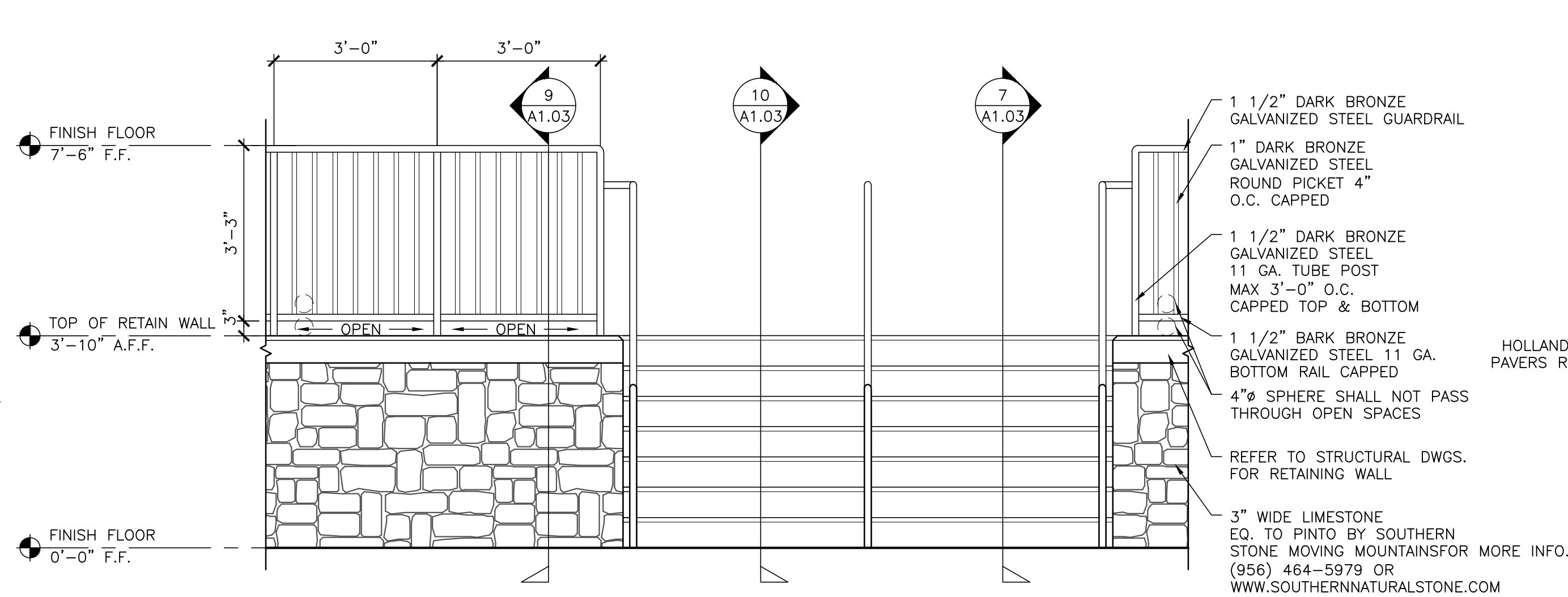
**STAIR SECTION DETAIL**  
7 SCALE: 1/2"=1'-0"



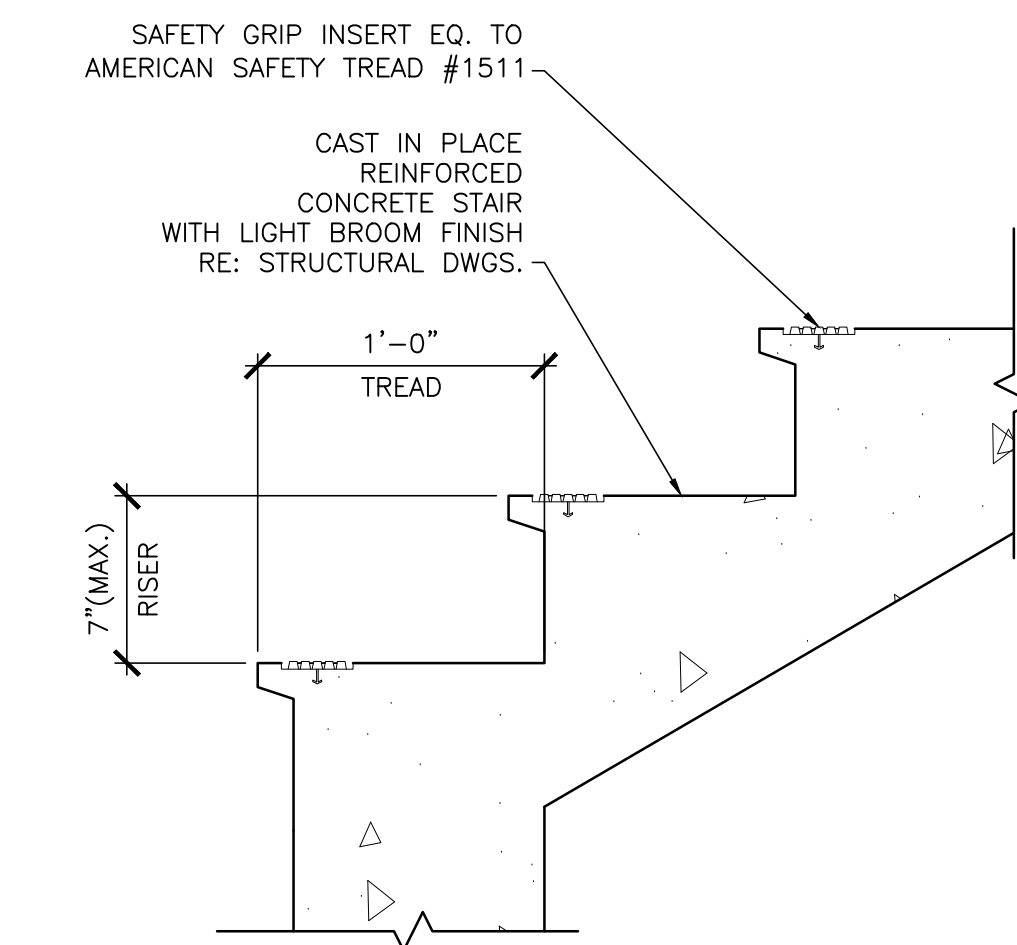
**PARTIAL SITE PLAN  
AT RETAINING WALL STAIRS**  
6 SCALE: 3/8"=1'-0"



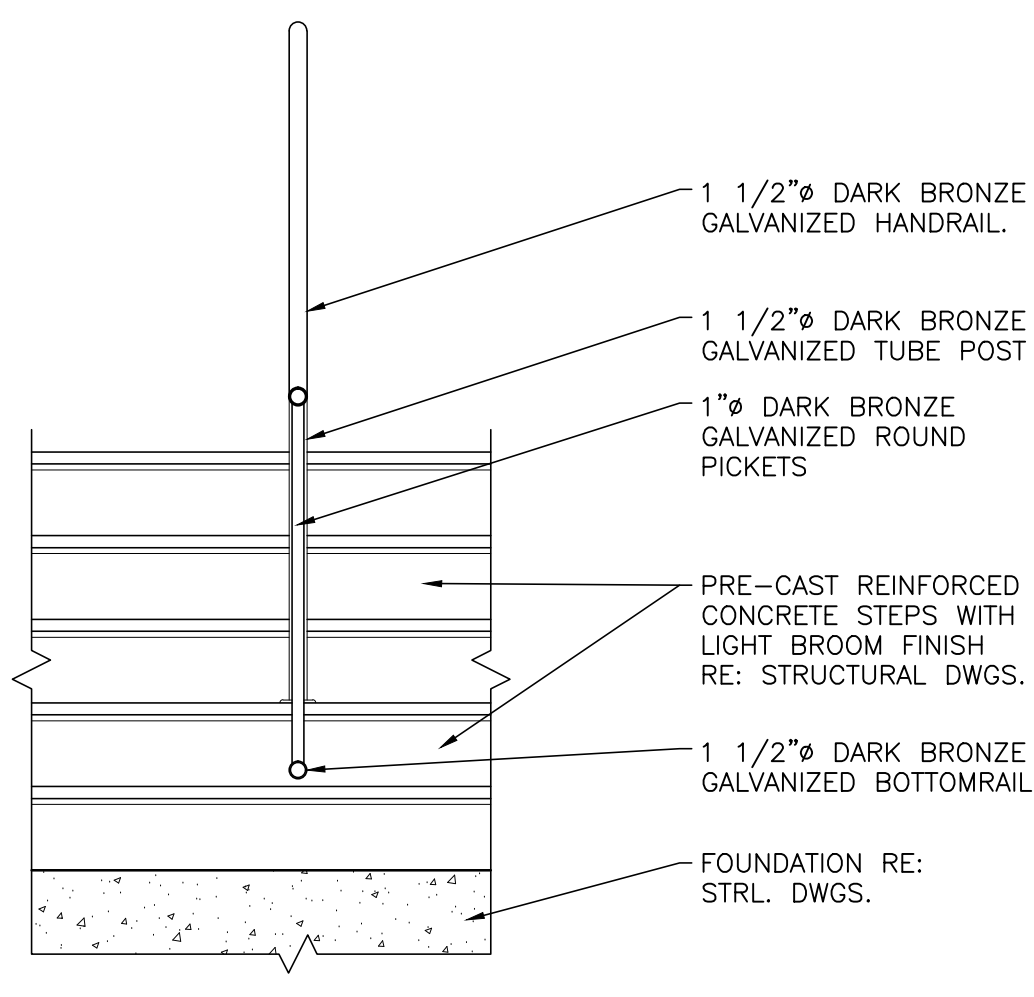
**RETAINING WALL  
SECTION DETAIL**  
9 SCALE: 1/2"=1'-0"



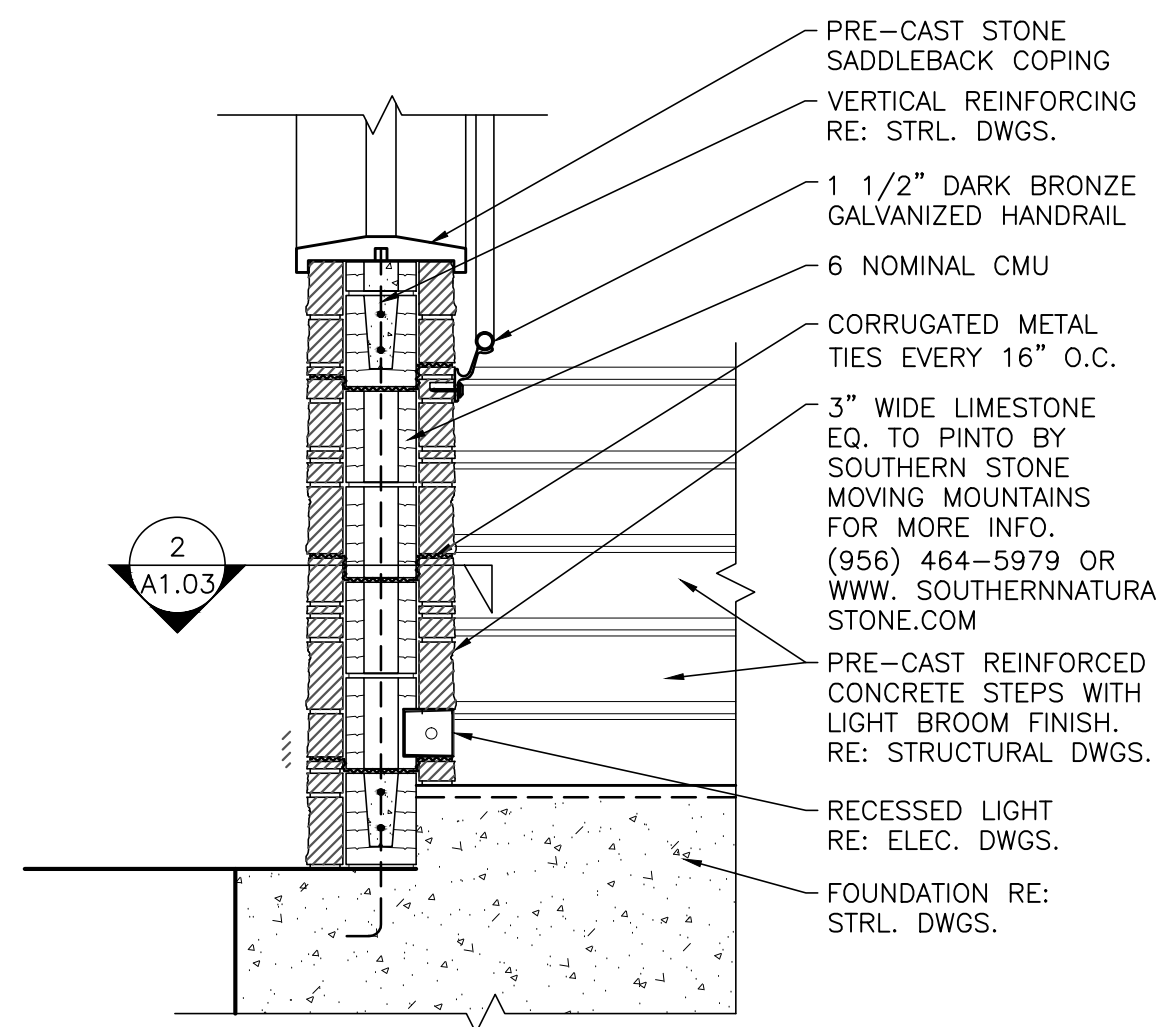
**PARTIAL RETAINING WALL  
& STAIR ELEVATION**  
8 SCALE: 1/2"=1'-0"



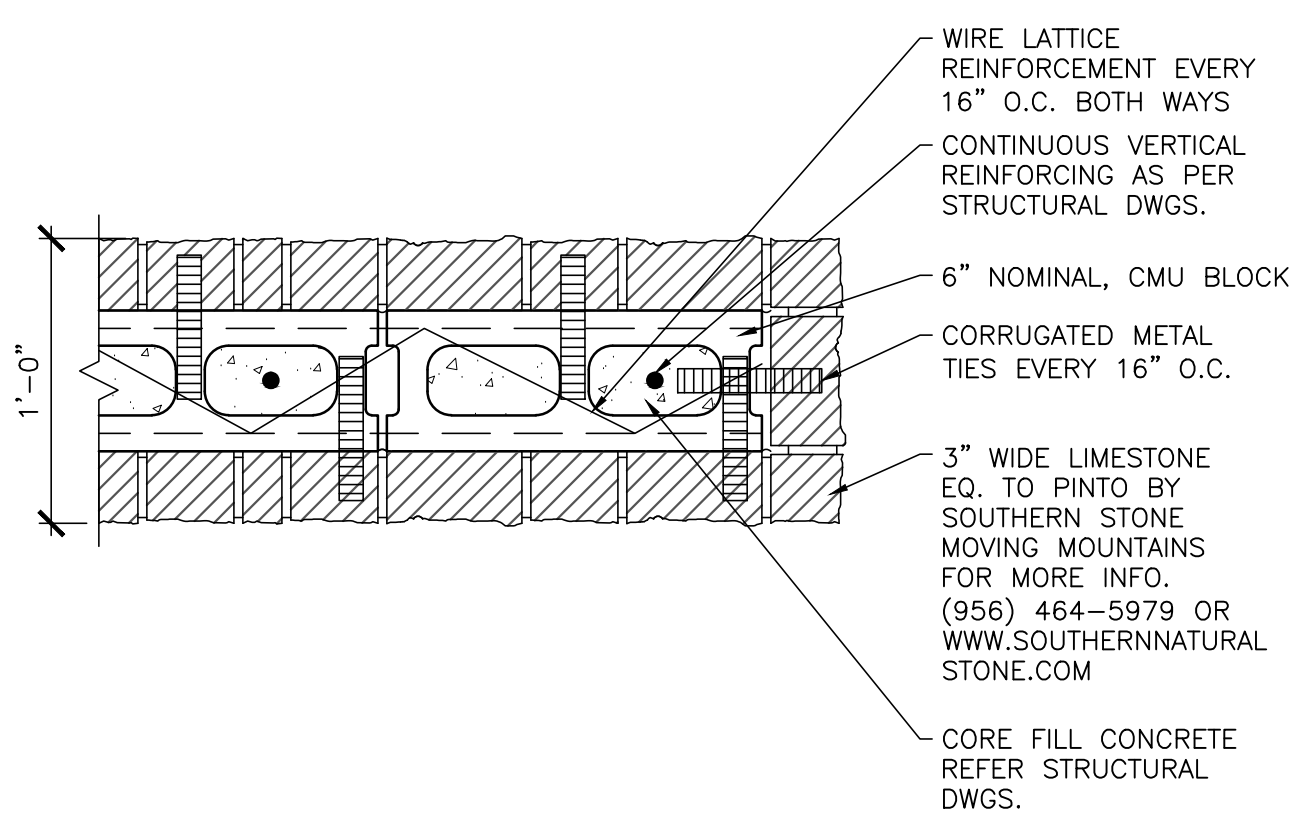
**STAIR ASSEMBLY DETAIL**  
5 SCALE: 1/2"=1'-0"



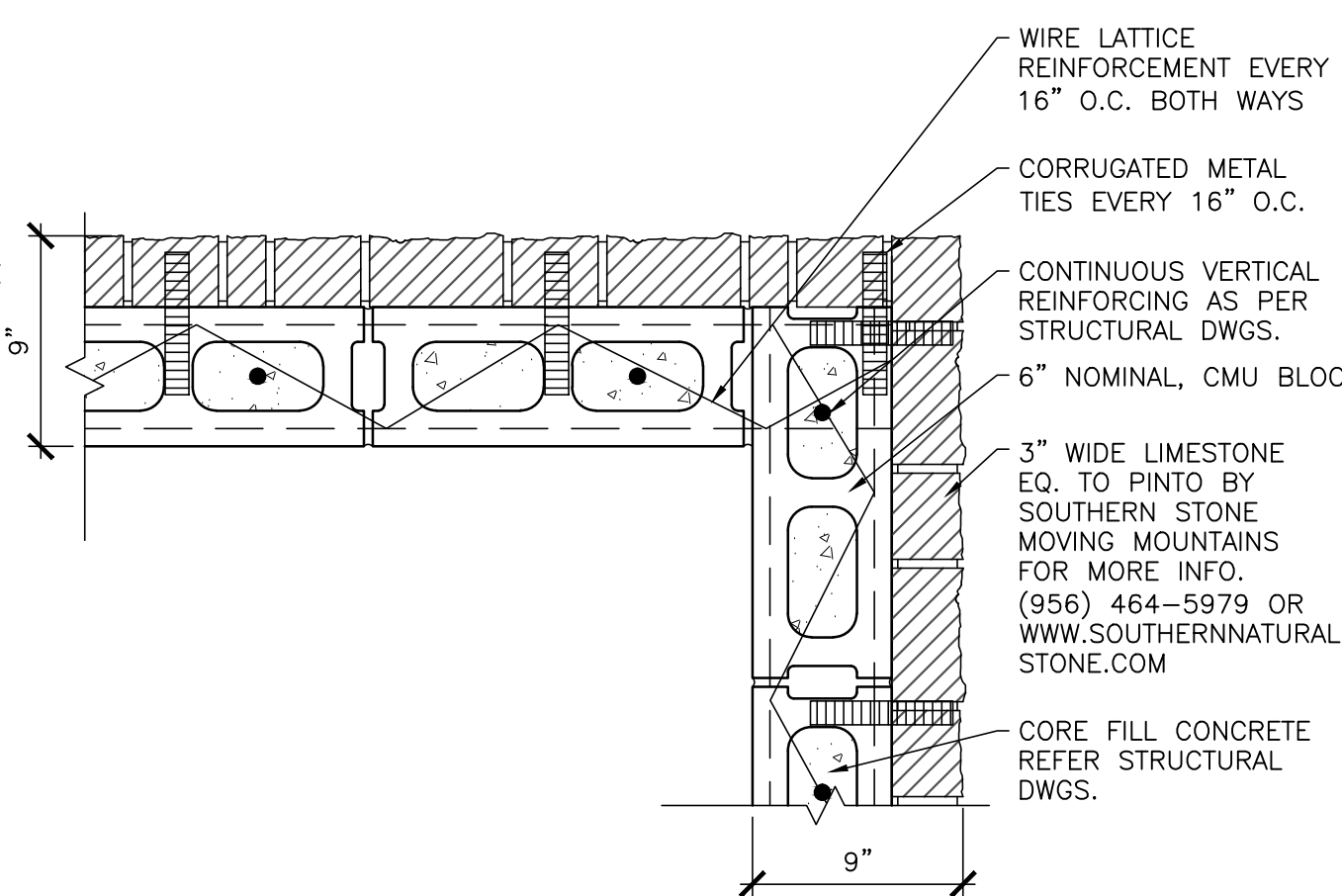
**STAIR GUARDRAIL  
AND HANDRAIL DETAIL**  
4 SCALE: 3/4"=1'-0"



**STAIR GUARDRAIL  
AND HANDRAIL DETAIL**  
3 SCALE: 3/4"=1'-0"



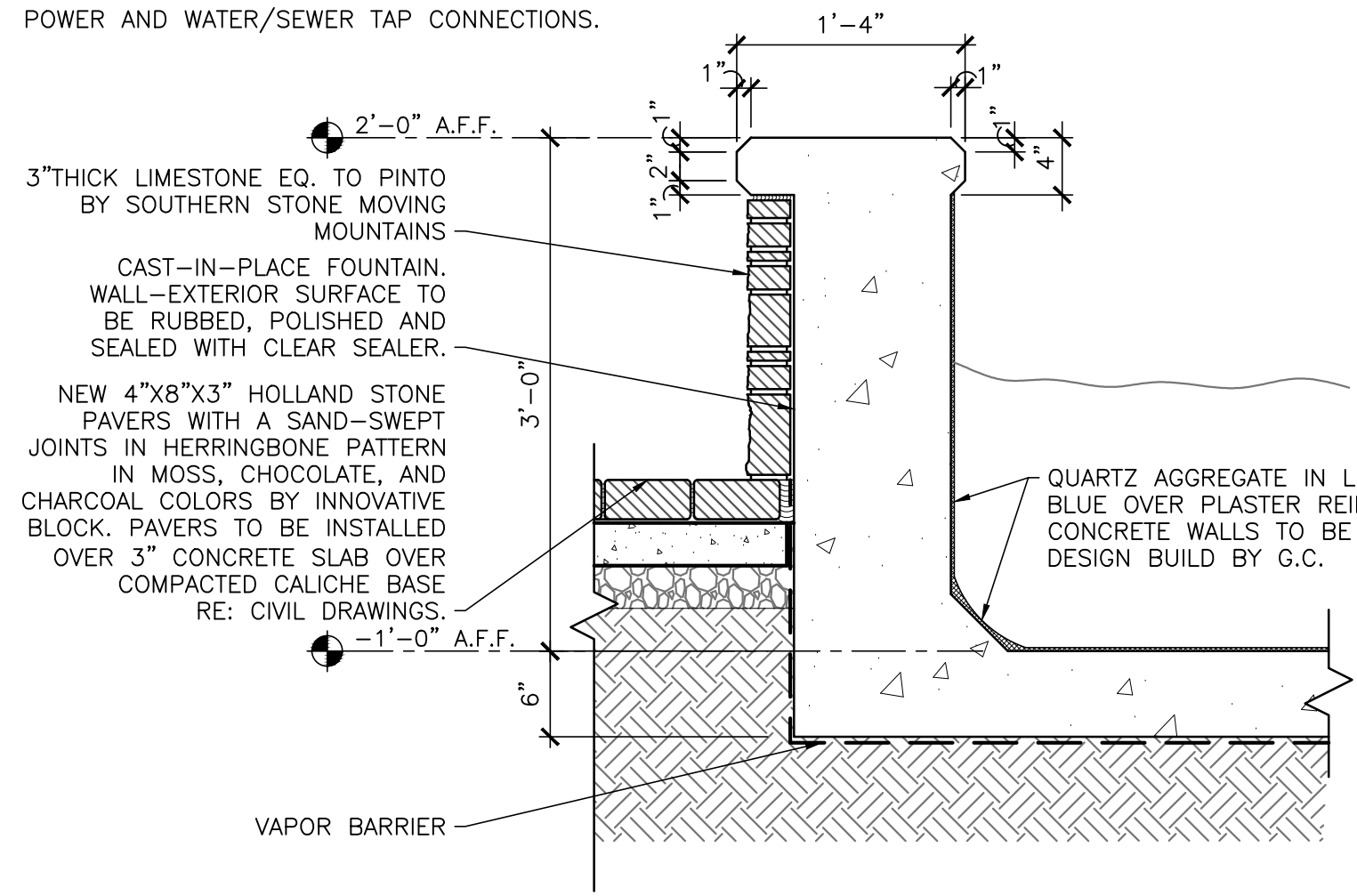
**WALL DETAIL**  
2 SCALE: 1 1/2"=1'-0"



**WALL DETAIL**  
1 SCALE: 1 1/2"=1'-0"



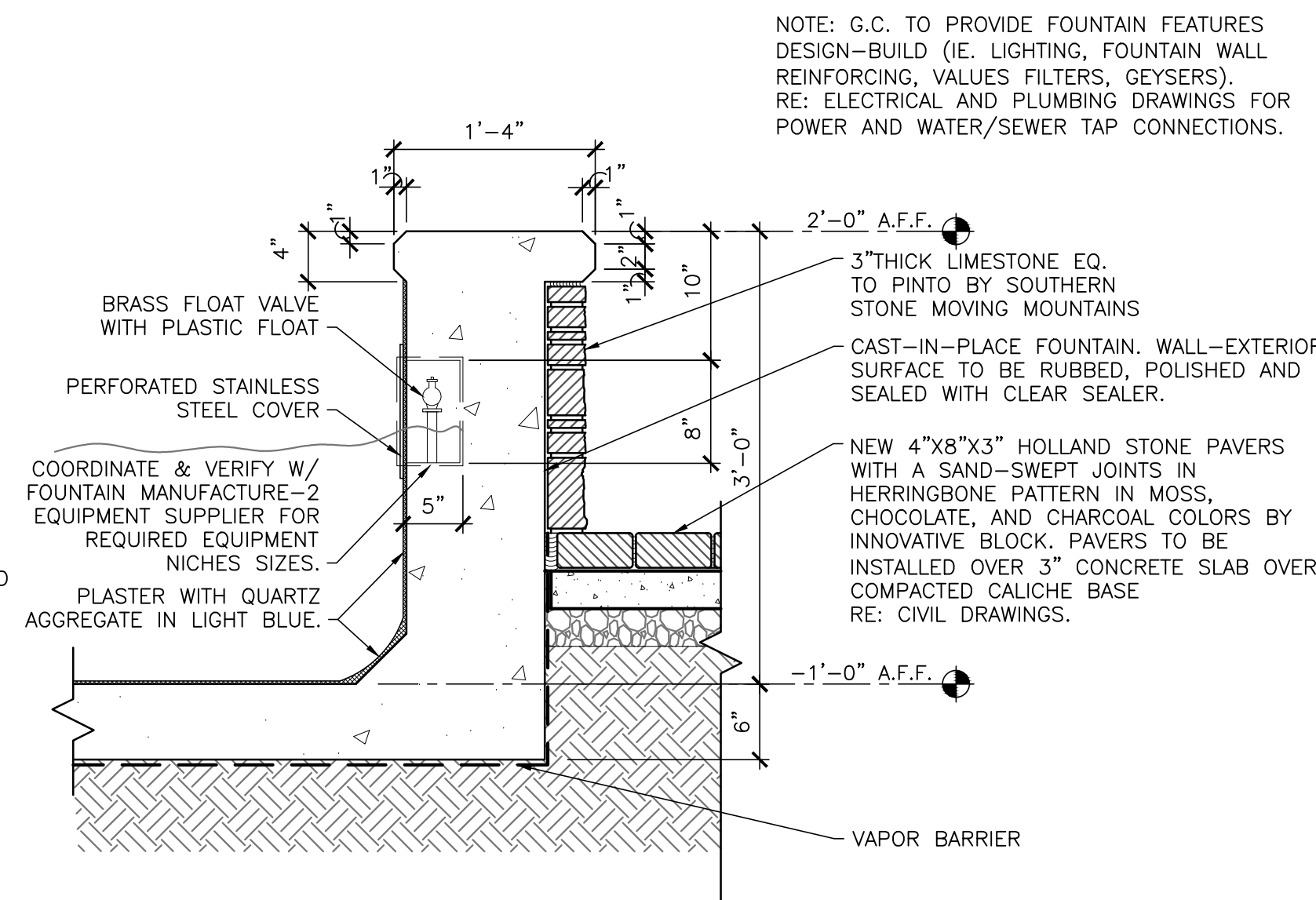
NOTE: G.C. TO PROVIDE FOUNTAIN FEATURES DESIGN-BUILD (E. LIGHTING, FOUNTAIN WALL REINFORCING, VALVES, FILTERS, GEYSERS). RE: ELECTRICAL AND PLUMBING DRAWINGS FOR POWER AND WATER/SEWER TAP CONNECTIONS.



11 FOUNTAIN SECTION DETAIL

SCALE: 1/4"=1'-0"

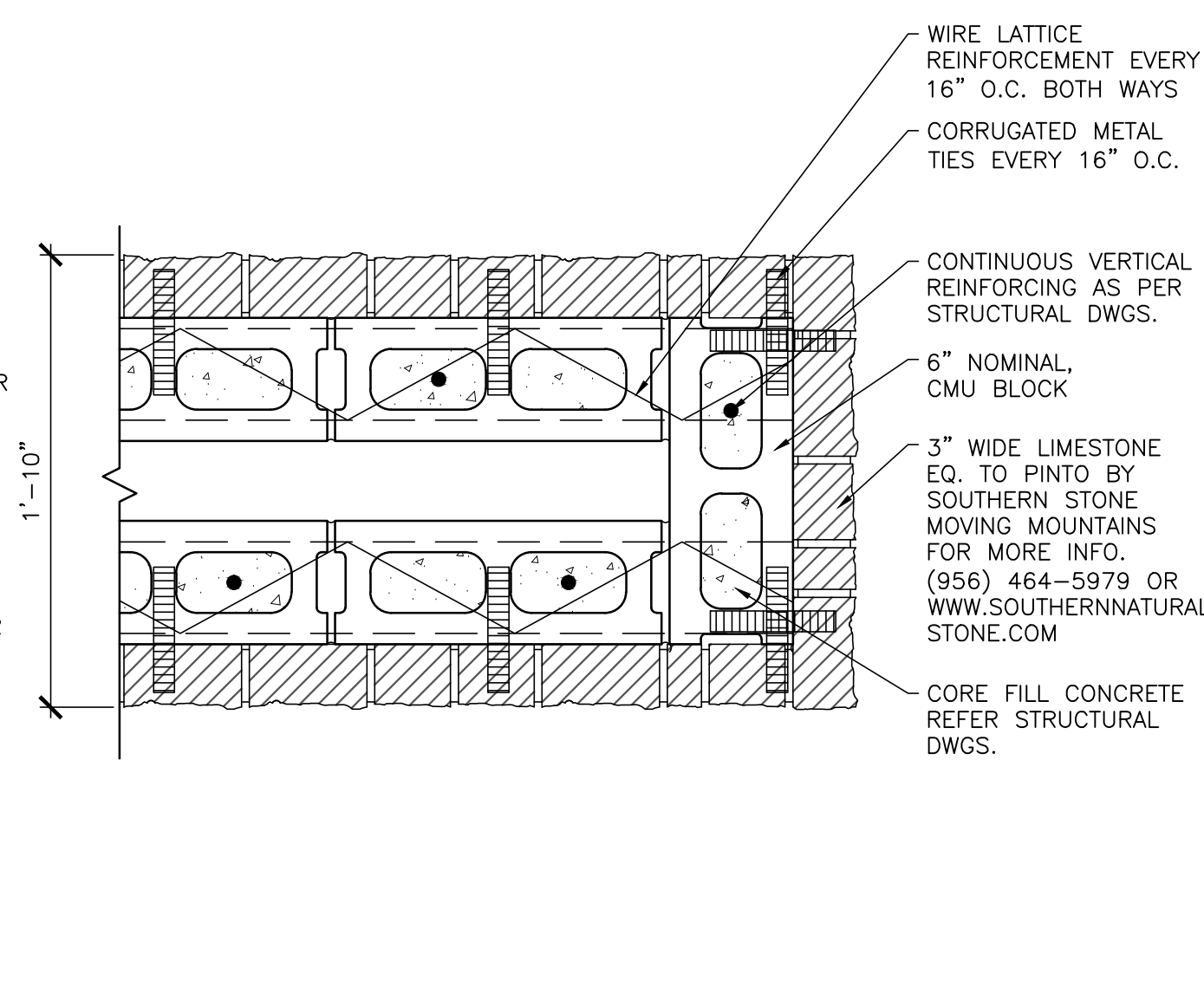
SITE\_DET1\_004



10 FOUNTAIN SECTION DETAIL

SCALE: 1/4"=1'-0"

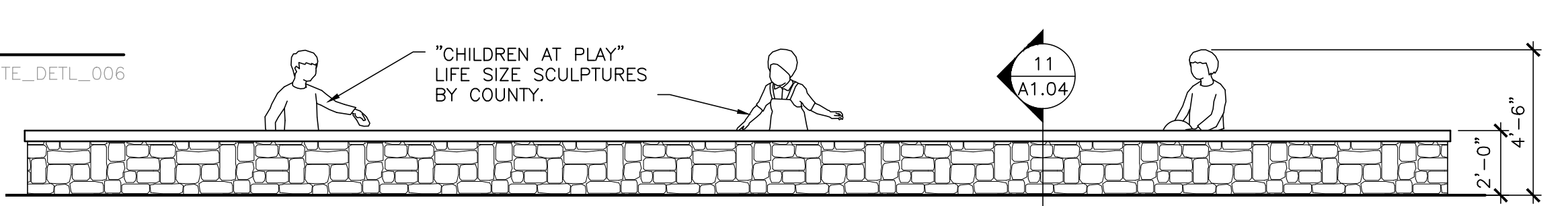
SITE\_DET1\_003



9 WALL DETAIL

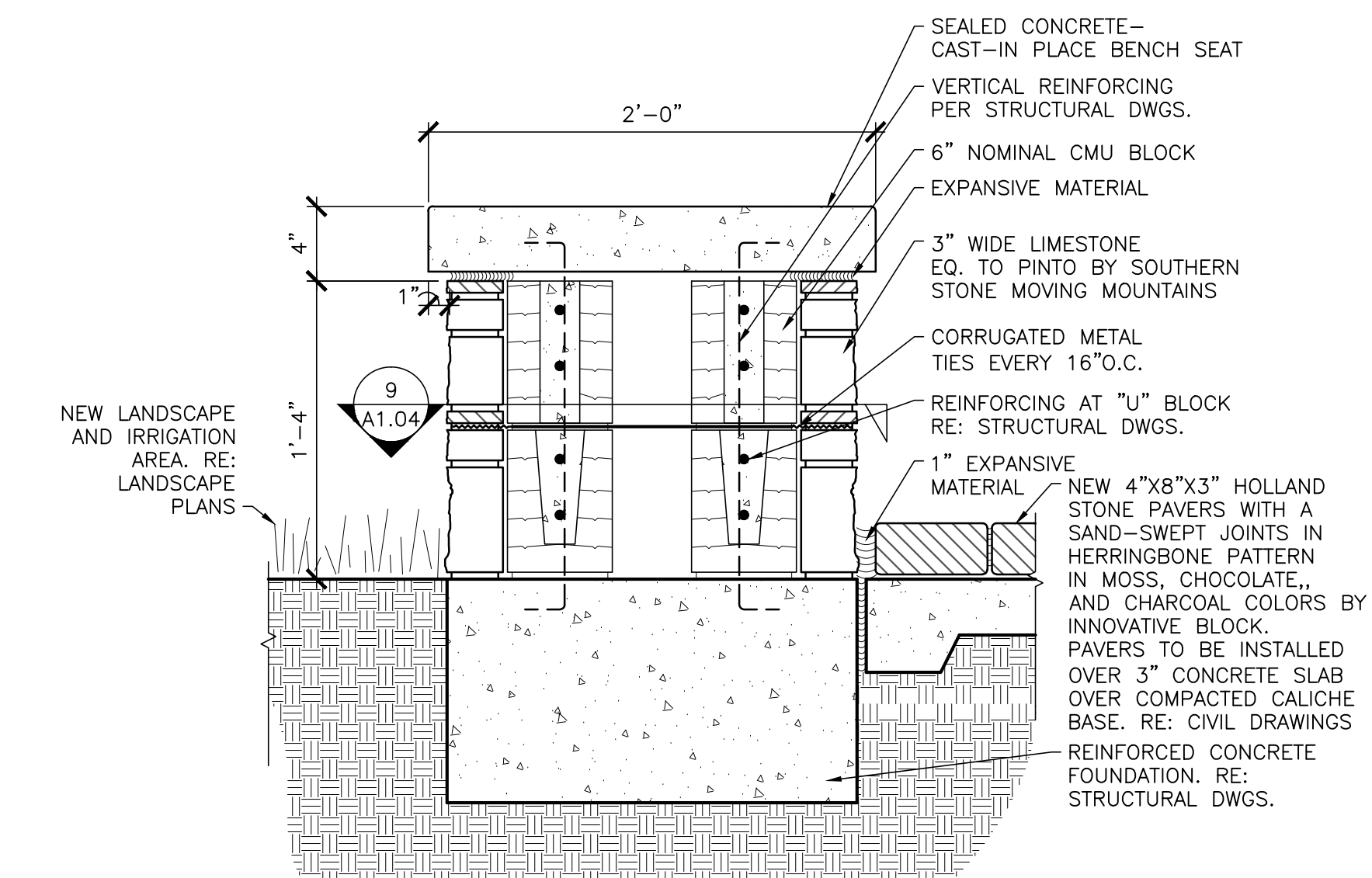
SCALE: 1 1/2"=1'-0"

SITE\_DET1\_006



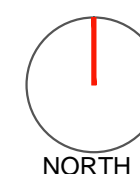
8 FOUNTAIN FEATURE ELEVATION

SCALE: 1/4"=1'-0"



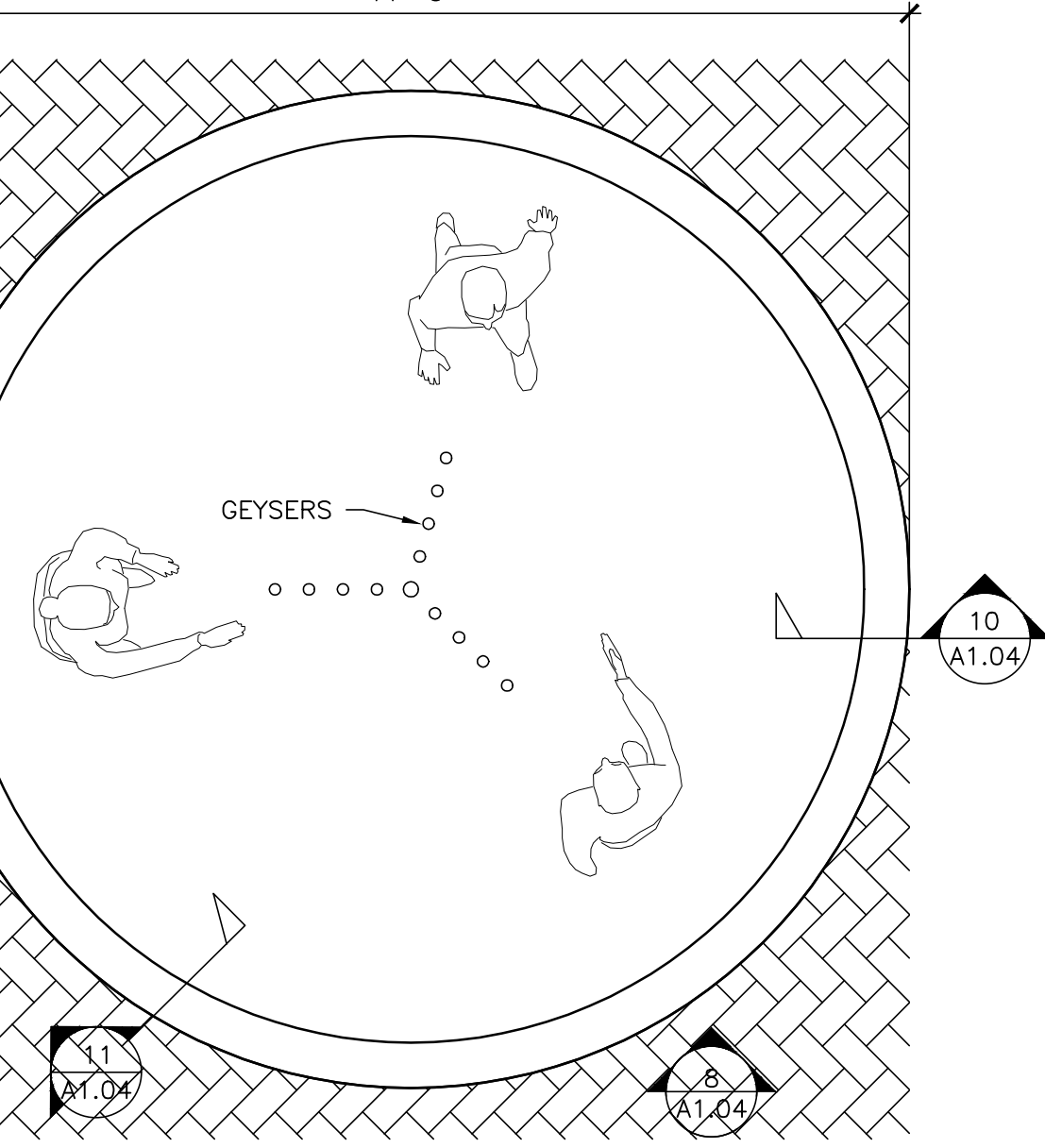
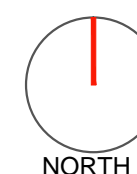
7 TREE WELL BENCH SECTION DETAIL

SCALE: 1 1/2"=1'-0"



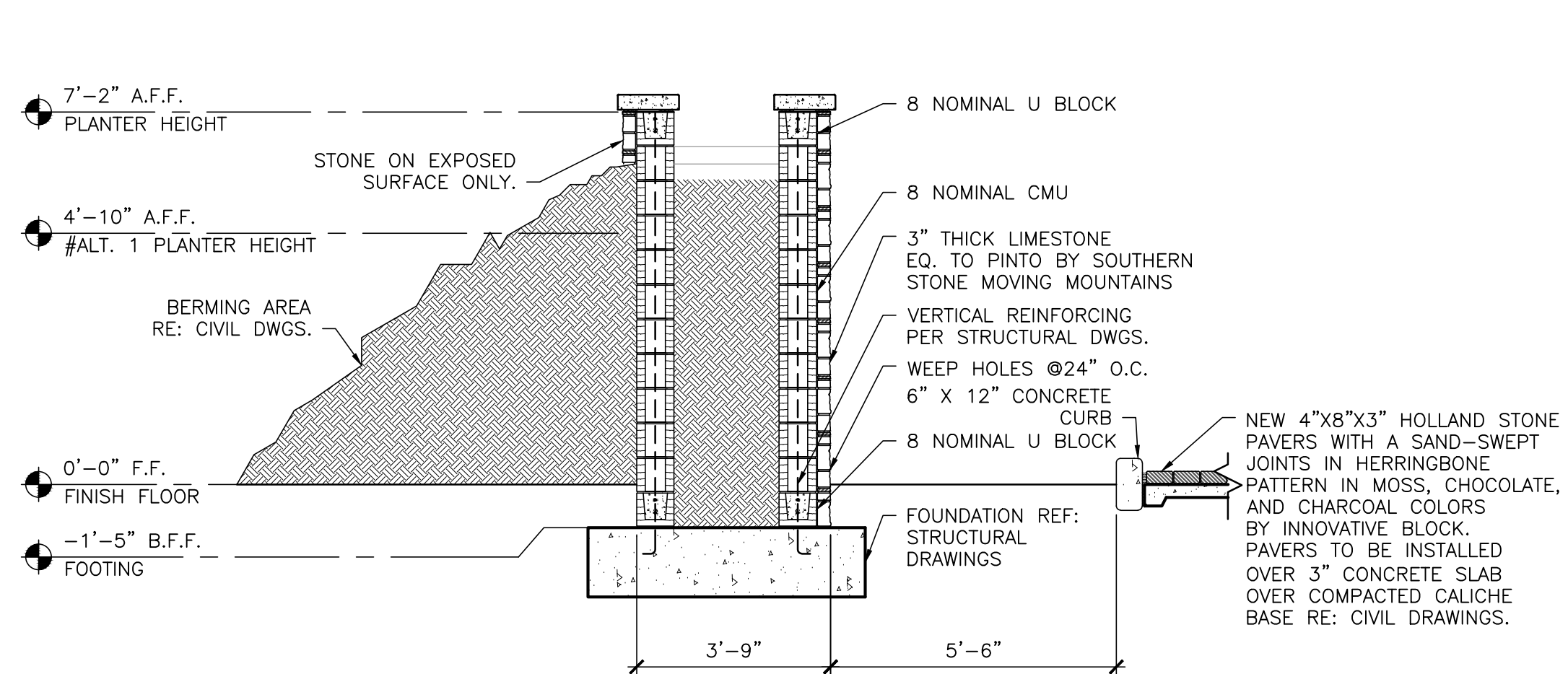
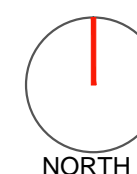
6 PARTIAL SITE PLAN AT "TREE WELL" BENCH FEATURE

SCALE: 1/8"=1'-0"



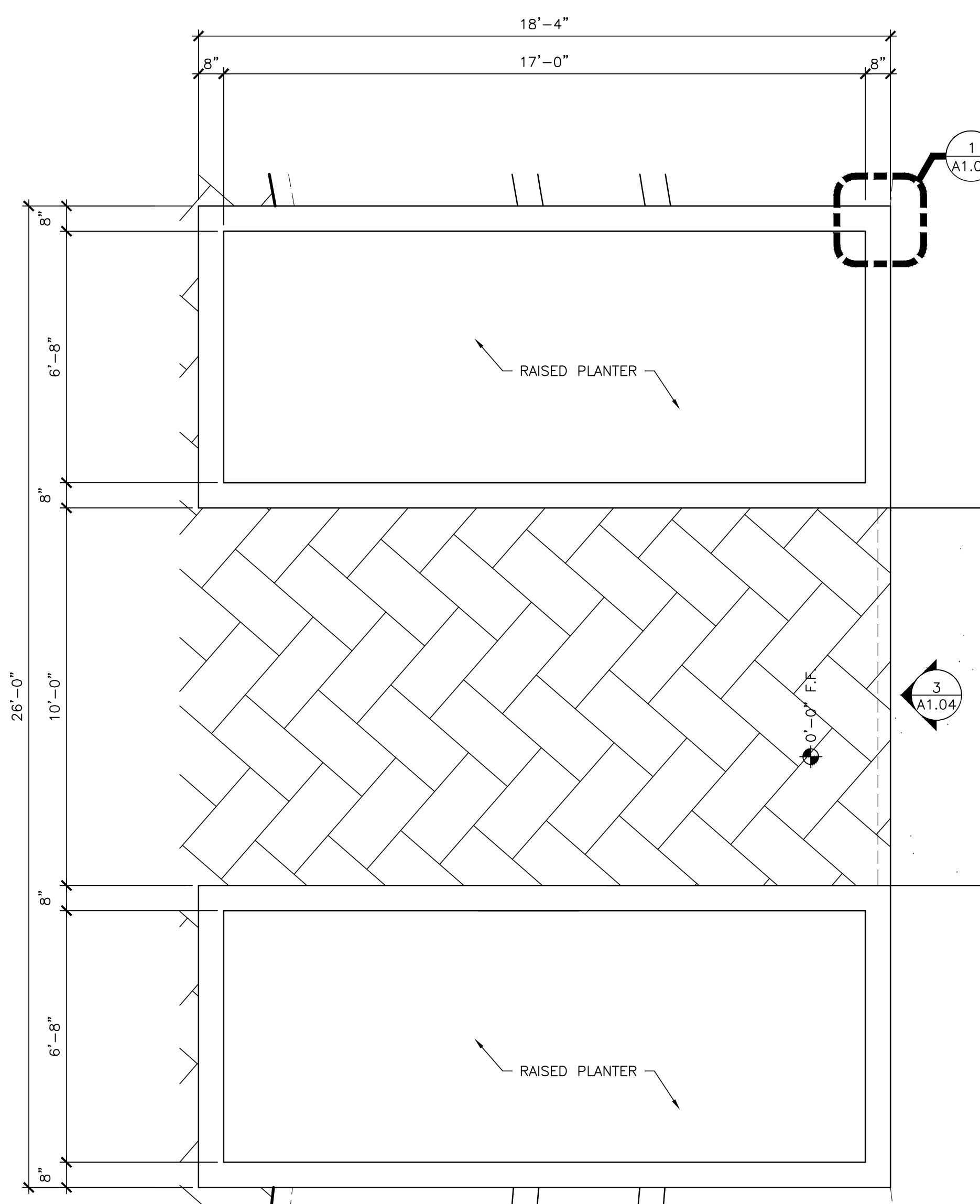
5 PARTIAL SITE PLAN AT FOUNTAIN FEATURE

SCALE: 1/8"=1'-0"



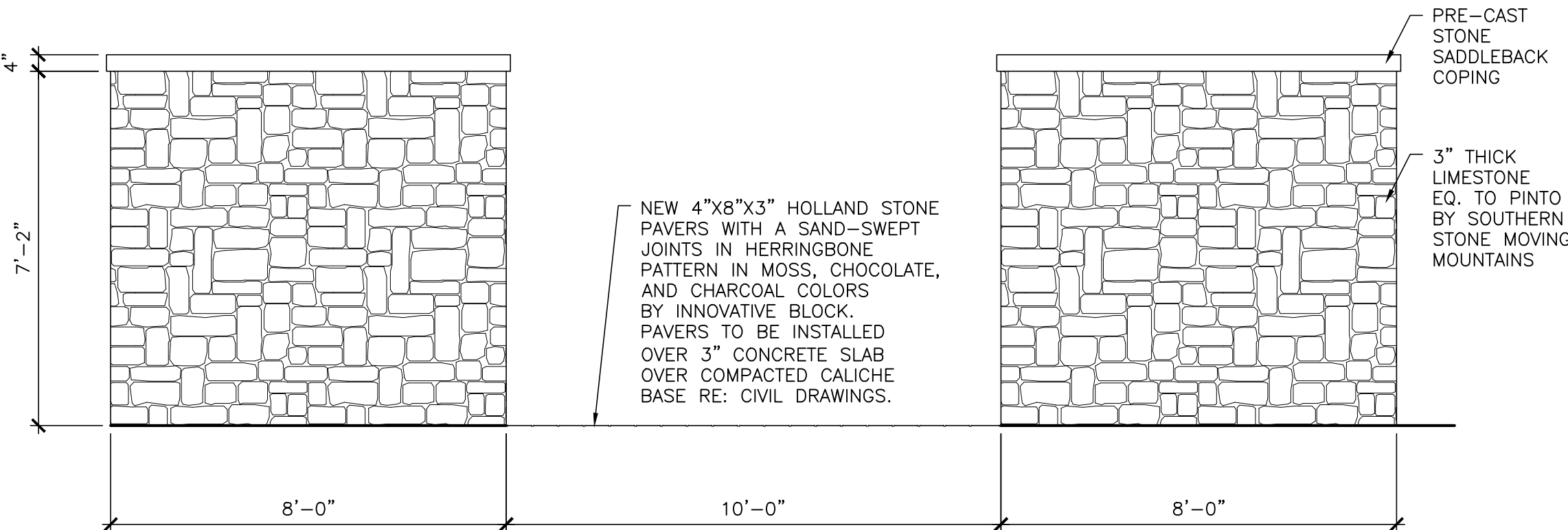
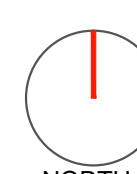
4 PLANTER WALL SECTION DETAIL

SCALE: 3/8"=1'-0"



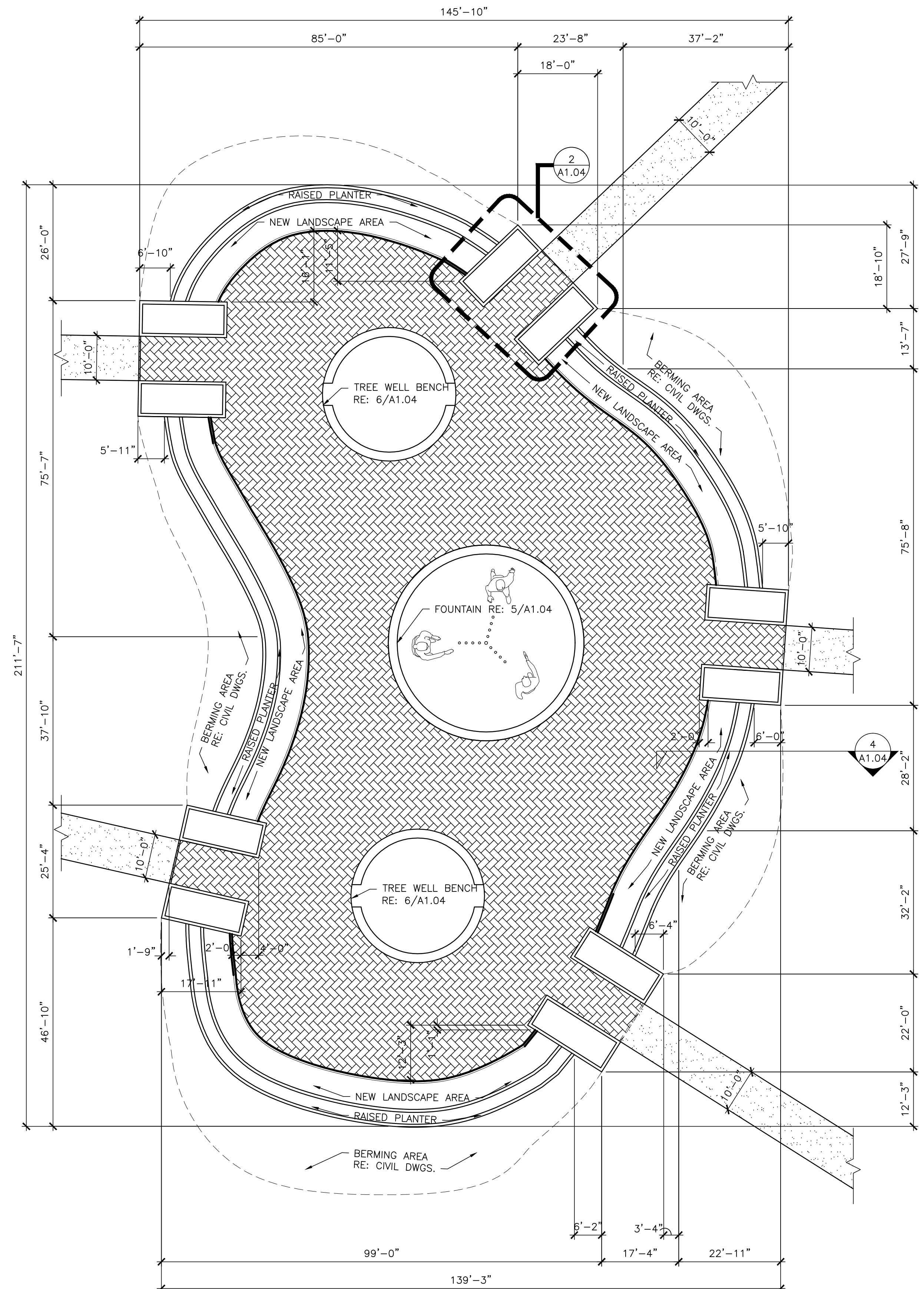
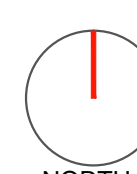
2 STAIR ENLARGED PLAN

SCALE: 3/8"=1'-0"



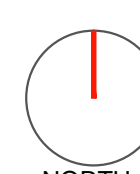
3 STAIR SECTION DETAIL

SCALE: 3/8"=1'-0"



1 PARTIAL SITE PLAN AT "SUNKEN GARDEN"

SCALE: 1/16"=1'-0"



## SHEET NOTES

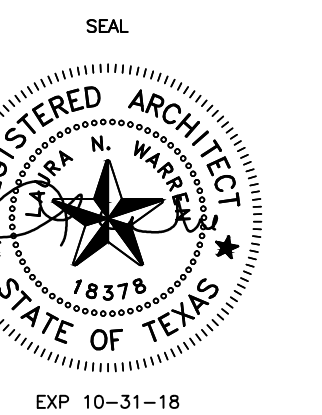
1. REFER SHEET G0.01 AND SPECIFICATIONS FOR ALTERNATES DESCRIPTION.



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REVISION	DATE	APPROVED BY	DESCRIPTION



PROPOSED

HIDALGO COUNTY  
PRECINCT 4  
MEMORIAL PARK  
PHASE 1

107 SUNFLOWER RD  
EDINBURG, TEXAS 78542

PROJECT DATE  
1341701  
09/27/2018  
REVISED

A1.04  
PARTIAL SITE PLAN,  
ELEVATIONS, & SECTIONS



GENERAL

1. THIS CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE UNLESS OTHERWISE INDICATED. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, WORKMEN, AND OTHER PERSONS DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR EARTH BANKS, FORMS, SCAFFOLDING, PLANKING SAFETY NETS, SUPPORT AND BRACING FOR CRANES, PILES, ETC. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND HE SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT OR THE ENGINEER DO NOT INDUCE INSPECTION OF THE ABOVE AND BELOW ITEMS.
2. ALL CONSTRUCTION AND QUALITY OF MATERIALS SHALL COMPLY WITH THE GOVERNING BUILDING CODES AND REGULATIONS.
3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, TOLERANCES AND CONDITIONS AT THE JOB SITE BEFORE COMMENCEMENT OF WORK AND SHALL IMMEDIATELY REPORT ANY DISCREPANCIES OR OMISSIONS TO THE ARCHITECT AND ENGINEER IN WRITING. ANY OMISSION OR CONFLICT BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH ANY WORK SO INVOLVED. IN CASE OF CONFLICT, NOTES AND DETAILS ON THE BALANCE OF THE DRAWINGS TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. DRAWINGS TAKE PRECEDENCE OVER SPECIFICATIONS.
4. WHERE CONSTRUCTION DETAILS ARE NOT SPECIFICALLY SHOWN OR NOTED FOR ANY PART OF THE WORK, SUCH DETAILS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAILS SHOWN FOR SIMILAR CONDITIONS AND MATERIALS, WHERE SUFFICIENTLY SIMILAR WORK IS NOT SHOWN, THE ENGINEER SHALL BE CONSULTED FOR CLARIFICATION. EACH SUBCONTRACTOR IS CONSIDERED AN EXPERT IN HIS RESPECTIVE FIELD AND SHALL PRIOR TO THE SUBMISSION OF A BID OR PERFORMANCE OF WORK, NOTIFY THE GENERAL CONTRACTOR, ARCHITECT, ENGINEER OR OWNER, IN WRITING OF ANY WORK CALLED OUT IN THE DRAWINGS IN HIS TRADE THAT CANNOT BE GUARANTEED OR PERFORMED AS INDICATED.
5. THE CONTRACTOR SHALL COORDINATE ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AS TO WEIGHTS AND EXACT LOCATIONS, WITH STRUCTURAL SUPPORTS. IN THE EVENT THAT THE PURCHASED EQUIPMENT DEVIATES IN WEIGHT AND LOCATION FROM THOSE INDICATED ON THE PLANS, THE ARCHITECT AND ENGINEER MUST BE NOTIFIED AND APPROVAL OBTAINED PRIOR TO INSTALLATION.
6. THIS STRUCTURE IS DESIGNED AS A STABLE UNIT AFTER ALL COMPONENTS ARE IN PLACE. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY BRACING AS REQUIRED TO INSURE THE VERTICAL AND LATERAL STABILITY OF THE ENTIRE STRUCTURE, OR ANY PORTION THEREOF, DURING CONSTRUCTION.
7. NEITHER THE OWNER NOR THE ARCHITECT NOR THE ENGINEER WILL ENFORCE SAFETY MEASURES OR REGULATIONS. THE CONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING AND BRACING, AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS.
8. TRADE NAMES AND MANUFACTURERS REFERRED TO ARE FOR QUALITY STANDARDS ONLY. SUBSTITUTIONS WILL BE PERMITTED AS APPROVED BY THE ENGINEER.
9. ANY OPTIONS OR APPROVED SUBSTITUTIONS ARE FOR CONTRACTORS CONVENIENCE. THE CONTRACTOR SHALL HAVE RESPONSIBILITY FOR THE DESIGN OF SUCH SUBSTITUTIONS (INCLUDING REDESIGN BY THE ENGINEER), AND COORDINATION WITH ALL ITEMS THAT THE SUBSTITUTIONS MAY HAVE.
10. THE ARCHITECT AND ENGINEER ARE TO BE NOTIFIED IN WRITING WHEN CONSTRUCTION AT THE SITE BEGINS.
11. ANY QUESTIONS RELATED TO INTERPRETATION OR INTENT OF THESE DRAWINGS SHALL BE REFERRED TO THE ENGINEER.
12. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO LOCATE AND PROTECT ANY EXISTING UNDERGROUND OR CONCEALED CONDUIT, PLUMBING, OR OTHER UTILITIES PRIOR TO BEGINNING ANY WORK.
13. PIPES, DUCTS, SLEEVES, CHASES, ETC. SHALL NOT BE PLACED IN BEAMS OR WALLS UNLESS SPECIFICALLY SHOWN OR NOTED. NOR SHALL ANY STRUCTURAL MEMBER BE CUT FOR PIPES, DUCTS, ETC. UNLESS NOTED CONTRACTOR SHALL OBTAIN PRIOR APPROVAL FOR INSTALLATION OF ANY ADDITIONAL PIPES, DUCTS, ETC.

DESIGN

DESIGN LOADS, STRUCTURAL ANALYSIS AND PREPARATIONS OF STRUCTURAL MEMBERS ARE BASED UPON THE FOLLOWING CRITERIA:

1. CODE	IBC 2012
2. LATERAL LOADS	
A. WIND SPEED (V <sub>30</sub> )	139 MPH
B. EXPOSURE CATEGORY:	C
C. IMPORTANCE FACTOR:	1.15
D. BUILDING CATEGORY	II
E. SEISMIC DESIGN CATEGORY	A
F. SITE CLASS	D
G. SEISMIC COEFFICIENTS	D
Ss	0.058 g
S1	0.014 g
Fa	2.5
Pv	3.5
Sms	0.140 g
Smt	0.050 g
Sds	0.090 g
Sdt	0.033 g
3. VERTICAL LOADS	
A. COLLATERAL LOAD:	0 PSF
B. DEAD LOAD:	ACTUAL WEIGHT PSF
C. LIVE LOAD (REDUCIBLE)	20 PSF
D. LIVE UPLIFT LOAD (NET):	AS CALCULATED BY SUB-CONTRACTOR PSF
E. GROUND SNOW LOAD:	0 PSF
F. CRANE LOADS:	NONE
G. MECHANICAL UNITS:	SEE PLANS
FLOOR:	
A. DEAD LOAD:	50 PSF
B. LIVE LOAD, OFFICE:	50 + 20 PSF
C. LIVE LOAD, LIGHT STORAGE:	125 PSF
D. LIVE LOAD, HEAVY STORAGE:	250 PSF
E. LIVE LOAD, ROOMS:	80 PSF
F. LIVE LOAD, CORRIDOR:	100 PSF
G. MECHANICAL UNITS:	SEE MECHANICAL PLANS

SHOP DRAWINGS AND

1. SHOP DRAWINGS SHALL BE PREPARED AND SUBMITTED FOR REVIEW TO THE ENGINEER FOR EACH STRUCTURAL BUILDING MATERIAL AS INDICATED IN THE STRUCTURAL GENERAL NOTES AND THE CONTRACT SPECIFICATIONS. SEE THE CONTRACT SPECIFICATIONS FOR SUBMITTAL PROCEDURES AND ADDITIONAL INFORMATION.
2. SHOP DRAWINGS SHALL USE DRAFTING LINE WORK AND LETTING THAT IS CLEARLY LEGIBLE. SHOP DRAWINGS SHALL NOT CONTAIN NO REPRODUCTIONS OF THE CONTRACT DRAWING PLANS OR DETAILS.
3. SUBMIT SHOP DRAWINGS IN PDF FORMAT.
4. SHOP DRAWINGS SHALL NOT SHOW MATERIALS FOR MORE THAN ONE LEVEL OF THE SAME PLAN.
5. REVIEW OF SHOP DRAWINGS SHALL SHOW CLEAR AND COMPLETE INFORMATION FOR THE FABRICATION DETAIL SHEETS AND/OR MATERIAL LISTS AND INSTALLATION.
6. ALLOW A MINIMUM OF (2) WEEKS FOR REVIEW OF EACH SET OF SHOP DRAWINGS.
7. CONTRACTOR SHALL REVIEW THE SHOP DRAWINGS SUBMITTED BY THE SUB-CONTRACTOR AND COORDINATE SHOP DRAWINGS WITH ALL OTHER TRADING.
8. CONTRACTOR SHALL ANSWER ALL QUESTIONS OR CLARIFICATIONS BY THE SUB-CONTRACTOR BEFORE SUBMITTING TO ENGINEER FOR REVIEW. ANY QUESTIONS THAT THE CONTRACTOR CANNOT ANSWER WITH THE INFORMATION ON THE DRAWINGS SHALL CLEARLY BE MARKED FOR THE ENGINEER FOR REVIEW.
9. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS. SEE NOTE NUMBER 3 UNDER GENERAL NOTES.
10. REVIEW OF SHOP DRAWINGS BY THE ENGINEER IS FOR GENERAL CONFORMANCE TO THE STRUCTURAL DRAWINGS. REVIEW OF THE SHOP DRAWINGS BY THE ENGINEER DOES NOT RELIEF THE CONTRACTOR FOR ANY ERRORS IN DIMENSIONS OR MATERIALS INDICATED ON THE SHOP DRAWINGS.
11. IF THERE IS ANY DISCREPANCY BETWEEN THE STRUCTURAL DRAWINGS AND SHOP DRAWINGS, THE INFORMATION SHOWN ON THE STRUCTURAL DRAWINGS GOVERN.
12. PROVIDE SUBMITTALS FOR THE FOLLOWING ITEMS:

ITEM	REQUIRED
A. CONCRETE MIX DESIGN	X
B. CURING COMPOUND FOR CONCRETE	X
C. REINFORCING STEEL	X
D. STRUCTURAL STEEL	X
E. STEEL JOBS	X
F. METAL DECKING (INDICATE LAYOUT AND TYPES OF DECK PANELS, ANCHORAGE DETAILS, REINFORCING CHANNELS, PANS, DECK OPENINGS, SPECIAL JOINTING, ACCESSORIES, AND ATTACHMENTS TO OTHER CONSTRUCTION)	X
G. PRE-MANUFACTURED METAL BUILDING (INCLUDE CALC'S & REACTIONS)	
H. PRE-MANUFACTURED WOOD TRUSSES	

REINFORCING

1. BAR REINFORCEMENT SHALL CONFORM TO THE FOLLOWING GRADES OF ASTM A615, INCLUDING SUPPLEMENT S1, GRADE 40 - #8 AND SMALLER GRADE 60 - #4 AND LARGER.
2. DETAILS OF REINFORCEMENT SHALL BE IN ACCORDANCE WITH THE "MANUAL OF THE AMERICAN CONCRETE INSTITUTE (ACI) 318, UNLESS OTHERWISE NOTED.
3. TOP AND BOTTOM AND AT INTERMEDIATE LOCATIONS, SPACED NOT GREATER THAN 192 BAR DIAMETERS OR 48" O.C. WHICH EVER IS LESS. IN MASONRY CONSTRUCTION, THE REINFORCEMENT SHALL BE SECURED IN PLACE WITH REBAR SPACERS AND SHALL NOT BE SPACED APART MORE THAN 48 INCHES ON CENTER.
4. ALL BEAMS REINFORCEMENT SHALL CONFORM TO ASTM A185.
5. WALLS, PILLARS, COLUMNS SHALL BE DOWELED TO THE SUPPORTING FOOTINGS WITH REINFORCEMENT.
6. WALLS, PILLARS, COLUMNS SHALL BE DOWELED TO THE SAME SPACING AS THE VERTICAL REINFORCEMENT IN THE WALLS, PILLARS, OR COLUMNS.
7. BAR SUPPORTS SHALL BE PROVIDED IN ACCORDANCE WITH THE PROVISIONS OF "BAR SUPPORT SPECIFICATIONS" AS CONTAINED IN THE LATEST EDITION OF THE "MANUAL OF STANDARD PRACTICE" BY THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI). PLASTIC BRICK CHAIRS ARE NOT ALLOWED FOR SLAB ON GRADE AND GRADE BEAMS. USE CONCRETE BRICK CHAIRS.
8. THE CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE", LATEST EDITION.
9. ALL REINFORCEMENT SHALL BE SECURELY TIED IN PLACE BEFORE PLACING CONCRETE OR GROUT, INCLUDING EXTERIOR DOWELS FOR CMU OR CONCRETE WALLS.
10. PROVIDE CORNER BARS TO STAYS PERMANENT AND DEAD END BEAM INTERSECTIONS. BARS TO EQUAL SIZE AND QUANTITY OF THE NOTED BEAM STEEL. BARS SHALL BE DETAIL AS CONTINUOUS BARS. BE LAPPED 40 BAR DIAMETERS AT SPLICES.
11. EXTEND THE SLAB REINFORCING STEEL, PERPENDICULAR TO BEAM, TO THE TOP OUTSIDE REINFORCING BAR OF PERIMETER BEAMS. START THE SLAB REINFORCING STEEL, PARALLEL TO BEAM, NOT MORE THAN 6" FROM THE TOP INSIDE REINFORCING BAR OF PERIMETER BEAMS.
12. PROVIDE #4 "Z" BARS AT 12" ON CENTER WHERE THE SLAB STEPS DOWN MORE THAN 3". THE "Z" BARS SHALL LAP THE MAIN SLAB REINFORCING STEEL 40 BAR DIAMETERS.
13. ALL CONDUIT OR PLUMBING LINES IN SLAB SHALL BE PLACED BELOW SLAB REINFORCING. ALL CONDUIT TO BE NO GREATER THAN 1" DIAMETER AND TO BE PLACED IN CENTER OF SLAB. NO PLUMBING LINES GREATER THAN 1" INCH ALLOWED IN THE SLAB.
14. WELDING OF CROSSING BARS AND TACK WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED.
15. WELDING OF REINFORCING STEEL, IF PERMITTED BY THE STRUCTURAL ENGINEER, SHALL BE PERFORMED IN ACCORDANCE WITH THE "STRUCTURAL WELDING CODE REINFORCING STEEL" ON THE AMERICAN WELDING SOCIETY. AWS D1.4-08 AS INCORPORATED IN CBC CHAPTER 19.18 AND BY CERTIFIED WELDERS QUALIFIED USING PROCEDURES CONTAINED THEREIN. ETOW ELECTRODES SHALL BE USED IN WELDING.
16. REINFORCEMENT SHALL NOT BE WELDED UNTIL A CHEMICAL ANALYSIS SUFFICIENT TO DETERMINE THE CARBON EQUIVALENT (C.E.) IS PERFORMED. THE C.E. OF REINFORCING STEEL SHALL BE CALCULATED FROM THE CHEMICAL COMPOSITION AS SHOWN IN THE MILL TEST REPORT. IF MILL TEST REPORTS ARE NOT AVAILABLE, A CHEMICAL ANALYSIS SHALL BE MADE ON REINFORCEMENT REPRESENTATIVE OF THOSE TO BE WELDED. THE C.E. SHALL NOT EXCEED 0.55 AS CALCULATED PER CBC CHAPTER 19.18. A COPY OF THE MILL TEST OF REINFORCING STEEL IN CONCRETE MEMBERS, SPECIAL INSPECTION IS REQUIRED FOR ALL FIELD WELDING.
17. CONTRACTOR SHALL SUBMIT REINFORCING STEEL SHOP DRAWINGS FOR REVIEW BEFORE FABRICATION AND INSTALLATION.
18. LAPS AT BAR SPLICES, UNLESS NOTED OTHERWISE, SHALL BE AS FOLLOWS:
- MASONRY - GRADE 60: LAP 50 DIA. (30" MIN.)  
GRADE 40: LAP 48 DIA. (24" MIN.)
- CONCRETE - LAP PER SCHEDULE BELOW

EXPOSURE CONDITION	MINIMUM COVER	TOLERANCE
DRILLED PIERS, FOOTINGS AND OTHER PRINCIPAL STRUCTURAL MEMBERS IN WHICH CONCRETE IS DEPOSITED AGAINST GROUND: WHERE CONCRETE SURFACES, AFTER REMOVAL OF FORMS, ARE EXPOSED TO WEATHER OR GROUND:	3"	3/8"
FOR BARS 5/8" IN DIAMETER	2"	1/4"
FOR BARS 5/8" OR LESS IN DIAMETER	1 1/2"	1/4"
WHERE SURFACES ARE NOT DIRECTLY EXPOSED TO WEATHER OR GROUND:		
FOR SLAB ON GRADE (FROM TOP OF SLAB)	1 1/2"	1/4"
FOR BEAMS, COLUMNS	1"	1/8"
FOR JOISTS AND SLABS	1"	1/8"

18. LAPS AT BAR SPLICES, UNLESS NOTED OTHERWISE, SHALL BE AS FOLLOWS:

MASONRY - GRADE 60: LAP 50 DIA. (30" MIN.)  
GRADE 40: LAP 48 DIA. (24" MIN.)

CONCRETE - LAP PER SCHEDULE BELOW

BAR SPICE LAP LENGTH IN CONCRETE				
BAR	fc = 2000 PSI	fc = 3000 PSI	fc = 4000 PSI	fc = 5000 PSI
SIZE:	2000 PSI	3000 PSI	4000 PSI	5000 PSI
#3	22	22	22	22
#4	29	29	29	29
#5	40	36	36	36
#6	57	46	43	43
#7	77	63	54	54
#8	100	82	71	71
#9	128	104	90	90
#10	162	132	115	115
#11	200	163	141	141

FOR WELDED WIRE FABRIC: SPACING OF WIRE PLUS 12".

STRUCTURAL

1. MATERIAL, AND WORKMANSHIP SHALL CONFORM TO THE LATEST EDITION OF THE AISC SPECIFICATIONS FOR STEEL DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.
2. STRUCTURAL STEEL SHALL COMPLY WITH THE FOLLOWING ASTM DESIGNATIONS:
- | MATERIAL                         | DESIGNATION   | STRENGTH  |
|----------------------------------|---------------|-----------|
| ANCHOR BOLTS                     | A36           | Fy=36 ksi |
| PLATES                           | A36           | Fy=36 ksi |
| ANGLES                           | A36           | Fy=36 ksi |
| CHANNELS                         | A36           | Fy=36 ksi |
| WIDE FLANGE SHAPES               | A572          | Fy=50 ksi |
| STEEL PIPE                       | A53, GRADE B  | Fy=35 ksi |
| SQUARE & RECT. STEEL TUBES (HSS) | A500, GRADE B | Fy=46 ksi |
| ROUND TUBES (HSS)                | 500, GRADE B  | Fy=42 ksi |
3. ALL STRUCTURAL STEEL SHALL BE FABRICATED, ERECTED, AND PAINTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS AS AMENDED TO DATE AND THE CODE OF STANDARD PRACTICE, LATEST EDITION AS ADOPTED BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, AMENDED AS FOLLOWS:
- SECTION 7.4.1. DELETE FIRST TWO SENTENCES.
- SECTION 7.4. ALL REFERENCE TO OWNER SHALL BE CHANGED TO GENERAL CONTRACTOR.
- SECTION 7.9.3. THE CONTRACTOR SHALL PROVIDE THE SCHEDULE AND SCHEDULE OF THE EFFECT OF ANY CONCENTRATION LOADS MUST BE TAKEN INTO ACCOUNT.
- SECTION 7.9.4. THE CONTRACTOR TO DESIGN SHOPS, JACKS OR LOADS.
- WELDING SHALL BE DONE IN ACCORDANCE WITH THE STANDARD CODE FOR ARC AND GAS WELDING IN BUILDING CONSTRUCTION AS PUBLISHED BY THE AMERICAN WELDING SOCIETY, EXCEPT THAT ALL WELDING SHALL BE DONE BY THE ELECTRIC ARC PROCESS.
- ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS AND SHALL CONFORM TO ANSII/AWS D1.1:4.
5. DETAILED AND OR SCHEDULED CONNECTIONS HAVE BEEN DESIGNED BY STRUCTURAL ENGINEER. ANY CONNECTION NOT DETAILED OR SCHEDULED OR ALTERED FOR FABRICATION PURPOSES SHALL BE SIZED AND DETAILED BY FABRICATOR AND SHALL BE MARKED FOR ENGINEER'S VERIFICATION. FABRICATOR SIZED AND DETAILED CONNECTIONS SHALL SUPPORT ONE HALF THE TOTAL UNIFORM LOAD CAPACITY SHOWN IN THE TABLES OF UNIFORM CONDITIONS. PART 2 OF THE AISC MANUAL OF STEEL CONSTRUCTION FOR THE GIVEN BEAM, SPAN AND GRADE OF STEEL SPECIFIED.
6. SEE ARCHITECTURAL PLANS FOR MISCELLANEOUS STEEL ITEMS NOT INDICATED ON STRUCTURAL DRAWINGS. STEEL ITEMS SHOWN ON ARCHITECTURAL DRAWINGS AND NOT SPECIFIED ON THE STRUCTURAL DRAWINGS SHALL BE DESIGNED BY THE STEEL FABRICATOR. SEE DESIGN CRITERIA FOR LOADING.
7. ALL BOLTED CONNECTIONS SHALL BE MADE USING 1/4" FILLET WELD, U.N.O.
8. ALL BOLTED CONNECTIONS SHALL BE MADE USING 3/4" DIAMETER HIGH STRENGTH BOLTS, ASTM A325, BEARING TYPE CONNECTION W/ WASHERS ASTM F438, U.N.O. ON DESIGN DRAWINGS. CONNECTION REQUIRED FOR ALL HIGH STRENGTH BOLTING. ALL NUTS SHALL BE PER ASTM A563.
9. ALL CONNECTION PLATES AND STIFFENERS SHALL BE MADE WITH 1/4" THICK PLATES.
10. ALL STEEL (INCLUDING BOLTS) EXPOSED TO THE WEATHER SHALL BE HOT DIPPED GALVANIZED. INCLUDES STEEL THAT IS ONLY COVERED WITH PLASTER OR STUCCO. SEE ARCHITECTURAL PLANS FOR STRICTER REQUIREMENTS ARE REQUIRED.
11. ALL EXPOSED STEEL SHALL FOLLOW SECTION 10 OF THE CODE OF STANDARD PRACTICE OF AISC, SECTION 10 OF THE CODE ADDRESSES ARCHITECTUALLY EXPOSED STRUCTURAL STEEL (AESS).
12. CONNECTIONS SHALL BE PER HOLLOW STRUCTURAL SECTIONS, CONNECTION MANUAL BY AISC.
13. WHERE STEEL MEMBER PASSES THROUGH CMU WALL, PROVIDE HALF INCH GAP BETWEEN THE CMU AND THE STEEL MEMBER, PROVIDE ELASTOMERIC MATERIAL BETWEEN THE STEEL MEMBER AND CMU WALL.
14. ALL BEAMS NOT SHOWN SHALL BE W14x26. ALL COLUMNS NOT SHOWN SHALL BE HSS44x14.
15. HOLES FOR BOLTS IN STRUCTURAL STEEL SHALL BE DRILLED OR PUNCHED. BURNING OF HOLES SHALL NOT BE PERMITTED. UNLESS NOTED OTHERWISE, HOLES SHALL BE STANDARD SIZE 1/16 INCH LARGER THAN THE BOLT.
16. ALL STRUCTURAL STEEL SHAPES SHALL BE PRIMED WITH A RUST RESISTANT PRIMER BEFORE SHIPMENT TO THE PROJECT SITE. PRIMER SHALL NOT BE APPLIED TO THE INTERIOR AREA OF STEEL. INTENDED TO RECEIVE SLIP CRITICAL BOLTED CONNECTIONS.
17. HIGH STRENGTH BOLTS INSTALLATION SHALL BE CONTINUOUSLY INSPECTED BY A SPECIAL INSPECTOR. FOLLOWING ARE REQUIREMENTS OF THE SPECIAL INSPECTOR:
- A. HE SHALL VERIFY THE MILL CERTIFICATES FOR MATERIAL.
- B. HE SHALL VERIFY THAT THE MATERIAL USED ARE PROPERLY STORED AND PREPARED FOR USE.
- C. HE SHALL VERIFY THAT CONSTRUCTION DETAILS, PROCEDURES, TOOL CALIBRATIONS AND WORKMANSHIP ARE IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND BUILDING CODE.
- D. FOR SNUG-TIGHT CONNECTIONS, HE SHALL VERIFY THAT THE PILES OF THE CONNECTED ELEMENTS HAVE BEEN BROUGHT INTO SNUG CONTACT WITH EACH OTHER.
- E. FOR SLIP-TIGHT CONNECTIONS, HE SHALL VERIFY THE PRETENSION METHOD SELECTED BY THE CONTRACTOR HAS INDUCED THE REQUIRED MINIMUM TENSION.
- F. A CERTIFICATE OF INSPECTION SHALL BE FURNISHED BY THE SPECIAL INSPECTOR TO THE BUILDING OFFICIAL PRIOR TO HIS INSPECTION AND TO THE ARCHITECT AND ENGINEER.
20. ALL NON-SHRINK GROUT FOR LEVELING OF BASE PLATES SHALL HAVE A MINIMUM 5000 PSI COMPRESSIVE STRENGTH AT 28 DAYS. GROUT SHALL COMPLY WITH CORPS OF ENGINEERS SPECIFICATION CRD-C-621.
21. AT ALL TUBES, PROVIDE 3/8" THICK END PLATE, U.N.O.

ALLOWANCE

1. IN ADDITION TO THE MATERIAL SHOWN, THE CONTRACTOR TO PROVIDE ADDITIONAL MATERIAL, FOR USE ON THE PROJECT AS DIRECTED BY THE STRUCTURAL ENGINEER FIELD REPRESENTATIVE. THE ALLOWANCE COST SHALL INCLUDE MATERIAL COST, LABOR COSTS AND PLACEMENT AT THE SITE.
2. REMAINING BALANCE AT THE END OF THE PROJECT SHALL BE RETURNED/CREDITED BACK TO THE OWNER.
3. THE ALLOWANCE SHALL APPEAR ON THE SCHEDULE OF VALUE AS A LINE ITEM.
- | MATERIAL          | ALLOWANCE  |
|-------------------|------------|
| CONCRETE          | 2 CU. YD.  |
| REINFORCING STEEL | 1000 LBS   |
| STRUCTURAL STEEL  | 2000 LBS   |
| CMU               | 20 SQ. FT. |

SPECIAL NOTES TO

1. UNDER NORMAL CONDITIONS, AND FOR CONVENTIONAL BUILDINGS SUCH AS THE SUBJECT MATTER, REINFORCED CONCRETE AND MASONRY DEVELOP CRACKS. THE CRACKS ARE DUE TO INHERENT SHRINKAGE OF CONCRETE, CREEP AND RESTRAINING EFFECTS OF VERTICAL AND OTHER STRUCTURAL ELEMENTS TO WHICH THE BEAMS/SLABS ARE TIED.
2. THE CRACKS FORMED ARE NORMALLY COSMETIC. THE SLAB MAINTAINS ITS STRENGTH AND STRENGTH REQUIREMENTS. IT IS EMPHASIZED THAT ALTHOUGH SPECIAL EFFORT IS MADE TO REDUCE THE POTENTIAL CAUSES AND NUMBER OF SUCH CRACKS, IT IS NOT PRACTICAL TO PROVIDE TOTAL ARTICULATION BETWEEN THE FLOOR SYSTEM AND ITS SUPPORTS AND THEREBY ACHIEVE COMPLETE INHIBITION OF ALL CRACKS.
3. MOST SUCH CRACKS DEVELOP OVER THE FIRST THREE YEARS OF THE LIFE OF THE FLOOR SYSTEM. CRACKS WHICH ARE WIDER THAN 0.1 INCH MAY NEED TO BE PRESSURE EPOXIED. REFER TO THE NOTES UNDER "ALLOWANCES".
4. THE OBJECT OF THE JOINTS PROVIDED IS TO ALLOW MOVEMENT. MOVEMENTS DUE TO CREEP AND SHRINKAGE MAY BE NOTICEABLE AT JOINTS UP TO TWO YEARS AFTER CONSTRUCTION, BEYOND WHICH MOVEMENTS DUE TO VARIATIONS IN TEMPERATURE WILL PERSIST.

CAST-IN-PLACE

1. VERIFY ALL DIMENSIONS. COORDINATE WITH ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION AND NOTIFY ARCHITECT AND/OR ENGINEER OF ANY DISCREPANCIES.
2. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE SPECIFICATIONS, ACI 308.1-05, OR LATEST EDITION. DRILLED PIERS SHALL COMPLY WITH ACI 308.1-01 AND ACI 308.3R-05.
3. ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING BARS, ACCESSORIES UNLESS OTHERWISE NOTED, SHALL BE IN ACCORDANCE WITH THE ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE", ACI 318-11 LATEST EDITION.
4. THE MINIMUM 28 DAYS CYLINDER STRENGTH SHALL BE AS FOLLOWS:
- | LOCATION      | STRENGTH | MAXIMUM AGGREGATE | SIZE OF LARGE AGGREGATE | WATER/CEMENT RATIO |
|---------------|----------|-------------------|-------------------------|--------------------|
| FOUNDATIONS   | 3000 PSI | 5"                | 1 1/2"                  | 0.55               |
| SLAB ON GRADE | 3000 PSI | 5"                | 1 1/2"                  | 0.55               |
| GRADE BEAMS   | 3000 PSI | 5"                | 1 1/2"                  | 0.55               |
| WALL          | 3000 PSI | 6"                | 3/4"                    | 0.55               |
5. NO HORIZONTAL CONSTRUCTION JOINTS WILL BE PERMITTED IN SLABS OR BEAMS.
6. VERTICAL CONSTRUCTION JOINTS IN SLABS ARE TO BE AS SHOWN ON PLANS OR AS APPROVED BY ENGINEER.
7. ALL OPENINGS IN SLAB (FOR PIPING, DRAINS, ETC.) SHALL BE SEALED WITH 1/2" SEALANT "2A" (SELF-LEVELING 2-PART POLYURETHANE).
8. UTILITIES THAT PROJECT THROUGH SLAB FLOORS SHOULD BE DESIGNED WITH EITHER SOME DEGREE OF FLEXIBILITY OR WITH SLEEVES IN ORDER TO PREVENT DAMAGE TO THESE LINE SHAFTS DURING MOVEMENT OCCUR.
9. BACKFILL AROUND PERIMETER TO PROVIDE POSITIVE DRAINAGE AWAY FROM SLAB. FLOOR TOLERANCES
- | F-NUMBER SYSTEM | COMPOSITE | MINIMUM LOCAL VALUE |
|-----------------|-----------|---------------------|
|                 | 30        | 23                  |
|                 | 25        | 19                  |
11. IN ALL INSTANCES MINIMUM SLAB THICKNESS SHALL BE OBTAINED. COORDINATE SLAB FINISHES WITH ARCHITECTURAL PLANS.
12. ANCHOR BOLTS, SOWELS, INSERTS, ETC. SHALL BE SECURELY TIED IN PLACE PRIOR TO PLACING CONCRETE.
13. REFER TO ARCHITECTURAL MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR ALL MOLD, GROOVES, REGLETTS, ORNAMENTAL CLIPS, PIPES, CONDUITS, INSERTS, ETC. TO BE CAST IN CONCRETE. PROVIDE OVERSIZED SLEEVES FOR PLUMBING AND ELECTRICAL CONDUITS. CONDUITS SHALL BE PLACED IN CONCRETE. FOOTINGS, OR SLAB UNLESS SPECIFICALLY DETAILED IN THESE PLANS, OR AS DIRECTED BY THE ENGINEER.
14. MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED.
15. CONCRETE TESTING SHALL BE ONE SET OF CYLINDERS FOR EVERY 50 CUBIC YARDS OR PORTION THEREOF FOR EACH TYPE OF CONCRETE POURED ON ANY GIVEN DAY. ONE SET CONSISTS OF 2 CYLINDERS TESTED FOR COMPRESSION AT 7 DAYS AND 2 CYLINDERS AT 28 DAYS.
16. VAPOR RETARDANT (UNDER SLAB): SHALL CONFORM TO ASTM E1745, CLASS A OR BETTER AND SHALL HAVE A MINIMUM WATER VAPOR PERMEANCE OF 0.01 PERMS WHEN TESTED IN ACCORDANCE WITH ASTM E96. VAPOR RETARDANT SHALL BE NOT LESS THAN 15 MILS THICK.
- APPROVED PRODUCTS
- A. CONDUIT: BY STEGO INDUSTRIES LLC, (877) 464-7434.
- B. GRIFFULIN T-45 BY REEF INDUSTRIES (800) 231-6074.
- C. RUFOF D1WB BY RAVEN IND. AT TEXAS ENVIRONMENTAL PLASTIC, (281) 821-7320.
- INSTALLATION
- A. LAY SHEETS SMOOTHLY, STRETCH AND WEIGHT EDGES. LAY JOINTS TWELVE (12) INCHES AND SEAL WITH VAPOR RETARDANT MANUFACTURER TURN BARRIER UP SIX INCHES AT WALLS AND AT ALL PIPES, ABUTMENTS, ETC. TAPE SEAL AT PENETRATIONS AND AT EDGES.
- B. AT GRADE BEAMS, EXTEND VAPOR RETARDANT DOWN SIDES OF BEAM TRENCHES (AND FOOTING EXCAVATIONS) TO WITHIN 4" OF TRENCH BOTTOM AND SECURE TO SIDES OF TRENCH. DO NOT EXTEND RETARDANT ACROSS BOTTOM OF BEAM TRENCH. PATCHING:
- A. PATCH ALL FURCHES WITH A MINIMUM OVERLAP OF 6" IN ALL DIRECTIONS AND TAPE AROUND ENTIRE PERIMETER OF REPAIR.
16. ALL CONDUIT OR PLUMBING LINES IN SLAB SHALL BE PLACED BELOW SLAB REINFORCING. ALL CONDUIT OR PLUMBING LINES SHALL NOT BE GREATER THAN 1 INCH DIAMETER AND SHALL BE PLACED NEAR THE CENTER OF THE SLAB AS MUCH AS POSSIBLE.
- A. PRE-INSTALLATION CONFERENCE:
1. AT LEAST 30 DAYS PRIOR TO THE START OF THE CONCRETE SLAB CONSTRUCTION SCHEDULE, THE CONTRACTOR SHALL CONDUCT A MEETING TO REVIEW THE PROPOSED MIX DESIGNS AND TO DISCUSS THE REQUIRED METHODS AND PROCEDURES TO ACHIEVE THE REQUIRED CONCRETE CONSTRUCTION. THE CONTRACTOR SHALL SEND A PRE-CONCRETE CONFERENCE AGENDA TO ALL ATTENDEES 20 DAYS PRIOR TO THE SCHEDULED DATE OF THE CONFERENCE.
2. THE CONTRACTOR SHALL REQUIRE RESPONSIBLE REPRESENTATIVES OF EVERY PARTY CONCERNED WITH THE CONCRETE WORK TO ATTEND THE CONFERENCE, INCLUDING BUT NOT LIMITED TO:
- A. CONTRACTOR'S SUPERINTENDENT
- B. LABORATORY RESPONSIBLE FOR CONCRETE MIXES AND/OR FIELD QUALITY CONTROL
- C. READY-MIX CONCRETE PRODUCER
- D. CONCRETE SUBCONTRACTOR
- E. ADMIXTURE MANUFACTURER
- F. LIQUID DENSIFIER AND SEALER MANUFACTURER
- G. JOINT FILLING APPLICATOR
3. MINUTES OF THE MEETING SHALL BE RECORDED, TYPED AND PRINTED BY THE CONTRACTOR AND DISTRIBUTED BY HIM TO ALL CONCERNED PARTIES, INCLUDING THE OWNER'S REPRESENTATIVE, THE ARCHITECT, AND THE STRUCTURAL ENGINEER WITHIN FIVE DAYS OF THE MEETING.
6. CONCRETE SUBCONTRACTOR QUALIFICATION:
1. THE CONCRETE SUBCONTRACTOR SHALL INCLUDE IN THEIR BID PACKAGE TO THE CONTRACTOR, OUT-LOOK AFTER FINISHING CONCRETE, BUT NOT BEFORE FREE WATER HAS DISAPPEARED FROM CONCRETE SURFACE. CURING COMPOUND SHALL BE PLACED WITHIN FOUR (4) HOURS AFTER CONCRETE HAS BEEN PLACED.
2. THE CONTRACTOR'S TEAM SHALL HAVE PARTICIPATED IN THE MAJORITY OF THESE PROJECTS, AND THAT TEAM SHALL REMAIN THE SAME THROUGHOUT THE DURATION OF THIS PROJECT.
- C. CONCRETE MATERIAL:
1. PORTLAND CEMENT: ASTM C 150, TYPE I. USE ONE BRAND OF CEMENT THROUGHOUT THE PROJECT.
2. COARSE AND FINE AGGREGATES: ASTM C33. COMBINED AGGREGATE GRADATION FOR SLABS ON GRADE AND OTHER DESIGNATED CONCRETE SHALL BE 8% - 18% FOR LARGE TOP AGGREGATES (1 1/2") OR 8% - 22% FOR SMALLER TOP SIZE AGGREGATES (1" OR 3/4") RETAINED ON EACH SIEVE BELOW THE TOP SIZE AND ABOVE THE NO. 100 SIEVE. SLABS ON GRADE SHALL HAVE A MAXIMUM AGGREGATE SIZE OF 1-1/2" FOOTINGS AND PIERS "1" AND BEAMS "3/4".
3. WATER: COMPLYING WITH ASTM C 64.
4. ALL CONCRETE SHALL CONTAIN "POZZOLITH" ADMIX AS PER MANUFACTURER'S SPECIFICATIONS, IN ACCORDANCE WITH ASTM C494.
- D. ADMIXTURES:
1. AIR-ENTRAINING ADMIXTURES: SHALL CONFORM TO ASTM C-260. ADMIXTURE MANUFACTURER SHALL PROVIDE WRITTEN CERTIFICATION THAT THE AIR-ENTRAINING ADMIXTURE IS COMPATIBLE WITH OTHER REQUIRED ADMIXTURES. ALL EXTERIOR SLABS SHALL BE AIR-ENTRAINED (4% - 6%) ACCEPTABLE PRODUCTS: EUCLID CHEMICAL AEA-92 AND ARIMIX 200, MASTER BUILDERS MCGRAW, W.R. GRACE DARAVAIR 1000 AND DAREX-11.
2. WATER-REDUCING ADMIXTURE: SHALL CONFORM TO ASTM C494, TYPE A AND CONTAIN NOT MORE THAN 0.05% CHLORIDE IONS. ACCEPTABLE PRODUCTS: EUCLID CHEMICAL WR-89 AND WR-91, MASTER BUILDERS 200M AND 322N, W.R. GRACE WRDA 39 AND WRDA 64.
3. WATER REDUCING, RETARDING ADMIXTURE: SHALL CONFORM TO ASTM C494, TYPE D, AND CONTAIN NOT MORE THAN 0.05% CHLORIDE IONS. ACCEPTABLE PRODUCTS: EUCLID CHEMICAL RETARDER 75, MASTER BUILDERS POZZOLITH R, W.R. GRACE DARATARD 17.
4. HIGH RANKE WATER-REDUCING ADMIXTURE (SUPERPLASTICIZER) SHALL CONFORM TO ASTM C494, TYPE F OR TYPE G AND CONTAIN NOT MORE THAN 0.05% CHLORIDE IONS. ACCEPTABLE PRODUCTS: EUCLID CHEMICAL EUCON 37, MASTER BUILDERS REOBUILD 1000 W.R. GRACE DARACEM - 1000.
5. WATER-REDUCING, NON-CORROSIVE ACCELERATING ADMIXTURE: SHALL CONFORM TO ASTM C494, TYPE C OR E, AND CONTAIN NOT MORE CHLORIDE IONS THAN ARE PRESENT IN MUNICIPAL DRINKING WATER. THE ADMIXTURE MANUFACTURER MUST HAVE LONG-TERM, NON-CORROSIVE TEST DATA FROM AN INDEPENDENT TESTING LABORATORY (OF AT LEAST A YEARS DURATION) USING AN ACCEPTABLE ACCELERATED CORROSION TEST METHOD SUCH AS THAT USING ELECTRICAL POTENTIAL MEASURES. ACCEPTABLE PRODUCTS: EUCLID CHEMICAL ACCELGUARD 8090 AND ACCELGUARD NCA, MASTER BUILDERS NC534 AND POZZUTTO 20, W.R. GRACE POLARSET. PROHIBITED ADMIXTURES:
- a.) CALCIUM CHLORIDE OR ADMIXTURES CONTAINING MORE THAN 0.05% CHLORIDE IONS ARE NOT PERMITTED.
- b.) FLASH: A MAXIMUM OF 20% AS CEMENT REPLACEMENT ALLOWED

- E. EVAPORATION RETARDER:
1. THE METHODOLOGY FOR ALTERNATE ALUMINUM FILM FORMING, MANUFACTURED FOR APPLICATION TO FRESH CONCRETE.
- a.) ACCEPTABLE PRODUCTS
- "SUPER REZ SEAL" BY EUCLID CHEMICAL COMPANY - CONTACT: PHIL BRANDT (877) 438-3828
- F. CURING MATERIALS:
1. EXTERIOR CURING: ALL EXTERIOR CONCRETE SLABS SHALL BE CURED USING A LIQUID MEMBRANE-FORMING CURING COMPOUND. THE LIQUID MEMBRANE-FORMING CURING COMPOUND SHALL MEET THE REQUIREMENTS OF ASTM C 1315 WITH A MAXIMUM V.O.C. CONTENT OF 700 GL.
- a.) ACCEPTABLE PRODUCTS
- "SUPER REZ SEAL" BY EUCLID CHEMICAL COMPANY - CONTACT PHIL BRANDT (877) 438-3828
2. INTERIOR CURING: ALL INTERIOR CONCRETE SLABS SHALL BE CURED USING A REDUCED COLOR, DISPERSING LIQUID MEMBRANE FORMING CURING COMPOUND THAT IS FORMULATED FROM HYDROCARBON RESINS. THE DISPERSING LIQUID MEMBRANE FORMING CURING COMPOUND SHALL MEET THE REQUIREMENTS OF ASTM C-309 AND V.O.C. CONTENTS IN ACCORDANCE TO EPA 40 CFR, PART 59, TABLE I, SUBPART D FOR CONCRETE CURING COMPOUNDS WITH A MAXIMUM V.O.C. CONTENT OF 350 GPM/1000 S.F. OF CURING.
- a.) ACCEPTABLE PRODUCTS
- "KUREZ DR VOX" BY THE EUCLID CHEMICAL COMPANY - CONTACT PHIL BRANDT (877) 438-3828
- ALL CONCRETE SLABS SHALL ALSO BE MAINTAINED MOIST FOR 7 DAYS
- G. CONCRETE MIXES
- CONCRETE WITH ACI 301 REQUIREMENTS FOR CONCRETE MIXTURE, U.N.O.
2. PREPARE DESIGN MIXES SIGNED AND SEALED BY A PROFESSIONAL ENGINEER. WATER/CEMENT RATIO SHALL BE 0.55. THE CONCRETE MIXTURE DETERMINED BY EITHER LABORATORY TRIAL MIX OR FIELD TEST DATA AS FOLLOWS:
- CONCRETE MATERIALS INCLUDED IN THE MIX DESIGN SHALL BE THE SAME MATERIALS USED TO THE PROJECT AND SHALL BE PREPARED BY AN INDEPENDENT TESTING LABORATORY APPROVED BY THE OWNER. THE LABORATORY MIX DESIGN SHALL NOT EXCEED THE DESIRED JOINT STRENGTH OF CONCRETE BY 1,200 PSI. FOUR COPIES OF THE MIX DESIGN SHALL BE SUBMITTED TO THE OWNER BEFORE CONCRETE WORK BEGINS.
3. SLUMP: CONCRETE CONTAINING HRWR SHALL HAVE A MAXIMUM SLUMP OF 8" (200MM). ALL OTHER CONCRETE SHALL NOT EXCEED 4 INCHES (100 MM) UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
4. ADJUSTMENT TO CONCRETE MIXES: MIX DESIGN ADJUSTMENTS MAY BE REQUESTED BY THE CONTRACTOR WHEN CHARACTERISTICS WARRANT. AT NO ADDITIONAL COST TO OWNER AND AS ACCEPTED BY OWNER. LABORATORY TEST DATA FOR REVISED MIX DESIGN AND STRENGTH RESULTS MUST BE SUBMITTED TO AND ACCEPTED BY OWNER BEFORE USING IN WORK. BOTH THE CONCRETE TESTING AND INSPECTION AGENCY AND THE CONCRETE CONTRACTOR SHALL SATISFY THEMSELVES THAT THE CONCRETE MIX DESIGN WILL PRODUCE A CONCRETE WHICH WILL MEET THE SPECIFICATIONS FOR THIS PROJECT. IN ADDITION, THE CONTRACTOR AND CONCRETE FINISHER SHALL VERIFY THAT THE WORKABILITY, FINISHABILITY AND SETTING TIMES ARE APPROPRIATE FOR SLAB INSTALLATIONS. PLACEMENT SHALL BE MADE BY CHUTE DIRECTLY FROM THE CONCRETE TRUCKS. IF PUMPING OF THE CONCRETE IS CONTEMPLATED FOR ANY SPECIAL LOCATIONS, THE PROPORTIONS ESTABLISHED ABOVE SHALL NOT BE ALTERED TO SUIT THE CAPABILITIES OF THE PUMPING EQUIPMENT.
5. READY MIX CONCRETE SHALL COMPLY WITH REQUIREMENTS OF ASTM C94. WHEN AIR TEMPERATURE IS BETWEEN 85° AND 90° F, REDUCE MIXING AND DELIVERY TIME FROM 90 MINUTES TO 75 MINUTES. WHEN AIR TEMPERATURE IS ABOVE 90° F, REDUCE MIXING AND DELIVERY TIME TO 60 MINUTES.
6. WATER CEMENT RATIO SHALL BE BASED ON SURFACE DRY MATERIAL.
7. CONTRACTION JOINTS IN SLABS ON GRADE:
- SAVED JOINTS: ALL SAW CUTTING SHALL BE ACCOMPLISHED WITH A SOFT-CUT SAW AS SOON AS THE SLAB WILL SUPPORT THE WEIGHT OF THE SAW AND OPERATOR. NOTE: CONCRETE MUST BE REMOVED COMPLETELY AND IMMEDIATELY. IF CHALK LINES ARE USED FOR SAW CUTS, ALL CHALK REMAINING ON SLAB SHALL BE REMOVED COMPLETELY AND IMMEDIATELY AFTER SAWING.
- J. CONCRETE CURING AND PROTECTION:
- a.) FIRST, ALL EXTERIOR CONCRETE SLABS SHALL BE CURED USING A LIQUID MEMBRANE-FORMING CURING COMPOUND TO BE APPLIED EVENLY AND UNIFORMY PER MANUFACTURER'S INSTRUCTIONS AS SOON AS POSSIBLE AFTER FINAL FINISHING. SURFACE SHALL BE DAMP, BUT NOT WET AND CAN NO LONGER BE MARKED BY A WALKING WORKMAN. ALL APPLICATIONS SHALL BE MADE BY AN APPLICATOR CERTIFIED BY THE MANUFACTURER. AND WHEN SURFACE AND AIR TEMPERATURE IS ABOVE 90° F, BEGIN CURING AFTER FINISHING CONCRETE, BUT NOT BEFORE FREE WATER HAS DISAPPEARED FROM CONCRETE SURFACE. CURING COMPOUND SHALL BE PLACED WITHIN FOUR (4) HOURS AFTER CONCRETE HAS BEEN PLACED.
- b.) SECOND, CONCRETE SHALL BE MAINTAINED ABOVE 50 DEGREES F AND IN A MOIST CONDITION FOR AT LEAST THE FIRST SEVEN (7) DAYS AFTER PLACEMENT.
- c.) FIRST, ALL INTERIOR CONCRETE SLABS SHALL BE CURED USING A LIQUID MEMBRANE-FORMING CURING COMPOUND TO BE APPLIED EVENLY AND UNIFORMY PER MANUFACTURER'S INSTRUCTIONS AS SOON AS POSSIBLE AFTER FINAL FINISHING. SURFACE SHALL BE DAMP, BUT NOT WET AND CAN NO LONGER BE MARKED BY A WALKING WORKMAN. ALL APPLICATIONS SHALL BE MADE BY AN APPLICATOR CERTIFIED BY THE MANUFACTURER. AND WHEN SURFACE AND AIR TEMPERATURE IS ABOVE 90° F, BEGIN CURING AFTER FINISHING CONCRETE, BUT NOT BEFORE FREE WATER HAS DISAPPEARED FROM CONCRETE SURFACE. CURING COMPOUND SHALL BE PLACED WITHIN FOUR (4) HOURS AFTER CONCRETE HAS BEEN PLACED.
- d.) SECOND, CONCRETE SHALL BE MAINTAINED ABOVE 50 DEGREES F AND PONDED WITH WATER FOR SEVEN (7) DAYS AFTER CONCRETE PLACEMENT.
- k.) THIRD, CONCRETE SLABS SHALL BE CURED USING A LIQUID MEMBRANE-FORMING CURING COMPOUND TO BE APPLIED EVENLY AND UNIFORMY PER MANUFACTURER'S INSTRUCTIONS. SURFACE SHALL BE DAMP, BUT NOT WET AND CAN NO LONGER BE MARKED BY A WALKING WORKMAN. ALL APPLICATIONS SHALL BE MADE BY AN APPLICATOR CERTIFIED BY THE MANUFACTURER, AND WHEN SURFACE AND AIR TEMPERATURE IS ABOVE 90° F, BEGIN



RESPONSIBILITIES OF THE OWNER

A. EMPLOY AND PAY THE SPECIAL INSPECTION AGENCY TO PERFORM INSPECTIONS SPECIFIED IN THIS SECTION AND BE INSURED BY AUTHORITIES HAVING JURISDICTION

B. EMPLOY AND PAY THE MATERIALS TESTING LABORATORY TO PERFORM TESTS SPECIFIED IN THIS SECTION AND BE INSURED BY AUTHORITIES HAVING JURISDICTION

C. NOTIFY THE ARCHITECT IMMEDIATELY UPON RECEIVING ANY INFORMATION THAT:

1. RETESTING - THE CONTRACTOR SHALL REBURSTHE THE OWNER FOR RETESTING WHERE RESULTS OF INSPECTIONS AND TESTS PROVE UNSATISFACTORY AND INDICATE NONCOMPLIANCE WITH THE SPECIFICATIONS

C. EMPLOY THE DESIGN PROFESSIONAL RESPONSIBLE FOR THE STRUCTURAL DESIGN OR ANOTHER ENGINEER OR ARCHITECT DESIGNATED BY THE (DPR) TO PERFORM VISUAL OBSERVATION, RECORD, TEST, AND/OR CORRECT

DEFINITIONS

A. APPROVED FABRICATOR: A FABRICATOR REGISTERED AND BONDED BY THE BUILDING DEPARTMENT AND ENGINEER OR ARCHITECT TO PERFORM WORK, OFF-SITE, REQUIRING SPECIAL INSPECTION WITHOUT SPECIAL INSPECTION. THE DESCRIPTION IN SECTION 1701.1 OF THE 1998 CALIFORNIA BUILDING CODE IS APPLICABLE.

B. SPECIAL INSPECTION AGENCY: AN ORGANIZED, QUALIFIED BODIES DESIGNATED HEREIN AND APPROVED BY THE ENGINEER OF RECORD TO PERFORM SPECIAL INSPECTION AND TESTING OF THE CONSTRUCTION OF THE STRUCTURE, THE SPECIFICATIONS AND AS DESCRIBED IN SECTION 1701.1998 CALIFORNIA BUILDING CODE.

C. SPECIAL INSPECTOR: A QUALIFIED PERSON, EMPLOYED BY THE SPECIFIED SPECIAL INSPECTION AGENCY, WHOSE DUTIES INCLUDE VISUAL OBSERVATIONS, RECORDING, MEASUREMENTS, TESTING, AND/OR CORRECTING THE WORK OF THE BUILDING OFFICIAL FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION. DUTIES INCLUDE VISUAL OBSERVATIONS, RECORDING, MEASUREMENTS, TESTING, AND/OR CORRECTING THE WORK OF THE BUILDING OFFICIAL INCLUDING PREPARATION OF REPORTS.

D. TESTING LABORATORY: AN ACCREDITED MATERIALS TESTING LABORATORY, APPROVED BY THE ENGINEER OF RECORD, WHOSE DUTIES INCLUDE TESTING, CALIBRATE OR OTHERWISE DETERMINE THE CHARACTERISTICS OR PERFORMANCE OF CONSTRUCTION MATERIALS.

E. CONTINUOUS INSPECTION: ON SITE INSPECTION BY THE SPECIAL INSPECTOR ON A CONTINUOUS BASIS OBSERVING ALL WORK REQUIRING SPECIAL INSPECTION.

F. PERIODIC INSPECTION: INSPECTION OF THE CONSTRUCTION OF THE WORK AT SPECIFIC INTERVALS AT PREDETERMINED INTERVALS OR MORE FREQUENTLY AS WORK PROGRESSES. NO SIGNIFICANT ELEMENTS OR AREAS SHALL BE COVERED BY ADDITIONAL WORK BEFORE PROVIDING PERIODIC INSPECTION BY THE SPECIAL INSPECTOR.

G. STRUCTURAL OBSERVATION: THE VISUAL OBSERVATION BY THE ENGINEER OF RECORD OR ARCHITECT, INCLUDING BUT NOT LIMITED TO THE ELEMENTS AND CONNECTIONS OF THE STRUCTURAL SYSTEM, FOR GENERAL CONFORMANCE TO THE APPROVED PLANS AND SPECIFICATIONS, AND TO CORRECTED CONTRASTED CONDITIONS AND COMPLIANCE WITH THE STRUCTURAL SYSTEM. STRUCTURAL OBSERVATION DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR THE SPECIAL AND MUNICIPAL INSPECTIONS REQUIRED BY THE SPECIFICATIONS.

H. EOR: ENGINEER OF RECORD

I. DPR: ENGINEER OR RECORDSMAN/ENGINEER OF RECORD

J. SPECIAL INSPECTION AND TESTING: INSPECTION AND TESTING OF THE CONSTRUCTION OF THIS SECTION APPLIES TO THE STRUCTURAL PORTIONS OF THE PROJECT REQUIRING SPECIAL INSPECTION. THE SPECIAL INSPECTOR DUTIES ARE DESCRIBED IN CBC SECTIONS 1701.1 AND CBC 1701.19.

K. DOCUMENTED METHODS AND PROCEDURES SHALL BE USED FOR INSPECTION AND TESTING REQUIRED OF CONTRACTUAL DOCUMENTS, AND FOR ESTABLISHING ACCEPTANCE OF THE CONSTRUCTION OF THE PROJECT. THE SPECIAL INSPECTOR'S CHECKLISTS MUST BE USED. THE WORK WILL BE KEPT UP TO DATE AND READILY AVAILABLE FOR USE. NO SPECIAL INSPECTION AND TESTING SHALL BE PERFORMED WITHOUT THE PRESENT PERSONNEL. IN IS QUESTION DUE TO JOB SITE CONDITIONS, PRIOR TO PROJECT COMMENCEMENT, THE TESTING AGENCY WILL CONFER WITH AND OBTAIN THE APPROVAL FROM THE ARCHITECT AND DESIGN PROFESSIONAL. THE SPECIAL INSPECTOR SHALL FOLLOW THE TESTING PROCEDURES OR SPECIFICATIONS INCLUDING ANY APPROPRIATE ASTM METHODS CODE REQUIREMENTS OR SPECIAL SPECIFICATION REQUIREMENTS. AT THE START OF EACH INSPECTION, EACH INSPECTOR SHALL REVIEW THE TESTING PROCEDURES AND FORMS OF MATERIALS, PERSONNEL QUALIFICATIONS, AS REQUIRED, AND PROCEDURES WITH APPLICABLE CODES, PLANS, AND SPECIFICATIONS.

L. APPROVED SPECIAL INSPECTION AGENCY: A SPECIAL INSPECTION AGENCY, AS APPROVED, APPROVED SPECIAL INSPECTION AGENCY EMPLOYED BY THE OWNER OR OWNERS AGENT, NOT THE SUBCONTRACTOR OR SUBCONTRACTOR.

M. ACCREDITATION TO ASTM E-2329-98, STANDARD SPECIFICATIONS FOR AGENTS ENGAGED IN THE TESTING AND/OR INSPECTION OF CONSTRUCTION MATERIALS, SHALL BE USED TO DETERMINE THE QUALIFICATION OF THE COPIES OF THE TEST RESULTS AND FINAL REPORTS SHALL BE FURNISHED TO THE ENGINEER OF RECORD (EOR) IN ADDITION TO OTHER NORMAL DISTRIBUTIONS.

N. NOT MORE THAN TWO DAYS OF THE TEST IN THE CASE OF DISCREPANCIES OR DEFICIENCIES, THE SPECIAL INSPECTION AGENCY SHALL IMMEDIATELY NOTIFY THE EOR. TESTING SPECIAL INSPECTION SHALL BE PER APPLICABLE STRUCTURAL MASONRY, REINFORCED CONCRETE, AND STRUCTURAL STEEL, WELDING CODES AND STANDARDS AND ARE PART OF THIS SPECIFICATION.

O. A CERTIFICATE OF SATISFACTORY COMPLETION OF WORK REQUIRING SPECIAL INSPECTION MUST BE COMPLETED AND SUBMITTED TO THE INSPECTION SERVICES DIVISION BY THE CONTRACTOR.

P. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE TEST AND/OR INSPECTION FIRM WITH A CONSTRUCTION SCHEDULE TO FACILITATE THE PROPER COORDINATION.

THE SPECIAL INSPECTOR SHALL FURNISH DAILY INSPECTION REPORTS TO THE BUILDING OFFICIAL, THE ARCHITECT, AND THE ENGINEER AT A MINIMUM PER WEEK REQUIREMENT. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL REPORT, SIGNED BY THE SPECIAL INSPECTOR, TO THE ARCHITECT IMMEDIATELY AFTER THE WORK REQUIRING SPECIAL INSPECTION WAS IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND THE WORKMANSHIP PROVISIONS OF THE CBC.

IF DISCREPANCIES SHALL BE FOUND DURING THE WORK REQUIRING SPECIAL INSPECTION FOR CORRECTION, THEN IF UNCORRECTED, TO THE PROPER DESIGN AND THE ARCHITECT AND THE BUILDING OFFICIAL.

SPECIAL INSPECTION REPORTS

THESE REPORTS SHALL INCLUDE, AS A MINIMUM, THE FOLLOWING INFORMATION:

A. PROJECT NUMBER

B. NAME OF THE MUNICIPAL INSPECTOR, IF AVAILABLE, AND OF THE GOVERNING MUNICIPALITY

C. SPECIAL INSPECTION AGENCY NAME, ADDRESS, AND PHONE NUMBER

D. UNIQUE IDENTIFICATION OF THE REPORT AND OF EACH PAGE

E. CLIENT NAME AND ADDRESS

F. NAME AND ADDRESS OF THE DESIGN PROFESSIONAL, OF RECORD, AND OTHER DESIGNERS OR ENGINEERS APPLICABLE TO THE PROJECT

G. DESCRIPTION OF THE TYPE OF CONSTRUCTION OF THE WORK REQUIRING SPECIAL INSPECTION

H. ANY UNRESOLVED DEVIATIONS, EXCLUSIONS, AND ADDITIONS TO OR FROM THE APPROVED DRAWINGS AND SPECIFICATIONS RELEVANT TO THE WORK REQUIRING SPECIAL INSPECTION

I. COMPLIANCE FINDINGS AND REFERENCE

J. DESCRIPTION OF LOCATION WHERE THE INSPECTION WAS PERFORMED WITHIN THE PROJECT

K. TIME AND DATE OF THE INSPECTION

L. MEASUREMENTS, EXAMINATIONS, AND DESIRED RESULTS SUPPORTED BY TABLES, SKETCHES, AND PHOTOGRAPHS

M. THE NAME, SIGNATURE, TITLE, AND IDENTIFICATION NUMBER, AS APPROPRIATE, OF THE FIELD INSPECTOR

N. IDENTIFICATION OF SUBCONTRACTORS EMPLOYED TO CARRY OUT TESTS OR PARTS OF TESTS

TEST REPORTS

LABORATORY TESTS AND MILL CERTIFICATIONS ARE REQUIRED TO BE SUBMITTED TO THE ENGINEER OF RECORD THESE REPORTS SHALL REQUIRE, BUT NOT BE LIMITED TO THE FOLLOWING:

1. CONCRETE CYLINDERS

2. REINFORCING STEEL

3. CONCRETE COLUMNS

4. CONCRETE MIXES

5. CONCRETE ANCHORS

SPECIAL INSPECTION BY A SPECIAL OR DEPUTY INSPECTOR FROM AN ACCREDITED, EOR APPROVED INSPECTION AGENCY AND WITH THE APPROPRIATE CURRENT MUNICIPAL EOR APPROVED CERTIFICATIONS SHALL BE REQUIRED FOR THE TYPE OF WORK LISTED BELOW.

1. DURING PLACEMENT OF REINFORCED CONCRETE WHERE THE STRUCTURAL DESIGN IS BASED ON FC GREATER THAN 3 000 PSI AND THE TAKING TEST SPECIMENS. THE NUMBER OF TEST SPECIMENS TO BE TAKEN SHALL BE NOT LESS THAN THE MINIMUM REQUIRED BY THE GOVERNING MUNICIPAL BUILDING CODE OR AS SPECIFIED BY THE APPROVED STRUCTURAL PLANS, WHICHEVER IS THE GREATER NUMBER.
2. DURING THE PLACEMENT OF REINFORCING STEEL AND PRE STRESS TENDONS UNLESS THE SPECIAL INSPECTOR HAS INSPECTED FOR CONFORMANCE WITH THE APPROVED PLANS PRIOR TO THE CLOSING OF FORMS OR THE DELIVERY OF CONCRETE TO THE JOBSITE.
3. DURING THE PLACEMENT OF REINFORCING STEEL AND CONCRETE FOR CAST-IN-PLACE DRILLED PILES OR CAISSONS.
4. INSPECTION IS REQUIRED ON CAST-IN-PLACE PILES OR CAISSONS, EVEN IF FC IS MORE THAN 2 500 PSI.
5. PRIOR TO AND DURING THE PLACEMENT OF CONCRETE AROUND BOLTS WHEN STRESS INCREASES PERMITTED BY FOOTNOTE 5 OF TABLE 196. SECTION 1925 NOT IN UNIFORM BUILDING CODE FOR THE USE OF FULL VALUES FOR EMBEDDED BOLTS.
6. PRIOR TO AND DURING THE INSTALLATION OF ANCHORS REQUIRING TO BE DRILLED INTO CONCRETE.
7. DURING THE STRESSING AND GROUTING OF TENDONS IN PRE STRESSED.
8. CONTINUOUS INSPECTION FOR THE PLACEMENT OF THE REINFORCEMENT AND CONCRETE AT JOINTS AND CORNERS OF WALLS, COLUMNS, PIERS, AND 3 & 4.
9. SHORT CUTS PLACEMENT AND DURING THE TAKING OF TEST SPECIMENS.
- PERIODIC INSPECTION FOR REINFORCED CONCRETE SHALL BE PERFORMED WHEN THE FOLLOWING OCCUR, AS MINIMUM:
  - A. AT THE START AND DURING EACH INSPECTION OF THE PROJECT TO ASCERTAIN PROPOSED CONFORMITY OF MATERIALS, PERSONNEL, QUALIFICATIONS AND EQUIPMENT, AND PROJECT SCHEDULE TO THE APPLICABLE CODE, PLANS AND SPECIFICATIONS.
  - B. WHEN REINFORCEMENT VERIFICATION PRIOR TO THE PLACEMENT OF CONCRETE.
  - C. DURING THE PLACEMENT OF CONCRETE.
  - D. DURING THE MOLDING, CONSTRUCTION OF TAKING OF COMPRESSION SAMPLES.
  - E. WHEN CORNERS OR JOINTS ARE COVERED.
  - F. AT SUCH FREQUENCY AS NECESSARY TO CLEARLY CONFIRM THE PLACEMENT OF TIES, HOOPS, STIRRUPS, CONNECTIONS, AND ANY ADDITIONAL SPECIFIED REINFORCEMENT (I.E. TENDONS, ANCHORS, CORNERS, COLUMNS, PIERS, AND CAISSONS) BEFORE THEY ARE COVERED.
  - G. DURING SAMPLING OF CONCRETE AT DISCHARGE FROM MIXER.
  - H. BEFORE ANY CONCRETE IS PLACED AT JOINTS OR CORNERS OF DESIGN.
  - I. ALL FUNCTIONS AT THE BATCHING PLANT FOR READY MIX. THIS COULD INCLUDE CEMENT SAMPLING OR TEST RESULTS, GRAVEL GRADATION, CHECKING OF EQUIPMENT AND EQUIPMENT RECORDS.
- B. STRUCTURAL WELDING - GENERAL - INSPECTOR'S DUTIES
  - 1. ALL FIELD WELDING NOT DONE IN AN APPROVED FABRICATOR SHOP EXCEPT PERIODIC INSPECTION OF WELDING SHALL BE DONE WHEN IT IS DETERMINED PRIOR TO THE START OF THE PROJECT SHALL BE ALLOWED PER SECTION 1701.5.
  - IF EXCEPTIONS:
    - 2. DURING ALL FIELD WELDING OF SPECIAL MOMENT-RESISTING FRAMES, IN ADDITION, NONDESTRUCTIVE TESTING AS REQUIRED BY SECTION 1703.
    - 3. PERIODIC INSPECTION OF WELDING SHALL BE DONE WHEN IT IS DETERMINED BY THE SPECIAL INSPECTOR THAT THE WELDING DOES NOT MEET THE REQUIREMENTS OF THE SPECIFICATIONS (WPS) WHEN OTHER THAN STANDARD WAYS PER QUALIFIED JOINTS AND PROCEDURES ARE INVOLVED.
    - 4. THE SPECIAL INSPECTOR SHALL BE REQUIRED TO APPLY THE SET OF REFERENCED CODES, PARTICULARLY THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE (AWS D1.1) AND THE MANUAL, AND SPECIFICATIONS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, INC.
    - 5. THE SPECIAL INSPECTOR SHALL REVIEW MILL TEST REPORTS AND CHECK HEAT NUMBERS WITH MATERIAL AS RECEIVED. VERIFY THAT PROPER IDENTIFICATION OF STEEL IS MAINTAINED THROUGHOUT THE PROJECT.
    - 6. THE SPECIAL INSPECTOR SHALL, WHEN REQUIRED BY PROJECT SPECIFICATIONS, MARK SAMPLE LOCATION WITH STEEL STAMP ON EACH PEECE TESTED.
    - 7. THE SPECIAL INSPECTOR SHALL, WHEN REQUIRED BY PROJECT SPECIFICATIONS, AND CHECK THAT SAMPLE IDENTIFICATION IS MAINTAINED AS SAMPLES ARE DELIVERED TO LABORATORY AND TESTED.
    - 8. THE SPECIAL INSPECTOR SHALL, WHEN REQUIRED BY PROJECT SPECIFICATIONS, FINISH AND NOT "CROP" ENDS AND AVAILABLE FOR SAMPLE CUTTING, COORDINATE WITH THE LABORATORY AND TESTING AGENCY.

PORTIONS OF WORK REQUIRING SPECIAL INSPECTION:			YES	NO
FOUNDATION	A. COMPACTED FILL, GRADING, AND EXCAVATIONS		X	
	B. CONTINUOUS INSPECTION OF PIERS		X	
	C. CONTINUOUS INSPECTION AND TEST CYLINDERS FOR CONCRETE.		X	
CONCRETE	D. CONTINUOUS INSPECTION FOR SLAB CONCRETE		X	
	E. TEST CYLINDERS FOR SLAB CONCRETE			X
	F. ANCHOR BOLTS OR EMBEDS IN CONCRETE (INSTALLATION AND CONCRETE PLACEMENT)			X
	G. ALL ADHESIVE ANCHORS, RODS, DOWELS, SHALL BE CONTINUOUSLY INSPECTED DURING INSTALLATION		X	
DRILLED IN ANCHORS	H. ADDITIONAL TESTING MAY BE REQUIRED AS SPECIFIED ON THE PLANS.			X
	I. ADHESIVE ANCHORS IN CONCRETE OR MASONRY			X
REINFORCING STEEL	A. PLACING OF REINFORCING			X
	B. SAMPLING AND TESTING STEEL (MILL REPORTS AND IDENTIFICATION OF STEEL)			X
WELDING	A. ALL STRUCTURAL WELDING EXCEPT WELDING IN APPROVED SHOPS.			X
	B. ULTRASONIC TESTING OF FULL PENETRATION WELD CONNECTIONS, AND FIELD WELDS.			X
	C. STRUCTURAL LIGHT GAGE METAL FRAME WELDING.			X
BOLTING	D. REINFORCING STEEL WELDING			X
	A. HIGH STRENGTH BOLT A325 & A490X (TORQUE VERIFICATION)			X
	B. HIGH STRENGTH BOLT A325X & A490X (SNUG CONTACT OF PLYS)			X
MASONRY	A. SAMPLING OF MASONRY UNITS			X
	B. MASONRY PRISM CONSTRUCTION			X
	C. MORTAR SAMPLING			X
	D. CONTINUOUS INSPECTION DURING PLACEMENT AND GROUTING OF MASONRY UNITS AND REINFORCEMENT PLACEMENT.			X
	E. ANCHOR BOLTS OR EMBEDS IN MASONRY (INSTALLATION AND GROUT PLACEMENT)			X
INSULATING CONCRETE FILL	A. TEST CYLINDERS AND INSPECTIONS			
STRUCTURAL STEEL	A. MILL REPORTS AND IDENTIFICATION OF STEEL (AFFIDAVIT OF COMPLIANCE)			X
	B. SAMPLING AND TESTING			X
	C. DURING PLACEMENT OF PAINT AS SPECIFIED BY THE ARCHITECT.			X
SHEAR DIAPHRAGMS	A. INSPECTION OF SHEATHING PLACEMENT AND NAIL SPACING			
APPROVED FABRICATORS	APPROVED FABRICATORS: MUST SUBMIT CERTIFICATE OF COMPLIANCE FOR ALL OFF SITE FABRICATION SUCH AS STRUCTURAL STEEL, GLU-LAMs, GUSSET CONNECTIONS, ETC.			X
STRUCTURAL OBSERVATION	STRUCTURAL OBSERVATIONS REQUIRED. WHEN REQUIRED BY THIS ENGINEER OR THE BUILDING DEPARTMENT, THE CONTRACTOR SHALL EMPLOY AN OBSERVER APPOINTED BY THE EOKR TO PERFORM STRUCTURAL OBSERVATION.			X

## REINFORCED CONCRETE MASONRY

- CONCRETE MASONRY UNITS (CMU) SHALL CONFORM TO ASTM C90, AND AS FOLLOWS:
  - UNIT COMPRESSIVE STRENGTH: 1500 PSI MINIMUM AVERAGE NET AREA COMPRESSIVE STRENGTH
  - WEIGHT CLASSIFICATION: MEDIUM WEIGHT BLOCK
  - GROUT: S = 3000 PSI
  - MORTAR SHALL BE TYPE T
  - CONCRETE MASONRY ASSEMBLAGE (fm) SHALL BE 1500 PSI
- ALL REINFORCING BARS SHALL BE STANDARD BILLET STEEL AND SHALL CONFORM TO ASTM A 615, GRADE 60, REINFORCING BARS #3 AND SMALLER MAY BE GRADE 40.
- CONCRETE SHALL CONFORM TO ASTM C150 TYPE I, (LOW ALKALI), MASONRY CEMENTS ARE NOT ALLOWED.
- TYPICAL REINFORCEMENT, U.O. (DRAWING NOTES GOVERN OVER THESE NOTES):

CMU	VERTICAL	HORIZONTAL	OPENINGS AND CORNERS	CORNERS
	6" #4 AT 32" O.C.	#5 AT 96" O.C.	(2) #5	(3) #4
	#4 AT 48" O.C.	#4 AT 96" O.C.	(1) #4	(3) #4
	2 #4 AT 16" O.C.	#4 AT 96" O.C.	(2) #6	(3) #6
	2 #4 AT 12" O.C.	2 #6 AT 48" O.C.	(2) #6	(3) #6
- ALL VERTICAL (2) #6 WALL/COLUMN/PIER ARE REINFORCED PER DETAIL 1/5402DE DOWELS FROM FOUNDATION, SAME SIZE AND SPACING.
- TYPICAL HORIZONTAL REINFORCEMENT SHALL BE TWO (2) #5 CONTINUOUS IN 8'x16" DEEP CENTRINUS CONCRETE FILLLED BOND BEAM BELOW EACH FLOOR AND ROOF LEVEL, UNLESS NOTED OTHERWISE, PROVIDE STANDARD DURA-DOL TRUSS-TYPE REINFORCING OR REVIEWED EQUIVALENT EVERY OTHER COURSE (16" ON CENTER) AND AS PER MANUFACTURERS RECOMMENDATIONS. (9 GAGE MINIMUM GALVANIZED)
- VERTICAL CELLS TO BE FILLED SHALL HAVE VERTICAL ALIGNMENT SUFFICIENT TO MAINTAIN A CLEAR, UNOBSTRUCTED CONTINUOUS VERTICAL.
- WALL LENGTHS LESS THAN OR EQUAL TO FOUR (4) TIMES ITS THICKNESS SHALL BE CONSIDERED COLUMN SECTIONS AND SHALL BE REINFORCED WITH #6 VERTICAL REINFORCEMENT IN FILLED CELLS, PROVIDE 1/4 INCH DIAMETER TIES EVERY COURSE (16" ON CENTER) (16" ON CENTER) (16" ON CENTER).

1. CONCRETE MASONRY UNITS (CMU) SHALL CONFORM TO ASTM C90, AND AS FOLLOWS:  
\* UNIT COMPRESSIVE STRENGTH: 1900 PSI MINIMUM AVERAGE NET AREA COMPRESSIVE STRENGTH.  
\* WEIGHT CLASSIFICATION: MEDIUM WEIGHT BLOCK  
\* GROUT:  $f_c = 3000$  PSI  
\* MORTAR SHALL BE TYPE S  
\* CONCRETE MASONRY ASSEMBLAGE (fm) SHALL BE 1500 PSI
2. ALL REINFORCING BARS SHALL BE NEW BILLET STEEL AND SHALL CONFORM TO ASTM A-615, GRADE 60, REINFORCING BARS #3 AND SMALLER MAY BE GRADE 40.
3. CONCRETE SHALL CONFORM TO ASTM C150 TYPE I, LOW ALKALI, MASONRY CEMENTS ARE NOT ALLOWED.
4. CONTRACTOR SHALL SUBMIT DRAINAGE NOTES COVERED BY THESE NOTES.

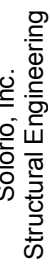
ALL VERTICAL REINFORCING CMU WALL/COLUMN/PIESTER REINFORCEMENT PER DETAIL 1/5402D  
DOWELS FROM FOUNDATION, SAME SIZE AND SPACING.

5. TYPICAL HORIZONTAL REINFORCEMENT SHALL BE TWO (2) #5 CONTINUOUS IN 8"x16"  
SPACING. ALL HORIZONTAL REINFORCEMENT SHALL BE 16" ON CENTER AND ROOF LEVEL,  
UNLESS NOTED OTHERWISE. PROVIDE STANDARD DURO-WALL, TRUSS-TYPE REINFORCEMENT  
OR REVIEWED EQUIVALENT EVERY OTHER COURSE (16" ON CENTER) AND AS PER  
MANUFACTURER'S RECOMMENDATIONS. (9 GAGE MINIMUM GALVANIZED)

6. VERTICAL CELLS TO BE FILLED SHALL HAVE VERTICAL ALIGNMENT SUFFICIENT TO MAINTAIN  
A MINIMUM 12" CLEARANCE FROM ALL STRUCTURAL ELEMENTS.

7. WALL LENGTHS LESS THAN OR EQUAL TO FOUR (4) TIMES ITS THICKNESS SHALL BE  
CONSIDERED COLUMN SECTIONS AND SHALL BE REINFORCED WITH #5 VERTICAL REINFORCEMENT  
IN FILLED CELLS, PROVIDE 1/4" INCH DIAMETER TIES EVERY COURSE (8" ON CENTER)

INSPECTION			CONTINUOUS DURING TASK LISTED	PERIODICALLY X LISTED
	(MONITOR MATERIAL AND WORKSMANSHIP TO ASSURE CONTRACT DOCUMENTS ARE BEING FOLLOWED)			
1.	AS MASONRY CONSTRUCTION BEGINS, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:			
	A. PROPORTIONS OF SITE PREPARED MORTAR.		X	
	B. CONSTRUCTION OF MORTAR JOINTS.		X	
	C. LOCATION OF REINFORCEMENT AND CONNECTORS.		X	
2.	THE INSPECTION PROGRAM SHALL VERIFY:			
	A. SIZE AND LOCATION OF STRUCTURAL ELEMENTS.		X	
	B. TYPE, SIZE AND LOCATION OF JOINTS, ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMING, AND OTHER CONSTRUCTION		X	
	C. CHECK GROUT MIX FOR COMPLIANCE WITH CODE AND SPECIFICATIONS.		X	
	D. WELDING OF REINFORCING BARS		X	
	E. PROTECTION OF MASONRY DURING COOL WEATHER (TEMP. BELOW 40° F) OR HOT WEATHER (TEMP. ABOVE 90° F).		X	
	F. CLOSING OF CLEAN OUT HOLES, KNOCKING DOWN OF FINS AND REMOVAL OF DEBRIS.		X	
	G. VERIFY THAT MATERIALS ARE PROPERLY STORED.		X	
	H. VERIFY THE LOCATION OF THE CONTROL JOINTS.		X	
3.	PRIOR TO GROUTING, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:			
	A. GROUT SPACE IS CLEAN.		X	
	B. PLACEMENT OF REINFORCEMENT AND CONNECTOR, (CHECK ELEVATION, LAP SPICES, STAGGER AND OFFSETS)		X	
	C. CHECK GROUT MIX FOR COMPLIANCE WITH CODE AND SPECIFICATIONS.		X	
	D. CONSTRUCTION OF MORTAR JOINTS.		X	
	E. CHECK INSTALLATION OF CEMENT CURE CLOSURE.		X	
4.	GROUT PLACEMENT SHALL BE VERIFIED TO ENSURE COMPLIANCE WITH CODE AND CONSTRUCTION DOCUMENT PROVISIONS, (SUCH AS MECHANICAL ANCHORING, PLACEMENT AND LATER DURING RECONSOLIDATION.)			
5.	PREPARATION OF ANY REQUIRED GROUT SPECIMENS, MORTAR SPECIMENS AND/OR PRISMS SHALL BE OBSERVED.			X
6.	COMPLIANCE WITH REQUIRED INSPECTION PROVISIONS OF THE PROVISIONS OF THE CONSTRUCTION DOCUMENTS AND THE APPROVED SUBMITTALS SHALL BE VERIFIED.			
7.	CHECK THAT CURING REQUIREMENTS ARE BEING FOLLOWED			X
8.	VERIFY PLACEMENT OF ANCHORS INTO CONCRETE MASONRY UNITS.			X
9.	FREQUENCY OF TESTS:			
	A. CONCRETE MASONRY UNIT TEST. FOR EACH TYPE, CLASS, AND GRADE OF CONCRETE MASONRY UNIT INDICATED, TEST UNITS BY METHOD OF SAMPLING AND TESTING OF ASTM C140. ONE SET OF ONE STANDARD CONSTRUCTION TEST SHOULD BE CONDUCTED FOR EVERY 5,000 SQ. FT. OF WALL DURING CONSTRUCTION IN ACCORDANCE TO ASTM C1314, BUT NOT LESS THAN ONE SET OF 3 MASONRY PRISMS FOR THE PROJECT.		X	
	B. MORTAR TEST. FOR EACH TYPE INDICATED, TEST MORTAR BY METHODS OF SAMPLING AND TESTING OF ASTM C780. CONDUCT TESTS NO LESS FREQUENTLY THAN THAT REQUIRED TO EVALUATE THE MORTAR. TESTS SHOULD BE USED TO EACH INCREMENT OF MASONRY UNITS INDICATED ABOVE FROM WHICH SAMPLES ARE TAKEN FOR TESTING. TEST MORTAR FOR EVERY 1,500 SQ. FT. OF CONSTRUCTION.		X	
	C. GROUT TEST. AT START OF GROUTING OPERATION, TAKE ONE TEST PER DAY FOR FIRST 3 DAYS. EACH GROUT TEST CONSISTS OF THREE SPECIMENS MADE IN ACCORDANCE WITH ASTM C1019. AFTER FIRST THREE TESTS, SPECIMENS FOR CONTINUING QUALITY CONTROL SHOULD BE TAKEN ONCE A WEEK FOR EVERY 25 CUBIC YARDS OF GROUT OR FOR EVERY 2,500 SQ. FT. OF WALL, WHICHEVER COMES FIRST.		X	
10.	MASONRY TESTING REQUIREMENTS			X
	TESTING METHOD	PRIOR TO CONSTRUCTION	DURING CONSTRUCTION	
	OPTION			
	METHOD 1: MASONRY PRISM TESTING	5 PRISMS	3 PRISMS FOR EVERY 5,000 S.F. OF WALL	
	METHOD 2: MASONRY PRISM TESTING	APPROVED 30 PRISM	3 PRISMS FOR EVERY 5,000 S.F. OF WALL	
	METHOD 3: UNIT STRENGTH METHOD	UNITS AND GROUT OR 5 PRISM	UNITS AND GROUT OR 5 PRISMS FOR EVERY 5,000 S.F. OF WALL	



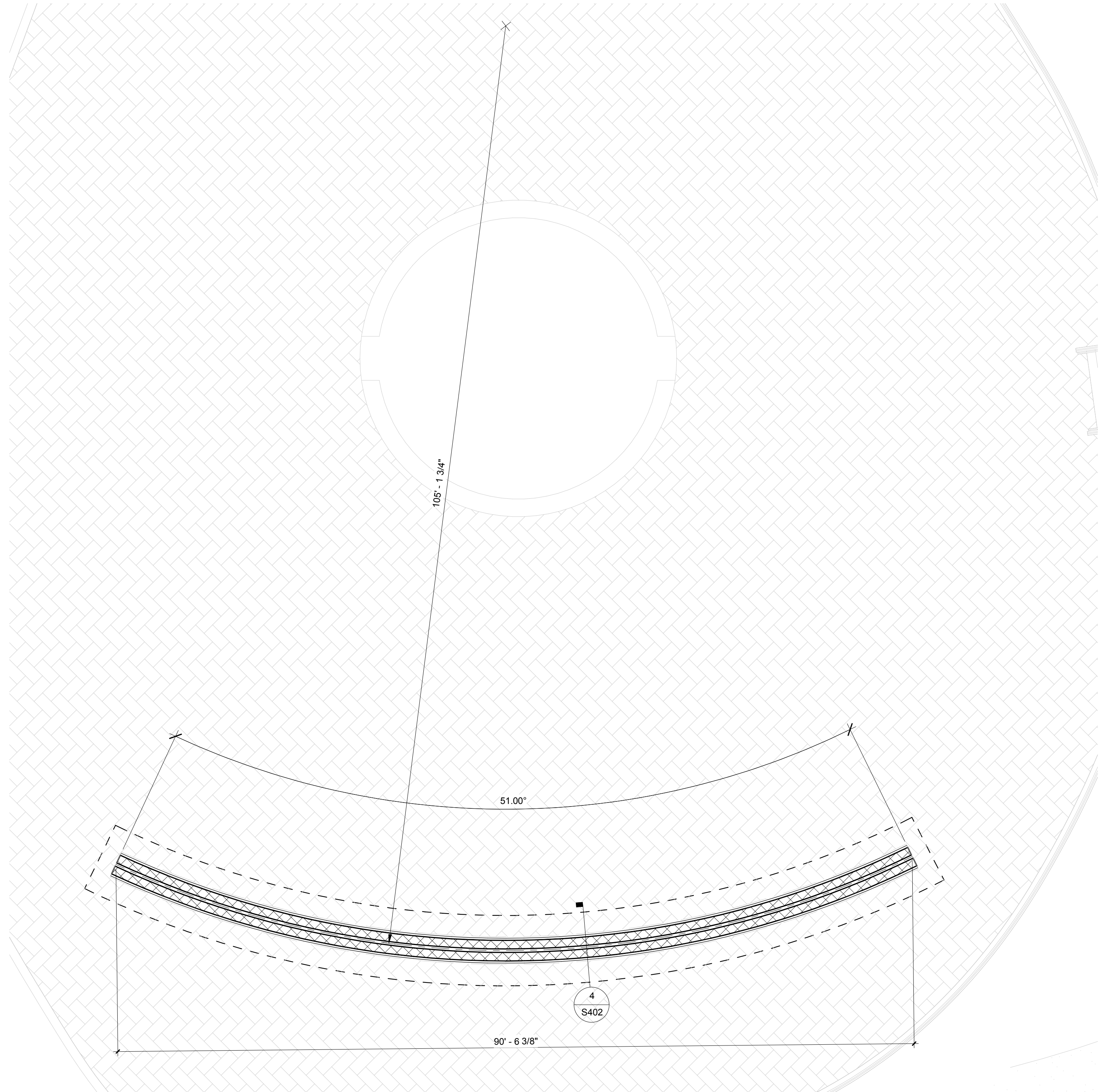
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Project: 17163  
Date: August 02, 2017

S102

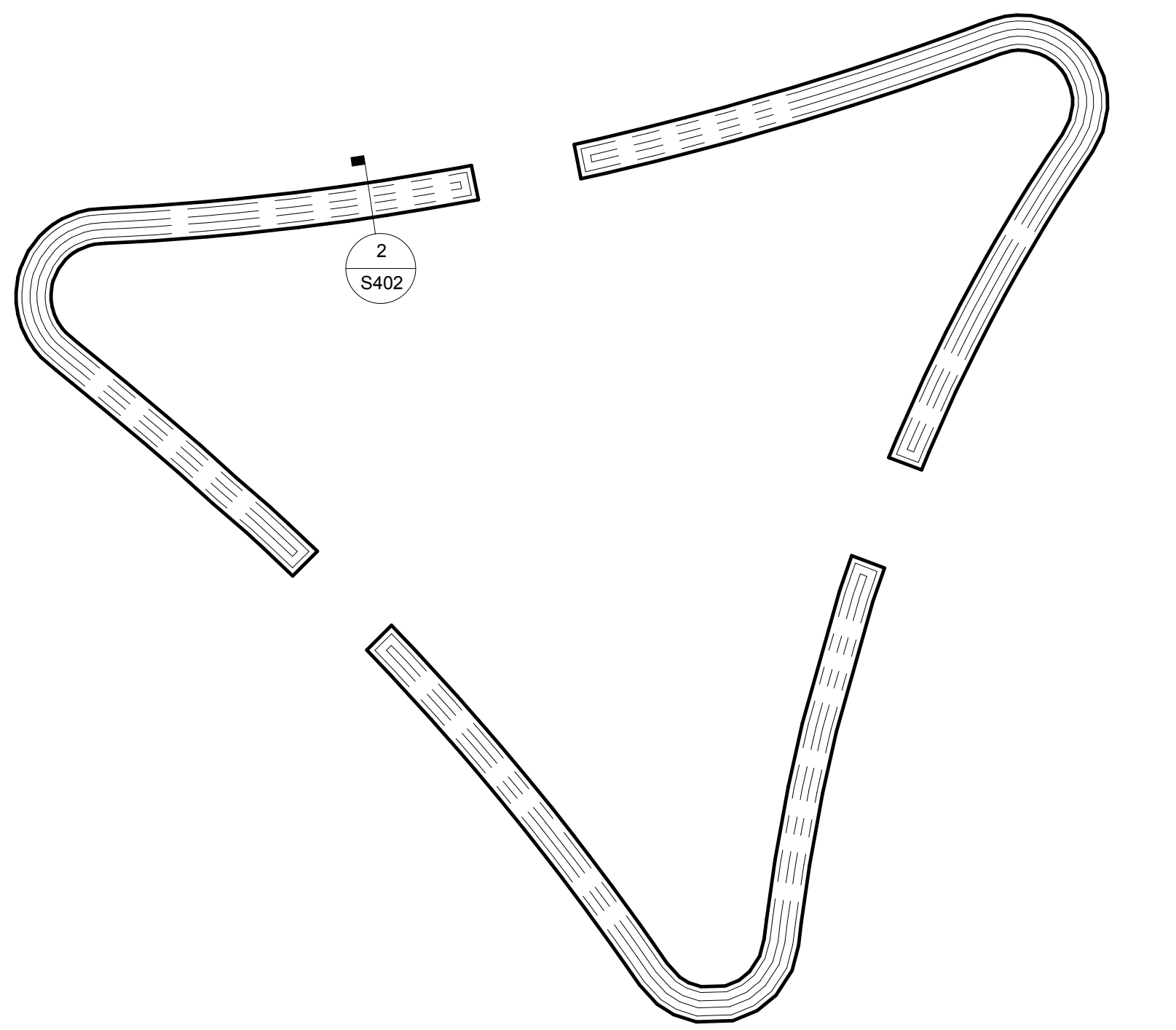


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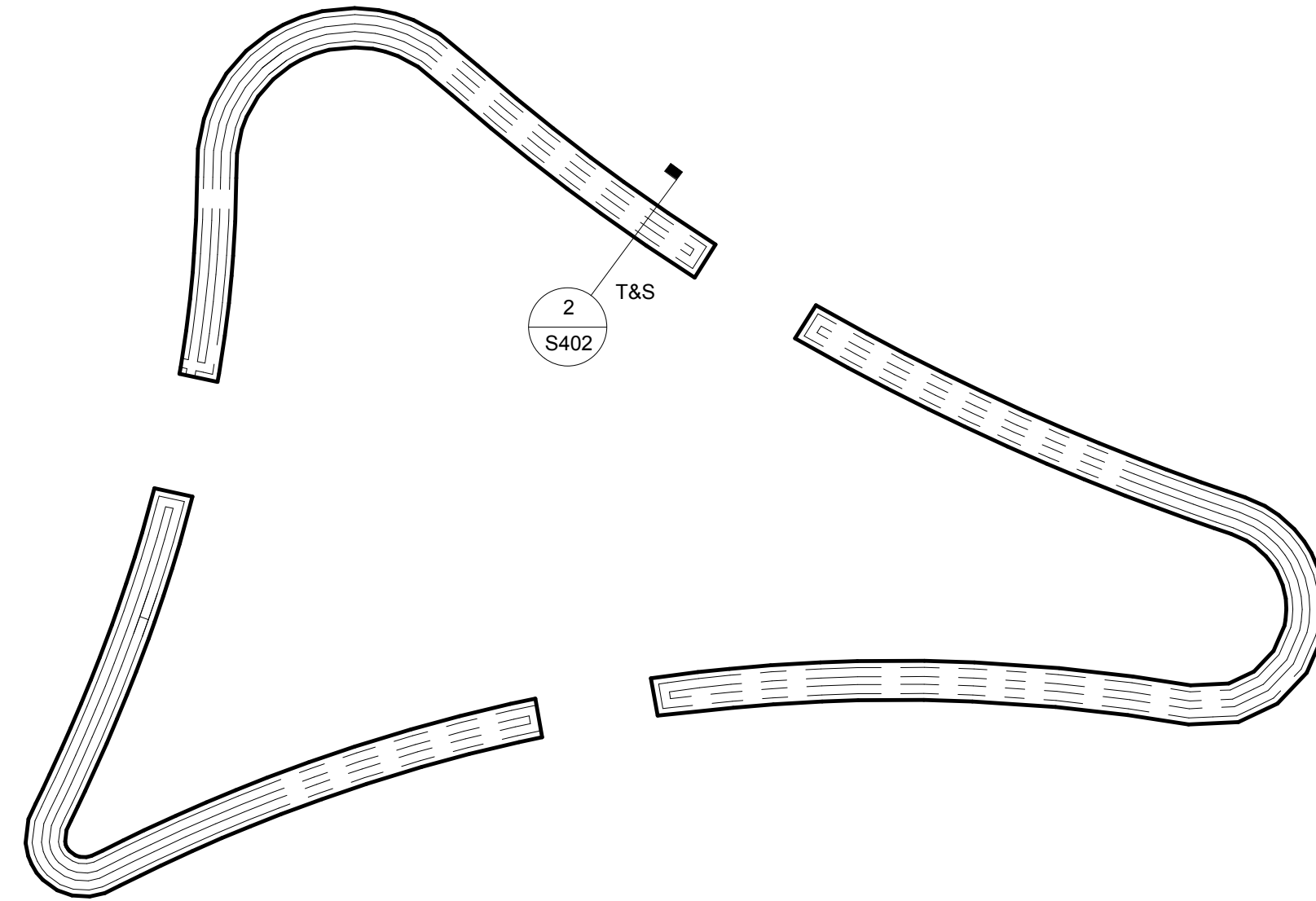
Foundation Plan - Dependent 1  
1/8" = 1'-0"

1
S402/S201



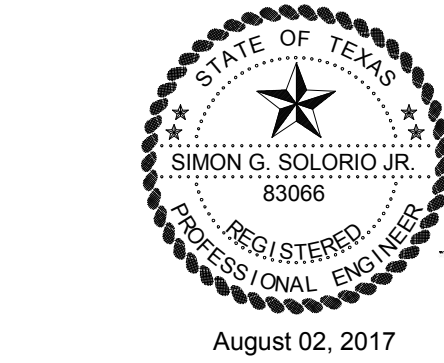
Foundation Plan - Dependent 3  
1/8" = 1'-0"

2
S402/S201



Foundation Plan - Dependent 4  
1/8" = 1'-0"

3
S402/S201

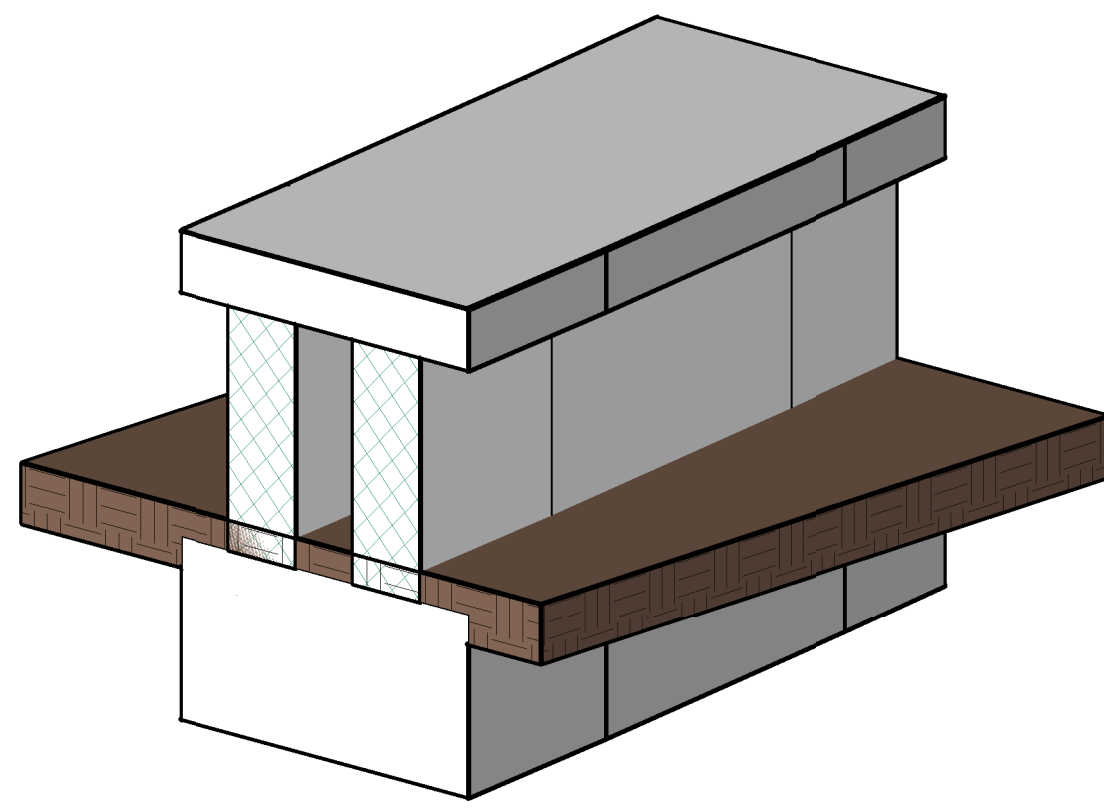


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- FOUNDATION NOTES**
- FOR GENERAL NOTES SEE SHEET S101 AND S102
  - FOR TYPICAL DETAILS SEE SHEETS NUMBER S400'S
  - CONTRACTOR/SUBCONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS WITH ARCHITECTURAL PLANS BEFORE COMMENCING ANY WORK. THE CONTRACTOR AND/OR SUBCONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT AND ENGINEER BEFORE THE WORK HAS BEGUN. REFER TO ARCHITECTURAL PLANS FOR ADDITIONAL DIMENSIONS.
  - REFER TO ARCHITECTURAL PLANS FOR FLOOR DRAIN LOCATIONS.
  - SLOPE SLAB TO DRAINS. SEE ARCHITECTURAL PLANS FOR SLOPE.
  - REFER TO ARCHITECTURAL PLANS FOR FLOOR FINISHES. ENGINEER IS NOT RESPONSIBLE FOR TYPE OF FLOOR FINISHES.
  - THE TESTING LABORATORY SHALL BE THE OWNERS REPRESENTATIVE TO CONTROL THE PLACEMENT OF COMPACTED FILL. THE TESTING LABORATORY SHALL APPROVE THE SUBGRADE PREPARATION, THE FILL MATERIALS, THE METHOD OF PLACEMENT AND COMPACTION, AND SHALL GIVE WRITTEN APPROVAL OF THE COMPLETED FILL. THE TESTING LABORATORY SHALL INDICATE ON THERE REPORT THE ELEVATION OF THE COMPACTED SUBGRADE.
  - ALL EARTHWORK AND GRADING SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEERING STUDY. THE MORE STRINGENT REQUIREMENTS BETWEEN THESE SUBGRADE NOTES AND GEOTECHNICAL ENGINEERING STUDY SHALL GOVERN AND EXECUTED BY THE CONTRACTOR.
  - IN THE EVENT FOUNDATION EXCAVATIONS ARE CARRIED TO A DEPTH GREATER THAN REQUIRED, THE ADDITIONAL DEPTH SHALL BE FILLED WITH THE SAME CONCRETE AS THAT USED FOR FOOTING AT NO ADDITIONAL EXPENSE TO THE OWNER. NO UNCONTROLLED FILL WILL BE PERMITTED.
  - THE FOOTING EXCAVATIONS SHALL BE KEPT FREE FROM LOOSE MATERIAL AND STANDING WATER.
  - THE FOUNDATION EXCAVATIONS SHOULD BE OBSERVED BY THE TESTING LABORATORY PRIOR TO STEEL OR CONCRETE PLACEMENT TO ASSESS THAT THE FOUNDATION MATERIALS ARE CAPABLE OF SUPPORTING THE DESIGN LOADS AND ARE CONSISTENT WITH THE MATERIALS DISCUSSED IN THE STUDY. THIS IS ESPECIALLY IMPORTANT TO IDENTIFY THE ACCEPTABILITY OF THE SUBGRADE OR FILL MATERIAL UNDER THE FOOTING. SOFT OR LOOSE SOIL ZONES ENCOUNTERED AT THE BOTTOM OF THE FOOTING OR BEAM EXCAVATIONS SHOULD BE EXCAVATIONS SHOULD BE REMOVED TO THE LEVEL OF COMPETENT SOIL AS DIRECTED BY THE TESTING LABORATORY. CAVITIES FORMED AS A RESULT OF EXCAVATION OF SOFT OR LOOSE SOIL ZONES SHOULD BE BACKFILLED WITH LEAN CONCRETE OR SELECT FILL AS DETERMINED BY THE TESTING LABORATORY.
  - CARE SHOULD BE TAKEN TO SHAPE THE BUILDING AREAS SUCH THAT WATER WILL NOT POND AROUND THE STRUCTURE DURING CONSTRUCTION AND CAUSE THE NEAR SURFACE CLAYS TO SWELL. THE PROPOSED STRUCTURE SHALL BE ISOLATED FROM ANY MOISTURE SOURCE WHICH MIGHT ALSO CAUSE SWELLING OF THE CLAYS AFTER COMPLETION OF THE CONSTRUCTION.
  - WHEN THE STRUCTURE IS COMPLETE, THE GROUND SURFACE SHOULD SLOPE AWAY FROM THE STRUCTURE AND DOWN SPOUTS SHOULD CARRY RUNOFF WATER SEVERAL FEET FROM THE BUILDING, PREFERABLY INTO PAVED AREAS OR SEWERS, BEFORE DISCHARGING.
  - DO NOT PLANT OR LEAVE IN PLACE, DEEP ROOTED TREES WITHIN CLOSE PROXIMITY TO THE PERIMETER OF THE STRUCTURE. DEEP ROOTED TREES HAVE POTENTIAL TO REMOVE MOISTURE FROM BENEATH THE BUILDING IF PLANTED CLOSE ENOUGH TO ALLOW THE ROOT BULB EXTEND NEAR OR BENEATH THE BUILDING.
  - AIR CONDITIONING CONDENSER DRAIN LINES TO DISCHARGE WATER A MINIMUM OF 5 FEET FROM THE PERIMETER OF THE STRUCTURE. THE DISCHARGE AREA SHALL HAVE SUFFICIENT SLOPE AWAY FROM THE STRUCTURE TO PREVENT STANDING WATER.
  - THE FINAL ONE (1) FOOT OF FILL OUTSIDE THE BUILDING AREA SHOULD CONSIST OF A COHESIVE CLAYEY (CL) SOIL. FILL CAN NOT BE ALLOWED TO DRY OUT DURING OR AFTER COMPACTION. (P1 BETWEEN 15 AND 25)
  - NOTE THAT SOME LEVELS OF RISK ARE ASSOCIATED WITH ALL FOUNDATION SYSTEMS AND THERE IS NO SUCH THING AS A "ZERO RISK" FOUNDATION. IT ALSO SHOULD BE NOTED THAT THE FOUNDATION PROVIDED IS NOT DESIGNED TO RESIST SOIL MOVEMENT AS A RESULT OF SEWER/PLUMBING LEAKS, EXCESSIVE IRRIGATION, NON UNIFORM IRRIGATION, POOR DRAINAGE, AND WATER PONDING NEAR THE FOUNDATION SYSTEM.
  - CONSTRUCTION FOLLOWING WET WEATHER PERIODS WILL LIKELY ENCOUNTER DIFFICULTIES DUE TO THE WET OR SOFT SURFACE SOILS BECOMING A GENERAL HINDRANCE TO EQUIPMENT DUE TO RUTTING AND PUMPING OF THE SOIL SURFACE. IF THE SUBGRADE CANNOT BE ADEQUATELY COMPACTED TO MINIMUM DENSITIES AS DESCRIBED ABOVE, ONE OF THE FOLLOWING MEASURES WILL BE REQUIRED:
    - REMOVAL AND REPLACEMENT WITH SELECT FILL.
    - CHEMICAL TREATMENT OF THE SOIL TO DRY SOIL AND INCREASE THE STABILITY OF THE SUBGRADE.
    - DRYING BY NATURAL MEANS.

SLAB ON GRADE	
THICKNESS	5.0 INCHES
REINFORCING (EACH WAY)	#4 AT 14" O.C.
REINFORCING LOCATION	MID DEPTH
VISQUEEN	10 MIL



Seal  
4  
S201

**TWG**  
THE WARREN GROUP  
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Revision Date Issued By Description

Document issued for:  
Construction Documents

PROPOSED

HIDALGO  
COUNTY  
PRECINCT 4  
MEMORIAL PARK  
PHASE 1

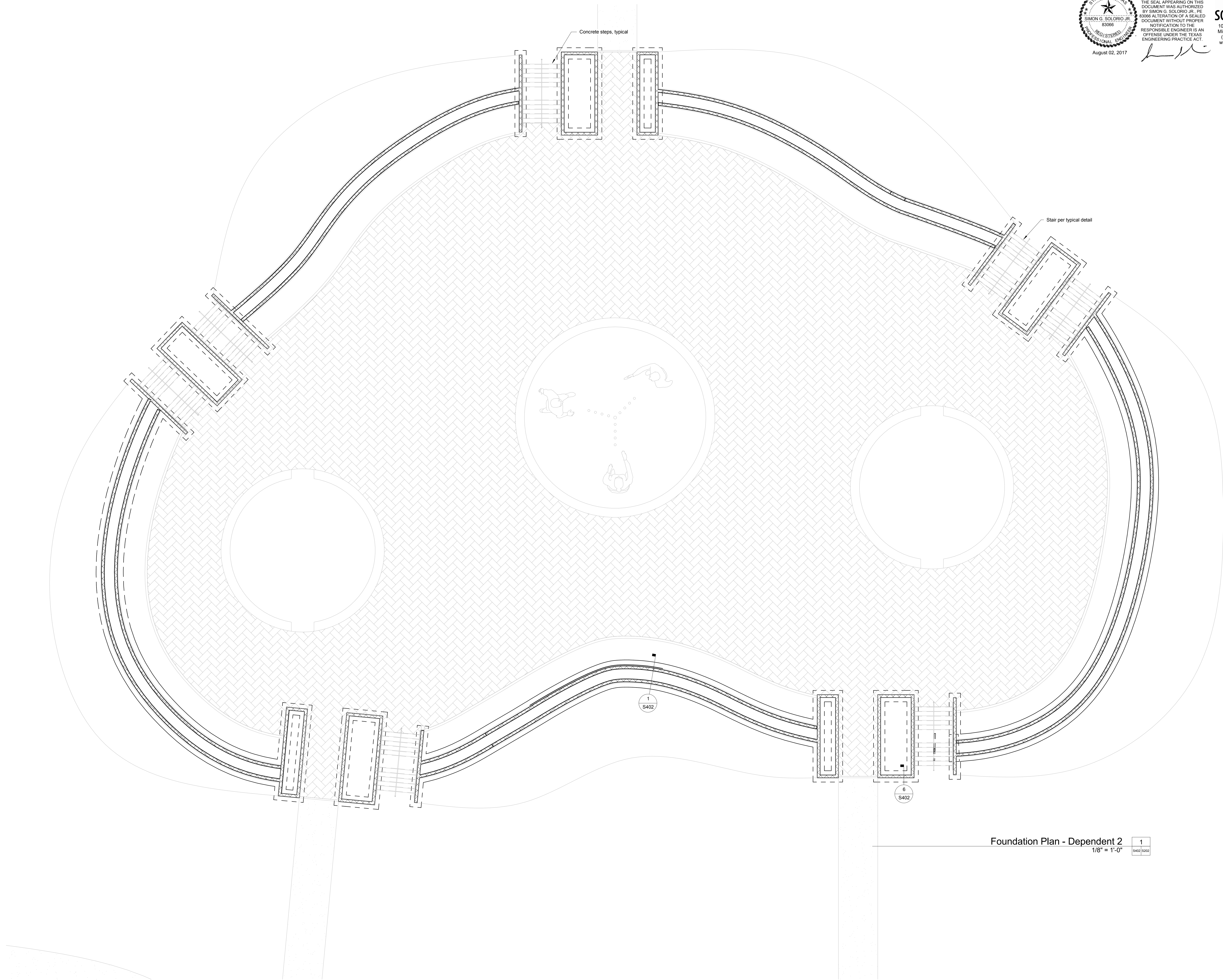
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Project: 17163  
Date: August 02, 2017

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PHASE 1

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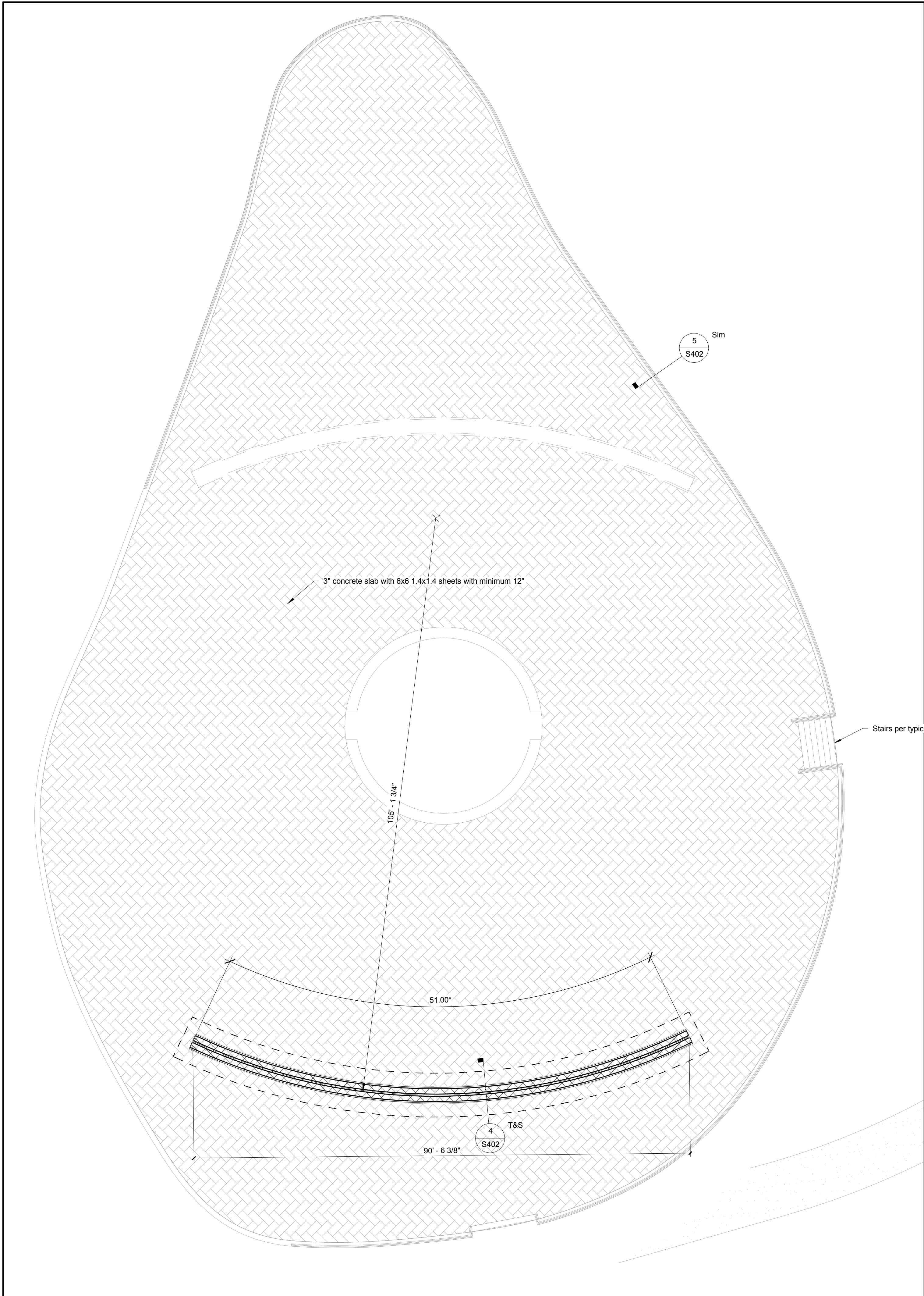
PROPOSED

Hidalgo County  
Precint 4  
Memorial Park  
Phase I

107 HIGHWAY AND SUNFLOWER ROAD  
EDINBURG, TEXAS 78539

Project: 17163  
Date: August 02, 2017

S204



Foundation Plan Monument

3/32" = 1'-0"

1  
S402/S204

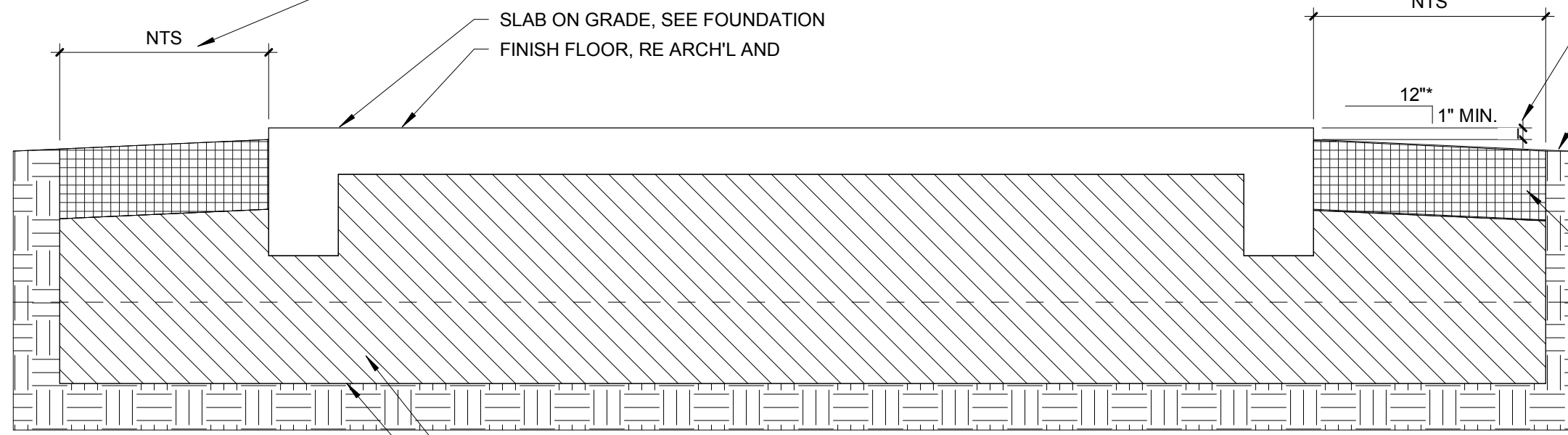


NOTE TO OWNER:  
DRAINAGE OF THE SITE MUST BE MAINTAINED THROUGHOUT THE LIFE OF THE STRUCTURE. THE SOIL AT THIS SITE IS HIGHLY SENSITIVE TO CHANGE IN THE SOIL MOISTURE CONTENT AND WILL DAMAGE THE STRUCTURE IF THE MOISTURE CONTENT INCREASES OR

\*INITIAL ROUGH GRADING SHALL BE COMPLETED w/ NATURAL CLAY MATERIALS (NO SAND ALLOWED)  
PRIOR TO FORM SETTING IT SHALL SLOPE 1" FOOT FOR THE FIRST 5', AND 6' MIN. IN 10' TO

EXTEND BUILDING PAD AROUND PERIMETER OF BUILDING AS INDICATED ON PLANS (U.N.O. 5'-0" MINIMUM)

SLAB ON GRADE, SEE FOUNDATION FINISH FLOOR, RE ARCH'L AND



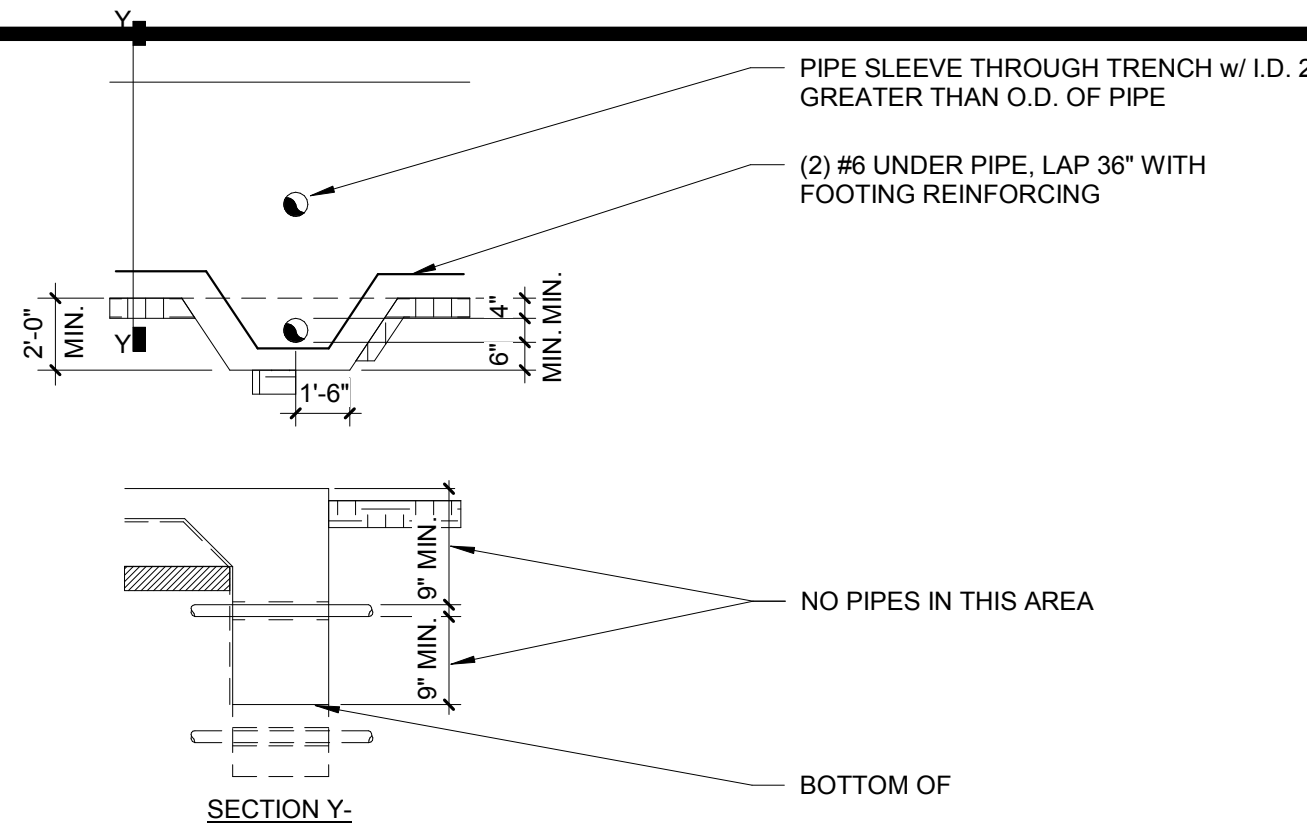
LINE OF EXCAVATION  
THE SUB GRADE SHALL BE PREPARED IN ACCORDANCE W/ GEOTECHNICAL REPORT RECOMMENDATIONS. THE TESTING LABORATORY SHALL TEST AND APPROVE THE MOISTURE AND DENSITY OF THE SUBGRADE PRIOR TO PLACEMENT OF ANY FILL MATERIAL.

Typical Building Subgrade Preparation  
1" = 1'-0"

9

S401

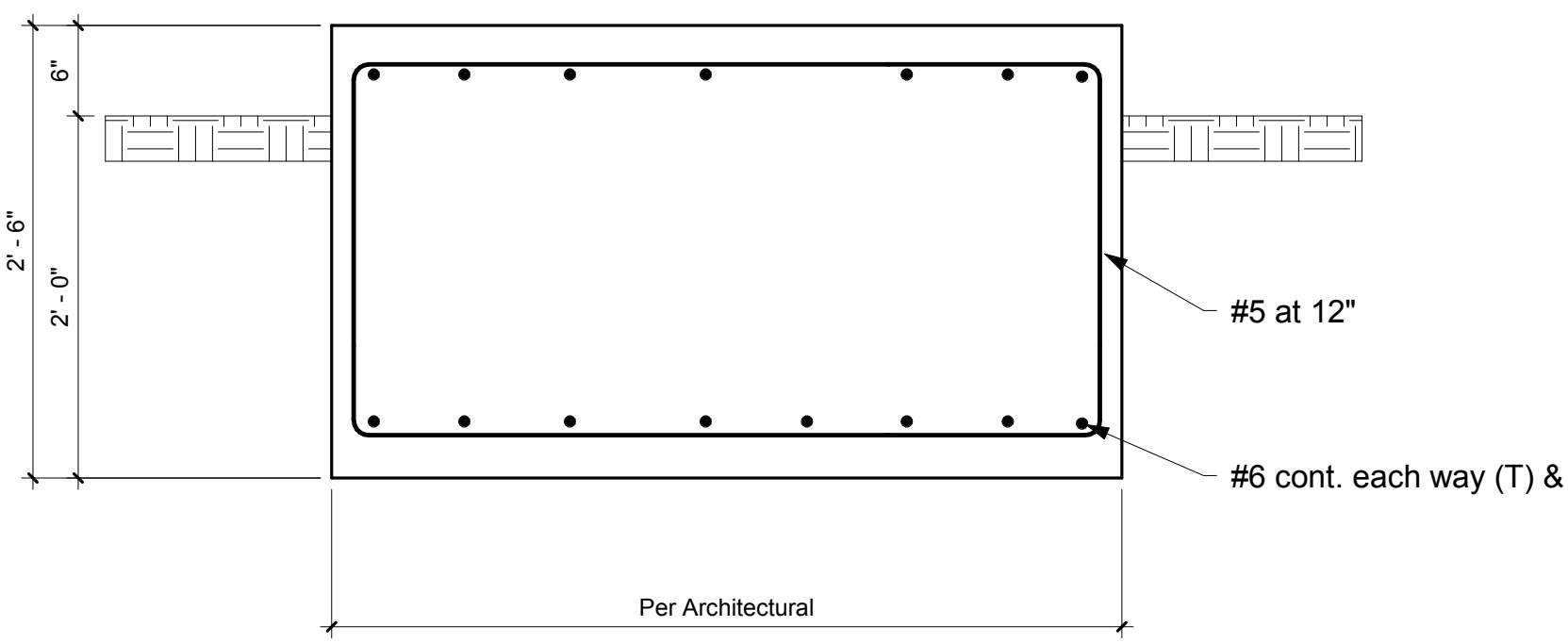
NOTE TO CONTRACTOR:  
PROVIDE PUMPS ON SITE AND REMOVE ANY WATER FROM THE SITE 100% OF THE TIME. STANDING WATER IN THE EXCAVATION AT ANYTIME, DAY OR NIGHT, IS UNACCEPTABLE.



Typical Piping Through Footing  
3/8" = 1'-0"

5

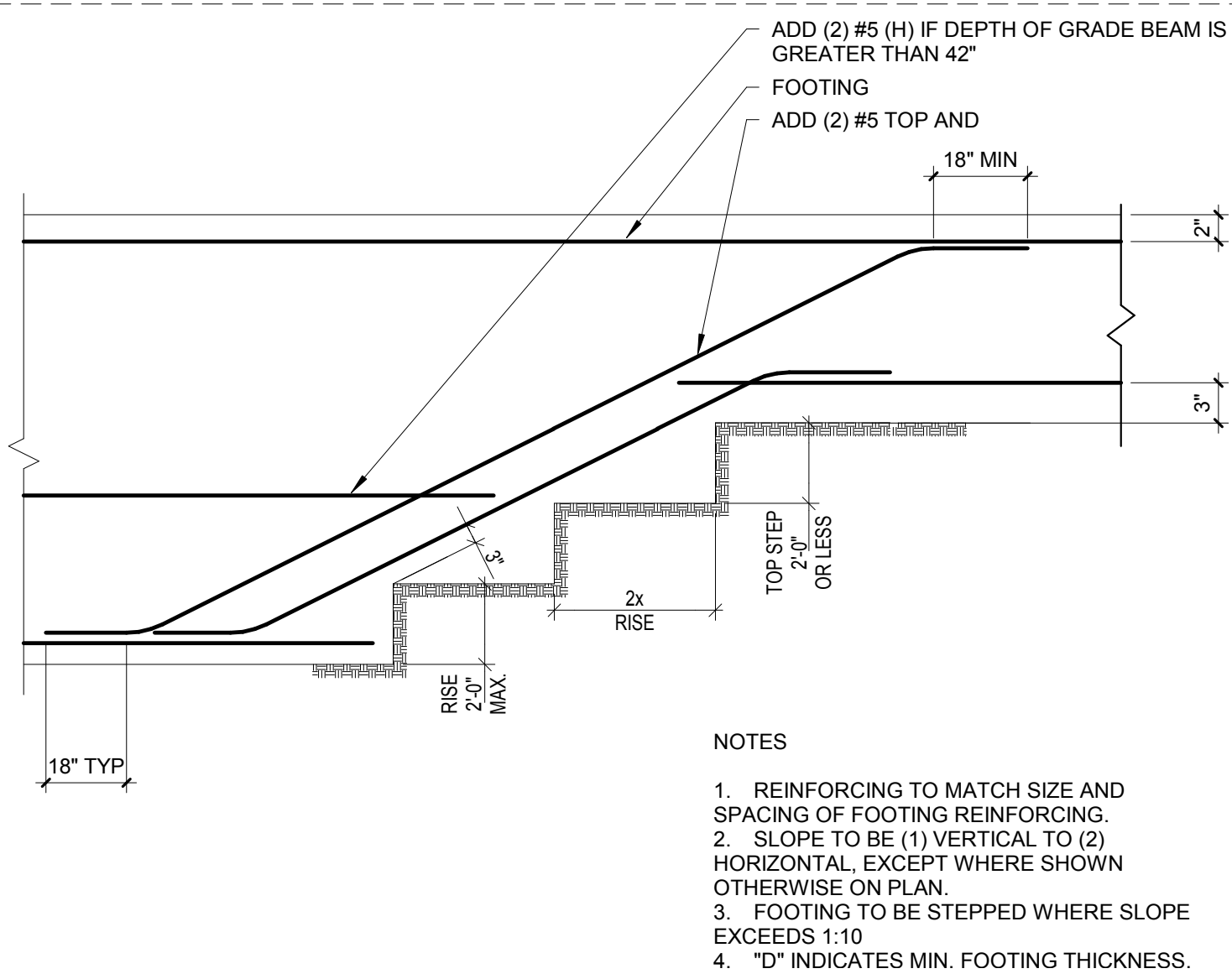
S401



Footing at Exterior, Slab Drop for Future Slab  
1" = 1'-0"

1

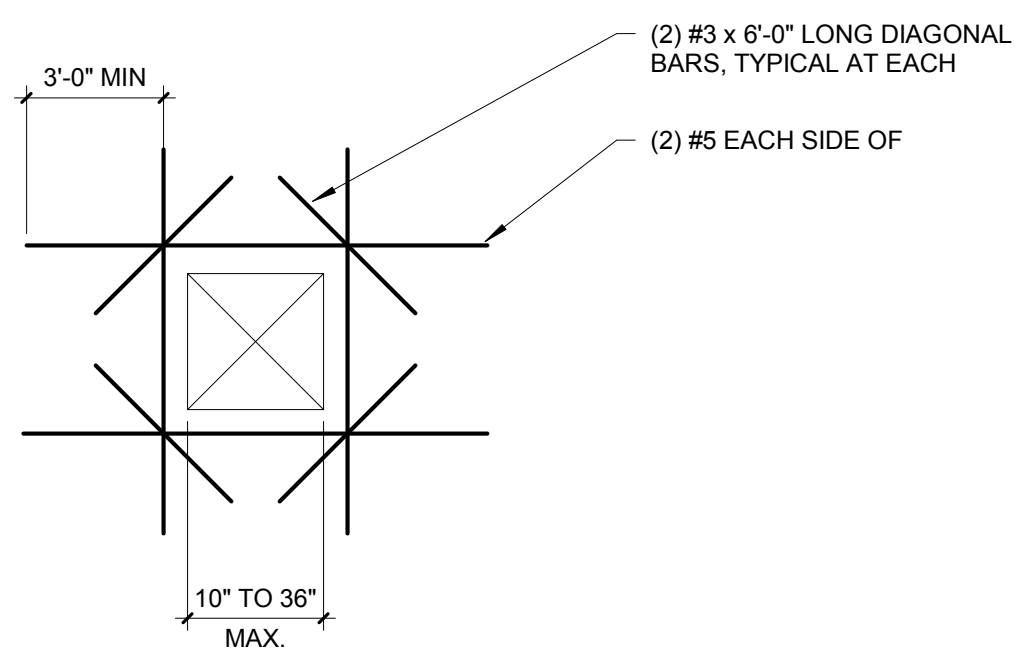
S401



Typical Stepped Footing  
1" = 1'-0"

6

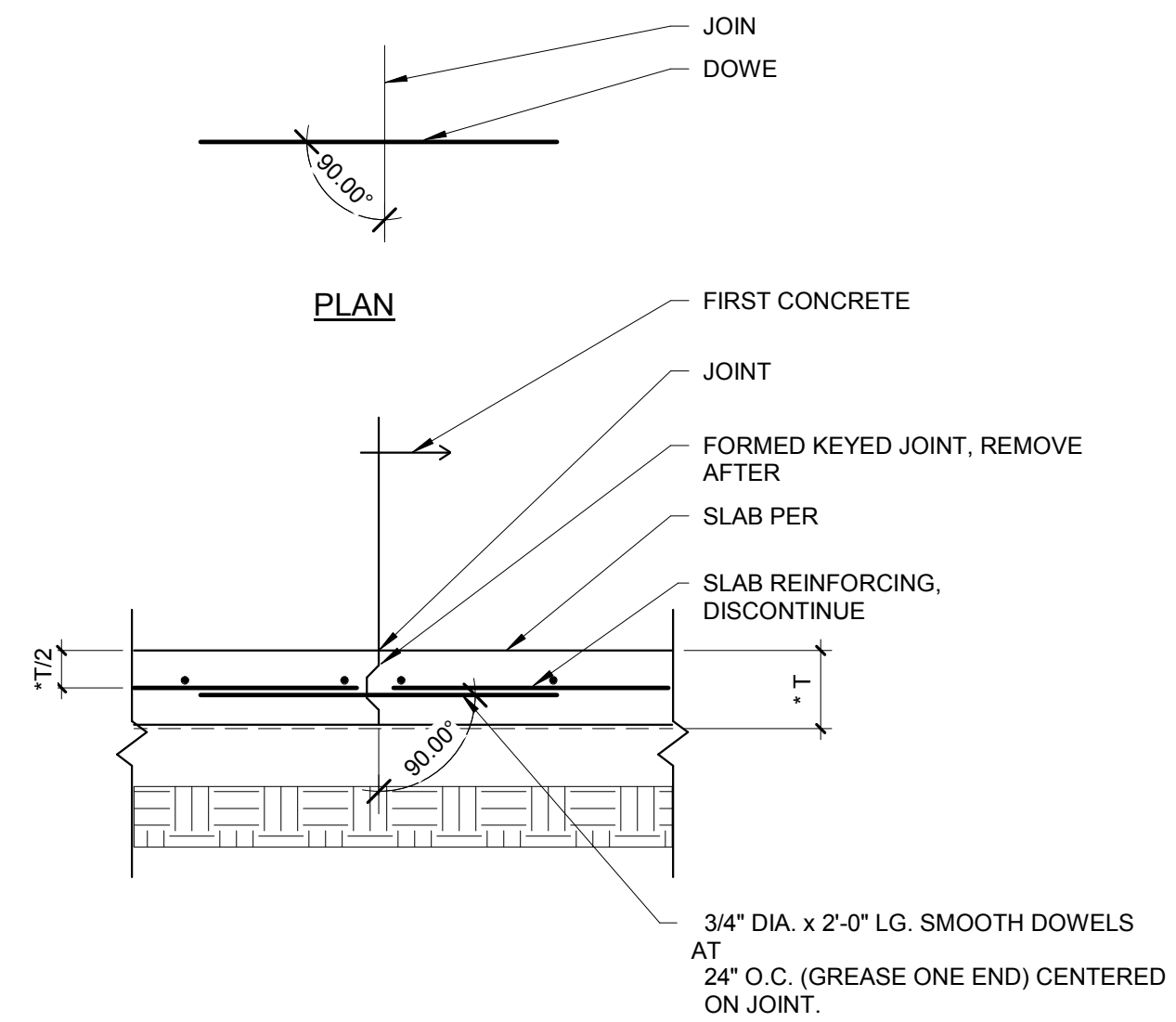
S401



Typical Slab Opening Reinforcing  
1/4" = 1'-0"

2

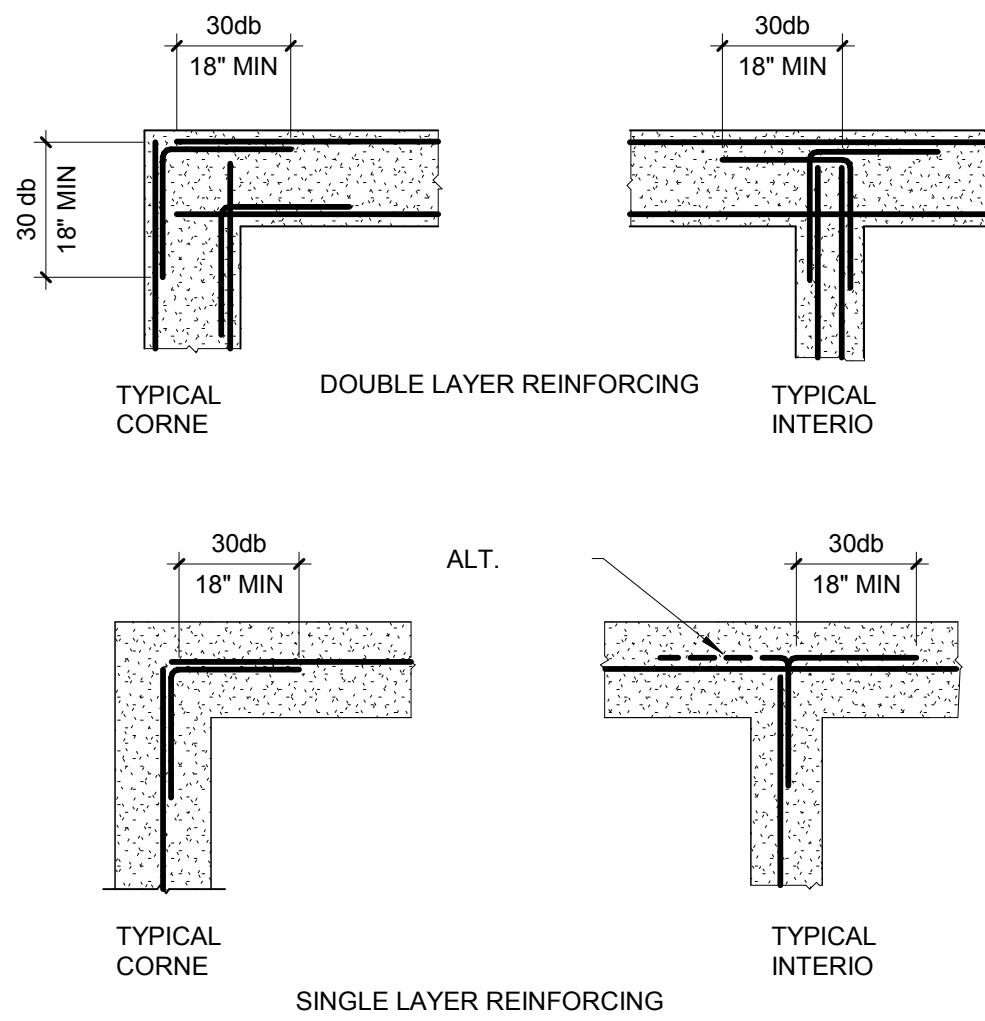
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Typical Slab Construction Joint  
1" = 1'-0"

7

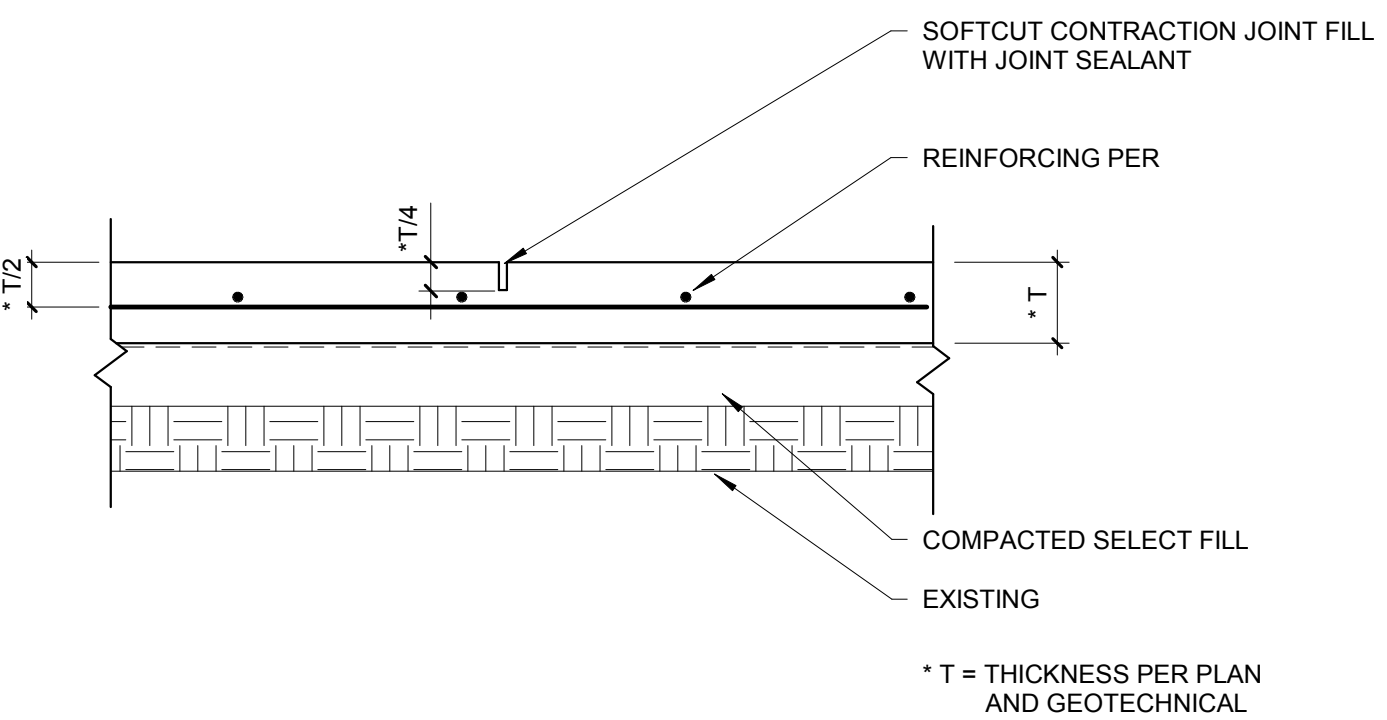
S401



Typical Reinforcing at Concrete Intersections  
1/4" = 1'-0"

3

S401



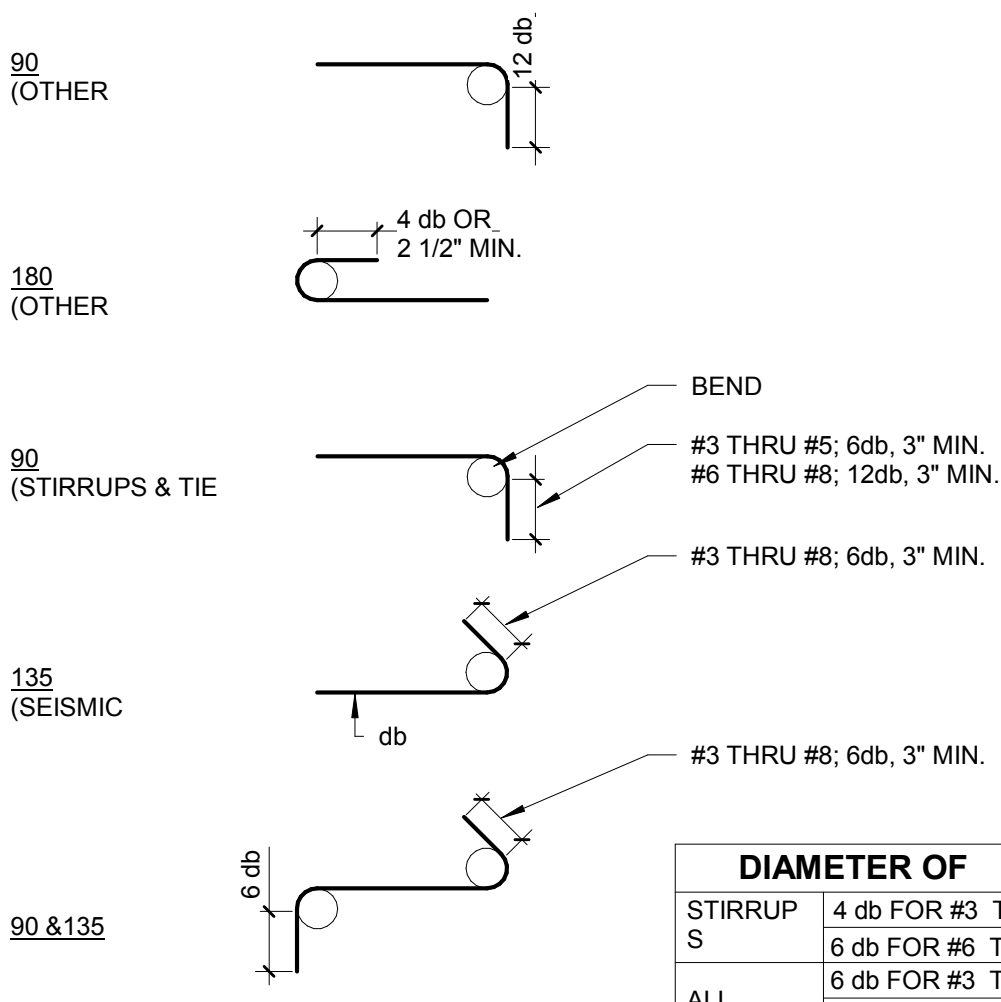
NOTES

1. SPACING SHALL NOT EXCEED 15 FEET.
2. JOINT PATTERN SHOULD BE NEARLY SQUARE.
3. SAW CUT SHALL BE MADE WITHIN 4 HOURS OF PLACEMENT (OR AS SOON AS SLAB SURFACE CAN BE WALKED UPON WITHOUT MARKING).
4. FILL SAW CUT FULL DEPTH WITH "SKODOUR S" AFTER SLAB IS CURED (28 DAYS, MINIMUM).
5. THIS DETAIL TO BE USED ONLY IN THE ABSENCE OF ARCHITECTURAL

Typical Slab Contraction Joint  
1" = 1'-0"

8

S401

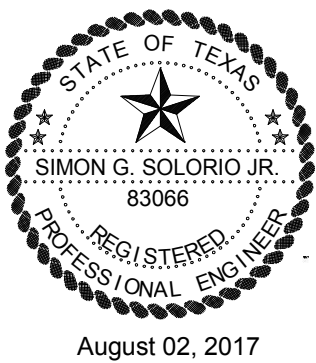


DIAMETER OF	
STIRRUP	4 db FOR #3 THRU #5 BARS
S	6 db FOR #6 THRU #8 BARS
ALL	6 db FOR #3 THRU #5 BARS
OTHER	8 db FOR #9 THRU #11 BARS
	10 db FOR #14 THRU #18 BARS

Typical Reinforcing Bends  
1/4" = 1'-0"

4

S401



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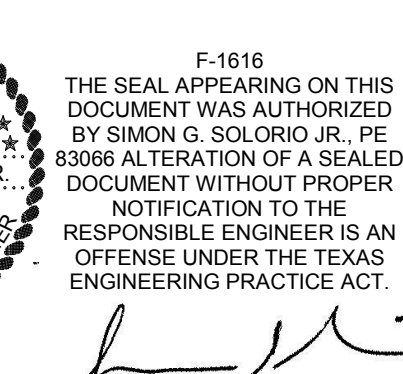
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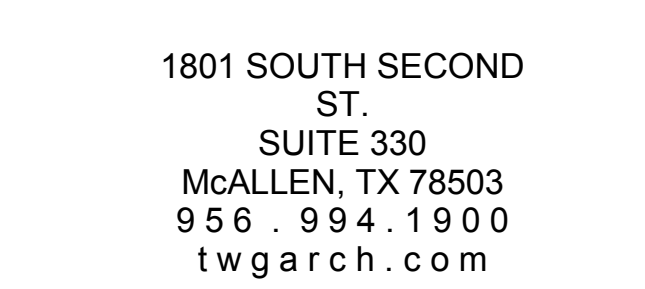
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S401





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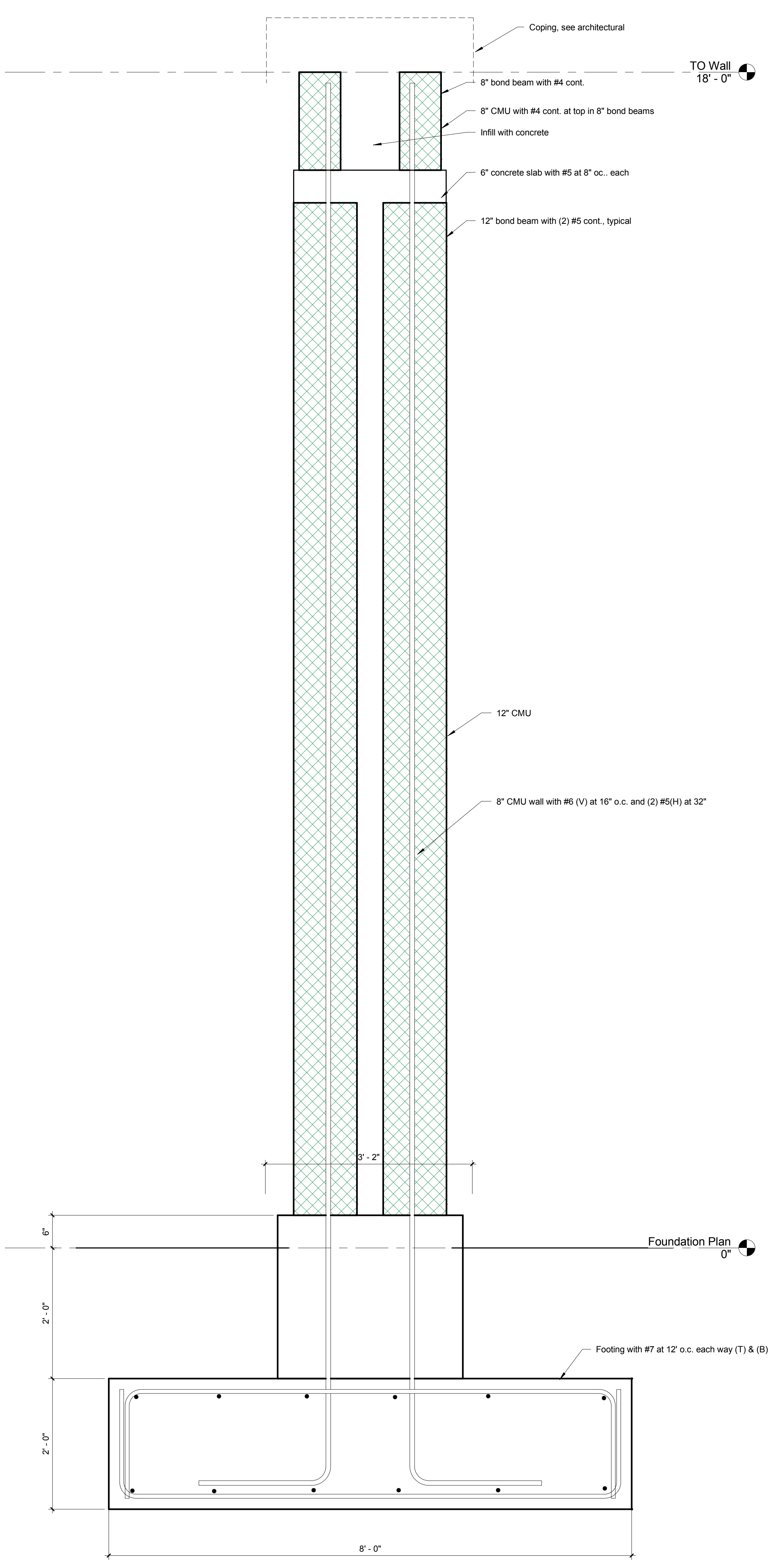
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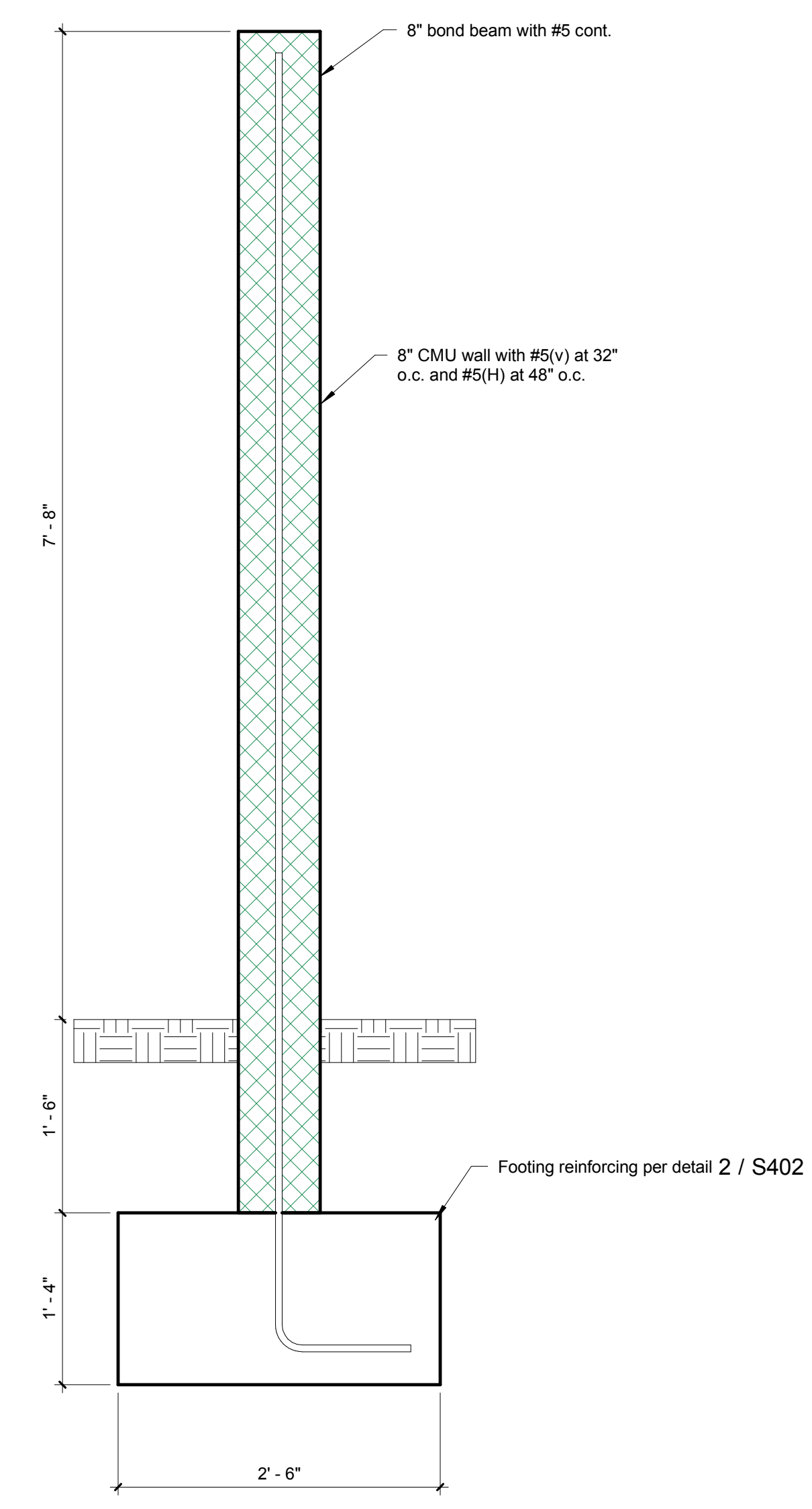
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Project:	17163
Date:	August 02, 2017

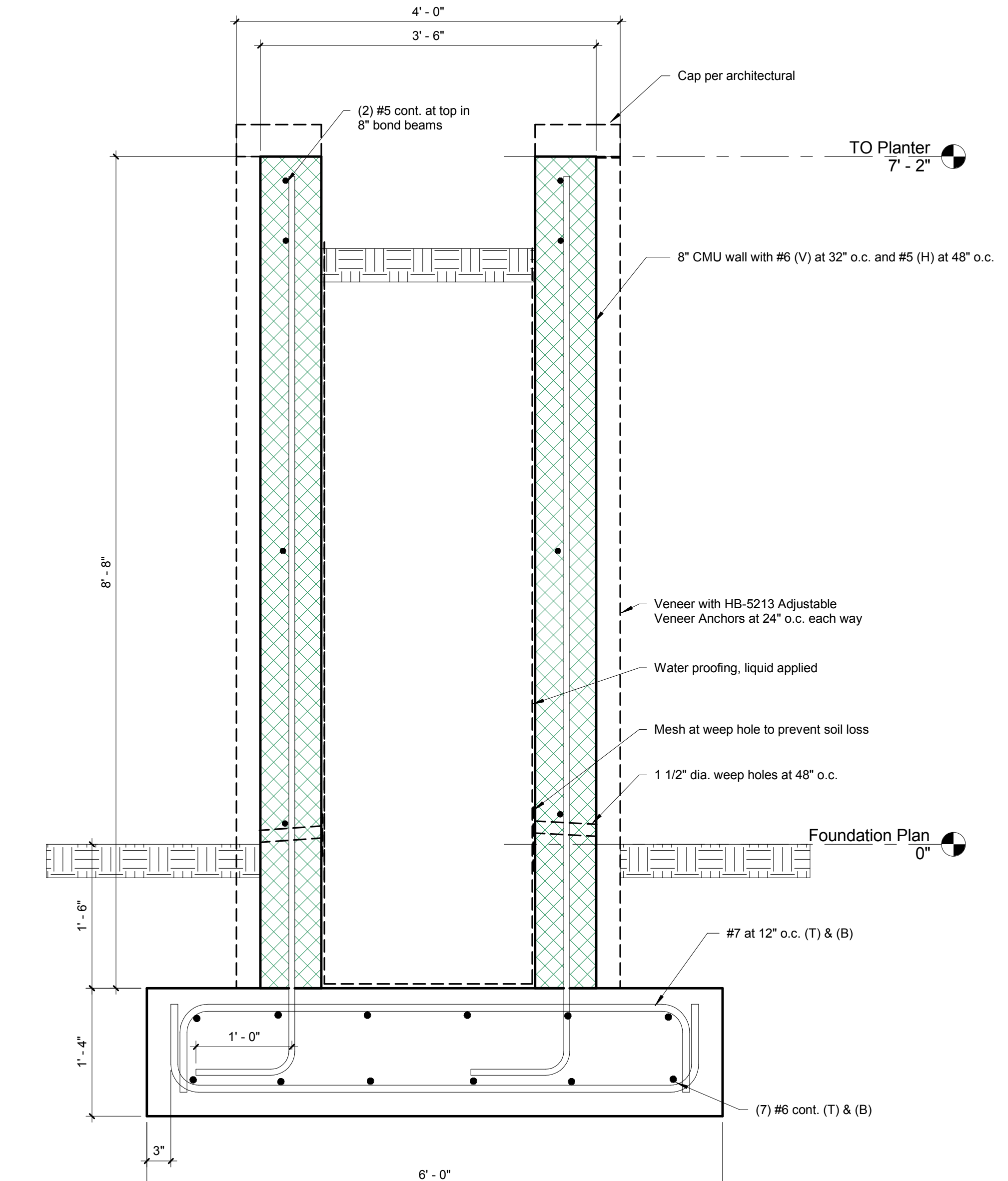
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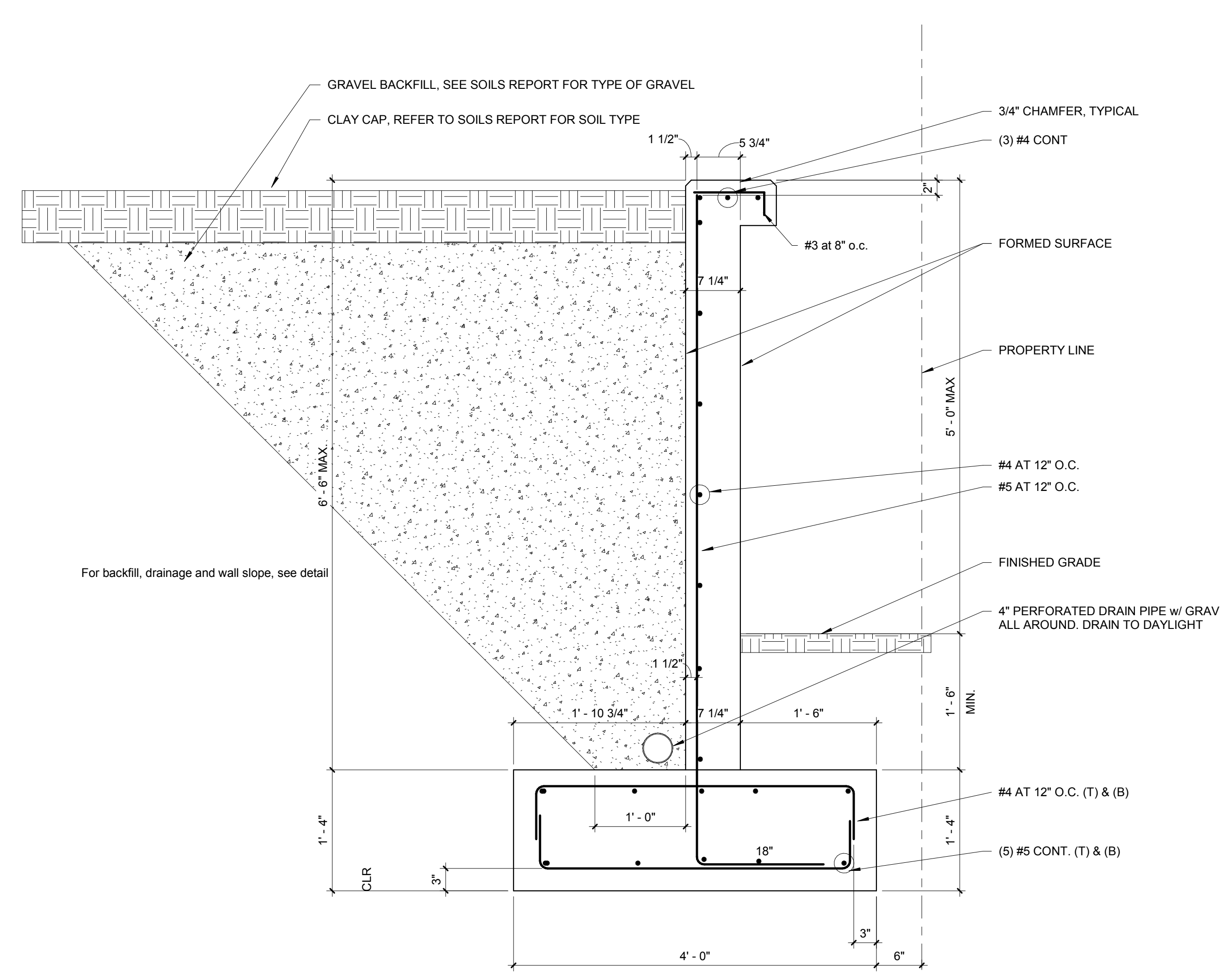
Monument wall and Footing	4
1" = 1'-0"	\$201 \$402



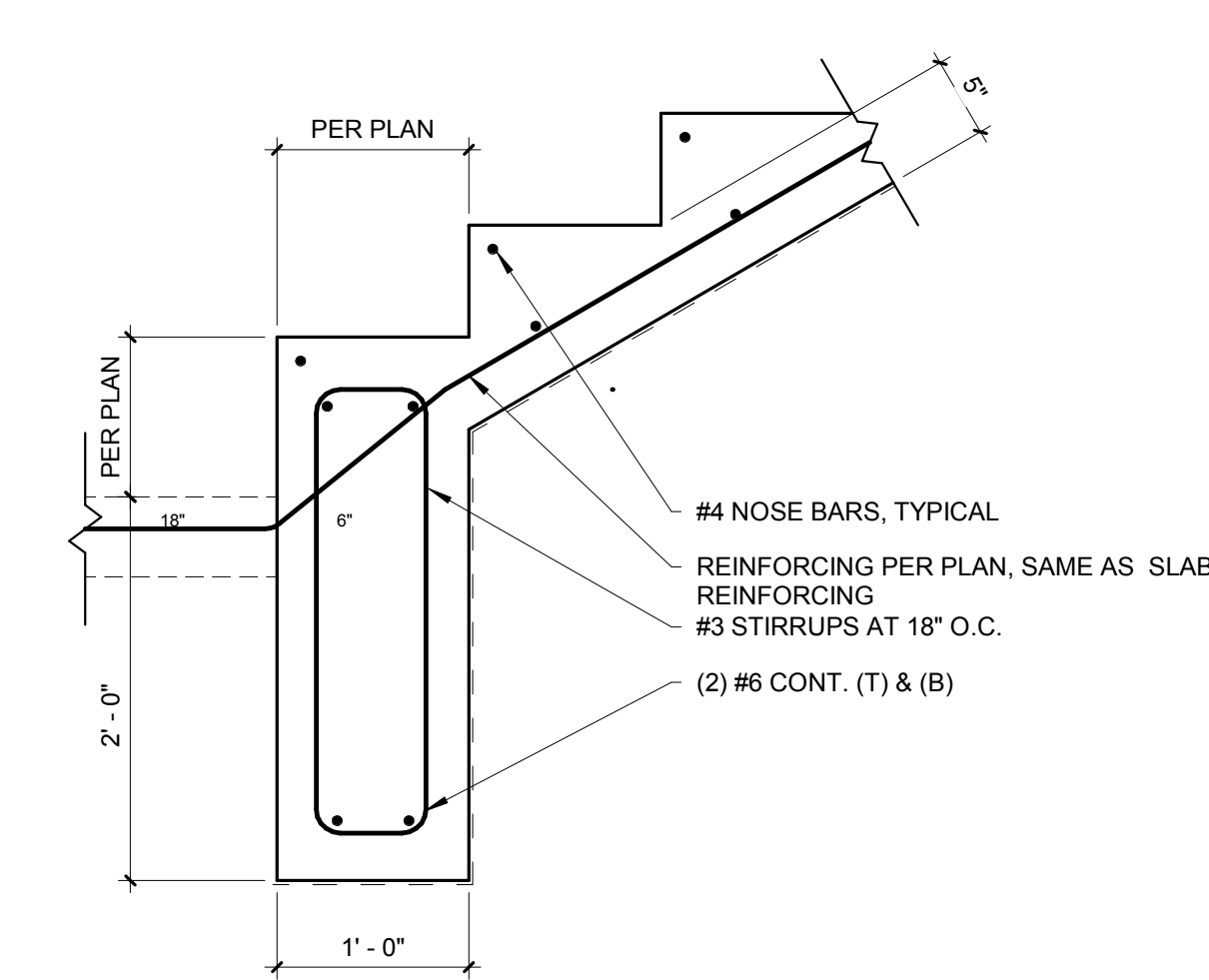
Planter CMU Walls	6
1" = 1'-0"	S202



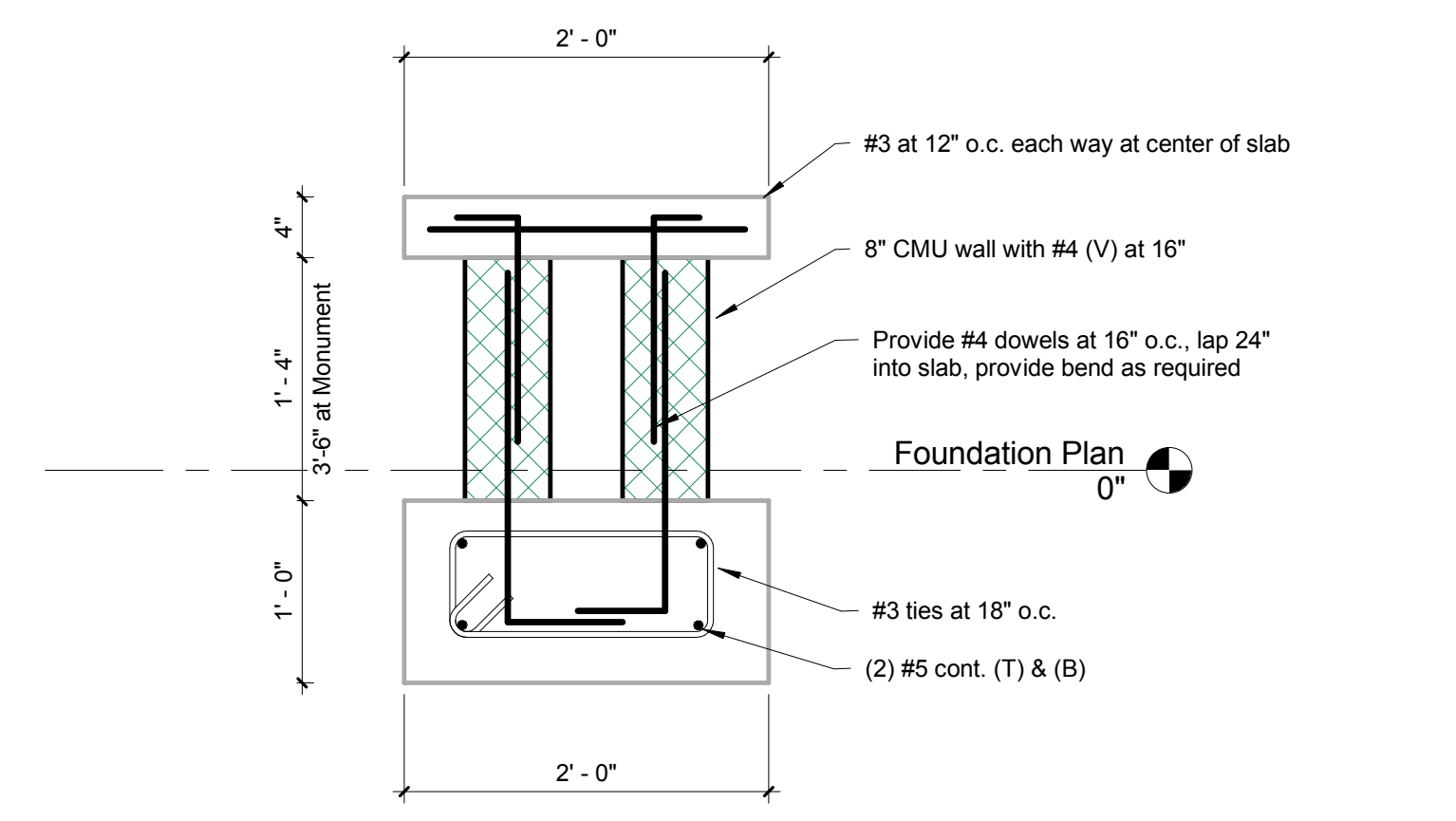
Planter Walls and Footing	1
1" = 1'-0"	S202 S4



5' Retaining Wall, NO Surcharge	5
1" = 1'-0"	S204 \$



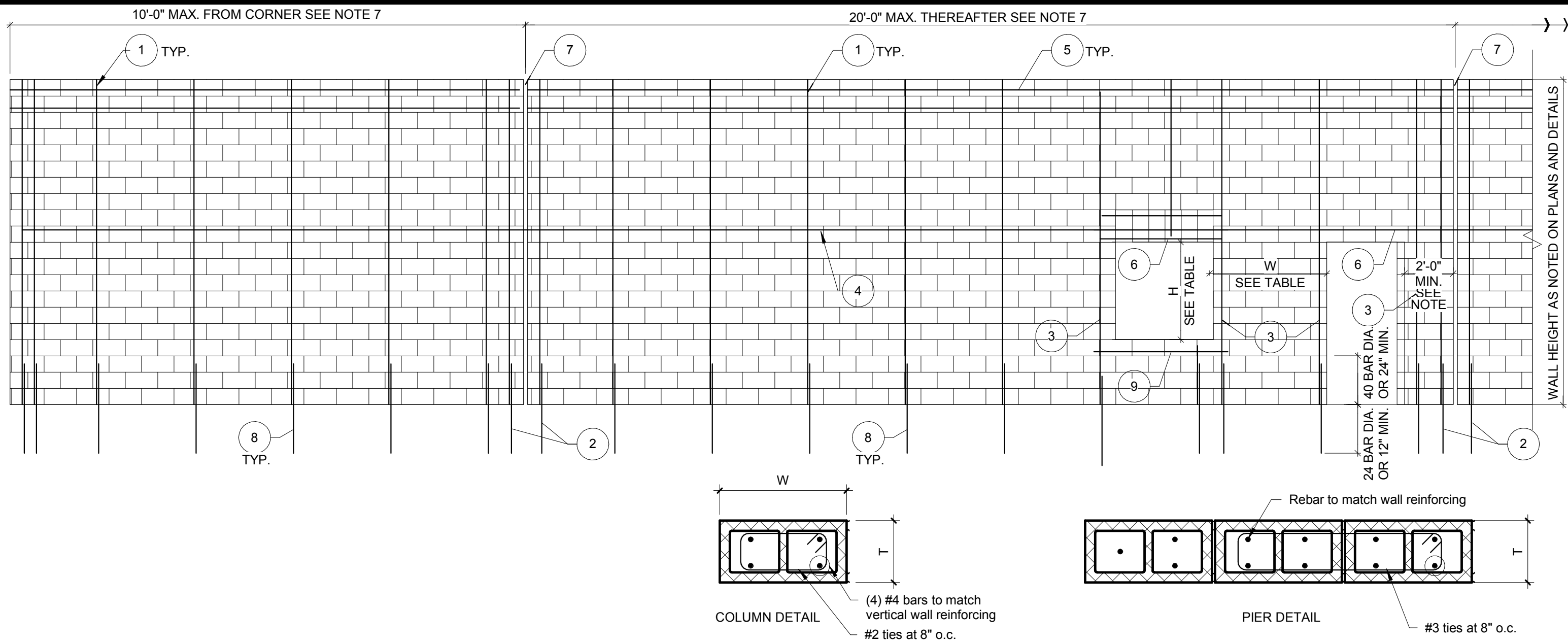
Footings at Concrete Steps, Exterior	3
1" = 1'-0"	s



Bench Detail and Monument Wall	2
1" = 1'-0"	\$201 \$

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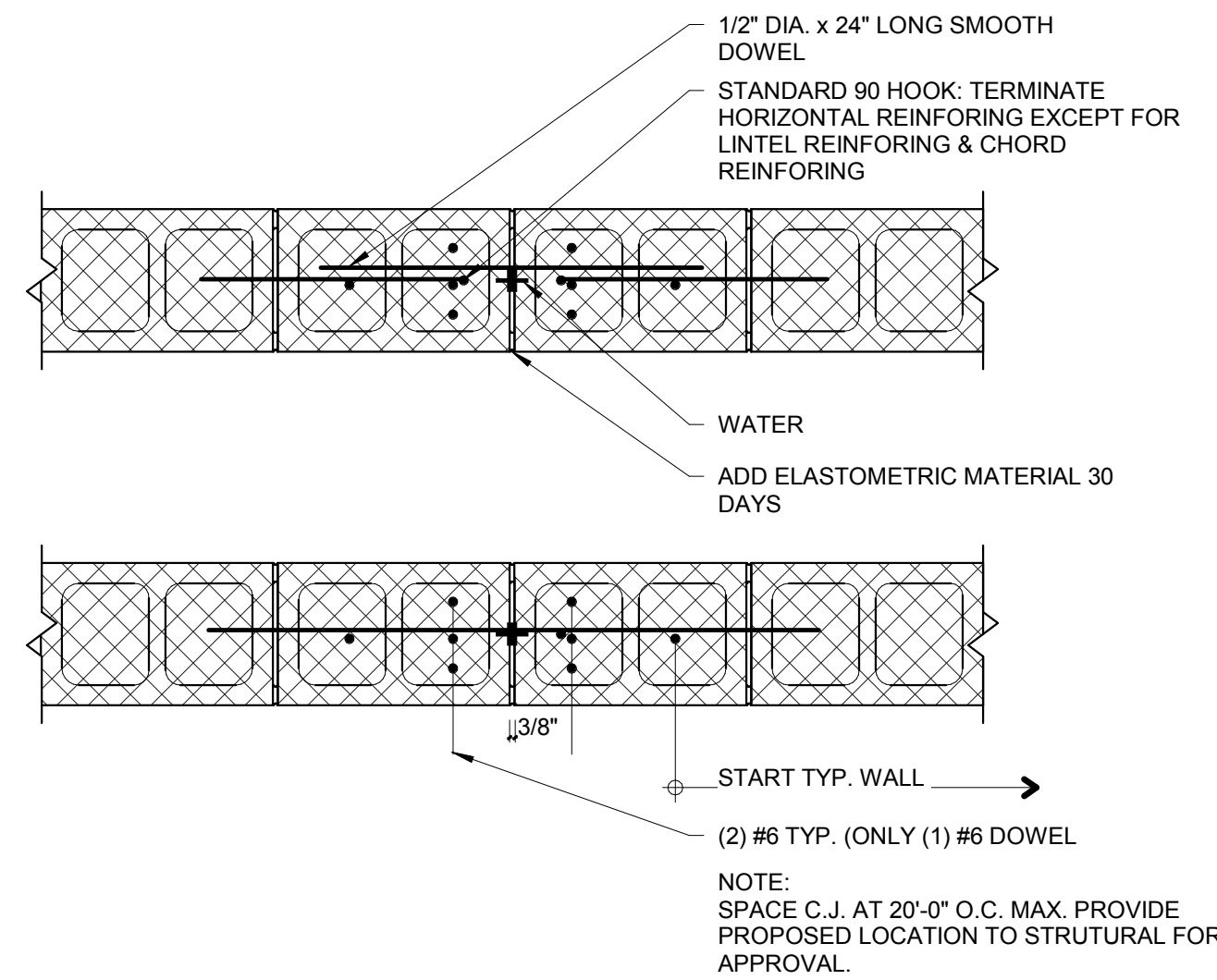


WALL THICKNESS (T)	DIMENSIONAL LIMITS		
	CLEAR	PIER	COLUMN
6"	H > 24" AND W > 32"	H > 24" AND 32" > W > 24"	H > 24" AND W < 24"
8"	H > 32" AND W > 40"	H > 32" AND 40" > W > 24"	H > 32" AND W < 24"
12"	H > 48" AND W > 64"	H > 48" AND 64" > W > 40"	H > 48" AND W < 40"

1. NORMAL WALL REINFORCING AS NOTED ON DETAILS AND DESCRIBED IN GENERAL NOTES.
2. ADDITIONAL VERTICAL REINFORCING AT CONTROL JOINTS - SEE TYPICAL CONTROL JOINT DETAIL.
3. ADDITIONAL VERTICAL REINFORCING AT JAMBS OF ALL WALL OPENINGS.
4. INTERMEDIATE BOND BEAM REINFORCED AND SPACED AS REQUIRED ON DRAWINGS. CUT ONE INTERMEDIATE BOND BEAM SHALL BE PLACED AT WINDOW LINTEL ELEVATION AND AT 8'-0" O.C.
5. ROOF LEVEL BOND BEAM REINFORCED AS NOTED ON DETAILS - CONTINUE ALL REINFORCING UNCUT THROUGH CONTROL JOINTS.
6. LINTEL REINFORCING AS DETAILED AND/OR SCHEDULED.
7. CONTROL JOINTS (CJ): UNLESS NOTED OTHERWISE ON THE ARCHITECTURAL DRAWINGS, THE CJ SPACING NOTED IS THE MAXIMUM PERMITTED. THE SPACING OF CJS SHALL BE COORDINATED WITH THE WALL OPENING LOCATIONS AND IN NO CASE SHALL A CJ BE LOCATED CLOSER THAN 24" TO THE JAMB OF ANY WALL OPENING.
8. FOUNDATION DOWELS TO MATCH VERTICAL WALL REINFORCING SIZE AND SPACING.
9. SILL LEVEL BOND BEAM REINFORCED AS NOTED IN MASONRY GENERAL NOTES.

Typical CMU Wall Elevation  
1" = 1'-0"

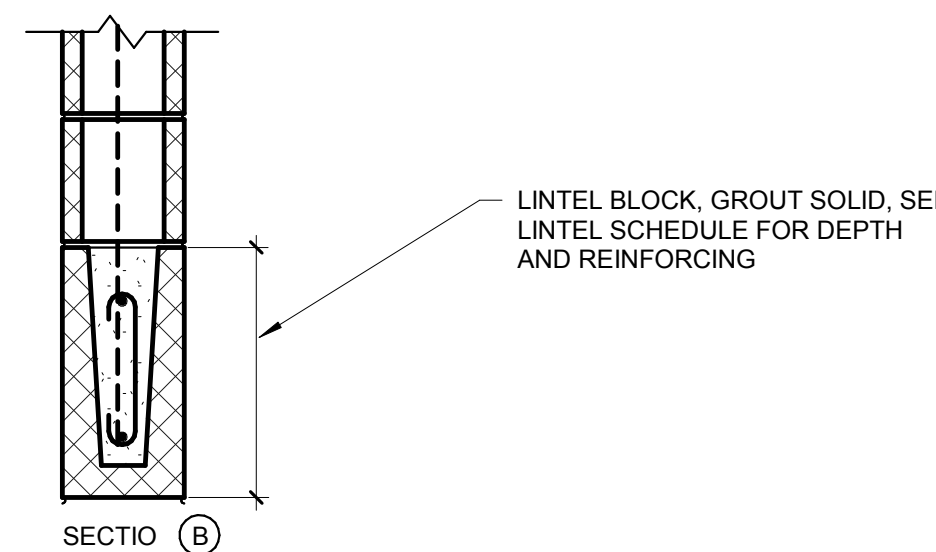
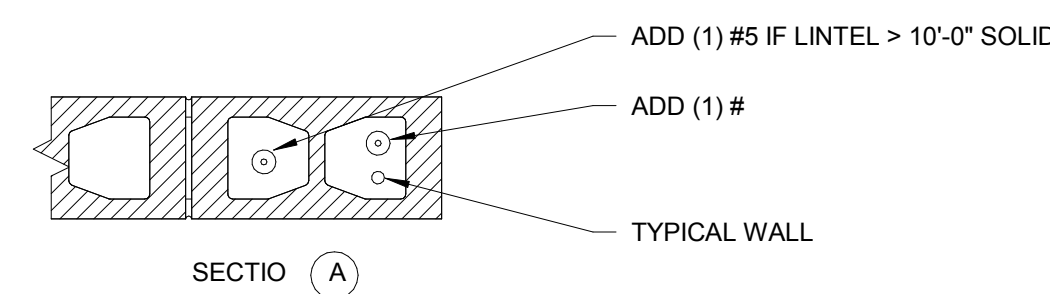
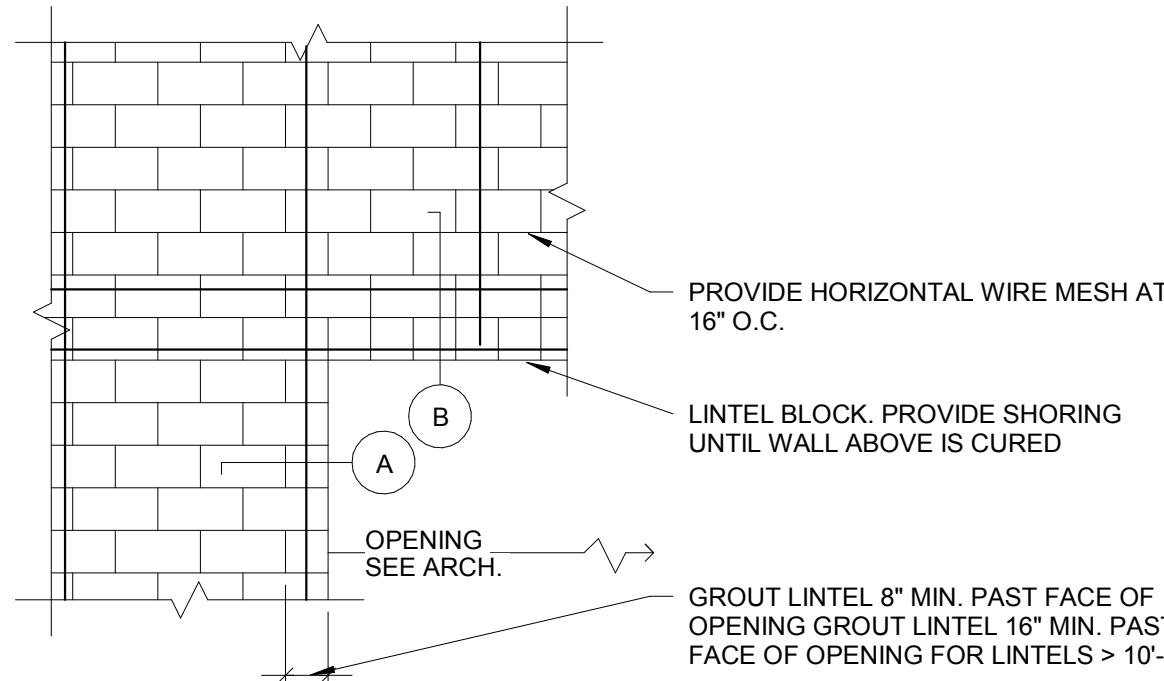
5  
S403



Typical CMU Control Joint  
1" = 1'-0"

6  
S403

LINTEL					
CLEA SPA	WIDT	DEPT	REINFORCIN	#S TIES AT:	REMARK
<3'-	8"	8"	(1) #5	8"	
<6'-	8"	16"	(1) #5 (T) & (B)	8"	
<10'-	8"	16"	(1) #6 (T) & (B)	8"	
<12'-	8"	24"	(1) #7 (T) & (B)	8"	
<14'-	8"	36"	(1) #7 (T) & (B)	8"	
<16'-	8"	24"	(2) #6 (T) & (B)	8"	C.I.P.
<3'-	12"	8"	(2) #5	8"	
<6'-	12"	16"	(2) #5 (T) & (B)	8"	
<10'-	12"	16"	(2) #6 (T) & (B)	8"	
<12'-	12"	24"	(2) #7 (T) & (B)	8"	
<14'-	12"	36"	(2) #7 (T) & (B)	8"	
<16'-	12"	24"	(2) #6 (T) & (B)	8"	C.I.P.



Typical CMU Lintel  
1" = 1'-0"

8  
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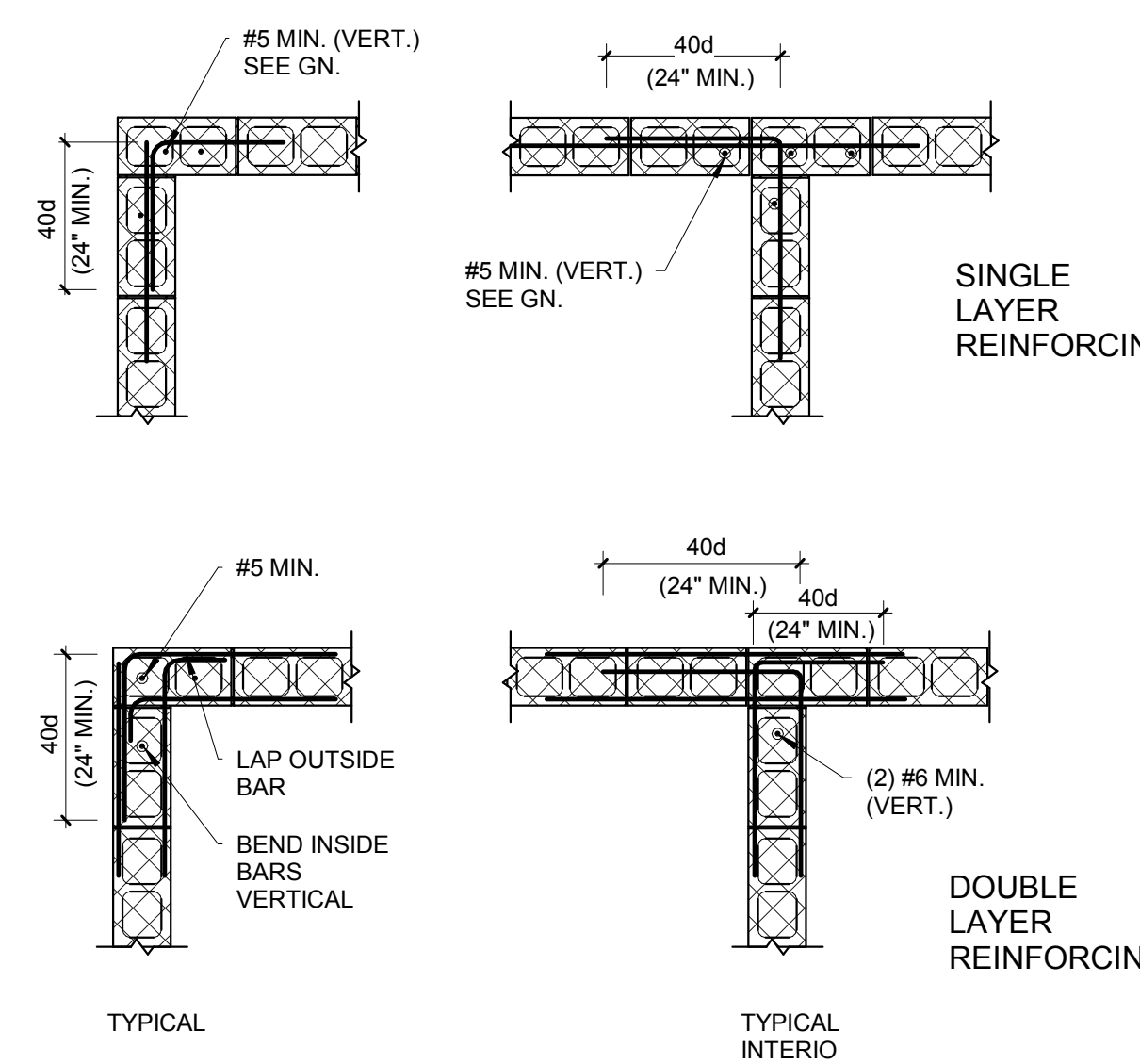
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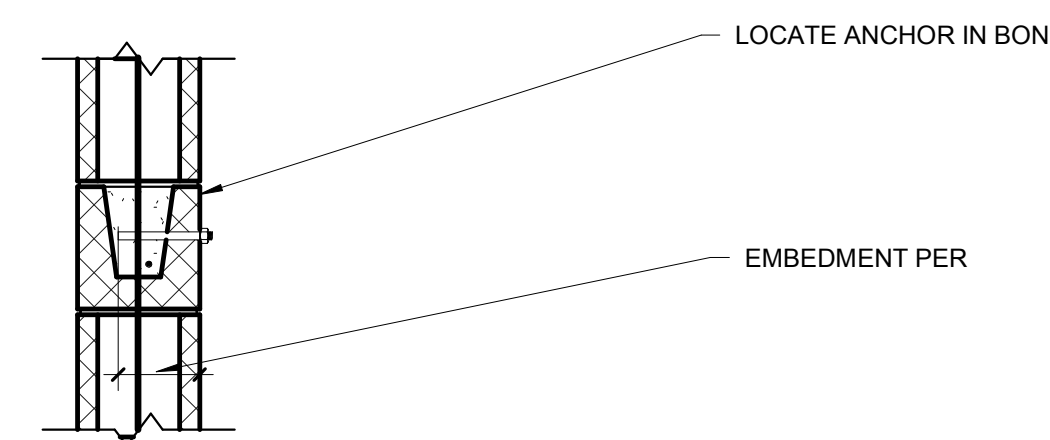
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Typical CMU Reinforcing at Intersections  
1/2" = 1'-0"

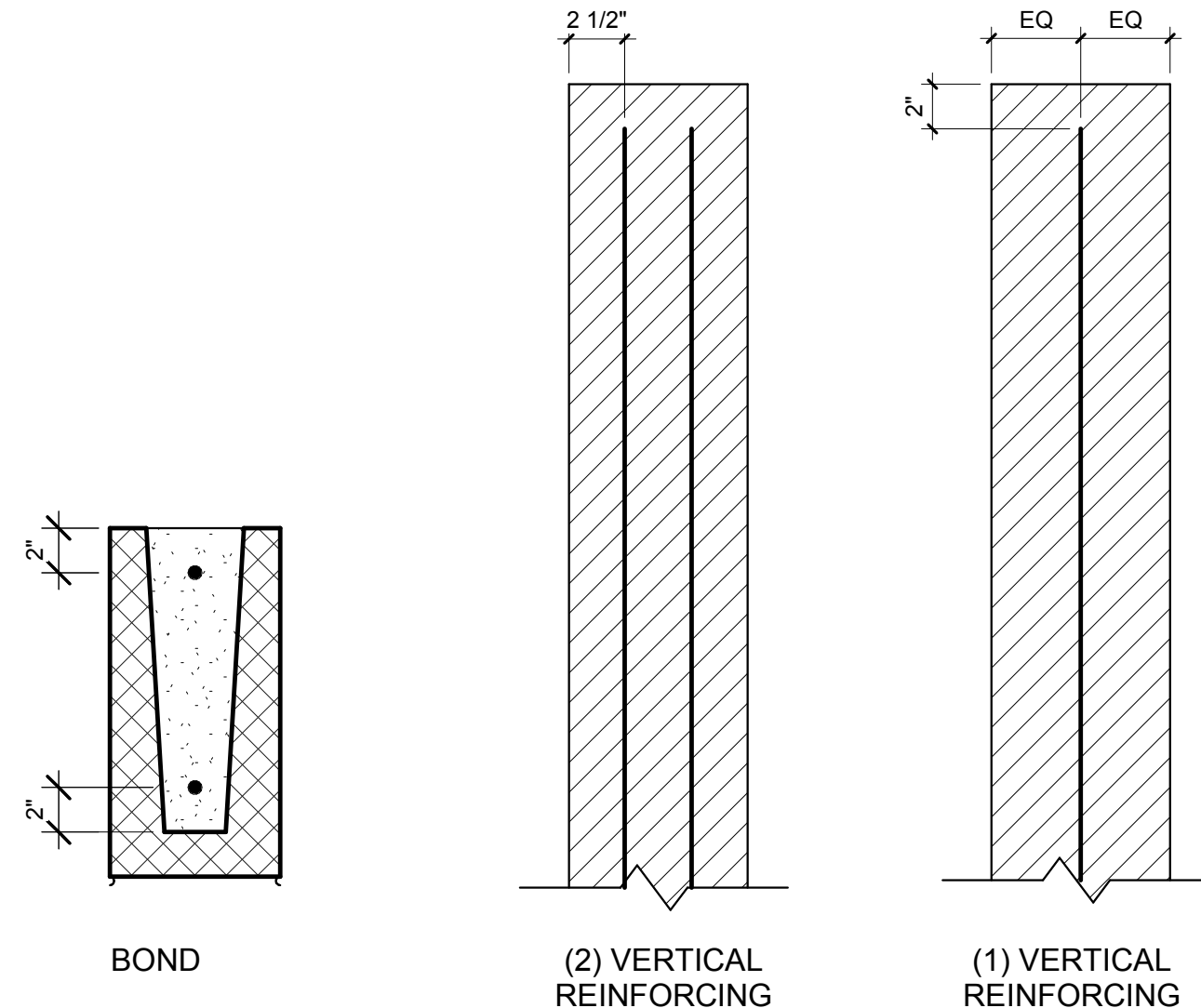
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S403

DIA.	EMBEDMEN	ADHESIV
CONCRETE	MASONRY	
1/2"	4"	6"
5/8"	5"	6"
3/4"	6"	6"



Typical CMU Threaded Anchor Embedment  
1" = 1'-0"

3  
S403



Typical CMU Reinforcing Clearances  
1 1/2" = 1'-0"

4  
S403

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PRECINCT 4  
MEMORIAL PARK  
PHASE 1

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EDINBURG, TEXAS 78539

Project: 17163  
Date: August 02, 2017

S403



ELECTRICAL SPECIFICATIONS:

I. GENERAL CONDITIONS

A. THE SCOPE OF THE WORK SHALL INCLUDE THE FURNISHING AND INSTALLATION OF THE NECESSARY MATERIAL AND LABOR TO ACCOMPLISH THE WORK INDICATED BY THE DRAWINGS AND HEREIN SPECIFIED. ALL WORK BY THIS CONTRACTOR SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND LOCAL BUILDING CODES. WHERE CONFLICTS BETWEEN THIS SPECIFICATION AND THE BASE BUILDING SPECIFICATION EXIST, THE BASE BUILDING DOCUMENT SHALL GOVERN.

B. THE CONTRACT DOCUMENTS DO NOT PROPOSE TO SHOW ALL EXISTING SYSTEMS, EQUIPMENT OR MATERIAL. CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING THE EXISTING CONDITIONS AT THE JOB SITE BEFORE SUBMITTING PROPOSALS. SUBMISSION OF PROPOSALS SHALL BE TAKEN AS EVIDENCE THAT SUCH INSPECTION HAS TAKEN PLACE. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE COMPLETE SET OF CONSTRUCTION DOCUMENTS, AND THE LACK OF SPECIFIC INFORMATION ON THE DRAWINGS SHALL NOT RELIEVE THE CONTRACTOR OF ANY RESPONSIBILITY.

C. MATERIALS AND EQUIPMENT FURNISHED UNDER THIS CONTRACT SHALL BE NEW AND SHALL BEAR THE U.L. LABEL WHERE APPLICABLE, UNLESS NOTED OTHERWISE. ALL WORK SHALL BE GUARANTEED AGAINST DEFECTIVE MATERIALS AND WORKMANSHIP FOR A PERIOD OF NOT LESS THAN ONE (1) YEAR AFTER COMPLETION AND ACCEPTANCE BY THE OWNER.

D. CONTRACTOR SHALL INSTALL ELECTRICAL SYSTEMS WITHOUT INTERFERENCE AND IN STRICT COORDINATION WITH OTHER TRADES.

E. MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE CONTRACT DOCUMENTS AND APPLICABLE CODES AND STANDARDS. IN CASE OF DIFFERENCE BETWEEN APPLICABLE CODES AND STANDARDS AND THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL PROMPTLY NOTIFY THE ARCHITECT/ENGINEER IN WRITING OF SUCH DIFFERENCE. SHOULD THE CONTRACTOR PERFORM ANY WORK THAT DOES NOT COMPLY WITH THE REQUIREMENTS OF APPLICABLE CODES AND STANDARDS, HE SHALL BEAR ALL COSTS ARISING IN CORRECTING SUCH DEFECTS. APPLICABLE CODES AND STANDARDS SHALL INCLUDE ALL ORDINANCES, UTILITY COMPANY REGULATIONS, AND APPLICABLE REQUIREMENTS OF NATIONALLY ACCEPTED CODES AND STANDARDS. SHOULD THE CONTRACTOR SUPPLY EQUIPMENT DIFFERING FROM THE SPECIFIED ITEMS IN THE CONTRACT DOCUMENTS WITHOUT NOTIFICATION TO THE ENGINEER, HE SHALL BEAR ALL COSTS TO UPGRADE DEFICIENCIES ARISING FROM SUCH.

F. WHERE ONLY ONE MANUFACTURER'S NAME IS LISTED IN THE EQUIPMENT SPECIFICATION, OTHER MANUFACTURERS OF SIMILAR CHARACTERISTICS AND OF EQUAL OR BETTER PERFORMANCE CAPACITIES MAY BE CONSIDERED FOR "OR EQUAL" ACCEPTANCE BY THE ENGINEER. SUBSTITUTION REQUESTS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL. WHERE MORE THAN ONE MANUFACTURER IS LISTED IN THE NOTES AND EQUIPMENT SPECIFICATIONS, ONLY THOSE NAMED MANUFACTURERS WILL BE CONSIDERED FOR ACCEPTANCE. SHOULD A SUBSTITUTION BE ACCEPTED, AND SHOULD THE SUBSTITUTE MATERIAL PROVE DEFECTIVE, OR OTHERWISE UNSATISFACTORY FOR THE SERVICE INTENDED WITHIN THE GUARANTEE PERIOD, THIS MATERIAL OR EQUIPMENT SHALL BE REPLACED WITH THE MATERIAL OR EQUIPMENT SPECIFIED AT NO COST TO THE OWNER.

G. PROVIDE ACCESS, INCLUDING NECESSARY ACCESS DOORS, FOR NEW AND EXISTING EQUIPMENT REQUIRING OPERATION AND/OR MAINTENANCE. RELOCATE EXISTING AND LOCATE ALL NEW EQUIPMENT SUCH THAT OPERATION OR MAINTENANCE IS NOT RESTRICTED.

H. INSTALL EQUIPMENT WITH WORKING CLEARANCES COMPLYING WITH NEC 110-16 AND 110-34.

I. CONTRACTOR SHALL FURNISH COMPLETE BROCHURES (SUBMITTALS) IN QUADRUPPLICATE OF ALL MATERIALS AND EQUIPMENT PRIOR TO COMMENCING ANY WORK. DATA SHALL INCLUDE DESCRIPTIVE LITERATURE, PERFORMANCE DATA, DIAGRAMS, CAPACITY INFORMATION, ETC., TO SUBSTANTIATE THAT PROPOSED EQUIPMENT WILL MEET ALL OF THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS.

II. PRODUCTS

A. CONDUIT

1. RIGID STEEL CONDUIT (RSC - GALVANIZED RIGID CONDUIT): CONSTRUCTED OF MILD STEEL PIPING, GALVANIZED INSIDE AND OUTSIDE, CONFORMING WITH FED. SPEC. WW-C-581C, ANSI C80.1 AND APPLICABLE UL STANDARDS.

2. INTERMEDIATE METAL CONDUIT (IMC): CONSTRUCTED OF ZINC COATED STEEL TUBING MANUFACTURED IN ACCORDANCE WITH UL-1242 AND MEETING THE REQUIREMENTS OF THE NEC.

3. ELECTRIC METALLIC TUBING (EMT): OF HIGH GRADE STEEL MANUFACTURED SPECIFICALLY TO STANDARDS ASSURING MAXIMUM WELDING CHARACTERISTICS AND DUCTILITY, AND SHALL CONFORM TO FED. SPEC. WW-1-806b.

4. FLEXIBLE METAL CONDUIT: MANUFACTURED OF MILD STEEL STRIP MATERIAL, HAVING A HOT-DIP GALVANIZED COATING AND MEETING REQUIREMENTS OF FED. SPEC. WW-C-566b.

5. LIQUIDTIGHT FLEXIBLE CONDUIT: FLEXIBLE METAL CONDUIT AS SPECIFIED HEREIN WITH A COPPER GROUNDING STRAND AND FACTORY-APPLIED NEOPRENE JACKET. LIQUID TIGHT FLEXIBLE CONDUIT SHALL BE UL LISTED, EQUIVALENT TO ANAKONDA "SEALTITE", TYPE UA.

6. METAL-CLAD CABLE MAY BE USED. TYPE MC METAL CLAD CABLE SHALL BE HOSPITAL GRADE AND CONSIST OF FACTORY ASSEMBLED INSULATED CONDUCTORS ENCLOSED IN A METALLIC SHEATH OF INTERLOCKED GALVANIZED STEEL STRIP MANUFACTURED IN ACCORDANCE WITH UL 1569. THE CONDUCTORS SHALL HAVE AN OPERATING TEMPERATURE OF 90 DEGREE C AND SHALL BE COVERED BY A HIGH DIELECTRIC STRENGTH ASSEMBLY TAPE. TYPE MC CABLE SHALL BE AS MANUFACTURED BY AFC OR EQUAL.

B. COUPLINGS AND TERMINATIONS

1. FOR RIGID STEEL OR INTERMEDIATE METAL CONDUIT: FACTORY-MADE THREADED COUPLINGS OF SAME MATERIAL AS THE CONDUIT.

2. FOR ELECTRICAL METALLIC TUBING: STEEL SET SCREW COUPLINGS; STEEL SET SCREW BOX CONNECTORS WITH NYLON INSULATED THROAT AND LOCKNUTS AT ALL BOXES AND CABINET TERMINATIONS OR NON-INSULATED BOX CONNECTOR, LOCKNUT AND NYLON-INSULATED GROUNDING BUSHING GROUNDING BUSHING ON ALL TUBING WHERE GROUNDING BUSHINGS ARE REQUIRED.

3. FOR FLEXIBLE METAL CONDUIT: COUPLINGS AT CONNECTIONS BETWEEN FLEXIBLE CONDUIT AND EMT, AND NYLON INSULATED THROAT STEEL CONNECTORS AT BOX OR CABINET TERMINATIONS.

C. JUNCTION AND PULL BOXES

1. SIZE BOXES IN ACCORDANCE WITH THE REQUIREMENTS OF THE NEC. BOXES SHALL BE NO SMALLER THAN 4 INCHES SQUARE BY 1-1/2 INCHES DEEP WITH COVERS ACCESSIBLE AT ALL TIMES. SET BOXES ON CONCEALED CONDUITS WITH COVERS FLUSH WITH THE FINISHED WALL OR CEILING LINE. PROVIDE JUNCTION AND PULL BOXES OF APPROPRIATE DIMENSIONS FOR CONDUITS AND CONDUCTORS NOTED WHERE SHOWN AND WHERE NECESSARY FOR THE INSTALLATION AND PULLING OF CABLES AND WIRES. INSTALL COVERS ON JUNCTION BOXES AND CONDULETS AFTER WIRING AND CONNECTIONS ARE COMPLETED.

D. OUTLET BOXES

1. OUTLET BOXES SHALL BE UL LISTED, AND OF SIZES AND TYPES REQUIRED FOR THE APPLICATION. OUTLET BOXES SHALL BE SHEET STEEL, NO LIGHTER THAN 14 GAUGE, GALVANIZED AFTER FABRICATION. SET BOX SO FACE OF BOX WILL FINISH FLUSH WITH BUILDING SURFACE.

a. FOR LIGHTING FIXTURE OUTLETS: 4 INCH SQUARE BY 1-1/2 INCHES DEEP WITH RAISED FIXTURE RING.

b. FOR WALL SWITCHES, RECEPTACLES, AND COMMUNICATION USE: 4 INCH SQUARE, BY 1-1/2 INCHES DEEP. USE BOXES WITH PLASTER RINGS IN ALL PLASTERED WALLS WHERE WALL THICKNESS PERMITS. USE BOXES LESS THAN 1-1/2 INCH DEEP ONLY IN LOCATIONS WHERE DEEP BOXES CANNOT BE ACCOMMODATED BY CONSTRUCTION.

E. WIREWAY

1. UL LISTED; SIZED INDICATED OR REQUIRED; HINGED COVER, SECURED WITH CAPTIVE SCREWS, COMPLETE WITH ALL REQUIRED FITTINGS, COUPLINGS, HANGERS AND ACCESSORIES.

2. CORROSION RESISTANT PRIMER AND ANIS GRAY EPOXY PAINT FINISH. CORROSION RESISTANT BOLTS OR SCREWS. SCREWS OR BOLTS INSTALLED TOWARD THE INSIDE FITTED WITH SPRING NUTS OR OTHERWISE PREVENTED FROM DAMAGING CONDUCTOR INSULATION.

F. PULL CORDS

1. PROVIDE A NYLON POLYETHYLENE CORD, WITH A TENSILE STRENGTH OF NOT LESS THAN 200 POUNDS, IN EACH EMPTY CONDUIT TO FACILITATE THE FUTURE INSTALLATION OF CONDUCTORS. INCORPORATE PLASTIC TAPS FOR IDENTIFICATION.

G. CONDUCTORS

1. CONDUCTORS SHALL BE 98% CONDUCTIVITY SOFT DRAWN ANNEALED COPPER, 600 VOLT, THIN/THIN INSULATION, #12 AND LARGER - STRANDED.

2. NO CONDUCTORS SHALL BE SMALLER THAN NO. 12, EXCEPT FOR SIGNAL OR CONTROL CIRCUITS AND FOR INDIVIDUAL LIGHTING FIXTURE TAPS AS PERMITTED BY NEC.

3. FOR HOME RUNS ON 120-VOLT, 20-AMPERE BRANCH CIRCUITS, WHERE LENGTH OF RUN FROM PANELBOARD TO FIRST OUTLET EXCEEDS 100 LINEAR FEET, USE NO. 10 CONDUCTORS. WHERE LENGTH OF RUN IS 100 LINEAR FEET OR LESS, USE NO. 12 CONDUCTORS.

4. FOR HOME RUNS ON 277-VOLT, 20-AMPERE BRANCH CIRCUITS, WHERE LENGTH OF RUN FROM PANELBOARD TO FIRST OUTLET EXCEEDS 200 LINEAR FEET, USE NO. 10 CONDUCTORS. WHERE LENGTH OF RUN IS 100 LINEAR FEET OR LESS, USE NO. 12 CONDUCTORS.

H. WIRING DEVICES, COVER PLATES AND ACCESSORIES

1. PROVIDE WIRING DEVICES AND ASSOCIATED ACCESSORIES. DEVICES OF LEYTON, HUBBELL OR PASS & SEYMOUR ARE ACCEPTABLE. SUBMIT FOR REVIEW A COMPLETE LIST OF ANY SUBSTITUTES OFFERED FROM THOSE SPECIFIED.

2. COLOR OF WALL SWITCHES, RECEPTACLES AND FACEPLATES: AS SPECIFIED OR SELECTED BY ARCHITECT.

3. WHERE LIGHTING CIRCUITS ARE SHOWN TO BE LINE VOLTAGE SWITCHED, PROVIDE WITH SPECIFICATION GRADE, HORSEPOWER RATED, UL LISTED, BACK- AND SIDE-WIRED, TOGGLE SWITCHES RATED 20-AMP, 120 VOLTS OR 277 VOLTS. SWITCHES SHALL BE SPST, DPST, 3-WAY OR 4-WAY, WITH OR WITHOUT PILOT LIGHT, AS INDICATED ON THE DRAWINGS.

4. RECEPTACLES

a. STANDARD WALL RECEPTACLES SHALL BE COMMERCIAL GRADE, RATED 20-AMP, 120-VOLT, 2 POLE, 3-WIRE, GROUNDING TYPE, SIDE-WIRED, NEMA 5-20R, EMO TO PASS & SEYMOUR CR20 (MATCH EXISTING BUILDING STANDARD).

b. SPECIAL PURPOSE RECEPTACLES SHALL BE COMMERCIAL GRADE DEVICES FOR THE NEMA CONFIGURATIONS SCHEDULED OR INDICATED ON THE DRAWINGS.

c. GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLES SHALL BE 20 AMP, 120 VOLT, 2 POLE, 3-WIRE, NEMA 5-20R.

d. RECEPTACLES ON EMERGENCY POWER SHALL BE RED.

5. MAINTAIN GROUNDING CONTINUITY BETWEEN DEVICES AND METALLIC RACEWAY SYSTEM IN ADDITION TO PROVIDING A GREEN EQUIPMENT GROUNDING CONDUCTOR RUN WITH ALL CIRCUIT CONDUCTORS AS INDICATED ON THE DRAWINGS, EXCEPT CARE SHALL BE TAKEN WHEN INSTALLING RECEPTACLES HAVING ISOLATED GROUND POLE SO AS TO NOT BOND THE EQUIPMENT GROUND CONDUCTOR TO THE CONDUIT SYSTEM.

6. ELECTRICAL CONTRACTOR SHALL LABEL EACH EMERGENCY RECEPTACLE IDENTIFYING THE SPECIFIC ELECTRICAL PANEL AND CIRCUIT THAT SERVED THAT RECEPTACLE.

I. OVERCURRENT PROTECTIVE DEVICES

1. MOLDED CASE CIRCUIT BREAKERS

a. AS MANUFACTURED BY THE MANUFACTURER OF THE PANELBOARD IN WHICH INSTALLED.

b. ONE, TWO OR THREE POLE WITH RATINGS INDICATED ON THE DRAWINGS; (STANDARD) OR (HIGH INTERRUPTING) CONSTRUCTION AS REQUIRED BY THE SHORT CIRCUIT RATINGS INDICATED ON THE DRAWINGS.

c. QUICK-MAKE, QUICK-BREAK, CALIBRATED FOR OPERATION IN AN AMBIENT TEMPERATURE OF 40°C. TRIP INDICATION BY HANDLE POSITION, TRIP-FREE. TWO AND THREE POLE BREAKERS, COMMON TRIP WITH SINGLE OPERATING HANDLE WITHOUT HANDLE TIES. PERMANENT TRIP UNIT CONTAINING INDIVIDUAL THERMAL AND MAGNETIC TRIP ELEMENTS IN EACH POLE. FRAME SIZES GREATER THAN 100 AMPERES: VARIABLE MAGNETIC TRIP ELEMENTS WHICH ARE SET BY A SINGLE ADJUSTMENT.

d. REMOVABLE LUGS, UL LISTED FOR COPPER AND ALUMINUM CONDUCTORS. LISTED FOR INSTALLATION OF MECHANICAL OR COMPRESSION TYPE LUGS.

2. FUSES

a. AS MANUFACTURED BY BUSSMAN, GOULD-SHALUMIT OR LITFLEUSE.

b. FOR CIRCUITS RATED 601 AMPERES TO 6000 AMPERES, 600 VOLT AC, FUSES SHALL BE UL LISTED CLASS L, CURRENT LIMITING, TIME-DELAY WITH 200,000 AMPERE RMS SYM INTERRUPTING RATING.

c. FOR CIRCUITS RATED 0 TO 600 AMPERES, 250 VOLT OR 600 VOLT AC, FUSES SHALL BE UL LISTED CLASS RK1, CURRENT LIMITING, DIA. ELEMENT TIME-DELAY WITH 20,000 AMPERES RMS SYM INTERRUPTING RATING.

d. PROVIDE SPARE FUSES AS FOLLOWS: 600A AND SMALLER - 10% OR EACH RATING (MINIMUM OF 3 PER RATING). 601A AND LARGER - 3 OF EACH RATING.

J. DISCONNECT SWITCHES

1. AS MANUFACTURED BY SQUARE D, CUTLER-HAMMER OR SIEMENS.

2. FUSIBLE/NON-FUSIBLE SWITCHES

a. ALL SWITCHES: HEAVY DUTY TYPE, UL LISTED AND MEET LATEST NEMA STANDARDS KS-1; HORSEPOWER RATED, QUICK-MAKE, QUICK-BREAK; VISIBLE BLADES IN "OFF" POSITION; REMOVABLE ARC SUPPRESSORS; LUGS FRONT REMOVABLE AND UL LISTED FOR 75°C ALUMINUM OR COPPER WIRE; OPERATING HANDLE IN CONTROL OF SWITCH WITH DOOR OPEN AND CLOSED; HANDLE POSITION CLEARLY INDICATE "ON" AND "OFF" POSITIONS; PROVISIONS FOR PADLOCKING IN "OFF" POSITION; SAFETY INTERLOCKS TO PREVENT THE ENCLOSURE DOOR FROM BEING OPENED WHILE THE HANDLE IS IN THE "ON" POSITION AND TO PREVENT THE HANDLE FROM BEING TURNED TO THE "ON" POSITION WHILE THE ENCLOSURE DOOR IS OPEN; MEANS TO PERMIT AUTHORIZED PERSONNEL TO RELEASE THE SAFETY INTERLOCKS FOR MAINTENANCE OR INSPECTION; AUXILIARY POLES, AS REQUIRED, TO DISCONNECT CONTROL VOLTAGE(S) WHEN POWER VOLTAGE IS DISCONNECTED.

b. ENCLOSURES: NEMA 1 OR NEMA 3R, AS INDICATED ON DRAWINGS; CLEAN STEEL, GALVANIZED AFTER FORMING, PRIMED AND GREY BAKED ENAMEL FINISHED; NEMA 1 COVERS ON PIN TYPE HINGES; NEMA 3R COVERS SECURABLE IN THE OPEN POSITION. INTERCHANGEABLE BOLT-ON THREADED HUBS ON NEMA 3R SWITCHES THRU 200 AMPERE.

c. FUSIBLE SWITCHES: FOR 600 AMPERE AND SMALLER SWITCHES, PROVIDE UL LISTED REJECTION CLIPS TO REJECT ALL FUSES EXCEPT CLASS R; FOR 800 AMPERE AND LARGER SWITCHES, PROVIDE FUSE CLIPS FOR CLASS L FUSES. ALL SWITCHES UL LISTED SHORT CIRCUIT RATING OF 200,000 AMPERES RMS SYMMETRICAL.

K. GROUNDING

1. GROUNDING SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC.

2. GROUNDING CONDUCTORS SHALL BE ANNEALED COPPER CABLES OF THE SIZES INDICATED OR REQUIRED.

3. A "GREEN WIRE" EQUIPMENT GROUNDING CONDUCTOR SHALL BE INSTALLED WITHIN EACH FEEDER AND BRANCH CIRCUIT RACEWAY, WHETHER METALLIC OR NON-METALLIC, TO FORM A COMPLETE AND CONTINUOUS GROUNDING PATH. CONNECT GROUNDING CONDUCTORS TO GROUND TERMINALS AT EACH END OF THE RUN.

L. LIGHTING FIXTURES

1. INSURE EACH LIGHTING FIXTURE HAS AN OPERATING SET OF LAMPS EQUAL TO EXISTING OR OF THE TYPES SHOWN ON THE DRAWINGS AND/OR SPECIFIED HEREIN. LAMPS SHALL BE MANUFACTURED BY GENERAL ELECTRIC, PHILIPS, OR OSRAM/SILVANIA, EXCEPT WHERE SCHEDULED OTHERWISE.

2. INCANDESCENT LAMPS: IN GENERAL, THEY SHALL BE INSIDE FROSTED, ENERGY-SAVING STYLE DESIGNED FOR 130-VOLT OPERATION. WHERE REFLECTOR STYLE LAMPS ARE SCHEDULED, FURNISH BEAM PATTERN INDICATED ON THE DRAWINGS. SPECIAL PURPOSE INCANDESCENT AND INCANDESCENT QUARTZ LAMPS: OF WATAGE, AND CONFIGURATION AS SCHEDULED AND AS RECOMMENDED BY THE LUMINAIRE MANUFACTURER.

3. FLUORESCENT LAMPS: IN GENERAL, 48-INCH LENGTH, T-8, RAPID START, ENERGY-SAVING LAMPS; LAMP COLOR AS INDICATED.

4. FLUORESCENT BALLASTS: IN GENERAL, ELECTRONIC TYPE FOR BOTH STANDARD FLUORESCENT AND COMPACT FLUORESCENT, INPUT POWER FACTOR ABOVE 95%, TH LESS THAN 10%, AS MANUFACTURED BY MOTOROLA.

5. HIGH INTENSITY DISCHARGE (HID) BALLASTS: HIGH INTENSITY DISCHARGE (HID) BALLASTS: IN GENERAL, REGULATORY TYPE DESIGNED TO START AND OPERATE THE SPECIFIED LAMP COMBINATION. UNIT DESIGNED FOR RELIABLE START AND OPERATION TO AN AMBIENT TEMPERATURE OF -20 LESS THAN 95%; AS MANUFACTURED BY ADVANCE OR MAGNETEK.

6. PROVIDE A LIGHTING FIXTURE COMPLETE WITH LAMPS, BALLASTS, AND OTHER REQUIRED APURTENANCES FOR EACH LIGHTING OUTLET SHOWN ON THE DRAWINGS. LIGHT FIXTURES SHALL BE AS DESCRIBED IN THE "LIGHTING FIXTURE SCHEDULE". EACH UNIT SHALL BE FURNISHED WITH ALL MOUNTING AND TRIM ACCESSORIES TO SUIT THE SPECIFIC SERVICES APPLIED. FINISHES SHALL BE FACTORY-STANDARD, EXCEPT WHERE SCHEDULED OTHERWISE.

7. PROVIDE LIGHTING FIXTURES IN ACCORDANCE WITH THE DESIGNATIONS AND DESCRIPTIONS ON THE DRAWINGS. WHERE A SINGLE MANUFACTURER AND ASSOCIATED CATALOG NUMBER IS SCHEDULED, IT IS TO ESTABLISH A DESIRED TYPE AND STANDARD OF QUALITY.

8. LIGHTING FIXTURES SHALL BE UL LABELED.

M. FIRE ALARM SYSTEM

1. FIRE ALARM BY FIRE ALARM CONTRACTOR AS REQUIRED FOR SPRINKLER RISER AND BUILDING FIRE ALARM.

2. NONCODED ADDRESSABLE SYSTEM, WITH AUTOMATIC SENSITIVITY CONTROL OF CERTAIN SMOKE DETECTORS AND MULTIPLEXED SIGNAL TRANSMISSION, DEDICATED TO FIRE-ALARM SERVICE ONLY.

3. ACCEPTABLE MANUFACTURERS: NOTIFIER, EDWARDS, SIEMENS-CERBERUS, SIMPLEX/ROBINELL-TYCO.

N. TELEPHONE/DATA SYSTEM

1. AT ALL WALL DATA/VOICE OUTLET LOCATIONS, PROVIDE BACK BOXES AND 3/4" EMPTY CONDUIT WITH PULL CORD TO ABOVE CEILING.

2. TRANSIENT VOLTAGE SURGE SUPPRESSION

1. TYPE 1 - SERVICE ENTRANCE SWITCHBOARD SUPPRESSORS 200KA/PHASE - OPTIONS - FURNISH WITH SINE-WAVE TRACKING, LED LIGHTS, AUDIBLE ALARM, ONE SET OF DRY CONTACTS, AND SURGE EVENT COUNTER.

2. TYPE 2 - DISTRIBUTION PANELBOARD SUPPRESSORS 160KA/PHASE - OPTIONS - FURNISH WITH LED LIGHTS, AUDIBLE ALARM, ONE SET OF DRY CONTACTS, AND SURGE EVENTS COUNTER.

3. TYPE 3 - ELECTRONIC GRADE SUPPRESSORS 85KA/PHASE - OPTIONS - FURNISH WITH LED LIGHTS, AUDIBLE ALARM, ONE SET OF DRY CONTACTS, AND SURGE EVENTS COUNTER.

III. EXECUTION

A. INSTALLATION OF BUILDING CONDUIT

1. ALL INTERIOR RACEWAYS SHALL BE EMT. RACEWAYS IN DAMP OR WET LOCATIONS, OR IN HAZARDOUS LOCATIONS, SHALL BE RSC OR IMC.

2. CONDUITS SHALL BE OF SUCH SIZE AND SO INSTALLED THAT THE CONDUCTORS MAY BE DRAWN THROUGH WITHOUT INJURY OR EXCESSIVE STRAIN, SHALL BE SECURED AT CABINETS AND BOXES WITH GALVANIZED LOCKNUTS, BOTH INSIDE AND OUTSIDE, AND SHALL HAVE APPROPRIATE BUSHINGS INSIDE. BUSHINGS SHALL BE INSULATING TYPE WITH BOND GROUND CLAMPS.

3. USE LENGTHS OF FLEXIBLE METAL CONDUIT NOT LESS THAN 12 INCHES LONG AT FINAL CONNECTIONS TO ALL MOTORS, TRANSFORMERS AND SIMILAR DEVICES SUBJECT TO MOVEMENT BECAUSE OF VIBRATION OR MECHANICAL ADJUSTMENT. USE FLEXIBLE METAL CONDUITS TO EFFECT FINAL CONNECTIONS TO RECESSED LIGHTING FIXTURES, USE LIQUID TIGHT FLEXIBLE METAL CONDUIT, WITH APPROPRIATE CONNECTIONS, IN DAMP OR WET LOCATIONS, AT MOTOR OR EQUIPMENT LOCATIONS IN MECHANICAL EQUIPMENT ROOMS, AT OR NEAR PUMPS, AND WHEN INSTALLED OUTDOORS.

4. GROUND METALLIC CONDUITS AS REQUIRED BY NEC.

5. INSTALL RACEWAYS CONTINUOUS FROM OUTLET TO OUTLET BOX, OR CABINET WITH A MAXIMUM OF 150 FEET BETWEEN PULLS. IN AREAS WHERE THERE ARE NO SUSPENDED CEILINGS, RUN ALL CONDUITS PARALLEL/PERPENDICULAR TO BUILDING SURFACE PLANES.

6. IN SYSTEMS OPERATING AT MORE THAN 300 VOLTS BETWEEN PHASE CONDUCTORS, AND WHERE DIFFERENT PHASE CONDUCTORS ARE TO BE RUN TO A COMMON GANG WALL SWITCH BOX, PROVIDE SUBSTANTIAL BARRIERS BETWEEN ADJACENT SWITCHES IN THE BOX SO THAT TWO DIFFERENT PHASE WIRES WILL NOT BE IN THE SAME COMPARTMENT.

7. WHEREVER RACEWAYS PASS THROUGH FLOORS, WALLS, PENETRATIONS, OR OTHER PARTITIONS, CAREFULLY FILL ANY SPACE BETWEEN THE OUTSIDE OF THE RACEWAY AND THE BUILDING MATERIAL TO PREVENT PASSAGE OF AIR, WATER, SMOKE, AND FUMES. FILLING MATERIAL SHALL BE A UL LISTED, INTUMESCENT SEALING HAVING FIRE/SMOKE RESISTIVE RATING EQUAL TO THE BUILDING MATERIAL PENETRATED.

8. TYPE MC METAL CLAD CABLES SHALL BE ACCEPTABLE TO BE INSTALLED IN WALLS AND CEILINGS IN CONFORMANCE WITH THE REQUIREMENTS OF NEC 334. TYPE MC CABLE SHALL BE USED ONLY FOR BRANCH CIRCUITS FOR LIGHTING AND HVAC VAV BOXES. TYPE MC CABLE SHALL NOT BE USED FOR FEEDERS OR MULTIPLE BRANCH CIRCUIT HOMERUNS, AND MORE SPECIFICALLY, SHALL NOT BE USED FOR POWER CIRCUITS, AND KITCHEN EQUIPMENT BRANCH CIRCUITS. TYPE MC CABLE SHALL NOT BE UTILIZED WITHIN ELECTRICAL EQUIPMENT ROOMS. CABLE SHALL TRANSITION TO A FIBER OPTIC CONDUIT PRIOR TO ENTERING ELECTRICAL EQUIPMENT ROOMS.

9. CONDUITS UTILIZED THROUGHOUT THE PROJECT SHALL NOT BE SMALLER THAN 3/4 INCH FOR FEEDERS, MULTIPLE BRANCH CIRCUIT HOMERUNS AND HOMERUNS OF CONDUCTORS LARGER THAN NO. 12. INDIVIDUAL BRANCH CIRCUIT WIRING FOR NO. 12 CONDUCTORS SHALL BE ACCEPTABLE IN 1/2" CONDUIT, I.E. #212, #1210, 1/2".

B. INSTALLATION OF PULL AND JUNCTION BOXES

1. FASTEN ALL BOXES SECURELY TO THE BUILDING CONSTRUCTION, INDEPENDENT OF CONDUIT SYSTEMS.

2. ON CONCEALED CONDUIT SYSTEMS WHERE BOXES ARE NOT OTHERWISE ACCESSIBLE, SET BOXES FLUSH WITH FINISHED SURFACES FOR ACCESS, AND PROVIDE OVERLAPPING COVERS.

C. INSTALLATION OF OUTLET BOXES

1. TERMINATE CONDUITS AT A METAL OUTLET BOX AT EACH OUTLET OR DEVICE. ALL BOXES SHALL CONFORM TO THE NEC.

2. OUTLET BOXES SHALL BE SUPPORTED INDEPENDENT OF THE CONDUIT SYSTEM.

D. INSTALLATION OF CONDUIT HANGERS AND SUPPORTS

1. FURNISH AND INSTALL ALL HANGERS AND SUPPORTS REQUIRED BY RACEWAY SYSTEMS.

2. SUPPORT ALL ABOVE-GROUND ELECTRICAL CONDUITS FROM THE BUILDING STRUCTURE/CONSTRUCTION. SUPPORT CONDUITS RUNNING VERTICALLY OR HORIZONTALLY ALONG WALLS WITH GALVANIZED WALLABLE IRON ONE-HOLE CLAMPS. CARRY INDIVIDUALLY SUPPORTED HORIZONTAL CONDUITS 1-1/4 INCH AND LARGER ON SUITABLE HANGERS.

3. LOCATE HANGERS AND TRAPEZES TO SUPPORT HORIZONTAL RACEWAYS WITHOUT APPRECIABLE SAGGING. HANGER SPACING SHALL NOT EXCEED NEC REQUIREMENTS, OR RECOMMENDATIONS OF THE NECA "STANDARD OF INSTALLATION".

4. WHERE CONDUITS SMALLER THAN 1-1/4 INCH ARE INSTALLED ABOVE REMOVABLE TYPE DRY CEILINGS, SUPPORT THEM ON SUITABLE HANGER RODS WITH METAL CLIPS AT A DISTANCE ABOVE THE CEILING SUFFICIENT TO PERMIT REMOVAL OF CEILING PANELS AND LAY-IN LIGHT FIXTURES. LOCATE SUCH CONDUITS SO AS NOT TO HINDER ACCESS TO MECHANICAL EQUIPMENT THROUGH CEILING PANELS.

E. INSTALLATION OF CONDUCTORS

1. PULL NO CONDUCTORS INTO CONDUITS UNTIL ALL WORK OF A NATURE WHICH MAY CAUSE INJURY TO CONDUCTORS IS COMPLETED.

2. RUN FEEDERS IN CONTINUOUS PIECES, WITHOUT JOINTS OR SPLICES, INSOFAR AS PRACTICABLE.

3. RUN CONDUITS FOR EMERGENCY POWER CONDUCTORS SEPARATE FROM ALL OTHER WIRING.

F. SEGREGATION OF WIRING SYSTEMS

1. SEGREGATION OF WIRING SYSTEMS SHALL NOT BE COMPROMISED BY THE USE OF COMMON PULLBOXES, WIREWAYS, CABINETS OR ANY OTHER TYPE OF ENCLOSURE.

2. THE RACEWAY SYSTEM FOR EACH FEEDER SHALL BE A SEPARATE SYSTEM COMPLETELY FAULT ISOLATED FROM ALL OTHER RACEWAY SYSTEMS.

3. THE RACEWAY SYSTEM FOR THE BRANCH CIRCUITS OF EACH PANELBOARD SHALL BE A SEPARATE SYSTEM COMPLETELY FAULT ISOLATED FROM ALL OTHER RACEWAY SYSTEMS.

G. EQUIPMENT CONNECTIONS AND CONTROL WIRING

1. THE FURNISHING AND INSTALLATION OF CONTROL POWER WIRING REQUIRED FOR EQUIPMENT FURNISHED UNDER DIVISION 15 AND NOT SHOWN ON THE ELECTRICAL DRAWINGS SHALL BE FURNISHED UNDER DIVISION 15. CONTROL POWER WIRING IS DEFINED AS THE LINE VOLTAGE (120V) POWER WIRING FOR EQUIPMENT CONTROL, CABINETS, TEMPERATURE CONTROL, ENERGY MANAGEMENT, OR BUILDING AUTOMATION SYSTEM PANELS AND LINE VOLTAGE SMOKE/FIRE DAMPERS.

2. THE FURNISHING AND INSTALLATION OF THE TEMPERATURE CONTROL WIRING, ENERGY MANAGEMENT SYSTEM OR BUILDING AUTOMATION WIRING NOT SHOWN ON THE ELECTRICAL DRAWINGS SHALL BE FURNISHED UNDER DIVISION 15. TEMPERATURE CONTROL, ENERGY MANAGEMENT SYSTEM AND BUILDING AUTOMATION SYSTEM WIRING IS DEFINED AS THE INTERLOCK OR INTERCONNECTING WIRING REQUIRED BETWEEN SYSTEM CONTROL DEVICES, APPURTENANCES AND CONTROL PANELS TO ALLOW THE SYSTEM TO FUNCTION AUTOMATICALLY. THIS INCLUDES WIRING BETWEEN THE FIRE ALARM SYSTEM, SMOKE EXHAUST SYSTEMS, DOOR ENTRY SYSTEMS AND ANY OTHER SYSTEM REQUIRING INTERFACE WITH THE TEMPERATURE CONTROL, ENERGY MANAGEMENT AND BUILDING AUTOMATION SYSTEM.

3. PROVIDE POWER WIRING TO EACH MOTOR-DRIVEN AND/OR ELECTRICALLY-OPERATED SYSTEM OR UNIT OF EQUIPMENT. THE WIRING SHALL ALLOW THE MOTOR(S) OR EQUIPMENT TO OPERATE IN A MANUAL MODE.

4. CONTROL WIRING WILL, UNLESS SPECIFICALLY NOTED OTHERWISE, BE FURNISHED AND INSTALLED UNDER OTHER DIVISIONS OF THE SPECIFICATIONS.

5. EXCEPT FOR ITEMS THAT ARE FURNISHED WITH FACTORY-INSTALLED, INTEGRAL MOTORS, AN ELECTRIC MOTOR OF REQUIRED SIZE AND ELECTRICAL CHARACTERISTICS WILL BE PROVIDED AND INSTALLED UNDER OTHER DIVISIONS FOR EACH ITEM OF MOTOR-DRIVEN EQUIPMENT. COMPLETE THE ELECTRICAL INSTALLATION OF THESE MOTORS IN ACCORDANCE WITH APPROVED WIRING DIAGRAMS AND INSTRUCTIONS.

6. WHERE DISCONNECT SWITCHES OR CIRCUIT BREAKERS ARE NOT PROVIDED INTEGRAL WITH CONTROL EQUIPMENT FOR MOTORS AND OTHER ELECTRICAL APPURTENANCES, PROVIDE AND INSTALL ALL DISCONNECT SWITCHES REQUIRED BY THE NATIONAL ELECTRICAL CODE AND/OR INDICATED.

7. WHERE POSSIBLE, TERMINATE CONDUITS IN CONDUIT BOXES ON MOTORS, WHERE MOTORS ARE NOT PROVIDED WITH CONDUIT BOXES, TERMINATE THE CONDUITS IN CONDUIT FITTINGS AT THE MOTORS.

L. TEMPORARY SERVICES

1. TEMPORARY SERVICES: ARRANGE FOR SOURCES OF TEMPORARY CONSTRUCTION SERVICES. SUCH SERVICES SHALL BE NOMINALLY 120/208 VOLT, 3-PHASE, 4-WIRE FROM WHICH A COMPLETE SYSTEM OF TEMPORARY POWER AND LIGHTING SHALL BE PROVIDED FOR ALL CONSTRUCTION NEEDS.

J. CONTRACTOR SHALL KEEP A CLEAN SET OF DRAWINGS ON THE JOB, NOTING DAILY ALL CHANGES MADE IN THESE DRAWINGS IN CONNECTION WITH THE FINAL INSTALLATION INCLUDING EXACT DIMENSIONED LOCATIONS OF ALL NEW AND UNCOVERED EXISTING UTILITIES AND SHALL, WITH HIS REQUEST FOR FINAL PAYMENT, TURN OVER A CLEAN, NEATLY MARKED SET OF REPRODUCIBLE MYLARS SHOWING "AS INSTALLED" WORK TO THE ARCHITECT FOR SUBSEQUENT REVIEW AND TRANSMITTAL TO THE OWNER. CONTRACTOR SHALL NOTE ALL CONSTRUCTION CHANGES, DATE EACH SHEET AND LABEL "AS-BUILT" IN THE REVISION BLOCK ON THE DRAWINGS. CONTRACTOR SHALL ALSO FURNISH ONE (1) SET OF "AS-BUILT" BLUELINE PRINTS.

K. IN ADDITION TO THE ABOVE, CONTRACTOR SHALL ACCUMULATE DURING THE JOB'S PROGRESS, THE FOLLOWING DATA, IN TRIPLICATE, PREPARED IN A NEAT BROCHURE OR PACKET FOLDER AND TURNED OVER TO THE ARCHITECT FOR REVIEW AND SUBSEQUENT DELIVERY TO THE OWNER.

1. ALL WARRANTIES AND GUARANTEES AND MANUFACTURER'S DIRECTIONS ON EQUIPMENT AND MATERIAL COVERED BY THE CONTRACT INCLUDING THE NAMES, ADDRESSES AND TELEPHONE NUMBERS OF THE MANUFACTURER'S REPRESENTATIVE.

2. APPROVED FIXTURE BROCHURES, WIRING DIAGRAMS AND CONTROL DIAGRAMS (ORIGINAL DATA, NO COPIES).

3. COPIES OF APPROVED SHOP DRAWINGS.

4. OPERATING INSTRUCTIONS FOR ALL ELECTRICAL SYSTEM EQUIPMENT. OPERATING INSTRUCTIONS SHALL ALSO INCLUDE RECOMMENDED MAINTENANCE PROCEDURES.

5. TEST REPORTS REQUIRED BY THESE SPECIFICATIONS.

6. ANY AND ALL OTHER DATA AND/OR DRAWINGS REQUIRED DURING CONSTRUCTION.

7. REPAIR PARTS LISTS OF ALL MAJOR ITEMS OF EQUIPMENT INCLUDING NAME, ADDRESS AND TELEPHONE NUMBERS OF LOCAL SUPPLIER OR AGENT.

L. ALL OF THE ABOVE DATA SHALL BE SUBMITTED TO THE ENGINEER FOR HIS REVIEW AT SUCH TIME AS THE CONTRACTOR SUBMITS HIS LAST ESTIMATE PRIOR TO HIS FINAL PAYMENT, BUT IN NO CASE, LESS THAN TWO WEEKS BEFORE FINAL INSPECTION.

M. NORMAL FUNCTIONS OF OCCUPIED AREAS MUST CONTINUE DURING THE CONSTRUCTION PHASES. EVERY EFFORT SHALL BE MADE TO ASSURE SUCH FUNCTIONS ARE NOT DISTURBED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND REMOVAL OF TEMPORARY SYSTEMS AS REQUIRED TO MAINTAIN THE FUNCTIONS OF OCCUPIED AREAS.



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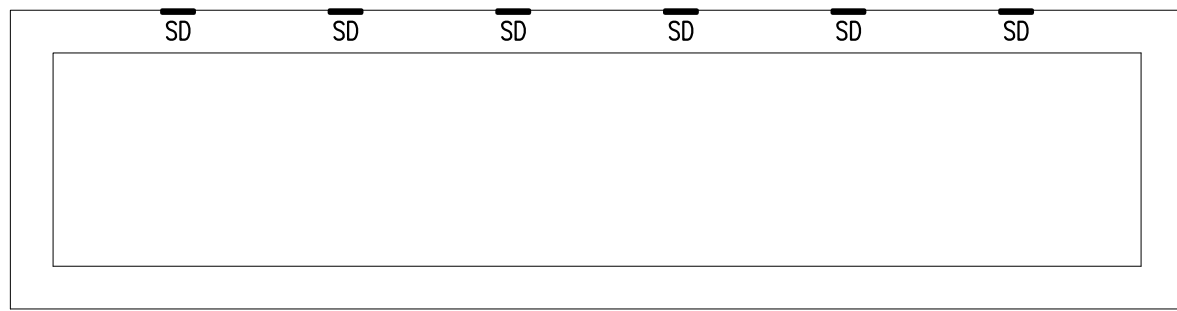
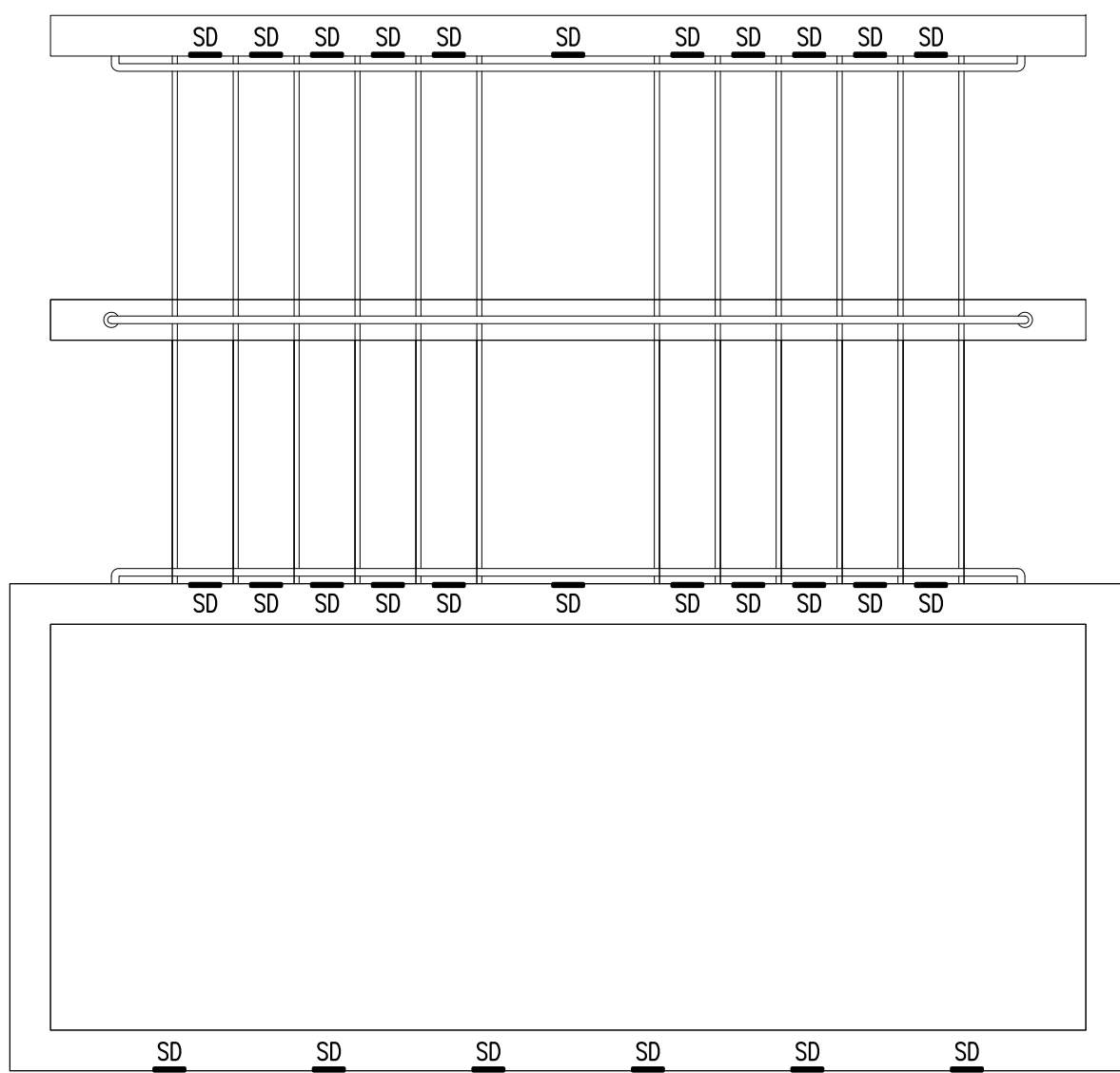
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REVISION	DATE	APPROVED BY	DESCRIPTION

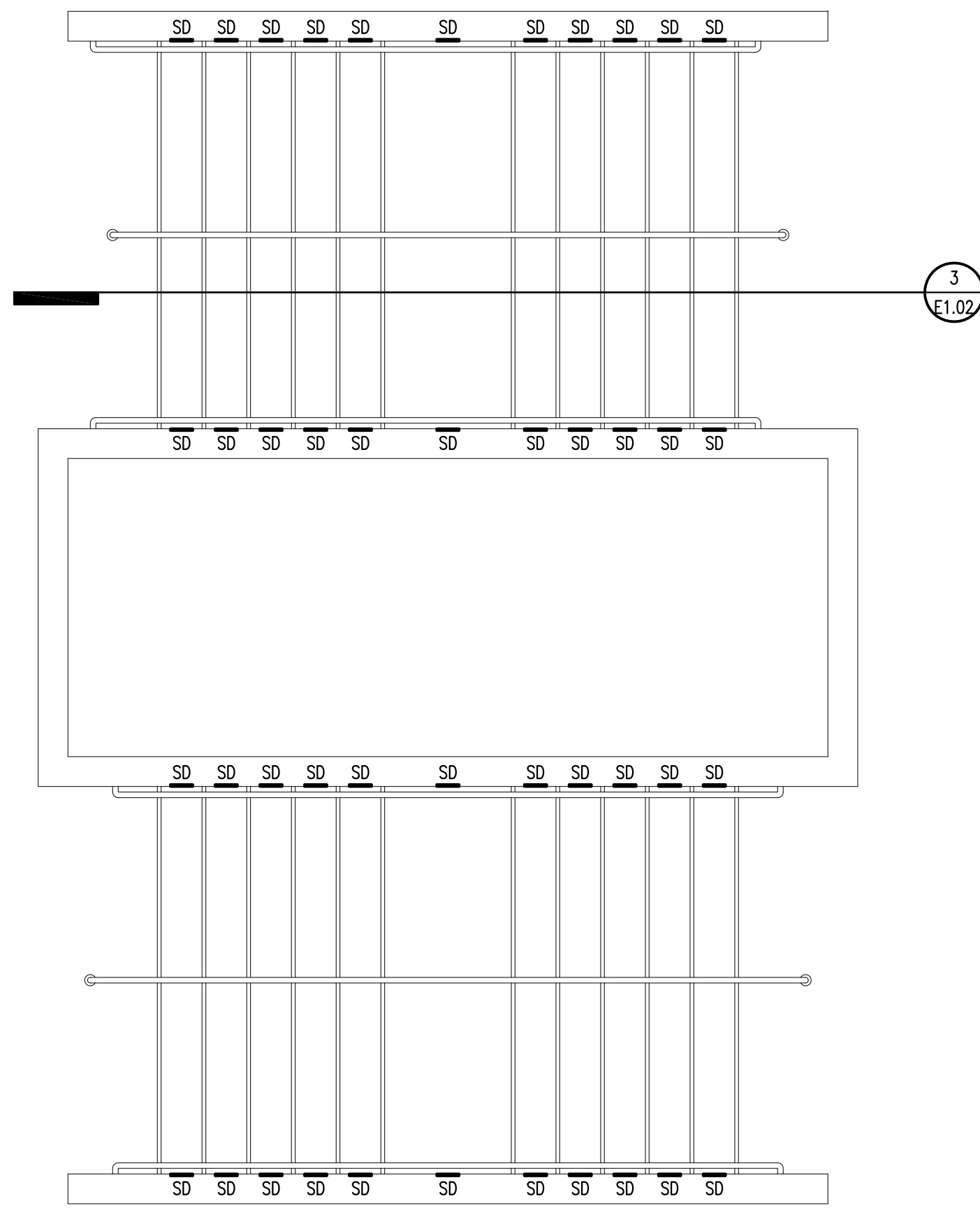




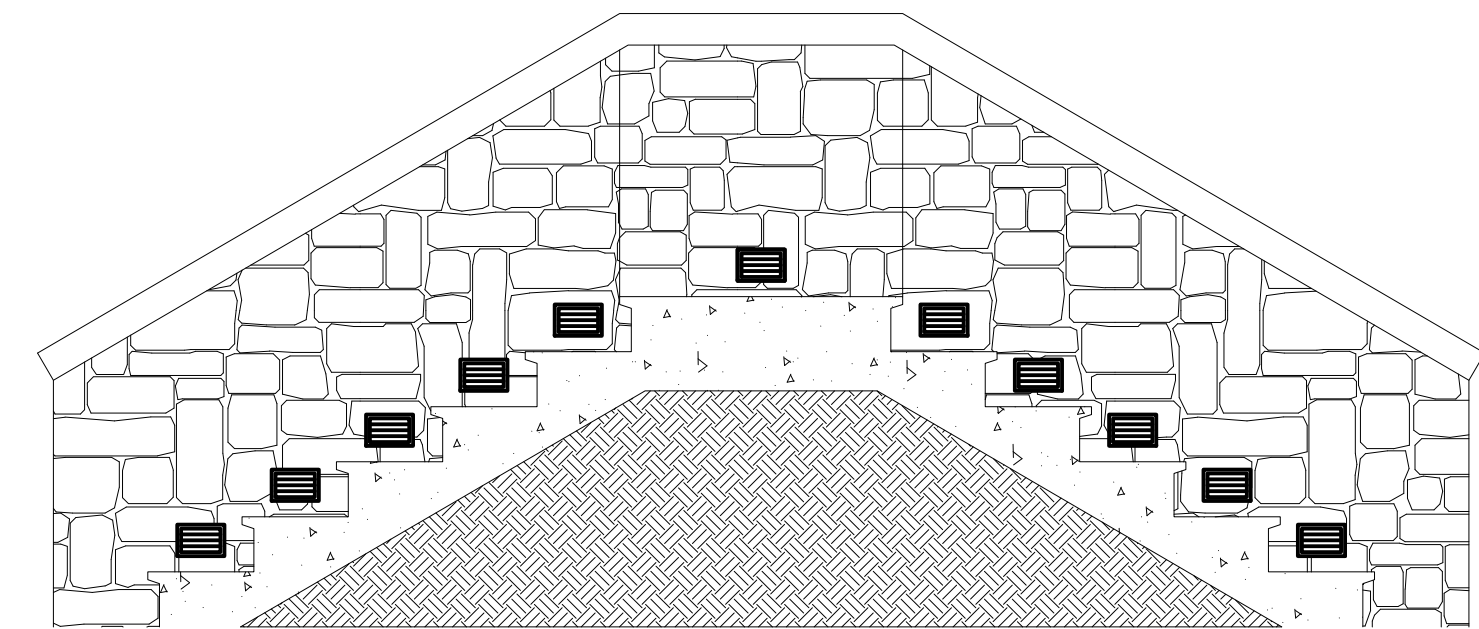




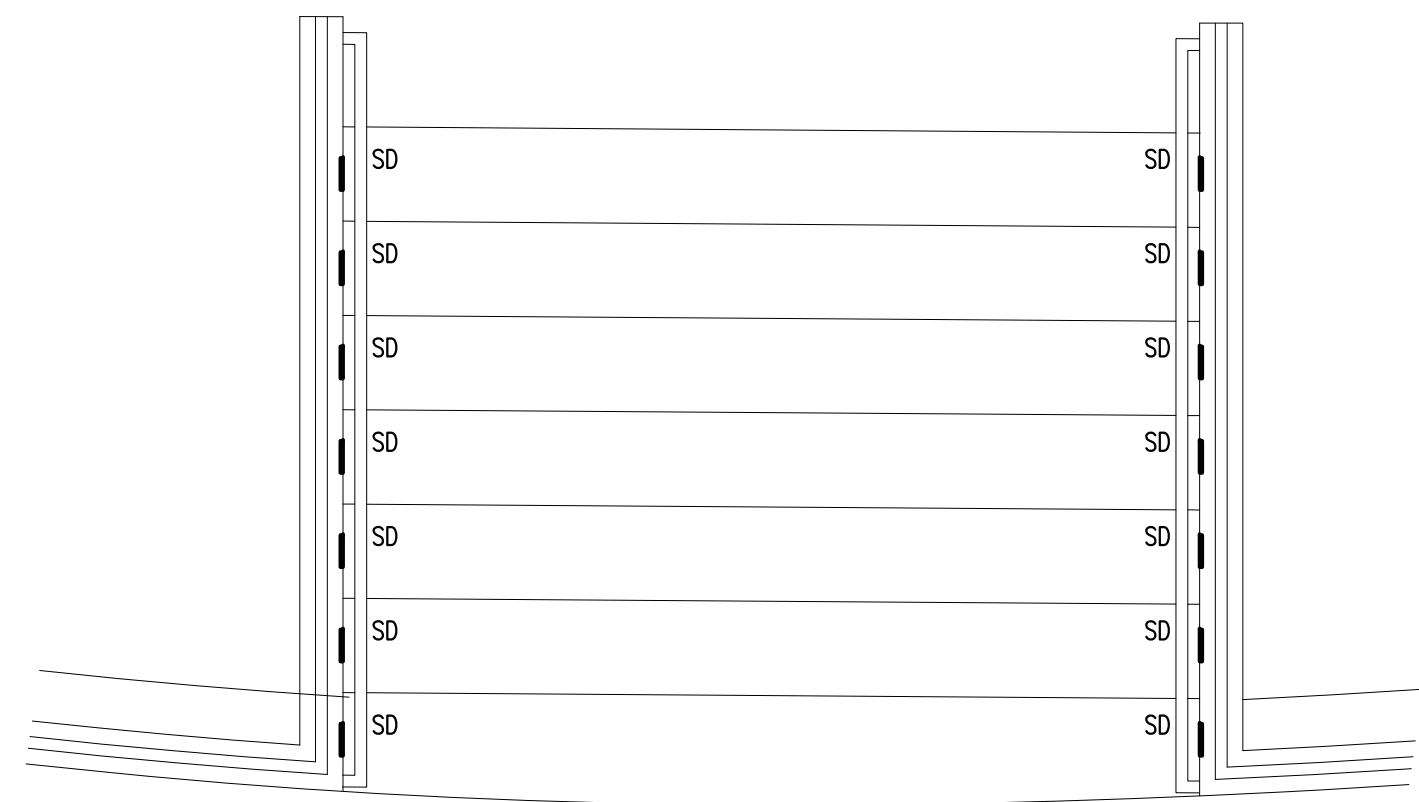
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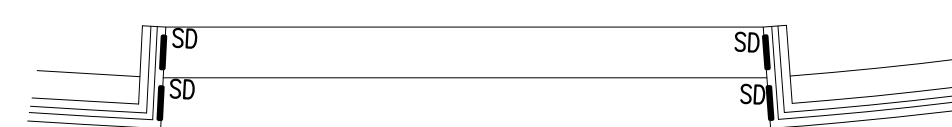
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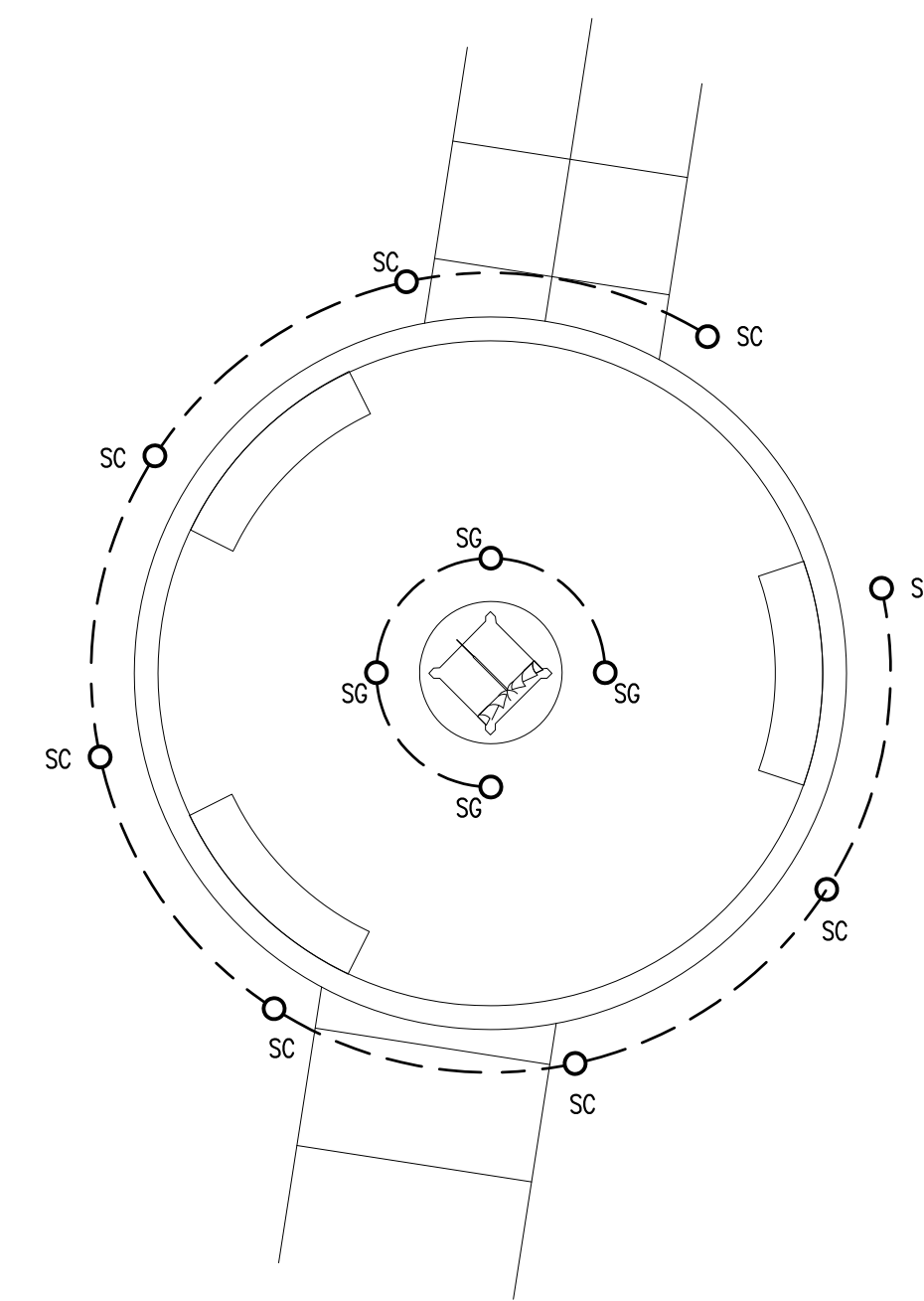
3 ELECTRICAL STAIR SECTION DETAIL  
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4 ENLARGED - ELECTRICAL LIGHTING STAIR  
SCALE: N.T.S.



5 ENLARGED - ELECTRICAL LIGHTING STAIR  
SCALE: N.T.S.



6 ENLARGED - ELECTRICAL LIGHTING WINDMILL MEMORIAL  
SCALE: N.T.S. (ALT. 3)

## FIELD VERIFY ALL CONDITIONS

DESIGN DRAWINGS SCHEMATIC. THIS CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING OR AWARD OF CONTRACT TO INSPECT EXISTING FIELD CONDITIONS. THIS CONTRACT SHALL INCLUDE ALL LABOR AND MATERIALS NECESSARY FOR FIELD MODIFICATIONS DUE TO EXISTING CONDITIONS.

THE CONTRACTOR SHALL CONTACT THE ARCHITECT, ENGINEER OR OWNER PRIOR TO BIDDING FOR INTERPRETATIONS AND CLARIFICATIONS OF THE DESIGN AND INCLUDE IN HIS BID ALL COSTS TO MEET THE DESIGN INTENT. CLARIFICATIONS MADE BY THE ARCHITECT, ENGINEER OR OWNER AFTER BIDDING WILL BE FINAL AND SHALL BE IMPLEMENTED AT CONTRACTOR'S COST.

BIDDING CONTRACTORS SHALL HAVE A WORKING KNOWLEDGE OF LOCAL CODES AND ORDINANCES AND SHALL INCLUDE IN THEIR BIDS THE COSTS FOR ALL WORK INSTALLED IN STRICT ACCORDANCE WITH GOVERNING CODES, THE PLANS AND SPECIFICATIONS NOT WITHSTANDING. THE CONTRACTOR SHALL ALERT ARCHITECT, ENGINEER OR OWNER OF ANY APPARENT DISCREPANCIES BETWEEN GOVERNING CODES AND DESIGN INTENT.

## GENERAL NOTES: ( )

(A) INFORMATION ON THIS PLAN HAS BEEN OBTAINED FROM EXISTING SITE SURVEY. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO COMMENCING WORK. ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND CONSTRUCTION DOCUMENTS SHALL BE REPORTED TO THE ENGINEER.

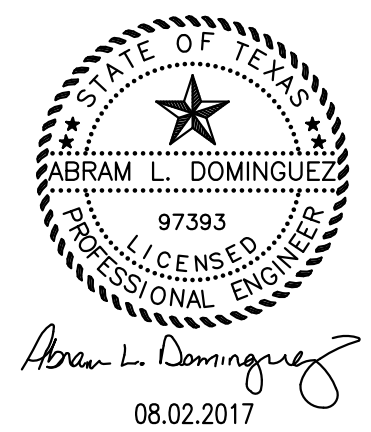
## KEYED NOTES: O

- TRANSFORMER PAD FOR UTILITY COMPANY TRANSFORMER.
- ROUTE AS DIRECTED BY UTILITY COMPANY.

1801 SOUTH SECOND ST. SUITE 330  
McALLEN, TX 78503  
956.994.1900  
twgarch.com

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REVISION	DATE	APPROVED BY	DESCRIPTION



PROPOSED

HIDALGO COUNTY  
PRECINCT 4  
MEMORIAL PARK  
PHASE 1

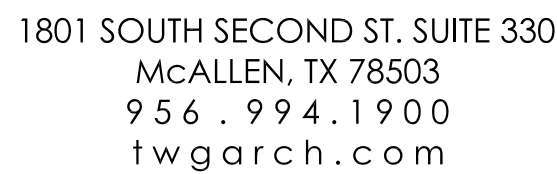
CORNER OF 107 & SUNFLOWER ROAD  
EDINBURG, TEXAS

PROJECT 1341701  
DATE 08/02/2017  
REVISED

E1.02  
ENLARGED-ELECTRICAL  
SECTIONS

**MEP SOLUTIONS**  
ENGINEERING  
MECHANICAL, ELECTRICAL, PLUMBING ENGINEERS  
600 E. BEAUMONT AVE. SUITE 2 MCALLEN, TX 78501 (956) 684-2727  
TEXAS BOARD OF PROFESSIONAL ENGINEERS REGISTRATION # F-9748





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ARCHITECTS INC.

[illegible]

HIDALGO COUNTY  
PRECINCT 4  
MEMORIAL PARK  
PHASE 1


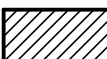











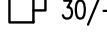
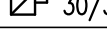


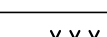



CORNER OF 107 & SUNFLOWER ROAD  
EDINBURG, TEXAS

PROJECT	1341701
DATE	08/02/2017
REVISED	

## E2.01

### ELECTRICAL LEGENDS SCHEDULES, & RISER.

# 1 ELECTRICAL LEGEND

<h1 style="text-align: center; margin: 0;">ELECTRICAL LEGEND</h1> <p style="text-align: center; margin: 0;">ALL SYMBOLS SHOWN MAY NOT APPEAR IN ALL DRAWINGS. SYMBOLS ARE SHOWN SCHEMATIC AND MAY NOT BE TO SCALE.</p>			
SYMBOL	DESCRIPTION		MNTG. HT. UNO (SEE NOTE 1)
	2'x4' FLUORESCENT LIGHT FIXTURE		SEE FIX. SCH.
	2'x4' FLUORESCENT LIGHT FIXTURE ON BATTERY PACK		SEE FIX. SCH.
	INCANDESCENT, FLUORESCENT, OR HID FIXTURE CLG. OR WALL MTD.		SEE FIX. SCH.
	1) EXIT LIGHT, CEILING OR WALL MOUNTED – SHADING INDICATING SINGLE OR DOUBLE FACE; DIRECTIONAL ARROWS AS INDICATED		9" BFC
	WALL SWITCH SPST, 20A/120/277V		48" AFF
	3-WAY WALL SWITCH, 20A/120/277V		48" AFF
	WALL DIMMER SWITCH		48" AFF
	DUPLEX RECEPTACLE – 20A/125V/1P/3W/G NEMA 5-20R		15" AFF
	DUPLEX ROPT. GFI/WATER PROOF – 20A/125V/1P/3W/G NEMA 5-20R		15" AFF
	QUADRAPLEX RECEPTACLE (TWO DUPLEX ROPT'S. UNDER ONE COVERPLATE)		15" AFF
	TELEPHONE/DATA OUTLET, WALL MOUNTED–STUB 3/4" ABOVE ACCESSIBLE CEILING FROM 2 GANG BOX W/1 GANG RETAINER RING.		15" AFF
 	TELEVISION OUTLET. CLG. OR WALL MOUNTED – STUB 1" C/A ABOVE CEILING FROM OUTLET BOX		–
	DISCONNECT SWITCH – 30/30/3 INDICATES 30A, 3-POLE, NONFUSED		AS REQD.
	DISCONNECT SWITCH – 30/30/3 INDICATES 30A, 3-POLE, 30A FUSE		AS REQD.
	PANELBOARD		–
	SINGLE LINE CONTINUATION		–
	CIRCUIT HOME RUN TO PANELBOARD (2 #12, 1 #12E, 3/4" 20A/1P CB UNO)		–
XXX	THREE SINGLE POLE DEVICE CIRCUIT NUMBERS		–
	MOTION DETECTOR		–
	DOOR CONTACT		–
	SECURITY KEYPAD		–
ABS	ABOVE BACK SPLASH	GFI	GROUND FAULT INTERRUPTER
AFF	ABOVE FINISHED FLOOR	BFC	BELOW FINISHED CEILING

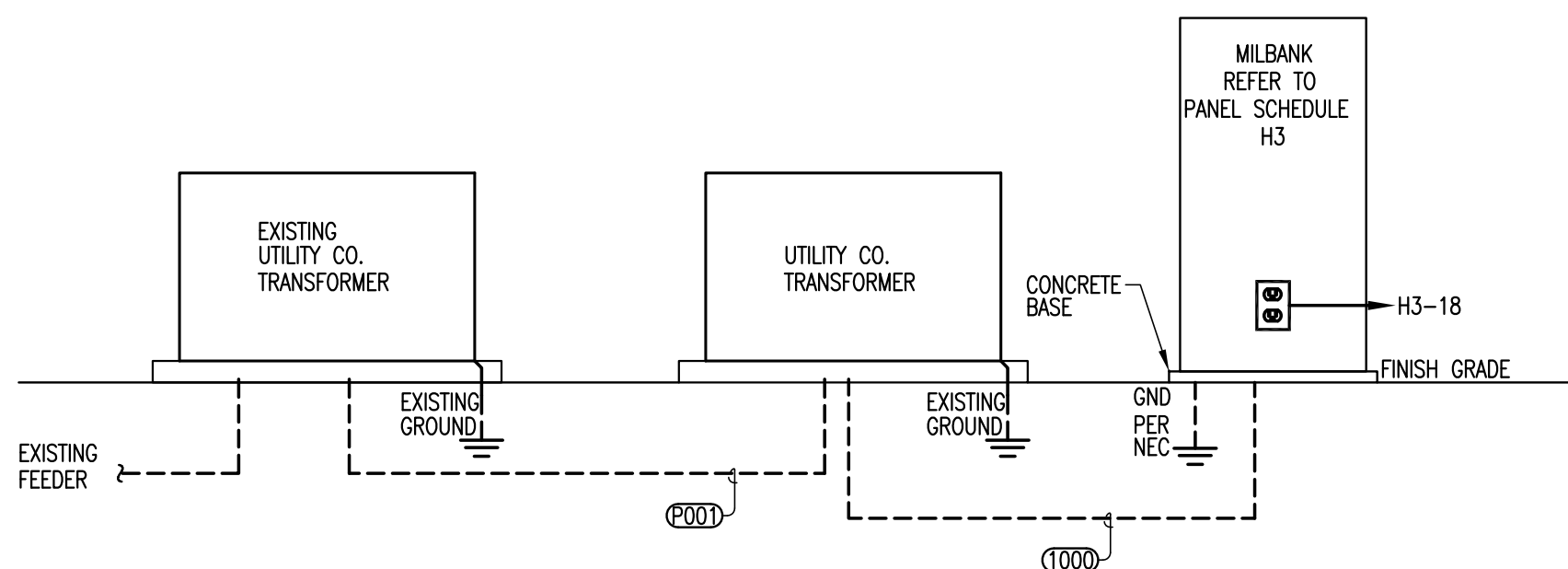
NOTES:

- 48" AFF INDICATES TO TOP OF DEVICE.
- 15" AFF INDICATES TO BOTTOM OF DEVICE.
- ALL OTHER MOUNTING HEIGHTS REFER TO CENTERLINE OF DEVICE.

A. ELECTRICAL CONTRACTOR SHALL VERIFY POINT OF CONNECTION TO UTILITIES PRIOR TO BID TO AVOID CONFLICT. ANY DISCREPANCIES FOUND BY THE CONTRACTOR SHALL BE REPORTED TO THE ENGINEER/ARCHITECT IMMEDIATELY AND PRIOR TO ANY INSTALLATION. FAILURE TO COMPLY SHALL MAKE ALL CORRECTIONS AND/OR MODIFICATIONS THE FULL RESPONSIBILITY OF THE CONTRACTOR.

B. ELECTRICAL CONTRACTOR SHALL COORDINATE CONNECTION WITH UTILITY COMPANY.

C. FURNISH AND INSTALL RECEPTACLE INSIDE MILBANK ENCLOSURE.



## 2 ELECTRICAL RISER DIAGRAM

### 3 ELECTRICAL LIGHTING FIXTURE SCHEDULE

TYPE DESCRIPTION		MANUFACTURER & MODEL #	LAMPS/TEMP/VA	VOLTAGE	REMARKS
SA	SINGLE HEAD LED AREA LIGHT WITH TYPE 3 DISTRIBUTION COLOR AS SELECTED BY ARCHITECT 30" POLE- 24" PEDESTAL	LSI #XALM 3 LED HO 40 UE XXX GENERAL STRUCTURES #CPA-2-B015-30-D1	LED 4000K 241	120/277	
SB	POST TOP AREA LIGHT WITH TYPE 3 DISTRIBUTION COLOR AS SELECTED BY ARCHITECT 20" POLE- 24" PEDESTAL	LSI #XCN3 PT 3 LED HO NW UE XXX GENERAL STRUCTURES #CPA-2-5015-20	LED 4000K 108	120/277	
SC	IN-GRADE FIXTURE NARROW SPOT DISTRIBUTION IP68 RATED	ERCO #35175.023	LED 4000K 8	120/277	
SD	LED BRICK STEP LIGHT HORIZONTAL LOUVER COLOR AS SELECTED BY ARCHITECT	CONTECH #STPB WW LH SS	LED 3000K 3	120/277	
SF	TREE FLOODLIGHT DIRECT BURIAL LED DRIVER	FOCUS INDUSTRIES #DL-22-SS-LED FOCUS INDUSTRIES #DB-12-LED10	LED 5	120	
SG	IN-GRADE FIXTURE NARROW SPOT DISTRIBUTION IP68 RATED	ERCO #35175.023	LED 4000K 8	120/277	

# 4 ELECTRICAL FEEDER/BRANCH CIRCUIT SCHEDULE

FEEDER / BRANCH CIRCUIT SCHEDULE					
		PHASE	NEUTRAL	GROUND	
MARK	RACEWAY	CONDUCTORS	CONDUCTORS	CONDUCTORS	REMARKS
P001	4"				SEE SEE SEE SEE
1000	2"	2#3/0	1#3/0	1#6	SEE SEE SEE SEE

9864	CONNECTED	12330	DEMAND
180	CONNECTED	180	DEMAND
8520	CONNECTED	8520	DEMAND
18564	CONNECTED	21030	DEMAND
77	CONNECTED	88	DEMAND

VAL	VAR	VAO	DESCRIPTION	LOAD	BKR	OKT	PH	OKT	BKR	LOAD	VAL	VAR	VAO
605			EXTERIOR LIGHTING	20/2	1	A	2	20/2	EXTERIOR LIGHTING #2 & 3		112		
605			EXTERIOR LIGHTING	20/2	3	B	4				112		
605			EXTERIOR LIGHTING	20/2	5	A	6	20/2	EXTERIOR LIGHTING & FUTURE		168		
605			EXTERIOR LIGHTING		7	B	8	-			168		
432			EXTERIOR LIGHTING	20/2	9	A	10	20/2	EXTERIOR LIGHTING ALT. #4		285		
432			EXTERIOR LIGHTING		11	B	12	-			285		
378			EXTERIOR LIGHTING	20/2	13	A	14	20/1	TREE LIGHTS		50		
378			EXTERIOR LIGHTING		15	B	16	20/1	LIGHTING CONTACTOR			36	
378			EXTERIOR LIGHTING	20/2	17	A	18	20/1	RECEPTACLE		180		
378			EXTERIOR LIGHTING		19	B	20	20/1	SPARE				
432			EXTERIOR LIGHTING	20/2	21	A	22	20/1	SPARE				
432			EXTERIOR LIGHTING		23	B	24	20/1	SPARE				
486			EXTERIOR LIGHTING	20/2	25	A	26	20/1	SPARE				
486			EXTERIOR LIGHTING		27	B	28	20/1	SPARE				
540			EXTERIOR LIGHTING	20/2	29	A	30	20/1	SPACE				
540			EXTERIOR LIGHTING		31	B	32	20/1	SPACE				
486			EXTERIOR LIGHTING	20/2	33	A	34	20/1	SPACE				
486			EXTERIOR LIGHTING		35	B	36	30/2	PUMP			204	
			SPACE	20/1	37	A	38	30/2	PUMP			204	
			SPACE	20/1	39	B	40	30/2	PUMP			204	
			SPACE	20/1	41	A	42	-				204	

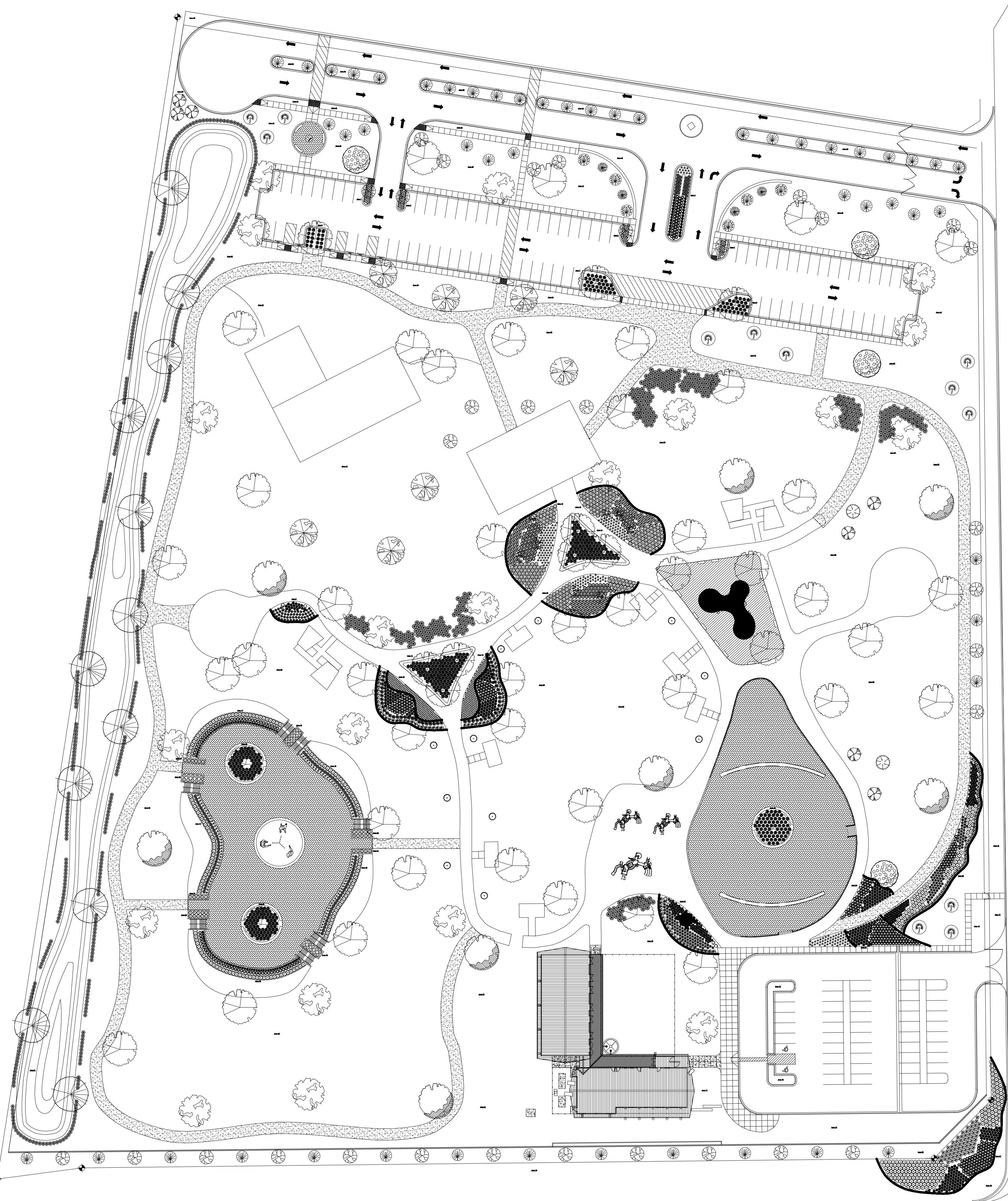
V&L (LIGHTING)	9864	CONNECTED	12330	DEMAND
V&R (RECEPTACLES)	180	CONNECTED	180	DEMAND
V&O (OTHER)	8520	CONNECTED	8520	DEMAND
VA: TOTAL	18564	CONNECTED	21030	DEMAND
AMPS: TOTAL	77	CONNECTED	88	DEMAND

5 ELEC  
SCALE: N.T.S.



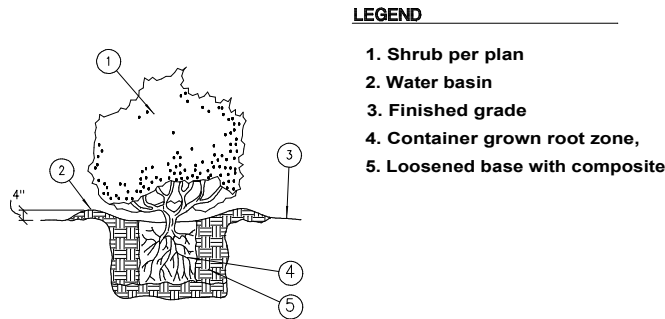
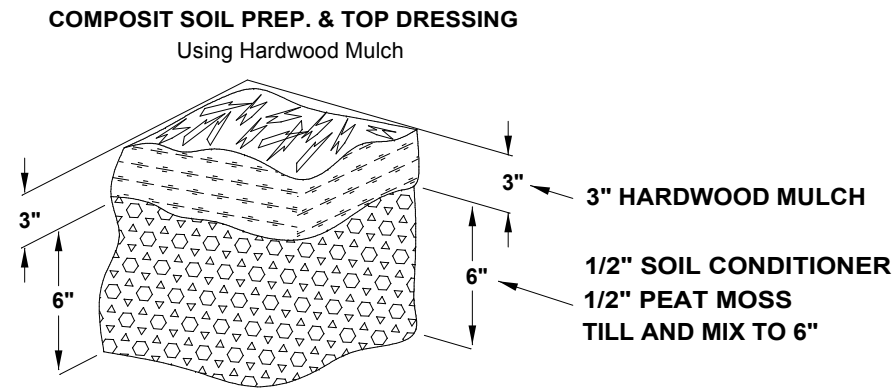
MECHANICAL, ELECTRICAL, PLUMBING ENGINEERS  
600 E. BEAUMONT AVE. SUITE 2 McALLEN, TX 78501 (956) 664-2727  
TEXAS BOARD OF PROFESSIONAL ENGINEERS REGISTRATION # F-9746



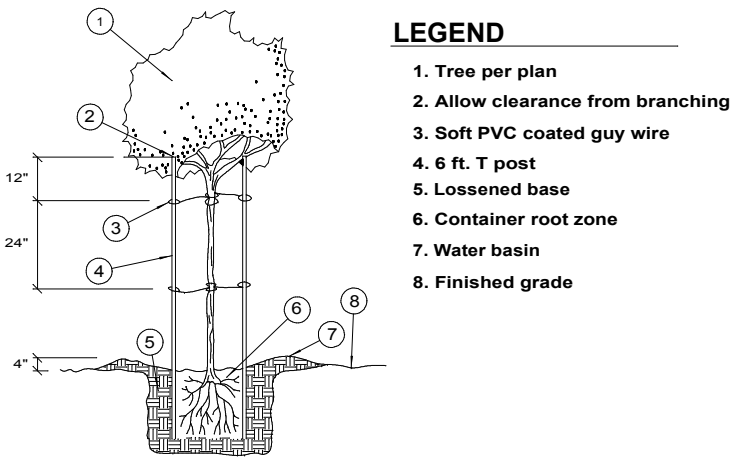


SUNFLOWER ROAD

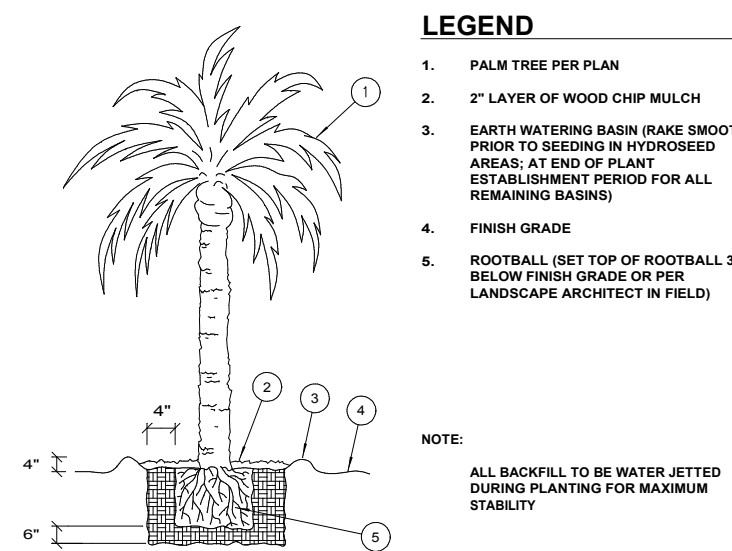
STATE HIGHWAY 107



SHRUB PLANTING



TREE PLANTING



PALM TREE PLANTING

Landscape

Trees

Qty

2

7

8

8

4

12

7

20

32

56

Palms

Qty

4

12

51

6

Qty

271

79

350

213

113

431

527

51

Qty

333

Qty

11

656

334

467

Annuals-Perennials

Qty

444

431

218

297

Landscape

Qty

7

Symbol

Symbol

Common Name

Plant Size

Persimmon, Common

2 to 2 1/2

Mesquite

3 to 3 1/2

Holly, Yaupon

2 to 2 1/2

Ash, Fan-Tex

3 1/2 to 4

Royal Poinciana

3 to 3 1/2

Cypress, Montezuma

3 to 3 1/2

Wild Olive

2 1/2 to 3

Elm, Cedar

3 to 3 1/2

Crape Myrtle

10 ft

Oak, Southern Live

3 to 3 1/2 Cal

Common Name

Plant Size

Queen Palm

10 ft Clear Trunk

Texas Sabal

6' Clear Trunk

Mexican Fan Palm

12' Clear Trunk

Florida Sabal Palm

12 ft Clear Trunk

Common Name

Plant Size

Firebush

3 Gallon

Sage, Green Cloud

3 Gallon

Plumbago

3 Gallon

Holly, Dwarf Yaupon

3 Gallon

Indian Hawthorn

3 Gallon

Bougainvillea, Dwarf

5 Gallon

Carissa, Green Carpet

3 Gallon

Rose, Knockout

5 Gallon

Common Name

Plant Size

Juniper 'Sea Green'

5 Gallon

Common Name

Plant Size

Bougainvillea

15 Gallon

Asiatic Jasmine

4" Pots

Liriope

1 Gallon

Bougainvillea

3 Gallon

Common Name

Plant Size

Salvia, Meslycup

1 Gallon

Sage, Autumn

1 Gallon

Lantana

1 Gallon

Bubline

1 Gallon

Description

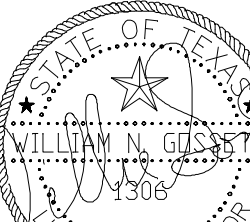
Boulders Boulder

EARTH IRRIGATION & LANDSCAPING, INC.  
1000 S. WILLET ST. MCALLEN, TX 78504  
PH: 361.631.6686 FAX: 361.631.6688

Revision Number	Revision Date	Approved by	Attachments

EARTH IRRIGATION & LANDSCAPING, INC.  
1000 S. WILLET ST. MCALLEN, TX 78504  
PH: 361.631.6686 FAX: 361.631.6688

PROJECT TITLE  
Memorial Park  
LANDSCAPE PLAN



ADEQUACY OF THE WORK  
OF THE LANDSCAPE DESIGNER  
THE TEXAS COMMISSION OF ENVIRONMENTAL QUALITY  
AFTER THIS TEST DAY  
HOLDING THIS DESIGN  
FOR THE YEAR 2017

Seal

DATE: 8/02/2017

FILE:

DRAWN BY: JT

SCALE: 1" = 50'

SHEET: L1.0





ALL VALVES REQUIRE A DECODER AS SPECIFIED BY HUNTER IRRIGATION

Irrigation contractor shall provide an as built print

