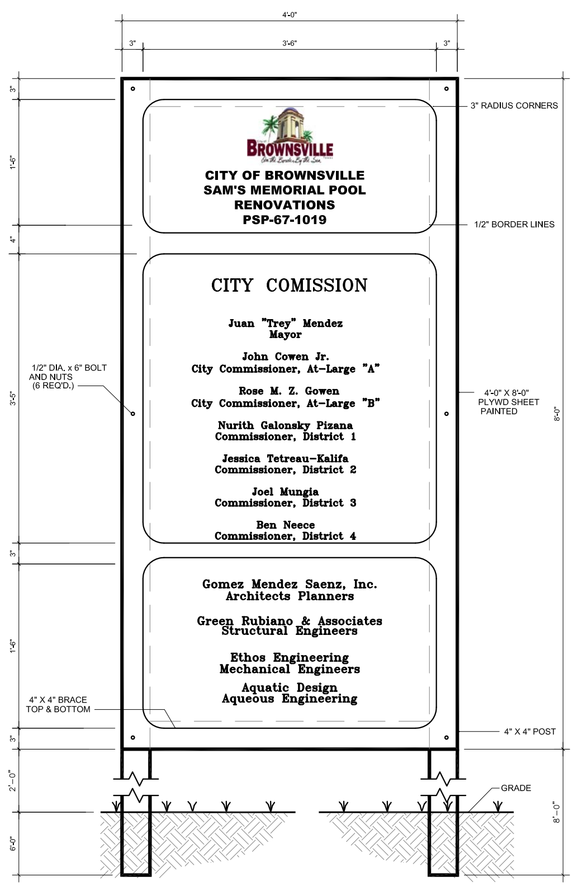
CITY OF BROWNSVILLE
SAM'S MEMORIAL POOL RENOVATIONS
PSP-67-1019

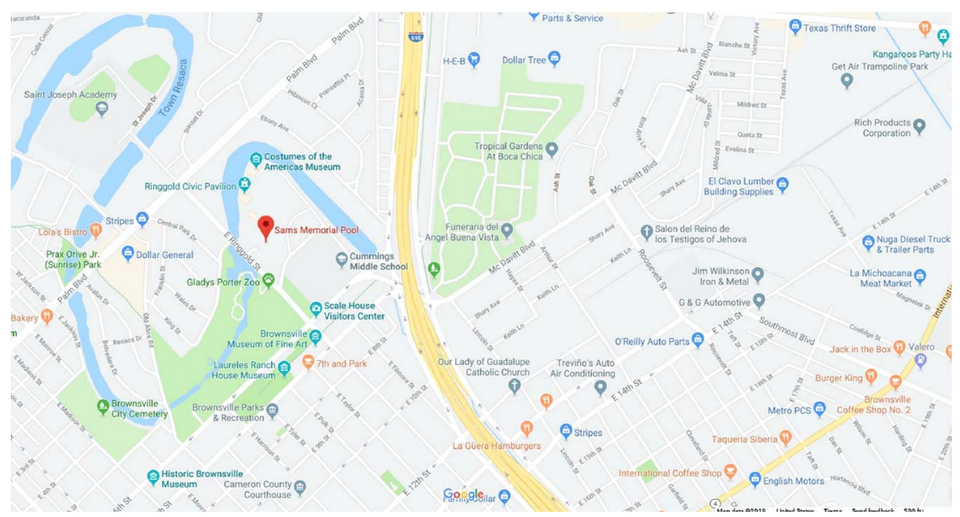
BROWNSVILLE TEXAS

Juan "Trey" Mendez	Mayor
John Cowen Jr.	City Commissioner, At-Large "A"
Rose M. Z. Gowen	City Commissioner, At-Large "B"
Nurith Galonsky Pizana	Commissioner, District 1
Jessica Tetreau-Kalifa	Commissioner, District 2
Joel Mungia	Commissioner, District 3
Ben Neece	Commissioner, District 4

Damaris McGlone — Parks and Recreation Specialist



01 PROJECT SIGN
NOT TO SCALE



505 E RINGGOLD ST. BROWNSVILLE TEXAS 78520

LIST OF DRAWINGS

CIVIL DRAWINGS

COVER	SHEET COVER
D1.00	DEMOLITION PLAN
D1.01	DEMOLITION PLAN AT POOL DECK
A2.01	FLOOR PLAN
A2.02	FLOOR PLAN POOL DECK
A3.01	PLAN ENLARGEMENTS AND RAILING DETAILS
A4.01	WALL SECTIONS
A4.02	WALL SECTIONS
A5.01	EXTERIOR ELEVATIONS
SP1.01	POOL HEATERS PLAN & DETAILS
S1.1	STRUCTURAL NOTES
S1.2	STRUCTURAL NOTES
S1.3	GENERAL STRUCTURAL DETAILS
S3.1	POOL DECK REPAIR PLAN
S3.2	STRUCTURAL DETAILS
S3.3	PUMP ROOM REPAIR PLAN
S3.4	WALL SECTIONS STORAGE ROOM
S4.1	CONCRETE REPAIR DETAILS
ME1.01	MEP NOTES
ME2.01	MECHANICAL DEMOLITION NOTES
ME3.01	MECHANICAL ELECTRICAL NOTES
ME4.01	POOL DECK MECHANICAL/ELECTRICAL PLAN
ME5.01	ELECTRICAL LEGENDS AND NOTES
ME6.01	MECHANICAL PLAN
ME7.01	GENERAL DETAILS

MECHANICAL ENGINEERS
ETHOS ENGINEERING - M.E.P.
119 VAN BUREN, SUITE 101 HARLINGEN, TEXAS 78550
(956) 230-3435 FAX: (956) 720-0830

AQUATIC DESIGN
AQUEOUS ENGINEERING
1419 LAMAR STREET TYLER, TEXAS 75701
PH (903) 266-9089 CELL: (903) 530-1678

STRUCTURAL ENGINEERS
GREEN RUBIANO & ASSOCIATES
1220 W. HARRISON HARLINGEN, TX 78550
PH. (956) 428-4461 FAX. (956) 428-0281

A R C H I T E C T S
GOMEZ MENDEZ SAENZ, INC.
1150 PAREDES LINE RD. BROWNSVILLE, TX. 78521
PH. (956) 546-0110 FAX. (956) 546-0196

No.	REVISIONS	BY

GMS ARCHITECTS
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SAMS MEMORIAL POOL RENOVATIONS
CITY OF BROWNSVILLE, TEXAS

SMP-67-1219

RUDOLPH V. GOMEZ REGISTERED ARCHITECT 17864 STATE OF TEXAS

DATE	FEBRUARY, 2019
SCALE	As Shown
DRAWN	R. GOMEZ, AIA I O
JOB #	COB POOL
SHEET	CVR

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KEYED DEMOLITION NOTES:

D1 DEMOLISH EXISTING CMU WALL INFILL AT THIS LOCATION , INLUDING DOORS AND LOUVERS. REF STRUCTURAL DWGS FOR SPECIFICS

D2 REMOVE EXISTING WOOD WALLS AND WOOD GATES

D3 REMOVE EXISTING CONCRETE PAD AT AREA SHOWN COORDINATE WITH POOL CONSULTANT FOR HEATER REMOVAL AND REPLACEMENT, REF EQUIPMENT SCHEDULE FOR ADDITIONAL REQUIREMENTS AT NEW EQUIPMENT RE GRADE AREA TO ACCOMMODATE NEW IMPROVEMENTS

D4 EXISTING GAS METER TO REMAIN

D5 EXISTING CONCRETE COLUMNS TO REMAIN

D6 REFERENCE STRUCTURAL & MECHANICAL DWGS FOR ADDITIONAL DEMOLITION REQUIREMENTS

HATCH LEGEND

INDICATES DEMOLITION AREA

GENERAL DEMOLITION NOTES:

1 GENERAL CONTRACTOR TO TAKE CARE NOT TO DAMAGE EXISTING FOUNDATION, STRUCTURAL STEEL BEAMS / COLUMNS, SURROUNDING BUILDINGS AND VARIOUS SURFACES OUTSIDE OF DEMOLITION AREA, SHOULD ANY DAMAGE OCCUR OUTSIDE OF DEMOLITION AREA, THE GENERAL CONTRACTOR WILL BE RESPONSIBLE TO REPAIR OR REPLACE DAMAGED ITEMS.

2 GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND DISPOSING DEBRIS & MATERIAL AWAY FROM SITE ACCORDING TO LOCAL & STATE REGULATIONS.

3 GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE PROJECT SITE TO SEE FIRST HAND WHAT DEMOLITION REQUIREMENTS ARE REQUIRED FOR THIS PROJECT AND SHALL INCLUDE IN HIS OR HER BID ALL THE DEMOLITION REQUIREMENTS TO COMPLETE THIS PROJECT.

4 LOCATE AND LABEL ALL UTILITIES BEFORE ANY DEMOLITION & CONSTRUCTION SHALL BEGIN SO THAT ANY SUBCONTRACTOR VISITING THIS SITE CAN EASILY IDENTIFY THESE.

5 GENERAL CONTRACTOR TO FAMILIARIZE THEMSELVES WITH THIS PROJECT SITE AND DEMOLITION REQUIREMENTS FOR BUILDING ADDITION - INCLUDE IN BID ALL DEMOLITION AND CLEARING NECESSARY TO COMPLETE THIS PROJECT

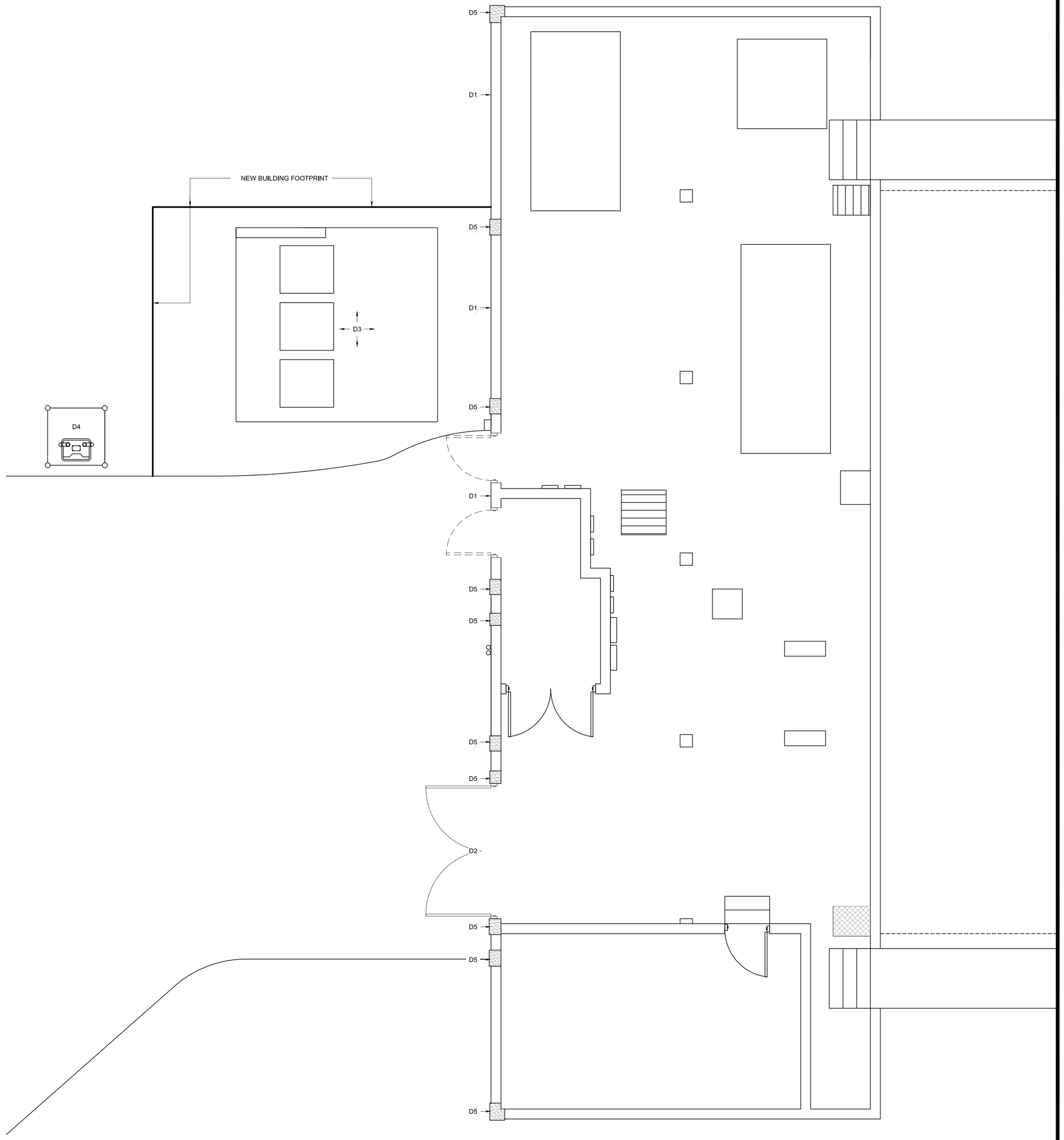
6 COORDINATE WITH ARCHITECT AND/OR ENGINEERS PRIOR TO ANY DEMOLITION ITEMS THAT ARE UNCLEAR.

7 REFER TO MECHANICAL, ELECTRICAL & PLUMBING PLANS FOR ADDITIONAL SITE DEMOLITION NOTES.

8 PROVIDE TEMPORARY CONSTRUCTION FENCE - ENSURE THAT CONSTRUCTION SITE IS SECURE FROM ANYONE THAT MAY VISIT THE SITE - ENSURE CONSTRUCTION FENCE IS A MINIMUM OF 6'-0" HIGH CHAIN LINK FENCE OR APPROVED EQUAL

9 ALL DEMOLISHED MATERIAL IS TO BE REMOVED FROM PROJECT SITE AND DISPOSED OF PROPERLY PRIOR TO COMMENCING NEW CONSTRUCTION.

10 INFILL SITE ACCORDINGLY AT AL AREAS WHERE SIDEWALKS,CANOPIES, TREES, FENCE POSTS AND SHRUBS WERE REMOVED REFERENCE STRUCTURAL FOR INFILL REQUIREMENTS



01 DEMOLITION PLAN AT LOWER LEVEL
SCALE: 1/4" = 1'-0"

PLAN NORTH

No.	REVISIONS	BY

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SAMS MEMORIAL POOL RENOVATIONS
CITY OF BROWNSVILLE, TEXAS

SMP-67-1219

REGISTERED ARCHITECT
RODOLFO GOMEZ
STATE OF TEXAS

DATE	FEBRUARY, 2019
SCALE	As Shown
DRAWN	R. GOMEZ, AIA
	I O
JOB #	COB POOL
SHEET	D1.00

KEYED DEMOLITION NOTES:

D1 REMOVE EXISTING CONCRETE FLATWORK INCLUDING BRICK PAVERS AT AREA SHOWN. SAWCUT TO NEAREST CONTROL JOINT AS SHOWN PROVIDE NEW CONCRETE FOR NEW TILE INSTALLATION

D2 REMOVE EXISTING STEEL RAILING AT RAMP

D3 REMOVE EXISTING WOOD TRELLIS SAWCUT POST 1" UNDER EXISTING CONCRETE WALK

D4 REMOVE EXISTING RAILING AND REINSTALL AFTER NEW TILE INSTALLATION ALONG RAMP AND STAIRS ONLY

D5 EXISTING PALM TREES TO BE REMOVED AND DISPOSED FROM BY OWNER, GENERAL CONTRACTOR TO INFILL AREA AND PROVIDE NEW CONCRETE FOR NEW TILE INSTALLATION

D6 GENERAL CONTRACTOR TO BE RESPONSIBLE FOR PROVIDING NEW POOL DEPTH MARKERS AND NO RUNNING TILE INSERTS TO MATCH EXACTLY WHAT WAS REMOVED

HATCH LEGEND

INDICATES DEMOLITION AREA

GENERAL DEMOLITION NOTES:

1 GENERAL CONTRACTOR TO TAKE CARE NOT TO DAMAGE EXISTING FOUNDATION, STRUCTURAL STEEL BEAMS / COLUMNS, SURROUNDING BUILDINGS AND VARIOUS SURFACES OUTSIDE OF DEMOLITION AREA. SHOULD ANY DAMAGE OCCUR OUTSIDE OF DEMOLITION AREA. THE GENERAL CONTRACTOR WILL BE RESPONSIBLE TO REPAIR OR REPLACE DAMAGED ITEMS.

2 GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND DISPOSING DEBRIS & MATERIAL AWAY FROM SITE ACCORDING TO LOCAL & STATE REGULATIONS.

3 GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE PROJECT SITE TO SEE FIRST HAND WHAT DEMOLITION REQUIREMENTS ARE REQUIRED FOR THIS PROJECT AND SHALL INCLUDE IN HIS OR HER BID ALL THE DEMOLITION REQUIREMENTS TO COMPLETE THIS PROJECT.

4 LOCATE AND LABEL ALL UTILITIES BEFORE ANY DEMOLITION & CONSTRUCTION SHALL BEGIN SO THAT ANY SUBCONTRACTOR VISITING THIS SITE CAN EASILY IDENTIFY THESE.

5 GENERAL CONTRACTOR TO FAMILIARIZE THEMSELVES WITH THIS PROJECT SITE AND DEMOLITION REQUIREMENTS FOR BUILDING ADDITION - INCLUDE IN BID ALL DEMOLITION AND CLEARING NECESSARY TO COMPLETE THIS PROJECT

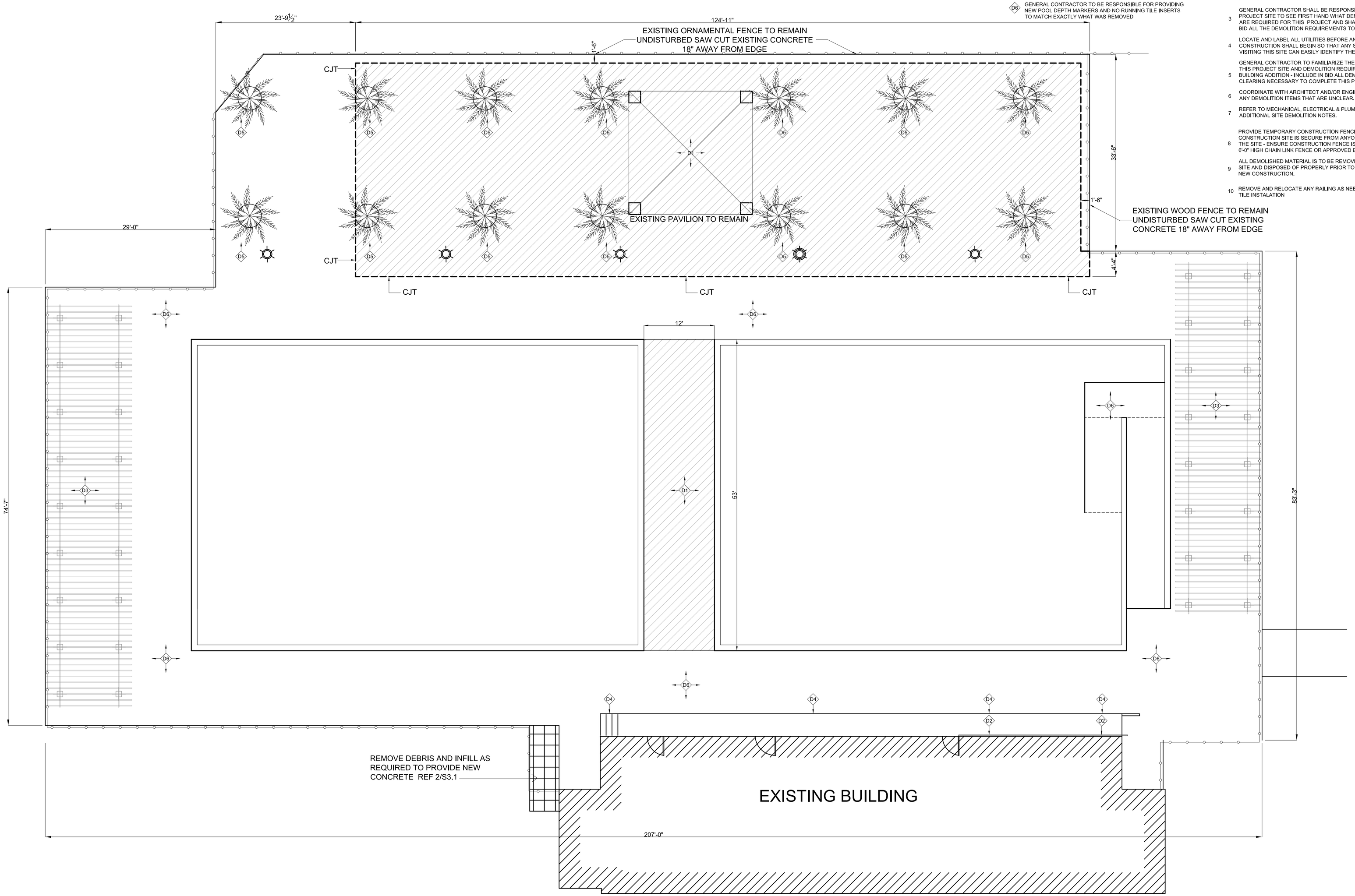
6 COORDINATE WITH ARCHITECT AND/OR ENGINEERS PRIOR TO ANY DEMOLITION ITEMS THAT ARE UNCLEAR.

7 REFER TO MECHANICAL, ELECTRICAL & PLUMBING PLANS FOR ADDITIONAL SITE DEMOLITION NOTES.

8 PROVIDE TEMPORARY CONSTRUCTION FENCE - ENSURE THAT CONSTRUCTION SITE IS SECURE FROM ANYONE THAT MAY VISIT THE SITE - ENSURE CONSTRUCTION FENCE IS A MINIMUM OF 6'-0" HIGH CHAIN LINK FENCE OR APPROVED EQUAL

9 ALL DEMOLISHED MATERIAL IS TO BE REMOVED FROM PROJECT SITE AND DISPOSED OF PROPERLY PRIOR TO COMMENCING NEW CONSTRUCTION.

10 REMOVE AND RELOCATE ANY RAILING AS NEEDED FOR NEW TILE INSTALATION



01 DEMOLITION PLAN AT POOL DECK

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

PLAN NORTH

No.	REVISIONS	BY

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SAMS MEMORIAL POOL RENOVATIONS

CITY OF BROWNSVILLE, TEXAS

SMP-67-1219

REGISTERED ARCHITECT
RODOLFO V. GOMEZ
STATE OF TEXAS

DATE	FEBRUARY, 2019
SCALE	As Shown
DRAWN	R. GOMEZ, AIA
JOB #	COB POOL
SHEET	D1.01

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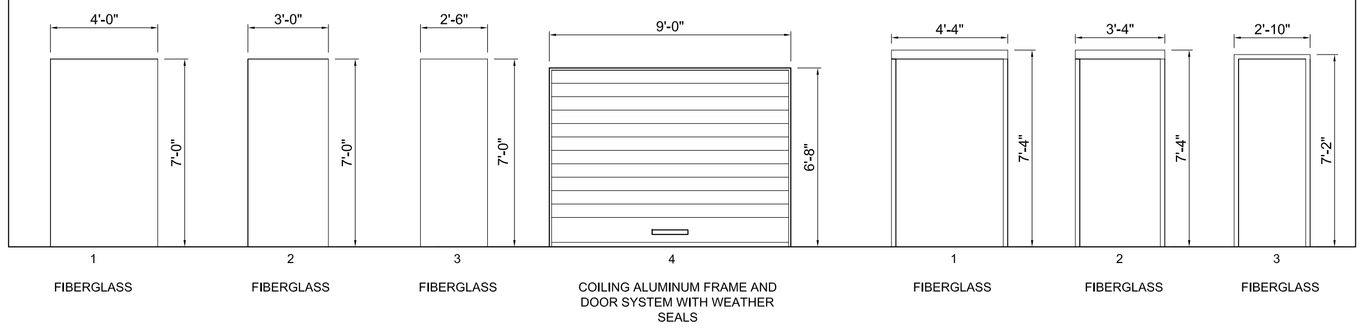
NOTE : REFER TO FIXTURE PLANS FOR CORRESPONDING DOOR HARDWARE SETS
NOTE : PROVIDE CYLINDERS OF ALL LOCKSETS TO BE KEYED TO EXISTING GRANDMASTER SYSTEM.
NOTE : CONTRACTOR MUST PROVIDE TRANSITION STRIPS AT ALL DISSIMILAR FLOOR CONDITIONS BETWEEN ROOMS AT DOOR SILLS



DOOR ELEVATIONS

SCALE 1/4" = 1'-0"

DOOR FRAME ELEVATIONS

SCALE 1/4" = 1'-0"

DOOR SCHEDULE

DOOR NO.	DOOR MATL.	DOOR W	DOOR H	DOOR T	FRAME MATL.	FRAME W	FRAME H	FRAME T	HDWR	DETAIL JAMB	DETAIL HEAD	DETAIL SILL	REMARKS
1	FRP	4'-0"	7'-0"	1 3/4"	FRP	4'-4"	7'-4"	VERIFY		11/A3.02	12/A3.02	01/A3.02	
2	FRP	3'-0"	7'-0"	1 3/4"	FRP	3'-4"	7'-4"	VERIFY		11/A3.02	12/A3.02	01/A3.02	
3	FRP	2'-6"	7'-0"	1 3/4"	FRP	2'-10"	7'-4"	VERIFY		11/A3.02	12/A3.02	01/A3.02	
4	ALUM.	9'-0"	6'-8"	1 3/4"	ALUM.	9'-4"	10'-0"	VERIFY		11/A3.02	12/A3.02	01/A3.02	

ALL EXTERIOR WINDOWS, DOORS, STOREFRONTS & O.H. DOOR ASSEMBLIES SHALL BE CERTIFIED TO MEET THE PROJECTS MINIMUM DESIGN WIND PRESSURES. REFERENCE STRUCTURAL DRAWINGS FOR DESIGN WIND PRESSURE REQUIREMENTS - TYPICAL THROUGHOUT PROJECT

ROOM FINISH SCHEDULE

ALL WALLS TO BE PAINTED UNLESS NOTED OTHERWISE

THIS SCHEDULE BASED ON PLAN NORTH ORIENTATION

ROOM	ROOM NAME	BASE	FLR.	WALLS N	WALLS S	WALLS E	WALLS W	CLG.	CLG. HEIGHTS	REMARKS
100	STORAGE	PTD	EPX PTD	CMU/PTD	GYP/PTD	CMU/PTD	CMU/PTD	PTD	VARIES	
101	COVERED AREA	PTD	CONC	CMU/PTD			CMU/PTD	EXP	VARIES	

FINISH LEGEND:

RUBBER ——— RUBBER BASE
PTD ——— PAINTED
CMU/PTD ——— CONC. MASONRY UNIT PAINTED
GYP/PTD ——— GYPSUM BOARD PAINTED
CONC. ——— SEALED CONCRETE
MTL ——— METAL SOFFIT PANELS
C.T. ——— CERAMIC TILE BY DAL-TILE
VCT ——— VINYL TILE ALLOW FOR 3 COLORS
EPX PTD ——— EPOXY PAINT

01 FLOOR PLAN

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

GENERAL NOTES:

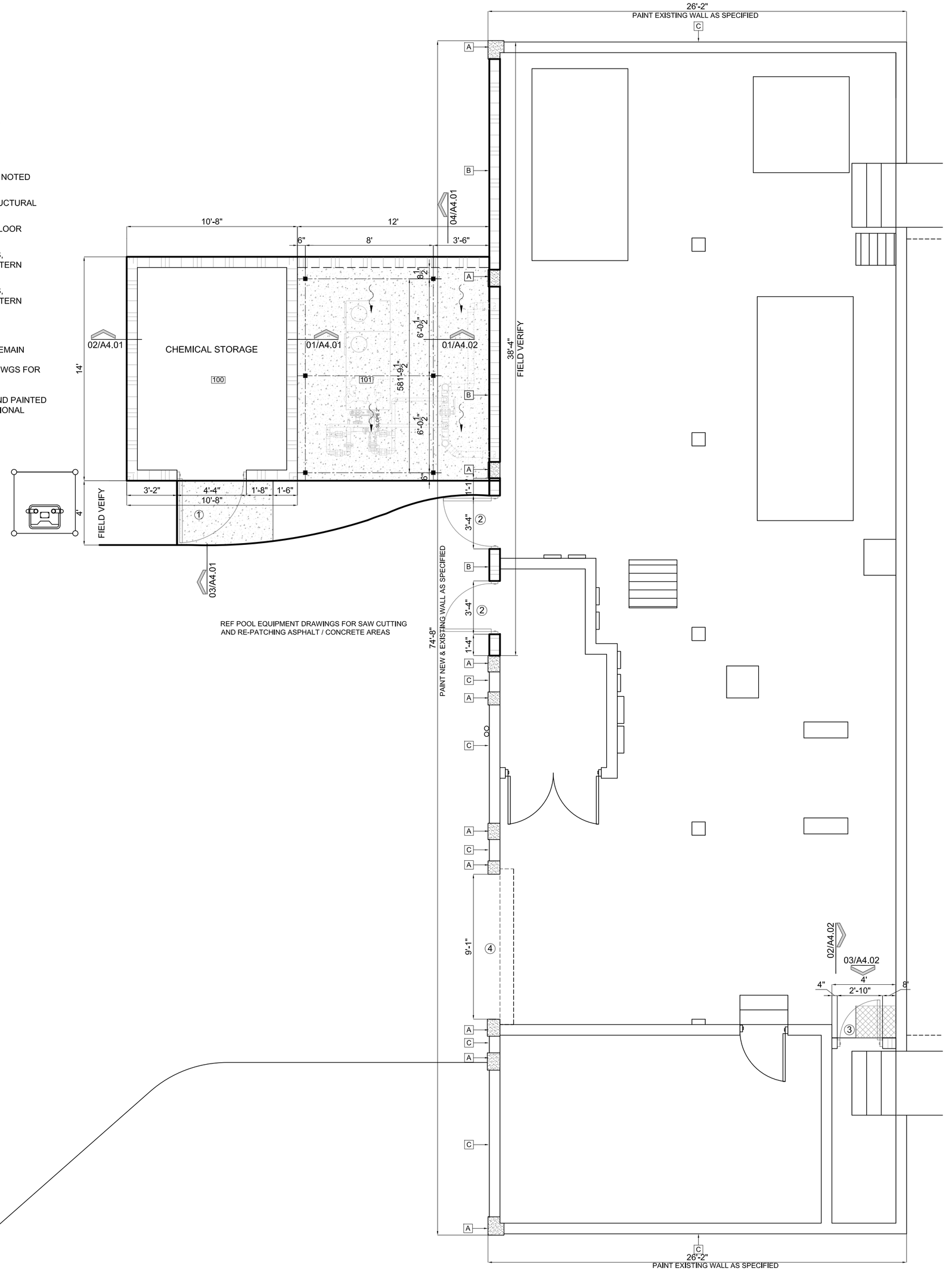
1. REFERENCE A4.00 SERIES FOR WALL SECTIONS NOTED ON THIS PLAN.
2. PROVIDE MASONRY CONTROL JOINTS AS PER STRUCTURAL STRUCTURAL .
3. PROVIDE TRANSITION STRIPS AT ALL DISSIMILAR FLOOR CONDITIONS
4. REFERENCE FIXTURE PLANS SHEET FOR FIXTURES, ACCESSORY REQUIREMENTS AND FLOOR TILE PATTERN LAYOUT
4. REFERENCE FIXTURE PLANS SHEET FOR FIXTURES, ACCESSORY REQUIREMENTS AND FLOOR TILE PATTERN LAYOUT

LEGEND:

[A] EXISTING CONCRETE COLUMNS AND HEADER TO REMAIN

[B] NEW CMU WALL INFILL REFERENCE STRUCTURAL DWGS FOR ADDITIONAL REQUIREMENTS

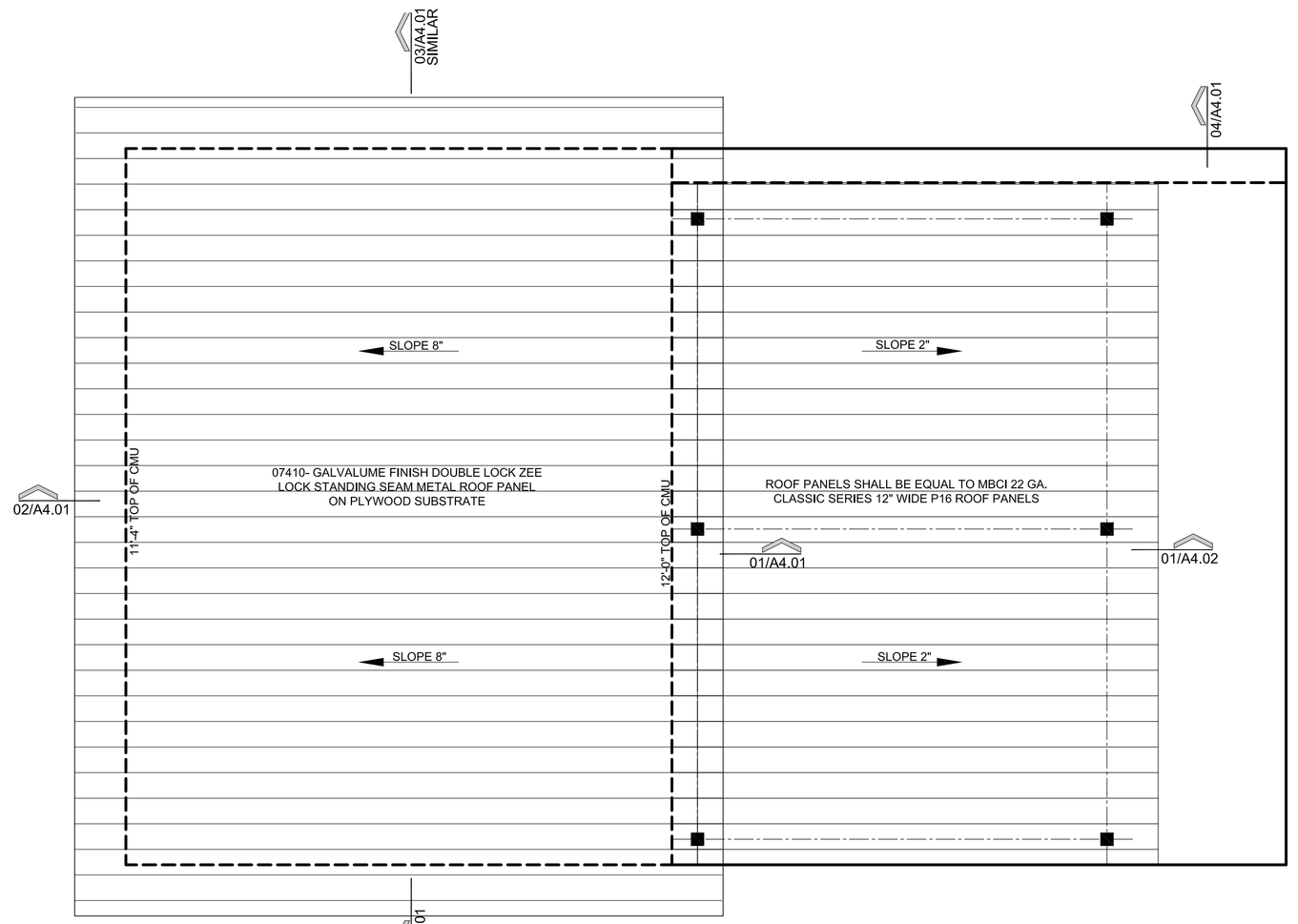
[C] EXISTING CMU WALL TO BE PATCHED, REPAIRED AND PAINTED AS REQUIRED REF. STRUCTURAL DWGS FOR ADDITIONAL REQUIREMENTS



01 FLOOR PLAN

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

PLAN NORTH



02 ROOF PLAN

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

PLAN NORTH

No.	REVISIONS	BY

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fax (956) 546-0196

SAMS MEMORIAL POOL RENOVATIONS

CITY OF BROWNSVILLE, TEXAS

SMP-67-1219

DATE	FEBRUARY, 2019
SCALE	As Shown
DRAWN	R. GOMEZ, AIA
JOB #	COB POOL
SHEET	A2.01

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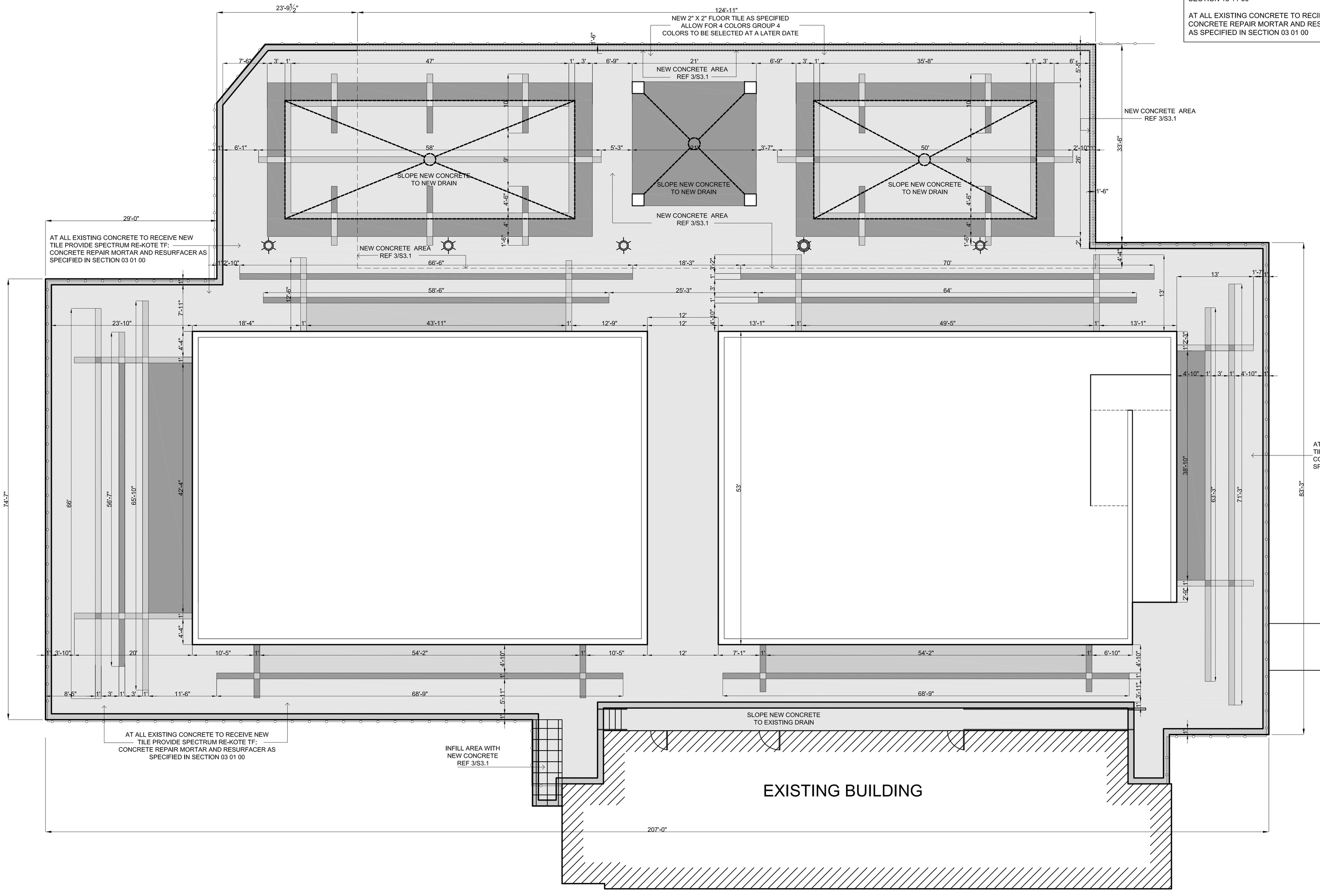
GENERAL NOTES

GENERAL CONTRACTOR TO BE RESPONSIBLE FOR PROVIDING NEW POOL DEPTH MARKERS AND NO RUNNING TILE INSERTS TO MATCH EXACTLY WHAT WAS REMOVED

AT ALL EXPANSION JOINTS PROVIDE TWO-PART,ELASTOMERIC, POLYSULFIDE-BASED JOINT SEALANT AS SPECIFIED IN SECTION 13 11 00

AT ALL EXISTING CONCRETE TO RECIEVE NEW TILE PROVIDE SPECTRUM RE-KOTE TF: CONCRETE REPAIR MORTAR AND RESURFACER AS SPECIFIED IN SECTION 03 01 00



01 POOL DECK PLAN
SCALE: 1/8" = 1'-0"

No.	REVISIONS	BY

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SAMS MEMORIAL POOL RENOVATIONS

CITY OF BROWNSVILLE, TEXAS

SMP-67-1219

DATE	FEBRUARY, 2019
SCALE	As Shown
DRAWN	R. GOMEZ, AIA
JOB #	I O
SHEET	COB POOL

A2.02

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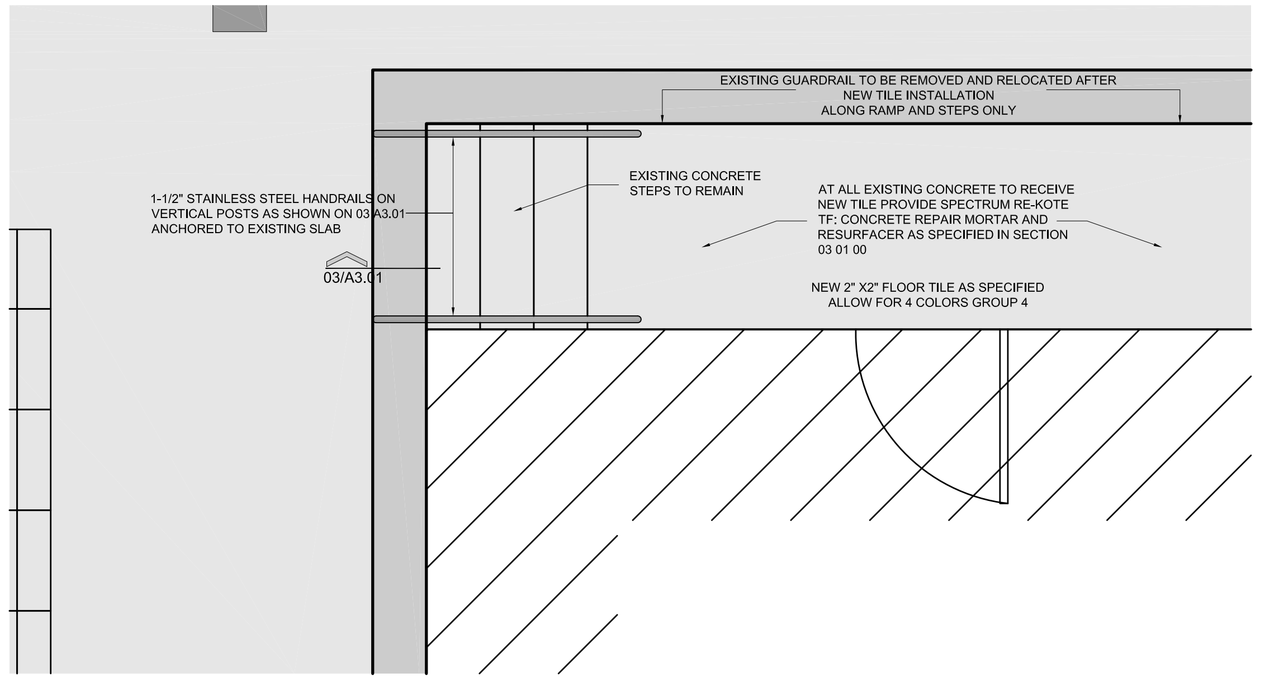
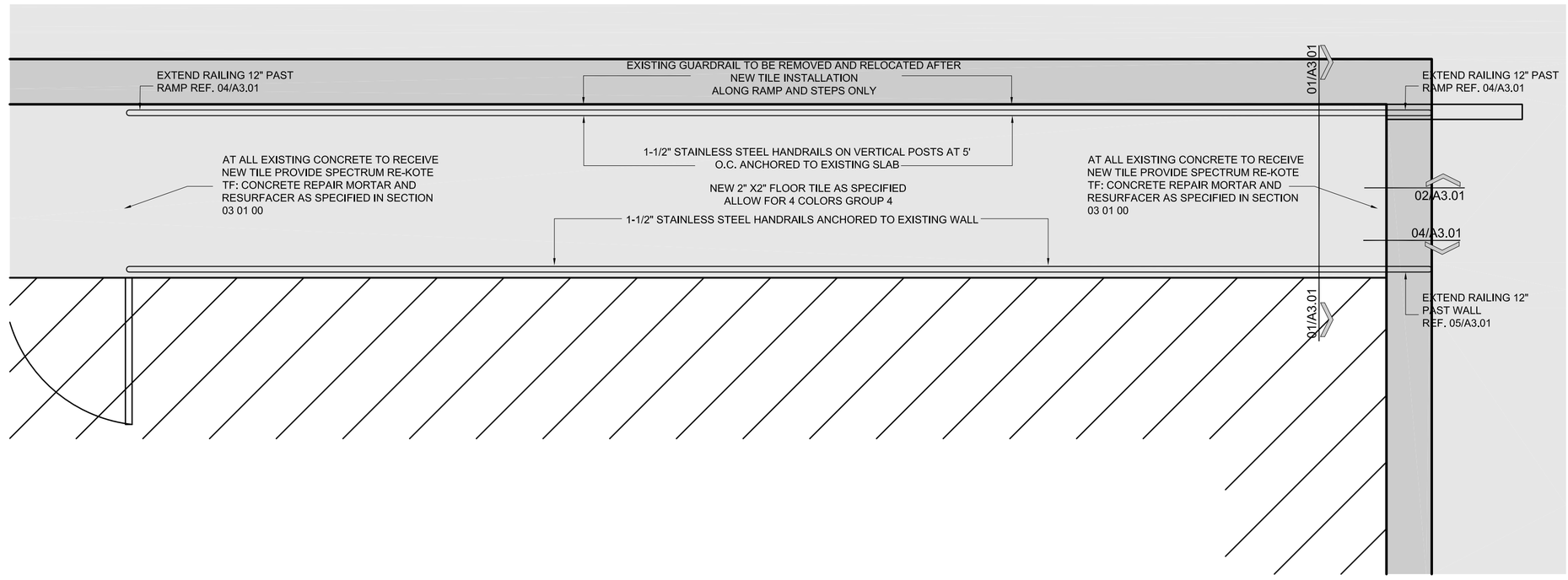


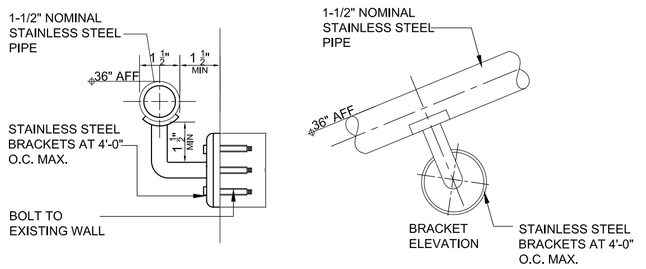
07 PLAN ENLARGEMENT

SCALE: $\frac{1}{2}$" = 1'-0"



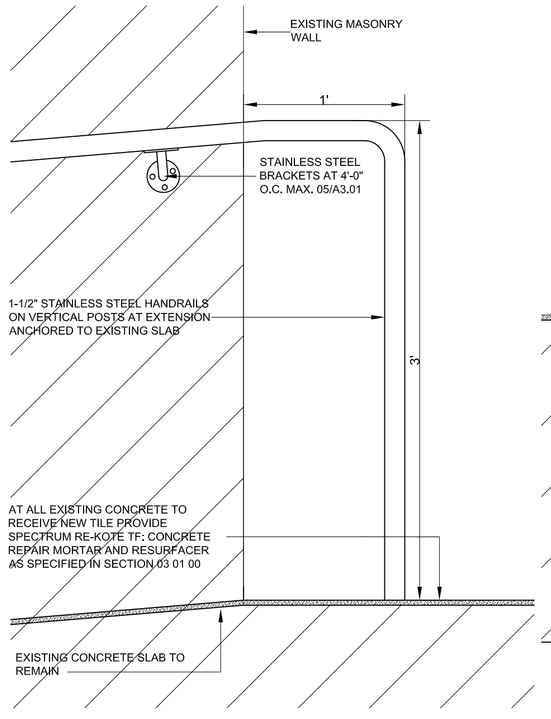
06 PLAN ENLARGEMENT

SCALE: $\frac{1}{2}$" = 1'-0"



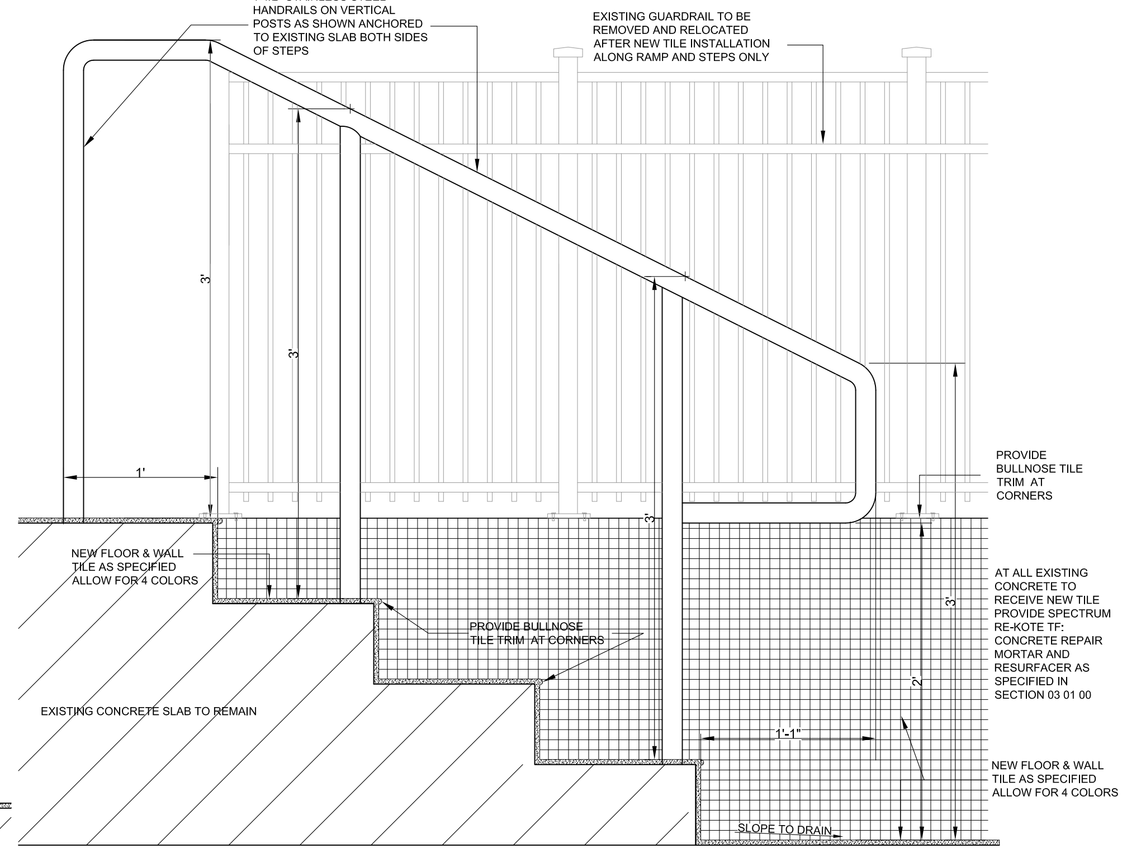
05 RAILING ENLARGEMENT

SCALE: 3 " = 1'-0"



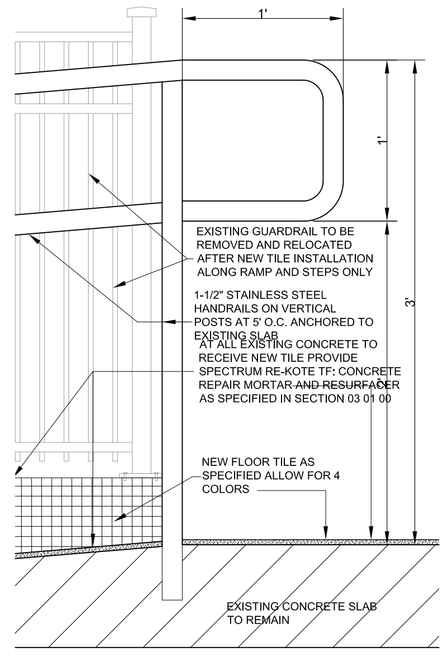
04 RAILING ELEVATION

SCALE: 1 $\frac{1}{2}$" = 1'-0"



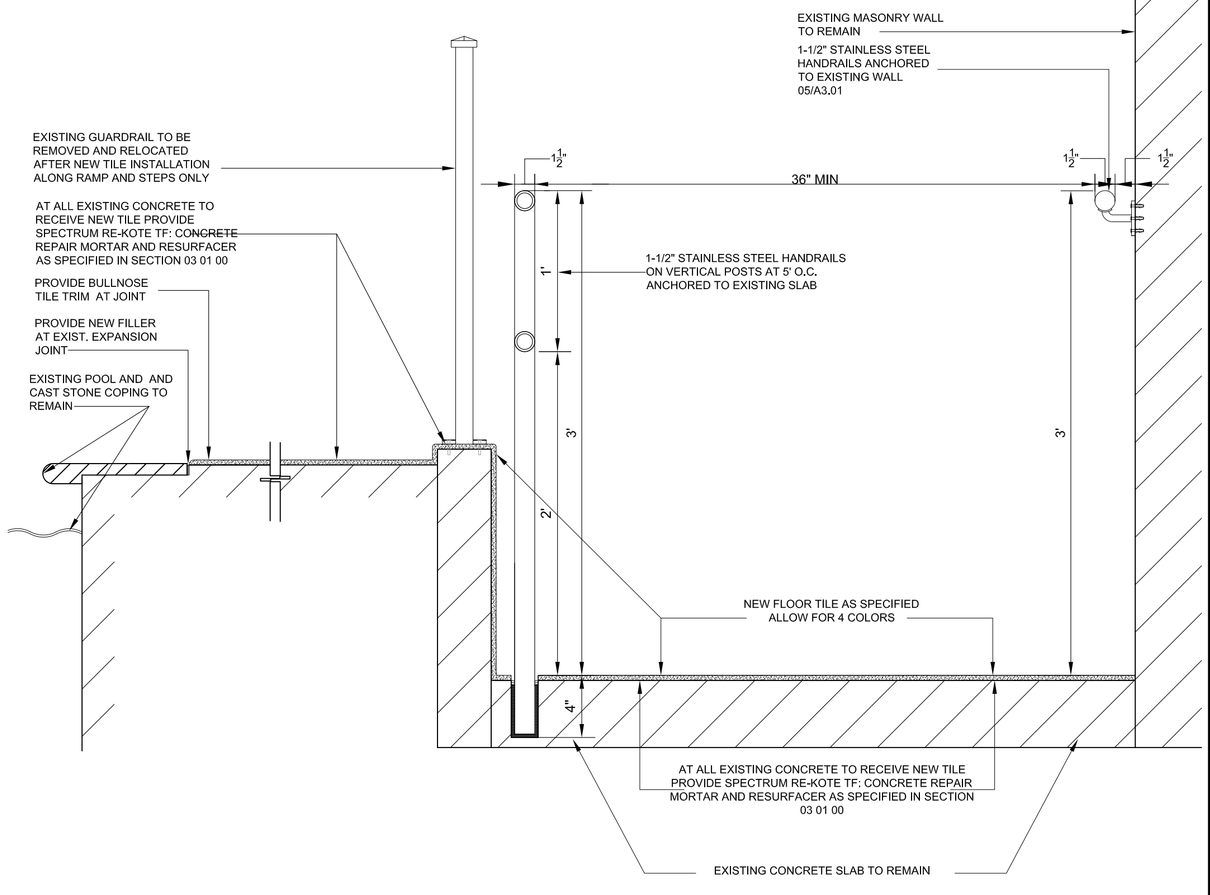
03 RAILING ELEVATION

SCALE: 1 $\frac{1}{2}$" = 1'-0"



02 RAILING ELEVATION

SCALE: 1 $\frac{1}{2}$" = 1'-0"



01 RAMP SECTION DETAIL

SCALE: 1 $\frac{1}{2}$" = 1'-0"

No.	REVISIONS	BY

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CITY OF BROWNSVILLE, TEXAS

SMP-67-1219

DATE	FEBRUARY, 2019
SCALE	As Shown
DRAWN	R. GOMEZ, AIA I.O.
JOB #	COB POOL
SHEET	A3.01

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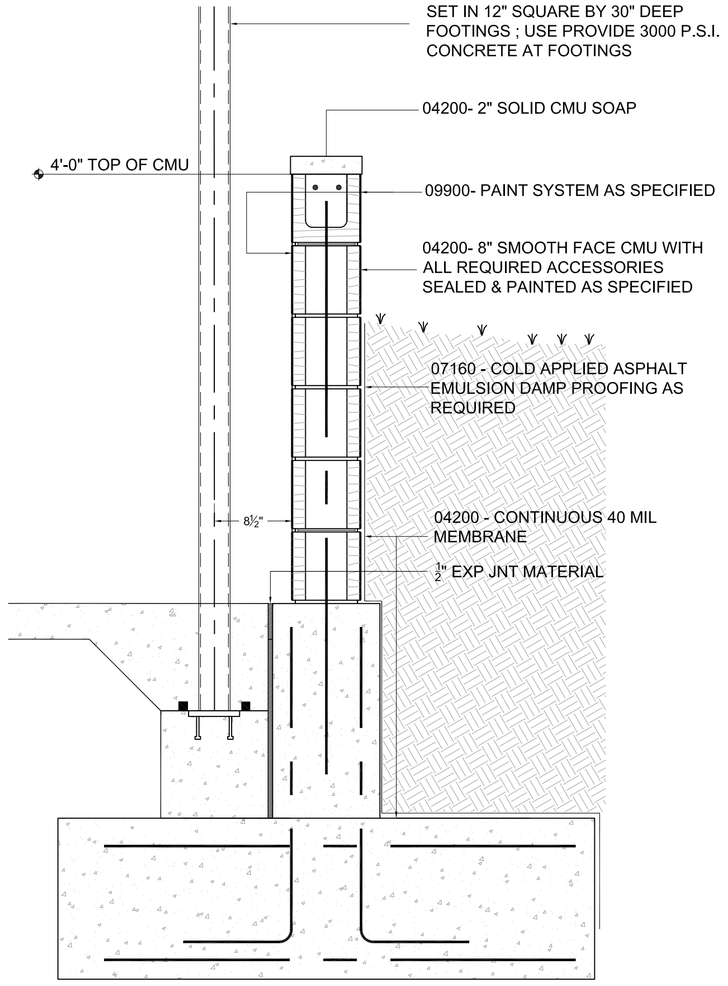
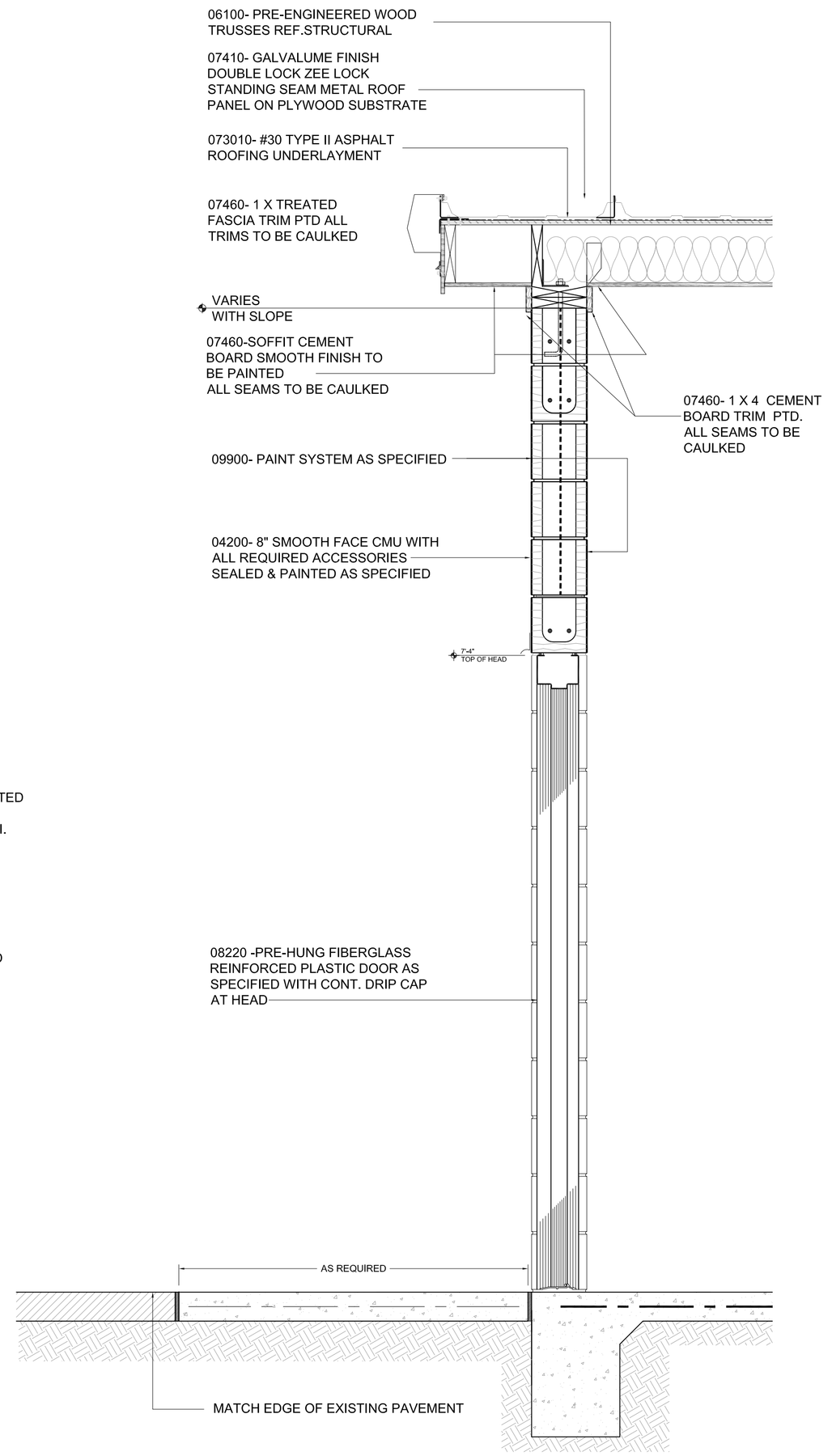
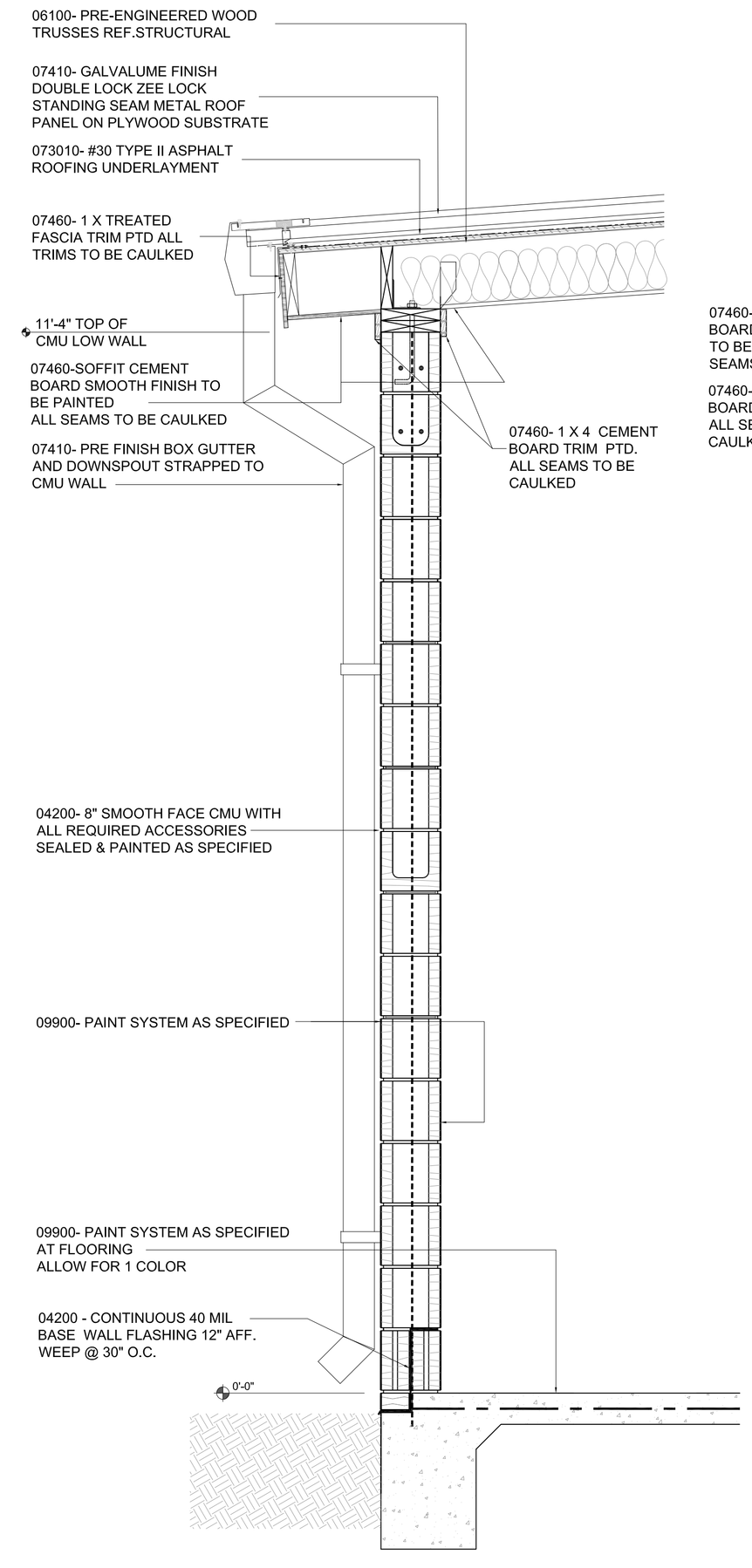


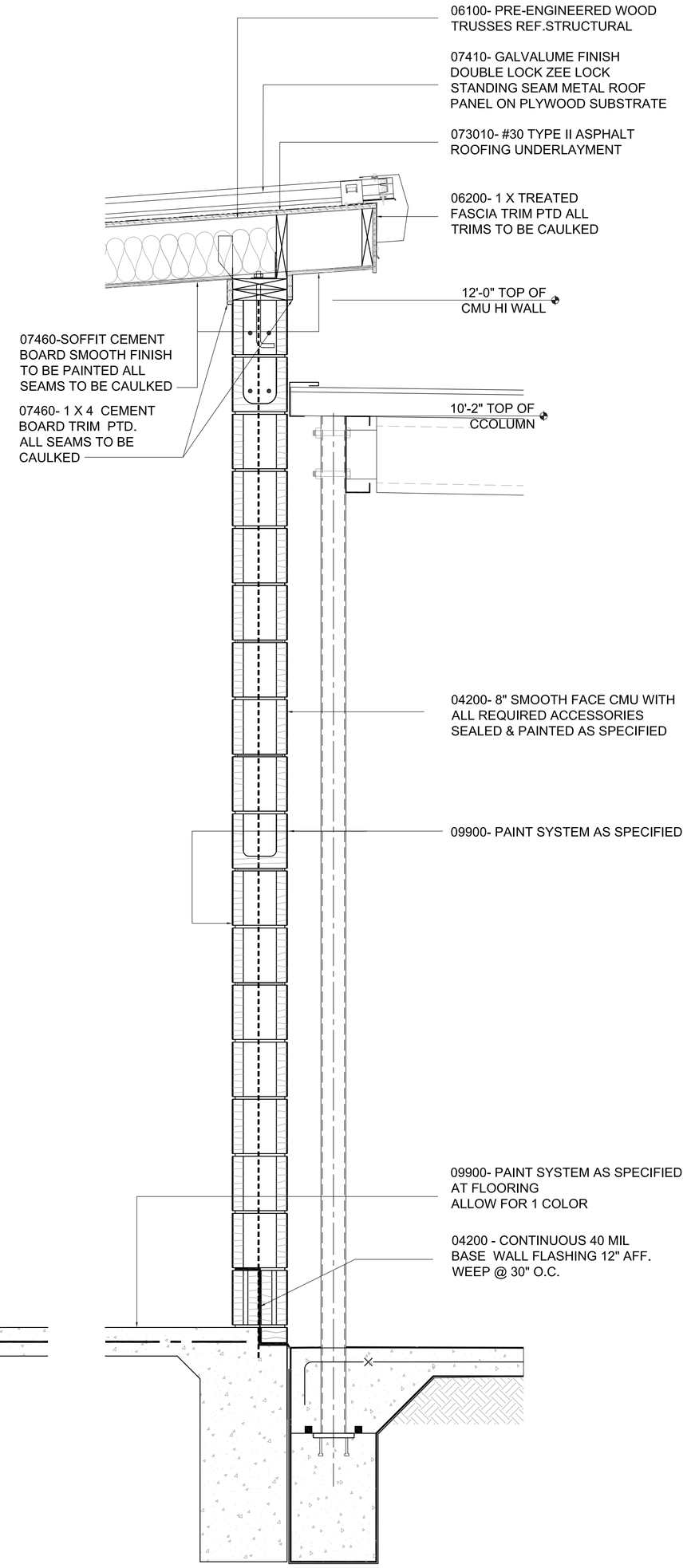
04 WALL SECTION
SCALE: 1" = 1'-0"



03 WALL SECTION
SCALE: 1" = 1'-0"



02 WALL SECTION
SCALE: 1" = 1'-0"



01 WALL SECTION
SCALE: 1" = 1'-0"

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DRAWN	R. GOMEZ, AIA
JOB #	I O
	COB POOL
SHEET	A4.01

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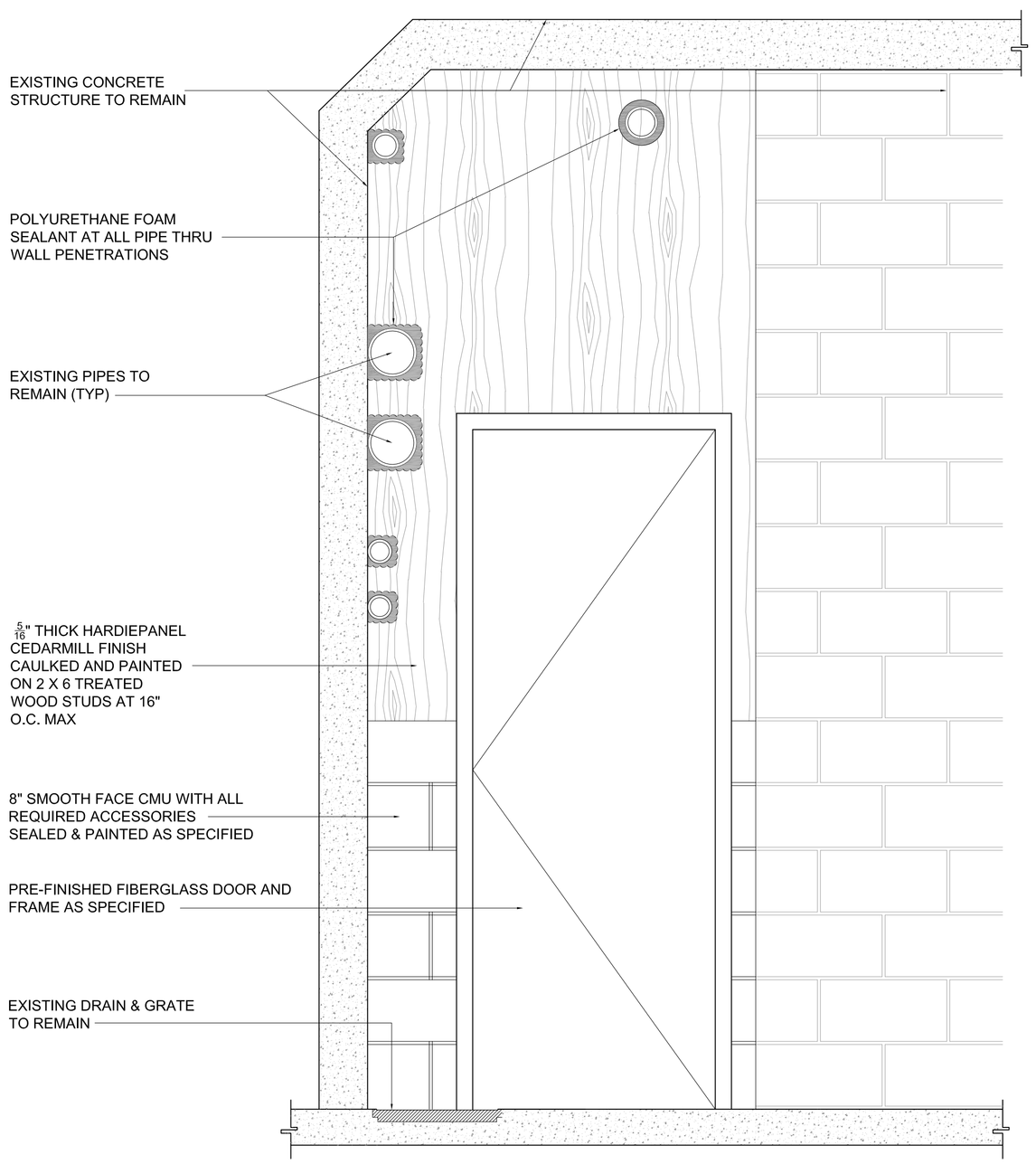
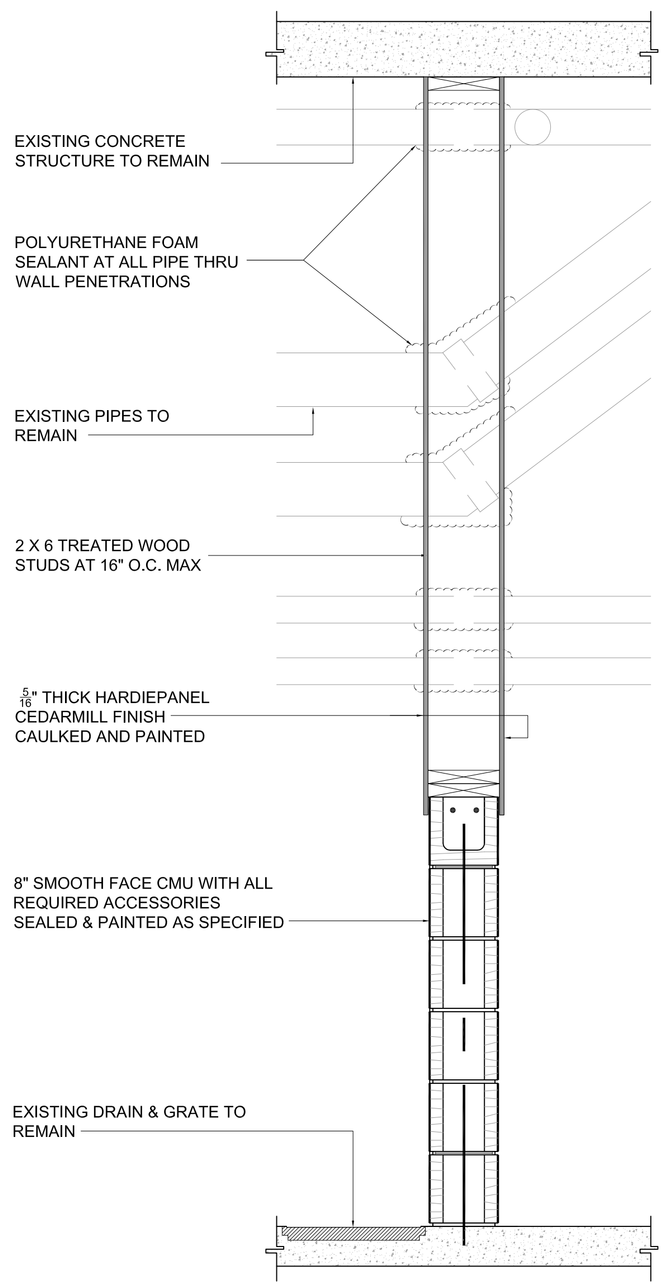
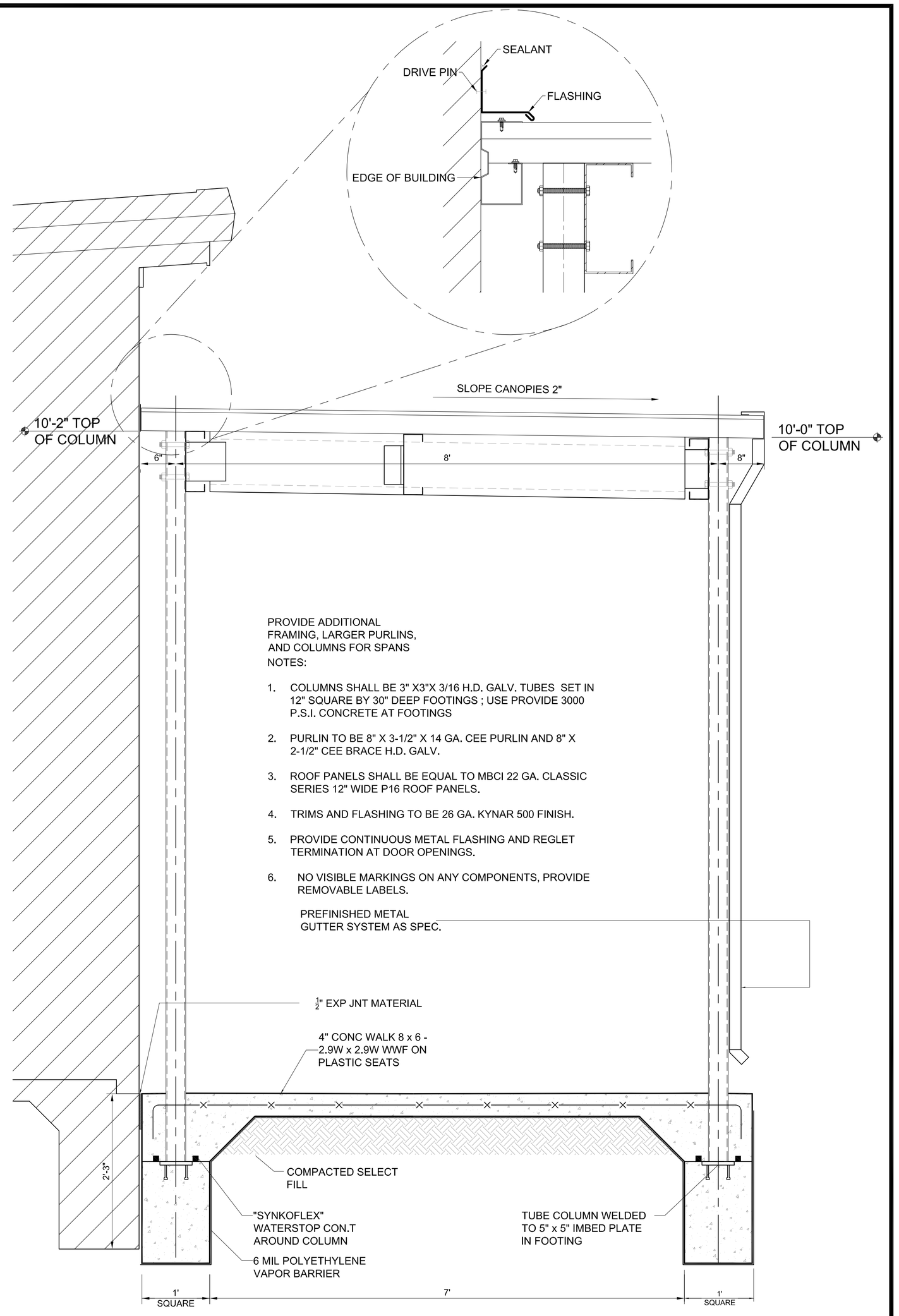


03 WALL ELEVATION
SCALE: 1" = 1'-0"



02 WALL SECTION
SCALE: 1" = 1'-0"



01 CANOPY SECTION
SCALE: 1" = 1'-0"

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SAMS MEMORIAL POOL RENOVATIONS
CITY OF BROWNSVILLE, TEXAS

SMP-67-1219

REGISTERED ARCHITECT RUDOLPH V. GOMEZ 4785 STATE OF TEXAS

DATE	FEBRUARY, 2019
SCALE	As Shown
DRAWN	R. GOMEZ, AIA I O
JOB #	COB POOL
SHEET	A4.02

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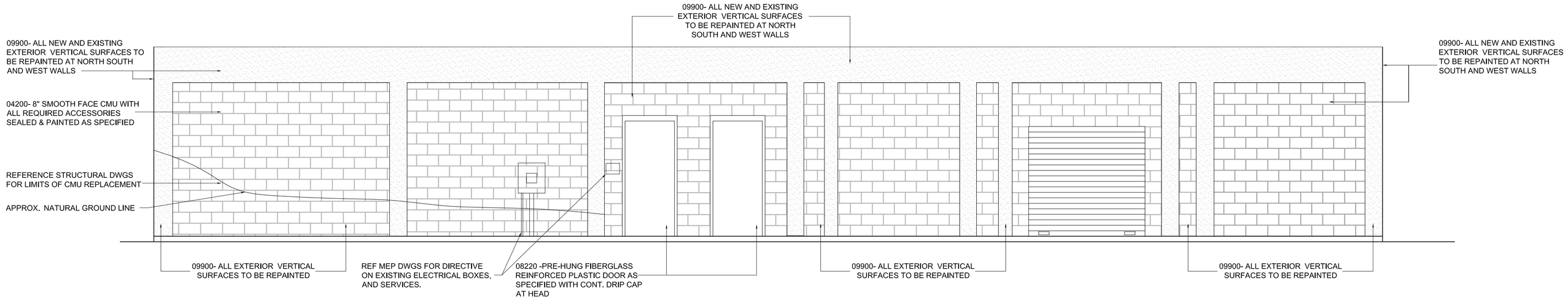
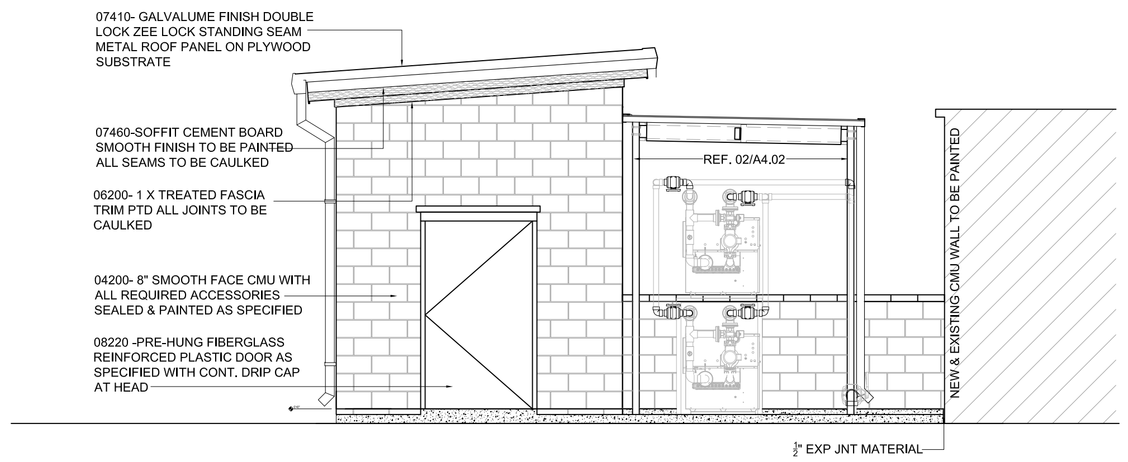
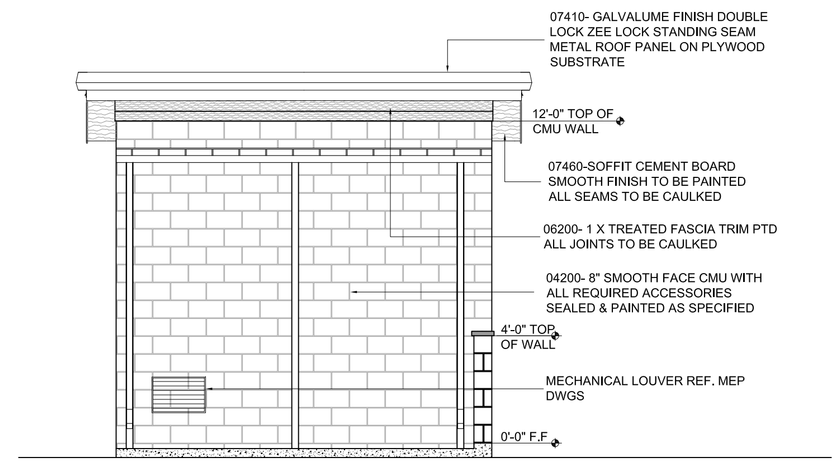


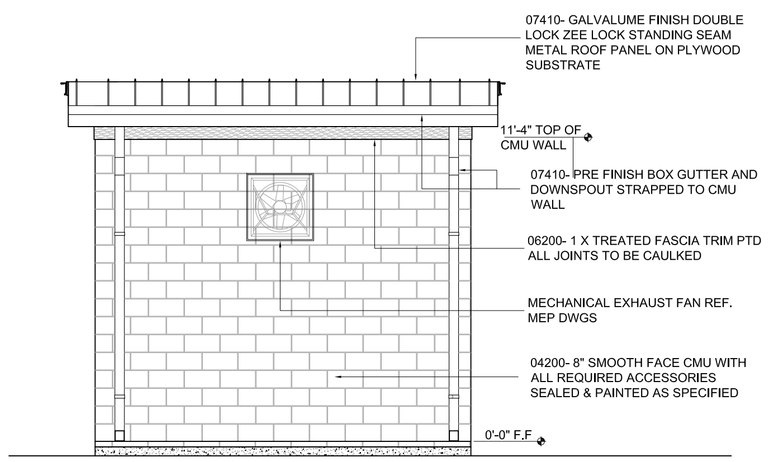
05 WEST ELEVATION
SCALE: 1/4" = 1'-0"



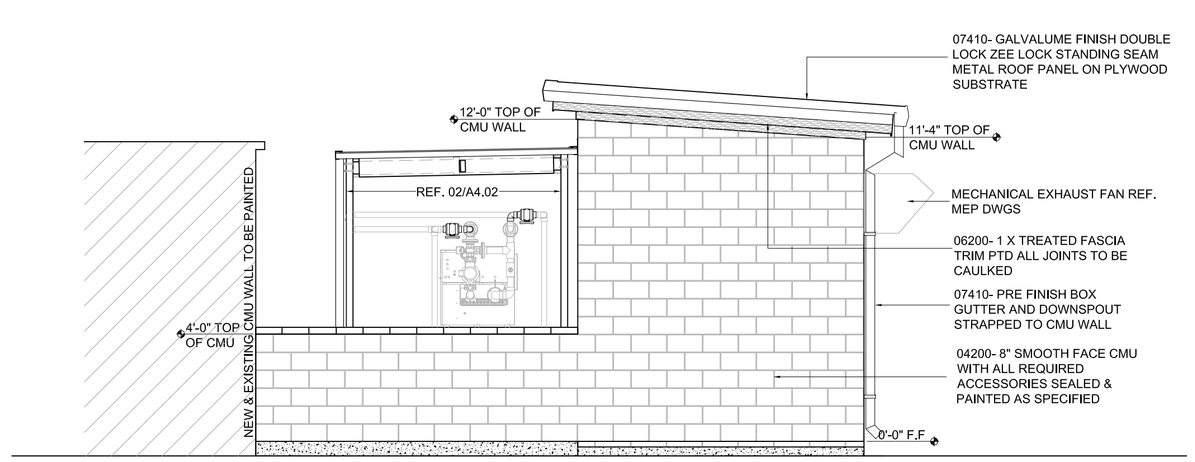
04 SOUTH ELEVATION
SCALE: 1/4" = 1'-0"



03 EAST ELEVATION
SCALE: 1/4" = 1'-0"



02 WEST ELEVATION
SCALE: 1/4" = 1'-0"



01 NORTH ELEVATION
SCALE: 1/4" = 1'-0"

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SAMS MEMORIAL POOL RENOVATIONS
CITY OF BROWNSVILLE, TEXAS

SMP-67-1219

REGISTERED ARCHITECT
RODOLFO V. GOMEZ
STATE OF TEXAS
4785

DATE	FEBRUARY, 2019
SCALE	As Shown
DRAWN	R. GOMEZ, AIA I.O
JOB #	COB POOL
SHEET	A5.01

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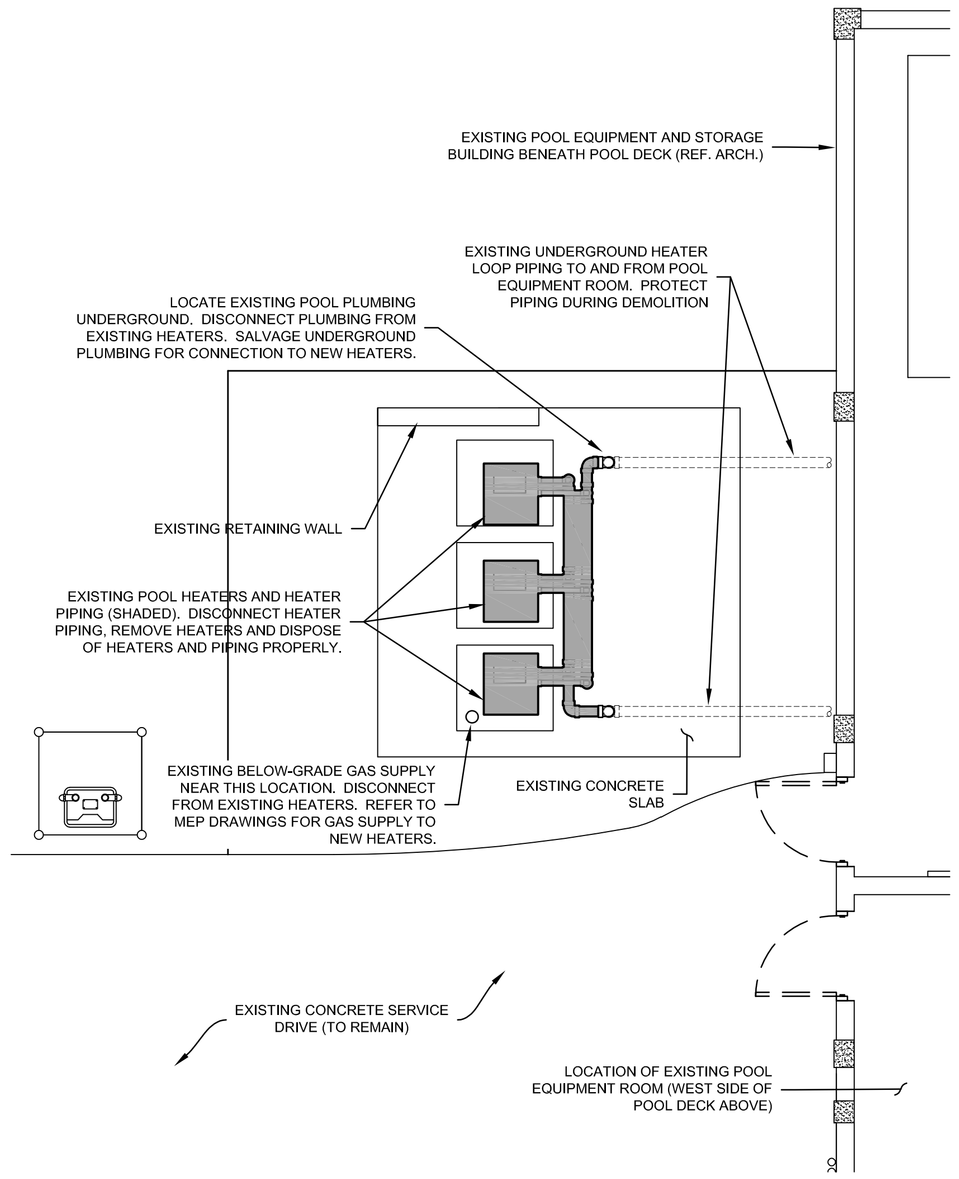
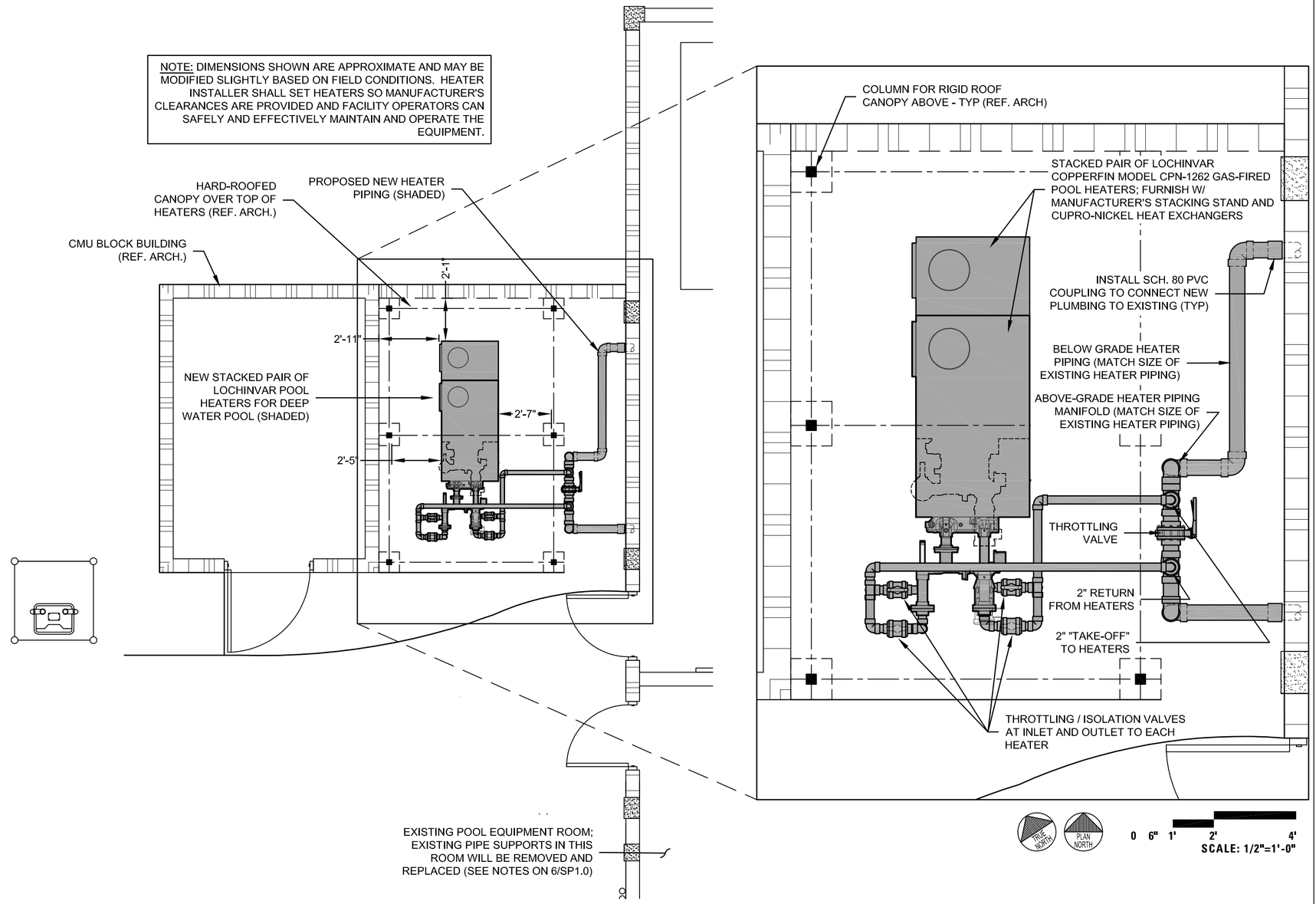


1 POOL HEATER DEMOLITION PLAN

0 1' 2' 4' 8'
SCALE: 1/4"=1'-0"



2 POOL HEATER REPLACEMENT PLAN

0 1' 2' 4' 8'
SCALE: 1/4"=1'-0"

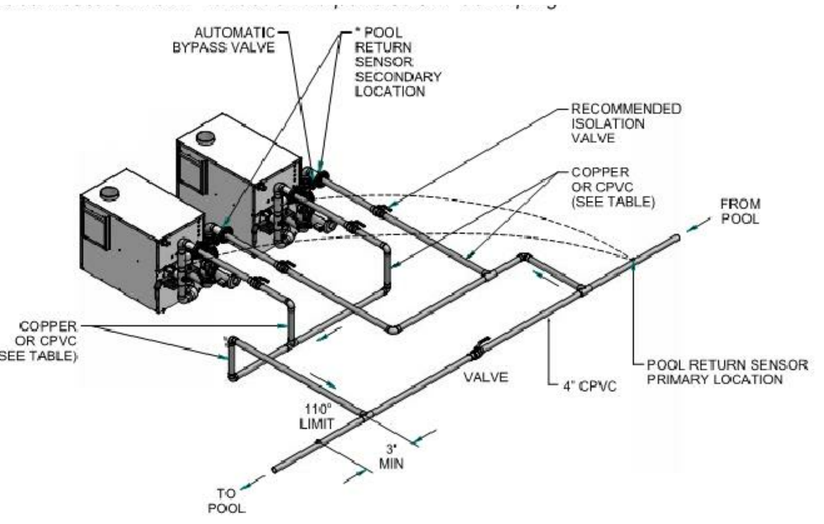
DEMOLITION NOTES

1. ALL DEMOLISHED HEATERS, PLUMBING, AND SIMILAR APPURTENANCES SHALL BE DISPOSED OF PROPERLY OFF SITE.
2. THE CONTRACTOR IS RESPONSIBLE FOR CHECKING FOR CRACKS/LEAKS IN EXISTING HEATER PIPING PRIOR TO CONSTRUCTION. THE CONTRACTOR WILL NOTIFY THE CITY OF ANY BROKEN OR DAMAGED PIPING, SO THAT IT CAN BE REPAIRED. (REPAIRS TO BELOW-GRADE PIPING OR PIPING IN THE POOL EQUIPMENT ROOM ARE NOT PART OF THIS BID. SUCH REPAIRS WILL BE COORDINATED THROUGH THE CITY OF BROWNSVILLE UNDER SEPARATE AGREEMENT.)
3. CONTRACTOR SHALL HAVE A LICENSED PLUMBER PROPERLY DISCONNECT EXISTING GAS SUPPLY LINES FOR POOL HEATERS DURING DEMOLITION. THE CONTRACTOR MAY RELOCATE THE GAS SUPPLY IF REQUIRED IN ORDER TO PROPERLY INSTALL THE NEW HEATERS SHOWN.
4. THE CONTRACTOR SHALL LIMIT DEMOLITION TO THE REMOVAL OF THE EXISTING HEATERS AND ASSOCIATED PIPING. IT IS NOT ANTICIPATED THAT THERE WILL BE DEMOLITION OF EXISTING STRUCTURES (SLABS, CURBS, RETAINING WALLS, ETC.) IF DEMOLITION OF EXISTING STRUCTURES IS REQUIRED, NOTIFY THE CITY OF BROWNSVILLE PRIOR TO CONSTRUCTION. REPAIRS TO ANY STRUCTURES THAT WILL BE DISTURBED WILL BE MADE BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

HEATER RELACEMENT NOTES

1. ALL NEW ABOVE-GRADE HEATER PIPING SHALL BE SCHEDULE 80 CPVC (OR SCHEDULE 80 PVC WHERE APPLICABLE). SCHEDULE 40 (OR LESSER) PIPING WILL NOT BE ACCEPTED.
2. EACH HEATER'S INLET AND OUTLET WATER PIPING SHALL BE SEPARATELY VALVED. REFER TO INSTALLATION DIAGRAMS PROVIDED BY MANUFACTURER.
3. THE FILTERS SHOWN WILL BE STACKED VERTICALLY. CONTRACTOR SHALL FURNISH THE MANUFACTURER'S REQUIRED STACKING STAND FOR THE HEATER PAIR.
4. FURNISH CUPRO-NICKEL ALLOY HEAT EXCHANGERS FOR BOTH HEATERS.
5. BOND NEW POOL HEATERS AND OTHER METAL COMPONENTS OF THE SYSTEM PER SECTION 680 OF THE NATIONAL ELECTRICAL CODE.
6. A LICENSED PLUMBER SHALL INSTALL THE GAS SUPPLY TO EACH HEATER INCLUDING ALL CODE-REQUIRED APPURTENANCES (VALVES, DRIP LEGS, ETC.)
7. HEATERS SHALL BE FURNISHED WITH ALL GAUGES, SENSORS AND SIMILAR EQUIPMENT REQUIRED BY THE TEXAS DEPARTMENT OF LICENSING & REGULATION FOR BOILER INSTALLATIONS.
8. PRESSURE AND/OR FLOW SENSORS SHALL BE INSTALLED ON THE HEATER LOOP PIPING. THE SENSORS WILL SHUT DOWN THE POOL HEATERS WHEN THERE IS NO FLOW IN THE SYSTEM IN ORDER TO PREVENT BOILING THE WATER AND RUPTURING THE PIPING SYSTEM.
9. ALL BIDDERS MUST BE EITHER COMMERCIAL POOL CONTRACTORS OR PROVIDE INSTALLATION OF COMMERCIAL POOL BOILERS AS PART OF THEIR NORMAL CONSTRUCTION ACTIVITIES. (BIDDERS SHALL SUBMIT A LIST OF AT LEAST FIVE DIFFERENT FACILITIES IN WHICH THEY HAVE INSTALLED COMMERCIAL POOL HEATERS OVER THE PAST TWO YEARS. HEATERS LISTED SHALL BE EQUAL TO OR LARGER THAN 400,000 BTU/HR OUTPUT UNITS.)

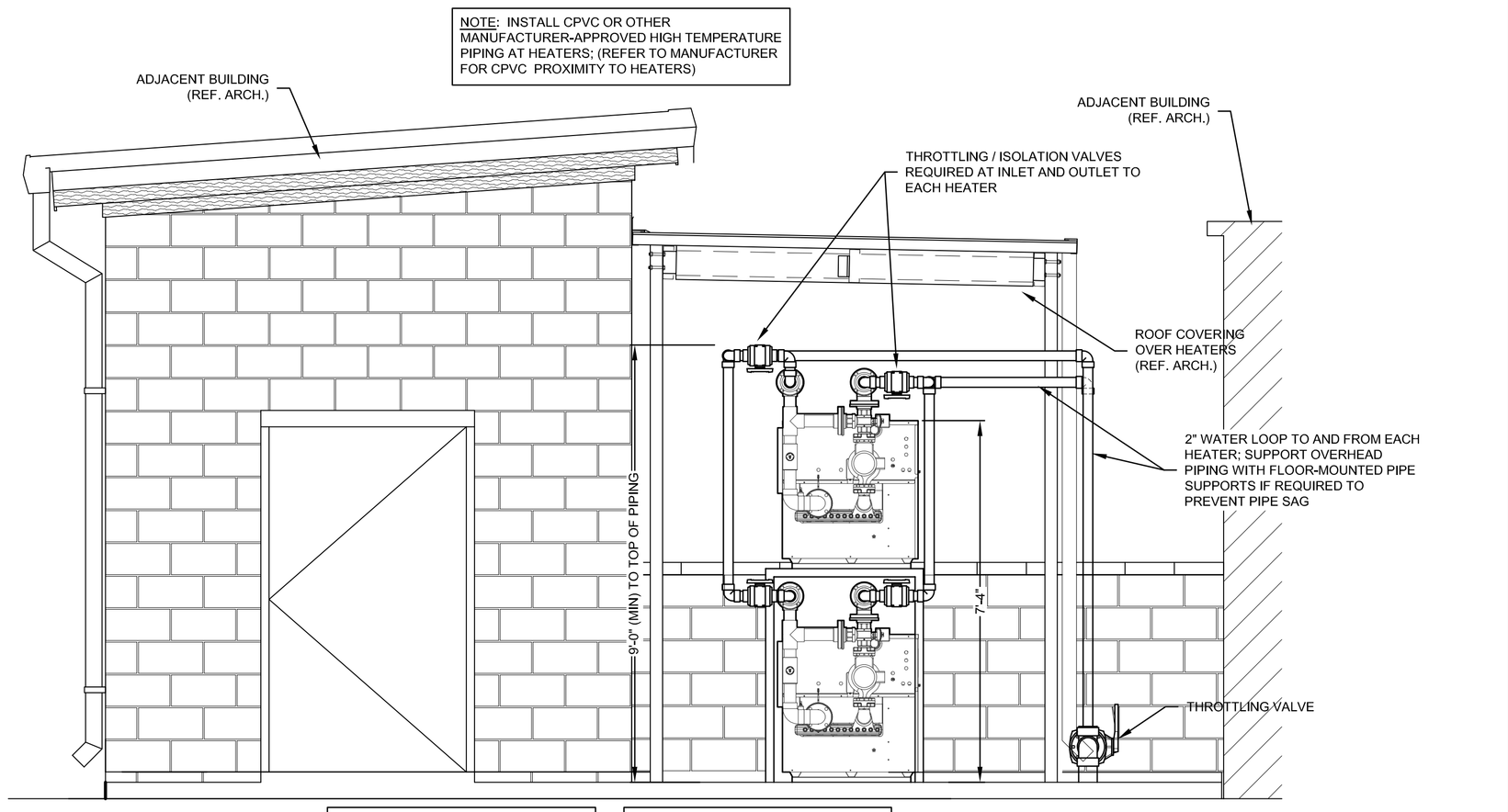
3 HEATER DEMO & INSTALL NOTES



MODEL NO	BYPASS PIPE SIZE
CP (N,L) 502-752	2" MIN
CP (N,L) 992-2072	2-1/2" MIN

* NOTE: IF THE RETURN SYSTEM SENSOR IS LOCATED IN THE SECONDARY LOCATION SHOWN ON THE PIPING DIAGRAM, THE UNIT PUMP MUST RUN CONTINUOUSLY TO ENSURE THE WATER FLOW PAST THE SENSOR IS MAINTAINED.

4 HEATER PAIR PLUMBING DIAGRAM



5 STACKED HEATER PAIR - FRONT ELEVATION

0 6" 1' 2' 4'
SCALE: 1/2"=1'-0"

NOTES

1. BIDDING NOTE - REPLACEMENT OF PIPE SUPPORTS IN POOL EQUIPMENT AREA: IN ADDITION TO THE HEATER REPLACEMENT SHOWN, CONTRACTOR SHALL REMOVE ALL EXISTING PIPE SUPPORTS INSIDE THE POOL EQUIPMENT ROOM AND WITHIN THE PLUMBING CHASE THAT SURROUNDS BOTH POOLS. EXISTING PIPE SUPPORTS WILL BE REMOVED AND REPLACED WITH NEW SUPPORTS. IN ORDER TO BID THIS PORTION OF PROJECT PROPERLY, AND COMPLETELY, THE BIDDER SHALL SCHEDULE A SITE VISIT WITH THE CITY OF BROWNSVILLE PARKS & RECREATION DEPARTMENT FOR A TOUR OF THE FACILITIES.
   - 1.1. UNISTRUT PIPE SUPPORTS: PIPES SHALL BE SUPPORTED BY FIBERGLASS UNISTRUT CHANNELS IN SUFFICIENT QUANTITY TO ADEQUATELY SUPPORT THE EXISTING PIPING WITHOUT PIPE SAG. UNISTRUT WILL BE DRILLED INTO AND CONNECTED TO THE EXISTING POOL WALLS (TO MATCH THE CURRENT INSTALLATION). SUPPORT "FEET" MAY ALSO BE USED WHEN PIPES NEED TO BE GROUND-SUPPORTED.
   - 1.2. THREADED ROD: UNISTRUT PIPE SUPPORTS WILL BE ATTACHED TO THE POOL WALLS BY DRILLING AND EPOXYING THREADED ROD INTO THE POOL WALLS. DRILL HOLES SHALL BE OF SUFFICIENT QUANTITY AND DEPTH TO SUPPORT THE PIPE WITHOUT CAUSING DAMAGE TO THE EXISTING POOL WALLS. RODS AND NUTS SHALL BE "FIBRE-BOLT" BY STRONGWELL. (PHONE: 276/645-8000, OR WEBSITE: WWW.STRONGWELL.COM)
   - 1.3. PIPE CLAMPS: POOL PIPING SHALL BE SECURED TO UNISTRUT SUPPORTS USING NON-CORROSIVE "CLIC" SUPPORTS BY EFCO FIXING TECHNOLOGIES, LTD. METAL CONNECTORS AND STRAPS WILL NOT BE APPROVED. (WEBSITE: WWW.CLIC-ORIGINAL.COM)
2. BIDDING NOTE - OWNER'S DISCRETIONARY ALLOWANCE: EACH BIDDER SHALL INCLUDE A $10,000 "OWNER'S DISCRETIONARY ALLOWANCE" IN THEIR BID. THE ALLOWANCE CAN BE DESIGNATED FOR USE BY THE OWNER ONLY, AND WILL BE USED FOR UPGRADES, ITEMS OF DISCOVERY, OR OTHER SIMILAR COSTS THAT ARE AT THE DISCRETION OF THE OWNER OR FOR REPAIRS AND WORK THAT COULD NOT HAVE BEEN BY THE BIDDERS PRIOR TO BIDDING.
3. BIDDING NOTE - PRE-BID SITE VISIT: ALL BIDDERS ARE HIGHLY ENCOURAGED TO SCHEDULE A SITE VISIT PRIOR TO SUBMITTING A BID FOR THE PROJECT. ONCE A CONTRACTOR HAS BEEN SELECTED FOR THE PROJECT, THE CONTRACT AMOUNT WILL NOT BE ADJUSTED UPWARD DUE TO THE BIDDERS FAILURE TO FAMILIARIZE HIMSELF/HERSELF WITH THE SITE PRIOR TO THE BID.

6 BIDDING NOTES

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SAMS MEMORIAL POOL RENOVATIONS
CITY OF BROWNSVILLE, TEXAS

SMP-67-1219

STATE OF TEXAS
J. BRYAN ZIEGLER
93965
REGISTERED PROFESSIONAL ENGINEER
9/3/2019

DATE	SEPTEMBER 3, 2019
SCALE	As Shown
DRAWN	B. ZIEGLER
JOB #	—
SHEET	SP1.0

GENERAL STRUCTURAL NOTES

THESE GENERAL NOTES SHALL APPLY UNLESS OTHERWISE SPECIFICALLY NOTED ON PLANS OR DETAILS. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SHALL COORDINATE ALL STRUCTURAL PLANS AND DETAILS WITH ARCHITECTURAL & MECHANICAL DRAWINGS BEFORE STARTING WORK. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR CONTRACTOR MEANS AND METHODS OF CONSTRUCTION OR SITE SAFETY. DESIGN, CONSTRUCTION, WORKMANSHIP AND MATERIALS SHALL COMPLY WITH THE CONTROLLING PROVISIONS OF THE 2012 EDITION OF THE **INTERNATIONAL BUILDING CODE (IBC).**

DESIGN CRITERIA

1. BASIS FOR DESIGN AND CODE COMPLIANCE

   A. GOVERNING BUILDING CODE.....IBC 2012 EDITION

2. WIND DESIGN BASED ON THE GREATER OF:

   A. ASCE 7-10 REQUIREMENTS

   ULTIMATE DESIGN WIND SPEED.....134 MPH (Vasd=104 MPH)
   RISK CATEGORY.....I
   WIND EXPOSURE CATEGORY.....B
   INTERNAL PRESSURE COEFFICIENT (GCpi).....+/-0.18
   Kzt.....1.0
   Kd.....0.85

   B. ASCE 7-05 REQUIREMENTS

   DESIGN WIND SPEED.....120 MPH
   IMPORTANCE FACTOR.....0.77
   WIND EXPOSURE CATEGORY.....B
   INTERNAL PRESSURE COEFFICIENT (GCpi).....+/-0.18
   Kzt.....1.0
   Kd.....0.85

3. GRAVITY DESIGN
   ROOF:
   DEAD LOAD.....SELF-WEIGHT OF STRUCTURE & ROOFING SYSTEM
   LIVE LOAD.....20 PSF

4. THESE BUILDINGS ARE DESIGNED TO MEET ASCE 7-05 & ASCE 7-10 WIND PRESSURES. ALL COMPONENTS AND CLADDINGS (E.G. WINDOWS, DOORS, ARCHITECTURAL SIDINGS AND ROOFING); MUST MEET MINIMUM WIND CODE REQUIREMENTS. IN ADDITION, GLAZED EXTERIOR OPENINGS IN THE LOWER 60 FEET OF THE BUILDING SHALL BE IMPACT RESISTANT MEETING ASTM E 1996 FOR LARGE MISSILES OR PROTECTED WITH AN IMPACT RESISTANT COVERING.

5. THE GENERAL CONTRACTOR MUST SUBMIT COMPONENT AND CLADDING WIND PRESSURE & IMPACT RESISTANCE RATINGS AND REQUIRED ATTACHMENT PROCEDURES TO THE STRUCTURAL ENGINEER FOR REVIEW. SUBMITTAL INFORMATION SHALL INCLUDE A THIRD PARTY TESTING REPORT OF THE SUBMITTED ASSEMBLY; REFERENCE EXTERIOR COMPONENTS & CLADDINGS NOTES FOR ADDITIONAL REQUIREMENTS. THE GENERAL CONTRACTOR SHALL CONTACT THE STRUCTURAL ENGINEER TO COORDINATE AND SCHEDULE REQUIRED PERIODIC INSPECTION OF EXTERIOR COMPONENTS AND CLADDINGS.

6. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING CONSTRUCTION SERVICES AS NEEDED TO SATISFY THE REQUIREMENTS OF THE DRAWINGS, THE SPECIFICATIONS, THE REFERENCED BUILDING CODE AND THE TEXAS DEPARTMENT OF INSURANCE WINDSTORM INSPECTION PROGRAM. ALL CONSTRUCTION ADMINISTRATION COSTS ASSOCIATED WITH SUBMITTAL PREPARATION, SUBMITTAL REVIEW, INSPECTION COORDINATION, INCLUDING ALL GENERAL CONDITIONS, OVERHEAD AND PROFIT, SHALL BE INCLUDED IN THE GENERAL CONTRACTOR'S BID.

FOUNDATION DESIGN CRITERIA

1. FOUNDATION DESIGN IS IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE, AND IS BASED ON THE VALUES RECOMMENDED IN TABLE 1806.2-PRESUMPTIVE LOAD-BEARING VALUES, AS LISTED BELOW:

   VERTICAL FOUNDATION PRESSURE .....1,500 PSF

   LATERAL BEARING PRESSURE .....100 PSF / FT BELOW GRADE

2. A GEOTECHNICAL ENGINEER OF RECORD SHALL BE RETAINED TO VERIFY THE ASSUMED PROPERTIES LISTED ABOVE.

EXISTING CONDITIONS

1. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS. DIMENSIONS SHOWN ON THE PLANS ARE APPROXIMATE. CONTRACTOR SHALL OBTAIN ALL FIELD MEASUREMENTS AS NECESSARY TO COORDINATE NEW CONSTRUCTION TO EXISTING CONDITIONS.

2. IF EXISTING CONDITIONS DIFFER FROM THE DRAWINGS, INFORM THE ENGINEER AND ADDITIONAL DETAILS OR INTERPRETATION WILL BE PROVIDED. DO NOT PROCEED WITHOUT VERIFICATION.

3. THE CONTRACTOR SHALL VISIT THE SITE OF THE PROPOSED WORK AND FULLY ACQUAINT THEMSELVES WITH THE EXISTING CONDITIONS.

DEMOLITION NOTES

1. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE EXISTING STRUCTURE AND SURROUNDING BUILDINGS DURING CONSTRUCTION.

2. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY WATERTIGHTNESS OF THE BUILDING DURING DEMOLITION AND RECONSTRUCTION.

3. GENERAL CONTRACTOR SHALL COORDINATE WITH ENGINEER ITEMS THAT ARE UNCLEAR PRIOR TO ANY DEMOLITION.

4. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE PROJECT SITE TO DETERMINE DEMOLITION REQUIREMENTS AT THIS PROJECT. CONTRACTOR SHALL INCLUDE IN THEIR BID ALL THE DEMOLITION REQUIREMENTS TO COMPLETE THIS PROJECT.

5. GENERAL CONTRACTOR SHALL LOCATE AND LABEL ALL UTILITIES BEFORE COMMENCEMENT OF DEMOLITION & CONSTRUCTION ACTIVITIES. UTILITIES SHALL BE CLEARLY MARKED SO THAT ANY SUBCONTRACTOR VISITING THIS SITE CAN EASILY IDENTIFY UTILITIES. ANY COSTS TO REPAIR DAMAGES IF UTILITIES ARE NOT PROPERLY IDENTIFIED, ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

6. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND DISPOSING DEBRIS & MATERIAL AWAY FROM SITE ACCORDING TO GOVERNING LOCAL, STATE OR FEDERAL REGULATIONS.

7. ANY AREA DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED TO THE OWNER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE.

PENETRATIONS

1. PENETRATIONS THROUGH EXISTING ELEMENTS SHALL COMPLY WITH THE DRAWINGS AND SPECIFICATIONS.

2. DO NOT CUT JOISTS, BEAMS OR COLUMNS WITHOUT PRIOR APPROVAL.

3. PENETRATIONS THROUGH LOAD-BEARING ELEMENTS SHALL BE TEMPORARILY SHORED TO PREVENT COLLAPSE, AS SPECIFIED BELOW.

TEMPORARY BRACING, FALSEWORK AND FORMWORK

1. CONTRACTOR SHALL PROVIDE ENGINEERED SHORING PLAN PRIOR TO START OF ROOF COLUMN DEMOLITION. SHORING PLAN SHALL BE SIGNED AND SEALED BY A STATE OF TEXAS PROFESSIONAL ENGINEER.

2. THE DESIGN, ENGINEERING, FABRICATION, CONSTRUCTION, ERECTION, REMOVAL AND OVERALL SAFETY OF ALL TEMPORARY SUPPORTS SUCH AS FALSEWORK, FORMWORK, SHORES AND BRACING REQUIRED FOR THE EXECUTION OF THE CONTRACT ARE NOT INCLUDED IN THE DRAWINGS AND SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

3. THE ENGINEER'S EFFORTS ARE AIMED AT DESIGNING A PROJECT WHICH WILL BE SAFE AFTER FULL COMPLETION. THE ENGINEER HAS NO EXPERIENCE IN, AND TAKES NO RESPONSIBILITY FOR, CONSTRUCTION MEANS AND METHODS OR JOB SITE SAFETY DURING CONSTRUCTION. SAFETY IS EXCLUSIVELY THE CONTRACTOR'S RESPONSIBILITY. PROCESSING AND/OR APPROVING SUBMITTALS MADE BY CONTRACTOR WHICH MAY CONTAIN INFORMATION RELATED TO SHORING, CONSTRUCTION METHODS OR SAFETY ISSUES, OR PARTICIPATION IN MEETINGS WHERE SUCH ISSUES MIGHT BE DISCUSSED, MUST NOT BE CONSTRUED AS VOLUNTARY ASSUMPTION BY ENGINEER OF ANY RESPONSIBILITY FOR THESE SAFETY PROCEDURES.

HAZARDOUS MATERIALS ABATEMENT/MANAGEMENT

1. THE ENGINEER HAS NO RESPONSIBILITY OR LIABILITY FOR DESIGN, REMOVAL OF, OR TESTING FOR ASBESTOS/LEAD, OR FOR ABATEMENT/MANAGERIAL TREATMENTS, MONITORING, AND LEGAL DISPOSAL OF MATERIALS. CONTRACTOR SHALL DETERMINE IF ANY HAZARDOUS MATERIAL ABATEMENT/ MANAGEMENT IS REQUIRED AND SHALL INCLUDE COSTS THEREOF IN THE BID.

SAFETY

1. PERFORM ALL WORK IN A SAFE AND CONSCIENTIOUS MANNER TO PREVENT INJURIES.

2. CONTRACTOR SHALL MAINTAIN OSHA STANDARDS FOR JOB SAFETY AND WORKER PROTECTION, INCLUDING, BUT NOT LIMITED TO ADEQUATE PROTECTION, BARRICADES, SIGNS, ETC.

3. THE GENERAL CONTRACTOR IS SOLELY RESPONSIBLE FOR SAFETY. THE ENGINEER EXPRESSLY EXCLUDES ANY RESPONSIBILITY FOR CONTRACTOR SAFETY OR SAFETY OF JOBSITE.

FOUNDATION NOTES

1. REMOVE **AT LEAST 12 INCHES.** OF THE EXISTING SITE SOIL, VEGETATION, TREE ROOTS, DEBRIS, ETC., FROM THE PROPOSED BUILDING AREA TO A DISTANCE OF 5'-0" OUTSIDE THE BUILDING AREA (EXTERIOR OF THE FOUNDATION, INCLUDING ATTACHED IMPROVEMENTS SUCH AS SIDE WALKS AND CANOPIES). DEPTH OF REMOVAL SHALL BE VERIFIED BY THE GEOTECHNICAL ENGINEER AT THE TIME OF CONSTRUCTION.

2. AFTER TOP SOIL HAS BEEN REMOVED, THE SUBGRADE SHALL BE PROOF-ROLLED WITH APPROPRIATE CONSTRUCTION EQUIPMENT WEIGHING AT LEAST 20 TONS UNTIL THE GRADE OFFERS A RELATIVELY UNYIELDING SURFACE. SOFT SOIL AND YIELDING AREAS, AND AREAS WHERE TREE ROOTS HAVE BEEN REMOVED, SHALL BE OVER EXCAVATED AND REPLACED WITH COMPACTED SELECT FILL IN ACCORDANCE WITH THE REQUIREMENTS BELOW.

3. PROOFROLLING OPERATIONS AND EXCAVATION/BACKFILL ACTIVITIES SHOULD BE PERFORMED DURING A PERIOD OF DRY WEATHER AND OBSERVED BY THE GEOTECHNICAL ENGINEER OR HIS REPRESENTATIVE TO DOCUMENT SUBGRADE CONDITIONS AND PREPARATION. IF SUBGRADE SOILS ARE ALLOWED TO BECOME WET OR SATURATED, REMOVAL AND REPLACEMENT OF SOFT SOILS OR LIME STABILIZATION PROCEDURES SHALL BE PERFORMED AT THE CONTRACTOR'S EXPENSE. THE GEOTECHNICAL ENGINEER SHALL BE CONTACTED FOR ADDITIONAL RECOMMENDATIONS, IF REQUIRED.

4. SCARIFY, MOISTURE CONDITION, AND COMPACT THE TOP 8" OF THE EXPOSED SUBGRADE TO 98% OF STANDARD PROCTOR MAXIMUM DRY DENSITY AT -3% TO +3% ABOVE THE OPTIMUM MOISTURE CONTENT, IN ACCORDANCE WITH TEST METHOD ASTM D-698. MOISTURE CONTENT SHALL BE AS NOTED IMMEDIATELY PRIOR TO PLACING SELECT FILL.

5. RESTORE GRADE USING SELECT FILL AS REQUIRED TO PROVIDE THE SPECIFIED **FINISH FLOOR ELEVATION** AND PROPER SITE DRAINAGE, COMPACTED IN ACCORDANCE WITH THE REQUIREMENTS BELOW. FINISH FLOOR ELEVATIONS SHALL BE VERIFIED WITH ARCHITECT AND CIVIL ENGINEER.

6. SELECT FILL SHALL BE COMPACTED IN THE FIELD IN LIFTS NOT TO EXCEED 8" LOOSE MEASURE (6" COMPACTED LIFT) TO A MINIMUM OF 98% OF STANDARD PROCTOR MAXIMUM DRY DENSITY AT -3% TO +3% OF THE OPTIMUM MOISTURE CONTENT, AS EVALUATED BY ASTM D-698.

7. SELECT FILL SHALL BE FREE OF ORGANIC OR OTHER DELETERIOUS MATERIALS, HAVE A LIQUID LIMIT (LL) LESS THAN 40, A PLASTICITY INDEX (PI) BETWEEN 7-17, AND A MAXIMUM PARTICLE SIZE LESS THAN 2" DIAMETER.

8. FOUNDATION CONCRETE SHALL NOT BE PLACED ON SELECT FILL SOILS THAT HAVE BEEN DISTURBED BY RAINFALL OR WATER SEEPAGE. IF BEARING SOILS ARE SOFTENED BY WATER INTRUSION, OR BY DESICCATION, THE UNSUITABLE SOILS SHALL BE REMOVED FROM THE FOUNDATION EXCAVATION AND BE REPLACED WITH PROPERLY COMPACTED SELECT FILL PRIOR TO PLACEMENT OF FOUNDATION CONCRETE. ALL SOIL REMOVAL AND REPLACEMENT COSTS, INCLUDING ASSOCIATED COSTS TO REMOVE AND REINSTALL REINFORCEMENT AND VAPOR BARRIER MATERIALS, SHALL BE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR. DEPTH OF SOIL REMOVAL AND RECOMPACTION REQUIREMENTS SHALL BE COORDINATED WITH THE GEOTECHNICAL ENGINEER.

9. SAMPLES OF PROPOSED SELECT FILL SHALL BE FURNISHED TO THE TESTING LABORATORY 7 DAYS PRIOR TO INSTALLATION TO PERMIT TIME FOR SPECIFICATION COMPLIANCE INSPECTION AND REVIEW BY THE GEOTECHNICAL ENGINEER.

10. LABORATORY MOISTURE-DENSITY CURVES SHALL BE DEVELOPED FOR SUBGRADE AND FILL. PROCTOR CURVES AND FIELD DENSITY TESTS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. A MINIMUM OF ONE (1) IN PLACE DENSITY TEST PER 2,000 SQUARE FEET OF SLAB AREA SHALL BE TAKEN ON EACH LIFT DURING PLACEMENT OF SELECT FILL. DENSITY REPORTS SHALL BE TRANSMITTED TO ENGINEER WITHIN 3 DAYS AFTER TESTS ARE MADE.

11. GRAIN SIZE ANALYSIS AND ATTERBERG LIMITS TESTS SHALL BE PERFORMED DURING FILL PLACEMENT AT A RATE OF ONE TEST PER 2,000 CUBIC YARDS OF FILL BROUGHT TO THE SITE. SAMPLES FOR TEST SHALL BE TAKEN FROM JOBSITE MATERIALS.

12. SITE SHALL BE GRADED SO THAT WATER DOES NOT POND WITHIN 10 FEET OF THE PERIMETER FOUNDATION BEAM DURING OR AFTER CONSTRUCTION. THE SLOPE OF THE GROUND SURFACE AWAY FROM THE STRUCTURE SHOULD BE A MINIMUM OF FIVE (5%) PERCENT FOR A DISTANCE OF AT LEAST TEN (10') FEET. ELEVATION OF GROUND SURFACE ADJACENT TO THE FOUNDATION SHOULD BE AT LEAST 6 INCHES BELOW FINISH FLOOR.

13. FINAL DRAINAGE IS VERY IMPORTANT TO THE PERFORMANCE OF THE FOUNDATION. LANDSCAPING, PLUMBING, AND DOWNSPOUT DRAINAGE ARE ALSO VERY IMPORTANT. IT IS VITAL THAT ALL ROOF DRAINAGE BE TRANSPORTED AWAY FROM BUILDINGS SO THAT NO AREAS OF WATER POND AROUND BUILDINGS, WHICH CAN RESULT IN SOIL VOLUME CHANGE UNDER THE FOUNDATION. PLUMBING LEAKS SHOULD BE REPAIRED AS SOON AS POSSIBLE IN ORDER TO MINIMIZE THE MAGNITUDE OF MOISTURE CHANGE UNDER THE SLAB. LARGE TREES AND SHRUBS SHOULD NOT BE PLANTED IN THE IMMEDIATE VICINITY OF THE STRUCTURE, SINCE THE ROOT SYSTEMS CAN CAUSE A SUBSTANTIAL REDUCTION IN SOIL VOLUME IN THE VICINITY OF THE TREE DURING DRY PERIODS. BUSHES AND TREES SHOULD BE PLANTED A REASONABLE DISTANCE AWAY FROM THE STRUCTURE SO THAT THEIR CANOPY OR "DRIP LINE" DOES NOT EXTEND BEYOND THE PERIMETER OF THE FOUNDATION. WATERING OF VEGETATION SHOULD BE PERFORMED IN A TIMELY AND CONTROLLED MANNER. PROLONGED WATERING SHOULD BE AVOIDED.

CONCRETE

1. ALL CONCRETE WORK SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE SPECIFICATION, A.C.I. #301 AND BUILDING CODE REQUIREMENTS, A.C.I. #318, LATEST EDITION.

2. ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING BARS, UNLESS OTHERWISE NOTED, MUST FOLLOW THE A.C.I. "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE", A.C.I. #315, LATEST EDITION.

3. CONCRETE SHALL HAVE A MINIMUM COMPRESSION STRENGTH OF 3,000 PSI AT 28 DAYS.

4. A MAXIMUM OF 25% FLYASH MAY BE USED AS A CEMENT SUBSTITUTE AND SHALL CONFORM TO ASTM C618, CLASS C. THE WATER/CEMENT RATIO SHALL NOT EXCEED 0.6 AND SLUMPS SHALL BE 5 INCHES (±1 INCH). AGGREGATE SHALL BE WELL-GRADED, 1" MAXIMUM FOR THE SLAB ON GRADE. COARSE AGGREGATE SHALL MEET ASTM C33, GRADATION #57. A QUALIFIED TESTING LABORATORY SHALL BE RETAINED TO FURNISH MIX DESIGNS FOR ALL CLASSES OF CONCRETE. A SAMPLE OF FOUR CYLINDERS SHALL BE TAKEN NOT LESS THAN ONCE A DAY, NOR LESS THAN ONCE FOR EACH 100 YD.3 OF CONCRETE. ONE CYLINDER SHALL BE TESTED AT 7 DAYS AND TWO AT 28 DAYS. THE FOURTH CYLINDER MAY BE DISPOSED OF AFTER 45 DAYS IF NOT USED.

5. ADMIXTURES CONTAINING WATER SOLUBLE CHLORIDE IONS GREATER THAN 0.06% BY WEIGHT OF CEMENT SHALL NOT BE USED.

6. REINFORCING BARS SHALL BE NEW BILLET STEEL CONFORMING TO ASTM A-615, GRADE 60. #3 BARS MAY BE GRADE 40.

7. STANDARD PROTECTIVE COVER OF REINFORCING BARS UNLESS OTHERWISE NOTED SHALL BE:

   WHERE CAST AGAINST DIRT OR FILL ..... 3 IN.
   EXPOSED TO EARTH OR WEATHER ..... 2 IN.
   SLABS AND WALLS ..... 1 IN.
   OTHER ..... 1-1/2 IN.

8. ALL ACCESSORIES SHALL BE IN ACCORDANCE WITH THE A.C.I. "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE", A.C.I. #315, LATEST EDITION.

9. SLAB MAT TO BE SUPPORTED BY MASONRY BRICK BATTS (MIN OF 1/2 BRICK) SPACED AT 4 FEET ON CENTER EACH WAY (MAX). BEAM CAGES SUPPORTED BY BATTS AT 4 FEET ON CENTER.

10. VERTICAL CONSTRUCTION JOINTS IN FLOOR SHALL BE COORDINATED WITH STRUCTURAL ENGINEER PRIOR TO FORMING SLAB. CRACK CONTROL JOINTS SHALL BE PROVIDED AT LOCATIONS SHOWN ON THE PLANS. CONTROL JOINTS SHALL BE SAWCUT (IMMEDIATELY SUBSEQUENT TO FINISHING SLAB) WITH "SOFF-CUT" SYSTEM. JOINTS SHALL BE CLEANED AND FILLED WITH "SONOLASTIC SL1" WITHIN TWO (2) DAYS AFTER SAWCUTTING. NO HORIZONTAL JOINTS WILL BE PERMITTED IN SLABS OR BEAMS UNLESS APPROVED BY THE ENGINEER.

11. PROVIDE 2 TOP & BOTTOM CORNER BARS AT ALL DISCONTINUOUS GRADE BEAMS AND FOUNDATION CORNERS. CORNER BARS SHALL BE 4'-0" IN LENGTH (2'-0" LEGS). SIZE OF THE CORNER BARS SHALL MATCH THE SIZE OF THE GRADE BEAM REINFORCING AS SHOWN BY STRUCTURAL DRAWINGS.

12. MAINTAIN A MINIMUM OF ONE AND ONE-HALF (1-1/2) TIMES THE MAXIMUM COARSE AGGREGATE SIZE BETWEEN ALL REINFORCING BARS (EXCEPT AT LAPS).

13. BARS SCHEDULED OR DETAILED "CONT" SHALL BE LAPPED 40 BAR DIAMETERS (24 INCHES MINIMUM) UNLESS OTHERWISE NOTED.

14. WHERE CONCRETE IS TO HAVE UNEXPOSED SURFACES, THE FORMS MAY BE CONSTRUCTED OF #2 LUMBER OR BETTER. WHERE SURFACES ARE EXPOSED, SUCH AS FOR FINISH PAINTING OR STUCCO DASH, THE FORMS SHALL BE COMMERCIAL STANDARD DOUGLAS FIR, MOISTURE-RESISTANT CONCRETE FORM PLYWOOD; MINIMUM 5-PLY AND AT LEAST 9/16" THICK, OR FORMS LINED WITH COMMERCIAL STANDARD DOUGLAS FIR, CONCRETE FORM EXTERIOR, 3-PLY, NOT LESS THAN 1/4" THICK. WHERE CONCRETE IS EXPOSED, A SMOOTH SURFACE IS REQUIRED, FREE FROM FINS, HONEYCOMB, FORM MARKS OR OTHER DEFECTS.

15. EXPOSED SURFACES OF CONCRETE AT THE PERIMETER OF THE FOUNDATION SHALL BE FORMED WITH 2X10 #2 LUMBER OR BETTER. A SMOOTH SURFACE IS REQUIRED, FREE FROM FINS, HONEYCOMB, FORM MARKS OR OTHER DEFECTS.

16. CONSTRUCT FORMS SO THAT JOINTS ARE LEAKPROOF. MAINTAIN FORMS SUFFICIENTLY RIGID TO PREVENT DEFORMATION UNDER LOAD.

17. CONCRETE MAY BE PLACED WITH CHUTES UP TO 25' MAXIMUM. SLUMP SHALL NOT EXCEED 6" AT TRUCK DISCHARGE POINT.

18. CONCRETE PLACED BY PUMPING SHALL MEET THE FOLLOWING REQUIREMENTS:

   A. COARSE AGGREGATE SHALL BE GRADED FROM A MAXIMUM OF 1" DOWN

   B. MAXIMUM ALLOWABLE INCREASE IN CEMENT FACTOR SHALL BE 1/2 SACK PER CUBIC YARD OVER NORMAL MIX DESIGN.

   C. MAXIMUM WATER CEMENT RATIO SHALL BE 7-1/2 GALLONS PER SACK OF CEMENT. IF MORE WORKABILITY IS REQUIRED, AN ADMIXTURE MAY BE USED.

   D. MAXIMUM WEIGHT RATIO OF FINE AGGREGATES TO COARSE AGGREGATES SHALL NOT EXCEED 2/3.

   E. REFER TO A.C.I. #301, LATEST EDITION, SECTION 800, FOR OTHER PUMPING REQUIREMENTS.

   F. IN NO CASE SHALL CONCRETE BE PUMPED THROUGH AN ALUMINUM TUBE.

   G. SLUMP SHALL NOT EXCEED 6" AT TRUCK DISCHARGE POINT.

19. FLOOR FINISH (TOLERANCES)

   A. STEEL TROWEL FINISH 1/8" IN 10'

   B. FLOAT FINISH 1/4" IN 10'

   C. SCRATCH FINISH 1/2" IN 10'

20. CONCRETE TO BE CURED IN ACCORDANCE WITH ACI RECOMMENDATIONS. PROPOSED METHOD OF CURING TO BE COORDINATED WITH ENGINEER PRIOR TO CONCRETE PLACEMENT.

21. SHOP DRAWINGS SHALL BE PREPARED FOR ALL REINFORCING STEEL AND SUBMITTED FOR REVIEW BY ENGINEER. SUBMITTALS SHALL INCLUDE ELECTRONIC (PDF) COPIES OF EACH DRAWING. ENGINEERING DRAWINGS SHALL NOT BE REPRODUCED AND USED AS SHOP DRAWINGS.

22. THE CONTRACTOR SHALL REVIEW AND ANNOTATE SHOP DRAWINGS BEFORE SUBMITTING THEM TO THE ARCHITECT/ENGINEER FOR REVIEW. THE CONTRACTOR SHALL ALLOW ARCHITECT/ENGINEER 10 WORKING DAYS FOR REVIEW OF SHOP DRAWINGS.

23. ENGINEER TO BE NOTIFIED 48 HOURS PRIOR TO PLACEMENT OF FOUNDATION AND OF STRUCTURAL CONCRETE TO SCHEDULE REQUIRED OBSERVATIONS.

24. INCLUDE IN BID AN ALLOWANCE FOR **1.0 TONS** OF REINFORCING BARS TO BE USED AS DIRECTED IN FIELD FOR SPECIAL CONDITIONS AT A COST OF **$2,000.00 PER TON** (LABOR FOR PLACING SAME TO BE INCLUDED). ANY UNUSED ALLOWANCE WILL BE CREDITED TO THE OWNER AT THE END OF THE PROJECT.

CONCRETE MASONRY

1. **THE GENERAL CONTRACTOR, PROJECT SUPERINTENDENT, TESTING LABORATORY AND THE MASONRY FOREMAN** SHALL MEET WITH THE STRUCTURAL ENGINEER PRIOR TO THE START OF MASONRY WORK TO REVIEW PROJECT REQUIREMENTS AND PROCEDURES.

2. AN INDEPENDENT TESTING LAB SHALL VERIFY PLACEMENT OF VERTICAL REINFORCING IN WALLS AND HORIZONTAL REINFORCING IN BOND BEAMS AND LINTELS PRIOR TO PLACEMENT OF GROUT. INDEPENDENT TESTING LAB SHALL PROVIDE CONTINUOUS VISUAL OBSERVATIONS OF GROUTING PROCEDURES, REBAR PLACEMENT, SITE MIXING OF MORTAR, INSTALLATION OF EMBEDED STEEL CONNECTORS, AND GENERAL PLACEMENT OF MASONRY UNITS AND MORTAR JOINTS. INSPECTION REPORTS ARE TO BE GENERATED DAILY BY THE TESTING LAB. INSPECTION SUMMARY REPORTS SHALL BE EMAILED TO THE STRUCTURAL ENGINEER IN ELECTRONIC (PDF) FORMAT.

3. ALL CONCRETE MASONRY SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL BUILDING CODES AND THE AMERICAN CONCRETE INSTITUTE (ACI 530-02/ ASCE 5-02/ TMS 402-02). DESIGN IS BASED ON MASONRY COMPRESSIVE STRENGTH (f'm) OF 1,900 PSI.

4. HOT AND COLD WEATHER CONSTRUCTION PROCEDURES SHALL BE UTILIZED AS REQUIRED BY THE SPECIFICATIONS AND ACI 530.1.

5. HOLLOW CONCRETE MASONRY UNITS SHALL BE DOMESTIC LIGHTWEIGHT MOISTURE CONTROLLED TYPE I UNITS, CONFORMING TO ASTM C-90-97.

6. MASONRY UNITS SHALL HAVE A MINIMUM AVERAGE COMPRESSIVE STRENGTH OF 1,900 PSI (NET AREA) WHEN TESTED IN ACCORDANCE WITH ASTM C-140, "METHODS OF SAMPLING AND TESTING CONCRETE MASONRY UNITS" .

7. MORTAR PROPORTIONS FOR REINFORCED MASONRY SHALL BE ESTABLISHED PER ASTM C270 PROPORTION SPECIFICATIONS, TYPE S USING MASONRY CEMENT. FIELD TESTS OF MORTAR SHALL BE PERFORMED BY A QUALIFIED TESTING LABORATORY IN ACCORDANCE WITH ASTM C780 AT A RATE OF ONE TEST PER 2,000 SF OF WALL SURFACE TO DETERMINE BATCH-TO-BATCH UNIFORMITY OF MORTAR. REFERENCE SPECIFICATIONS FOR NON REINFORCED MASONRY.

8. GROUT FOR ALL REINFORCED HOLLOW MASONRY UNIT WALLS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI WITH A MAXIMUM 3/8" AGGREGATE. A MID RANGE WATER REDUCING AGENT SUCH AS "POLYHEED" (MASTER BUILDERS) SHALL BE USED. SLUMP TO BE BETWEEN 8 AND 11 INCHES. **ALL GROUT SHALL BE PUMPED.** PLACING OF GROUT TO FOLLOW AMERICAN CONCRETE INSTITUTE (ACI) RECOMMENDATIONS REGARDING **LOW & HIGH LIFT GROUTING.** MAXIMUM LIFT OF GROUT SHALL NOT EXCEED 5'-0" UNLESS APPROVED BY THE ENGINEER PRIOR TO START OF GROUTING. GROUT TO BE TESTED BY A QUALIFIED TESTING LABORATORY AT A RATE OF ONE TEST PER 25 CY OF GROUT IN ACCORDANCE WITH ASTM C1019.

9. REINFORCING STEEL SHALL CONFORM TO ASTM A-615, GRADE 60. ALL BAR REINFORCING SHALL BE LAPPED 48 BAR DIAMETERS (MIN). BARS SHALL BE PLACED WITHIN 1/2" (CENTERLINE OF BAR TO FACE OF MASONRY) OF LOCATION SHOWN IN STRUCTURAL PLANS. BARS SHALL BE HELD IN POSITION DURING GROUTING WITH BAR POSITIONERS. POSITIONERS SHALL BE LOCATED AT THE BOTTOM AND TOP OF THE WALL AND AT 8 TO 10 FOOT INTERVALS. BARS SPLICED BY NON-CONTACT LAP SPLICES SHALL NOT BE SPACED TRANSVERSELY FARTHER APART THAN ONE-FIFTH THE REQUIRED LENGTH OF LAP NOR MORE THAN 8 INCHES.

10. VERTICAL BARS SHALL EXTEND TO THE TOP OF THE PARAPET WALL OR BOND BEAM WHEN A 16" DEEP BEAM IS SPECIFIED. HOOKED DOWELS SHALL BE PROVIDED AT ROOF BOND BEAMS (W/O PARAPETS) LESS THAN 16" DEEP. DOWELS SHALL BE 30" LONG WITH 12" HOOKS.

11. ALL EXTERIOR MASONRY WALLS SHALL BE REINFORCED WITH 9 GA. HOT DIPPED GALVANIZED HORIZONTAL WIRE REINFORCEMENT (LADDER TYPE) EMBEDDED IN MORTAR JOINTS AT 16" O.C. NOMINAL WIDTH OF JOINT REINFORCING SHALL EQUAL WALL THICKNESS. (INTERIOR WALLS MAY BE MILL GALVANIZED). WIRE REINFORCEMENT SHALL CONFORM TO ASTM DESIGNATION A-82, AND SHALL BE LAPPED AT LEAST 8" WITH AT LEAST ONE CROSS WIRE WITHIN THE LAP. JOINT REINFORCING SHALL BE INSTALLED IN THE FIRST AND SECOND MORTAR BED JOINTS IMMEDIATELY ABOVE AND BELOW ALL OPENINGS. WIRE REINFORCING SHALL BE DISCONTINUOUS AT CONTROL JOINTS.

12. EXTERIOR WALLS SHALL BE BONDED WITH CONCRETE MASONRY UNITS AT BUILDING CORNERS.

13. ONE GROUTED #5 BAR SHALL BE PROVIDED AROUND THE PERIMETER OF ALL WALL OPENINGS AND AT BUILDING CORNERS UNLESS NOTED OTHERWISE ON THE STRUCTURAL PLANS.

14. NEATLY TOOL INTERIOR AND EXTERIOR JOINTS IN MASONRY TO FORM A SLIGHTLY CONCAVE PROFILE WHEN MORTAR IS THUMBPRINT HARD UNLESS SHOWN OTHERWISE. ALL MORTAR JOINTS SHALL BE TOOLED THE ENTIRE HEIGHT OF WALL.

15. BOND BEAMS SHALL BE REINFORCED WITH TWO CONTINUOUS #5 BARS UNLESS NOTED OTHERWISE ON THE STRUCTURAL PLANS. REINFORCING SHALL BE CONTINUOUS AT ALL CORNERS AND INTERSECTING WALLS. (PROVIDE CORNER BARS). WHERE SIDE WALL AND END WALL BOND BEAMS DO NOT COURSE, CONTINUE THE LOWER BOND BEAM AROUND THE BUILDING CORNER TO THE FIRST VERTICAL REINFORCED CELL.

16. CONTROL JOINTS SHALL BE CONSTRUCTED WITH SLOTTED MASONRY UNITS AND FACTORY MOLDED JOINT FILLER. JOINTS SHALL BE CAULKED WITH AN APPROVED MATERIAL. JOINTS SHALL BE PROVIDED AT MAXIMUM SPACING OF 22 FT. AND AT ALL LOCATIONS WHERE COLUMNS ARE PLACED IN CMU CELLS. (EXTERIOR AND INTERIOR WALLS). JOINT LOCATIONS, IF NOT SHOWN ON PLANS, SHALL BE COORDINATED WITH ARCHITECT.

17. CONTROL JOINTS **SHALL NOT** EXTEND THROUGH BOND BEAMS UNLESS INDICATED ON THE STRUCTURAL PLANS.

18. CONTROL JOINTS IN CMU WALLS SHALL NOT BE LOCATED CLOSER THAN 2'-0" FROM AN EDGE OF OPENING WITHOUT REVIEW OF STRUCTURAL ENGINEER.

19. LINTELS OVER ALL OPENINGS IN INTERIOR MASONRY PARTITIONS, NOT OTHERWISE COVERED, ARE TO BE OF STANDARD CMU LINTEL BLOCK WITH THICKNESS EQUAL TO WALL THICKNESS. DEPTH SHALL BE 8" FOR OPENINGS UP TO 6'-0", REINFORCED WITH TWO #5's, LOCATED 2-1/2" ABOVE THE BOTTOM EXTERIOR FACE OF THE UNIT.

20. INCLUDE IN BID AN ALLOWANCE OF **1.0 TON** OF REINFORCING BARS TO BE USED AS DIRECTED IN FIELD FOR SPECIAL CONDITIONS AT A COST OF **$2,000.00 PER TON** (LABOR AND GROUT FOR PLACING SAME TO BE INCLUDED). ANY UNUSED ALLOWANCE WILL BE CREDITED TO THE OWNER AT THE END OF THE PROJECT.

No.	REVISIONS	BY

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GENERAL STRUCTURAL NOTES

FASTENERS

1. CAST-IN-PLACE AND POST-INSTALLED ANCHORS SHALL BE PER ANCHOR DIAMETER AND EMBEDMENT DEPTH NOTED ON THE DRAWINGS. POST-INSTALLED ANCHORS SHALL BE UTILIZED ONLY WHERE SPECIFIED. ALL ANCHORS SHALL BE HOT-DIPPED GALVANIZED PER ASTM A153

2. ALL ANCHORS NOTED BELOW SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR SHALL CONTACT MANUFACTURER'S REPRESENTATIVE FOR THE INITIAL TRAINING AND INSTALLATION OF ANCHORS, AND FOR PRODUCT RELATED QUESTIONS AND AVAILABILITY.

3. SPECIAL INSPECTIONS SHALL BE PROVIDED FOR ALL MECHANICAL AND ADHESIVE ANCHORS PER THE APPLICABLE EVALUATION REPORT NOTED BELOW. SPECIAL INSPECTIONS SHALL BE PERFORMED BY INDEPENDENT TESTING LABORATORY PERFORMING QA/QC SERVICES ON PROJECT.

4. EXPANSION BOLTS (EB) IN CONCRETE/CMU SHALL BE TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193. ACCEPTABLE PRODUCTS:

   A. KWIK BOLT III (ICC-ES ESR-2302) BY HILTI (CONCRETE)

   B. KWIK BOLT III (ICC-ES-ESR-1385) BY HILTI (MASONRY)

   C. STRONG-BOLT 2 (ICC-ES ESR-3037) BY SIMPSON STRONG-TIE (CONCRETE)

   D. WEDGE-ALL ANCHOR (ICC-ES ESR-1396) BY SIMPSON STRONG-TIE (MASONRY)

5. HEAVY DUTY SLEEVE ANCHORS IN CONCRETE/CMU SHALL BE TESTED AND QUALIFIED OR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193. EXPANSION BOLTS (EB) SHALL NOT BE SUBSTITUTED FOR SLEEVE ANCHORS WITHOUT PRIOR WRITTEN APPROVAL BY STRUCTURAL ENGINEER. ACCEPTABLE PRODUCTS:

   A. HSL-3 (ICC-ES ESR-1545) BY HILTI (CONCRETE)

6. SCREW ANCHORS IN CONCRETE SHALL BE TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193. ACCEPTABLE PRODUCTS:

   A. KWIK HUS-EZ (ICC-ES ESR-3027) BY HILTI (CONCRETE)

   B. KWIK HUS-EZ (ICC-ES ESR-3056) BY HILTI (MASONRY)

   C. TITEN HD (ICC-ES ESR-2713) BY SIMPSON STRONG-TIE (CONCRETE)

   D. TAPCON ANCHORS (ICC-ES ESR-1671) (MASONRY)

   E. POWERS WEDGE BOLT (ICC-ES ESR-1678) (MASONRY)

7. UNDERCUT ANCHORS IN CONCRETE SHALL BE TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193. ACCEPTABLE PRODUCTS:

   A. HDA (ICC-ES ESR-1546) BY HILTI (CONCRETE)

   B. TORQ-CUT (ICC-ES ESR-2705) BY SIMPSON STRONG-TIE (CONCRETE)

8. POWDER ACTUATED FASTENERS IN CONCRETE/CMU SHALL BE TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193. ACCEPTABLE PRODUCTS:

   A. X-U (ICC-ES ESR-2269) BY HILTI (CONCRETE/MASONRY/STEEL)

   B. POWDER ACTUATED FASTENERS (ICC-ES ESR-2138) BY SIMPSON STRONG TIE (CONCRETE/MASONRY)

9. ADHESIVE ANCHORS IN CONCRETE/CMU SHALL BE TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.4 AND ICC-ES AC308. ACCEPTABLE PRODUCTS:

   A. HIT-RE 500-V3 (ICC-ES ESR-3814) BY HILTI (CONCRETE)

   B. HIT-HY 270 (ICC-ES ESR-4143) BY HILTI (MASONRY)

   C. SET-XP (ICC-ES ESR-2508) BY SIMPSON STRONG-TIE (CONCRETE)

   D. SET (ICC-ES ESR-1772) BY SIMPSON STRONG-TIE (MASONRY)

10. J-BOLTS SHALL BE FABRICATED FROM ASTM A36/A307 ROD. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED. EXPANSION BOLTS/SLEEVE ANCHORS SHALL NOT BE SUBSTITUTED FOR J-BOLTS WITHOUT PRIOR WRITTEN APPROVAL BY STRUCTURAL ENGINEER.

11. HEADED ANCHOR RODS SHALL BE FABRICATED FROM ASTM F1554 MATERIAL, FY=36 KSI

12. SUBSTITUTION REQUESTS FOR PRODUCTS LISTED ABOVE SHALL BE SUBMITTED BY THE CONTRACTOR TO THE STRUCTURAL ENGINEER ALONG WITH CALCULATIONS THAT ARE PREPARED & SEALED BY A REGISTERED PROFESSIONAL ENGINEER. THE CALCULATIONS SHALL DEMONSTRATE THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE PERTINENT EQUIVALENT PERFORMANCE VALUES OF THE SPECIFIED PRODUCT USING THE APPROPRIATE DESIGN PROCEDURE AND/OR STANDARDS. SUBSTITUTED ANCHORS SHALL HAVE A VALID CURRENT EVALUATION (ICC-ES OR IAPMO-ES) REPORT.

ROUGH CARPENTRY NOTES

1. ROUGH CARPENTRY SHALL COMPLY WITH THE PROVISIONS OF THE 2012 EDITION OF THE INTERNATIONAL BUILDING CODE AND THE NATIONAL DESIGN STANDARD, SPECIAL DESIGN PROVISIONS FOR WIND AND SEISMIC (SDPWS).

2. ALL LUMBER USED FOR LOAD SUPPORTING PURPOSES SHALL BE IDENTIFIED BY THE GRADE MARK OF AN APPROVED LUMBER GRADING OR INSPECTION BUREAU OR AGENCY.

3. ALL LUMBER AND PLYWOOD REQUIRED TO BE PRESERVATIVELY TREATED SHALL BEAR AN APPROVED AWPB QUALITY MARK.

4. FRAMING LUMBER MOISTURE CONTENT SHALL NOT EXCEED 19 PERCENT AT TIME OF INSTALLATION.

5. MATERIALS

   A. FRAMING LUMBER

USE-ITEM	LUMBER SPECIES	MINIMUM GRADE	GRADING AGENCY
TOP PLATES	SOUTHERN PINE	#2	SPIB
RAFTERS	SOUTHERN PINE	#2	SPIB

   * MEMBERS IN CONTACT WITH MASONRY OR CONCRETE SHALL BE PRESSURE TREATED.

   B. PLYWOOD

USE-ITEM	THICKNESS	EXPOSURE	APA SPAN RATING
ROOF SHEATHING	5/8"	1	32/16

ROUGH CARPENTRY NOTES CONTINUED:

   C. FASTENERS

COMMON NAIL	SHANK DIAMETER	HEAD DIAMETER	LENGTH
20d	0.192"	0.406"	4"
16d	0.162"	0.344"	3.1/2"
10d	0.148"	0.312"	3"
8d	0.131"	0.281"	2.1/2"

   1. THE NUMBER AND SIZE OF NAILS CONNECTING WOOD MEMBERS SHALL BE AS SHOWN ON PLAN BUT NOT LESS THAN SPECIFIED IN THE IBC 2012 TABLE 2304.9.1.

   2. NAILS EXPOSED TO MOISTURE SHALL BE GALVANIZED STEEL OR APPROVED NON-FERROUS METAL.

6. VERTICAL FRAMING MEMBERS SHALL BE CONTINUOUS LENGTH WITHOUT SPLICING. SPLICES IN HORIZONTAL MEMBERS SHALL OCCUR ONLY OVER BEARING POINTS. LAP MEMBERS WHICH BEAR ON PLATES TO PROVIDE FULL BEARING FOR EACH MEMBER.

7. STRUCTURAL MEMBERS WHOSE STRENGTH IS IMPAIRED BY IMPROPER CUTTING, DRILLING, OR EXCESSIVE DEFECTS SHALL BE REPLACED OR REINFORCED IN A MANNER ACCEPTABLE TO THE ENGINEER.

8. RAFTERS SHALL NOT BE NOTCHED AT THE END SUPPORTS OR THE MIDDLE 1/3 OF THE RAFTER SPAN.

9. RAFTERS ARE PERMITTED TO BE NOTCHED IN THE TOP OR BOTTOM OF THE RAFTERS AT THE OUTER 1/3 OF THE SPAN. NOTCHES SHALL NOT EXCEED IN DEPTH 1/6 THE ACTUAL RAFTER DEPTH AND SHALL NOT EXCEED IN LENGTH 1/3 THE ACTUAL FASTER DEPTH.

10. RAFTERS ARE PERMITTED TO BE BORED TO A DIAMETER NOT GREATER THAN 1/3 THE ACTUAL RAFTER DEPTH AND NOT BE CLOSER THAN 2 INCHES FROM THE TOP OR BOTTOM EDGE OF THE RAFTER.

11. CONTRACTOR SHALL ENSURE NAILS ARE PROPERLY DRIVEN. NAILS SHALL BE DRIVEN FLUSH WITH THE EXTERIOR SURFACE OF PLYWOOD. OVERDRIVEN NAILS SHALL BE REPLACED OR NAILS SHALL BE PLACED BETWEEN THE OVERDRIVEN NAILS.

12. TOP PLATES FOR BEARING WALLS AND PARTITIONS SHALL CONSIST OF 2 – 2x6 OR 2x8's (AS INDICATED ON PLAN). MEMBERS SHALL BE LAPPED AT CORNERS AND INTERSECTING PARTITION. TOP PLATES FOR NON-BEARING PARTITION MAY BE SINGLE. WHEN TOP PLATE IS PARALLEL TO CEILING FRAMING, INSTALL CROSS BLOCKING NOT MORE THAN FOUR (4') FEET O.C.

13. SHEATHING SHALL BE INSTALLED CONTINUOUS OVER TWO OR MORE SPANS WITH FACE GRAIN PERPENDICULAR TO SUPPORTS AND JOINTS STAGGERED. A 1/8" SPACE SHALL BE PROVIDED AT PANEL EDGES AND END JOINTS UNLESS RECOMMENDED OTHERWISE BY THE MANUFACTURER.

14. SHEATHING SHALL BE ATTACHED TO STRUCTURE AS SPECIFIED ON SHEATHING NAILING SCHEDULES.

15. ALL METAL ANCHORS, HOLD DOWNS AND ETC., SHALL BE MANUFACTURED BY "SIMPSON STRONG TIE" OR APPROVED EQUIVALENT.

16. ENGINEER SHALL BE CONTACTED FOR FRAMING INSPECTIONS PRIOR TO INSTALLING OF CEILINGS, WALL SHEATHING, WALL FINISHES, AND/OR ROOF COVERINGS (INCLUDING BUILDING PAPER).

EXTERIOR COMPONENTS & CLADDINGS

ALL EXTERIOR COMPONENT AND CLADDING SYSTEMS (E.G. WINDOWS, CURTAIN WALLS, STOREFRONTS, DOORS, ARCHITECTURAL SIDINGS, METAL WALL AND ROOF PANELS, ROOFING SYSTEMS, SKYLIGHTS) MUST MEET MINIMUM WIND CODE REQUIREMENTS. CONTRACTOR MUST SUBMIT COMPONENT AND CLADDING ASSEMBLY WIND PRESSURE AND IMPACT RESISTANCE TESTING RATINGS AND REQUIRED ATTACHMENT PROCEDURES TO STRUCTURAL ENGINEER FOR REVIEW. ROOF TOP MECHANICAL EQUIPMENT AND THEIR SUPPORT COMPONENTS, AND ANCHORING OF THESE ITEMS TO THE STRUCTURE, SHALL BE DELEGATED DESIGN TO BE PERFORMED BY THE EQUIPMENT'S MANUFACTURER, TO MEET THE WIND PRESSURES CALCULATED PER ASCE 7-10 SECTION 29.5.1 AND ASCE 7-05 SECTION 6.5.15.1, WHICHEVER PRODUCES GREATER WIND LOADS BY USING THE WIND DESIGN PARAMETERS LISTED ON THE GENERAL STRUCTURAL NOTES DESIGN CRITERIA.

1. TESTED ASSEMBLIES
   A. THE CONTRACTOR SHALL INSTALL PROJECT SPECIFIC ASSEMBLIES THAT HAVE BEEN TESTED AND MEET THE APPLICABLE PERFORMANCE REQUIREMENTS LISTED BELOW. PROJECT ASSEMBLIES SHALL BE INSTALLED IN SAME MANNER AS TESTED ASSEMBLIES INCLUDING SYSTEM COMPONENTS, REINFORCEMENT, GLAZING, HARDWARE, ANCHORS AND FASTENING LOCATIONS, SEALANTS & ALL ACCESSORIES, AS APPLICABLE.

2. ASSEMBLY PERFORMANCE REQUIREMENTS
   A. STRUCTURAL PERFORMANCE: TESTED ASSEMBLY THAT PASSES STRUCTURAL PERFORMANCE REQUIREMENTS WHEN TESTED IN ACCORDANCE WITH THE APPLICABLE PERFORMANCE STANDARD(S) LISTED BELOW, AT A MINIMUM OF THE POSITIVE AND NEGATIVE DESIGN WIND-LOAD PRESSURES INDICATED ON THE STRUCTURAL DRAWINGS. TESTED ASSEMBLY SHALL BE NO SMALLER IN WIDTH AND LENGTH THAN ASSEMBLY INDICATED FOR USE ON THE PROJECT AND SHALL MATCH PROJECT ASSEMBLY INCLUDING ALL COMPONENTS AND SUBSTRATE(S).

   B. WINDBORNE-DEBRIS-IMPACT RESISTANCE: TESTED ASSEMBLY THAT PASSES LARGE-MISSILE IMPACT PROTECTION TESTING REQUIREMENTS ACCORDING TO ASTM E 1996 WHEN TESTED ACCORDING TO ASTM E 1886. TESTED ASSEMBLY SHALL BE NO SMALLER IN WIDTH AND LENGTH THAN ASSEMBLY INDICATED FOR USE ON THE PROJECT AND SHALL MATCH PROJECT ASSEMBLY INCLUDING ALL COMPONENTS AND SUBSTRATE(S).

3. ASSEMBLY PERFORMANCE STANDARDS
   A. ASTM E 330 – STANDARD TEST METHOD FOR STRUCTURAL PERFORMANCE OF EXTERIOR WINDOWS, DOORS, SKYLIGHTS AND CURTAIN WALLS BY UNIFORM STATIC AIR PRESSURE DIFFERENCE

   B. ASTM E 1592 – STANDARD TEST METHOD FOR STRUCTURAL PERFORMANCE OF SHEET METAL ROOF AND SIDING SYSTEMS BY UNIFORM STATIC AIR PRESSURE DIFFERENCE

   C. ASTM E 1886 – STANDARD TEST METHOD FOR PERFORMANCE OF EXTERIOR WINDOWS, CURTAIN WALLS, DOORS, AND STORM SHUTTERS IMPACTED BY MISSILE(S) AND EXPOSED TO CYCLIC PRESSURE DIFFERENTIALS

   D. ASTM E 1996 – STANDARD SPECIFICATION FOR PERFORMANCE OF EXTERIOR WINDOWS, CURTAIN WALLS, DOORS AND IMPACT PROTECTIVE SYSTEMS IMPACTED BY WINDBORNE DEBRIS IN HURRICANES

   E. FM 4450 – APPROVAL STANDARD FOR CLASS 1 INSULATED STEEL DECK ROOFS

   F. FM 4470 – APPROVAL STANDARD FOR SINGLE-PLY, POLYMER-MODIFIED BITUMEN SHEET, BUILT-UP ROOF (BUR) AND LIQUID APPLIED ROOF ASSEMBLIES FOR USE IN CLASS 1 AND NONCOMBUSTIBLE ROOF DECK CONSTRUCTION

   G. FM 4474 – AMERICAN NATIONAL STANDARD FOR EVALUATING THE SIMULATED WIND UPLIFT RESISTANCE OF ROOF ASSEMBLIES USING STATIC POSITIVE AND/OR NEGATIVE DIFFERENTIAL PRESSURES

   H. UL 580 – STANDARD FOR TESTS FOR UPLIFT RESISTANCE OF ROOF ASSEMBLIES

   J. UL 1897 – STANDARD FOR UPLIFT TESTS FOR ROOF COVERING SYSTEMS

EXTERIOR COMPONENTS & CLADDINGS CONTINUED:

4. ASSEMBLY SUBMITTALS
   A. SUBMITTALS SHALL CONSIST OF PROJECT SPECIFIC SHOP DRAWINGS AND ASSEMBLY TEST REPORTS, AS DESCRIBED BELOW. SUBMITTALS SHALL BE COMPLETE, CLEAR AND LEGIBLE; INCOMPLETE SUBMITTALS WILL BE REJECTED.

   B. SHOP DRAWINGS SHALL INCLUDE THE FOLLOWING ITEMS:

      1) SYSTEM DESCRIPTION INCLUDING MANUFACTURER'S NAME AND SPECIFIC PRODUCT MODEL NUMBER, NAME OR DESIGNATION.

      2) MANUFACTURER'S PRODUCT DATA/TECHNICAL INFORMATION AND DETAILS.

      3) SYSTEM LAYOUT PLANS, ELEVATIONS, CROSS-SECTIONS AND DETAILS AS APPLICABLE TO THE PROJECT.

      4) DESCRIPTION OF SYSTEM'S ASSEMBLY COMPONENTS (E.G. ROOF LAYERS, FRAME MEMBERS, REINFORCEMENT, DOOR TYPE, GLAZING, HARDWARE, ANCHORS AND FASTENING LOCATIONS, SEALANTS, ACCESSORIES). ALL COMPONENTS SHALL MATCH THOSE SPECIFIED ON ASSEMBLY TEST REPORTS.

      5) SHOP DRAWINGS SHALL INDICATE THE SYSTEM ATTACHMENT METHOD INCLUDING ANCHOR TYPE AND FASTENER LOCATIONS FOR EACH DIFFERENT TYPE OF SUBSTRATE. SYSTEM ATTACHMENT SHALL BE PER ASSEMBLY TEST REPORTS.

      6) ASSEMBLY TEST REPORTS OFTEN PROVIDE OPTIONS FOR MATERIALS AND FASTENING METHODS. SHOP DRAWINGS SHALL BE SPECIFIC TO THE MATERIAL OR METHOD THAT THE CONTRACTOR IS PROPOSING TO INSTALL ON THE PROJECT.

      7) CROSS-REFERENCING BETWEEN THE SHOP DRAWINGS AND THE ASSEMBLY TEST REPORTS IS ENCOURAGED, BUT THE SHOP DRAWINGS SHALL BE DETAILED ENOUGH TO STAND INDEPENDENT OF THE TEST REPORTS.

   C. ASSEMBLY TEST REPORTS SHALL INCLUDE THE FOLLOWING ITEMS:

      1) PERFORMANCE RATINGS BASED ON EVALUATION OF COMPREHENSIVE TESTING IN ACCORDANCE WITH THE APPLICABLE PERFORMANCE STANDARD(S) LISTED ABOVE.

      2) TESTING AND DEVELOPMENT OF REPORTS SHALL BE PERFORMED BY A QUALIFIED THIRD-PARTY TESTING AGENCY.

      3) TEST REPORTS SHALL BE SEALED BY THE QUALIFIED PROFESSIONAL ENGINEER RESPONSIBLE FOR THEIR PREPARATION.

      4) TEST REPORTS SHALL BE RECENT TO INCLUDE THE MOST CURRENT SYSTEM MANUFACTURER'S COMPONENTS AND AVAILABLE FASTENERS AND ACCESSORIES. EXPIRED TEST REPORTS SHALL BE REJECTED.

      5) TEST REPORTS SHALL BE SUBMITTED FOR EACH DIFFERENT TYPE OF ASSEMBLY ON THE PROJECT INCLUDING VARIATIONS OF SYSTEM COMPONENTS AND SUBSTRATES.

SPECIAL INSPECTIONS

SPECIAL INSPECTIONS INDEPENDENT OF THE CONTRACTOR, THE ARCHITECT, OR THE ENGINEER, SHALL BE PROVIDED BY A SPECIAL INSPECTOR EMPLOYED BY THE OWNER ACCORDING TO CHAPTER 17 OF THE IBC 2012. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS. THE SPECIAL INSPECTOR SHALL SEND WRITTEN REPORTS TO THE OWNER, THE ARCHITECT, THE ENGINEER AND THE CONTRACTOR. THE REPORTS SHALL INDICATE IF WORK INSPECTED WAS DONE IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THE DISCREPANCIES ARE NOT CORRECTED, THE SPECIAL INSPECTOR SHALL BRING THE DISCREPANCIES TO THE ATTENTION OF THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE PRIOR TO THE COMPLETION OF THAT PHASE OF THE WORK. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT STATING THAT THE SPECIAL INSPECTION WORK WAS, TO THE BEST OF THEIR KNOWLEDGE, IN OR NOT IN CONFORMANCE WITH THE DRAWINGS, SPECIFICATIONS AND APPLICABLE WORKMANSHIP PROVISIONS OF THE IBC 2012.

CONTINUOUS OR PERIODIC SPECIAL INSPECTION IS REQUIRED FOR THE FOLLOWING WORK:

REQUIRED VERIFICATION AND INSPECTION OF SOILS

VERIFICATION AND INSPECTION TASK	CONTINUOUS DURING TASK LISTED	PERIODICALLY DURING TASK LISTED
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL		X
PERFORM CLASSIFICATION AND TESTING OF SELECT FILL MATERIALS		X
VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF SELECT FILL	X	
PRIOR TO PLACEMENT OF SELECT FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY		X

REQUIRED VERIFICATION AND INSPECTION OF ANCHORS

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC
CAST-IN-PLACE, POST-INSTALLED, MECHANICAL AND EPOXY SET ANCHORS: AS APPLICABLE, THE INSPECTION PROGRAM SHALL VERIFY THE ANCHOR TYPE, EMBEDMENT, TIGHTENING TORQUE, DIMENSIONS, HOLE DEPTH & DIAMETER AND CLEANOUT, EPOXY MIXING AND PLACEMENT PROCEDURES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND THE CURRENT ICC-ES EVALUATION REPORT	FREQUENCY OF INSPECTION SHALL BE IN ACCORDANCE WITH THE CURRENT ICC-ES EVALUATION REPORT, OR PER THE SPECIAL INSPECTION REQUIREMENTS OF THE ANCHOR SUBSTRATE, WHICHEVER IS MORE STRINGENT	

SPECIAL INSPECTIONS CONTINUED:

REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC
INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, AND PLACEMENT		X
INSPECT BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE	X	
VERIFY USE OF REQUIRED DESIGN MIX		X
PERFORM SLUMP AND AIR CONTENT TEST, AND DETERMINE THE TEMPERATURE OF THE CONCRETE AT THE TIME OF SAMPLING FRESH CONCRETE FOR MAKING SPECIMENS FOR STRENGTH TESTS PER ACI 318	X	
INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	X	
INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES		X
INSPECTION OF PRESTRESSED CONCRETE APPLICATION OF PRESTRESSING FORCES	X	
VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS		X
ERECTION OF PRECAST CONCRETE MEMBERS		X
INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED		X

REQUIRED LEVEL 1 SPECIAL INSPECTION OF MASONRY CONSTRUCTION (OCCUPANCY CATEGORY I, II, III)

INSPECTION TASK	CONTINUOUS DURING TASK LISTED	PERIODICALLY DURING TASK LISTED
AS MASONRY CONSTRUCTION BEGINS, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:		
PROPORTIONS OF SITE-PREPARED MORTAR		X
PLACEMENT OF MASONRY UNITS AND CONSTRUCTION OF MORTAR JOINTS		X
LOCATION OF REINFORCEMENT, CONNECTORS AND ANCHORAGES		X
THE INSPECTION PROGRAM SHALL VERIFY:		
SIZE AND LOCATION OF STRUCTURAL ELEMENTS		X
TYPE, SIZE AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES OR OTHER CONSTRUCTION		X
SPECIFIED SIZE, GRADE AND TYPE OF REINFORCEMENT		X
PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F) OR HOT WEATHER (TEMPERATURE ABOVE 90°F)		X
PRIOR TO GROUTING, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:		
GROUT SPACE IS CLEAN		X
PLACEMENT OF REINFORCEMENT, CONNECTORS AND ANCHORAGES		X
CONSTRUCTION OF MORTAR JOINTS		X
GROUT PLACEMENT SHALL BE VERIFIED TO ENSURE COMPLIANCE WITH CODE AND CONSTRUCTION DOCUMENT PROVISIONS	X	
PREPARATION OF ANY REQUIRED GROUT SPECIMENS, MORTAR SPECIMENS AND/OR PRISMS SHALL BE OBSERVED	X	
COMPLIANCE WITH REQUIRED INSPECTION PROVISIONS OF THE CONSTRUCTION DOCUMENTS AND THE APPROVED SUBITTALS SHALL BE VERIFIED		X

REQUIRED VERIFICATION AND INSPECTION OF WOOD CONSTRUCTION

VERIFICATION AND INSPECTION TASK	CONTINUOUS DURING TASK LISTED	PERIODICALLY DURING TASK LISTED
LUMBER SPECIES & GRADE		X
ROOF SHEATHING NAIL FASTENING		X
WALL SHEATHING NAIL FASTENING		X
FLOOR SHEATHING NAIL FASTENING		X
HOLD DOWN ANCHORS (2nd FLR & FOUNDATION)	X	
HURRICANE STRAPS & TIES		X
BUILT-UP WOOD STUD PACKS & HEADERS		X
ROOF AND FLOOR TRUSS INSTALLATION		X
TRUSS LAYOUT / PLACEMENT		X
TRUSS BEARING		X

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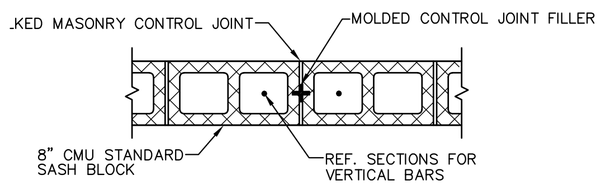
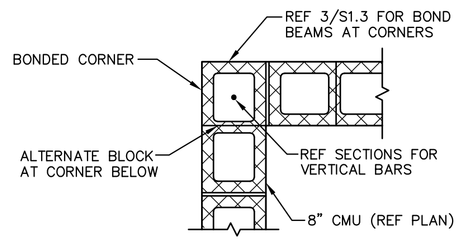
PROFESSIONAL ENGINEER
9/6/19

DATE	September 6, 2019
SCALE	As Shown
DRAWN	AV, CW, IG
JOB #	192-523
SHEET	S1.2

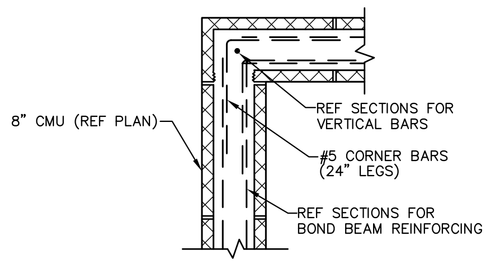
GENERAL STRUCTURAL NOTES



1 TYPICAL CRACK CONTROL JOINT

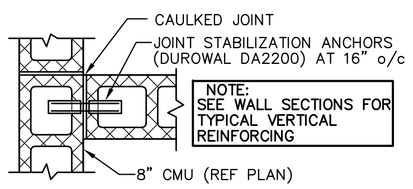


2 BONDED CORNER

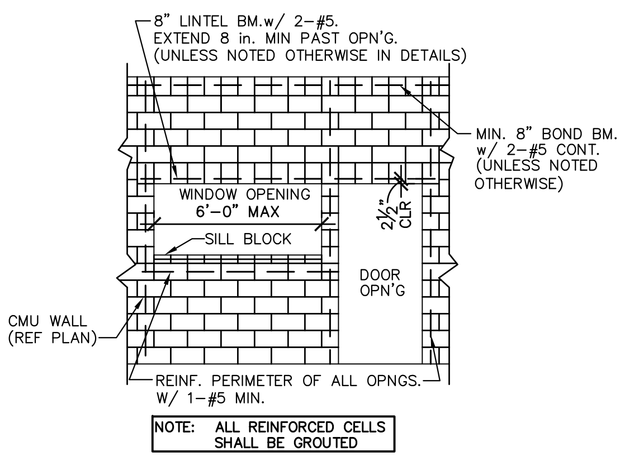


3 BOND BEAM AT EXTERIOR CORNERS

4 TYPICAL BOND BEAM AT INTERSECTING WALL



5 TYPICAL UNBONDED WALL INTERSECTION



6 TYPICAL REINFORCING AT OPENINGS
(NONLOADBEARING INTERIOR WALLS ONLY)

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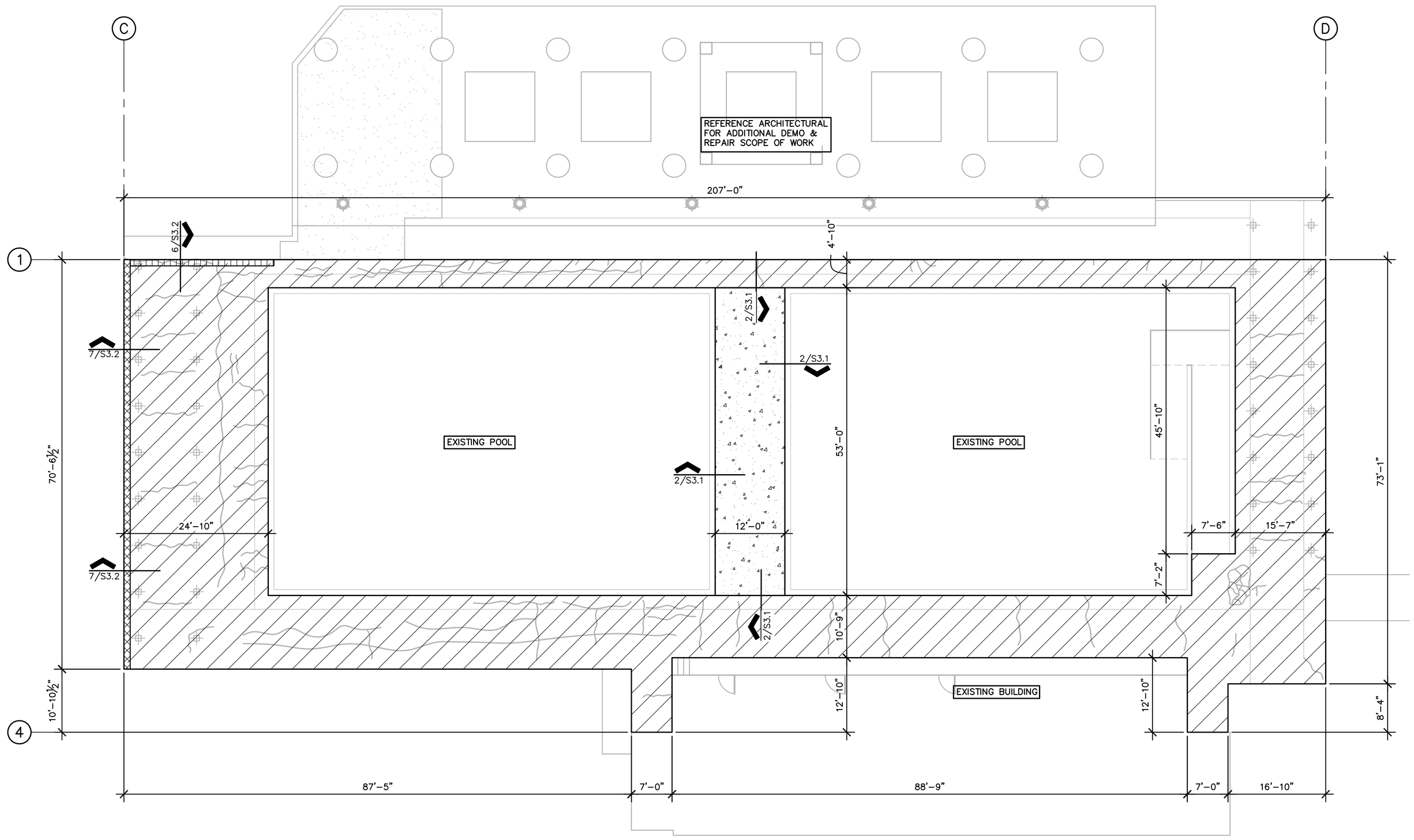


1 POOL DECK REPAIR PLAN

3/32" = 1'-0"

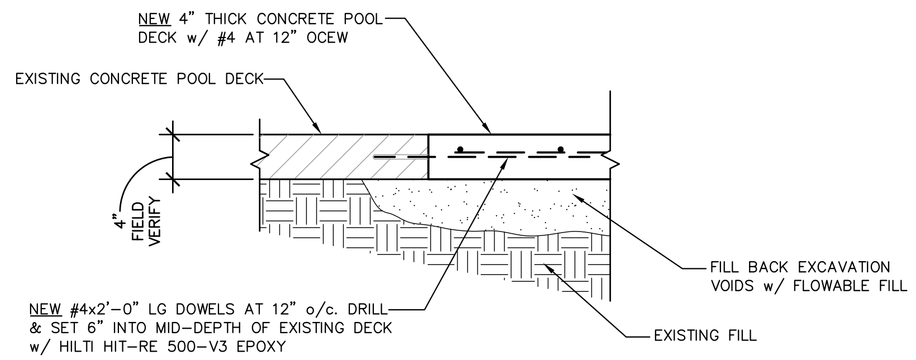
N

PLAN NORTH

NOTES:

1. INDICATES LOCATIONS WHERE EXISTING CONCRETE SHALL BE DEMOLISHED TO INSTALL NEW 4" THICK CONCRETE DECK w/ #4 AT 12" OCEW. REFERENCE ARCHITECTURAL FOR FLOOR FINISH.
2. INDICATES AREA WHERE EXISTING CONCRETE SHALL BE REPAIRED. REFERENCE SHEET S4.1 FOR TYPICAL CONCRETE REPAIR DETAILS.
3. CRACKING AND SPALLING SHOWN ON REPAIR PLAN ARE FOR VISUAL PURPOSE ONLY. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF CRACK AND FOLLOW PROCEDURES OUTLINES ON CONCRETE REPAIR NOTES ON SHEET S4.1.
4. EXISTING SLAB SHALL BE SAW CUT ALONG PERIMETER OF SLAB DEMOLITION AREAS. CONTRACTOR SHALL CUT A MINIMUM OF 1.1/2" DEEP CUT INTO EXISTING SLAB. CONTRACTOR SHALL USE APPROPRIATE SIZE DEMOLITION EQUIPMENT AND TOOLS TO AVOID EXCESSIVE VIBRATIONS IN EXISTING STRUCTURE.
5. INDICATES LOCATION WHERE EXISTING EDGE OF CONCRETE DECK SHALL BE REPAIRED. REFERENCE DETAIL 7/S3.2 FOR REPAIR DETAIL.
6. INDICATES LOCATION WHERE EXISTING EDGE OF CONCRETE DECK AND CONCRETE BEAM SHALL BE REPAIRED. REFERENCE DETAIL 6/S3.2 FOR REPAIR DETAIL.

CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS & EXISTING CONDITIONS IN THE FIELD. CONTACT ENGINEER IF CONDITIONS VARY FROM THOSE SHOWN ON THE DRAWINGS.



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SHEET	S3.1

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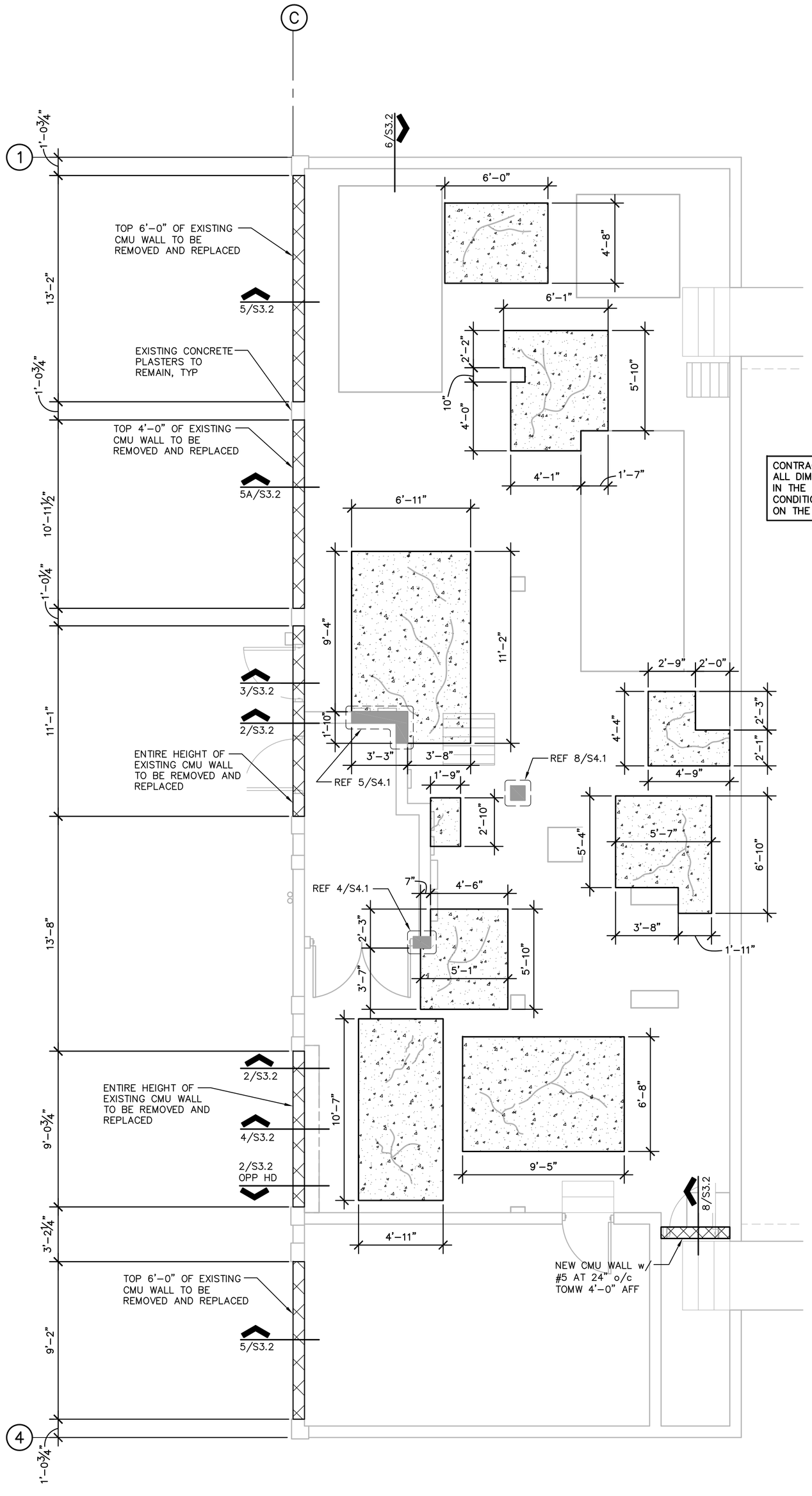


1 PUMP ROOM WALL AND FOUNDATION REPAIR PLAN

1/4" = 1'–0"

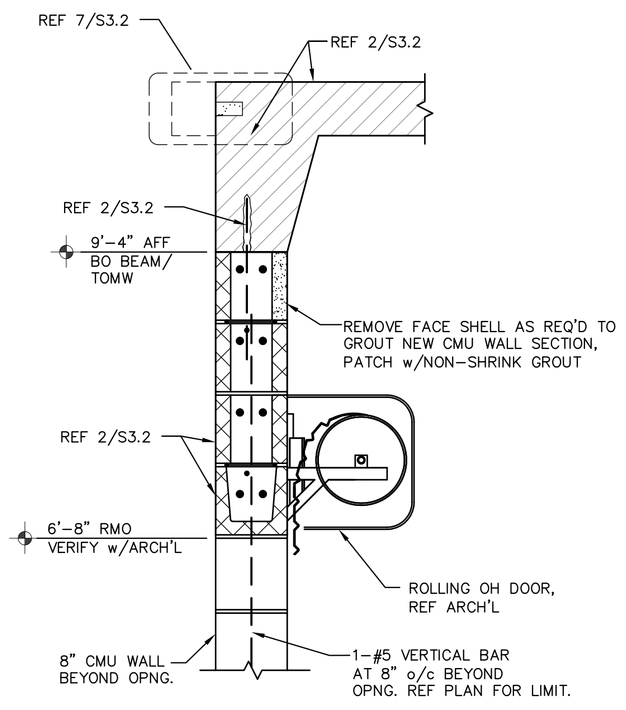
N

PLAN NORTH

NOTES:

1. [' '] INDICATES LOCATIONS WHERE EXISTING CONCRETE SLAB SHALL BE REPAIRED. REFERENCE SHEET S4.1 FOR TYPICAL CONCRETE REPAIR DETAILS.
2. [XXX] INDICATES AREAS WITH NEW 8" CMU MASONRY INFILL WALLS.
3. CRACKING AND SPALLING SHOWN ON REPAIR PLAN ARE FOR VISUAL PURPOSE ONLY. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF CRACK AND FOLLOW PROCEDURES OUTLINES ON CONCRETE REPAIR NOTES ON SHEET S4.1.

CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS & EXISTING CONDITIONS IN THE FIELD. CONTACT ENGINEER IF CONDITIONS VARY FROM THOSE SHOWN ON THE DRAWINGS.



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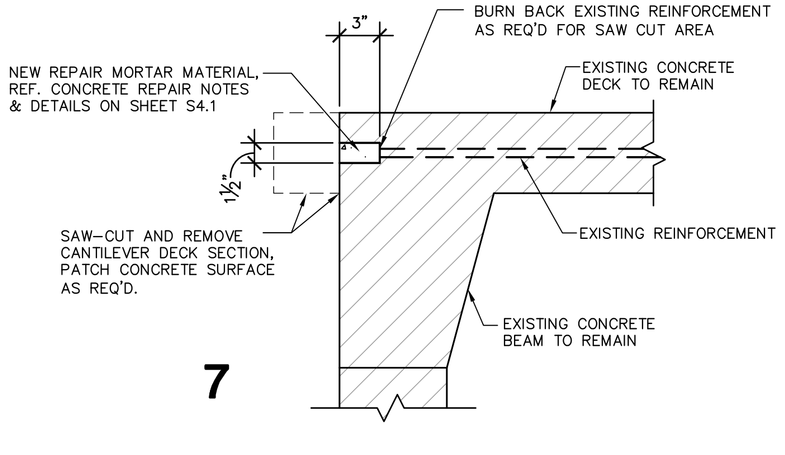

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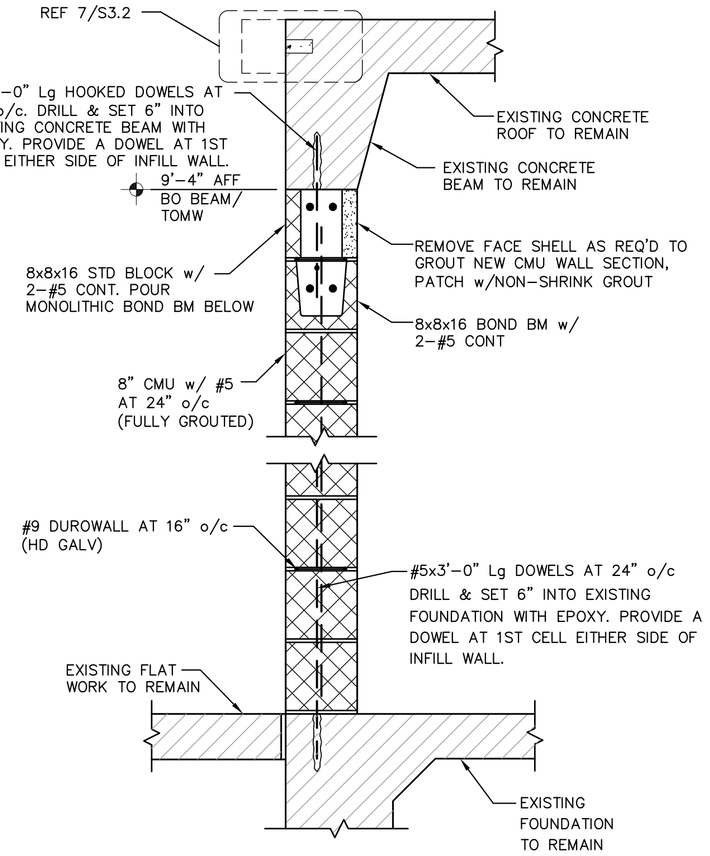

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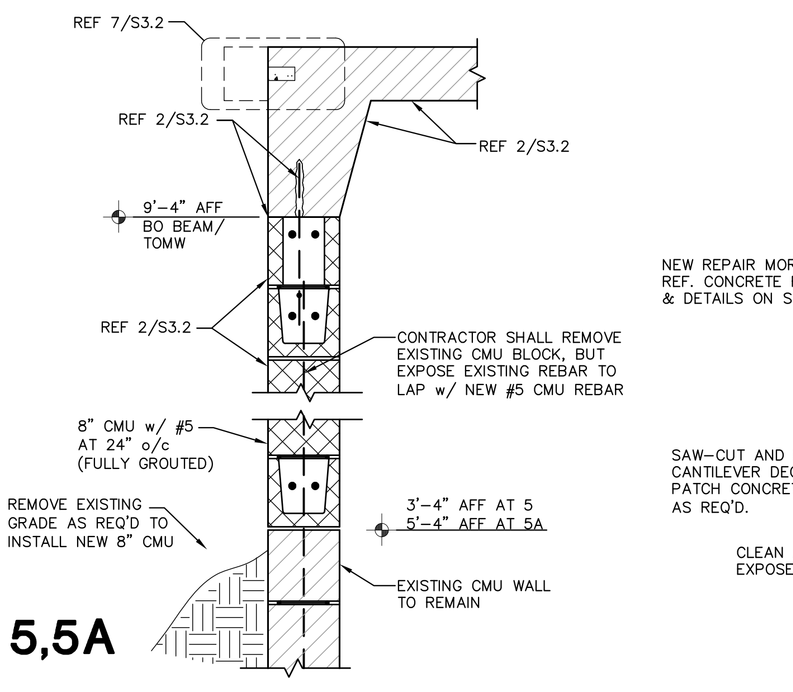

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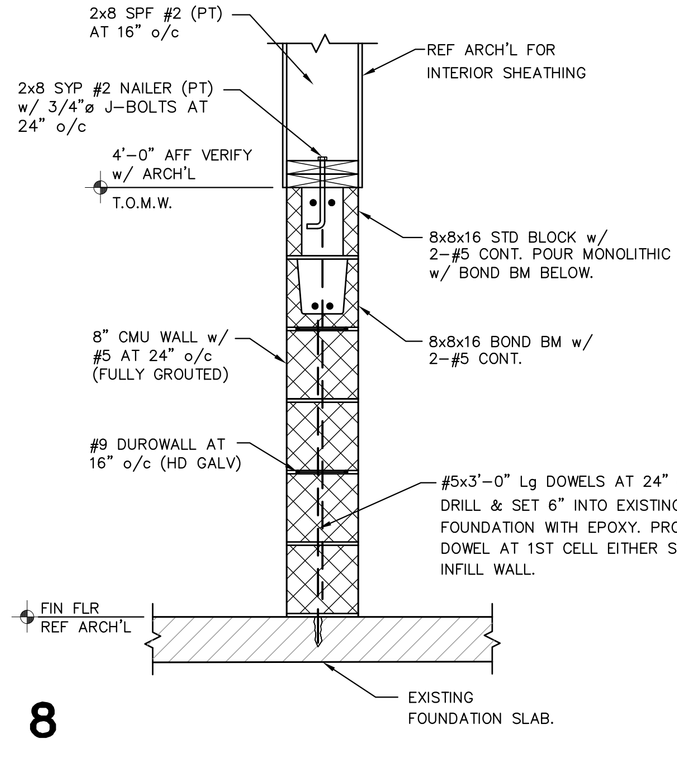

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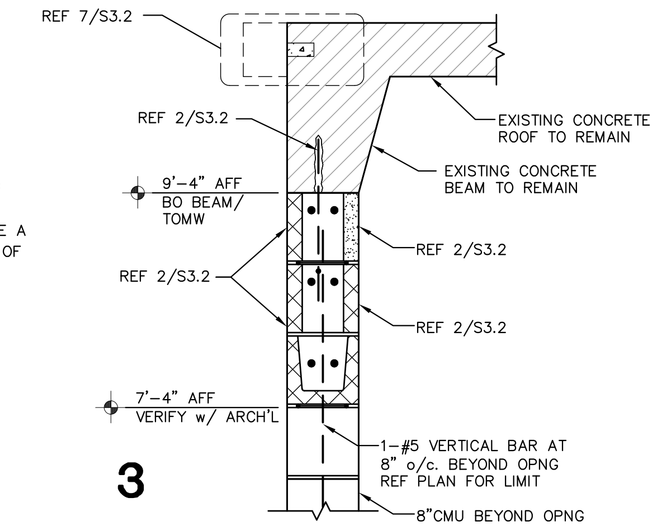

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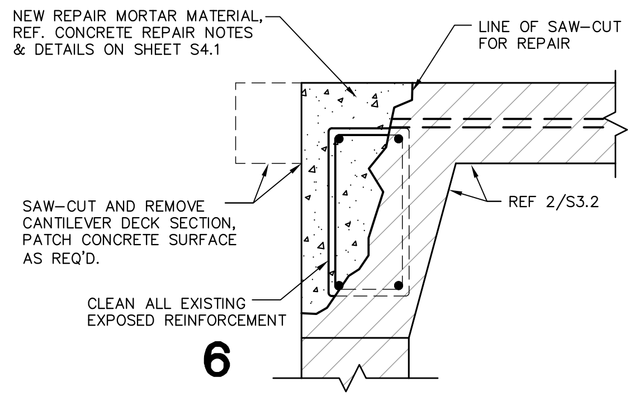

6

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9/6/19

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JOB #	192-523
SHEET	S3.2

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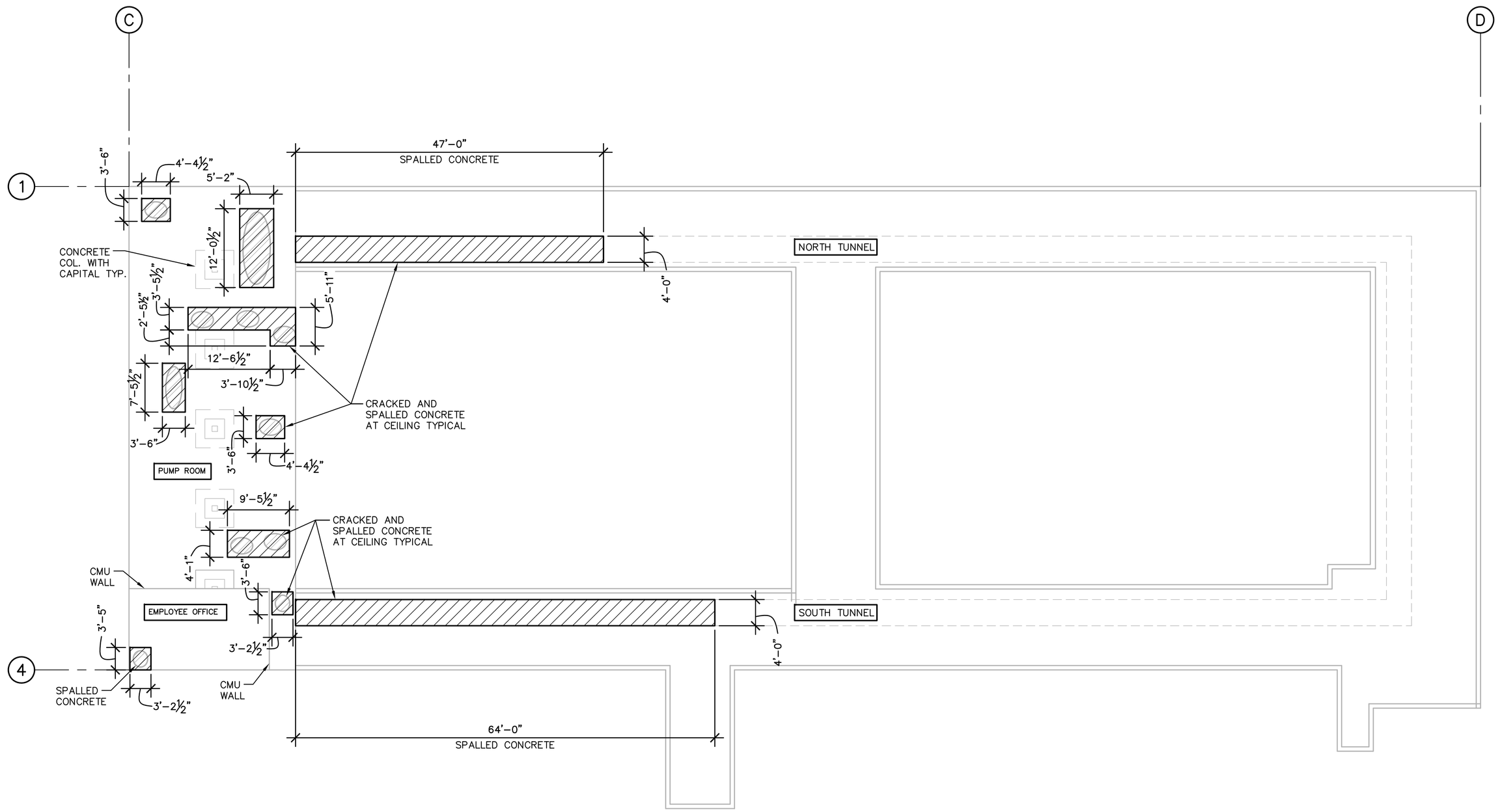

CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS & EXISTING CONDITIONS IN THE FIELD. CONTACT ENGINEER IF CONDITIONS VARY FROM THOSE SHOWN ON THE DRAWINGS.

1 PUMP ROOM AND TUNNEL REFLECTED CEILING REPAIR PLAN

3/32" = 1'-0"

N

PLAN NORTH

NOTES:

1. ▨ INDICATES AREA WHERE EXISTING CONCRETE SHALL BE REPAIRED. REFERENCE DETAIL 2/S4.1 FOR TYPICAL OVER HEAD REPAIR DETAIL.
2. CRACKING AND SPALLING SHOWN ON REPAIR PLAN ARE FOR VISUAL PURPOSE ONLY. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF CRACK AND FOLLOW PROCEDURES OUTLINES ON CONCRETE REPAIR NOTES ON SHEET S4.1

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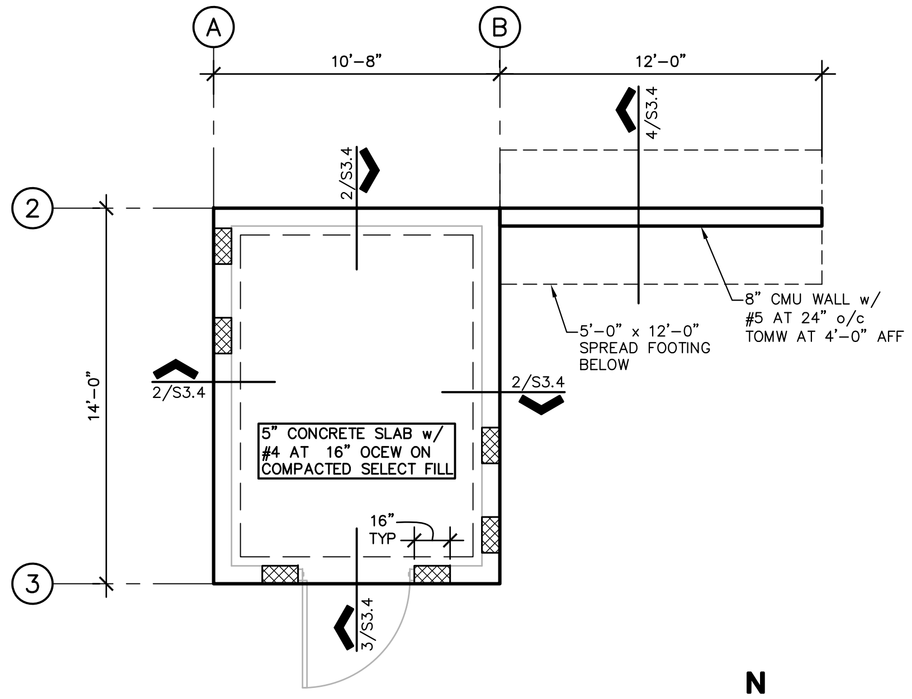


1 FOUNDATION PLAN

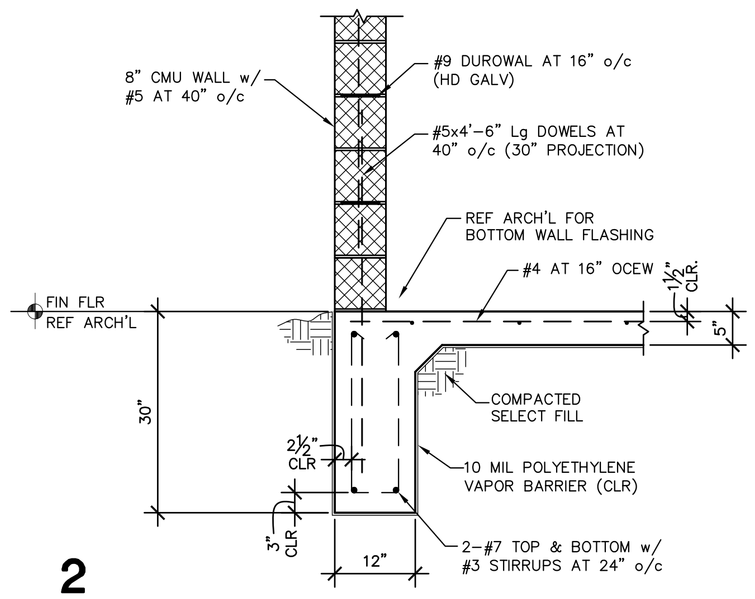
1/4" = 1'-0" STORAGE ROOM

N

PLAN NORTH

NOTES:

1. COORDINATE LOCATION AND ORIENTATION OF BLDG. WITH ARCHITECTURAL DRAWINGS.
2. ALL CONDUIT GREATER THAN 1.1/2" IN DIAMETER SHALL BE RECESSED TO PROVIDE 1.1/2" CLEAR DISTANCE BETWEEN SLAB REBAR & CONDUIT.
3. MAINTAIN 2" MINIMUM CLEAR DISTANCE BETWEEN ALL CONDUIT IN SLAB.
4. A SINGLE CONDUIT (MAX 3" O.D.) MAY BE PLACED WITHIN THE BEAM CAGE. ALL CONDUIT IN BEAM CAGES TO BE TIED TO STIRRUPS MINIMUM OF 4" FROM HORIZONTAL BARS.
5. PLUMBING LINES SHALL NOT BE PLACED IN BOTTOM OF GRADE BEAM TRENCHES.
6. ▨ INDICATES 8" CMU WALL w/ #5 VERTICAL BARS AT 8" o/c.



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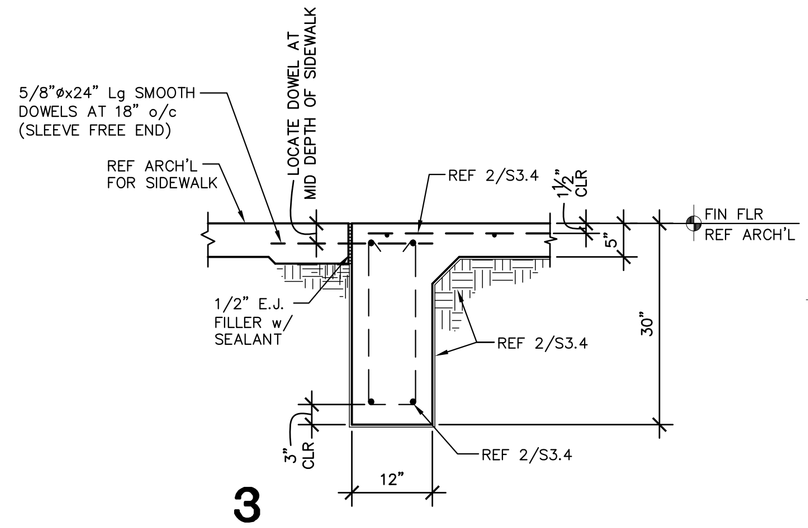

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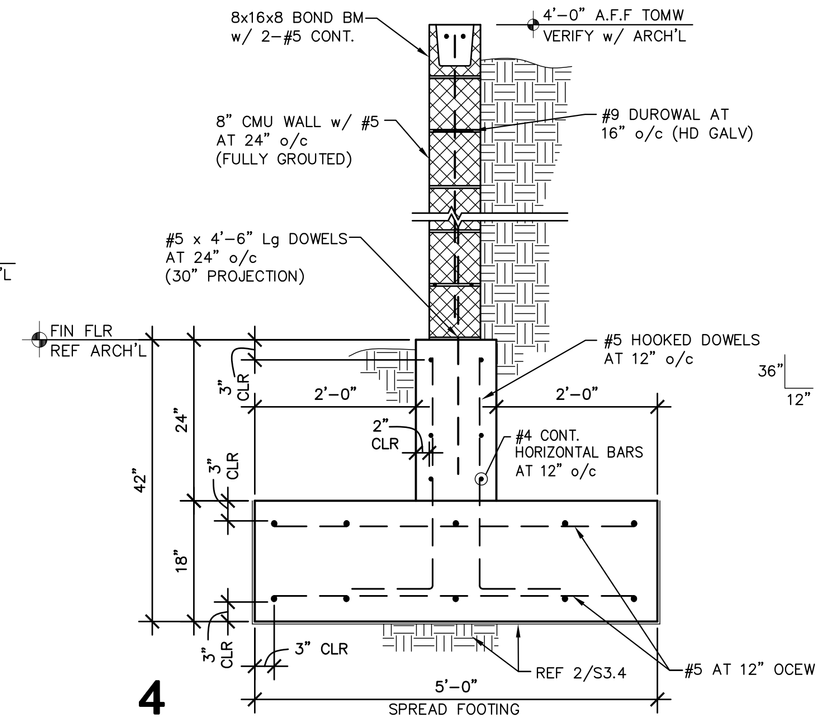

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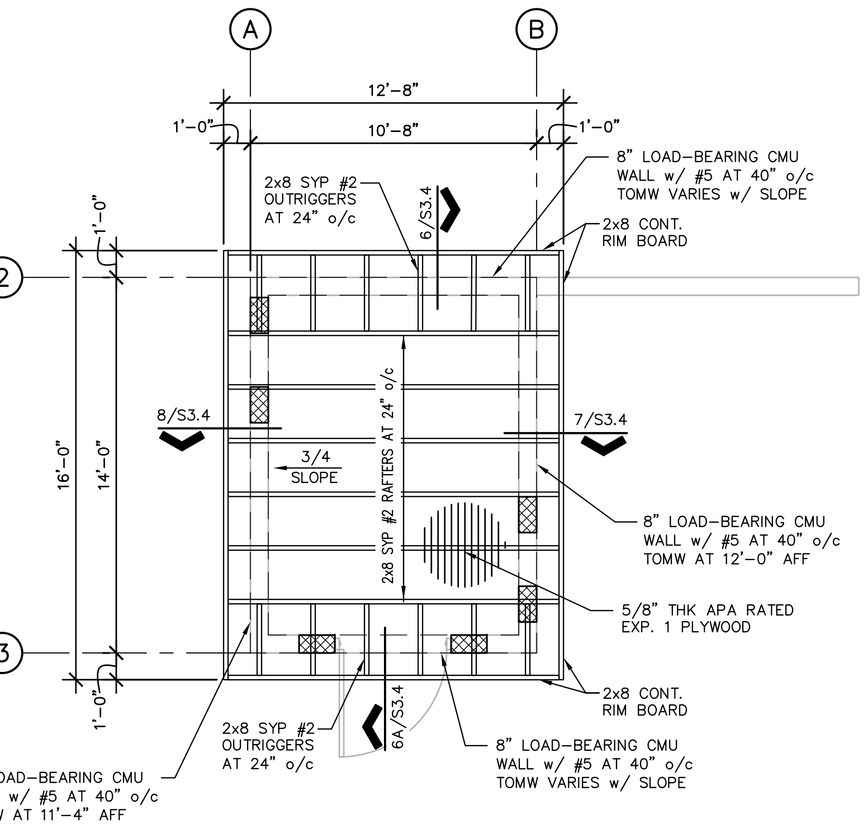


5 FRAMING PLAN

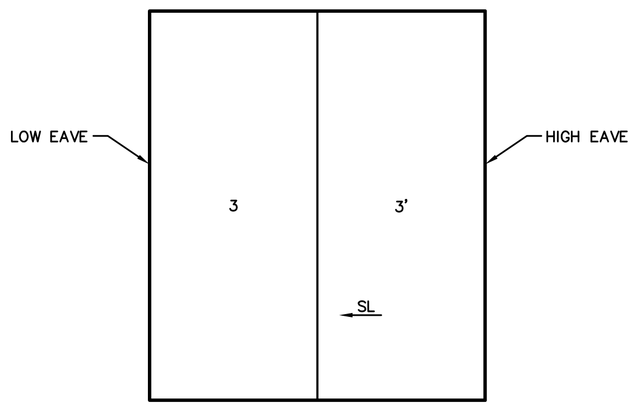
1/4" = 1'-0" STORAGE ROOM

N

PLAN NORTH

NOTES:

1. REFERENCE ARCHITECTURAL FOR ORIENTATION & LOCATION.
2. ROOF SHEATHING SHALL BE 5/8" APA RATED EXPOSURE 1. SPAN RATED 32/16.
3. REFERENCE ROOF SHEATHING NAILING SCHEDULE FOR PROPER PLYWOOD ATTACHMENT.
4. ALL HURRICANE TIES SHALL BE SIMPSON OR APPROVED EQUAL. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. ALL HURRICANE TIES SHALL BE HOT-DIPPED GALVANIZED UNLESS NOTED OTHERWISE.
5. ▨ INDICATES 8" CMU w/ #5 VERTICAL BARS AT 8" o/c.
6. REFERENCE 9/S3.4 FOR TYPICAL TOP PLATE J-BOLT FASTENER DETAIL

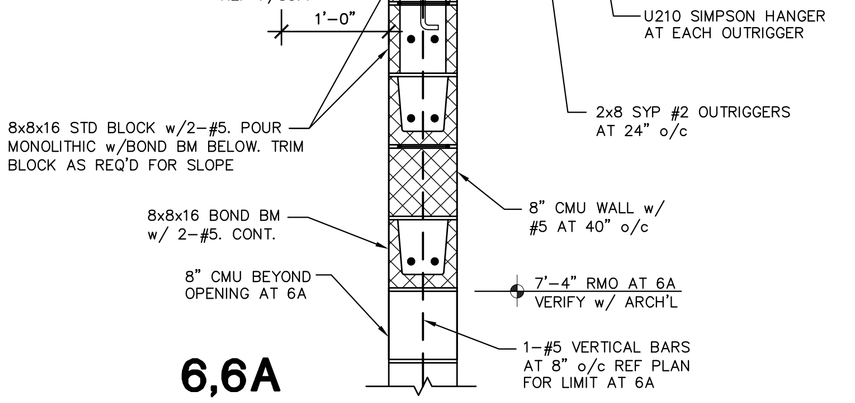


SAMS MEMORIAL POOL RENOVATIONS
ROOF DESIGN WIND PRESSURE DIAGRAM (SERVICE)

DESIGN WIND PRESSURE FOR ROOF COMPONENTS & CLADDING	
ZONE	P- (UPLIFT)
3	-34 PSF
3'	-47 PSF

DOORS & WINDOWS MAXIMUM DESIGN WIND PRESSURES
P+ = +18 PSF TOWARDS THE SURFACE
P- = -24 PSF AWAY FROM THE SURFACE

ROOF SHEATHING NAILING SCHEDULE	
4ft FROM PERIMETER OF ROOF UNLESS NOTED OTHERWISE.	8d NAILS AT 6" o/c ALONG EDGE OF SHEET AND 6" o/c AT INTERIOR SUPPORTS
OTHER	8d NAILS AT 6" o/c PERIMETER OF SHEET AND 12" o/c AT INTERIOR SUPPORTS



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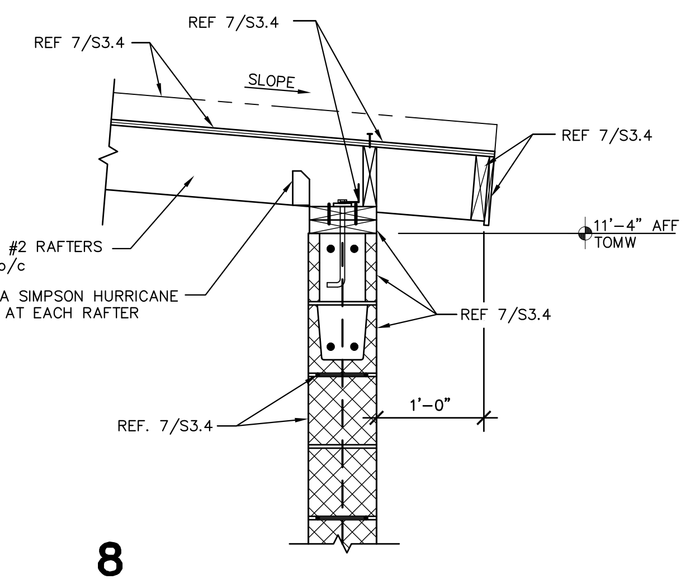

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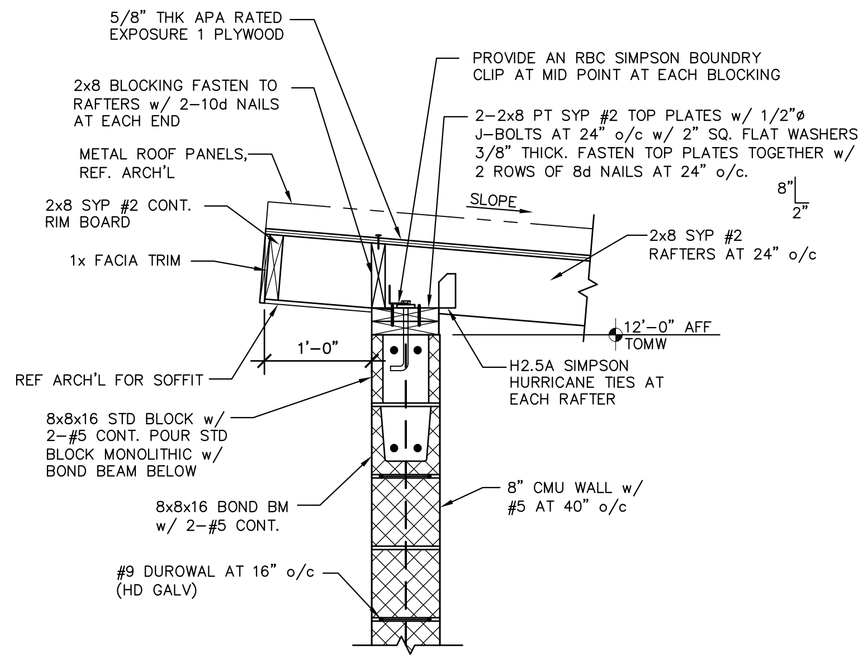

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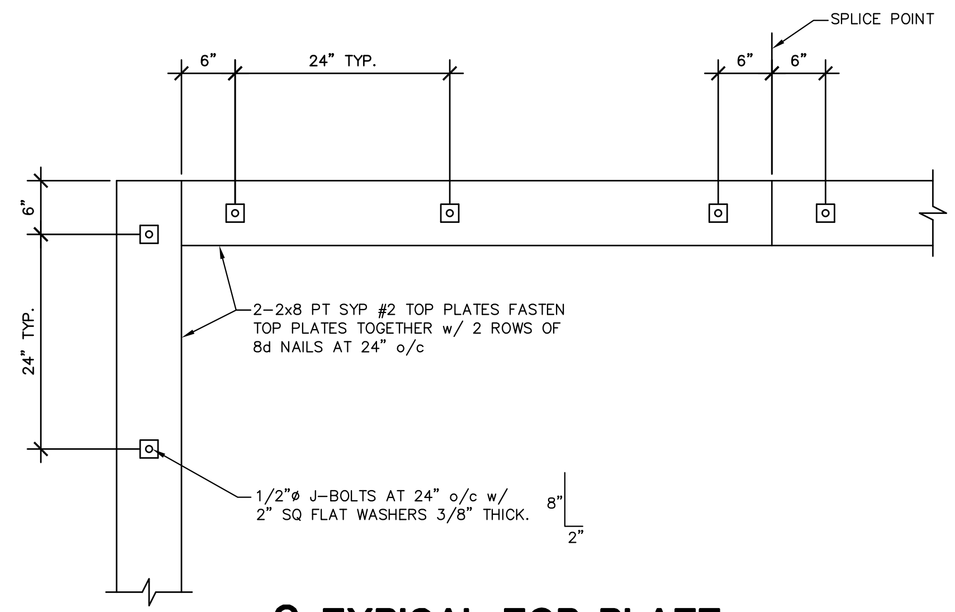

9 TYPICAL TOP PLATE J-BOLT FASTENER DETAIL

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SAMS MEMORIAL POOL RENOVATIONS

CITY OF BROWNSVILLE, TEXAS

HERIBERTO CAVAZOS 103450 LICENSED ARCHITECT STATE OF TEXAS
9/6/19

DATE September 6, 2019
SCALE As Shown
DRAWN AV, JCW, IG
JOB # 192-523
SHEET S3.4

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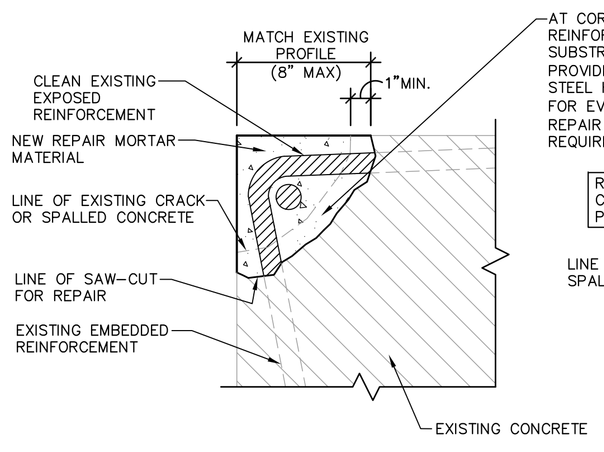
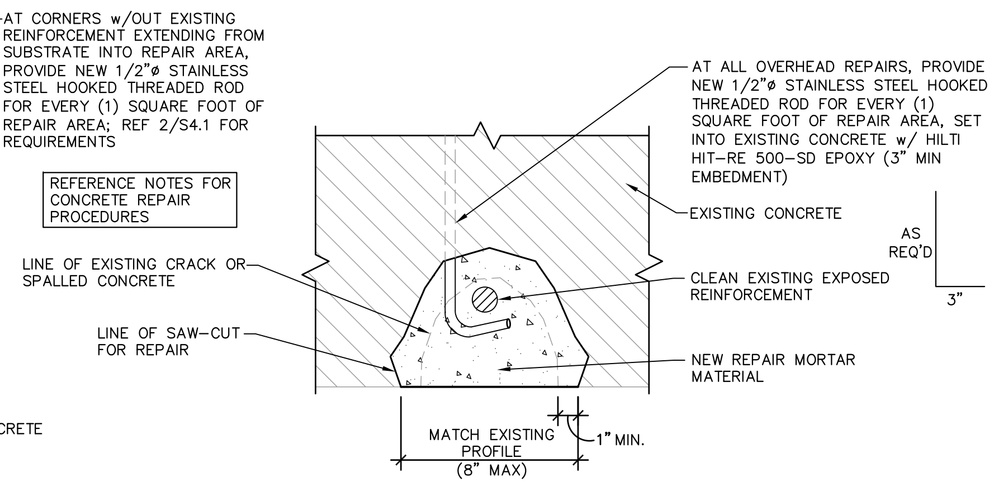
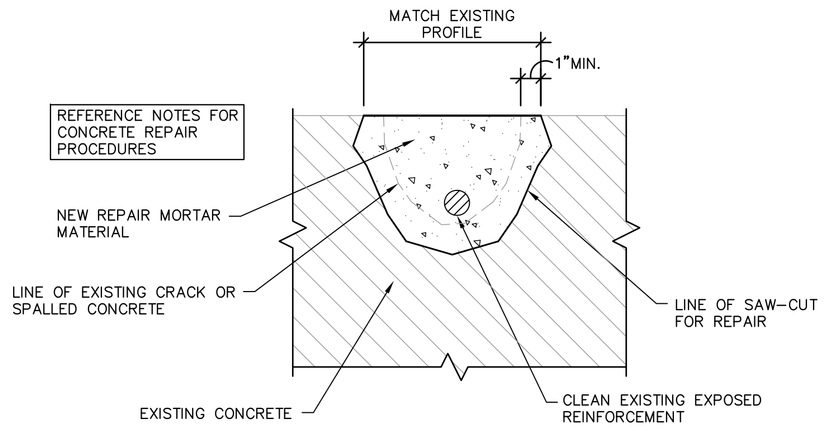


1 TYPICAL CORNER REPAIR



2 TYPICAL OVERHEAD REPAIR



3 TYPICAL HORIZONTAL REPAIR

4 TYPICAL CRACK REPAIR

(25 MILS AND TIGHTER)

5 TYPICAL CRACK REPAIR

(25 MILS AND WIDER)

6 TYPICAL WALL SPALL REPAIR

7 TYPICAL SLAB REPAIR

8 TYPICAL COLUMN REPAIR

NOTE: FOR REPAIR PROCEDURES, REFER TO CONCRETE REPAIR NOTES

CONCRETE REPAIR NOTES

1. IDENTIFICATION OF REPAIR AREAS:
   - CONTRACTOR SHALL VERIFY ALL CONCRETE AREAS BY MECHANICAL SOUNDING TO ENSURE ALL DISTRESSED CONCRETE IS REMOVED.
   - CONTRACTOR SHALL MARK PROPOSED REPAIR AREA ON SURFACE(S) TO RECEIVE REPAIR. PROPOSED AREA SHALL BE RECTILINEAR WITH 90 DEGREE CORNERS.
   - CONTRACTOR SHALL SCHEDULE WEEKLY SITE VISITS WITH ENGINEER TO REVIEW PROPOSED REPAIR AREAS. ALTERNATELY, CONTRACTOR MAY PHOTO DOCUMENT SIZE AND LOCATION OF PROPOSED REPAIR AREAS AND PROVIDE DOCUMENTATION TO ENGINEER FOR REVIEW. ENGINEER WILL EXAMINE PROPOSED AREAS FOR POSSIBLE MODIFICATIONS TO BOUNDARIES OR REPAIR METHODS, AND APPROVAL.
2. REMOVAL OF CRACKED & SPALLED CONCRETE:
   - SAW-CUT CONCRETE AROUND PERIMETER OF REPAIR AREA; UNDERCUT TO PROVIDE KEYED SHAPE. GRIND CONCRETE AS REQUIRED TO PROVIDE UNIFORM, STRAIGHT EDGE. CONTRACTOR SHALL EXERCISE CAUTION TO NOT SAW-CUT EMBEDDED STEEL REINFORCEMENT.
   - REMOVE DISTRESSED CONCRETE BY MECHANICAL CHIPPING TO SOUND CONCRETE. REMOVE CONCRETE TO A MINIMUM DEPTH OF 2 INCHES OR A MINIMUM DEPTH OF 1 INCH BEYOND EXPOSED REINFORCEMENT. SLOPE THE REMOVAL AREA TOWARDS THE OPENING TO PROVIDE A KEY INTO THE SOUND CONCRETE. CONTRACTOR SHALL EXERCISE CARE TO AVOID CRACKING THE UNDERLYING SOUND CONCRETE. IF FULL-SECTION REMOVAL IS REQUIRED, CONTACT ENGINEER FOR FURTHER INSTRUCTIONS.
   - REMOVE CONCRETE AROUND AND UNDER EXPOSED REINFORCEMENT TO PROVIDE A MINIMUM 1" CLEARANCE BETWEEN THE BAR AND THE CONCRETE.
3. CRACK PREPARATION
   - ROUT CRACK BY SAW-CUTTING CONCRETE AT CRACK LOCATION TO A WIDTH AND DEPTH OF 1/2 INCH.
   - BLOW OUT DUST AND DEBRIS FROM ROUTED CRACK BY USING COMPRESSED AIR OR VACUUM.
   - BEFORE INSTALLATION OF NEW REPAIR FILLER MATERIAL, CONTRACTOR SHALL CONTACT ENGINEER FOR EXAMINATION OF PREPARED CRACKS TO DETERMINE IF EPOXY INJECTION REPAIR IS REQUIRED.
4. SURFACE PREPARATION:
   - PREPARE SURFACE PER MANUFACTURER'S RECOMMENDATIONS. FOLLOW APPLICABLE ACI/ICRI APPROPRIATE GUIDELINES.
   - CONCRETE SUBSTRATE – REMOVE ALL DIRT, OIL, GREASE, AND ALL BOND-INHIBITING MATERIALS FROM SURFACE. PREPARATION WORK SHALL BE DONE BY SANDBLAST, HIGH PRESSURE WATER BLAST OR OTHER APPROPRIATE MECHANICAL MEANS TO EXPOSE AGGREGATE AND OBTAIN CONCRETE SURFACE PROFILE (CSP) REQUIRED. SUBSTRATE SHOULD BE SATURATED SURFACE DRY (SSD) WITH NO STANDING WATER DURING APPLICATION.
   - EXPOSED REINFORCEMENT – SANDBLAST OR MECHANICALLY CLEAN REINFORCEMENT TO REMOVE ALL TRACES OF CORROSION, EXPOSING WHITE METAL. STEEL SHALL BE PRIMED IMMEDIATELY THEREAFTER TO PREVENT FORMATION OF SURFACE CORROSION. IF MORE THAN 10% SECTION LOSS IS OBSERVED FOLLOWING SANDBLASTING, CONTACT ENGINEER FOR FURTHER INSTRUCTIONS.
5. PRIMING:
   - CONCRETE SUBSTRATE – PRIME THE PREPARED SUBSTRATE WITH A BRUSH OR SPRAYED APPLIED COAT OF PRIMER RECOMMENDED BY REPAIR MORTAR MANUFACTURER. ALTERNATELY, A SCRUB COAT OF REPAIR MORTAR CAN BE APPLIED PRIOR TO PLACEMENT OF THE MORTAR. THE REPAIR MORTAR SHALL BE APPLIED INTO THE WET SCRUB COAT BEFORE IT DRIES.
   - EXPOSED REINFORCEMENT – PRIMER RECOMMENDED BY REPAIR MORTAR MANUFACTURER.
6. MIXING:
   - MIX COMPONENTS PER MANUFACTURER'S RECOMMENDATIONS.
7. REPAIR MATERIALS:
   - REPAIR MORTAR MATERIAL "A" – FOR SHALLOW HORIZONTAL, VERTICAL AND OVERHEAD REPAIRS, LESS THAN 1.1/2" DEEP: SPECTRUM RE-KOTE TF, MANUFACTURED BY W. R. MEADOWS
   - REPAIR MORTAR MATERIAL "B" – FOR INTERMEDIATE VERTICAL AND OVERHEAD REPAIRS, FROM 1.1/2" TO 3.0" DEEP: MEADOW-CRETE GPS, MANUFACTURED BY W. R. MEADOWS
   - REPAIR MIX MATERIAL "C" – FOR LARGE, FORMED REPAIRS FROM 3.0" TO 8.0" DEEP: MEADOW-CRETE FNP EXTENDED, MANUFACTURED BY W. R. MEADOWS.
   - CRACK FILLER/INJECTION EPOXY: REZI-WELD LV, MANUFACTURED BY W. R. MEADOWS
   - BONDING AGENT: ACRY-LOK, MANUFACTURED BY W. R. MEADOWS
   - APPROVED EQUIVALENT REPAIR MATERIAL MANUFACTURERS: SIKA CORPORATION, EUCLID CHEMICAL COMPANY & BASF BUILDING SYSTEMS; ALL REPAIR MATERIALS TO BE FROM SINGLE MANUFACTURER.
   - CONCRETE FOR RE-CAST REPAIRS (IF REQUIRED): PORTLAND CEMENT CONCRETE IN ACCORDANCE WITH "SECTION 03300- CAST-IN-PLACE CONCRETE."
8. APPLICATION & FINISH:
   - REPAIR MORTAR MATERIALS A & B – MATERIAL SHALL BE SCRUBBED AND WORKED INTO THE PRIMED SUBSTRATE, FILLING ALL PORES AND VOIDS. FORCE MATERIAL AGAINST EDGE OF REPAIR, WORKING TOWARDS CENTER. THOROUGHLY COMPACT MORTAR AROUND EXPOSED REINFORCEMENT. MATERIAL MAY NEED TO BE APPLIED IN MULTIPLE LIFTS; FOLLOW MINIMUM AND MAXIMUM LIFT REQUIREMENTS. WHERE MULTIPLE LIFTS ARE REQUIRED, SCORE TOP SURFACE OF EACH LIFT TO PRODUCE A ROUGHENED SUBSTRATE FOR NEXT LIFT. ALLOW PRECEDING LIFT TO HARDEN, 30 MINUTES MINIMUM, BEFORE APPLYING FRESH MATERIAL. SATURATE SURFACE OF THE LIFT WITH CLEAN WATER. SCRUB FRESH MORTAR INTO PRECEDING LIFT. AFTER FILLING REPAIR, CONSOLIDATE, THEN SCREED. ALLOW MORTAR TO SET TO DESIRED STIFFNESS, AND THEN FINISH WITH STEEL, WOOD OR SPONGE FLOAT FOR A SMOOTH SURFACE.
   - REPAIR MIX MATERIAL C – PRE-WET SURFACE TO SSD (SATURATED SURFACE DRY). MATERIAL SHALL BE POURED OR PUMPED INTO FORMED AREA. VIBRATE FORM WHILE POURING OR PUMPING. PUMP WITH A VARIABLE PRESSURE PUMP. CONTINUE PUMPING UNTIL A 3 TO 5 PSI INCREASE IN NORMAL LINE PRESSURE IS EVIDENT THEN STOP PUMPING. FORM SHOULD NOT DEFLECT. VENT TO BE CAPPED WHEN STEADY FLOW IS EVIDENT, AND FORMS STRIPPED WHEN APPROPRIATE.
9. CURING:
   - MOIST CURE WITH WET BURLAP AND POLYETHYLENE, OR MANUFACTURER'S RECOMMENDED CURING COMPOUND. MOIST CURING SHOULD COMMENCE IMMEDIATELY AFTER FINISHING.
   - PROTECT NEWLY APPLIED MATERIAL FROM DIRECT SUNLIGHT, WIND, RAIN AND FROST.

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SAMS MEMORIAL POOL RENOVATIONS

CITY OF BROWNSVILLE, TEXAS

DATE	September 6, 2019
SCALE	As Shown
DRAWN	AV, CW, IG
JOB #	192-523
SHEET	S4.1

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FIRM REGISTRATION # F-4145

CODES & ORDINANCES:

1. GENERAL:
   a. UNLESS DRAWINGS OR SPECIFICATIONS HAVE MORE STRINGENT REQUIREMENTS, PERFORM ALL WORK PER APPLICABLE VERSION OF INTERNATIONAL BUILDING CODES, AND LOCAL CODES AND ORDINANCES.

   b. PRIOR TO SUBMITTING PROPOSAL, NOTIFY ENGINEER OF ANY ASPECTS OF DESIGN WHICH ARE THOUGHT TO BE IN NONCOMPLIANCE WITH APPLICABLE CODES.

3. PERMITS:
   a. CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS AND FEES ASSOCIATED WITH PROJECT, INCLUDING FEES FOR INSPECTIONS, APPLICATIONS, AND PROVISION OF NEW SERVICES.

   b. CONTRACTOR WHO WILL ACTUALLY PERFORM WORK MUST APPLY FOR ALL REQUIRED PERMITS.

4. APPROVALS AND INSPECTIONS:
   a. OBTAIN APPROVAL FROM CITY FIRE DEPARTMENT AND BUILDING AND SAFETY DEPARTMENT PRIOR TO INSTALLATION OF ANY FIRE RELATED ITEMS.

   b. COORDINATE PRESSURE TESTS, INSPECTIONS AND APPROVAL FOR ALL SYSTEMS WITH PERMITTING OFFICER, OWNER AND ENGINEER.

GENERAL NOTES:

1. CONTRACT RELATED:
   a. COORDINATE WORK AMONG ALL DISCIPLINES. IT IS NOT THE INTENT OF THESE DOCUMENTS TO DICTATE WHO MUST DO THE WORK. ALL WORK SHOWN IS THE RESPONSIBILITY OF THE (PRIME) CONTRACTOR.

   b. WORK TO BE DONE UNDER ALLOWANCES BECOMES AN INTEGRAL PART OF THE PROJECT AND RESPONSIBILITY OF CONTRACTOR ONCE ALLOWANCE IS APPROVED.

   c. CONTRACTOR SHALL NOT PROCEED WITH ANY WORK INVOLVING A CHANGE IN PROJECT SCOPE OR COST WITHOUT FIRST HAVING OBTAINED ENGINEER'S APPROVAL IN WRITING. UNLESS ENGINEER HAS AGREED TO SUCH CHANGE PRIOR TO IT BEING DONE, AND HAS AGREED THAT AN INCREASE IN COST ASSOCIATED WITH SUCH CHANGE IS WARRANTED; CONTRACTOR WILL NOT BE REIMBURSED FOR SUCH CHANGE.

COORDINATION:

1. GENERAL:
   a. CONTRACTOR SHALL REVIEW COMPLETE DOCUMENTS PRIOR TO SUBMITTAL OF PROPOSAL TO GAIN COMPLETE UNDERSTANDING OF PROJECT SCOPE, WORK BY OTHERS, AND MECHANICAL WORK ASSOCIATED WITH OTHER DISCIPLINES.

   b. TIME OR MONEY ALLOWANCES WILL NOT BE MADE TO ACCOMMODATE UTILITY CONFLICTS THAT CAN BE REASONABLY RESOLVED BY COORDINATION DURING SHOP DRAWING STAGE.

   c. PROVIDE COORDINATION DRAWINGS OF REFLECTED CEILING PLAN AND SECTION ABOVE CEILING SHOWING WORK OF ALL AFFECTED TRADES. DO NOT PROCEED WITH FABRICATION WORK UNTIL COORDINATION DRAWINGS HAVE BEEN APPROVED BY A/E.

2. SITE:
   a. TIME OR MONEY ALLOWANCES WILL NOT BE MADE TO ACCOMMODATE UTILITY CONFLICTS THAT CAN BE REASONABLY RESOLVED BY COORDINATION DURING SHOP DRAWING STAGE.

3. ARCHITECTURAL AND STRUCTURAL:
   a. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR DETAILS OF CONSTRUCTION, INCLUDING BEAMS, FLOOR AND WALL PENETRATIONS, CHASES, AND REFLECTED CEILING PLANS. VERIFY OPENING SIZES WITH EQUIPMENT FURNISHED.

   b. SLEEVE ALL EXTERIOR WALL AND GRADE BEAM PENETRATIONS. GRADE BEAM PENETRATIONS SHALL BE MADE WITHIN MIDDLE 1/3 OF VERTICAL SPAN OF BEAM.

   c. SEAL AROUND DUCTS AND PIPING AT ALL WALLS, A/C ROOMS AND WALL LOUVER PENETRATIONS WITH FIREPROOF CAULKING. RE: SPECS. PROVIDE ESCUTCHEON PLATES AND FLASHING AROUND PENETRATION, BOTH INSIDE AND OUTSIDE, TO PROVIDE FINISHED LOOK.

4. SPATIAL COORDINATION:
   a. COORDINATE ALL WORK WITH OTHER TRADES; COORDINATE SCHEDULE OF WORK WITH ALL SUB-CONTRACTORS TO ACHIEVE SMOOTH FLOW OF CONSTRUCTION.

   b. IN GENERAL, REROUTE SMALLER DUCTS/PIPES THROUGH JOISTS TO RESOLVE CONFLICTS WITH LARGER. PERFORM REROUTING IN MOST EFFICIENT MANNER POSSIBLE, AND IN ACCORDANCE WITH INDUSTRY STANDARDS.

   c. IN GENERAL ROUTE DUCTS/PIPES IN MOST EFFICIENT MANNER POSSIBLE, AND IN ACCORDANCE WITH INDUSTRY STANDARDS.

   d. SEE ELECTRICAL PLANS FOR EXACT LOCATION OF ELECTRICAL PANELS TO AVOID DUCTWORK AND PIPING RUNNING OVER THESE AREAS. COORDINATE WITH ELECTRICAL CONTRACTOR.

EQUIPMENT:

1. EQUIPMENT INSPECTION:
   a. FIELD VERIFY ALL CONDITIONS AND MEASURE DIMENSIONS WITHIN THE BUILDING PRIOR TO ORDERING EQUIPMENT AND/OR PROCEEDING WITH INSTALLATION.

   b. ALL EQUIPMENT SHALL BE FACTORY TESTED, AND CONTRACTOR SHALL VERIFY EQUIPMENT CONDITION PRIOR TO INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR EQUIPMENT DAMAGED DURING MOVING AND INSTALLATION.

   c. EQUIPMENT FOUND DEFECTIVE PRIOR TO FINAL ACCEPTANCE SHALL BE REPLACED AT NO COST TO OWNER.

2. EQUIPMENT ACCESS:
   a. INSTALL ALL VALVES, CONTROLS, DAMPERS, FANS, ETC. IN ACCESSIBLE LOCATIONS. PROVIDE ADEQUATELY SIZED ACCESS DOORS WHERE REQUIRED.

3. EQUIPMENT INSTALLATION:
   a. AFFIX ID TAGS TO ALL MECHANICAL EQUIPMENT PER SPECIFICATIONS.

4. EQUIPMENT INSULATION:
   a. INSULATE ALL SURFACES THAT ARE CAPABLE OF BECOMING COLD AND COLLECTING CONDENSATE. THIS INCLUDES SUPPLY DIFFUSERS AND CONNECTING DUCTWORK / TRANSITION PIECES.

5. PLUMBING:
   a. PROVIDE CODE RECOMMENDED CLEARANCE OR MINIMUM 10' BETWEEN EXHAUST FANS DISCHARGES, PLUMBING VENTS AND AIR INTAKES. COORDINATE LOCATIONS WITH PLUMBING CONTRACTOR.

6. ELECTRICAL:
   a. CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH ELECTRICAL CONTRACTOR REGARDING EQUIPMENT SIZES AND TYPES OF ELECTRICAL INTERFACE EQUIPMENT REQUIRED.

   b. DUE TO VARIATIONS IN EQUIPMENT CHARACTERISTICS BY DIFFERENT EQUIPMENT SUPPLIERS, MECHANICAL EQUIPMENT ULTIMATELY PROVIDED MAY DIFFER IN HORSEPOWER OR AMPERAGE REQUIREMENTS FROM THAT SPECIFIED IN THESE DRAWINGS. COORDINATE WITH GENERAL CONTRACTOR PRIOR TO BIDDING, AND PRIOR TO SUBMITTALS AND ORDERING EQUIPMENT, TO ENSURE THAT EQUIPMENT ELECTRICAL REQUIREMENTS ARE CONVEYED TO ELECTRICAL CONTRACTOR. IT IS SOLELY CONTRACTOR'S RESPONSIBILITY TO ENSURE COMPATIBILITY ISSUES ARE COORDINATED.

INSULATION:

1. FIBERGLASS INSULATION MAY NOT BE USED ON ANY COLD PIPING SURFACES; ONLY CLOSED CELL INSULATION IS ACCEPTABLE.

2. PROVIDE INSULATION ON ALL SURFACES CAPABLE OF CREATING CONDENSATION.

ABBREVIATIONS

A	AMPS	ENT.	ENTERING	NO	NORMALLY OPEN
ACCU	AIR COOLED CONDENSING UNIT	EXT.	EXTERNAL OR EXTERIOR	NTS	NOT TO SCALE
ACT	ACTUATOR	FCU	FAN COIL UNIT	OA	OUTSIDE AIR
AFF	ABOVE FINISHED FLOOR	FD	FIRE DAMPER	PH	PHASE
AHU	AIR HANDLING UNIT	FM	FLOW METER	RA	RETURN AIR
B.	BOTTOM	FS	FLOW SWITCH	RAG/RG	RETURN AIR GRILLE
BAS	BUILDING AUTOMATION SYSTEM	FPI	FINS PER INCH	RD	ROOF DRAIN
BOP	BOTTOM OF PIPE	G.	GROUND	RM.	ROOM
BOTT.	BOTTOM	GA.	GAGE	RPZ	REDUCED PRESSURE ZONE
C.	CONDUIT OR COMMON	GALV.	GALVANIZED	SA	SUPPLY AIR
CHR	CHILLED WATER RETURN	GPM	GALLONS PER MINUTE	SD	SUPPLY AIR DIFFUSER
CHS	CHILLED WATER SUPPLY	GRND.	GROUND	SS	STAINLESS STEEL
CHW	CHILLED WATER	HB	HOSE BIBB	SZ	SINGLE ZONE
CHWP	CHILLED WATER PUMP	HP	HORSEPOWER	TAB	TESTING & BALANCING
CR	CONDENSER WATER RETURN	HS	HUMIDITY SENSOR	T.O.L.	TOP OF LOUVER
CS	CONDENSER WATER SUPPLY	HVAC	HEATING, VENTILATION, & AIR CONDITIONING	TS	TEMPERATURE SENSOR
CLG.	CEILING OR COOLING			TSTAT	THERMOSTAT
COMB.	COMBINATION	LVG.	LEAVING	UG	UNDERGROUND
CONC.	CONCRETE	MECH	MECHANICAL	UNO	UNLESS OTHERWISE NOTED
COND.	CONDUIT	MOT. STRTR.	MOTOR STARTER	V	VOLTS
CT	COOLING TOWER	MS	MOTOR STARTER	VAV	VARIABLE AIR VOLUME
CU.	COPPER	MZ	MULTI-ZONE	VFD	VARIABLE FREQUENCY DRIVE
CW	CITY WATER	NC	NORMALLY CLOSED	W	WIRE
DDC	DIRECT DIGITAL CONTROLS				
DMPR.	DAMPER				
DISC.	DISCONNECT				
EAG/EG	EXHAUST AIR GRILLE				
EMS	ENERGY MANAGEMENT SYSTEM				

MECHANICAL SYMBOLS LEGEND

12x12	DUCT SIZE: FIRST FIGURE IS SIDE SHOWN	T	THERMOSTAT
(12x12)	BELOW DUCT SIZE: FIRST FIGURE IS SIDE SHOWN	RH	SPACE HUMIDITY SENSOR
	DIRECTION OF FLOW-RETURN	RH	DUCT HUMIDITY SENSOR
	DIRECTION OF FLOW-SUPPLY	C	SPACE CARBON DIOXIDE SENSOR
		SP	STATIC PRESSURE SENSOR
FD	FIRE DAMPER	C	DUCT CARBON DIOXIDE SENSOR
	FLEXIBLE DUCT	CHR	CHILLED WATER RETURN
EG-X cfm	EXHAUST AIR GRILLE	CHS	CHILLED WATER SUPPLY
		CD	CONDENSATE PIPING
RG/TG-X cfm	RETURN AIR/TRANSFER AIR GRILLE		BUTTERFLY VALVE
SD-X cfm	SUPPLY AIR DIFFUSER		MANUAL VALVE
	SIDE TAP WITH DAMPER		AUTOMATIC VALVE
	BACKDRAFT DAMPER		CHECK VALVE
AFR	AUTO-FLOW REGULATOR		PRESSURE GAUGE & COCK
	DRAIN VALVE	TS	TEMPERATURE SENSOR
	BALL VALVE	TW	THERMOMETER WELL

ELECTRICAL LEGEND

GFCI WCP	DUPLEX RECEPTACLE W/ GROUND FAULT INTERRUPTING TYPE - HUBBELL MODEL #GFTWRST20X AND WHILE IN USE WEATHERPROOF COVER - HUBBELL MODEL #WP26EH	18" AFF
S	SINGLE POLE TOGGLE SWITCH - HUBBELL MODEL #1221X	48" AFF
S_{WP}	SINGLE POLE TOGGLE SWITCH WITH WEATHER PROOF COVER - HUBBELL MODEL #HBL7420	48" AFF
S_T	THERMAL SWITCH, SQUARE D CLASS 2510 W RED PILOT LIGHT AND HANDLE GUARD / LOCK-OUT	AS REQUIRED
	DISCONNECT SWITCH - NON FUSED	AS REQUIRED
	DISCONNECT SWITCH - FUSED	AS REQUIRED
	ELECTRICAL PANELBOARD	AS REQUIRED
	UNDERGROUND RACEWAY	- - - -
	CONCEALED RACEWAY	- - - -

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SAMS MEMORIAL POOL RENOVATIONS
CITY OF BROWNSVILLE, TEXAS

DATE SEPTEMBER 03, 2019
SCALE As Shown
DRAWN ETHOS
JOB # 19V23
SHEET ME1.01

STATE OF TEXAS
RAY PEYNADO
125390
REGISTERED
PROFESSIONAL ENGINEER
9.03.2019
ELECTRICAL

STATE OF TEXAS
CESAR A. GONZALEZ
108611
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DEMOLITION GENERAL NOTES:

1. ALL DEMOLITION WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE CODES INCLUDING THOSE PUBLISHED BY OSHA.
2. THE EXTENT OF DEMOLITION WORK IS INDICATED ON THE ARCHITECTURAL DRAWINGS AND BY THE REQUIREMENTS OF THIS SECTION. A VISIT TO THE SITE IS REQUIRED TO PROPERLY BID THE DEMOLITION WORK.
3. PROVIDE ALL DEMOLITION WORK REQUIRED FOR THE REMOVAL OF EQUIPMENT AND ASSOCIATED DEVICES. PROVIDE A COMPLETE AND OPERABLE SYSTEM UPON COMPLETION OF THE PROJECT.
4. COORDINATE DEMOLITION OF DIVISION 22 & 23 SYSTEMS AS REQUIRED WITH ALL OTHER TRADES.
5. ALL EXISTING EQUIPMENT REMOVED DURING CONSTRUCTION, THAT IS NOT TO BE REUSED, SHALL BE REMOVED FROM THE JOB SITE AND PROPERLY RETURNED TO THE OWNER, IF DESIRED BY OWNER.
6. OWNER MAY WISH TO KEEP DEMOLISHED EQUIPMENT AND MATERIALS. COORDINATE OWNER, AND DISPOSE OF EQUIPMENT AND MATERIALS THAT OWNER DOES NOT RETAIN.

MECHANICAL KEYED NOTES:

[1] PREPARE AREA FOR NEW WALL MOUNTED FAN. SEE NEW PLAN.

ELECTRICAL KEYED NOTES:

(1) DISCONNECT AND REMOVE ALL ELECTRICAL ALONG WITH RELATED RACEWAYS, WIRING AND SUPPORT HARDWARE LOCATED ON WALL TO BE REMOVED – TYPICAL.

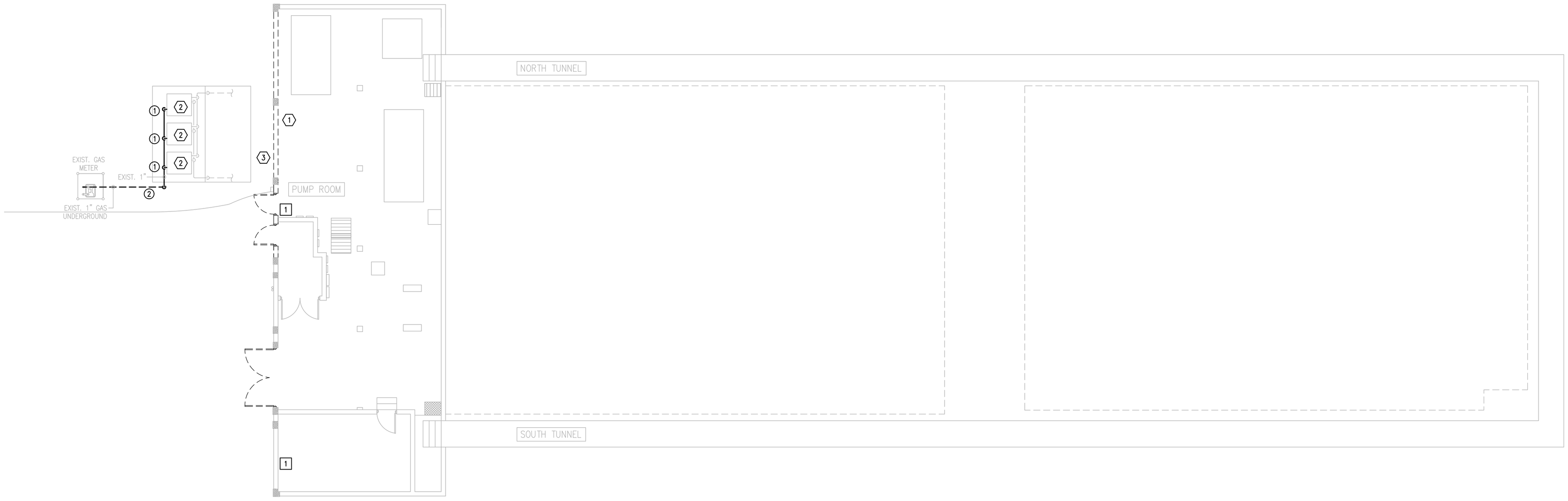
(2) DISCONNECT AND REMOVE ALL ELECTRICAL ALONG WITH RELATED RACEWAYS, WIRING AND SUPPORT HARDWARE TO POOL HEATERS TO BE REMOVED – TYPICAL.

(3) REMOVE ELECTRIC UTILITY CT METER, RACEWAYS AND CONDUCTORS; TO BE RELOCATED TO OUTER NEW WALL; COORDINATE WITH OTHER TRADES, OWNER, AND ELECTRIC UTILITY.

PLUMBING KEYED NOTES:

(1) DISCONNECT EXISTING GAS PIPING SERVING POOL WATER HEATERS THAT WILL BE REPLACED. REFER TO NEW PLAN FOR NEW WATER HEATER LOCATION & CONNECTION.

(2) DEMOLISH EXISTING GAS PIPING UNDERGROUND AND ABOVE GROUND AS SHOWN. REFER TO NEW PLAN FOR NEW GAS PIPE ROUTING.



01 PUMP ROOM AND TUNNEL
MECHANICAL & ELECTRICAL DEMOLITION PLAN
SCALE: 1/8" = 1'– 0"

NORTH

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FLUE VENT PIPING GENERAL NOTES:

1. THIS OPTION USES TYPE-B DOUBLE-WALL FLUE OUTLET PIPING.
2. THE NEGATIVE DRAFT IN A CONVENTIONAL VENT INSTALLATION MUST BE WITHIN THE RANGE OF 0.02 TO 0.08 INCHES W.C. TO ENSURE PROPER OPERATION.
3. IF THE DRAFT IN A DEDICATED STACK FOR A SINGLE UNIT INSTALLATION EXCEEDS THE MAXIMUM SPECIFIED DRAFT, YOU MUST INSTALL A BAROMETRIC DAMPER TO CONTROL DRAFT.
4. USE THE NATIONAL FUEL GAS CODE VENTING TABLES FOR DOUBLE-WALL VENT TO PROPERLY SIZE ALL VENT CONNECTORS AND STACKS.
5. AVOID LONG HORIZONTAL RUNS OF THE VENT PIPE, 90° ELBOWS, REDUCTIONS AND RESTRICTIONS.
6. THE VENT TERMINAL SHOULD BE VERTICAL AND EXHAUST OUTSIDE THE BUILDING AT LEAST 2 FEET ABOVE THE HIGHEST POINT OF THE ROOF WITHIN A 10 FOOT RADIUS OF THE TERMINATION.

GAS PIPING GENERAL NOTES:

1. METER TO DELIVER GAS PRESSURES AT MAXIMUM OF 14 INCHES WATER COLUMN (0.5 PSIG) AND MINIMUM OF 4.5 INCHES WATER COLUMN.
2. PRESSURE DROP OF 0.5 INCH WATER COLUMN.

GENERAL NOTES:

1. PROVIDE FIRE STOPPING AT ALL FIRE WALL PENETRATIONS; PROVIDE EXPANSION PLATES & BONDING JUMPERS AT BUILDING EXPANSION JOINTS.
2. EACH 20A/1P BRANCH CIRCUIT SHALL HAVE A DEDICATED NEUTRAL.
3. HOMERUNS – INSTALL NO MORE THAN THREE PER RACEWAY (INCLUDING LIGHTING BRANCH CIRCUITS); 3 INSULATED "HOT", 3 INSULATED "NEUTRAL AND 1 SHARED "GROUND".
4. PROVIDE ALL ELECTRICAL RECEPTACLES INSTALLED WITH THE GROUND OPENING IN THE "UP" POSITION.

MECHANICAL KEYED NOTES:

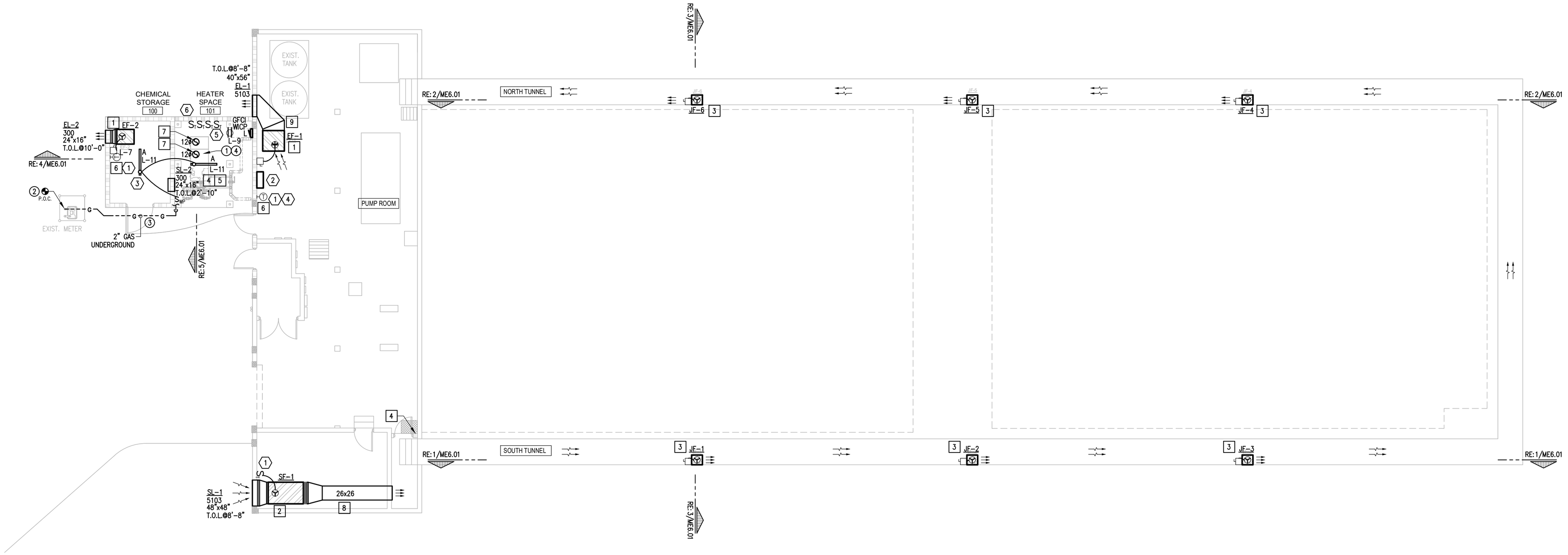
1. PROVIDE EXHAUST FAN AS SCHEDULED. SEE ASSOCIATED DETAIL ON DETAIL SHEET.
2. PROVIDE SUPPLY FAN AS SCHEDULED. SEE ASSOCIATED DETAIL ON DETAIL SHEET.
3. PROVIDE JET FAN AS SCHEDULED. SEE ASSOCIATED DETAIL ON DETAIL SHEET.
4. SLEEVE ALL WALL PENETRATIONS PER SPECIFICATIONS. SEAL AROUND DUCTS & PIPING AT ALL WALLS, AC ROOMS AND WALL LOUVER PENETRATIONS WITH FIRE-PROOF CAULKING. PROVIDE ESCUTCHEON PLATES AND FLASHING AROUND PENETRATION, BOTH INSIDE AND OUTSIDE TO PROVIDE A FINISH LOOK. (TYPICAL)
5. PROVIDE LOUVER AS SCHEDULED. COORDINATE FINAL FINISH, SIZE AND LOCATION WITH ARCHITECT PRIOR TO ORDERING. (TYP.) MOUNT LOUVER LOW.
6. PROVIDE WALL MOUNTED LINE VOLTAGE THERMOSTAT. COORDINATE WITH ELECTRICAL CONTRACTOR.
7. PROVIDE 12" EXHAUST PIPES TO SERVE WATER HEATERS. ROUTE EXHAUST PIPES UP AND PENETRATE THROUGH CANOPY. SEAL CANOPY PENETRATION. EXHAUST PIPES SHALL BE TYPE-B DOUBLE WALL PIPING.
8. PROVIDE SHEET METAL DUCT WITH 2" WRAP INSULATION.
9. PROVIDE DUCT TRANSITION FROM FAN DISCHARGE TO LOUVER AS SHOWN.

ELECTRICAL KEYED NOTES:

1. CONNECT LINE VOLTAGE THERMOSTAT FOR FAN CONTROL.
2. NO DUCTWORK OR PIPING TO BE ROUTED ABOVE ELECTRICAL GEAR. COORDINATE WITH OTHER TRADES – TYPICAL.
3. PROVIDE LIGHT FIXTURE LITHONIA MODEL NO. XVML L48 5000LM MVOLT 40K 80CRI SURFACE MOUNTED – TYPICAL.
4. PROVIDE SOFT START FOR EXHAUST, SUPPLY, AND JET FANS. LINE VOLTAGE THERMOSTAT TO BE CONNECTED TO SOFT START CONTROL CIRCUIT. REFER TO CONNECTION SCHEDULE.
5. FOR EACH WATER HEATER, PROVIDE THERMAL SWITCH FOR WATER HEATER CONTROL AND BLOWER; BRANCH CIRCUIT: 1/2" – 2#12 & #12G; AND PROVIDE THERMAL SWITCH FOR UNIT PUMP; BRANCH CIRCUIT: 1/2" – 2#12 & #12G. – TYPICAL.
6. NEW LOCATION OF RELOCATED UTILITY CT METER ON OUTER WALL; PROVIDE NEW METERING RACEWAY AND CONDUCTORS; COORDINATE WITH OTHER TRADES, OWNER, AND ELECTRIC UTILITY.

PLUMBING KEYED NOTES:

1. OWNER PROVIDED WATER HEATERS LOCATED UNDER NEW CANOPY.
2. PROVIDE NEW 2" UNDERGROUND GAS PIPING AS SHOWN.
3. ROUTE NEW GAS PIPING TO WATER HEATERS (PROVIDED BY POOL CONTRACTOR) UNDER CANOPY.
4. CONNECT GAS PIPING TO WATER HEATERS LOCATED UNDER NEW CANOPY. COORDINATE WITH GENERAL CONTRACTOR FOR EXACT LOCATION.



01 PUMP ROOM AND TUNNEL MECHANICAL & ELECTRICAL PLAN

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

NORTH

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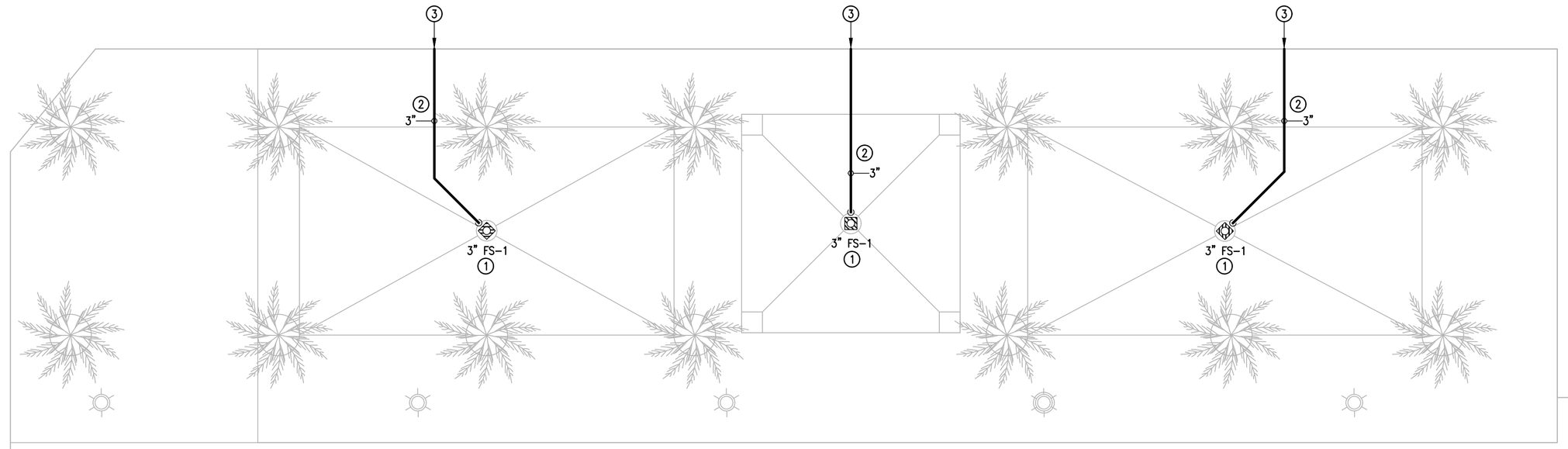

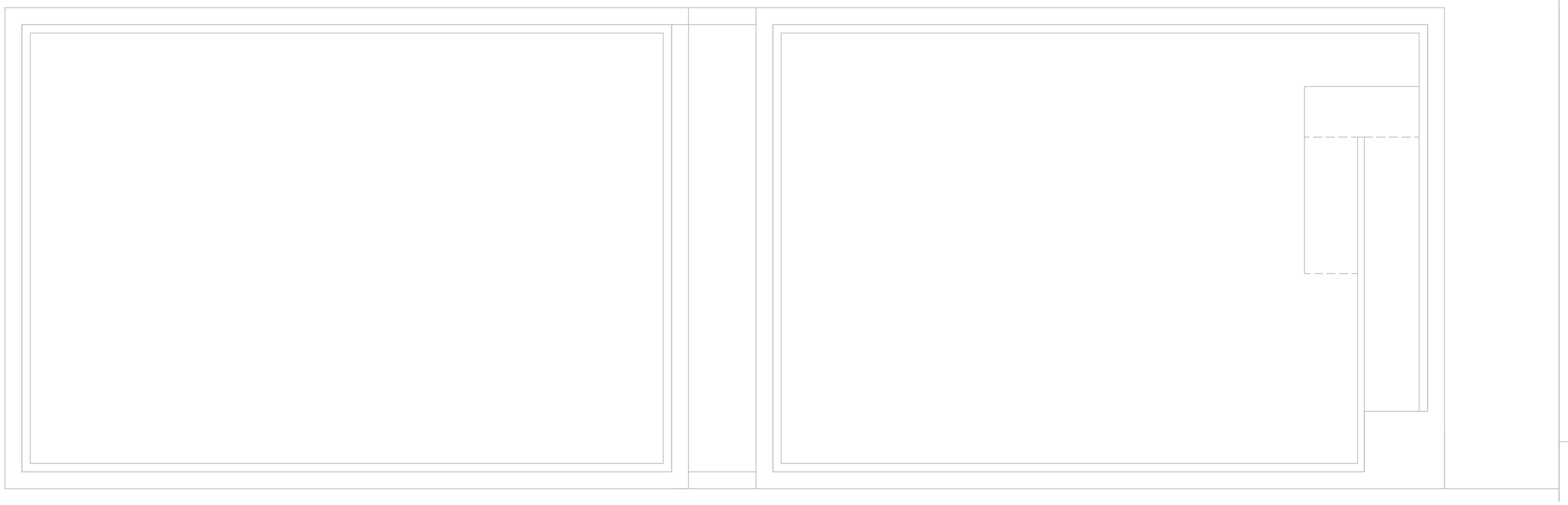

01 SWIMMING POOL
MECHANICAL / ELECTRICAL PLAN
SCALE: 1/8" = 1'- 0"

NORTH

GENERAL NOTES:

1. ALL PLUMBING WORK SHALL BE IN COMPLIANCE WITH ALL APPLICABLE CODES AS ADAPTED AND AMENDED BY THE INSPECTING AUTHORITIES.
2. DRAWING IS DIAGRAMMATIC ONLY. CONTRACTOR SHALL COORDINATE EXACT LOCATIONS OF PIPING, DEVICES AND EQUIPMENT WITH BUILDING ELEMENTS AND THE WORK OF OTHER TRADES.
3. ALL PLUMBING WORK SHALL BE INSTALLED SO AS TO AVOID CONFLICT WITH THE WORK OF OTHER TRADES. COORDINATE WITH MECHANICAL, ELECTRICAL AND STRUCTURAL FOR PROPER CLEARANCES.
4. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR PHASING AND SEQUENCE OF CONSTRUCTION WORK.
5. COORDINATE WORK AMONG ALL DISCIPLINES. IT IS NOT THE INTENT OF THESE DOCUMENTS TO DICTATE WHO MUST DO THE WORK. ALL WORK SHOWN IS THE RESPONSIBILITY OF THE PRIME CONTRACTOR.
6. SLEEVE ALL OUTSIDE WALLS, FOUNDATION GRADE BEAMS, INTERIOR WALL PENETRATIONS, AND FIRE SEAL ALL PENETRATION THROUGH FIRE WALLS AND FLOORS WHETHER SHOWN ON PLANS OR NOT.
7. RECORD INVERT ELEVATIONS OF ALL YARD CLEAN OUT (YCO) ON "AS-BUILT" DRAWINGS.
8. REFER TO PLUMBING FIXTURE ROUGH-IN SCHEDULE FOR INDIVIDUAL PIPE CONNECTIONS TO FIXTURES.

PLUMBING KEYED NOTES:

1. PROVIDE FLOOR SINK AS SCHEDULED.
2. ROUTE 3" PVC PIPING AS SHOWN.
3. TERMINATE OPEN ENDED TO DISCHARGE AT GREEN AREA.

PLUMBING FIXTURE SCHEDULE

MARK	MANUFACTURER & MODEL NUMBER	DESCRIPTION	CONNECTIONS				NOTES	REMARKS
			WASTE	VENT	CW	HW		
FS-1	MIFAB # FS-1940-FL-3	BOTTOM OUTLET STAINLESS STEEL BODY, 12" SQUARE, 16GA, TYPE 304 STAINLESS STEEL, FULL STAINLESS STEEL GRATE AND FRAME, ANCHOR FLANGE, 10" DEEP SUMP, DOME BOTTOM STRAINER, STAINLESS STEEL SEDIMENT BUCKET. PROVIDE CLAMPING DEVICE FOR DRAINS IN MEMBRANE FLOOR AREAS.	3"	2"	-	-		

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L

ROOM PUMP ROOM | VOLTS 208Y/120V 3P 4W | AIC 10,000
MOUNTING SURFACE | BUS AMPS 125 | MAIN BKR 100
FED FROM PC | NEUTRAL 100% | LUGS STANDARD
NOTE PROVIDE A TYPE-WRITTEN DIRECTORY INCLUDING ROOM NAMES

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C
1	80/3	CIRCULATING FANS SOFT START	6.38			2	20/1	WH 1 CTRL, BLOWER	1.26		
3	|			6.38		4	20/1	WH 1 UNIT PUMP		0.888	
5	|				6.38	6	20/1	WH 2 CTRL, BLOWER			1.26
7	20/1	EF-2	0.696			8	20/1	WH 2 UNIT PUMP	0.888		
9	20/1	RECEPT.		0.18		10	20/1	SPACE		0	
11	20/1	LIGHTING			0.098	12	20/1	SPACE			0
								TOTAL CONNECTED KVA BY PHASE	9.22	7.44	7.73

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	0.098	0.123	(125%)	MOTORS	22.4	22.4	(100%)
LARGEST MOTOR	2.7	0.676	(25%)	RECEPTACLES	0.18	0.18	(50%>10)
				NONCONTINUOUS	1.75	1.75	(100%)
				TOTAL LOAD		25.1	
				BALANCED 3-PHASE AMPS		69.7	

EXHAUST FAN CONNECTION SCHEDULE:

DESIGNATION	HP/WATTS	FLA	VOLTAGE	DISCONNECT	BRANCH CIRCUIT
JF-1	2 HP	7.5	208V/3PHASE	FACTORY MOUNTED DISCONNECT. [1]	1/2" - 3#12 & #12G
JF-2	2 HP	7.5	208V/3PHASE	FACTORY MOUNTED DISCONNECT. [1]	1/2" - 3#12 & #12G
JF-3	2 HP	7.5	208V/3PHASE	FACTORY MOUNTED DISCONNECT. [1]	1/2" - 3#12 & #12G
JF-4	2 HP	7.5	208V/3PHASE	FACTORY MOUNTED DISCONNECT. [1]	1/2" - 3#12 & #12G
JF-5	2 HP	7.5	208V/3PHASE	FACTORY MOUNTED DISCONNECT. [1]	1/2" - 3#12 & #12G
JF-6	2 HP	7.5	208V/3PHASE	FACTORY MOUNTED DISCONNECT. [1]	1/2" - 3#12 & #12G
SF-1	1 HP	4.6	208V/3PHASE	FACTORY MOUNTED DISCONNECT. [1]	1/2" - 3#12 & #12G
EF-1	3/4 HP	3.5	208V/3PHASE	FACTORY MOUNTED DISCONNECT. [1]	1/2" - 3#12 & #12G
EF-2	1/4 HP	5.8	120V/1PHASE	PROVIDE THERMAL SWITCH.	1/2" - 2#12 & #12G
WH 1 CTRL, BLOWER	1260 W	10.5	120V/1PHASE	PROVIDE THERMAL SWITCH.	1/2" - 2#12 & #12G
WH 2 CTRL, BLOWER	1260 W	10.5	120V/1PHASE	PROVIDE THERMAL SWITCH.	1/2" - 2#12 & #12G
WH 1 UNIT PUMP	888 W	7.4	120V/1PHASE	PROVIDE THERMAL SWITCH.	1/2" - 2#12 & #12G
WH 2 UNIT PUMP	888 W	7.4	120V/1PHASE	PROVIDE THERMAL SWITCH.	1/2" - 2#12 & #12G

NOTES:
[1] EXHAUST, SUPPLY, AND JET FANS TO BE CONNECTED TO A SINGLE SOFT STARTER. PROVIDE 208V, 3 PHASE, 20HP, NON-REVERSING SOFT STARTER WITH: THERMAL-MAGNETIC CIRCUIT BREAKER, NEMA 3R ENCLOSURE, HAND-OFF-AUTO SELECTOR SWITCH WITH START/STOP PUSH BUTTONS, PUSH-TO-TEST RUN LIGHT (RED) AND OFF LIGHT (GREEN), EMERGENCY STOP PUSH BUTTON, AUXILIARY AUTO MODE CONTACTS (TO CONNECT LINE VOLTAGE THERMOSTAT), ENGRAVED NAMEPLATE. PROVIDE SEPARATE OVERLOAD RELAYS FOR EACH FAN WITHIN THE SOFT START.

JET FAN SCHEDULE

MARK	ROOM NUMBER SERVING	TYPE	ELECTR. V/H/P	CFM	INPUT WATTS	MOTOR HP	E.S.P. IN. H20	SOUND IN SONES	MANUFACTURER & MODEL NUMBER	WEIGHT (LBS)	CONTROL NOTES	NOTES
JF-1	POOL TUNNEL	CEILING MOUNTED INLINE	208/60/3	5103	-	2.0	0.28	46.0	GREENHECK GJX-41-160-0616-M20	98	A	ALL
JF-2	POOL TUNNEL	CEILING MOUNTED INLINE	208/60/3	5103	-	2.0	0.28	46.0	GREENHECK GJX-41-160-0616-M20	98	A	ALL
JF-3	POOL TUNNEL	CEILING MOUNTED INLINE	208/60/3	5103	-	2.0	0.28	46.0	GREENHECK GJX-41-160-0616-M20	98	A	ALL
JF-4	POOL TUNNEL	CEILING MOUNTED INLINE	208/60/3	5103	-	2.0	0.28	46.0	GREENHECK GJX-41-160-0616-M20	98	A	ALL
JF-5	POOL TUNNEL	CEILING MOUNTED INLINE	208/60/3	5103	-	2.0	0.28	46.0	GREENHECK GJX-41-160-0616-M20	98	A	ALL
JF-6	POOL TUNNEL	CEILING MOUNTED INLINE	208/60/3	5103	-	2.0	0.28	46.0	GREENHECK GJX-41-160-0616-M20	98	A	ALL

NOTES:
1. PROVIDE FACTORY MOUNTED DISCONNECT.
2. MANUFACTURER AND MODEL NUMBER LISTED ARE "OR APPROVED EQUAL." REFER TO SPECIFICATIONS.
3. PROVIDE FACTORY APPLIED COATING-PERMATECTOR, CONCRETE GRAY-RAL 7023, FAN AND ATTACHED ACCESSORIES.
4. PROVIDE GALVANIZED INLET AND OUTLET GUARD.
5. PROVIDE EXTENDED MOTOR LEADS.

CONTROL NOTES:
A. FAN SHALL BE CONTROLLED BY LINE VOLTAGE THERMOSTAT. COORDINATE WITH ELECTRICAL.

EXHAUST FAN SCHEDULE

MARK	SERVING	TYPE	ELECTR. V/H/P	CFM	MOTOR HP / W	E.S.P. IN. H20	SOUND IN SONES	MANUFACTURER & MODEL NUMBER	WEIGHT (LBS)	CONTROL NOTES	GENERAL NOTES
EF-1	PUMP ROOM	WALL PROPELLOR	208/60/3	5,103	3/4 HP	0.389	25.0	GREENHECK AER-E30C-615-C-VGD7	187	A	ALL
EF-2	STORAGE ROOM	WALL PROPELLOR	120/60/1	300	1/4 HP	0.431	9.5	GREENHECK AER-E20C-605-VG	131	A	ALL

GENERAL NOTES:
1. PROVIDE FACTORY MOUNTED DISCONNECT.
2. MANUFACTURER AND MODEL NUMBER LISTED ARE "OR APPROVED EQUAL." REFER TO SPECIFICATIONS.
3. PROVIDE FIELD-INSTALLED FAN SPEED CONTROLLER. COORDINATE INSTALLATION WITH ELECTRICAL CONTRACTOR.
4. PROVIDE FAN WITH BACKDRAFT DAMPER, WALL HOUSING, CORROSION RESITANT FASTENERS.
5. PROVIDE WITH OSHA WIRE GUARD
6. PROVIDE FACTORY APPLIED HI-PRO POLYESTER, CONCRETE GRAY-RAL 7023 FINISH, FAN AND ATTACHED ACCESSORIES.

CONTROL NOTES:
A. FAN SHALL BE CONTROLLED BY LINE VOLTAGE THERMOSTAT. COORDINATE WITH ELECTRICAL.

SUPPLY FAN SCHEDULE

MARK	SERVING	TYPE	ELECTR. V/H/P	CFM	MOTOR HP / W	E.S.P. IN. H20	SOUND IN SONES	MANUFACTURER & MODEL NUMBER	WEIGHT (LBS)	CONTROL NOTES	GENERAL NOTES
SF-1	PUMP ROOM	WALL PROPELLOR	208/60/3	5,103	1 HP	0.535	32.0	GREENHECK AER-S30C-610-C-VGD10	373	A	ALL

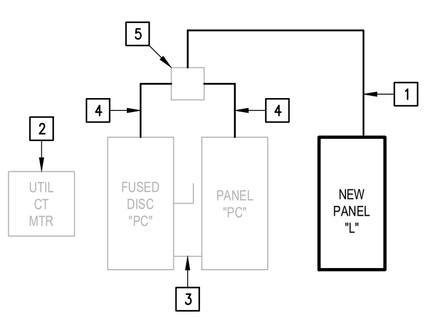
GENERAL NOTES:
1. PROVIDE FACTORY MOUNTED DISCONNECT.
2. MANUFACTURER AND MODEL NUMBER LISTED ARE "OR APPROVED EQUAL." REFER TO SPECIFICATIONS.
3. PROVIDE FIELD-INSTALLED FAN SPEED CONTROLLER. COORDINATE INSTALLATION WITH ELECTRICAL CONTRACTOR.
4. PROVIDE FAN WITH BACKDRAFT DAMPER, WALL HOUSING, CORROSION RESITANT FASTENERS.
5. PROVIDE WITH OSHA WIRE GUARD
6. PROVIDE FACTORY APPLIED HI-PRO POLYESTER, CONCRETE GRAY-RAL 7023 FINISH, FAN AND ATTACHED ACCESSORIES.

CONTROL NOTES:
A. FAN SHALL BE CONTROLLED BY LINE VOLTAGE THERMOSTAT. COORDINATE WITH ELECTRICAL.

LOUVER SCHEDULE

MARK	SERVES	CFM RANGE	FACE SIZE (W X H)	MIN. FREE AREA (FT2)	MANUFACTURER & MODEL NUMBER	NOTES
SUPPLY						
SL-1	SF-1	5,103	48 X 48	7.60	GREENHECK EHH-601DE	ALL
SL-2	STORAGE RM VETILATION	300	24 X 16	0.90	GREENHECK EHH-601DE	ALL
EXHAUST						
EL-1	EF-1	5,103	40 X 56	6.90	GREENHECK EHH-601DE	ALL
EL-2	EF-2	300	24 X 16	0.90	GREENHECK EHH-601DE	ALL

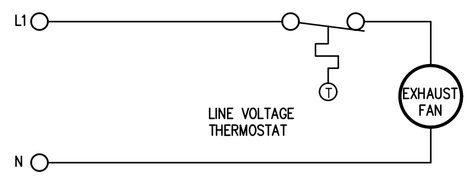
NOTES:
1. PRIOR TO ORDERING, COORDINATE LOUVER FINISH AND EXACT FACE SIZE WITH ENGINEER.
2. PROVIDE STAINLESS STEEL INSECT SCREEN AND HARDWARE.
3. PROVIDE FACTORY APPLIED HI-PRO POLYESTER, CONCRETE GRAY-RAL 7023.
4. LOUVERS SHALL HAVE FACTORY APPLIED CUSTOM COLOR. COORDINATE CUSTOM COLOR WITH OWNER & GENERAL CONTRACTOR PRIOR TO ORDERING.
5. DURING SUBMITTAL PHASE PROVIDE TDI EVALUATION REPORT INDICATING INSTALLATION DETAILS SPECIFICALLY FOR THE PROJECT'S WALL SUBSTRATE. REFER TO STRUCTURAL PLANS FOR WALL SUBSTRATE DETAILS.



KEYED NOTES:

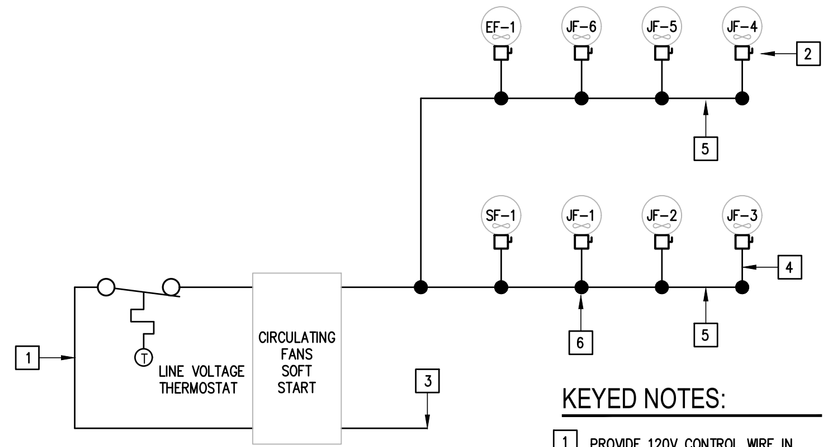
1. PROVIDE FEEDER FOR PANEL "L": 1.25" - 4#3 & #8G.
2. EXISTING UTILITY CT METER; RELOCATE TO OUTER WALL; COORDINATE WITH OTHER TRADES, OWNER, AND ELECTRIC UTILITY.
3. REMOVE EXISTING CONDUCTORS. RACEWAY TO REMAIN.
4. PROVIDE A NEW FEEDER 4"-4#600KCMIL & #3G.
5. PROVIDE NEMA 3R WIREWAY WITH HINGED COVER. PROVIDE POLARIS CONNECTORS FOR TAP FEEDER TO NEW PANEL "L".

01 PARTIAL RISER DIAGRAM
SCALE: NOT TO SCALE



NOTE:
LINE VOLTAGE THERMOSTAT SHALL BE HONEYWELL T6051A1016 OR APPROVED EQUAL.

02 EXHAUST FAN EF-2 WIRING DIAGRAM
SCALE: NOT TO SCALE



NOTE:
LINE VOLTAGE THERMOSTAT SHALL BE HONEYWELL T6051A1016 OR APPROVED EQUAL.

KEYED NOTES:

1. PROVIDE 120V CONTROL WIRE IN 1/2" RACEWAY.
2. FACTORY MOUNTED DISCONNECT.
3. CONNECT TO POWER SOURCE. SEE PANEL SCHEDULE.
4. PROVIDE BRANCH CIRCUIT TO FANS. SEE CONNECTION SCHEDULE - TYPICAL.
5. PROVIDE FEEDER TAP BRANCH CIRCUIT: 1" - 3#4 & #8G.
6. PROVIDE J-BOX FOR TAP - TYPICAL.

03 EF-1, SF-1, JF-1 THRU JF-6 WIRING DIAGRAM
SCALE: NOT TO SCALE

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SAMS MEMORIAL POOL RENOVATIONS

CITY OF BROWNSVILLE, TEXAS

DATE SEPTEMBER 03, 2019
SCALE As Shown
DRAWN ETHOS
JOB # 19V23
SHEET ME5.01

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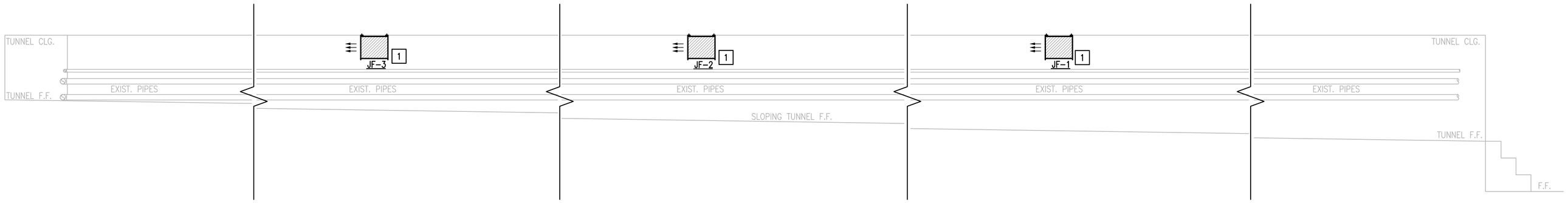
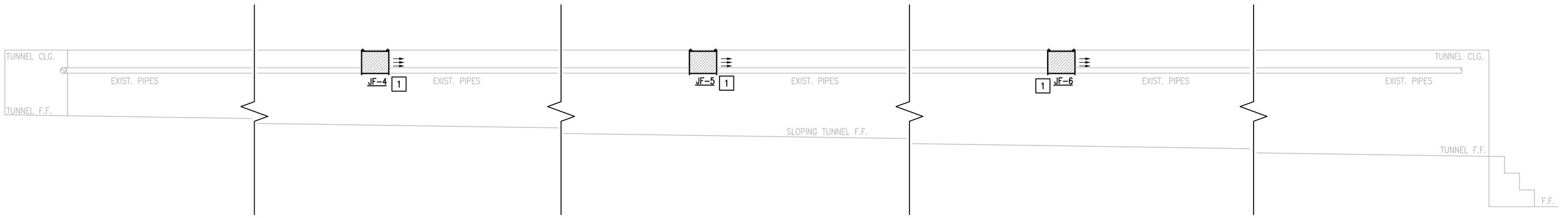
MECHANICAL KEYED NOTES:

1. JET FAN AS SCHEDULED. MOUNT ON CEILING INSIDE TUNNEL AS HIGH AS POSSIBLE AND COORDINATE WITH EXISTING POOL PIPING.
2. PROVIDE 12" EXHAUST PIPES TO SERVE WATER HEATERS. ROUTE EXHAUST PIPES UP AND PENETRATE THROUGH CANOPY. SEAL CANOPY PENETRATIONS AS PER SPECIFICATIONS.
3. PROVIDE HIGH WIND VENT CAP FOR FLUE PIPE. MOUNT AS PER HEATER MANUFACTURER RECOMMENDATIONS.



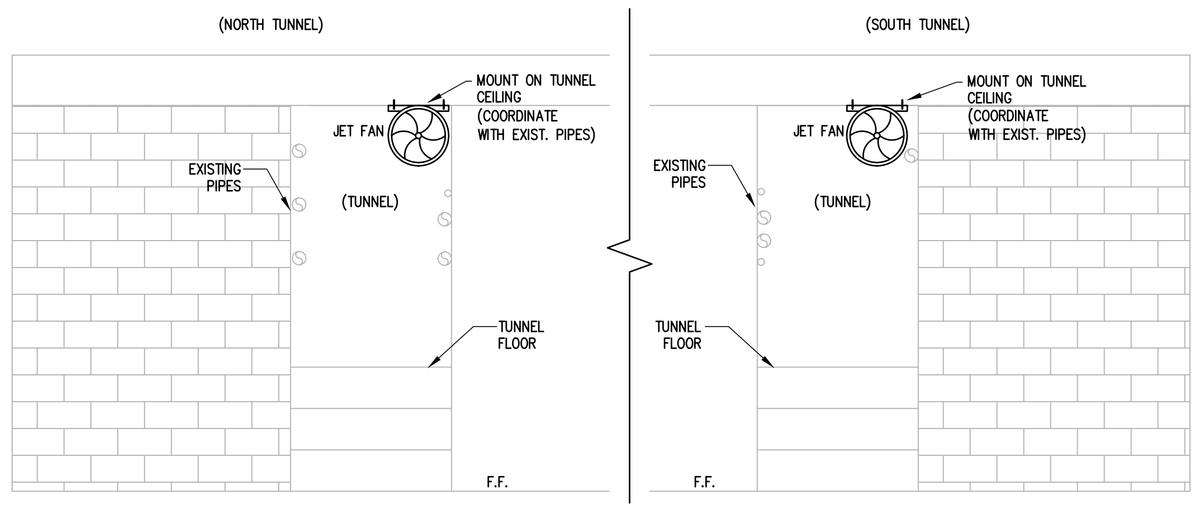
NORTH TUNNEL JET FAN MECHANICAL ELEVATION

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



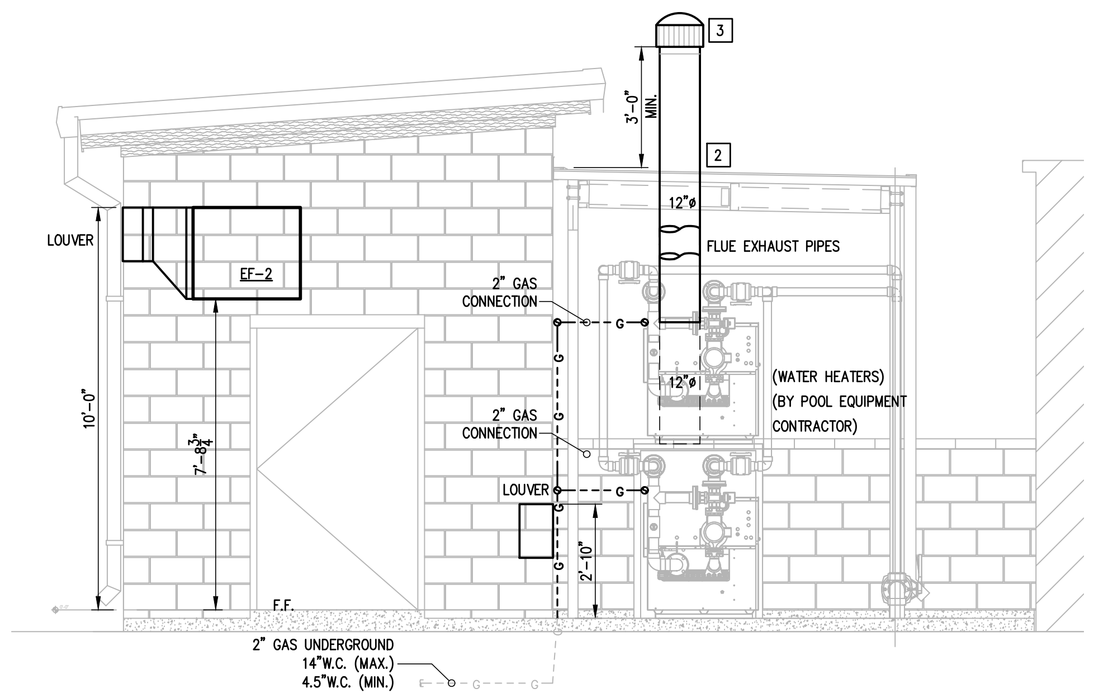
SOUTH TUNNEL JET FAN MECHANICAL ELEVATION

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



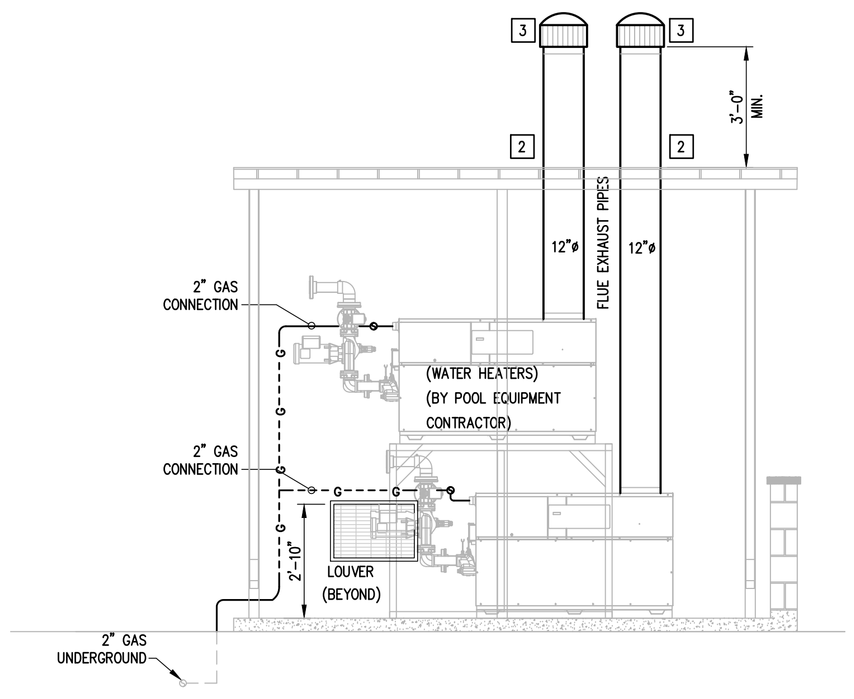
TUNNEL JET FAN MECHANICAL ELEVATION

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



WATER HEATERS MECHANICAL ELEVATION

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



WATER HEATERS MECHANICAL ELEVATION

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

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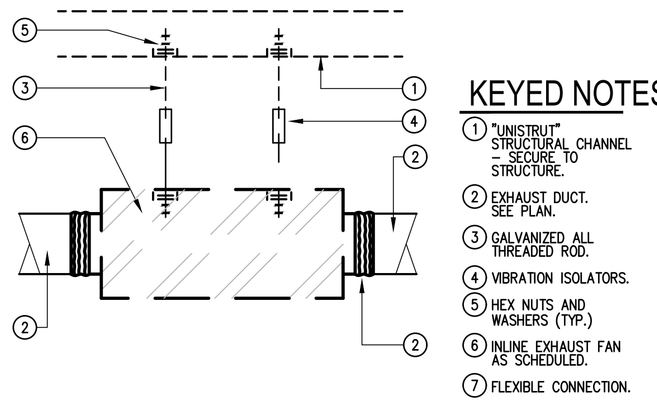
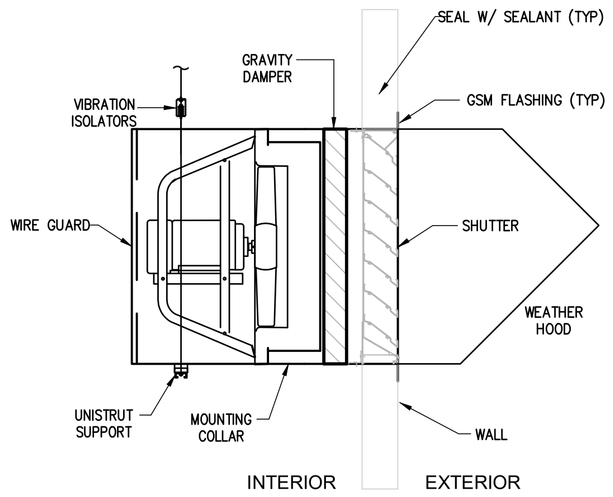


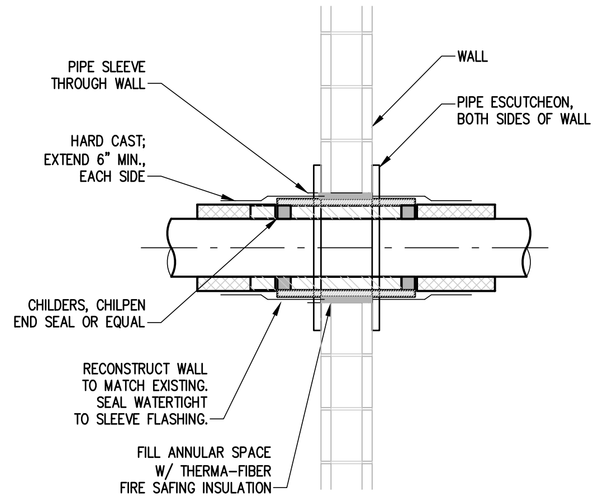
KEYED NOTES

1. "UNISTRUT" STRUCTURAL CHANNEL – SECURE TO STRUCTURE.
2. EXHAUST DUCT. SEE PLAN.
3. GALVANIZED ALL THREADED ROD.
4. VIBRATION ISOLATORS.
5. HEX NUTS AND WASHERS (TYP.)
6. INLINE EXHAUST FAN AS SCHEDULED.
7. FLEXIBLE CONNECTION.

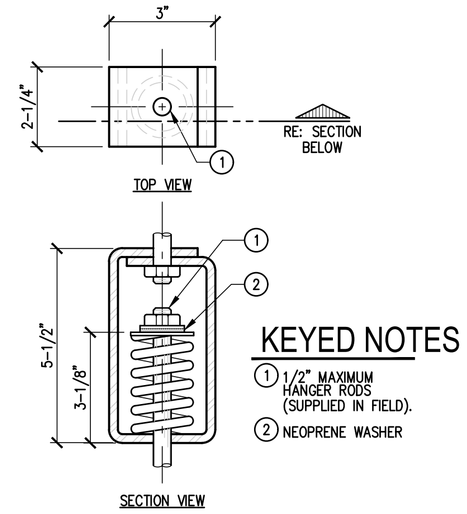
01 INLINE EXHAUST FAN DETAIL
SCALE: NOT TO SCALE



02 WALL FAN DETAIL
SCALE: NOT TO SCALE



03 PIPE PENETRATION @ WALL
SCALE: NOT TO SCALE



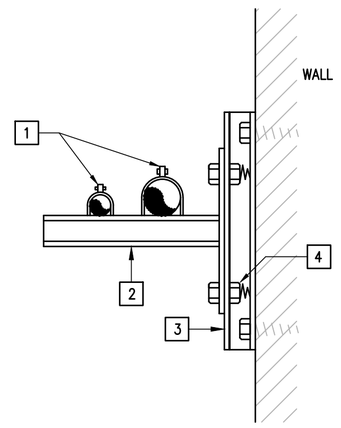
KEYED NOTES

1. 1/2" MAXIMUM HANGER RODS (SUPPLIED IN FIELD).
2. NEOPRENE WASHER

04 SPRING ISOLATION HANGER
SCALE: NOT TO SCALE

NOTE: ATTACH NAMEPLATES TO ALL ELECTRICAL GEAR AS NOTED ON SECTION 260553.

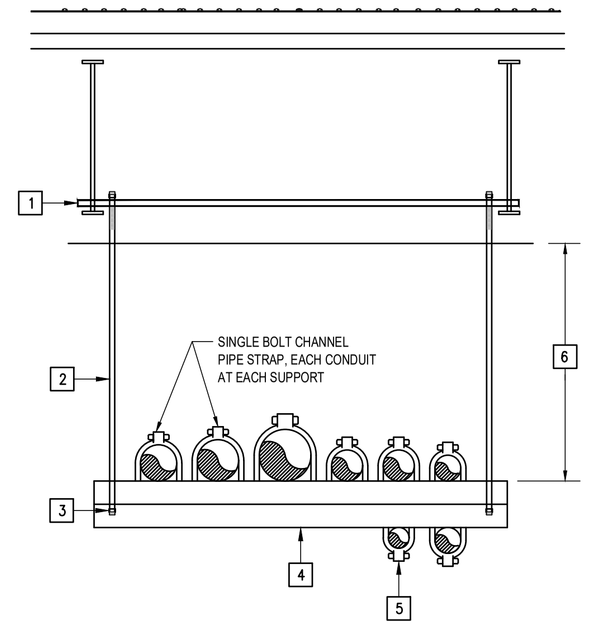
05 EQUIPMENT IDENTIFICATION LABEL DETAIL
SCALE: NOT TO SCALE



KEYED NOTES:

1. PROVIDE CONDUIT CLAMPS.
2. PROVIDE GALVANIZED UNISTRUT WALL BRACKET.
3. PROVIDE RAMSET OR BOLT GALVANIZED UNISTRUT TO WALL.
4. PROVIDE SELF HOLDING CLAMPING NUT WITH SPRING.

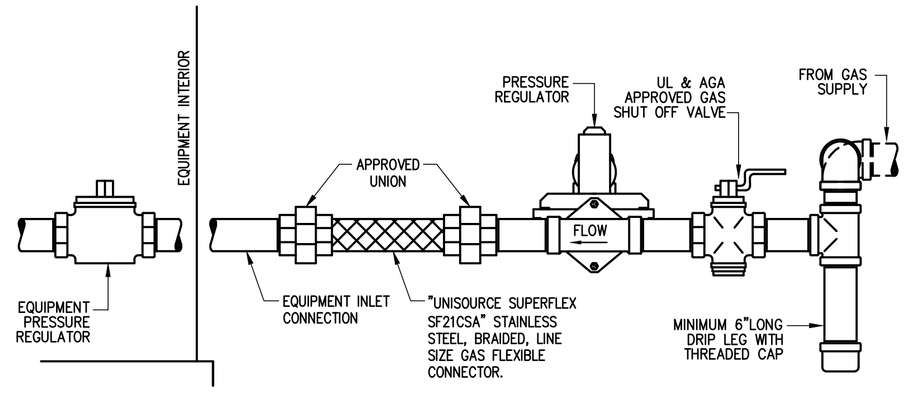
06 RACEWAY RUNS SUPPORT DETAIL
SCALE: NOT TO SCALE



KEYED NOTES:

1. PROVIDE UNISTRUT STRUCTURAL CHANNEL SECURED TO TO JOIST AT BOTH ENDS.
2. PROVIDE 1/2" GALVANIZED ROD MINIMUM.
3. PROVIDE LOCKNUT.
4. PROVIDE GALVANIZED UNISTRUT 8'-0" O/C MAXIMUM.
5. PROVIDE 0'-1" MAXIMUM SIZE ON BOTTOM OF UNISTRUT.
6. VARIES.

07 HORIZONTAL RACEWAYS SUPPORT DETAIL
SCALE: NOT TO SCALE



08 EQUIPMENT GAS CONNECTION DETAIL
SCALE : NOT TO SCALE

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