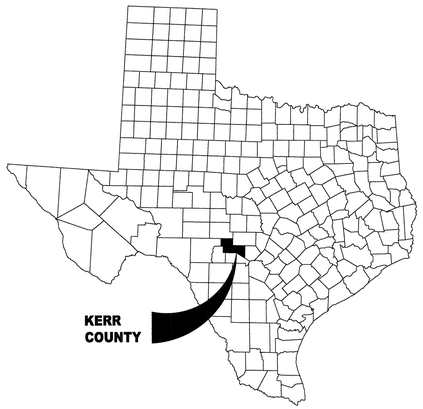
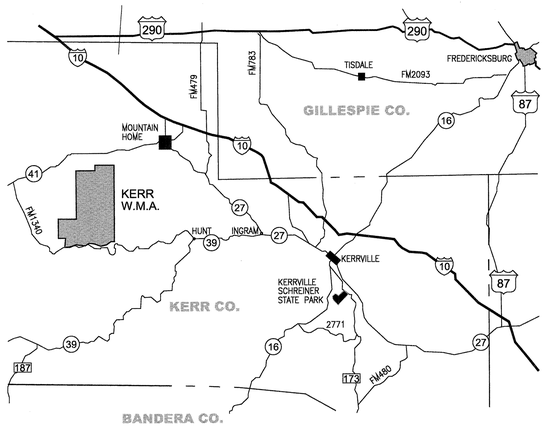


NORTH

COUNTY LOCATION MAP

NOT TO SCALE

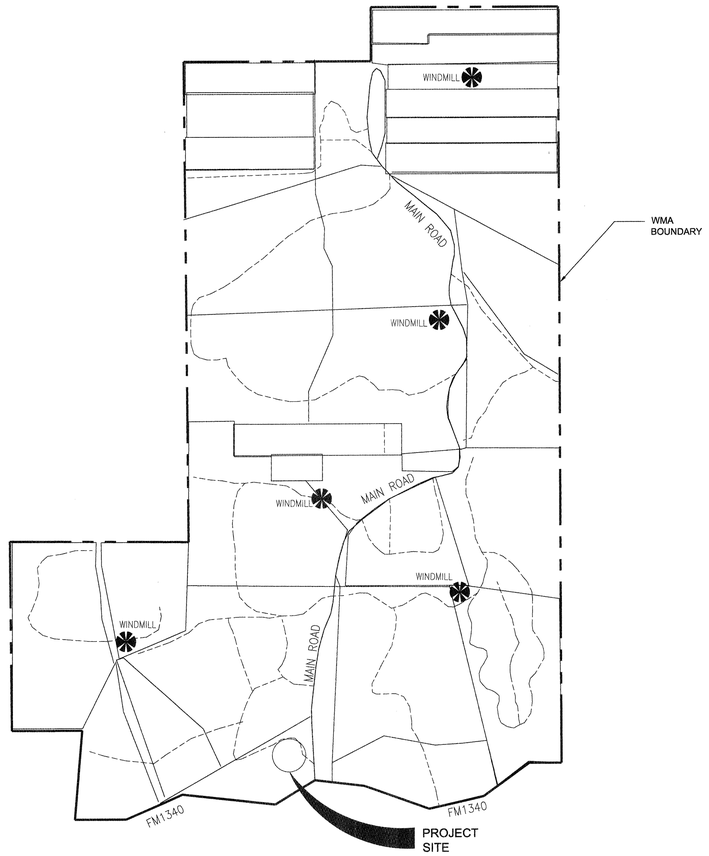


NORTH

VICINITY MAP

NOT TO SCALE

KERR WILDLIFE MANAGEMENT AREA



NORTH

SITE LOCATION MAP

NOT TO SCALE

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PROJECT

KERR WMA

RESEARCH, CONSERVATION AND EDUCATION STATION

PROJECT NO: 134174 DATE: 01/12/2018

INDEX OF DRAWINGS

SCOPE OF WORK

PROVIDE ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND INCIDENTALS TO BUILD A NEW WOOD FRAMED BUILDING TO SERVE AS A CONSERVATION EDUCATION CENTER. UTILITIES AND PAVING ARE INCLUDED IN THE SCOPE OF WORK.

BID ADD ALTERNATE NO. 1: PROVIDE CONCRETE PAVING IN LIEU OF ASPHALT PAVING AT DRIVE-THRU AREA.

BID ADD ALTERNATENO. 2: PROVIDE SITE-BUILT MASONRY FIREPLACE IN LIEU OF PREFABRICATED FIREPLACE.

BID ADD ALTERNATE NO. 3: STAIN EXPOSED WOOD BEAMS, RAFTERS AND UNDERSIDE OF WOOD ROOF DECKING.

BID ADD ALTERNATE NO. 4: PROVIDE GALVANIZED RAILING IN LIEU OF WOOD RAILING.

BID ADD ALTERNATE NO. 5: PROVIDE PRE-MANUFACTURED SLOPED FIBERGLASS TRENCHES IN LIEU OF SLOPED CONCRETE TRENCHES WITH TOP GRATING.

BID ADD ALTERNATE NO. 6: PROVIDE SOLID SURFACE COUNTERTOPS IN LIEU OF PLASTIC LAMINATE COUNTERTOPS.

BUILDING CODE SUMMARY

A. INTERNATIONAL CODE COUNCIL
- i. BUILDING CODE — INTERNATIONAL BUILDING CODE 2012
- ii. RESIDENTIAL CODE — INTERNATIONAL RESIDENTIAL CODE 2012
- iii. EXISTING BUILDINGS — INTERNATIONAL EXISTING BUILDINGS CODE 2012
- iv. STRUCTURAL CODE — INTERNATIONAL BUILDING CODE 2012
- v. PLUMBING CODE — INTERNATIONAL PLUMBING CODE 2012
- vi. MECHANICAL CODE — INTERNATIONAL MECHANICAL CODE 2012
- vii. ENERGY CODE — INTERNATIONAL ENERGY CODE 2012
- viii. GAS CODE — INTERNATIONAL FUEL GAS CODE 2012

B. NATIONAL FIRE PROTECTION ASSOCIATION
- I. ELECTRICAL CODE — NATIONAL ELECTRICAL CODE 2014

C. STATE ENERGY CONSERVATION OFFICE/TEXAS COMPTROLLERS OFFICE
- i. ENERGY CODES FOR STATE BUILDINGS — Title 34, Part 1, Ch. 19, Sb.C, Rule 19.31
  1. CERTIFICATION FOR RESIDENTIAL AND NONRESIDENTIAL BUILDINGS REQUIRED BY ARCHITECT/ENGINEER

D. ACCESSIBILITY CODE
- I. U.S. DEPT. OF JUSTICE, 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN
- ii. U.S. DEPT. OF JUSTICE, ARCHITECTURAL BARRIERS ACT, ACCESSIBILITY GUIDELINES FOR OUTDOOR DEVELOPED AREAS ON FEDERAL LANDS, EFFECTIVE NOVEMBER-25-2013
- iii. 2012 TEXAS ACCESSIBILITY STANDARDS, ELIMINATION OF ARCHITECTURAL BARRIERS, TEXAS GOVERNMENT CODE, CHAPTER 469

E. PLAYGROUND SAFETY CODE
- I. Public Playground Safety Handbook, U.S. Consumer Product Safety Commission.

TEXAS PARKS & WILDLIFE

TEXAS PARKS AND WILDLIFE

INFRASTRUCTURE DIVISION

4200 SMITH SCHOOL ROAD - AUSTIN, TEXAS 78744-3292

REGISTERED ARCHITECT — JOSE W. MARIN — 09611 — STATE OF TEXAS

01/12/2018

RELEASED FOR SOLICITATION

PROJECT MANAGER, INFRASTRUCTURE DIVISION — DATE 2/6/18

DESIGN BRANCH HEAD, INFRASTRUCTURE DIVISION — DATE 2/16/18

PM BRANCH HEAD, INFRASTRUCTURE DIVISION — DATE 2/16/2018

DEPUTY DIRECTOR, INFRASTRUCTURE DIVISION — DATE 2.16.2018

THE REVIEW, APPROVAL AND RELEASE OF THESE PLANS BY TPWD DOES NOT CONSTITUTE A VERIFICATION OF ALL DATA, INFORMATION AND CALCULATIONS SUPPLIED BY THE DESIGNER. TPWD IS NOT LIABLE FOR THE COMPLETNESS, ADEQUACY AND ACCURACY OF THESE DOCUMENTS. CONTACT ARCHITECT/ ENGINEER OF RECORD FOR DISCREPANCIES OR QUESTIONS RELATED TO THESE DOCUMENTS.

01 SET NO:

PERCENTAGE: ISSUED FOR BID

ARCHITECTURALABBREVIATIONS:
(SEE ENGINEERING SHEETS FOR SYMBOLS APPLICABLE TO THAT WORK)

NUMBER OR SYMBOL
& AND
@ AT
C CENTERLINE
POUND OR NUMBER

A
ABV. ABOVE
ACOUS. ACOUSTICAL
A.C.T. ACOUSTICAL CLG. TILE
A.D. AREA DRAIN
ADJ. ADJUSTABLE
A.F.F. ABOVE FINISH FLOOR
AGGR. AGGREGATE
ALUM. ALUMINUM
APROX. APPROXIMATE
ARCH. ARCHITECT/ARCHITECTURAL
ASPH. ASPHALT

B
BD. BOARD
BIT. BITUMINOUS
BLDG. BUILDING
BLK. BLOCK
BLKG. BLOCKING
B.M. BENCH MARK
BM. BEAM
BOT. BOTTOM
B.U.R. BUILT-UP ROOFING

C
CAB. CABINET
C.B. CATCH BASIN
CEM. CEMENT
CER. CERAMIC
C.I. CAST IRON
C.G. CORNER GUARD
C.J. CONTROL JOINT
CLG. CEILING
CLO. CLOSET
CLR. CLEAR
C.M.U. CONCRETE MASONRY UNIT
C.O. CASED OPENING
CO. CLEANOUT
COL. COLUMN
CONC. CONCRETE
CONN. CONNECTION
CONST. CONSTRUCTION
CONT. CONTINUOUS
CORR. CORRIDOR
CPT. CARPET
CNTR. COUNTER
CTR. CENTER
CTSK. COUNTERSINK

D
DBL. DOUBLE
DEPT. DEPARTMENT
DET. DETAIL
D.F. DRINKING FOUNTAIN
DIA. DIAMETER
DIM. DIMENSION
DISP. DISPENSER
DN. DOWN
D.O. DOOR OPENING
DR. DOOR
D.S. DOWNSPOUT
DWG. DRAWING
DWR. DRAWER

E
E. EAST
EA. EACH
E.W. EACH WAY
E.D.F. ELECTRIC DRINKING FOUNTAIN
E.W.C. ELECTRIC WATER COOLER
ELEC. ELECTRICAL
EL. ELEVATION
EMERG. EMERGENCY
ENCL. ENCLOSURE
E.P. ELECTRICAL PANEL
EQ. EQUAL
EQUIP. EQUIPMENT
EXIST. EXISTING
EXP. EXPANSION
E.J. EXPANSION JOINT
EXT. EXTERIOR
E.I.F.S. EXT. INSUL. & FINISH SYSTEM

F
F.A. FIRE ALARM
F.B. FLAT BAR
F.D. FLOOR DRAIN
FDTN. FOUNDATION
F.E. FIRE EXTINGUISHER
F.E.C. FIRE EXTINGUISHER CABINET
F.H.C. FIRE HOSE CABINET
FIN. FINISH
F.L. FLOW LINE
FLR. FLOOR
FLASH. FLASHING
FLUOR. FLUORESCENT
F.O.C. FACE OF CONCRETE
F.O.F. FACE OF FINISH
F.O.G. FACE OF GLASS
F.O.M. FACE OF MASONRY
F.O.S. FACE OF STUDS
FPRF. FIREPROOF
F.R. FIRE RATED
F.R.T. FIRE RETARDANT TREATED
F.R.T.W. FIRE RETARDANT TREATED WOOD
F.S. FULL SIZE
FT. FOOT OR FEET
FTG. FOOTING
FURR. FURRING
FUT. FUTURE

G
GA. GAUGE
GALV. GALVANIZED
G.B. GRAB BAR
GL. GLAZING
GND. GROUND
GR. GRADE
G.S. GALVANIZED STEEL
GYP. GYPSUM

H
H.B. HOSE BIBB
H.C. HOLLOW CORE
HDCAP. HANDICAPPED
HWD. HARDWOOD
HDWR. HARDWARE
H.M. HOLLOW METAL
HORIZ. HORIZONTAL
HT. HEIGHT

I
I.D. INSIDE DIAMETER
IN. INCH
INSUL. INSULATION
INT. INTERIOR
I.B.C. INTERNATIONAL BLDG. CODE

J
JAN. JANITOR
JT. JOINT

L
L ANGLE
LAB. LABORATORY
LAM. LAMINATE
LAV. LAVATORY
LKR. LOCKER
LB. POUND
LBS. POUNDS
LT. LIGHT

M
MAX. MAXIMUM
M.C. MEDICINE CABINET
MECH. MECHANICAL
MEMB. MEMBRANE
MFR. MANUFACTURER
MH. MANHOLE
MIN. MINIMUM
MIR. MIRROR
MISC. MISCELLANEOUS
M.O. MASONRY OPENING
M.R. MOISTURE RESISTANT
MTD. MOUNTED
MTL. METAL
MULL. MULLION

N
N. NORTH
N.I.C. NOT IN CONTRACT
NO. NUMBER
NOM. NOMINAL
N.T.S. NOT TO SCALE

O
OA. OVERALL
O.C. ON CENTER
O.D. OUTSIDE DIAMETER
O.F.C.I. OWNER FURNISHED - CONTRACTOR INSTALLED
O.F.& I. OWNER FURNISHED AND INSTALLED
OFF. OFFICE
OPNG. OPENING
OPP. OPPOSITE

P
PNL. PANEL
P. LAM. PLASTIC LAMINATE
PL. PLATE
PLAS. PLASTIC
PLBG. PLUMBING
PLYWD PLYWOOD
PR. PAIR
PRCST. PRECAST
PT. POINT
PTD. PAINTED
P.T.D. PAPER TOWEL DISPENSER
P.T.D./R. PAPER TOWEL DISPENSER/RECEPTACLE
PTN. PARTITION
P.T.R. PAPER TOWEL RECEPTACLE

Q
Q.T. QUARRY TILE
QTY. QUANTITY

R
R. RISER
RAD. RADIUS
R.D. ROOF DRAIN
REF. REFERENCE
REFR. REFRIGERATOR
REG. REGISTER
REINF. REINFORCE
RESIL. RESILIENT
RM. ROOM
R.O. ROUGH OPENING
REQ'D. REQUIRED

S
S. SOUTH
S.C. SOLID CORE
S.C.D. SEAT COVER DISPENSER
SCHED. SCHEDULE
S.D. SOAP DISH OR STORM DRAIN
SECT. SECTION
S.F. SQUARE FEET
SHWR. SHOWER
SHT. SHEET
SIM. SIMILAR
S.N.D. SANITARY NAPKIN DISPENSER
S.N.R. SANITARY NAPKIN RECEPTACLE
SPEC. SPECIFICATION
SPEC'D.SPECIFIED
SPECS. SPECIFICATIONS
SQ. SQUARE
S.S. SANITARY SEWER/ STAINLESS STEEL
STD. STANDARD
STL. STEEL
STOR. STORAGE
STR. STAIR
STRUC. STRUCTURAL
STM. SWR.STORM SEWER
SUSP. SUSPENDED
SWR. SEWER
SW. SWITCH
SYM. SYMETRICAL

T
T.P.D. TOILET PAPER DISPENSER
T&G TONGUE AND GROOVE
T.B. TOWEL BAR
TEL. TELEPHONE
TER. TERRAZZO
THK. THICK
T.O.C. TOP OF CURB
T.O.M. TOP OF MASONRY
T.O.P. TOP OF PAVEMENT
T.O.S. TOP OF STEEL
T.O.W. TOP OF WALL
T.P.D. TOILET PAPER DISPENSER
TRD. TREAD
TRTD. TREATED
TV. TELEVISION
TYP. TYPICAL

U
U.G. UNDERGROUND
U.N.O. UNLESS NOTED OTHERWISE
UNFIN. UNFINISHED
UTIL. UTILITY

V
VENT. VENTILATION
V.T.R. VENT THRU ROOF
VEST. VESTIBULE

W
W. WEST
W/ WITH
W.C. WATER CLOSET
W.H. WATER HEATER
WD. WOOD
WDW. WINDOW
W/O WITHOUT
WP. WATERPROOF
WSCT. WAINSCOT
WT. WEIGHT
W.W.F. WELDED WIRE FABRIC

DRAWING LEGEND

DOOR IDENTIFICATION	101 — DOOR SYMBOL, DOOR NUMBER
ROOM IDENTIFICATION	Room name 0000
PARTITION TYPE	A1
WINDOW TYPE	1
SECTION CUT SYMBOL	1 / A101 SIM — DETAIL/ SHEET NUMBER
ELEVATION SYMBOL	1 / A101 SIM — DETAIL/ SHEET NUMBER

DRAWING TITLE	View Name 1/8" = 1'-0" (1)
CONSTRUCTION DETAIL SYMBOL	1 / A101 SIM
COLUMN REFERENCE	0 — NEW COLUMN
ELEVATION MARKER	INFORMATION EL.:= 100'-0"
DRAWING REVISION	1
NORTH DIRECTION	

CODE REVIEW

CODE REVIEW:

OCCUPANCY CLASSIFICATION: GROUP B (BUSINESS - TRAINING AND SKILL DEVELOPMENT)

TYPE OF CONSTRUCTION: TYPE V -B

FIRE RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS:

STRUCTURAL FRAME: 0 HRS.
BEARING WALLS: 0 HRS.
NONBEARING EXTERIOR WALLS: 0 HRS.
NONBEARING INTERIOR WALLS: 0 HRS.
FLOOR: 0 HRS.
ROOF: 0 HRS.

FIRE RESISTANCE OF EXTERIOR WALLS:
FIRE SEPARATION DISTANCE > 30 FT 0 HRS.

ALLOWABLE AREA: 9,000 S.F.
ACTUAL AREA: 2,970 S.F.

ALLOWABLE HEIGHT: 2 STORIES (40 FT)
ACTUAL HEIGHT: 1 STORY

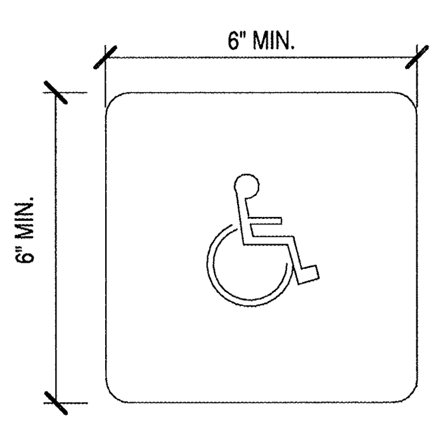
FIRE PROTECTION:
SPRINKLER SYSTEMS: NOT REQUIRED PER 2012 IBC, SECTION 903
PORTABLE FIRE EXTINGUISHERS: NOT REQUIRED PER 2012 IBC, SECTION 906
1 PROVIDED
FIRE ALARM: NOT REQUIRED PER 2012 IBC, SECTION 907

OCCUPANT LOAD:
PROCESSING AREA: 4 OCCUPANTS (300 G.S.F./ OCCUPANT)
OFFICE: 2 OCCUPANTS (100 G.S.F./ OCCUPANT)
SITTING: 18 OCCUPANTS (15 G.S.F./ OCCUPANT)
ACCESSORY: 1 OCCUPANT (300 G.S.F./ OCCUPANT)

TOTAL 25 OCCUPANTS

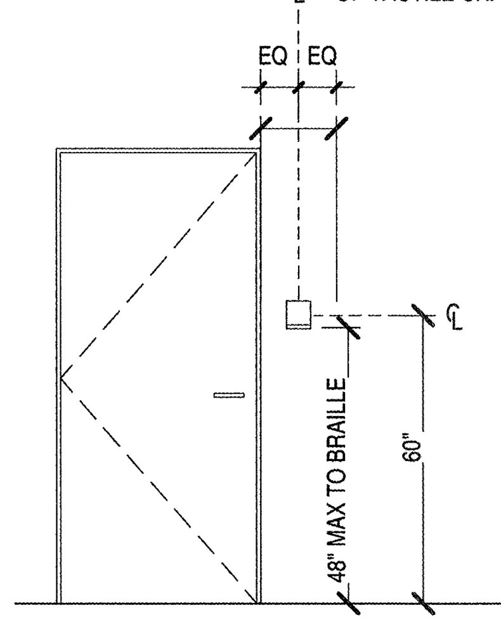
PLUMBING FACILITIES:
WATER CLOSETS: REQUIRED: 1 (1/25 PEOPLE)
PROVIDED: 1
LAVATORIES: REQUIRED: 1 (1/40 PEOPLE)
PROVIDED: 1
SERVICE SINKS: REQUIRED: 1
PROVIDED: 1

TAS REQUIREMENTS

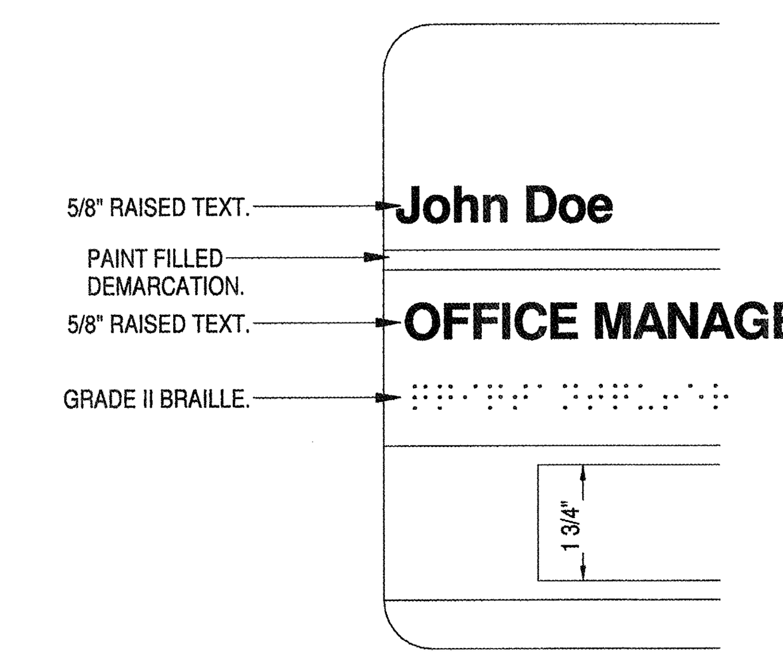


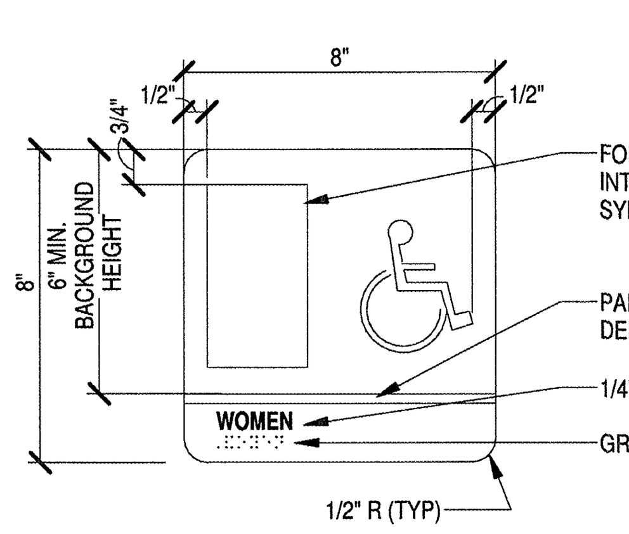
LOCATE AT:
- ALL FACILITIES AND ELEMENTS REQUIRED TO BE ACCESSIBLE PER TAS 216.
-AT ALL AREAS FOR EVACUATION ASSISTANCE
-AT ALL ACCESSIBLE TOILET AND BATHING FACILITIES
-AT ALL PUBLIC PHONES

INTERNATIONAL SYMBOL OF ACCESSIBILITY

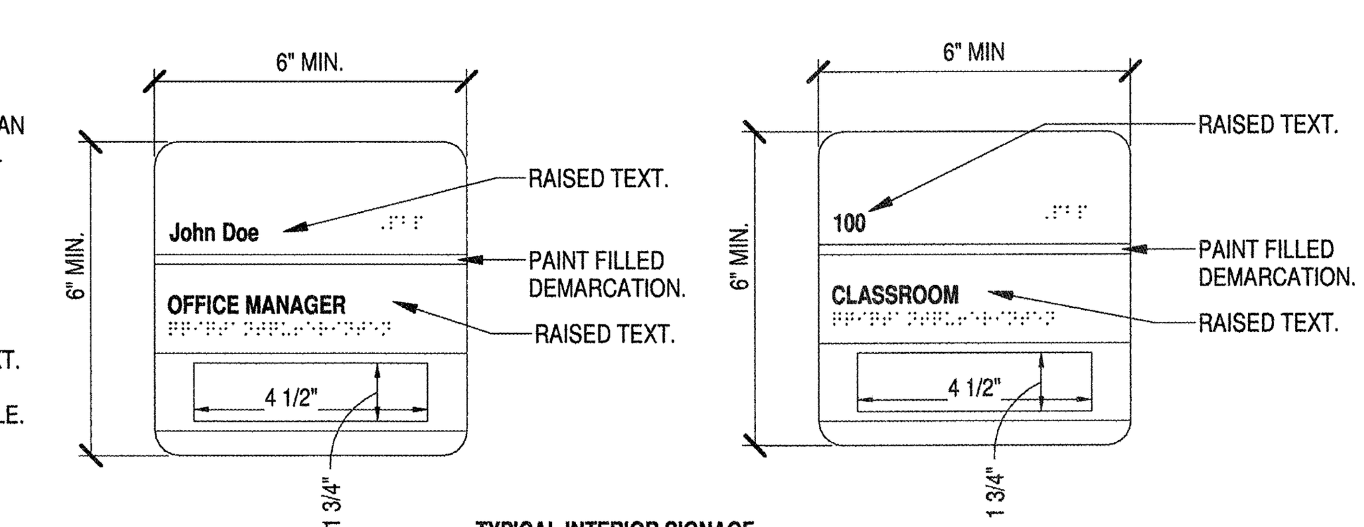


DOOR SIGNAGE HEIGHT AND LOCATION





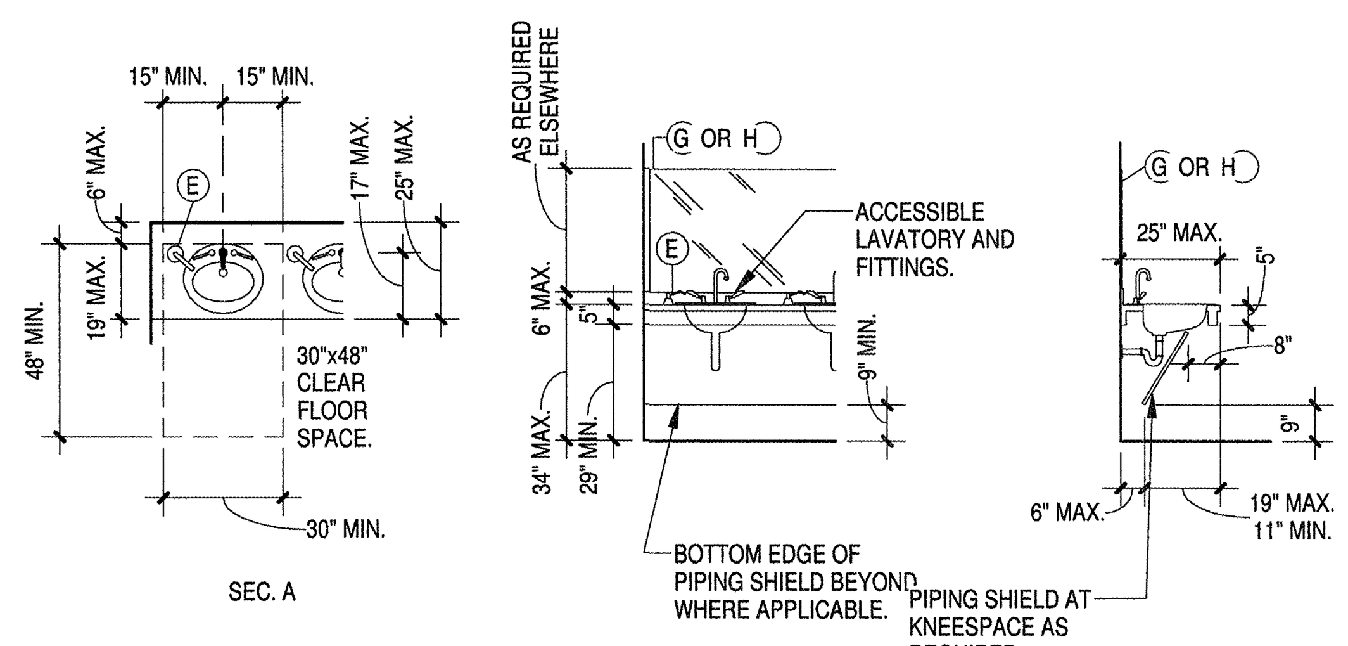
MEN'S AND WOMEN'S SIGNAGE



TYPICAL INTERIOR SIGNAGE

NOTES - ALL SIGN TYPES:
1. TACTILE CHARACTERS SHALL BE 48" MIN. A.F.F. AND 60" MAX A.F.F.
2. VISUAL CHARACTERS SHALL BE 40" MIN A.F.F. SEE TABLE 305.5.5 OF TAS FOR MORE INFORMATION ON VISUAL CHARACTERS.
3. ALL COPY TO BE HELVETICA MEDIUM.
4. ALL COPY TO BE RAISED 1/32" MIN. ABOVE THEIR BACKGROUND.
5. COPY STROKE WIDTH TO BE 1/4" WIDE MIN.
6. SIZE OF COPY MAY BE ADJUSTED; HOWEVER, LETTERS MAY NOT BE MORE THAN 5/8" HIGH. UNLESS OTHERWISE NOTED.
7. SEE SECTION 703 OF THE TAS FOR ADDITIONAL REQUIREMENTS ON SIGNAGE.

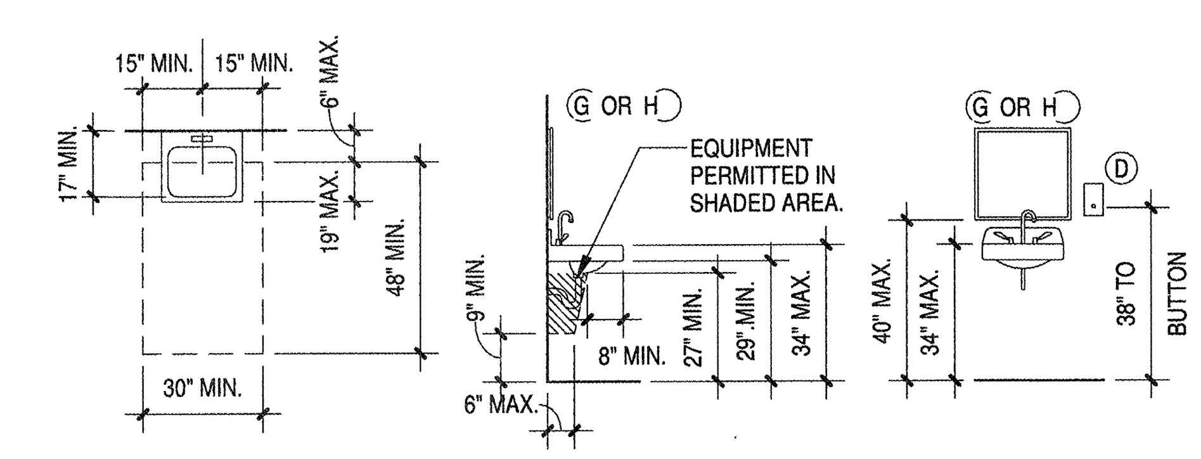
NOTES:
1) SEE PLANS FOR NUMBER AND LAYOUT OF LAVATORIES.
2) SEE MILLWORK DETAILS FOR COUNTERTOP CONSTRUCTION.
3) 34" MAX HEIGHT TO FLOOD LEVEL/ RIM HEIGHT OF BOWL WHERE BOWL/LAV SITS IN COUNTER.
4) 34" MAX COUNTER WHERE UNDER MOUNT OR WALL HUNG IS INSTALLED.



PLAN **ELEVATION** **SECTION A**

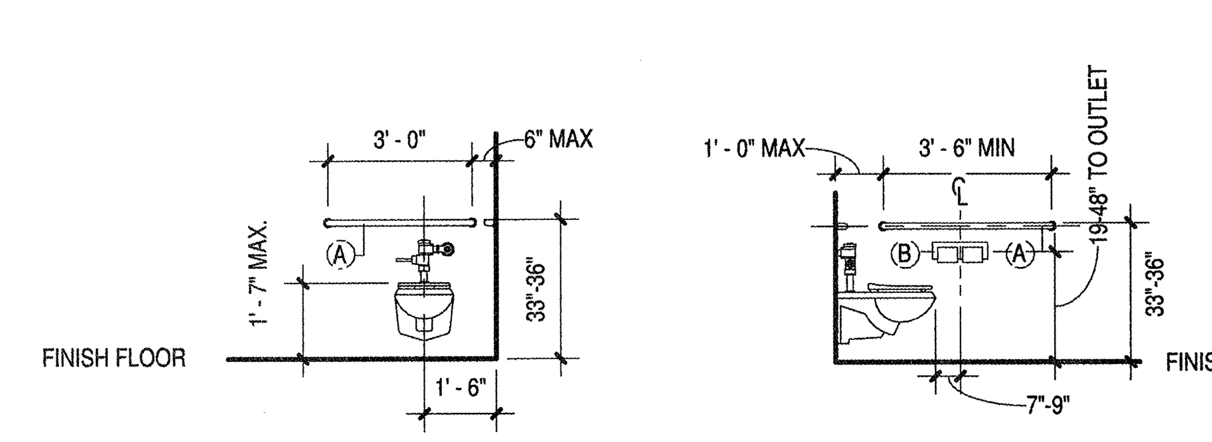
SEE SECTION 606 OF THE TAS FOR ADDITIONAL REQUIREMENTS ON ACCESSIBLE COUNTERTOP LAVATORIES.

NOTES: HOT WATER AND DRAIN PIPES UNDER LAVATORIES SHALL BE INSULATED OR OTHERWISE CONFIGURED TO PROTECT AGAINST CONTACT.



PLAN **SECTION** **ELEVATION**

SEE SECTION 606 OF THE TAS FOR ADDITIONAL REQUIREMENTS ON ACCESSIBLE LAVATORIES.



TYPICAL STALL FRONT ELEVATION **TYPICAL STALL SIDE ELEVATION**

SEE SECTION 608 OF THE TAS FOR ADDITIONAL REQUIREMENTS ON ACCESSIBLE STALLS.

GENERAL NOTES

GENERAL NOTES

1. COORDINATION: STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS ARE SUPPLEMENTARY TO THE ARCHITECTURAL DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CHECK AND COORDINATE ALL THE CONTRACT DOCUMENTS BEFORE FABRICATION AND/OR INSTALLATION OF ANY WORK. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES OR ERRORS.

2. FIELD VERIFICATION: PRIOR TO SCHEDULING OF WORK AND COMMENCING CONSTRUCTION, CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS SHOWN. CONTRACTOR SHALL NOTIFY ARCHITECT OF ANY DISCREPANCIES OF EQUIPMENT, DIMENSIONS OR MATERIALS ON DRAWINGS.

3. LEGEND: ALL SYMBOLS AND ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED CONSTRUCTION STANDARDS. IF THE CONTRACTOR HAS ANY QUESTIONS REGARDING THE SAME OR THEIR EXACT MEANING, THE ARCHITECT SHALL BE NOTIFIED FOR CLARIFICATION.

4. HORIZONTAL DIMENSIONS: DIMENSIONS ON THE DRAWINGS ARE TO CENTER LINE OF COLUMN, TO GRID LINES OR TO THE FACE OF FINISH AS INDICATED ON THE DRAWINGS, UNLESS NOTED OTHERWISE.

5. VERTICAL DIMENSIONS: CEILING HEIGHTS SHOWN IN FINISH SCHEDULE AND ON DRAWINGS ARE FROM FINISHED FLOOR SLAB AT THAT LOCATION.

6. PRECEDENCE: DIMENSIONS SHALL HAVE PRECEDENCE OVER SCALE. LARGER SCALE DRAWINGS HAVE PRECEDENCE OVER SMALL SCALE DRAWINGS. GENERAL NOTES TAKE PRECEDENCE OVER DRAWINGS.

7. DETAILS NOTED AS TYPICAL SHALL APPLY AT LIKE CONDITIONS. ALL OTHER CONDITIONS THAT ARE NOT TYPICAL WILL HAVE A SPECIFIC DETAIL CALLED OUT.

8. FRAMING: CONTRACTOR SHALL PROVIDE ALL REQUIRED BLOCKING, BACKING, FRAMES, HANGERS OR OTHER SUPPORT AS NECESSARY FOR ALL FIXTURES, EQUIPMENT, CABINETRY, FURNISHINGS AND ALL OTHER ITEMS REQUIRING THE SAME.

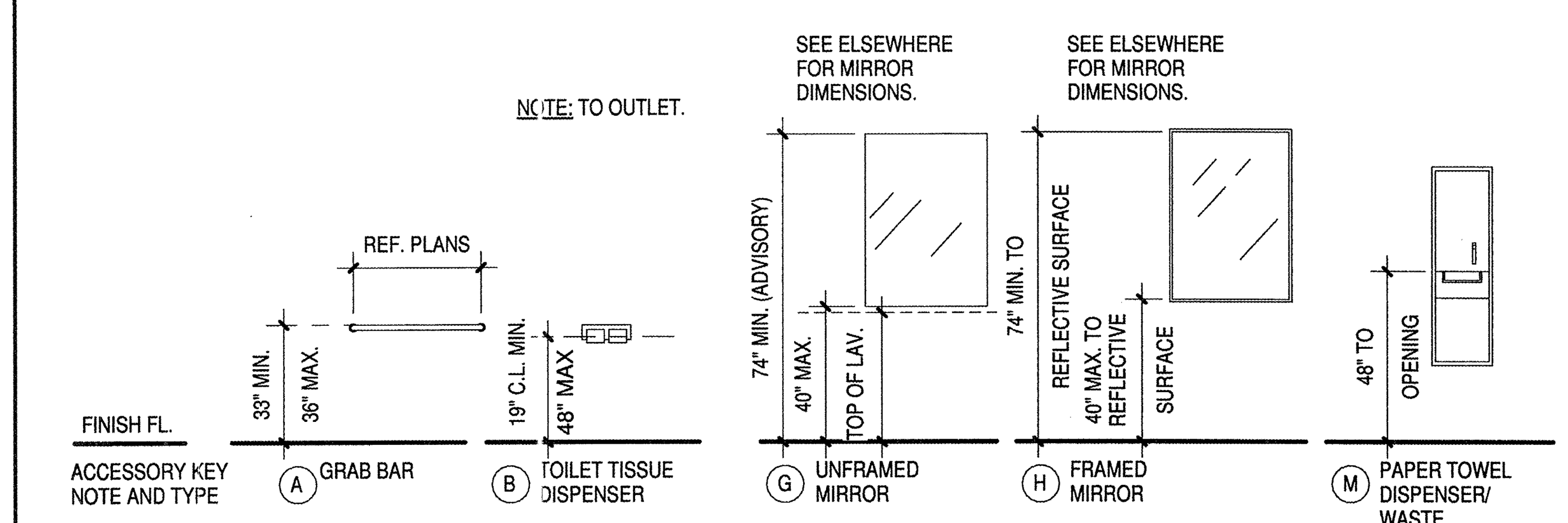
9. ACCESS PANELS: ALL EQUIPMENT SWITCHES, CONTROLS AND VALVES THAT ARE CONCEALED MUST BE PROVIDED WITH ACCESS PANELS.

10. ALL GLASS TO CONFORM TO CONSUMER SAFETY COMMISSION, PRODUCT SAFETY ACT 16 CFR 1201 & 2012 IBC.

11. ALL GYPSUM BOARD TO BE TYPE "X". ALL GYPSUM BOARD IN TOILETS, JANITOR ROOMS, AT SINKS & PIPE CHASES TO BE TYPE "X" WATER RESISTANT.

12. ALL EXPOSED CONDUITS, PIPES, SUPPORTS, ETC. ARE TO BE RUN PERPENDICULAR TO WALLS AND CEILINGS WITH CONSIDERATION TO NEATNESS.

13. THE WORK PERFORMED AS PART OF THESE DOCUMENTS SHALL COMPLY WITH TEXAS ACCESSIBILITY STANDARDS.



NOTE: FLOORS WITHIN ACCESSIBLE RESTROOMS MUST NOT EXCEED 2% (1:48) SLOPE IN ANY DIRECTION

1) SEE PLANS FOR NUMBER AND LAYOUT OF STALLS.
2) WHERE 6 OR MORE STALLS ARE PROVIDED, IN ADDITION TO THE STANDARD ACCESSIBLE STALL, AT LEAST ONE AMBULATORY ACCESSIBLE TOILET COMPARTMENT SHALL BE PROVIDED. SEE TAS 604.8.
3) THE REAR GRAB BAR SHALL BE PERMITTED TO 24" (610 MM) LONG MINIMUM, CENTERED ON THE WATER CLOSET, WHERE WALL SPACE DOES NOT PERMIT A LENGTH OF 36" (915 MM) MINIMUM DUE TO THE LOCATION OF A RECESSED FIXTURE ADJACENT TO THE WATER CLOSET.

TEXAS PARKS & WILDLIFE

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REGISTERED ARCHITECT JOE W. MARLER 09601 STATE OF TEXAS 01/12/2018

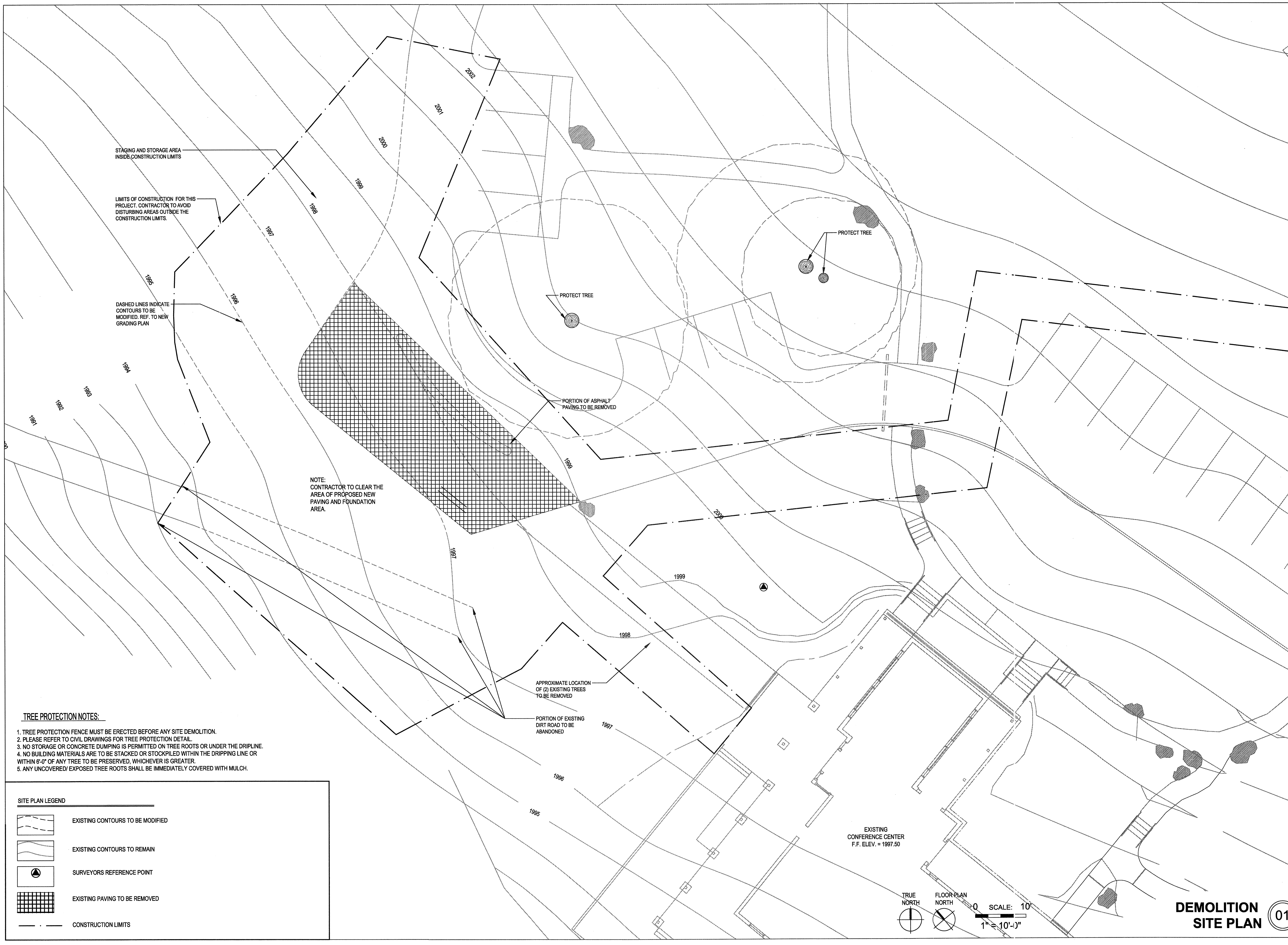
KERR WMA
RESEARCH, CONSERVATION AND EDUCATION STATION
PROJECT NUMBER: 134174

DATE: 01/12/2018
DESIGNED BY:
DRAWN BY:
REVIEWED BY:
REVISED:
REVISED:

SHEET TITLE
GENERAL INFORMATION & TAS REQUIREMENTS

SHEET NUMBER
G001

PERCENTAGE: ISSUED FOR BID



TREE PROTECTION NOTES:

1. TREE PROTECTION FENCE MUST BE ERECTED BEFORE ANY SITE DEMOLITION.
2. PLEASE REFER TO CIVIL DRAWINGS FOR TREE PROTECTION DETAIL.
3. NO STORAGE OR CONCRETE DUMPING IS PERMITTED ON TREE ROOTS OR UNDER THE DRIPLINE.
4. NO BUILDING MATERIALS ARE TO BE STACKED OR STOCKPILED WITHIN THE DRIPPING LINE OR WITHIN 6'-0" OF ANY TREE TO BE PRESERVED, WHICHEVER IS GREATER.
5. ANY UNCOVERED/ EXPOSED TREE ROOTS SHALL BE IMMEDIATELY COVERED WITH MULCH.

SITE PLAN LEGEND

- EXISTING CONTOURS TO BE MODIFIED
- EXISTING CONTOURS TO REMAIN
- SURVEYORS REFERENCE POINT
- EXISTING PAVING TO BE REMOVED
- CONSTRUCTION LIMITS

DEMOLITION SITE PLAN (01)

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01/12/2018

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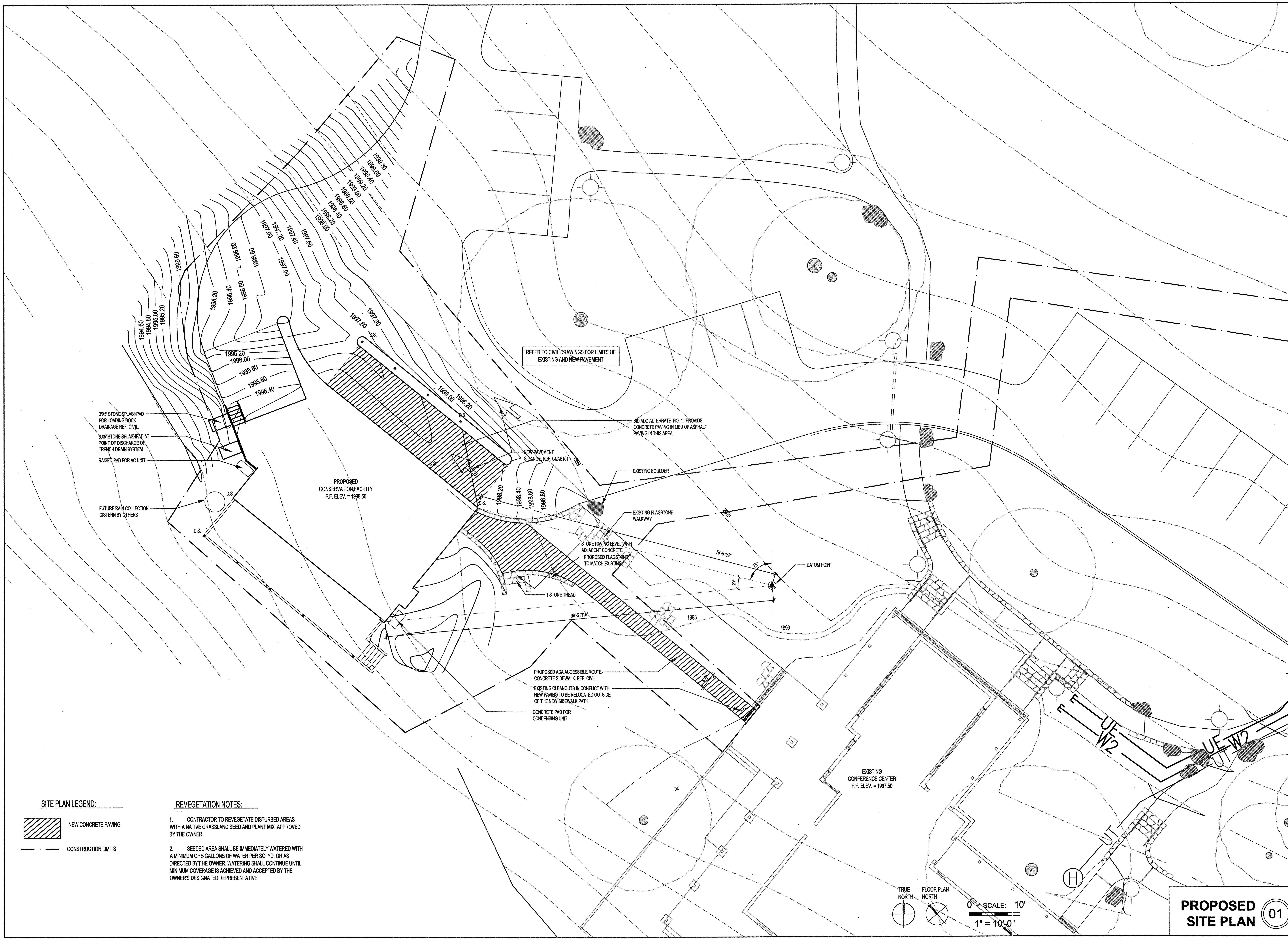
PROJECT NUMBER: 134174

DATE: 01/12/2018
DESIGNED BY:
DRAWN BY:
REVIEWED BY:
REVISED:
REVISED:
REVISED:

SHEET TITLE
DEMOLITION SITE PLAN

SHEET NUMBER
ASD01

PERCENTAGE: ISSUED FOR BID



SITE PLAN LEGEND:

- NEW CONCRETE PAVING
- CONSTRUCTION LIMITS

REVEGETATION NOTES:

1. CONTRACTOR TO REVEGETATE DISTURBED AREAS WITH A NATIVE GRASSLAND SEED AND PLANT MIX APPROVED BY THE OWNER.
2. SEEDED AREA SHALL BE IMMEDIATELY WATERED WITH A MINIMUM OF 5 GALLONS OF WATER PER SQ. YD. OR AS DIRECTED BYT HE OWNER. WATERING SHALL CONTINUE UNTIL MINIMUM COVERAGE IS ACHIEVED AND ACCEPTED BY THE OWNER'S DESIGNATED REPRESENTATIVE.

PROPOSED SITE PLAN (01)

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STATE OF TEXAS
01/12/2018

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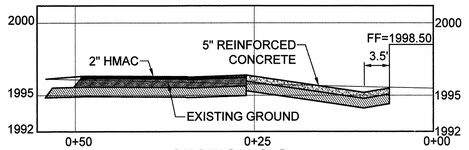
REVISED:
REVISED:
REVISED:

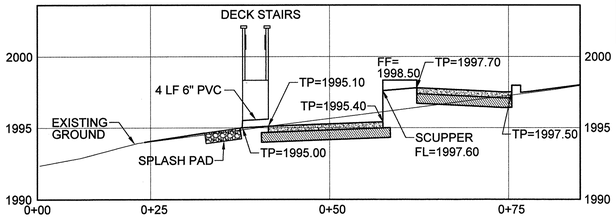
SHEET TITLE
PROPOSED SITE PLAN

SHEET NUMBER
AS101

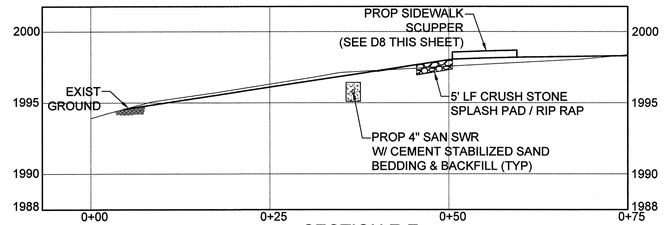
PERCENTAGE: ISSUED FOR BID



SECTION C-C
SCALE: 1"=10H, 1"=5V



SECTION B-B
SCALE: 1"=10H, 1"=5V



SECTION E-E
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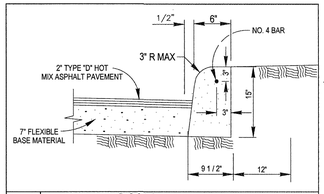
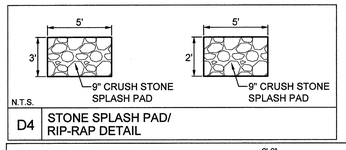
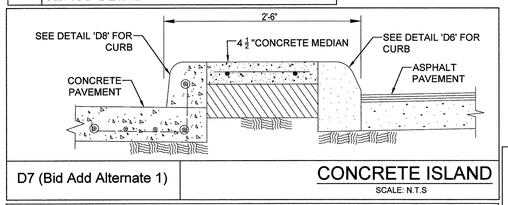


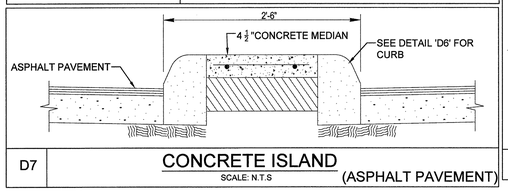
D6 | CONCRETE CURB
ON FLEXIBLE BASE MATERIAL
SCALE: NTS



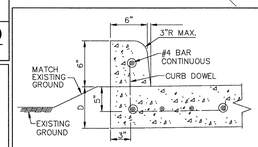
D4 | STONE SPLASH PAD/ RIP-RAP DETAIL



D7 (Bid Add Alternate 1) | CONCRETE ISLAND
SCALE: N.T.S



D7 | CONCRETE ISLAND (ASPHALT PAVEMENT)
SCALE: N.T.S



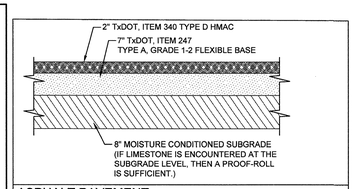
NO.3 BARS ON 2'-6" C-C
CURB DOWEL

NOTE FOR CURB:
1. AT EACH PAVEMENT EXPANSION JOINT THERE SHALL BE A PREMOLDED EXPANSION JOINT AT THE FULL WIDTH AND HEIGHT OF THE CURB AND THE SAME THICKNESS AS THE PAVEMENT EXPANSION JOINT.

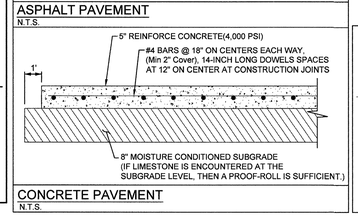
CONCRETE DOWELED ON CURB FOR 4' CONC SIDEWALK
SCALE: NTS

LEGEND

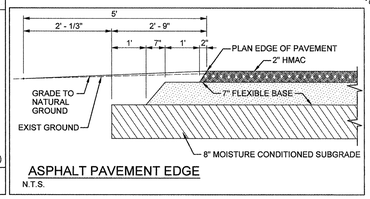
- TC - TOP OF CURB
- TS - TOP OF SLAB
- TP - TOP OF PAVEMENT
- TW - TOP OF SIDEWALK
- FF - FINISH FLOOR
- ➡ - SHEET FLOW DIRECTION
- —1995.00— - PROP CONTOUR
- — — - SAWCUT EXISTING ASPHALT PAVEMENT
- - PROP ASPHALT PAVEMENT OR (Bid Add Alt #1) - 5" CONCRETE PAVEMENT
- - PROP ASPHALT PAVEMENT
- - PROP 5" REINFORCED CONCRETE PAVEMENT
- - 9" THICK SPLASH PAD
- - PROP 4 1/2" REINFORCED CONC SIDEWALK
- - CONSTRUCTION LIMITS



ASPHALT PAVEMENT
N.T.S.



CONCRETE PAVEMENT
N.T.S.



ASPHALT PAVEMENT EDGE
N.T.S.

NOTES:

1. CONTRACTOR SHALL REFERENCE THE GEOTECHNICAL STUDY SUPPLEMENTAL LETTER #1 Prepared by: Intertech *PSI* Dated: May 18, 2017 PSI Project No. 0312-1485
2. ASPHALT PAVING SHALL BE IN ACCORDANCE WITH TxDOT ITEM 340.
3. BASE MATERIAL FOR ASPHALT SHALL BE IN ACCORDANCE WITH TxDOT ITEM 247.
4. CONCRETE PAVEMENT AND CURBS SHALL BE IN ACCORDANCE WITH TxDOT ITEM 360.
5. SUBGRADE COMPACTION / ROLLING SHALL BE PERFORMED IN ACCORDANCE WITH TxDOT ITEM 210.
6. PROOF ROLLING SHALL BE IN ACCORDANCE WITH TxDOT ITEM 216.

SEE UTILITIES SITE PLAN SHEET 'U1' FOR EXISTING AND PROPOSED UTILITIES.

NOTE:
PRIOR TO CONSTRUCTION CONTRACTOR SHALL TAKE PHOTOGRAPHS OF THE PAVEMENT AND PARKING AREA DEPICTING THE EXISTING CONDITIONS AND SHALL SUBMIT PHOTOS WITH THE FIRST SUBMITTALS.

D8 | SIDEWALK SCUPPER - TYPE 2
NTS

BENCHMARK
BM1 1/2" REBAR W/TPWD CAP N=13934627.243 E=1808233.650 ELEV=1999.85
BM2 1/2" REBAR W/TPWD CAP N=13934686.970 E=1808527.291 ELEV=2008.83

0 10 20
SCALE: 1"=10'

TEXAS PARKS & WILDLIFE

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REGISTERED PROFESSIONAL ENGINEER
1/19/18
OMEGA ENGINEERS, INC
TX PE Firm Reg. No. F-2147

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DATE: 1/19/2018
DESIGNED BY: EC
DRAWN BY: FE
REVIEWED BY: EC
REVISED:
REVISED:
REVISED:

SHEET TITLE
GRADING PLAN

SHEET NUMBER
C1
OF 59
C1 GRADING PLAN.dwg

PERCENTAGE: 100% CD DOCUMENT

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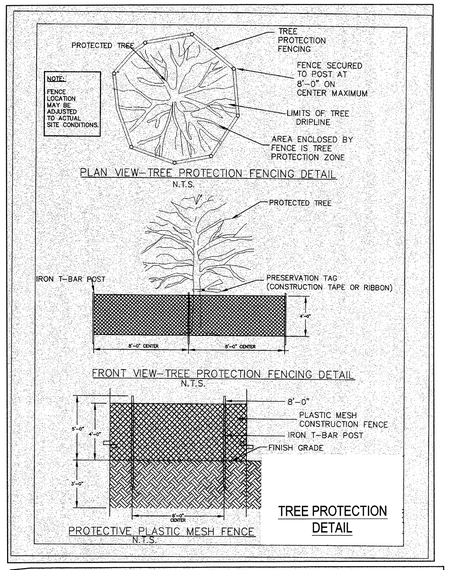

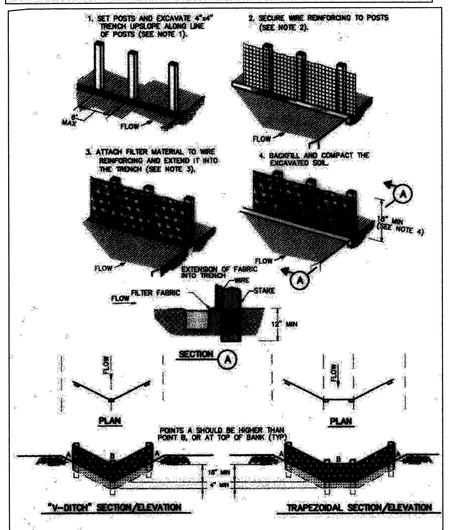

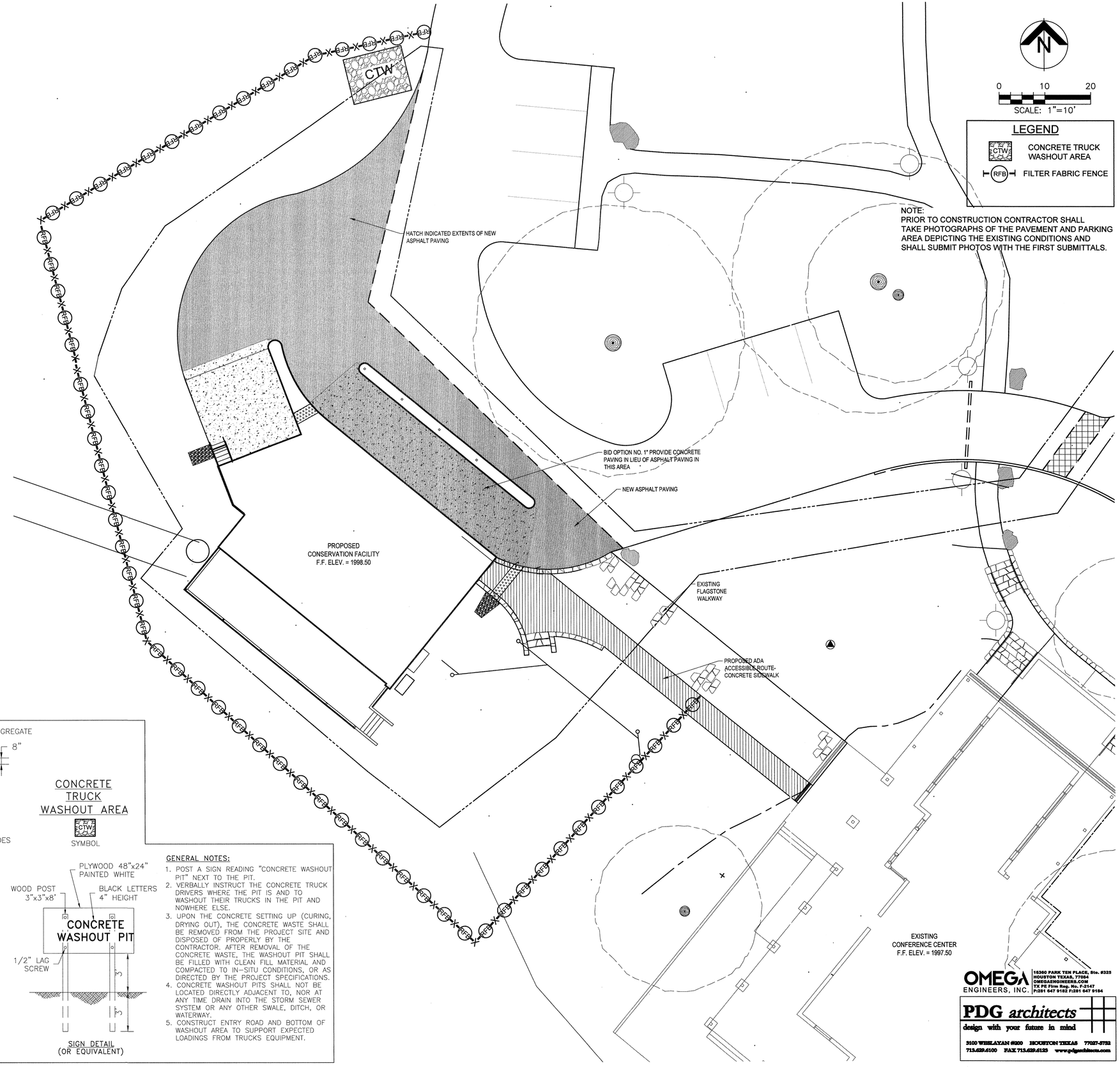

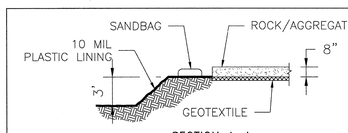

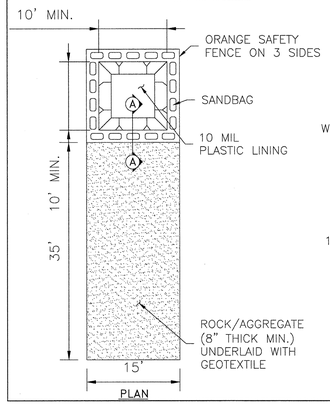

CONCRETE TRUCK WASHOUT AREA

SYMBOL

SIGN DETAIL (OR EQUIVALENT)

GENERAL NOTES:

1. POST A SIGN READING "CONCRETE WASHOUT PIT" NEXT TO THE PIT.
2. VERBALLY INSTRUCT THE CONCRETE TRUCK DRIVERS WHERE THE PIT IS AND TO WASHOUT THEIR TRUCKS IN THE PIT AND NOWHERE ELSE.
3. UPON THE CONCRETE SETTING UP (CURING, DRYING OUT), THE CONCRETE WASTE SHALL BE REMOVED FROM THE PROJECT SITE AND DISPOSED OF PROPERLY BY THE CONTRACTOR. AFTER REMOVAL OF THE CONCRETE WASTE, THE WASHOUT PIT SHALL BE FILLED WITH CLEAN FILL MATERIAL AND COMPACTED TO IN-SITU CONDITIONS, OR AS DIRECTED BY THE PROJECT SPECIFICATIONS.
4. CONCRETE WASHOUT PITS SHALL NOT BE LOCATED DIRECTLY ADJACENT TO, NOR AT ANY TIME DRAIN INTO THE STORM SEWER SYSTEM OR ANY OTHER SWALE, DITCH, OR WATERWAY.
5. CONSTRUCT ENTRY ROAD AND BOTTOM OF WASHOUT AREA TO SUPPORT EXPECTED LOADINGS FROM TRUCKS EQUIPMENT.

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PROJECT NUMBER: 134174

DATE: 1/19/2018
DESIGNED BY: EC
DRAWN BY: FE
REVIEWED BY: EC
REVISED:
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SHEET TITLE
SWPP PLAN

SHEET NUMBER
C2
OF 59
C2 SWPP PLAN.dwg

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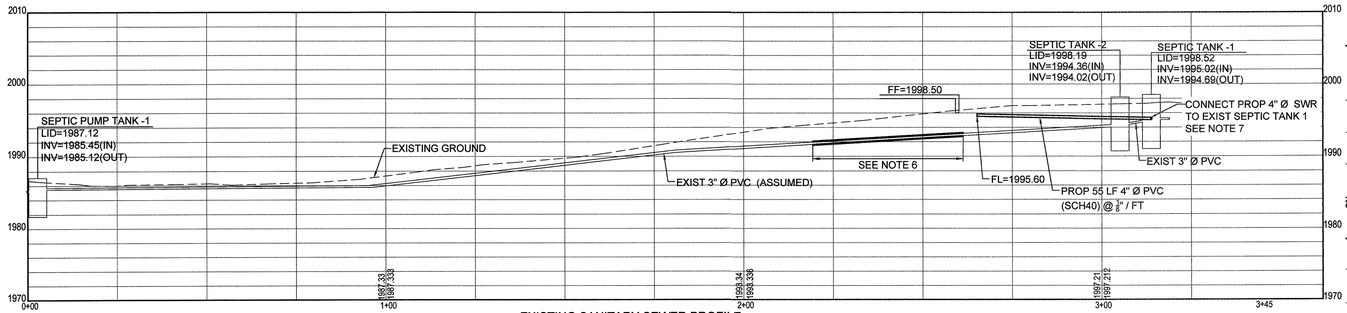
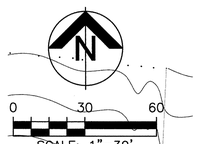


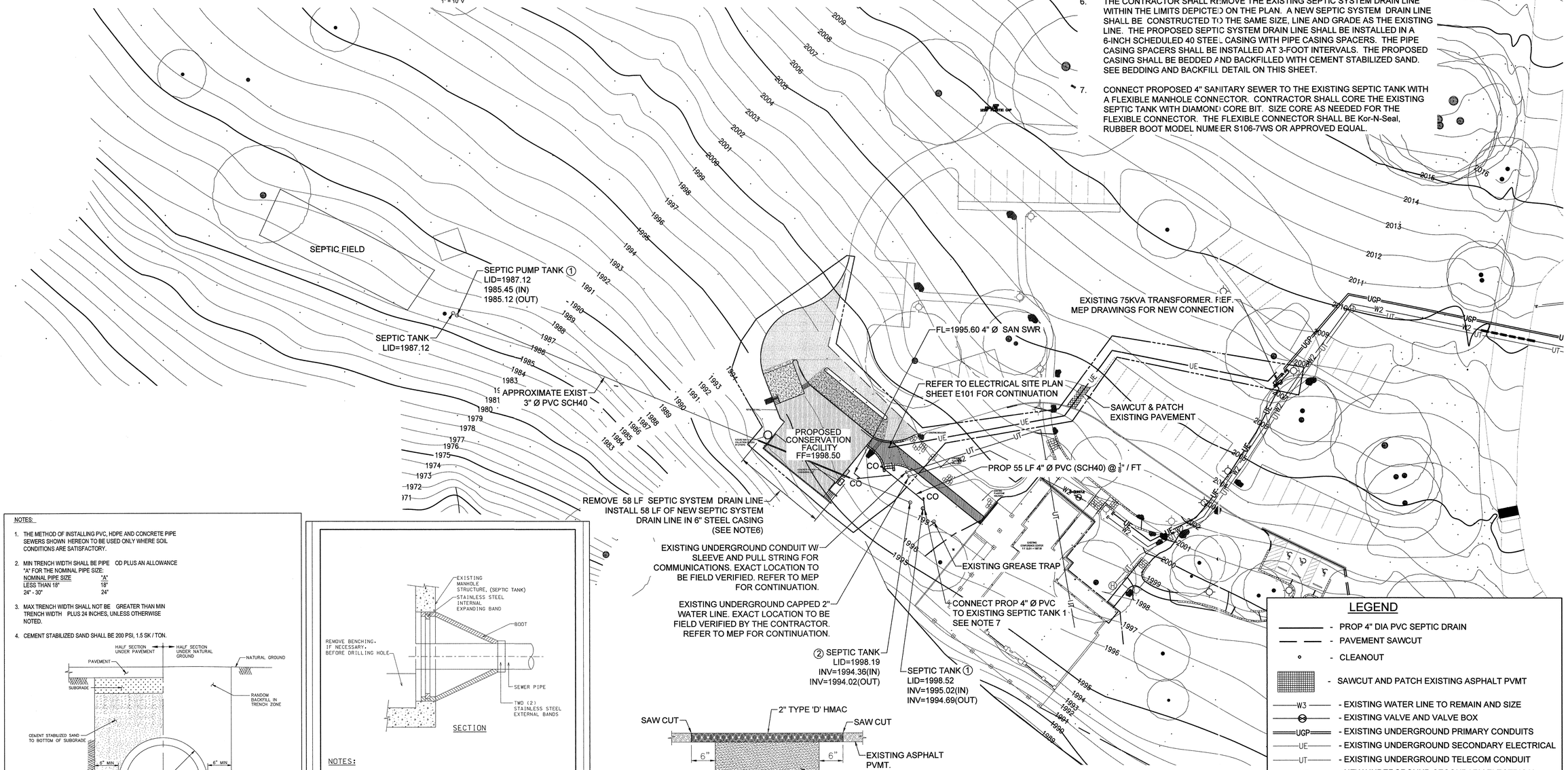
EXISTING SANITARY SEWER PROFILE

SCALE: 1" = 20' H
1" = 10' V

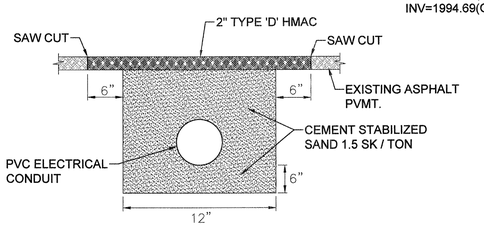
UTILITY NOTES:

1. THE EXISTING UTILITIES DEPICTED ON THIS SHEET ARE BASED UPON INFORMATION PROVIDE BY TEXAS PARKS AND WILDLIFE DEPARTMENT.
2. THE GENERAL CONTRACTOR SHALL RETAIN THE SERVICES OF A REGISTERED PROFESSIONAL SANITARIAN TO REVISE THE PERMIT FOR THE MODIFIED ON-SITE SEWAGE FACILITIES. (INCLUDE COST OF PERMITTING IN BASE BID, NO SEPARATE PAYMENT WILL BE MADE FOR PERMITTING.)
3. THE GENERAL CONTRACTOR SHALL RETAIN THE SERVICES OF A MASTER PLUMBER TO ROUTE WATER SERVICE TO THE PROPOSED CONSERVATION FACILITY.
4. THE GENERAL CONTRACTOR SHALL RETAIN THE SERVICES OF A MASTER ELECTRICITAN TO ROUTE ELECTRICAL POWER AND COMMUNICATION SERVICES TO THE PROPOSED CONSERVATION FACILITY.
5. THE GENERAL CONTRACTOR SHALL REFER TO THE MECHNICAL, ELECTRICAL AND PLUMBING PLANS INCLUDED WITHIN THIS PLAN SET FOR THE SANITARY, WATER, POWER AND COMMUNICTION SERVICES CONNECTION POINTS TO THE BUILDING.
6. THE CONTRACTOR SHALL REMOVE THE EXISTING SEPTIC SYSTEM DRAIN LINE WITHIN THE LIMITS DEPICTED ON THE PLAN. A NEW SEPTIC SYSTEM DRAIN LINE SHALL BE CONSTRUCTED TO THE SAME SIZE, LINE AND GRADE AS THE EXISTING LINE. THE PROPOSED SEPTIC SYSTEM DRAIN LINE SHALL BE INSTALLED IN A 6-INCH SCHEDULED 40 STEEL CASING WITH PIPE CASING SPACERS. THE PIPE CASING SPACERS SHALL BE INSTALLED AT 3-FOOT INTERVALS. THE PROPOSED CASING SHALL BE BEDDED AND BACKFILLED WITH CEMENT STABILIZED SAND. SEE BEDDING AND BACKFILL DETAIL ON THIS SHEET.
7. CONNECT PROPOSED 4" SANITARY SEWER TO THE EXISTING SEPTIC TANK WITH A FLEXIBLE MANHOLE CONNECTOR. CONTRACTOR SHALL CORE THE EXISTING SEPTIC TANK WITH DIAMOND CORE BIT. SIZE CORE AS NEEDED FOR THE FLEXIBLE CONNECTOR. THE FLEXIBLE CONNECTOR SHALL BE Kor-N-Seal, RUBBER BOOT MODEL NUMBER S106-7WS OR APPROVED EQUAL.





SANITARY SEWER AND STORM BEDDING AND BACKFILL



ASPHALT PAVEMENT REMOVAL AND REPLACEMENT DETAIL FOR ELECTRICAL CONDUIT

N.T.S.

LEGEND

- PROP 4" DIA PVC SEPTIC DRAIN
- PAVEMENT SAWCUT
- CLEANOUT
- SAWCUT AND PATCH EXISTING ASPHALT PVMT
- W3 - EXISTING WATER LINE TO REMAIN AND SIZE
- EXISTING VALVE AND VALVE BOX
- UGP - EXISTING UNDERGROUND PRIMARY CONDUITS
- UE - EXISTING UNDERGROUND SECONDARY ELECTRICAL
- UT - EXISTING UNDERGROUND TELECOM CONDUIT
- UE - NEW UNDERGROUND SECONDARY ELECTRICAL

NOTE:
CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO THE START OF WORK. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES BETWEEN THE PLANS AND ACTUAL FIELD CONDITIONS TO THE OWNER, ARCHITECT AND ENGINEER.

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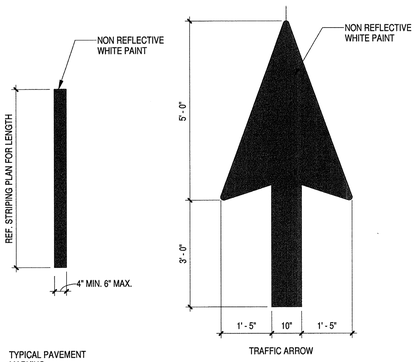
REVISED:

SHEET TITLE
UTILITY SCHEMATIC PLAN

SHEET NUMBER
US1
OF 59
C3 UTILITY PLAN.dwg

PERCENTAGE: 100% CD DOCUMENT

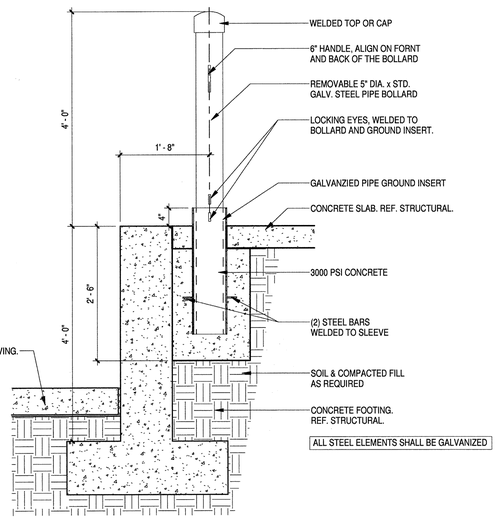
NOTE:
1. YELLOW PAINT MAY BE USED ON CONCRETE OR OTHER SURFACES WHEN WHITE PAINT DOES NOT PROVIDE SUFFICIENT CONTRAST.



TYPICAL PAVEMENT MARKING

TRAFFIC ARROW

PAVING SIGNAGE
1/2" = 1'-0" (04)



ALL STEEL ELEMENTS SHALL BE GALVANIZED

REMOVABLE BOLLARD DETAIL
3/4" = 1'-0" (03)

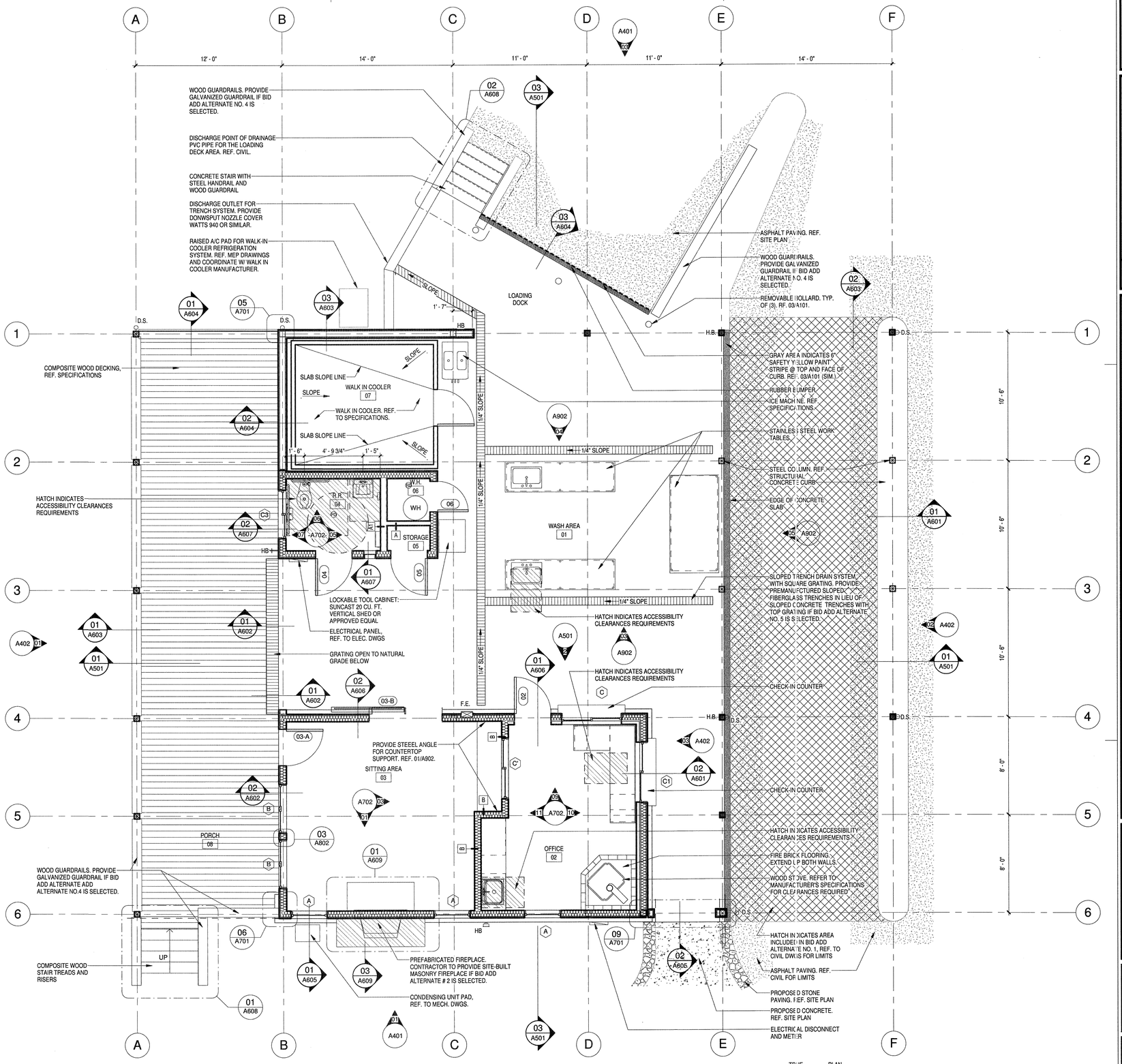
FLOOR PLAN NOTES:

1. ROOMS 02, 03, AND 04 TO RECEIVE ROOM SIGNAGE PER THE SPECIFICATIONS. REF. TO SIGANGE REQUIREMENTS ON SHEET G001 FOR INSTALLATION DETAILS.

REFERENCE NOTES:

1. REFER TO SHEET G001 FOR BUILDING CODE REVIEW INFORMATION, TYP.
2. REFER TO SHEET G001 FOR ARCHITECTURAL FLOOR PLAN LEGEND.
3. REFER TO SHEET A701 FOR WALL TYPE CONSTRUCTION INFORMATION, TYP.
4. XXXXXXX INDICATES WALL CAVITY INSULATION
5. REFER TO SHEET A801 FOR DOOR AND WINDOW SCHEDULES.
6. SEE A102 FOR DIMENSIONING.

GENERAL PLAN NOTES
1/4" = 1'-0" (02)



FLOOR PLAN
1/4" = 1'-0" (01)

TEXAS PARKS & WILDLIFE

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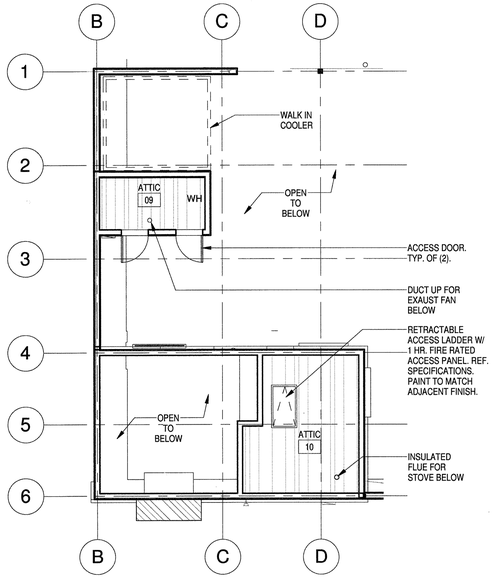
REVISED:

SHEET TITLE
FLOOR PLAN

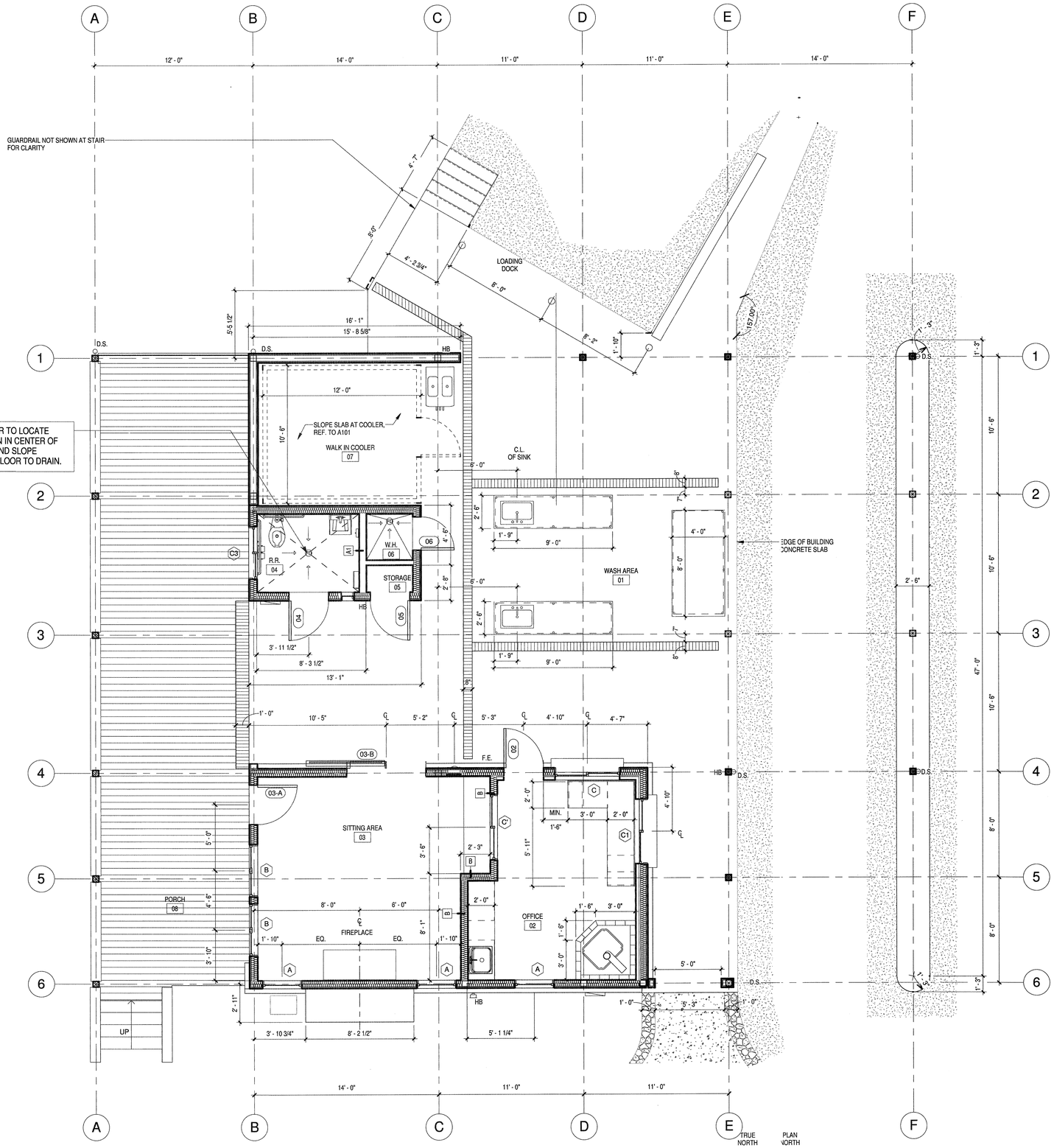
SHEET NUMBER
A101

PERCENTAGE: ISSUED FOR BID

NOT USED 12



ATTIC PLAN
1/8" = 1'-0" 04



DIMENSIONED FLOOR PLAN
1/4" = 1'-0" 01

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01/12/2018

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DESIGNED BY:
DRAWN BY:
REVIEWED BY:
REVISED:
REVISED:

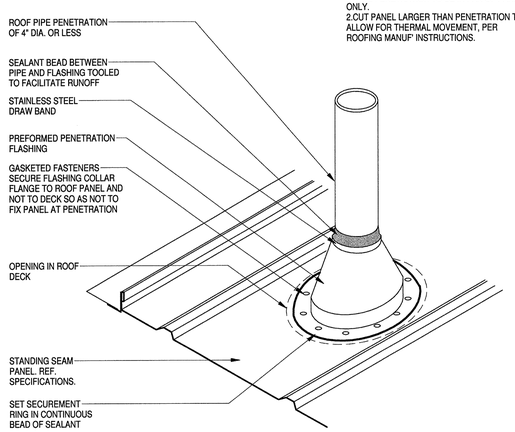
SHEET TITLE
DIMENSIONED FLOOR PLAN

SHEET NUMBER
A102

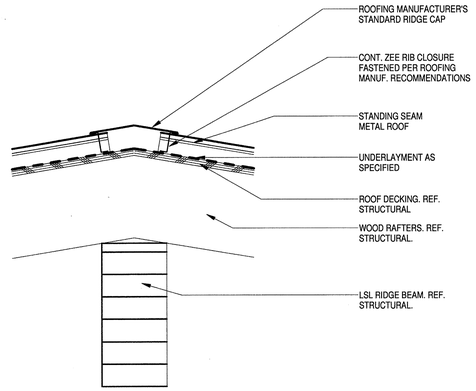
PERCENTAGE: ISSUED FOR BID

NOTES:

1. PIPE PENETRATION TO BE IN PAN OF PANEL ONLY.
2.CUT PANEL LARGER THAN PENETRATION TO ALLOW FOR THERMAL MOVEMENT, PER ROOFING MANUF' INSTRUCTIONS.

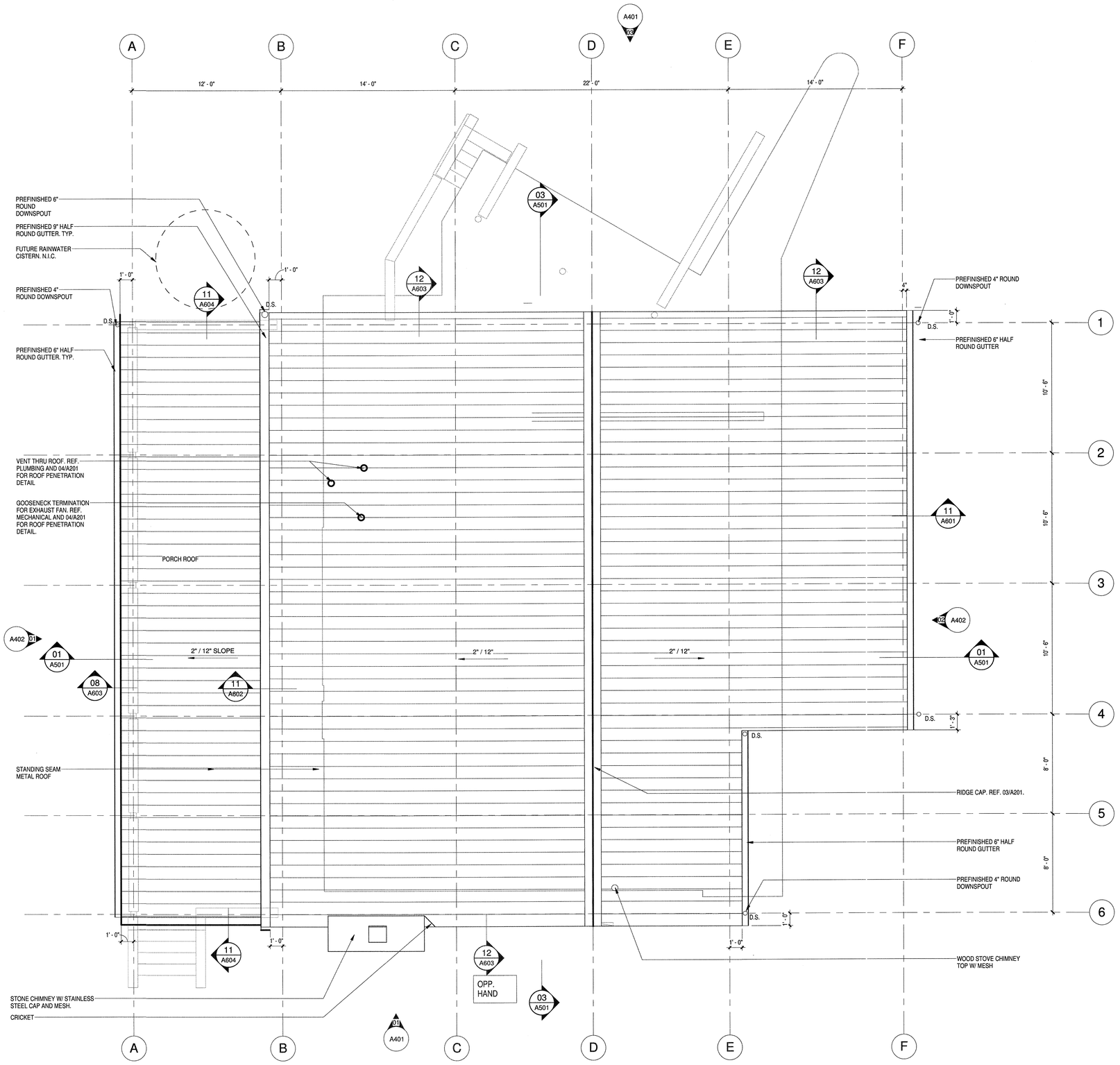


VENT STACK DETAIL
3" = 1'-0" 04



ROOF RIDGE DETAIL
1 1/2" = 1'-0" 03

NOT USED 02



ROOF PLAN
1/4" = 1'-0" 01

TRUE NORTH
PLAN NORTH

TEXAS PARKS & WILDLIFE

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SHEET TITLE
ROOF PLAN

SHEET NUMBER
A201

PERCENTAGE: ISSUED FOR BID

NOTES:

01. NEW MEAT RAIL SYSTEM SPECIFICATIONS SHALL BE AS FOLLOWS:

A. OVERHEAD RAIL SYSTEM: STAINLESS STEEL OVERHEAD BRACED RAIL SYSTEM FOR MOVING HARVESTED DEER CARCASSES. 2.5" RAILS SUPPORTED AND BRACED FROM STRUCTURE ABOVE AS RECOMMENDED BY RAIL SYSTEM MANUFACTURER AND WITH QUANTITIES AS SHOWN ON DRAWINGS. TWENTY (20) SINGLE WHEEL STAINLESS STEEL TROLLEYS WITH TWENTY (20) STAINLESS STEEL HOOKS (TWO HOOKS ADN TWO TROLLEYS PER DEER CARCASSES) ADN SIX (6) STAINLESS STEEL GAMBRELS. MINIMUM LOAD TO EQUAL 1,800 LBS.

I) BASIS OF DESIGN - MOUND TOOL BUTCHER MEAT PROCESSSING TROLLEYS (www.moundtoo.com)
- **a) 10" S.S. RAIL HANGER BRACKETS - NO. 1510**
- **b) 1/2" X 2 1/2" X 20' S.S. SQUARE EDGE TROLLEY TRACKS - NO. 1525**
- **c) HEAVY DUTY S.S. WHEEL, FRAME, AXLE, SWIVEL AND HOOK - NO. 812SS/822SS - 6**
- **d) S.S. GAMBRELS - NO. 833SS**

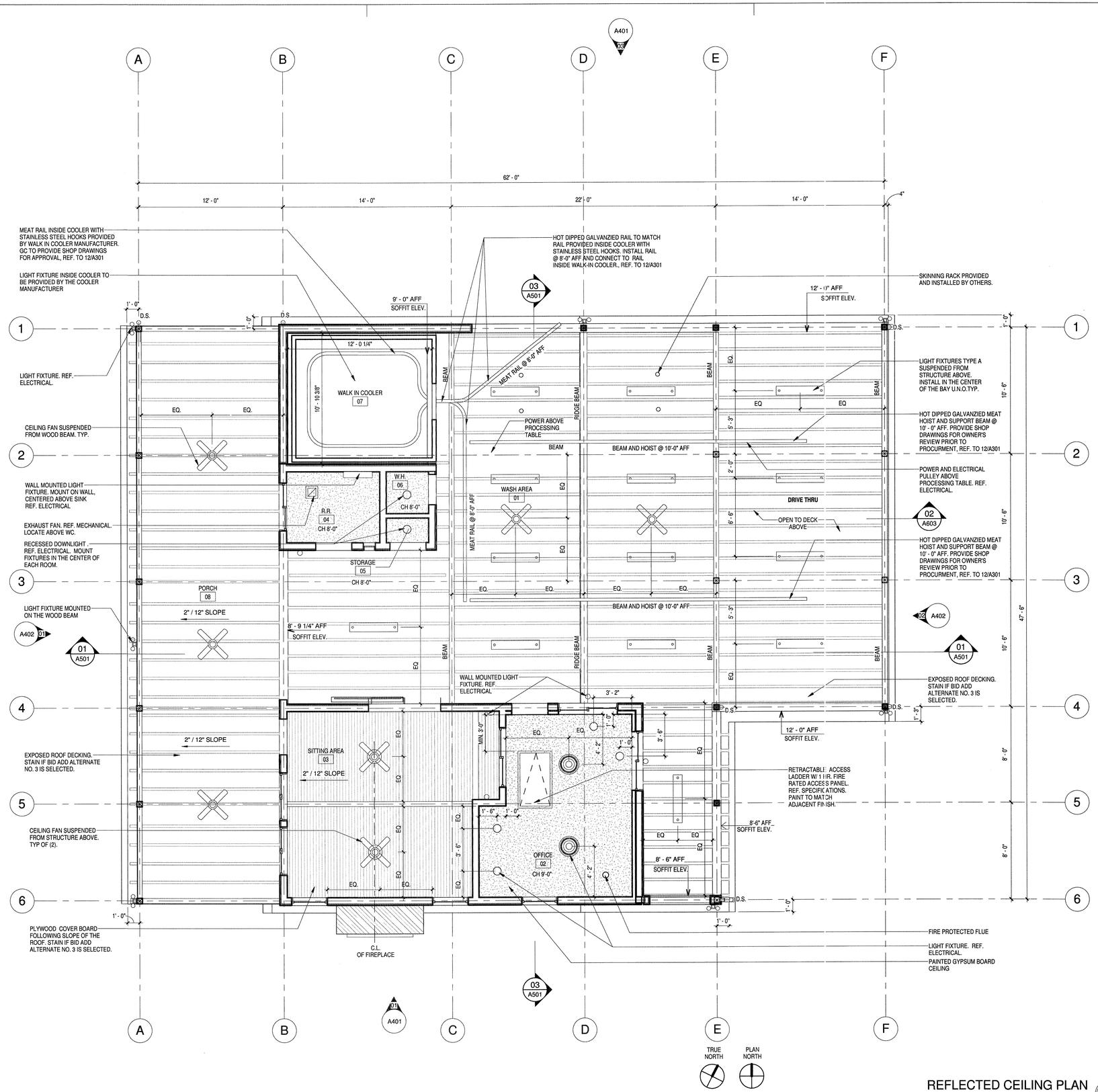
02. CABLE HOIST SHALL BE STRONGWAY ELECTRIC CABLE HOIST OR APPROVED EQUAL WITH A LIFT CAPACITY OF 500 LBS.

03. ALL STEEL MEMBERS TO BE HOT DIPPED GALVANIZED U.N.O.

04. ALL HOOKS TO BE STAINLESS STEEL.

05. CONTRACTOR TO ENSURE SMOOTH RAIL TRANSITION TO THE WALK-IN COOLER.

MEAT HOIST AND RAIL SPECIFICATIONS
1 1/2" = 1'-0" (12)



REFLECTED CEILING PLAN
1/4" = 1'-0" (01)

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REVIEWED BY:	
REVISED:	
REVISED:	

SHEET TITLE
REFLECTED CEILING PLAN

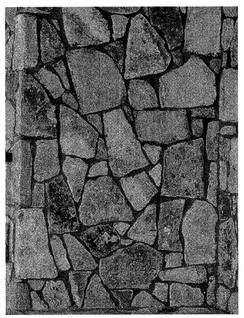
SHEET NUMBER
A301

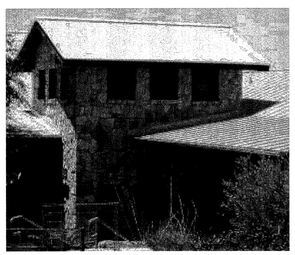
PERCENTAGE: ISSUED FOR BID

EXTERIOR FINISH MATERIALS SCHEDULE

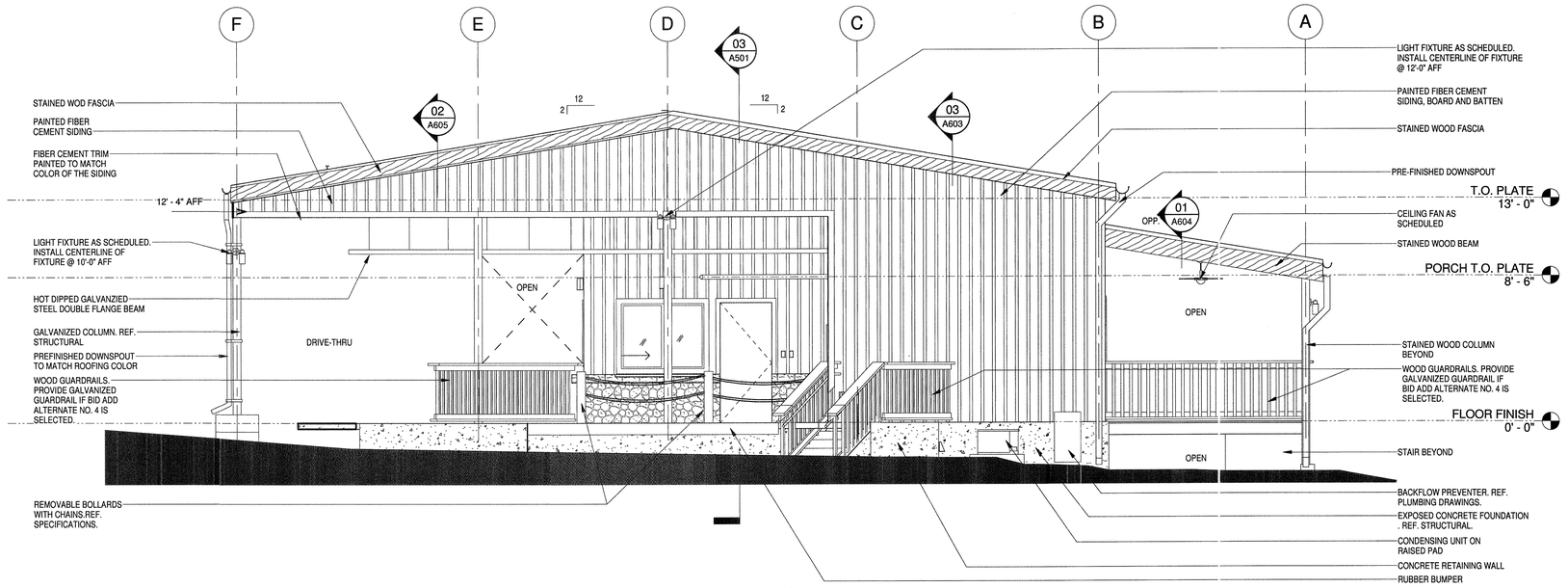
DESCRIPTION	MANUFACTURER	FINISH	COLOR
CEMENT BOARD SIDING	--	PAINTED	PT-1 ; MATCH BASS CENTER SIDING
STONE	--	MATCH BASS CENTER	
STANDING SEAM ROOFING	--	GALVALUME	
WOOD TRIM	--	CEDAR, STAINED	MATCH BASS CENTER
STEEL COLUMNS	--	HOT DIPPED GALVANIZED	
WOOD COLUMNS	--	STAINED	MATCH BASS CENTER
H.M. DOORS	SEE SPECS	PAINTED	PT-1
WOOD WINDOWS	SEE SPECS	STAINED	MATCH BASS CENTER

EXTERIOR FINISH MATERIALS SCHEDULE 04

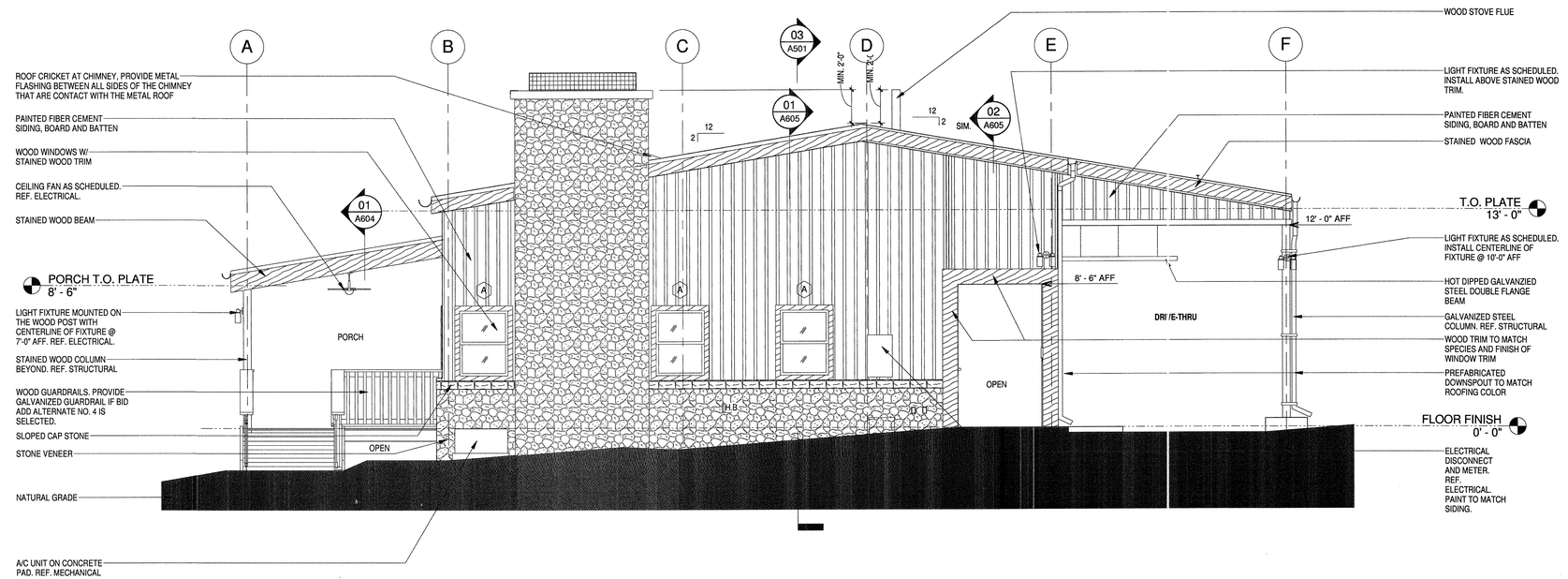




STONE PATTERN @ BASS CENTER TO MATCH 02



NORTH ELEVATION
1/4" = 1'-0" 03



SOUTH ELEVATION
1/4" = 1'-0" 01

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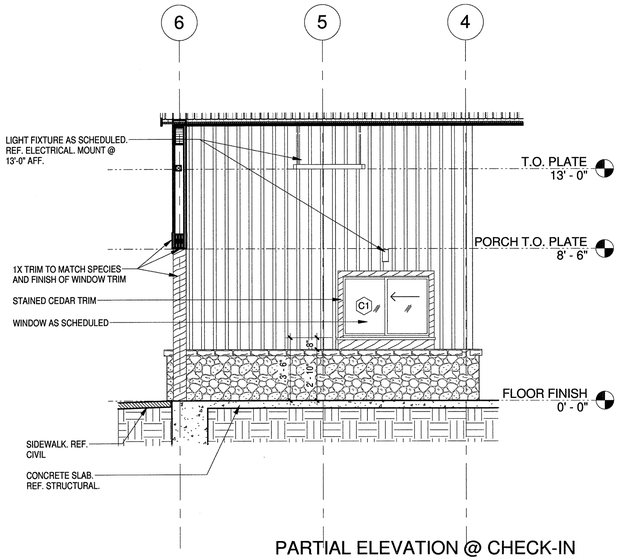
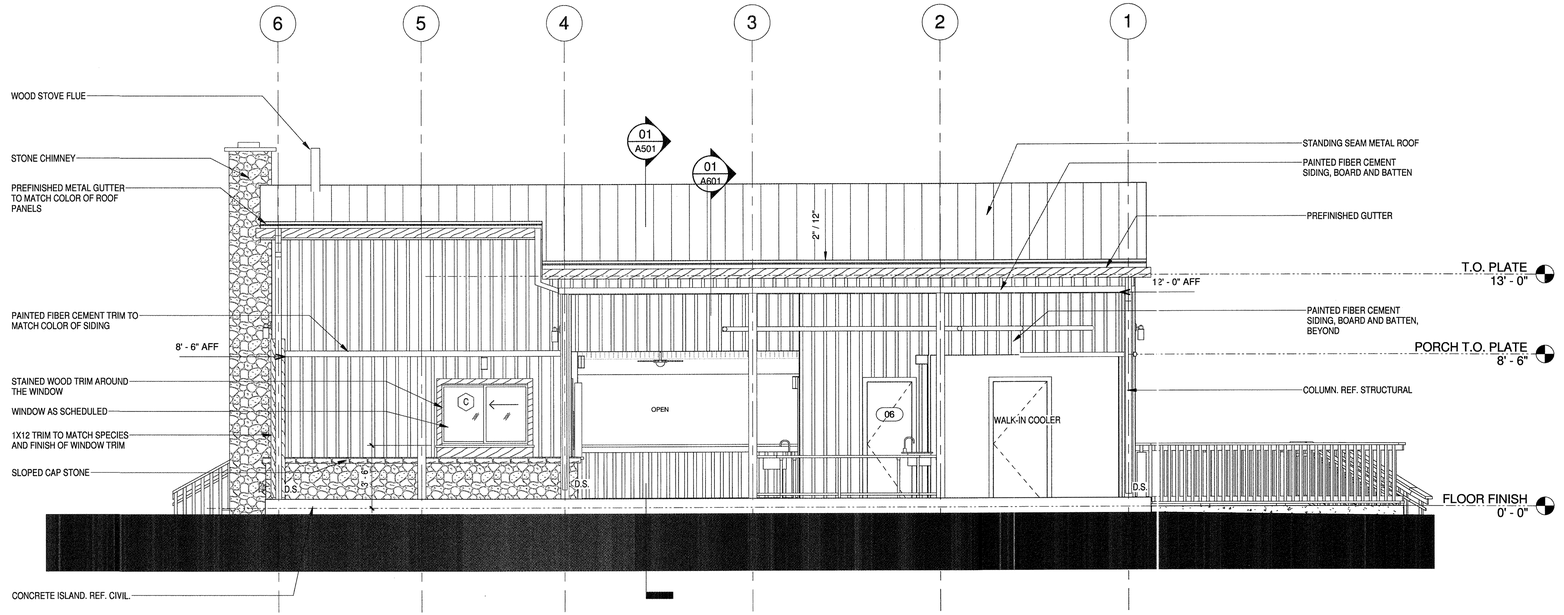
SHEET TITLE
BUILDING ELEVATIONS

SHEET NUMBER
A401

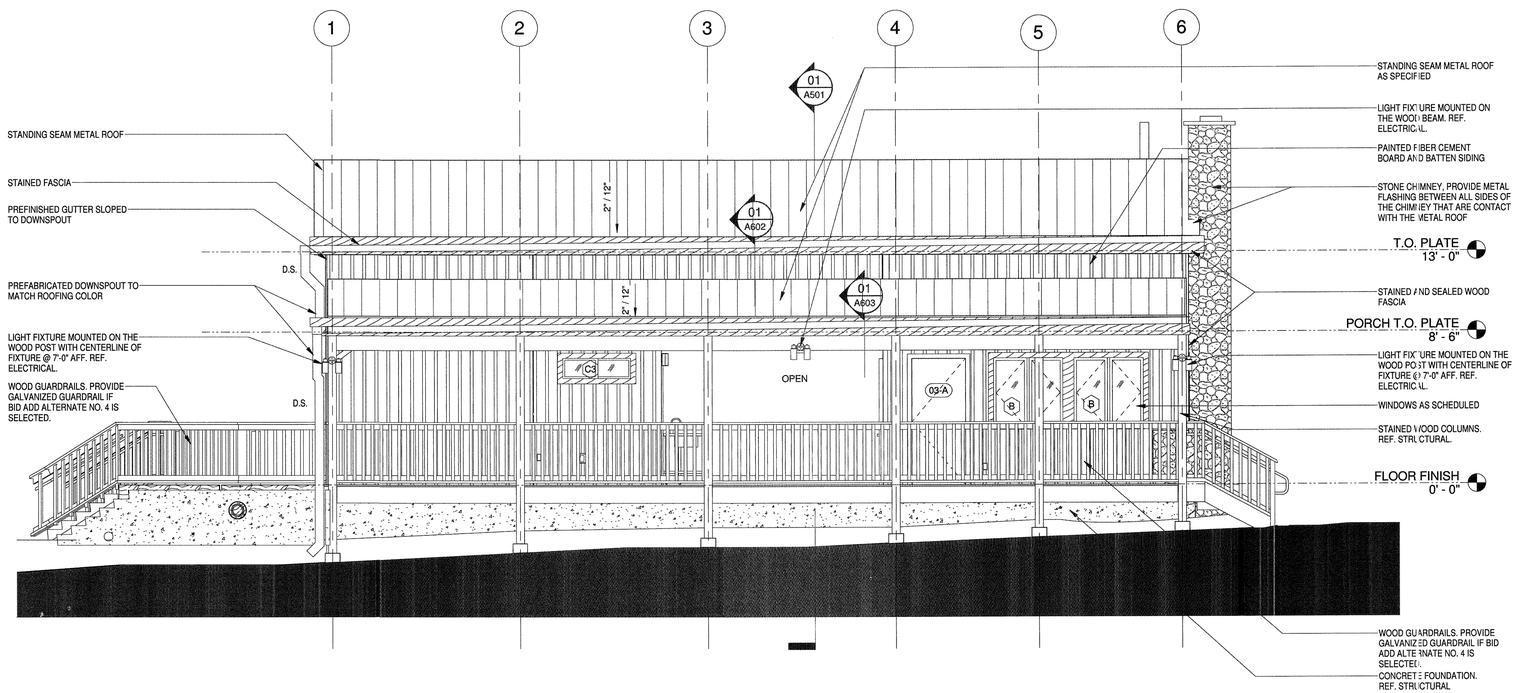
PERCENTAGE: ISSUED FOR BID



PARTIAL ELEVATION @ CHECK-IN COUNTER
1/4" = 1'-0" 03



EAST ELEVATION
1/4" = 1'-0" 02



WEST ELEVATION
1/4" = 1'-0" 01

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REVIEWED BY:
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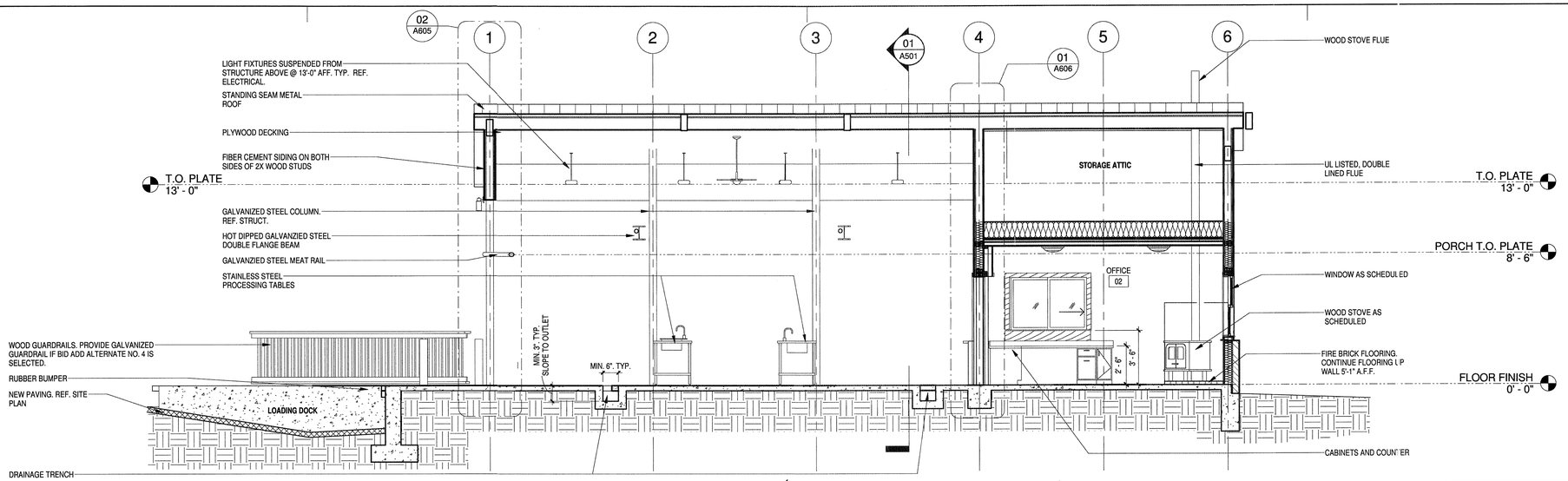
REVISED:

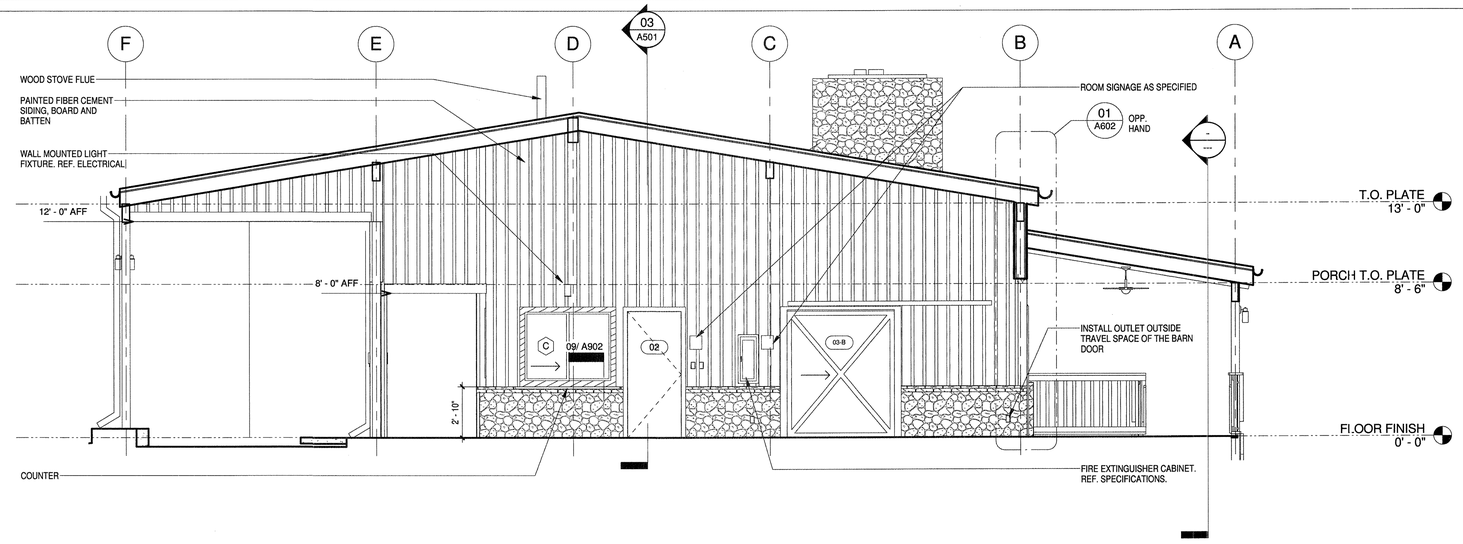
SHEET TITLE
BUILDING ELEVATIONS

SHEET NUMBER
A402

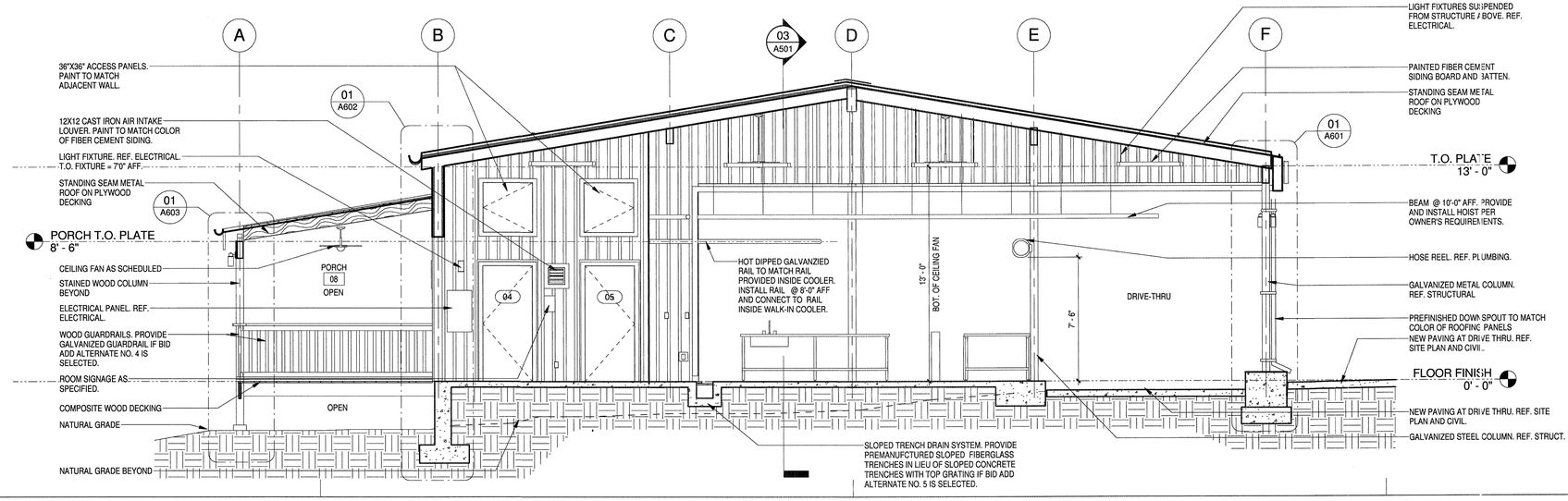
PERCENTAGE: ISSUED FOR BID



BUILDING SECTION N-S
1/4" = 1'-0" 03



ELEVATION @ BREEZEWAY
1/4" = 1'-0" 2



BUILDING SECTION E-W
1/4" = 1'-0" 01

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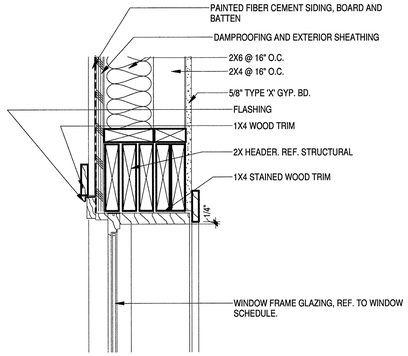
REVIEWED BY:	
REVISED:	
REVISED:	

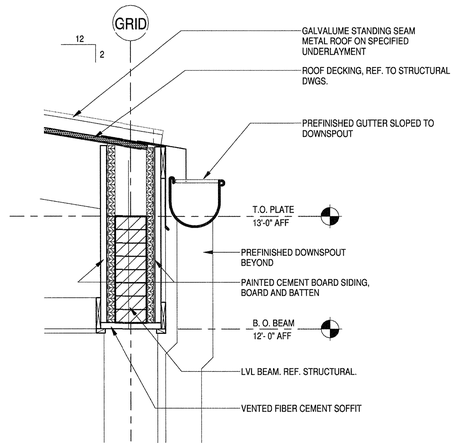
SHEET TITLE
BUILDING SECTIONS

SHEET NUMBER
A501

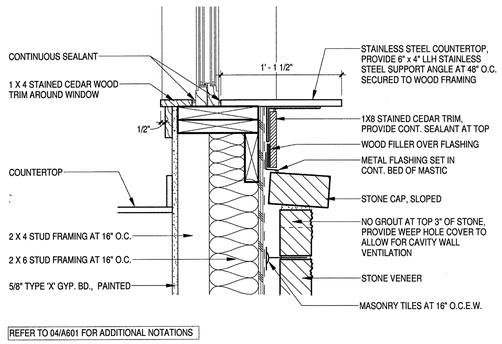
PERCENTAGE: ISSUED FOR BID



HEAD DETAIL AT SLIDING WINDOW
1 1/2" = 1'-0" (12)

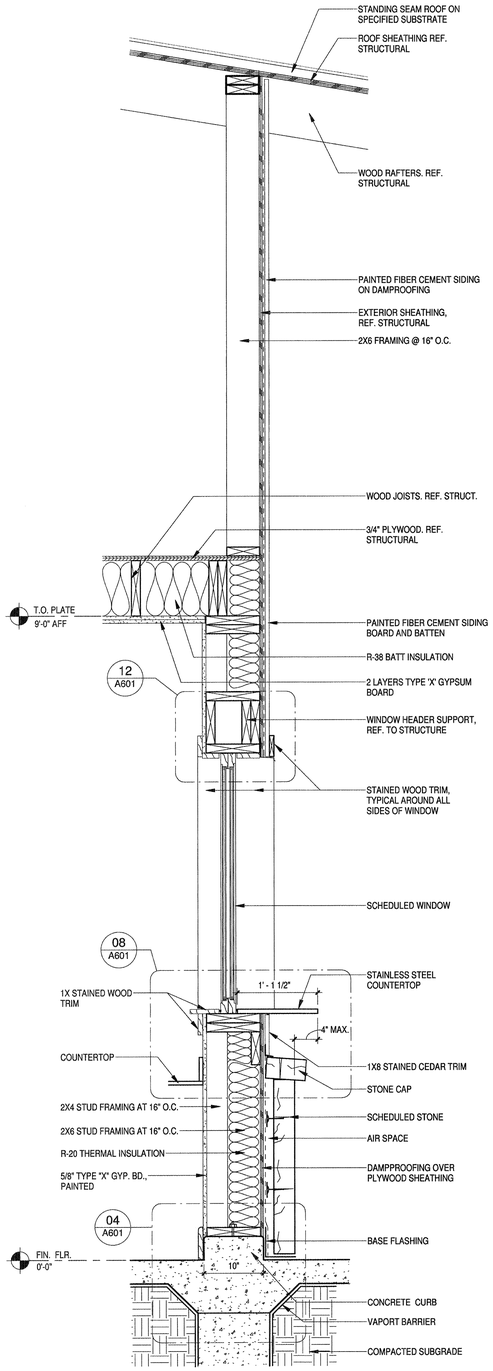


EAVE DETAIL @ DRIVE-THRU
1 1/2" = 1'-0" (11)

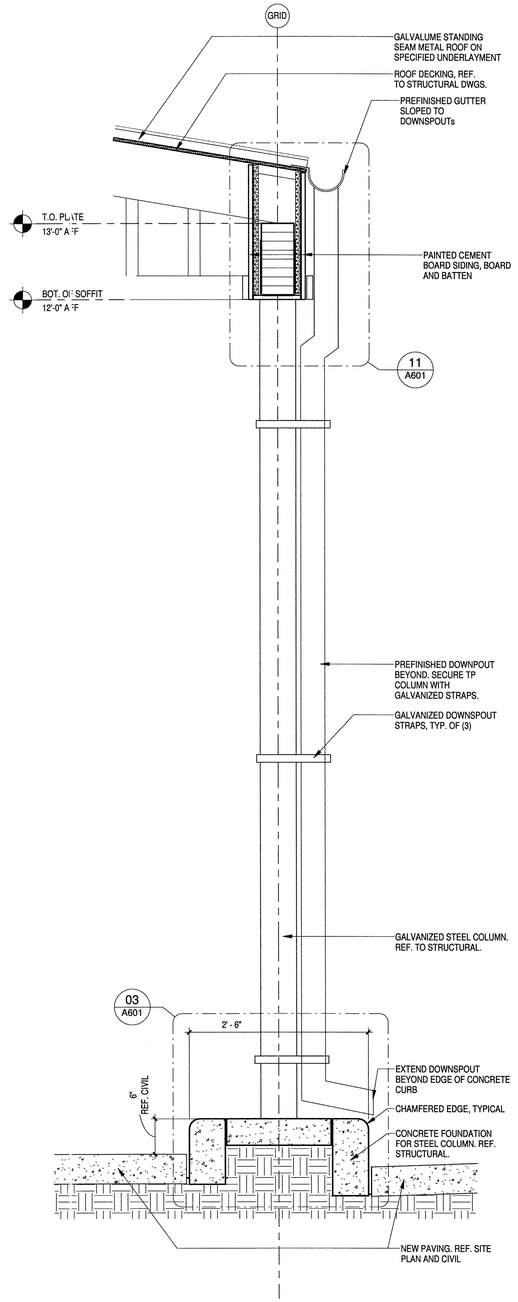


WINDOW SILL DETAIL AT TRANSACTION COUNTER
1 1/2" = 1'-0" (08)

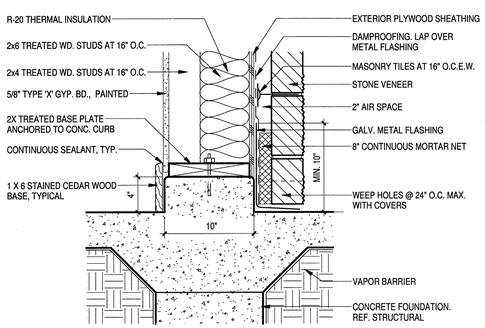
NOT USED (07)



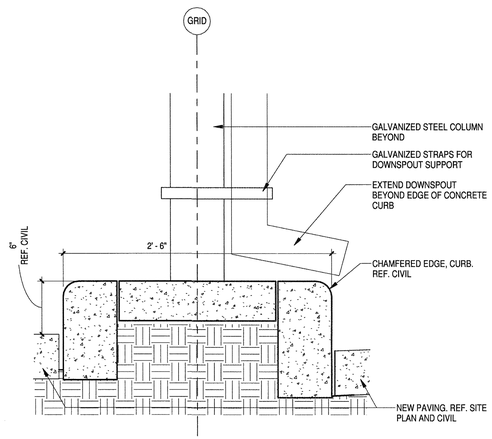
WALL SECTION AT OFFICE COUNTER
1" = 1'-0" (02)



WALL SECTION @ DRIVE-THRU EAVE
1" = 1'-0" (01)



CONCRETE CURB AT OFFICE DETAIL
1 1/2" = 1'-0" (04)



CONCRETE CURB @ DRIVE-THRU
1 1/2" = 1'-0" (03)

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DESIGNED BY:
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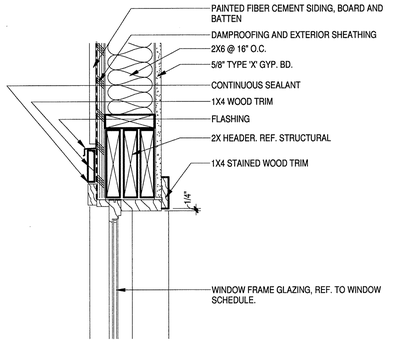
REVISED:
REVISED:

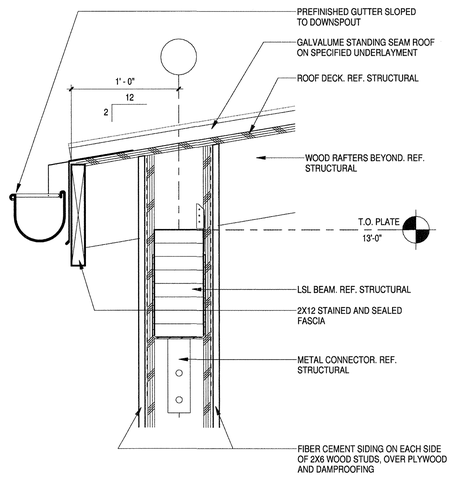
SHEET TITLE
WALL SECTIONS AND DETAILS

SHEET NUMBER
A601

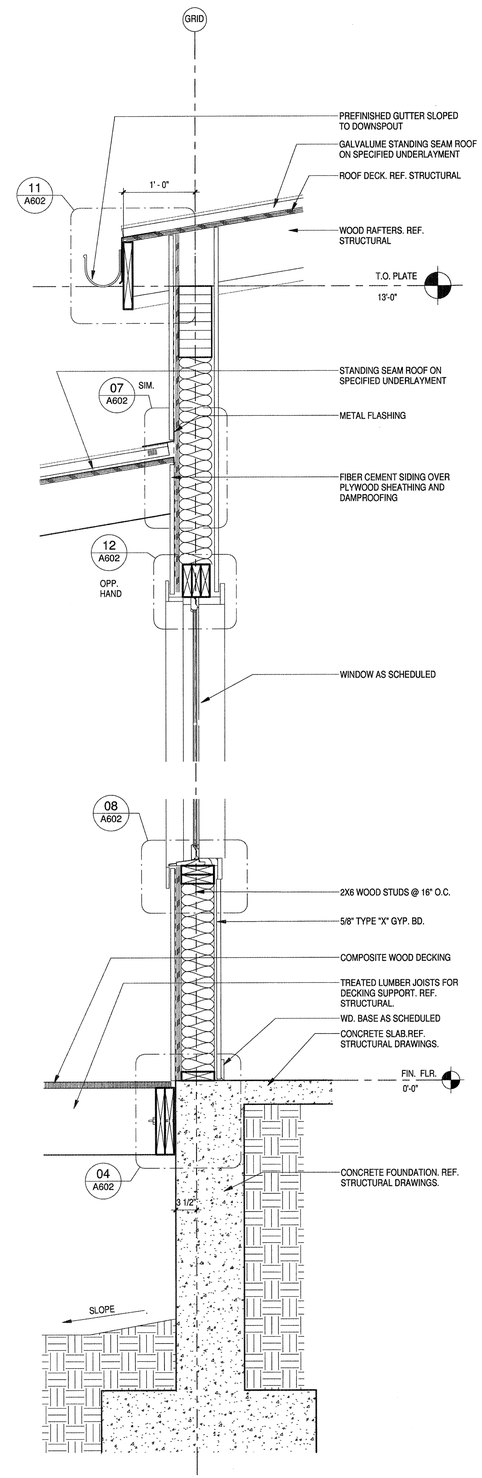
PERCENTAGE: ISSUED FOR BID



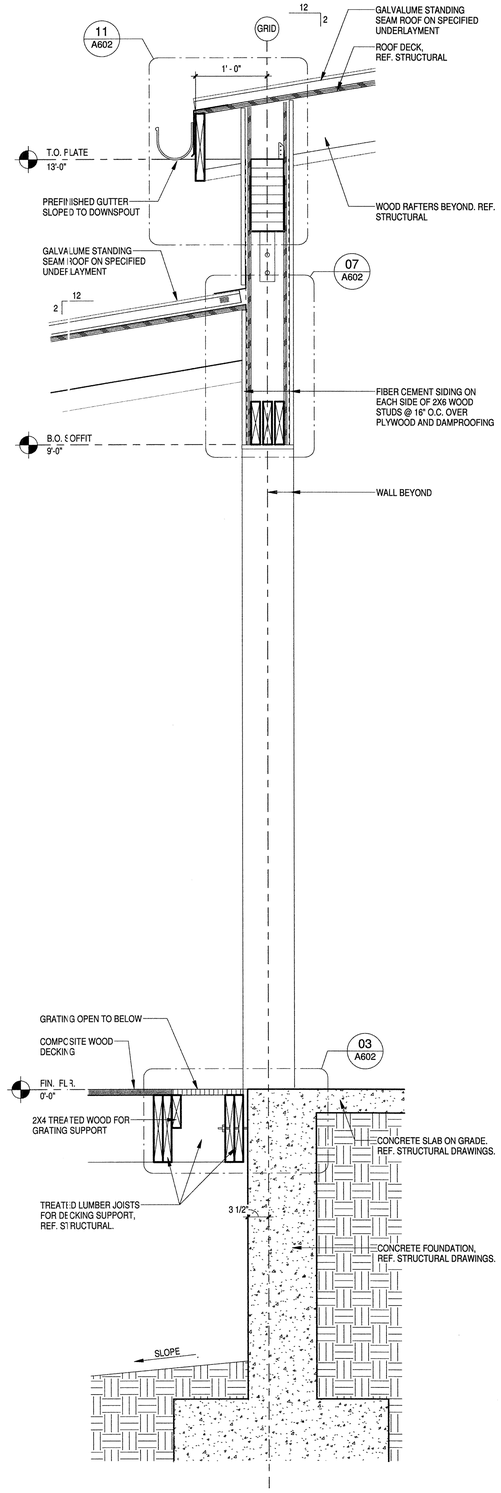
WINDOW HEAD @ SIDING DETAIL
1 1/2" = 1'-0" (12)



EAVE DETAIL @ HIGH ROOF
1 1/2" = 1'-0" (11)

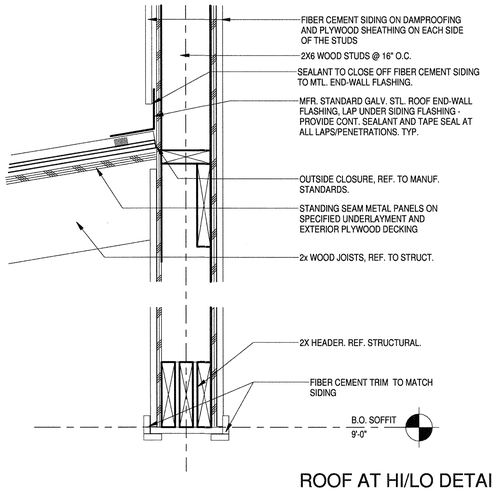


WALL SECTION @ SITTING RM. WINDOW
1" = 1'-0" (02)

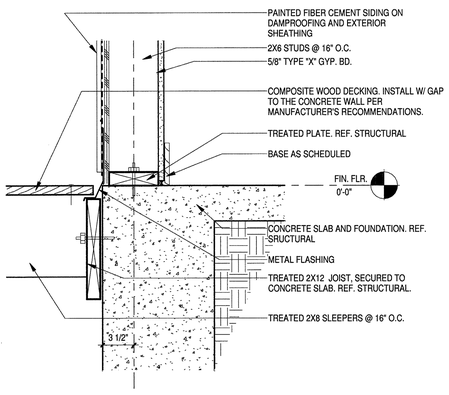


WALL SECTION @ PORCH
1" = 1'-0" (01)

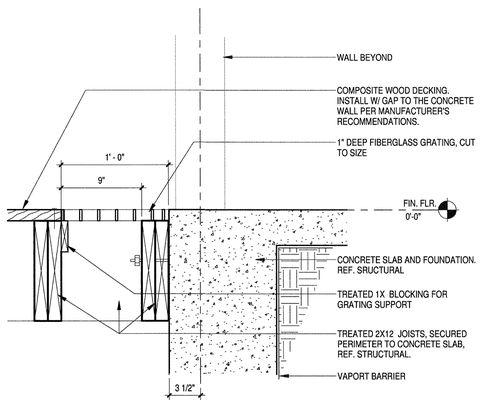
WINDOW SILL @ SIDING DETAIL
1 1/2" = 1'-0" (08)



ROOF AT HI/LO DETAIL
1 1/2" = 1'-0" (07)



CONCRETE TO DECKING DETAIL
1 1/2" = 1'-0" (04)



TRENCH @ DECK DETAIL
1 1/2" = 1'-0" (03)

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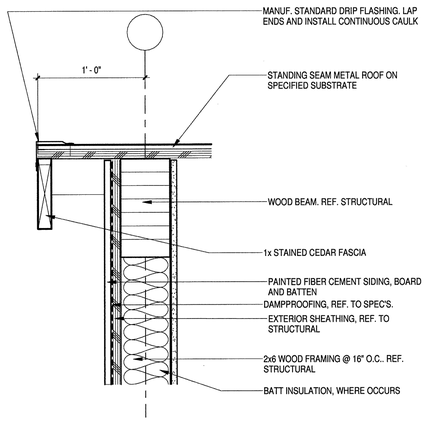
REVISED:
REVISED:

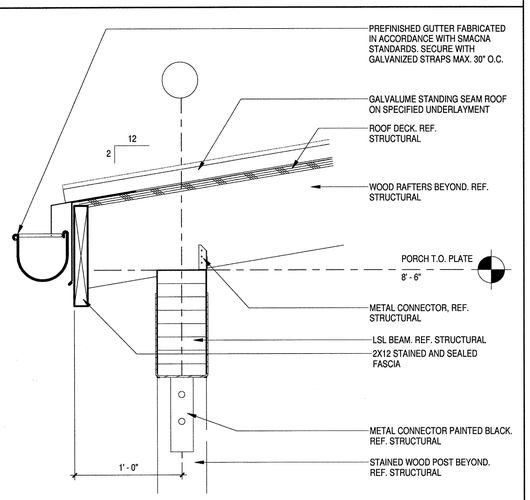
SHEET TITLE
WALL SECTIONS AND DETAILS

SHEET NUMBER
A602

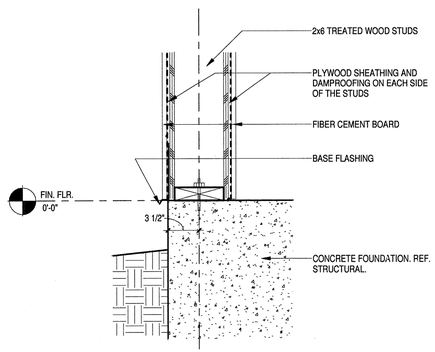
PERCENTAGE: ISSUED FOR BID



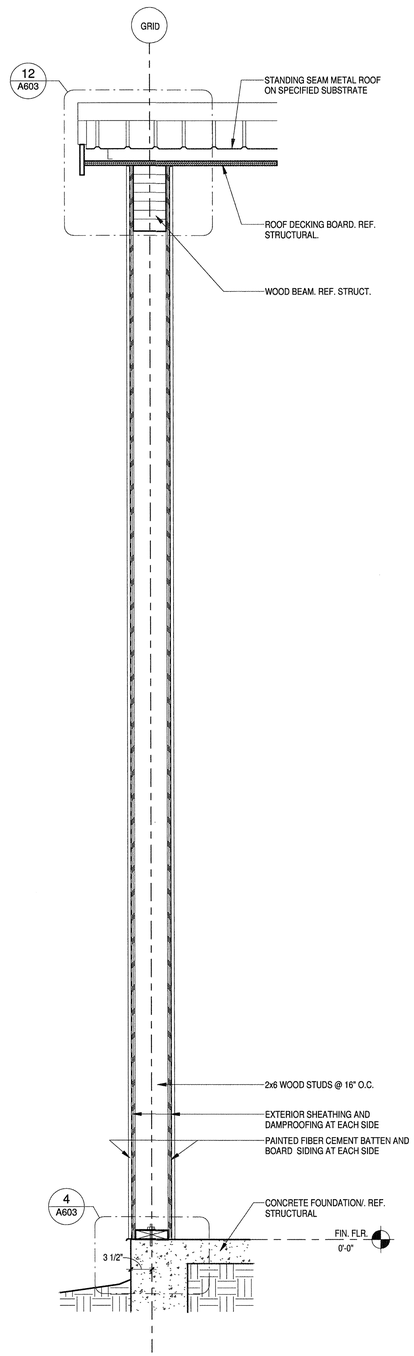
RAKE DETAIL @ HIGH ROOF
1 1/2" = 1'-0" (12)



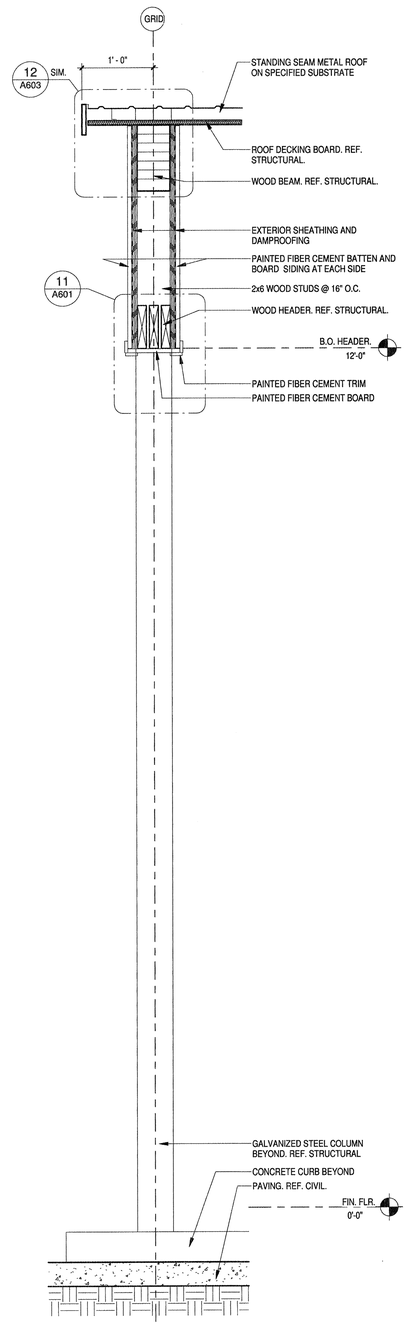
EAVE DETAIL @ LOW ROOF
1 1/2" = 1'-0" (08)



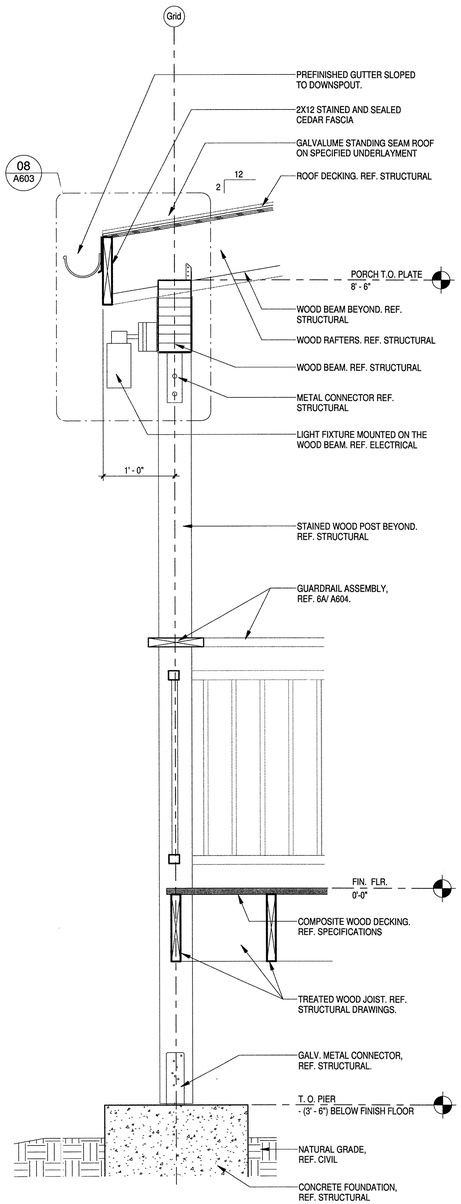
DETAIL AT SIDING TERMINATION
1 1/2" = 1'-0" (4)



WALL SECTION @ SIDING
1" = 1'-0" (03)



WALL SECTION @ DRIVE THROUGH
1" = 1'-0" (02)



WALL SECTION @ PORCH EAVE
1" = 1'-0" (01)

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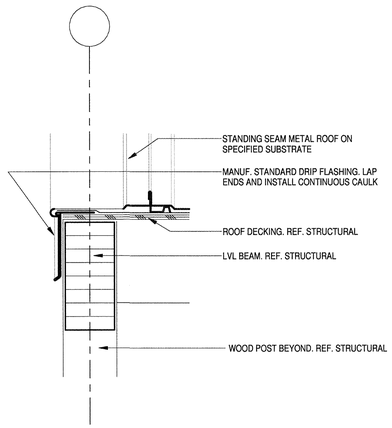
REVISED:
REVISED:

SHEET TITLE
WALL SECTIONS AND DETAILS

SHEET NUMBER
A603

PERCENTAGE: ISSUED FOR BID

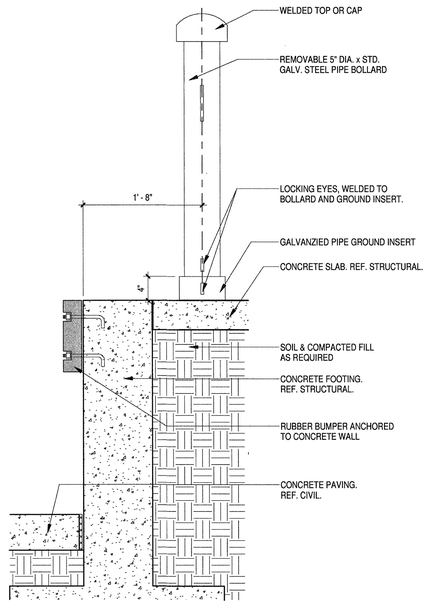
NOT USED 12



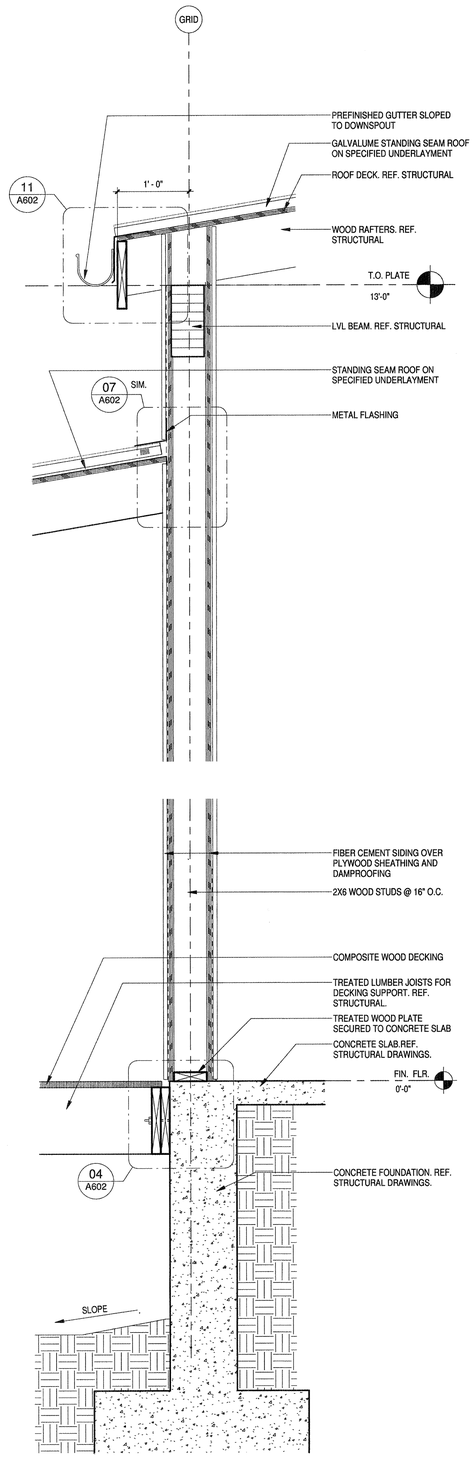
RAKE DETAIL @ LOW ROOF
1 1/2" = 1'-0" 11

NOT USED 08

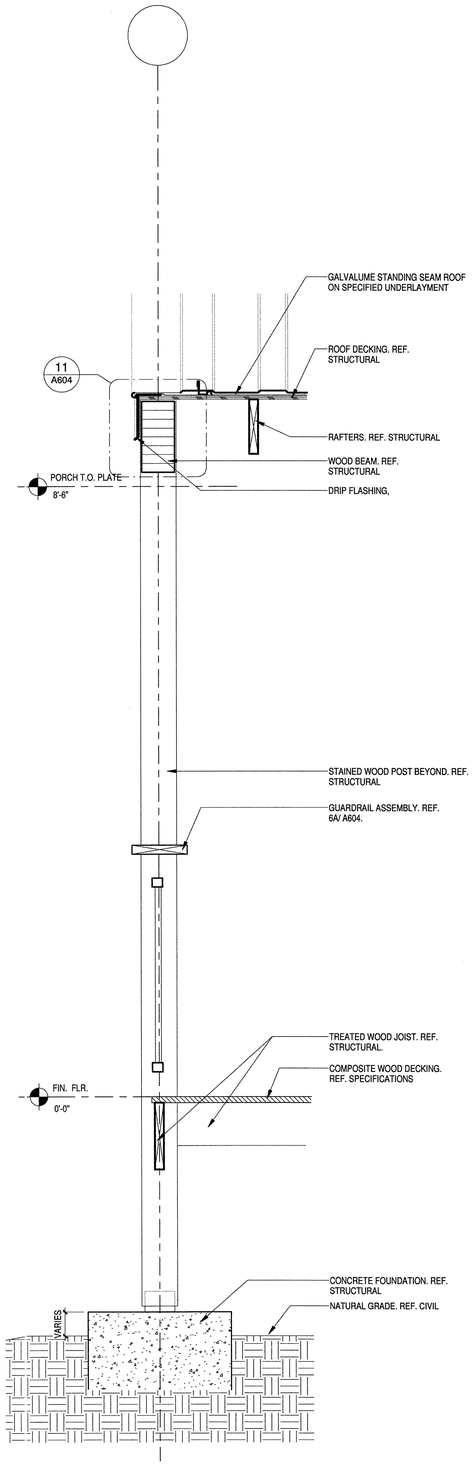
NOT USED 04



SECTION AT LOADING DOCK
1" = 1'-0" 03



WALL SECTION @ PORCH WALL
1" = 1'-0" 02



SECTION @ PORCH RAKE
1" = 1'-0" 01

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PROJECT NUMBER: 134174

DATE: 01/12/2018
DESIGNED BY:
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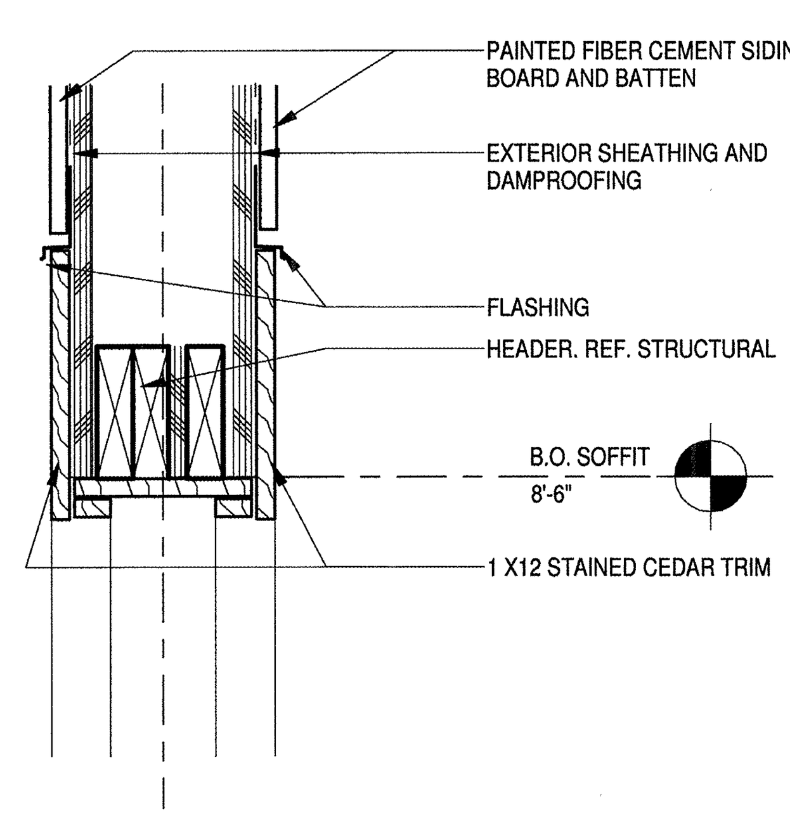
REVIEWED BY:
REVISED:
REVISED:

SHEET TITLE
WALL SECTIONS AND DETAILS

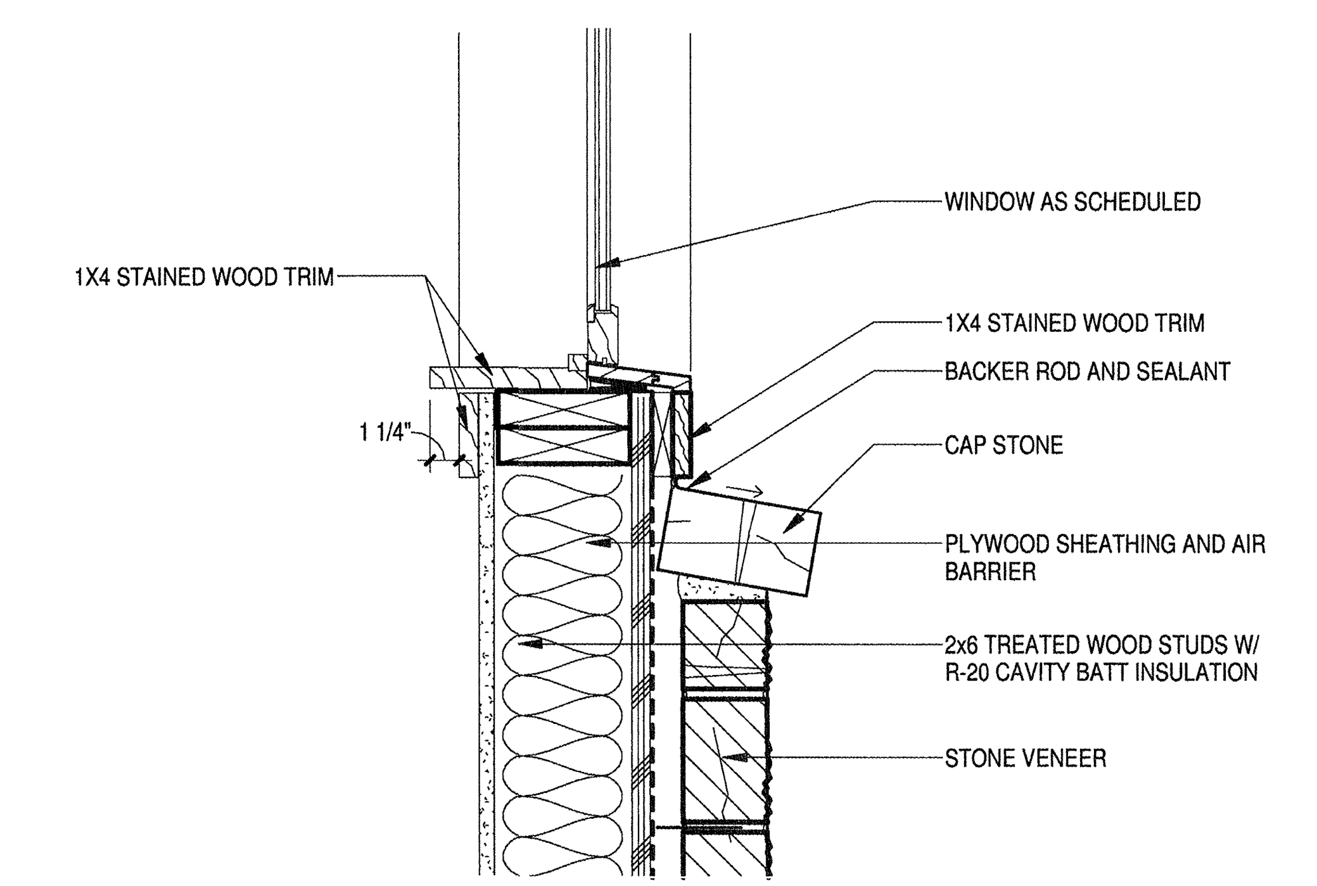
SHEET NUMBER
A604

PERCENTAGE: ISSUED FOR BID

NOT USED (11)

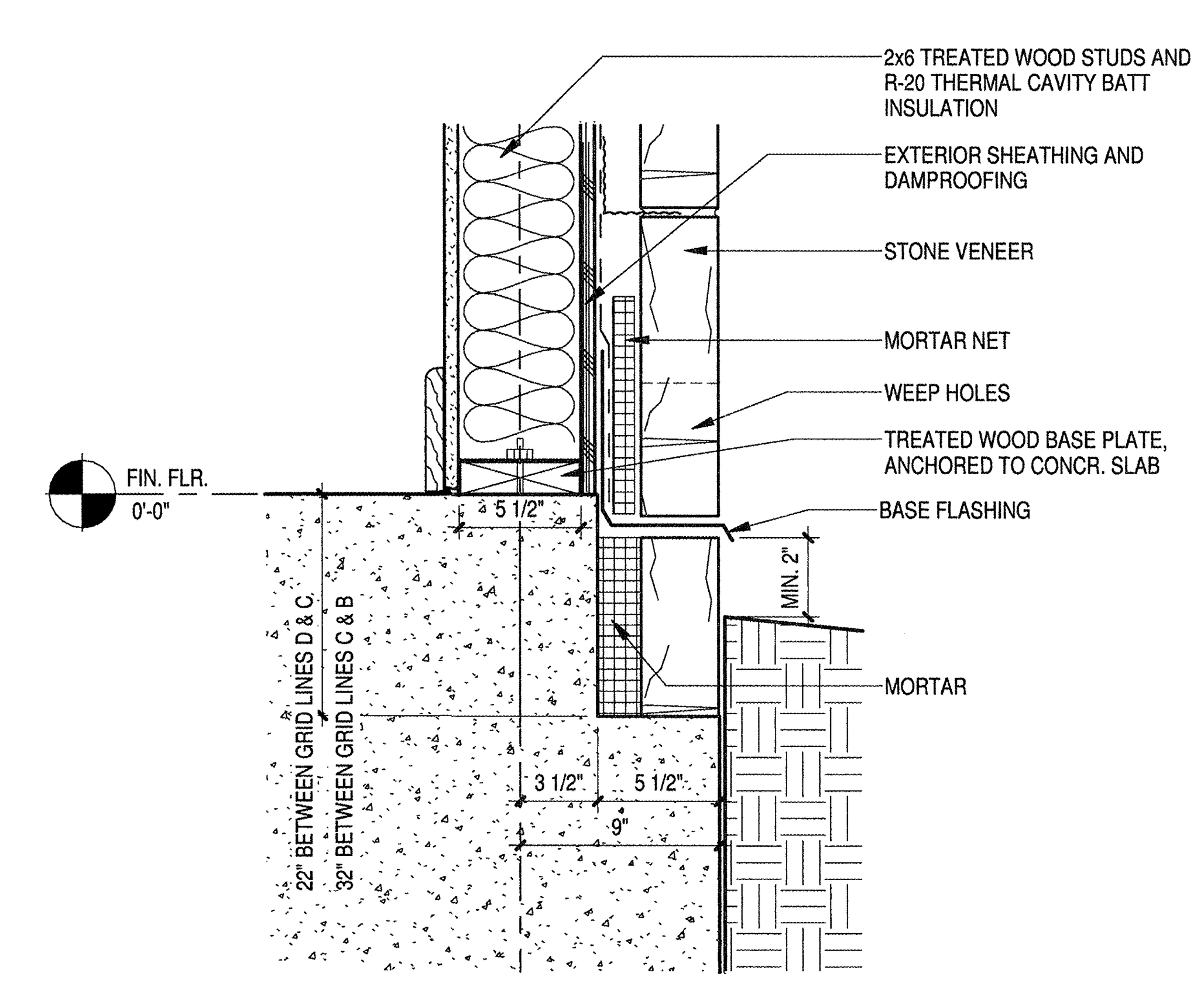


HEAD DETAIL AT PEDESTRIAN ENTRANCE (08)
1 1/2" = 1'-0"

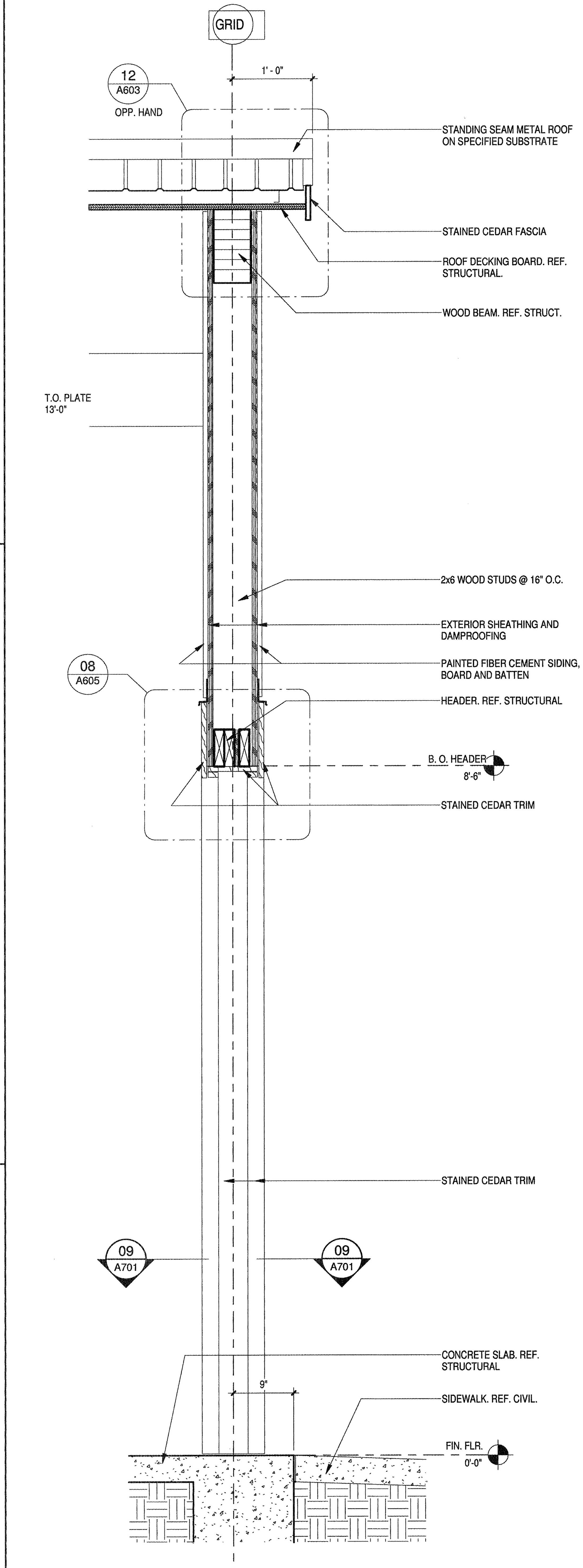


WINDOW SILL @ STONE CAP (07)
1 1/2" = 1'-0"

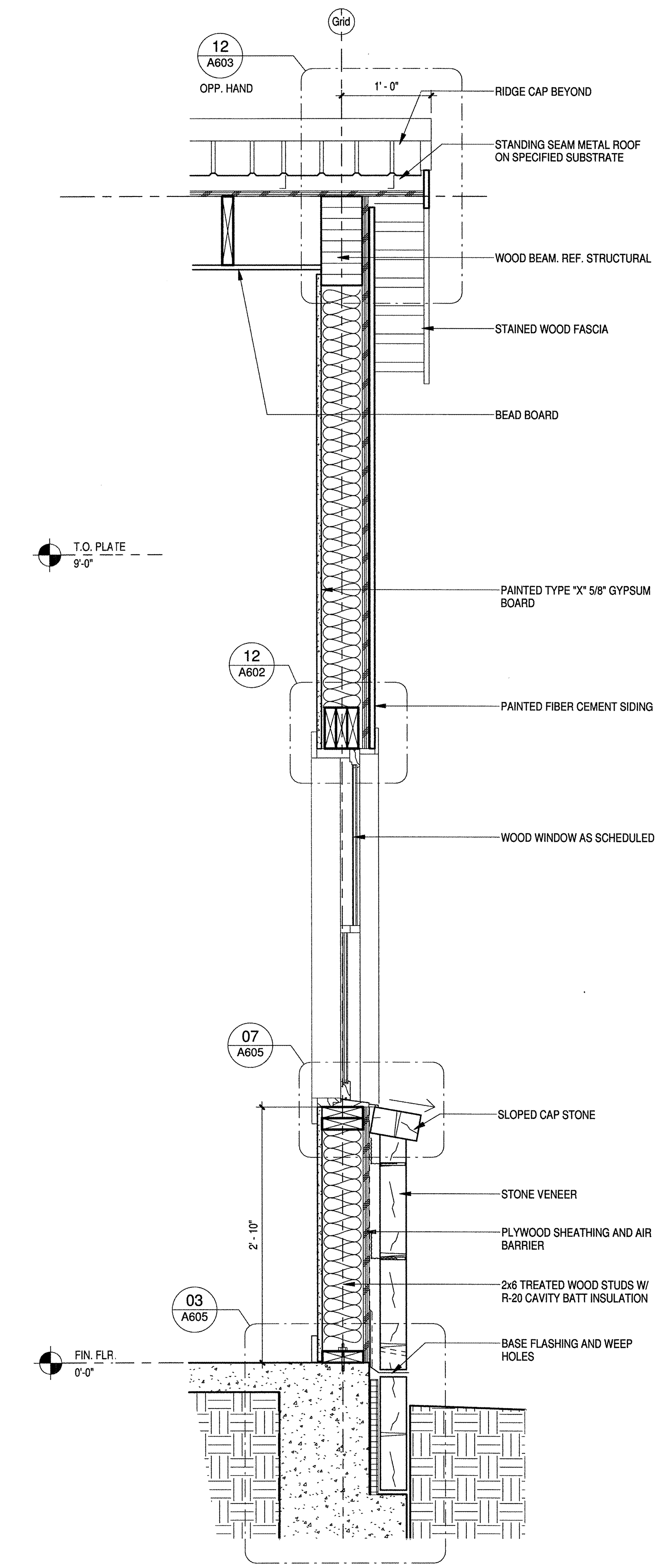
NOT USED (04)



STONE LEDGE DETAIL (03)
1 1/2" = 1'-0"



WALL SECTION @ PEDESTRIAN ENTRANCE (02)
1" = 1'-0"



SECTION @ STONE LEDGE (01)
1" = 1'-0"

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DRAWN BY:	
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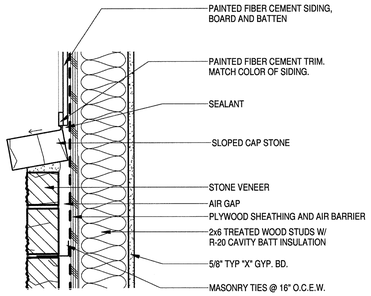
REVISED:	
REVISED:	

SHEET TITLE
WALL SECTIONS AND DETAILS

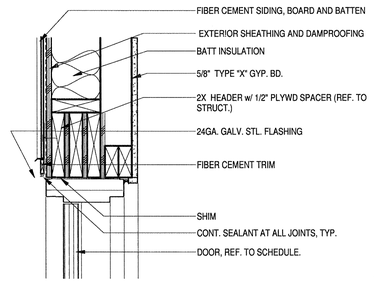
SHEET NUMBER
A605

PERCENTAGE: ISSUED FOR BID

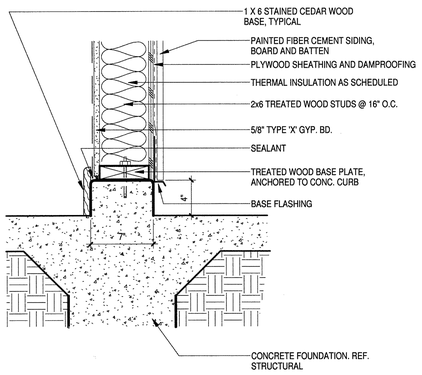
NOT USED 11



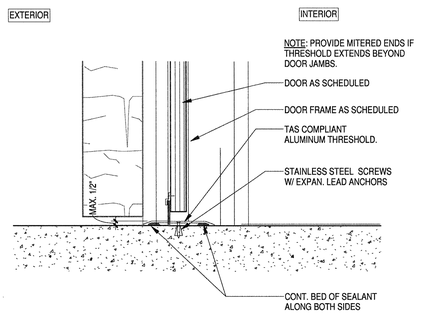
STONE CAP DETAIL
1 1/2" = 1'-0" 08



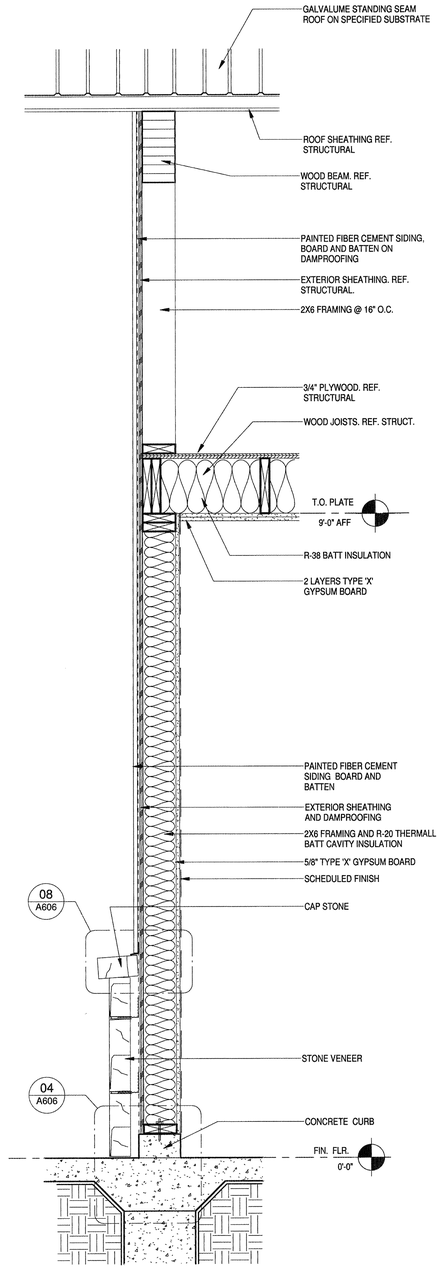
HOLLOW METAL DOOR HEAD DETAIL
1 1/2" = 1'-0" 07



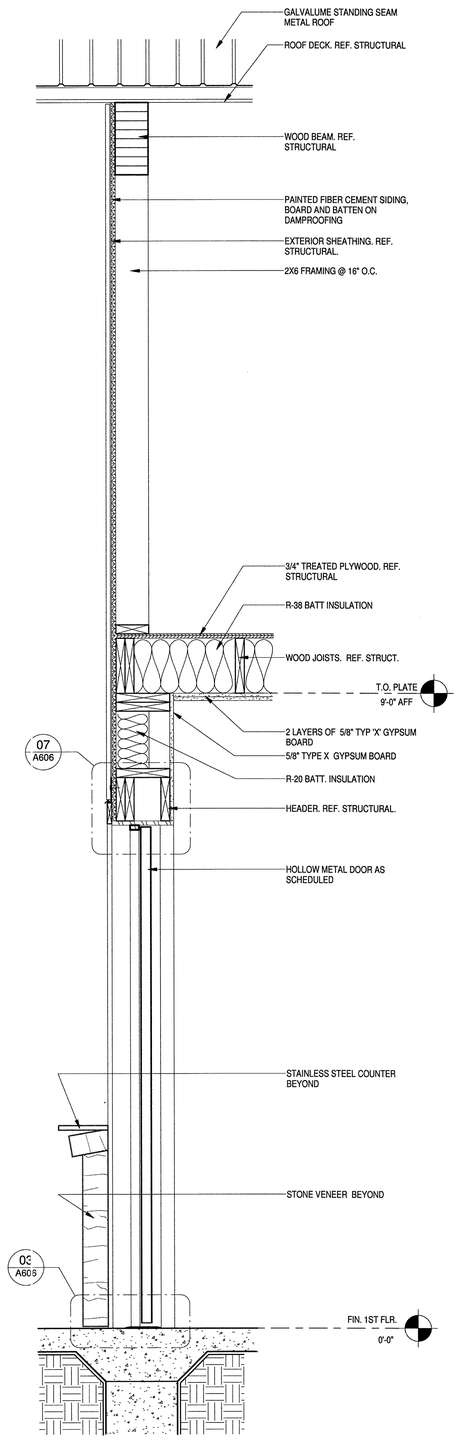
CONCRETE CURB DETAIL
1 1/2" = 1'-0" 04



DOOR THRESHOLD DETAIL
1 1/2" = 1'-0" 03



WALL SECTION
1" = 1'-0" 02



WALL SECTION @ DOOR
1" = 1'-0" 01

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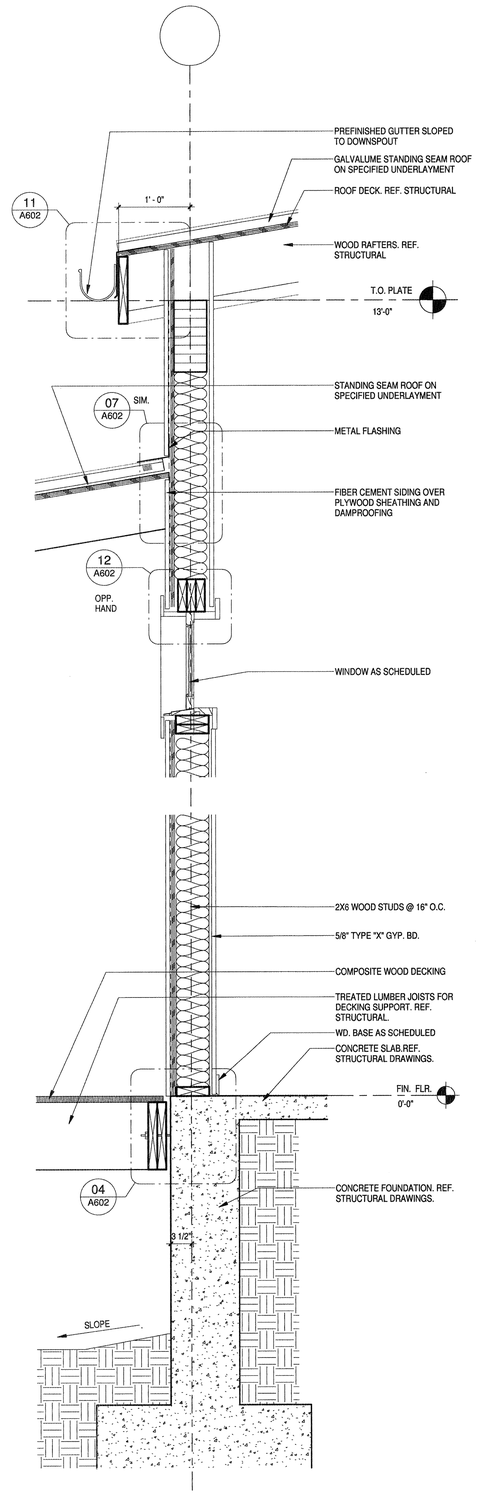
REVISED:
REVISED:

SHEET TITLE
WALL SECTIONS AND DETAILS

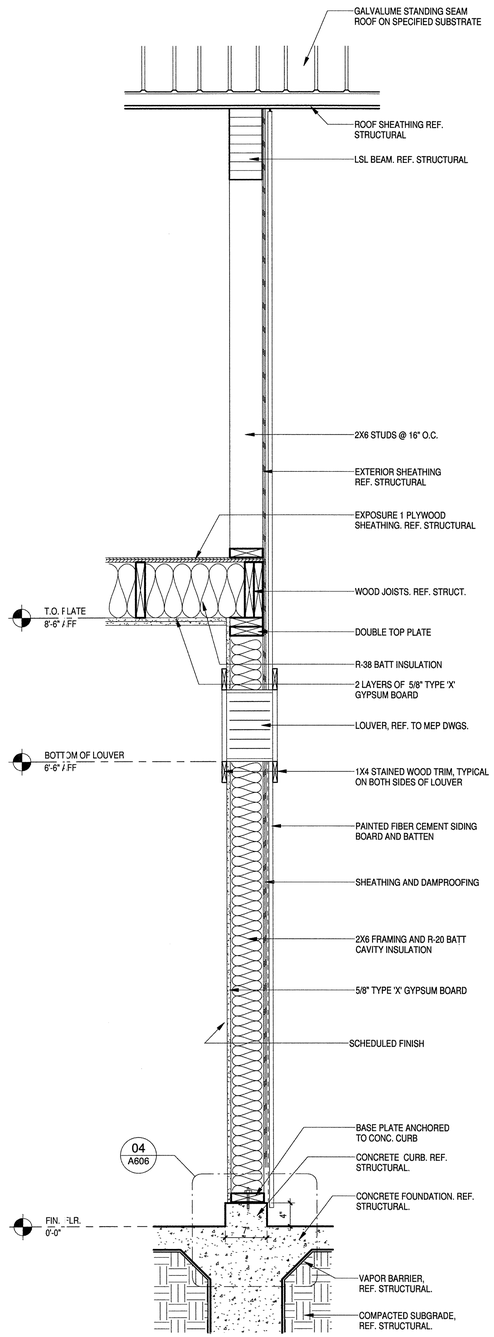
SHEET NUMBER
A606

PERCENTAGE: ISSUED FOR BID

NOT USED 03



WALL SECTION @ PORCH 2
1" = 1'-0" 02



WALL TYPE 'C'
1" = 1'-0" 01

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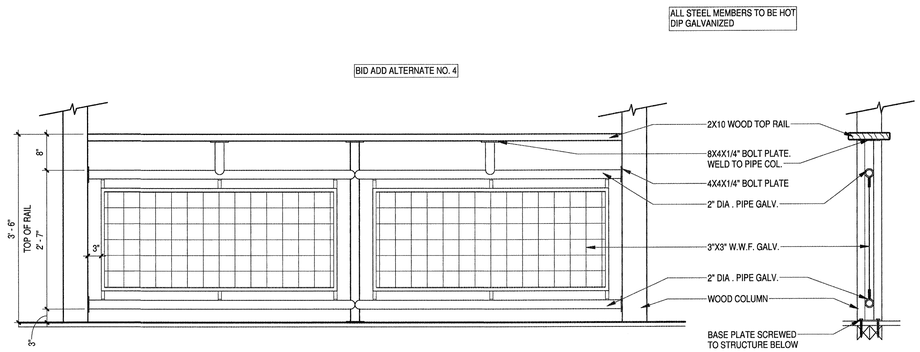
REVIEWED BY:
REVISED:
REVISED:

SHEET TITLE
WALL SECTIONS AND DETAILS

SHEET NUMBER
A607

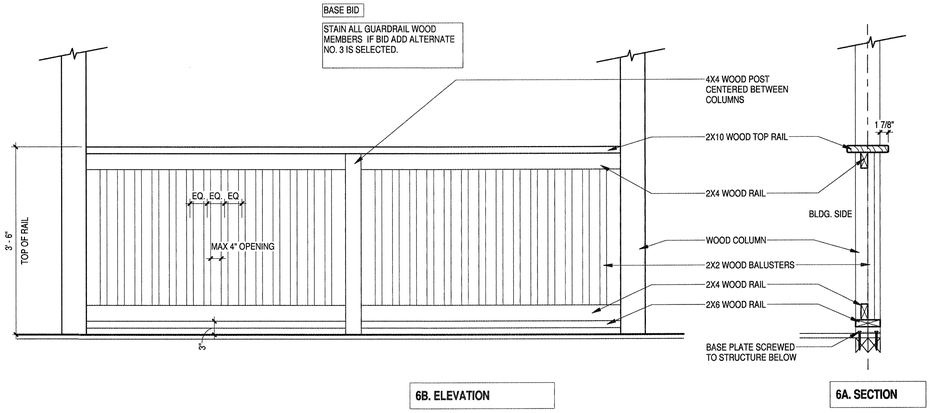
PERCENTAGE: ISSUED FOR BID

NOT USED 08



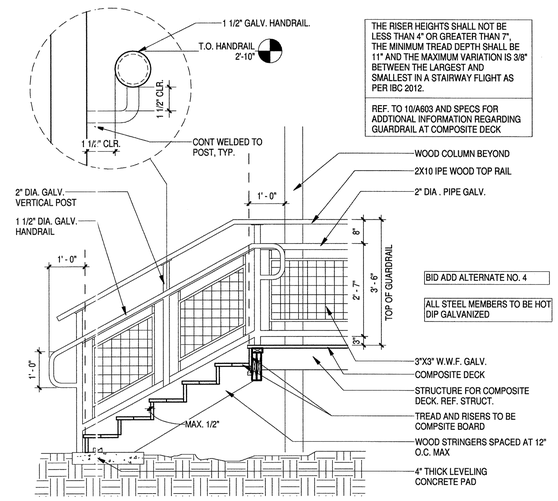
NOTE: MATCH EXISTING RAIL AT BASS CONFERENCE CENTER.

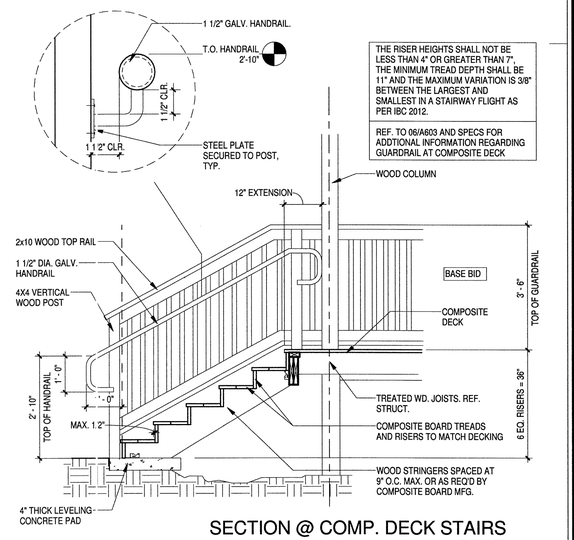
6B. ELEVATION **6A. SECTION**



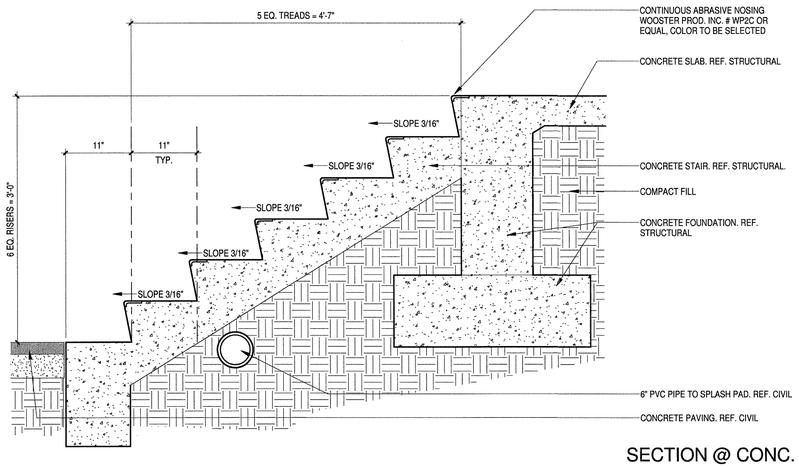
6B. ELEVATION **6A. SECTION**

GUARDRAIL @ COMPOSITE DECK BASE
3/4" = 1'-0" 06

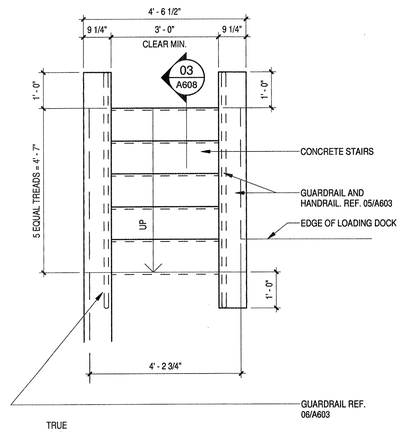




SECTION @ COMP. DECK STAIRS BASE
1/2" = 1'-0" 05

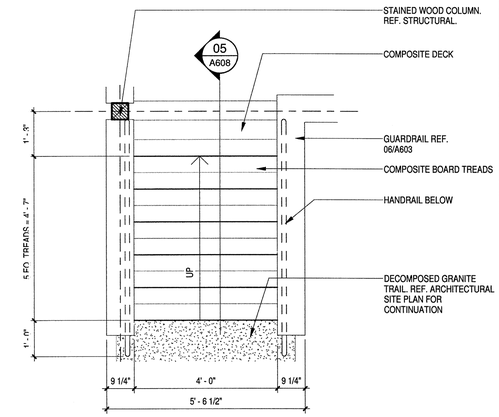


SECTION @ CONC. STAIR
1" = 1'-0" 03



TRUE NORTH

CONC. STAIR ENLARGED PLAN
1/2" = 1'-0" 02



TRUE NORTH

COMP. DECK STAIR ENLARGED PLAN
1/2" = 1'-0" 01

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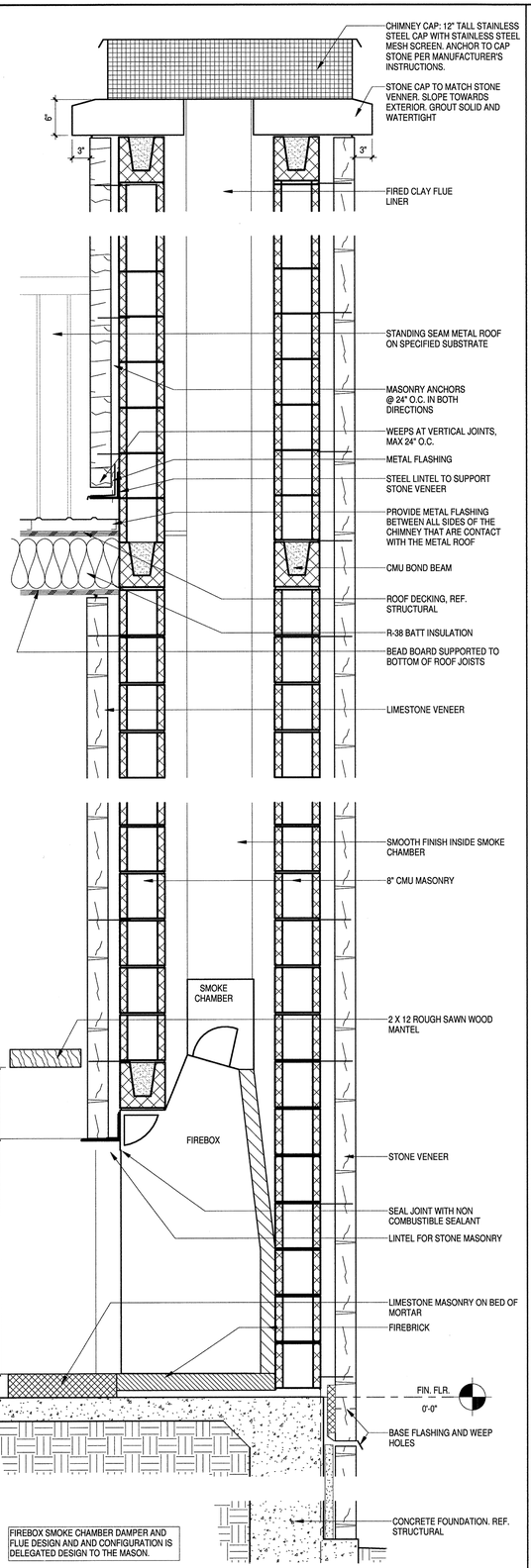
REVISED:
REVISED:

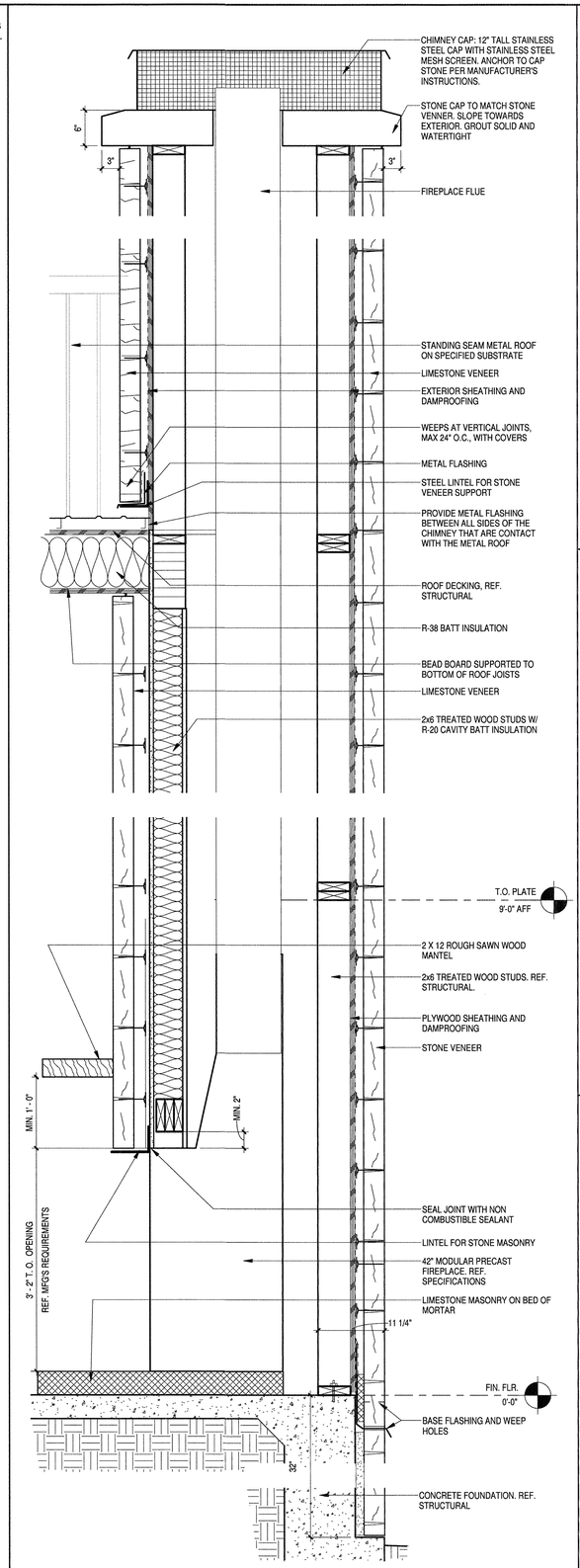
SHEET TITLE
STAIR AND GUARDRAIL DETAILS

SHEET NUMBER
A608

PERCENTAGE: ISSUED FOR BID

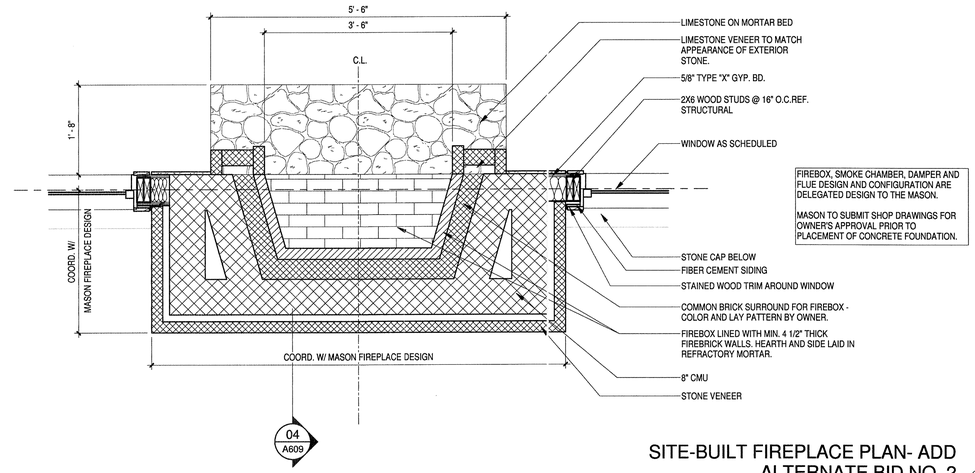


SECTION @ FIREPLACE - ADD ALTERNATE BID NO. 2
1" = 1'-0" 04

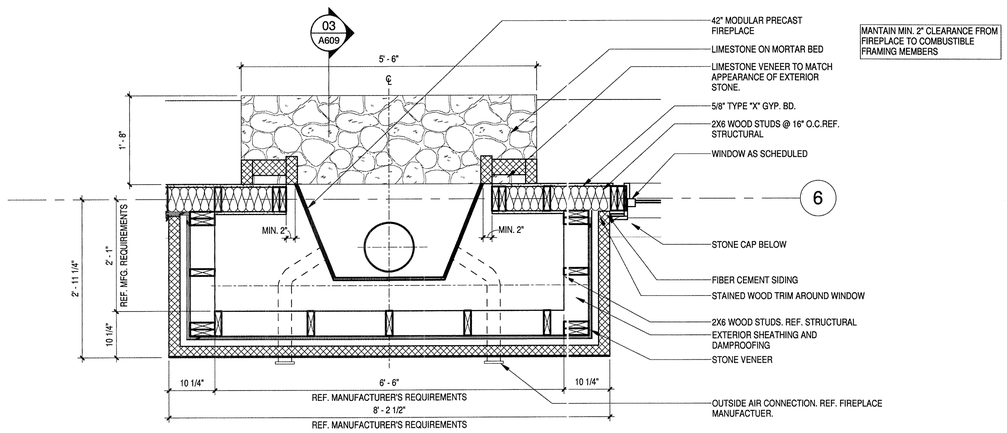


SECTION @ FIREPLACE - BASE BID
1" = 1'-0" 03

NOT USED 09



SITE-BUILT FIREPLACE PLAN- ADD ALTERNATE BID NO. 2
3/4" = 1'-0" 05



ENLARGED PLAN @ FIREPLACE- BASE BID
3/4" = 1'-0" 01

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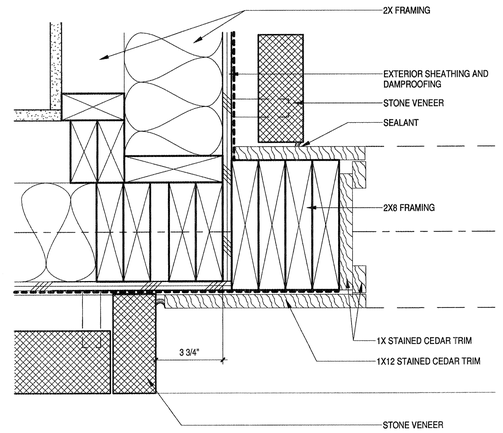
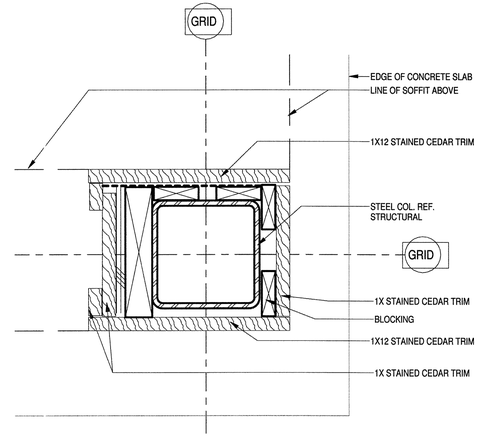
REVISED:
REVISED:

SHEET TITLE
FIREPLACE DETAILS

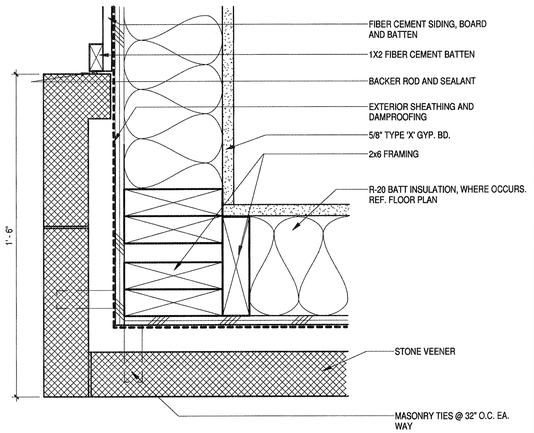
SHEET NUMBER
A609

PERCENTAGE: ISSUED FOR BID

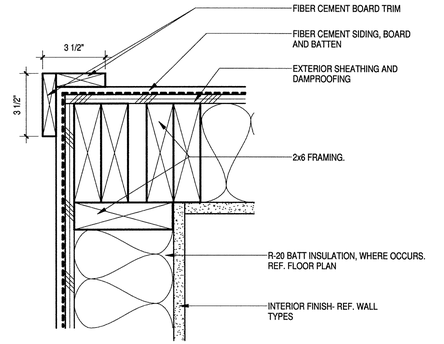




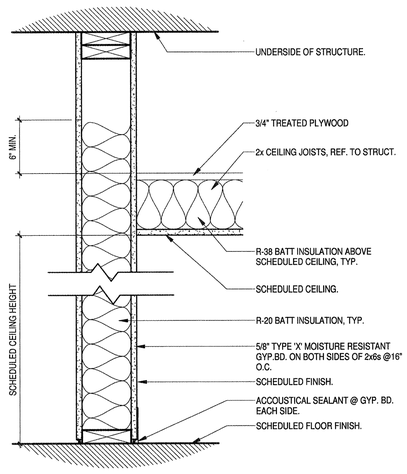
PLAN DETAIL @ PEDESTRIAN ENTRANCE
3" = 1'-0" 09



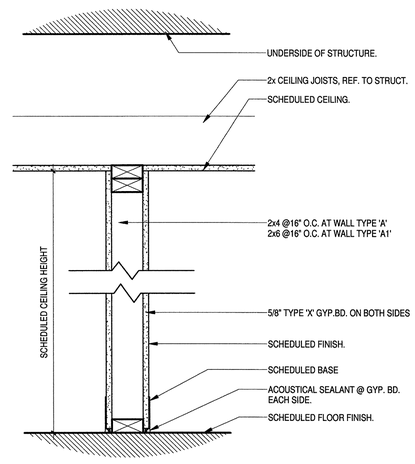
CORNER DETAIL @ STONE WRAP-AROUND
3" = 1'-0" 06



CORNER DETAIL @ SIDING
3" = 1'-0" 05



PARTITION TYPE 'B'
1 1/2" = 1'-0" 02



PARTITION TYPE 'A' & 'A1'
1 1/2" = 1'-0" 01

NOT USED 03

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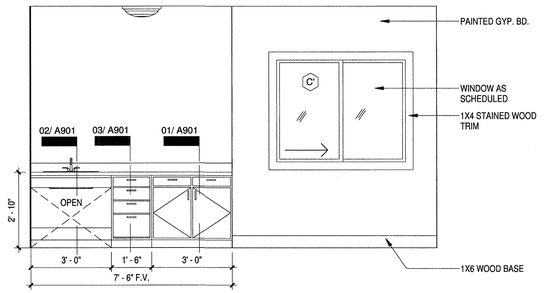
DATE: 01/12/2018
DESIGNED BY:
DRAWN BY:
REVIEWED BY:
REVISED:
REVISED:

SHEET TITLE
WALL PARTITIONS AND PLAN DETAILS

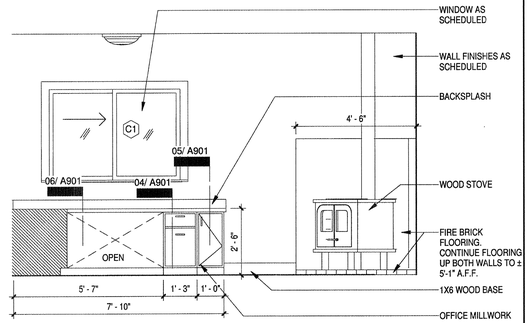
SHEET NUMBER
A701

PERCENTAGE: ISSUED FOR BID

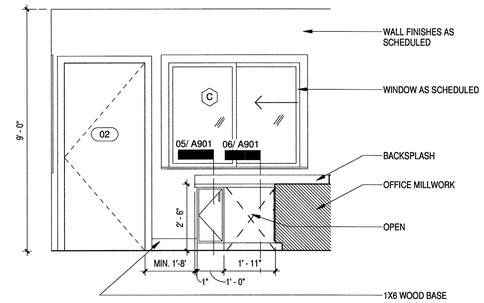
NOT USED 12



OFFICE WEST ELEVATION
3/8" = 1'-0" 11



OFFICE EAST ELEVATION
3/8" = 1'-0" 10



OFFICE NORTH ELEVATION
3/8" = 1'-0" 09

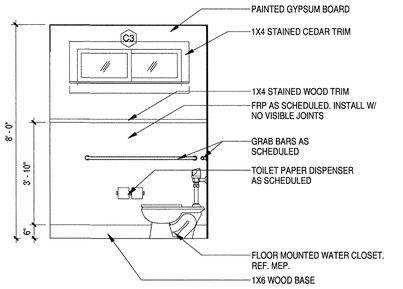
RESTROOM ACCESSORIES SCHEDULE

CODE	NAME	MANUFACTURER	DESCRIPTION	MODEL	REMARKS
TPD-1	TOILET PAPER DISP.	BOBRICK	SINGLE ROLL	B-27460	SURFACE MTD.
SD-1	SOAP DISPENSER	BOBRICK	MANUAL	B-2112	SURFACE MTD.
GB-1	GRAB BAR 36"	SANIGUARD	FLANGES WITH CONCEALED FASTENERS	GBS 15-1136-Q	SURFACE MTD.
GB-2	GRAB BAR 42"			GBS 15-1142-Q	
PTD-1	PAPER TOWEL DISP./ WASTE RECEP.	BOBRICK	STAINLESS STEEL-SATIN FINISH.	B-3961	RECESSED
M-1	GLASS MIRROR	BOBRICK	STAINLESS STEEL-ANGLE FRAME	B-290 (36"H X 18"W)	SURFACE MTD.

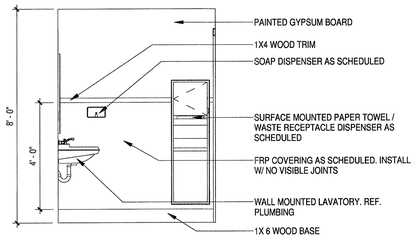
GERNERAL ACCESSORIES NOTES

1 CONTRACTOR IS TO INSTALL ACCESSORIES PER MANUFACTURER'S SPECIFICATIONS.
2 REFER TO TAS SHEET FOR MOUNTING HEIGHTS

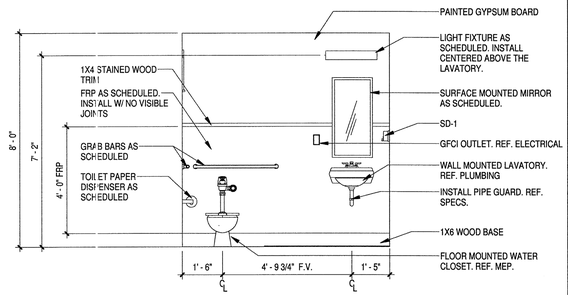
TOILET ACCESSORY SCHEDULE
NTS 08



WEST ELEVATION @ RESTROOM
3/8" = 1'-0" 07

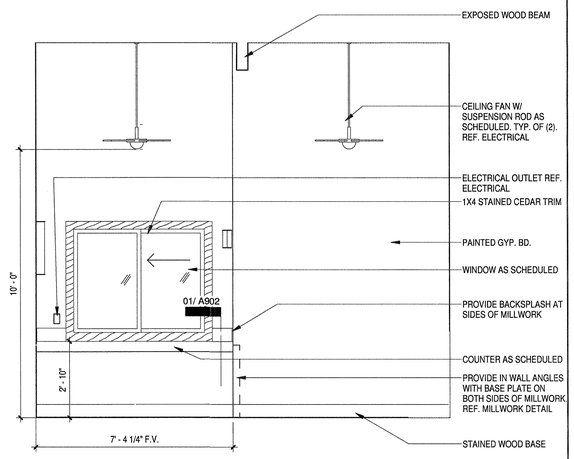


EAST ELEVATION @ RESTROOM
3/8" = 1'-0" 05

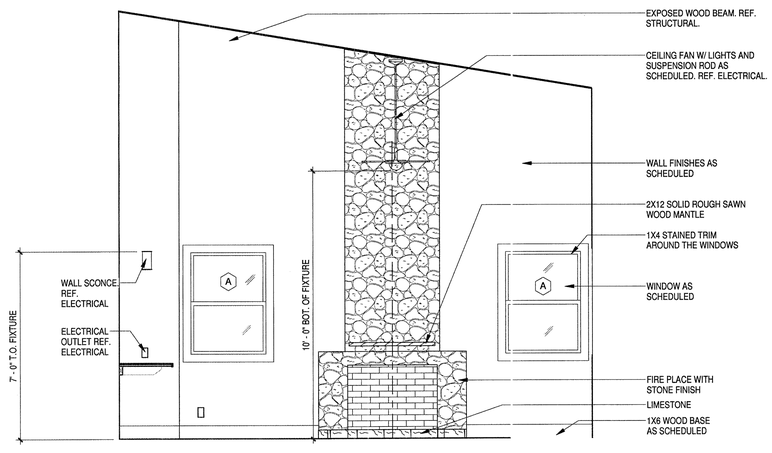


NORTH ELEVATION @ RESTROOM
3/8" = 1'-0" 06

NOT USED 04



ELEVATION @ COFFEE COUNTER
3/8" = 1'-0" 03



ELEVATION @ FIREPLACE
3/8" = 1'-0" 01

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REVISED:
REVISED:

SHEET TITLE
INTERIOR ELEVATIONS

SHEET NUMBER
A702

PERCENTAGE: ISSUED FOR BID

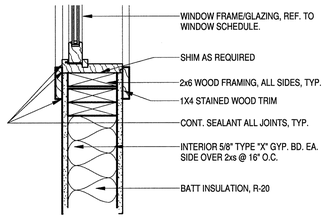
INTERIOR FINISH MATERIALS SCHEDULE										
NO.	ROOM	FLOOR FINISH	BASE FINISH	CEILING FINISH	CEILING HEIGHT	WALL FINISH				COMMENTS
						NORTH	SOUTH	EAST	WEST	
1	PROCESSING	F-2	--	C-2	VARIES	--	P-1	--	P-1	STAIN STR. ABOVE IF BID ALTERNATE 6 IS SELECTED
2	OFFICE	F-4	B-1, B-2	C-1	9'-0"	P-2	P-2	P-2	P-2	
3	SITTING AREA	F-4	B-1, B-2	C-3	VARIES	P-2	P-2	P-2	P-2	STAIN CEILING IF BID ALTERNATE 6 IS SELECTED.
4	RESTROOM	F-4	B-1, B-2	C-1	8'-6"	W-1,P-2	W-1,P-2	W-1,P-2	W-1,P-2	
5	STORAGE	F-1	B-1	C-1	8'-6"	P-2	P-2	P-2	P-2	
6	W.H.	F-1	B-1	C-1	8'-6"	P-2	P-2	P-2	P-2	
8	PORCH	F-3	--	C-2	VARIES	P-1	P-1	P-1	P-1	STAIN STR. ABOVE IF BID ALTERNATE 6 IS SELECTED

INTERIOR FINISH MATERIALS SCHEDULE
1/4" = 1'-0" 11

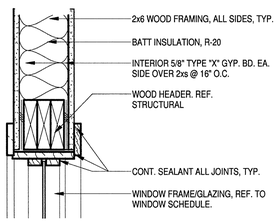
INTERIOR FINISH MATERIALS SCHEDULE						
CODE	MATERIAL	MANUFACTURER	SERIES	COLOR	DIMENSIONS	COMMENTS
FLOORING						
F-1	SEALED CONCRETE, SMOOTH	--	--	--	--	
F-2	CONCRETE, BROOM FINISH	--	--	--	--	
F-3	COMPOSITE DECKING	TREX	SELECT	SADDLE	1X6	
F-4	EPOXY FLOOR FINISH	DUR-A-FLEX, INC.	POLY-CRETE MDB	GRAY (VERIFY WITH OWNER)	--	
BASE						
B-1	CONCRETE	--	--	--	--	
B-2	WOOD BASE	--	RED CEDAR	CHERRY STAIN	1X4	
WALLS						
P-2	PAINT- WALL FIELD COLOR	SHERWIN WILLIAMS	SW7119	VENETIAN LACE	-	EGGSHELL FINISH
W-1	FRP	MARLITE	INDURO	4893 TUMBLED MOSAIC	4' X 8' SHEETS	INSTALL FULL SHEETS; NO SEAMS ALLOWED
CEILING						
C-1	PAINTED GYP. CEILING	SHERWIN WILLIAMS	SW7012	CREAMY		EGGSHELL FINISH
C-2	OPEN TO STRUCTURE ABOVE	--	--		-	STAIN FINISH IF BID ALTERNATE NO. 3 IS SELECTED
C-3	BEAD BOARD	--	--			STAIN FINISH IF BID ALTERNATE NO. 3 IS SELECTED
MISC.						
PLAM-1	PLASTIC LAMINATE	WILSONART	ANTIQUE BRUSH	4823-60		COUNTER- BASE BID
SS-1	SOLID SURFACE	FORMICA	SOLID SURFACING	COPPER QUARTZ 772		COUNTERTOP - BID ALTERNATE NO 6

NOTES:
1. CONTRACTOR TO VERIFY ALL FINISH SELECTIONS WITH ARCHITECT PRIOR TO ORDERING ANY MATERIALS.
2. CONCRETE FINISH IN THE PROCESSING AREA AND LOADING DOCK TO BE A MEDIUM BRUSH FINISH PER SPECIFICATIONS.

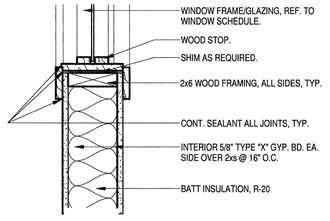
ROOM FINISH SCHEDULE
1/4" = 1'-0" 09



A. JAMB DETAIL

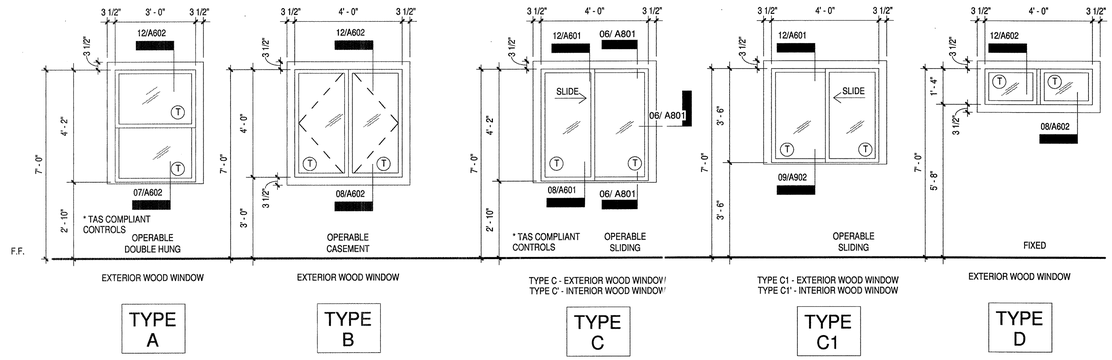


B. HEADER DETAIL



A. SILL DETAIL

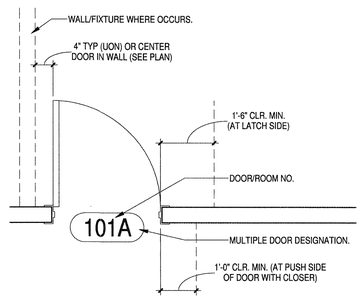
INTERIOR WINDOW DETAILS
1 1/2" = 1'-0" 06



(T) INDICATES GLASS TO BE TEMPERED

WINDOW TYPES
3/8" = 1'-0" 05

NOT USED 04

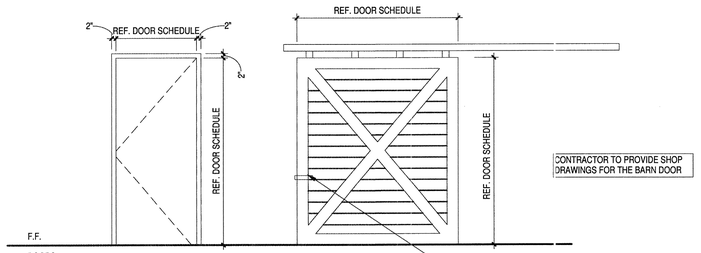


DOOR NOTES
1/2" = 1'-0" 03

DOOR SCHEDULE											
MARK	ROOM	WIDTH	HEIGHT	FRAME TYPE	FINISH	DOOR TYPE	DOOR FINISH	DOOR THICKNESS	HARDWARE SET	FIRE RATING	COMMENTS
02	OFFICE	3' - 0"	7' - 0"	H.M.	PAINTED	A	PAINTED	0' - 2"	02	NON	INSULATED DOOR
03-A	SITTING AREA	3' - 0"	7' - 0"	H.M.	PAINTED	A	PAINTED	0' - 2"	01	NON	
03-B	SITTING AREA	6' - 0"	7' - 0"	WOOD	STAINED	B	STAINED	0' - 1 3/4"	05	NON	BARN DOOR
04	R.R.	3' - 0"	7' - 0"	H.M.	PAINTED	A	STAINED	0' - 2"	04	NON	
05	STORAGE	3' - 0"	7' - 0"	H.M.	PAINTED	A	STAINED	0' - 2"	03	NON	
06	W.H.	2' - 6"	7' - 0"	H.M.	PAINTED	A	STAINED	0' - 2"	03	NON	

NOTES:
1. WALK IN COOLER DOOR TO BE PROVIDED BY WALK-IN COOLER MANUFACTURER

LEGEND:
HM: HOLLOW METAL
WD: WOOD
AL: ALUMINUM
FRP: FIBERGLASS REINFORCED POLYMER
GL: GLASS
SS: STAINLESS STEEL
EX: EXISTING
LPWD: LAMINATED PLASTIC WOOD DOOR



TYPE A — H.M. FRAMES, METAL DOOR

TYPE B — ROLLING BARN DOOR ON OVERHEAD TRACK

DOOR SCHEDULE AND TYPES
NTS 01

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DESIGNED BY:
DRAWN BY:
REVIEWED BY:
REVISED:
REVISED:

SHEET TITLE
DOOR AND WINDOW SCHEDULES

SHEET NUMBER
A801

PERCENTAGE: ISSUED FOR BID

NOT USED 12

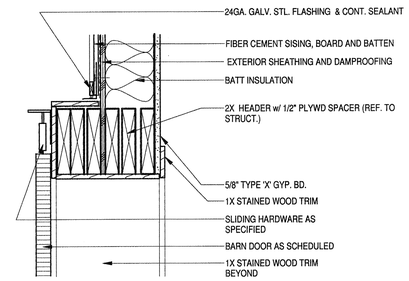
NOT USED 11

NOT USED 10

NOT USED 09

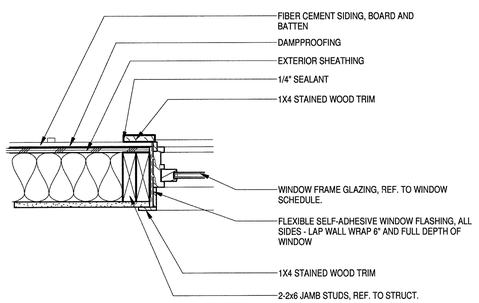
NOT USED 08

NOT USED 07

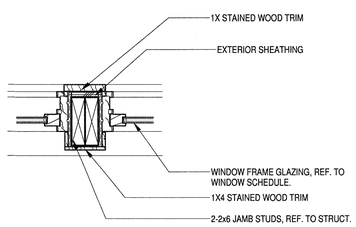


HEAD DETAIL @ BARN DOOR
1 1/2" = 1'-0" 06

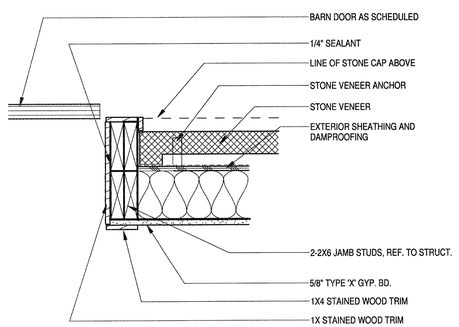
NOT USED 05



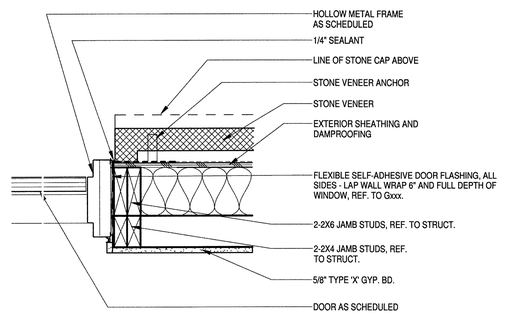
WINDOW JAMB DETAIL
1 1/2" = 1'-0" 04



WINDOW JAMB @ MULLION
1 1/2" = 1'-0" 03



JAMB DETAIL @ BARN DOOR
1 1/2" = 1'-0" 02



HOLLOW METAL DOOR JAMB DETAIL
1 1/2" = 1'-0" 01

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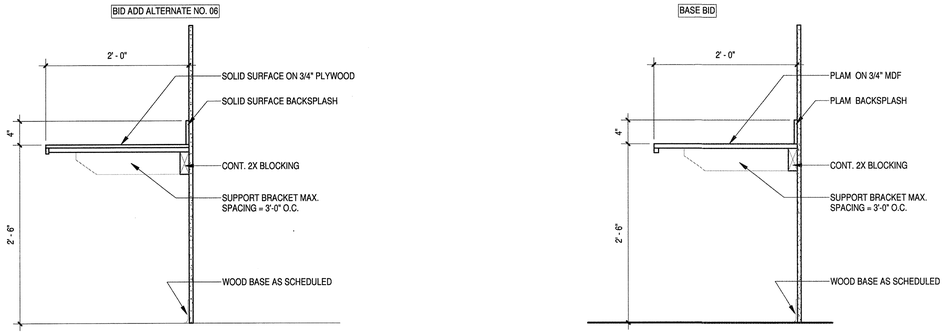
REVISED:
REVISED:

SHEET TITLE
DOOR AND WINDOW DETAILS

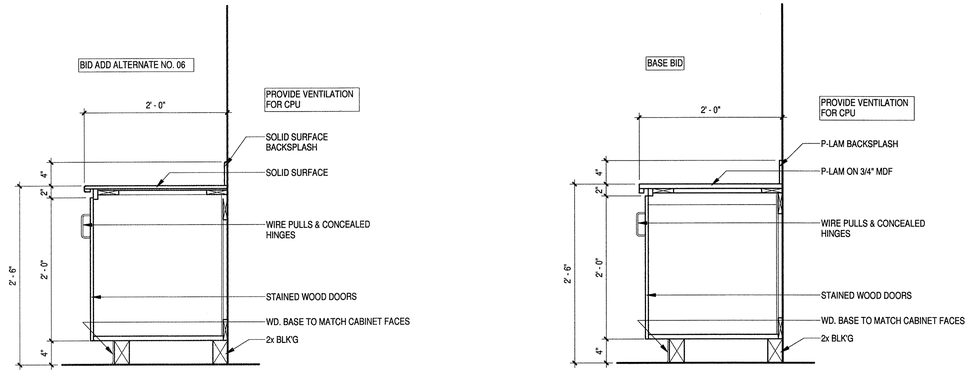
SHEET NUMBER
A802

PERCENTAGE: ISSUED FOR BID



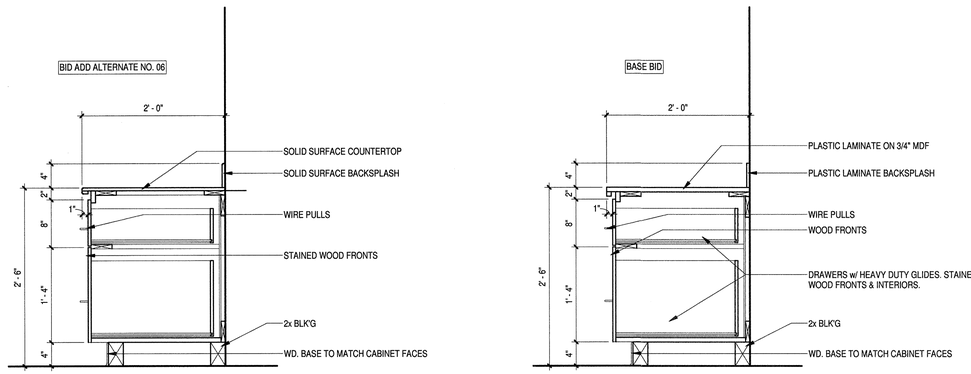
NOTES:
1. ALL EXPOSED EDGES SHALL BE FINISHED.
2. REFER TO ELEV. & FIN. SCHED. FOR FINISH SPECS.

SECTION @ OFFICE COUNTERTOP
1" = 1'-0" (06)



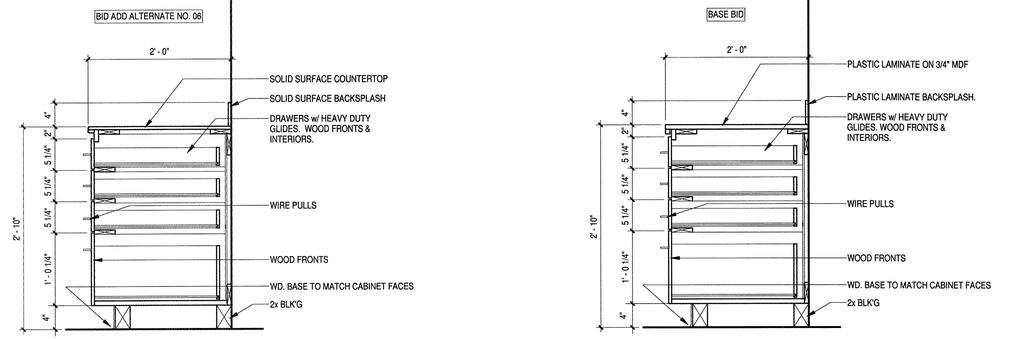
NOTES:
1. ALL EXPOSED EDGES SHALL BE FINISHED.
2. REFER TO ELEV. & FIN. SCHED. FOR FINISH SPECS.

CPU CABINET BASE
1" = 1'-0" (05)



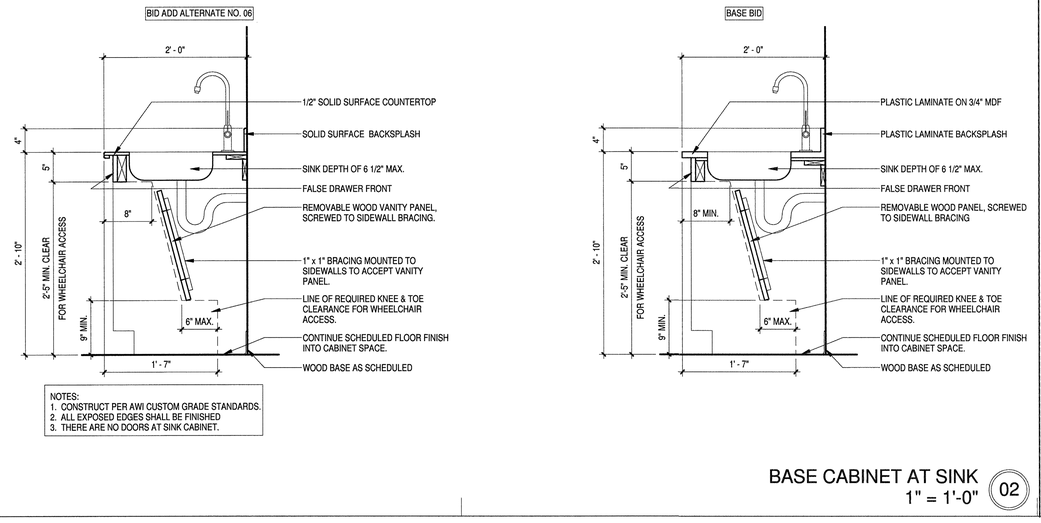
NOTE:
1. CONSTRUCT PER AWI CUSTOM GRADE STANDARDS.
2. ALL EXPOSED EDGES SHALL BE FINISHED.
3. REFER TO ELEV. & FIN. SCHED. FOR FINISH SPECS.

DESK FILE DRAWER BASE
1" = 1'-0" (04)



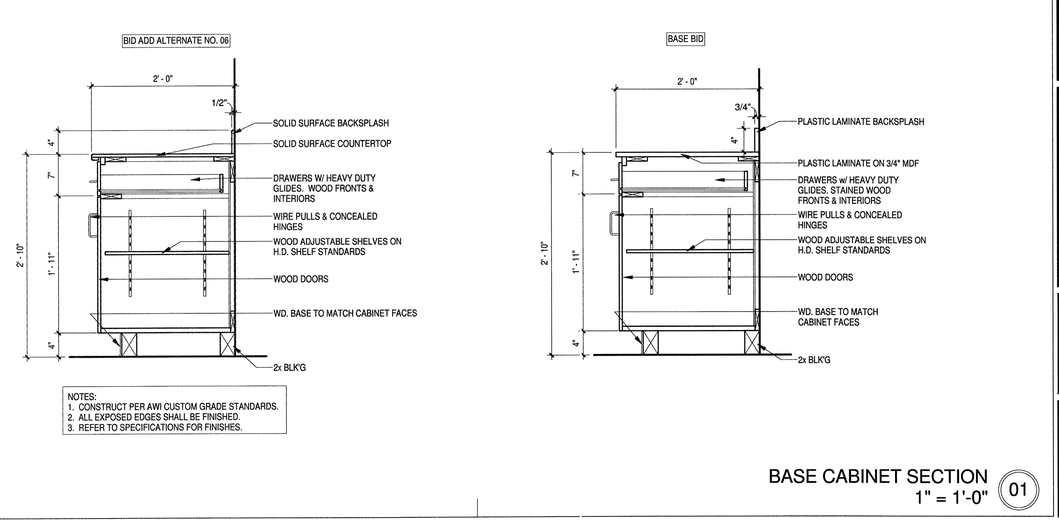
NOTES:
1. ALL EXPOSED EDGES SHALL BE FINISHED.
2. REFER TO SPECIFICATIONS FOR FINISHES.

BASE CABINET - 4 DRAWERS
1" = 1'-0" (03)



NOTES:
1. CONSTRUCT PER AWI CUSTOM GRADE STANDARDS.
2. ALL EXPOSED EDGES SHALL BE FINISHED
3. THERE ARE NO DOORS AT SINK CABINET.

BASE CABINET AT SINK
1" = 1'-0" (02)



NOTES:
1. CONSTRUCT PER AWI CUSTOM GRADE STANDARDS.
2. ALL EXPOSED EDGES SHALL BE FINISHED.
3. REFER TO SPECIFICATIONS FOR FINISHES.

BASE CABINET SECTION
1" = 1'-0" (01)

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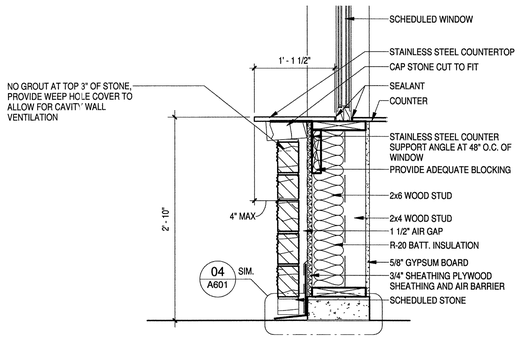
REVIEWED BY:
REVISED:
REVISED:

SHEET TITLE
MILLWORK DETAILS

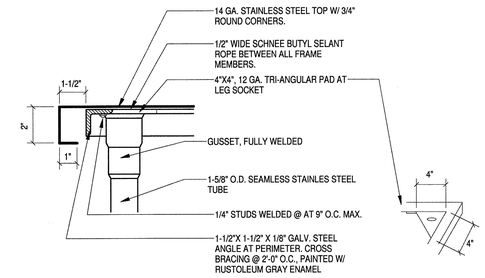
SHEET NUMBER
A901

PERCENTAGE: ISSUED FOR BID

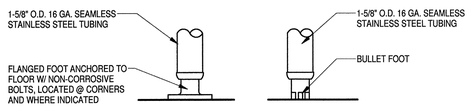


NOTE:
1. CONSTRUCT PER AWI CUSTOM GRADE STANDARDS.
2. ALL EXPOSED EDGES SHALL BE FINISHED.
3. REFER TO ELEV. & FIN. SCHED. FOR FINISH SPECS.

SECTION @ LOW TRANS. COUNTERTOP
1" = 1'-0" 09

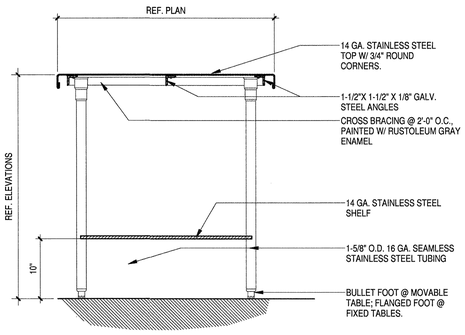


EDGE DETAIL

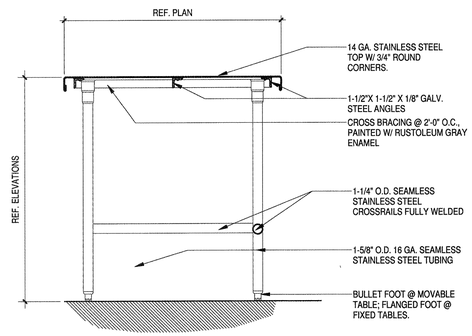


FOOT DETAILS

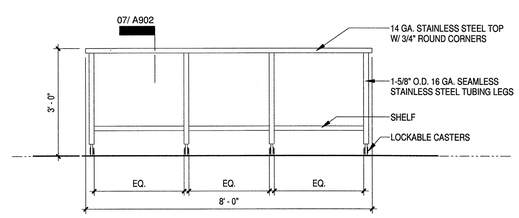
STAINLESS STEEL TABLES DETAILS
1" = 1'-0" 08



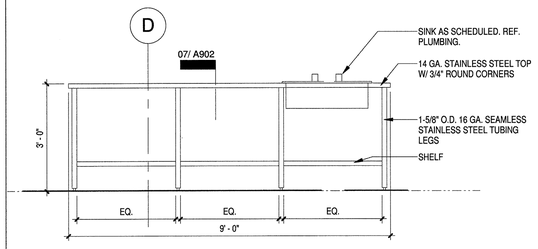
SECTION @ PROCESSING TABLE
1" = 1'-0" 07



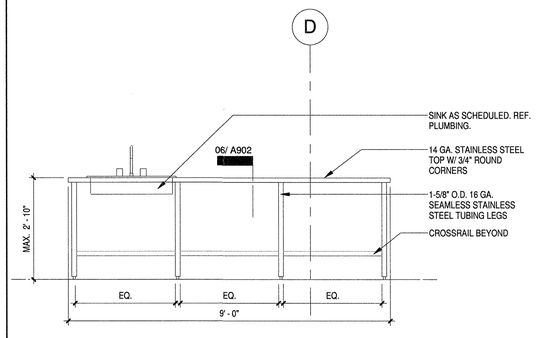
SECTION @ ADA PROCESSING TABLE
1" = 1'-0" 06



ELEVATION @ MOVABLE PREP TABLE
1/2" = 1'-0" 05

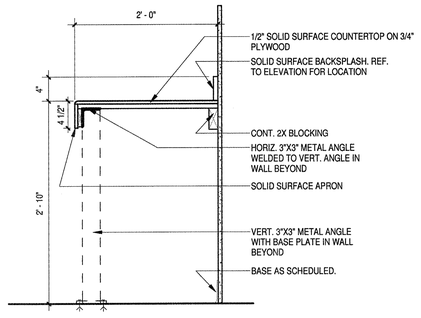


ELEVATION AT PROCESSING TABLE
1/2" = 1'-0" 04



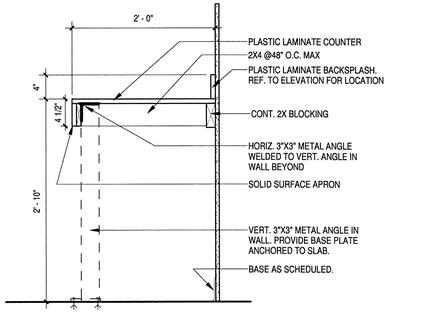
ELEVATION AT ADA PROCESSING TABLE
1/2" = 1'-0" 03

BID ADD ALTERNATE NO. 06



NOTE:
1. CONSTRUCT PER AWI CUSTOM GRADE STANDARDS.
2. ALL EXPOSED EDGES SHALL BE FINISHED.
3. REFER TO ELEV. & FIN. SCHED. FOR FINISH SPECS.

BASE BID



SECTION @ COFFEE COUNTERTOP
1" = 1'-0" 01

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PROJECT NUMBER: 134174

DATE: 01/12/2018
DESIGNED BY:
DRAWN BY:
REVIEWED BY:
REVISED:
REVISED:

SHEET TITLE
MILLWORK DETAILS

SHEET NUMBER
A902

PERCENTAGE: ISSUED FOR BID

1. STRUCTURAL ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
ACI	AMERICAN CONCRETE INSTITUTE
ADDL	ADDITIONAL
ADJ	ADJACENT
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AISI	AMERICAN IRON AND STEEL INSTITUTE
ANSI	AMERICAN NATIONAL STANDARD INSTITUTE
APPROX.	APPROXIMATE(LY)
AR	ANCHOR ROD
ARCH	ARCHITECTURAL
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASTM	AMERICAN SOCIETY OF TESTING MATERIALS
AWS	AMERICAN WELDING SOCIETY
B, BM	BEAM (MILD REINFORCED)
BC	BOTTOM CHORD
BLDG	BUILDING
BOD	BOTTOM OF DECK
BOT	BOTTOM
BP	BASE PLATE
BRG	BEARING
BS	BOTH SIDES
C	CHANNEL, COMPRESSION
CAMB	CAMBER
CIP	CAST-IN-PLACE
CL	CENTER LINE
CLR	CLEAR
COL	COLUMN
CONC	CONCRETE
CONT	CONTINUOUS
CPL	CAP PLATE
CS	CARBON STEEL
CSJ	CONSTRUCTION JOINT
CTJ	CONTROL JOINT
D	DEPTH
DET	DETAIL
DF	DRILLED FOOTING
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DL	DEAD LOAD
DN	DOWN
DO	DITTO
DWG	DRAWING
DWL	DOWEL
E	EAST
EA	EACH
EF	EACH FACE
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
EQ	EQUAL(LY)
EW	EACH WAY
EXIST	EXISTING
EXP	EXPANSION
FD	FLOOR DRAIN
F.F.E.	FINISH FLOOR ELEVATION

FND	FOUNDATION
FS	FAR SIDE
FT	FEET, FOOT
FTG	FOOTING
GA	GAUGE
GALV	GALVANIZED
GB	GRADE BEAM
HORIZ	HORIZONTAL
HP	HIGH POINT
HR	HOUR
HSS	HOLLOW STRUCTURAL SECTION
ID	INSIDE DIAMETER
IN	INCHES
JT	JOINT
K	KIPS, JOIST SERIES
KSI	KIPS PER SQUARE INCH
L	SPAN, LEFT
Ld	DEVELOPMENT LENGTH
LG	LENGTH
LGT	LONG, LONGITUDINAL
LH	LEFT HAND
LL	LIVE LOAD
LLBB	LONG LEG BACK TO BACK
LLH	LONG LEG HORIZ.
LLV	LONG LEG VERTICAL
LP	LOW POINT
LW	LONG WAY
MATL	MATERIAL
MAX	MAXIMUM
MC	MOMENT CONNECTION, MISC. CHANNEL
MECH	MECHANICAL
MFG(S)	MANUFACTURER(S)
MID	MIDDLE
MILL	MILL FACE
MIN	MINIMUM
MISC	MISCELLANEOUS
ML	MATCH LINE
MO	MASONRY OPENING
MS	MILD STEEL
MT	STRUCTURAL TEE CUT FROM MISC. STEEL
N	NORTH
NIC	NOT IN CONTRACT
NO.	NUMBER
NOM	NOMINAL
NS	NEAR SIDE
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OPNG	OPENING
OPP	OPPOSITE
PL	PLATE
PLF	POUNDS PER LINEAR FOOT

PLUMB	PLUMBING
PR	PAIR
PROJ	PROJECTION
PSI	POUNDS PER SQUARE INCH
PSF	POUNDS PER SQUARE FOOT
R	RIGHT, RISER, RADIUS
RD	ROOF DRAIN
RE	REFER
REF	REFERENCE
REINF	REINFORCE(D), (ING), (MENT)
REQD	REQUIRED
REV	REVISION
RH	RIGHT HAND
RO	ROUGH OPENING
S	SOUTH, SLAB
SCHED	SCHEDULE(D)
SDI	STEEL DECK INSTITUTE
SECT	SECTION
SF	SQUARE FEET
SHT	SHEET
SIM	SIMILAR
SJI	STEEL JOIST INSTITUTE
SL	SLOPE
SPA	SPACE
SPEC(S)	SPECIFICATION(S)
SQ	SQUARE
STD	STANDARD
STIF	STIFFENER
STIR	STIRRUP
STL	STEEL
STR	STRUCTURAL
T	TOP, TENSION
T & B	TOP AND BOTTOM
T & G	TONGUE AND GROOVE
TEMP	TEMPERATURE
THK	THICK(NESS)
TOC	TOP OF CONCRETE
TOF	TOP OF FOOTING
TOL	TOP OF LEDGE
TOP	TOP OF PANEL
TOS	TOP OF STEEL
TOT	TOTAL
TOW	TOP OF WALL
TRD(S)	TREAD(S)
TOJ	TOP OF JOIST
TYP	TYPICAL
UL	UNDERWRITERS LABORATORY
UNIF	UNIFORM
UON	UNLESS OTHERWISE NOTED
V	BEAM END SHEAR
VB	VERTICAL BRACE
VERT	VERTICAL
W	WALL, WEST, WIDTH, WIDE FLANGE
W/	WITH
WL	WIND LOAD, WATER LEVEL, WORKING LINE
WP	WATERPROOF, WORKING POINT

2. STRUCTURAL LEGEND

SYMBOL	ITEM
P-1	PRECAST CONCRETE PANEL
PC-4	PILE CAP MARK
F1	SPREAD FOOTING MARK
P1	PLINTH MARK
C1	COLUMN MARK
CWF1	CONTINUOUS WALL FOOTING MARK
BW1	BASEMENT WALL MARK
RW1	RETAINING WALL MARK
BP1	BASE PLATE MARK
A	STRUCTURAL STEEL COLUMN SPLICE TYPE
24/24	STRAIGHT SHAFT DRILLED PIER/FOOTING
B1 GB1 1B1	MILD REINFORCED CONCRETE BEAM MARKS
J1	MILD REINFORCED CONCRETE JOIST MARK
S1	SPAN DIRECTION OF A MILD REINFORCED CONCRETE SLAB WITH MAIN REINFORCING MARK S1
DECK / TYPE 1	SPAN DIRECTION OF 5 1/2" THICK CONCRETE SLAB W/ TYPE 1 STEEL DECK
DECK / TYPE 2	SPAN DIRECTION OF A BARE STEEL DECK TYPE 2 NOT HAVING ANY CONCRETE TOPPING
20K7 / V = 5K	STANDARD SJ1 OPEN WEB STEEL JOIST, K SERIES WITH 5 KIPS END SHEAR
W27x84 / (+24'-0")	STANDARD AISC ROLLED SHAPE OF W27x84 AT ELEVATION 24'-0"
W21x555 c=1"	STANDARD AISC ROLLED SHAPE OF W21x55 WITH 1" UPWARD CAMBER
W18x35 / 20K 20K	STANDARD AISC ROLLED SHAPE OF W18x35 WITH 20 KIPS BEAM END SHEAR
W14x22 (10)	STANDARD AISC ROLLED SHAPE OF W14x22 WITH 10 HEADED SHEAR CONNECTORS EQUALLY SPACED
W21x50 (10, 6, 12) BEAM BEAM	STANDARD AISC ROLLED SHAPE OF W21x50 WITH 28 HEADED SHEAR CONNECTORS EQUALLY SPACED FROM LEFT TO RIGHT AS 10 CONNECTORS / 6 CONNECTORS / 12 CONNECTORS
⊢▶	CONNECTED TO A ROLLED SHAPE COLUMN WITH A STANDARD WELDED MOMENT CONNECTION STANDARD AISC ROLLED SHAPE BEAM
10K1	STANDARD 'K' SERIES JOIST
KB	KNEE BRACE
L	STEEL ANGLE
JL	STEEL ANGLE BACK TO BACK
W	STANDARD ROLLED SHAPE
[	STANDARD ROLLED CHANNEL
○	STANDARD STEEL PIPE
□	HOLLOW STRUCTURAL SECTION
@	AT
&	AND
x	BY
℄	CENTER LINE

SYMBOL	ITEM
OC	ON CENTER
⌀	DIAMETER
%	PERCENT
PL	PLATE
RE:	REFER TO
#	NUMBER (BAR SIZE)
⌷	SQUARE
6"	SLAB DEPRESSION AND AMOUNT
126'-0"	DATUM ELEVATION
DIM	DIMENSION TO FACE OR DIMENSION TO COLUMN GRID OR CENTER LINE
45.00°	ANGLE IN DEGREES, MINUTES AND SECONDS
2	REVISION MARK
2 / S2.6.02; 2/S2.6.02	SECTION OR DETAIL REFERENCE (DRAWN AS DETAIL 2 ON SHEET S2.6.02)
2 / B	BUILDING GRID LINES "2" AND "B"

3. STRUCTURAL CONCEPT, STANDARDS AND LOADS

A. DESIGN CONCEPT:

THE STRUCTURE AS SHOWN HAS BEEN DESIGNED IN ACCORDANCE WITH THE BUILDING CODE REQUIREMENTS AND DESIGN STANDARDS TO SUPPORT THE FINAL BUILDING SERVICE LOADS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADDITIONAL SUPPORTS FOR THE STRUCTURE IF NECESSITATED BY THE CONSTRUCTION SEQUENCE OR METHODS OF FABRICATION, HANDLING, ERECTION, AND OTHER CONSTRUCTION OPERATIONS.

B. BUILDING CODES AND DESIGN STANDARDS:

1. AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE); MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, ASCE 7.
2. AMERICAN CONCRETE INSTITUTE (ACI), BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, ACI 318.
3. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), MANUAL OF STEEL CONSTRUCTION, 1989 AS AMENDED.
4. INTERNATIONAL BUILDING CODE, 2012 EDITION.

STEEL DECK INSTITUTE (SDI), DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS, ROOF DECKS, AND CELLULAR METAL FLOOR DECK WITH ELECTRICAL DISTRIBUTION.

C. GRAVITY LOADS:

SUPERIMPOSED LOADS ARE GIVEN IN POUNDS PER SQUARE FOOT (PSF).

BUILDING AREA	DEAD LOAD (PSF)	LIVE LOAD (PSF)
1. SLAB ON GRADE	0	100
2. ROOF	20	20
3. MEZZANINE AREAS	20	150
4 PORCH	20	140

D. GROUND SNOW LOAD (P):-- 5 PSF

E. WIND LOADS FOR 3-SECOND GUST:

1. ULTIMATE WIND SPEED: -- 115 MPH
2. OCCUPANCY CATEGORY: -- II
3. WIND EXPOSURE:-- C
4. COMPONENTS AND CLADDING PRESSURES

TYPE	TRIBUTARY AREA	PRESSURES (PSF)		FIELD
		CORNER	PERIMETER	-27 PSF
WALLS	10 FT^2	-36 PSF	-	-32 PSF
ROOF	10 FT^2	-49 PSF	+37 PSF	-44 PSF

RE: IBC 2012 FOR DESCRIPTION OF CORNER, PERIMETER & FIELD

4. GENERAL NOTES FOR CONSTRUCTION

A. CONSTRUCTION METHODS, PROCEDURES AND SEQUENCES ARE THE RESPONSIBILITY OF THE CONTRACTOR AND THE CONTRACTOR SHALL TAKE ALL THE NECESSARY MEANS TO MAINTAIN AND PROTECT THE STRUCTURAL INTEGRITY OF ALL CONSTRUCTION AT ALL STAGES.

B. ALL PROPOSED SUBSTITUTIONS MUST BE EQUAL OR BETTER AND SHALL BE REVIEWED BY THE ARCHITECT/ENGINEER PRIOR TO ANY PERTINENT WORK AND PRIOR TO THE AWARD OF THE CONTRACT.

C. NOT ALL OPENINGS AND OTHER COMPONENTS THAT ARE REQUIRED HAVE BEEN SHOWN IN THE STRUCTURAL DRAWINGS. COORDINATE WITH THE ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS AND VERIFY THE LOCATIONS AND SIZES OF ALL CHASES, INSERTS, OPENINGS, SLEEVES, FINISHES, DEPRESSIONS, PADS AND OTHER PROJECT REQUIREMENTS. FLOOR PLAN WILL BE FURNISHED FOR THAT PURPOSE.

D. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING THE MECHANICAL, ELECTRICAL, PLUMBING AND ARCHITECTURAL DRAWINGS TO DETERMINE WHERE OPENINGS ARE REQUIRED IN REINFORCED CONCRETE BEAMS, SLABS AND WALLS.

E. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS, DETAILING ALL THE OPENINGS, INCLUDING ADDED REINFORCEMENT AS SHOWN ON THE TYPICAL WALL, SLAB AND BEAM OPENING DETAILS FOR REVIEW.

F. ADDITIONAL REINFORCEMENT ABOVE THAT SHOWN IN THE TYPICAL SLAB AND BEAM OPENING DETAILS MAY BE REQUIRED AND WILL BE REVIEWED ON THE SHOP DRAWINGS.

G. USE THE MANUFACTURER'S CERTIFIED DRAWINGS AND SPECIFICATIONS FOR THE EQUIPMENT ANCHORAGE AND DETAILS.

H. ALL CONSTRUCTION JOINTS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE INCORPORATED INTO THE STRUCTURE. ADDITIONAL CONSTRUCTION JOINTS TO FACILITATE CONSTRUCTION SHALL BE LOCATED AND DETAILED ON THE SHOP DRAWINGS FOR REVIEW.

I. HORIZONTAL CONSTRUCTION JOINTS SHALL NOT BE PERMITTED IN BEAMS UNLESS SHOWN ON THE STRUCTURAL DRAWINGS.

J. ALL CONSTRUCTION AND CONTROL JOINTS FOR BEAMS WHICH ARE EXPOSED TO VIEW ARE TO BE LOCATED TO COINCIDE WITH THE ARCHITECTURAL CONSTRUCTION JOINTS AS SHOWN ON THE BUILDING ELEVATION SHEETS OR AS REVIEWED IN WRITING.

K. ALL WELDING SHALL CONFORM TO AWS STANDARDS. THE THICKNESS AND THE LENGTHS OF THE WELDS ARE AS SHOWN, SPECIFIED OR AS REQUIRED.

L. IT IS THE INTENT OF THE STRUCTURAL DOCUMENTS TO DESCRIBE A FUNCTIONALLY COMPLETE PROJECT. ALL LABOR DOCUMENTATION, SERVICES, MATERIALS, OR EQUIPMENT THAT MAY BE REASONABLY INFERRED FROM THESE DOCUMENTS OR FROM PREVAILING CUSTOM OR TRADE USAGE AS BEING REQUIRED TO PRODUCE THE DESIRED RESULT, WHETHER OR NOT SPECIFICALLY CALLED FOR, SHALL BE PROVEDED AT NO ADDITIONAL COST TO OWNER.

M. SHOP DRAWINGS:

1. THE TERM "SHOP DRAWINGS" INCLUDES FABRICATION, MANUFACTURING, ERECTION AND SETTING DRAWINGS, BROCHURES, CERTIFICATES, AND PRODUCT DATA DESCRIBING MATERIALS AND EQUIPMENT. SHOP DRAWINGS SHALL INCLUDE ALL PERTINENT INFORMATION REQUIRED FOR THE ENGINEER TO FULLY EVALUATE THE MATERIALS BEING REPRESENTED BY THE SUBMITTAL INCLUDING THE PHYSICAL PROPERTIES, DIMENSIONS, LOCATIONS AND METHOD OF INSTALLATION.
2. SHOP DRAWINGS WILL BEAR THE REVIEW STAMP OF THE CONTRACTOR INDICATING THAT HE HAS REVIEWED THE DRAWINGS FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS; COORDINATED ITEMS INCLUDED IN THE SUBMITTAL WITH RELATED ITEMS; AND VERIFIED AND COORDINATED DIMENSIONS.
3. REPRODUCTIONS OF THE ENGINEERING DRAWINGS WILL NOT BE ACCEPTABLE AS SHOP DRAWINGS.
4. ANY SHOP DRAWING NOT CONFORMING TO THESE REQUIREMENTS WILL BE CAUSE FOR REJECTION AND WILL BE RETURNED WITHOUT ANY FURTHER ACTION.

5. EXCAVATION, BACKFILLING & FOUNDATIONS

A. A GEOTECHNICAL REPORT CONTAINING TEST BORINGS, LABORATORY TESTS AND ENGINEERING ANALYSES BY GEOTECHNICAL ENGINEERING SERVICES, REPORT NO.0312-1485 DATED MAY 10, 2017, IS AVAILABLE FOR REVIEW

B. STRIP AND REMOVE ALL SURFACE PAVING, ORGANICS. TOP SOIL, SOFT SOIL, FILL AND FAT CLAYS FROM ALL CONSTRUCTION AREAS TO ALLOW FOR A MINIMUM DEPTH OF 4'-0" BELOW FLOOR SLAB A MINIMUM OF 5'-0" BEYOND THE BUILDING LINES.

C. PROOFROLL THE EXPOSED SUBGRADE WITH A 20 TON PNEUMATIC ROLLER OR EQUIVALENT EQUIPMENT TO DETECT WEAK ZONES IN THE SUBGRADE. REMOVE AND REPLACE WEAK AREAS DETECTED DURING PROOFROLLING, AS WELL AS ZONES OF FILL CONTAINING ORGANIC MATTER AND DEBRIS, WITH SOIL EXHIBITING SIMILAR CLASSIFICATION, MOISTURE CONTENT, AND DENSITY AS THE ADJACENT IN-SITU SOILS.

D. ESTABLISH POSITIVE SITE DRAINAGE AND PREVENT PONDING WITHIN THE BUILDING PAD.

E. SCARIFY THE EXPOSED SUBGRADE TO A MINIMUM DEPTH OF 6 INCHES AND COMPACTED TO 95% OF THE MAXIMUM DENSITY AS DETERMINED BY STANDARD MOISTURE DENSITY RELATIONSHIP, ASTM D698.

F. PROVIDE ADDITIONAL, SELECT FILL MATERIAL WITHIN THE BUILDING AREA, AND 5 FEET AROUND, OF LOW PLASTICITY OR SANDY CLAYS HAVING PLASTICITY INDICES RANGING BETWEEN 8 AND 18. PLACE FILL MATERIALS IN 8 INCH LOOSE LIFT AND COMPACT AS ABOVE. ON-SITE\ EXCAVATED MATERIALS MAY BE USED AS FILL IF DEEMED SUITABLE BY THE INDEPENDENT TESTING LAB.

G. BACK FILL AGAINST THE FOUNDATIONS IN UNIFORM LIFTS TO REQUIRED GRADES AFTER CONCRETE HAS ATTAINED THE 28-DAY DESIGN COMPRESSIVE STRENGTH.

H. PLACE SLAB-ON-GRADE ON 15 MIL THICK CLASS A VAPOR BARRIER AS SHOWN.

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DATE: 01/12/2018
DESIGNED BY:
DRAWN BY: TT
REVIEWED BY: OJ
REVISED:
REVISED:

SHEET TITLE
GENERAL STRUCTURAL CRITERIA

SHEET NUMBER
S1.0

PERCENTAGE: ISSUED FOR BID

6. CONCRETE

A. ALL NORMAL WEIGHT CONCRETE SHALL HAVE SAND AND CRUSHED CARBONATE AGGREGATE CONFORMING TO ASTM C33, TYPE 1 PORTLAND CEMENT, AND HAVE THE FOLLOWING DESIGNATED COMPRESSIVE STRENGTHS (f'c) IN 28 DAYS, UNLESS NOTED OTHERWISE ON THE DRAWINGS:

BUILDING COMPONENT	28 DAY CYLINDER COMPRESSIVE STRENGTH POUNDS PER SQUARE INCH(PSI)					
	NORMAL WEIGHT			MAX. AGGREGATE SIZE (IN.)	SLUMP (IN.)	W/C RATIO
	3000	3500	4000			
1. SPREAD FOOTING	●			1 1/2"	5-7	0.55
2. SLAB-ON-GRADE	●			1"	4-6	0.50
3. GRADE BEAMS AND PLINTHS		●		1"	4-6	0.50
4. ALL OTHER CONCRETE	●			1"	4-6	0.50

B. CONCRETE SUPPLIER SHALL BE AWARE OF CEMENTS THAT CAN CAUSE LATE ETTRINGITE FORMATION IN THE CEMENT PASTE AND BE PREPARED TO SHOW THAT THE CEMENTS USED WILL NOT CAUSE THIS PROBLEM.

C. NO HORIZONTAL JOINTS WILL BE PERMITTED IN CONCRETE EXCEPT WHERE THEY NORMALLY OCCUR OR WHERE SHOWN ON THE DETAILS. VERTICAL JOINTS SHALL OCCUR AT CENTER SPANS OR AT LOCATIONS APPROVED BY THE STRUCTURAL ENGINEER.

D. ALL MIXING, TRANSPORTING, PLACING AND CURING OF CONCRETE SHALL BE DONE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE AMERICAN CONCRETE INSTITUTE; ACI 301 AND ACI 318, LATEST EDITIONS.

E. ALL BASE PLATES AND ANCHOR BOLTS SHALL BE PROTECTED WITH 3" (MIN.) OF CONCRETE. ANCHOR BOLTS SHALL BE FABRICATED FROM FULL BODIED ASTM F1554, GRADE 36 LOW CARBON STEEL RODS HAVING THE SAME DIAMETER AS THE BOLT DIAMETER AND USING CUT THREADS. ROLLED THREADS ARE NOT ACCEPTABLE. BOLTS SHALL BE SET USING RIGID TEMPLATES.

F. PROVIDE DEFORMED NEW BILLET STEEL BARS CONFORMING TO ASTM A615, GRADE 60. ALL REINFORCING STEEL SHALL BE SECURELY HELD IN PLACE; PROVIDE ADDITIONAL BARS OR STIRRUPS FOR SUPPORT AS REQUIRED.

G. WELDED WIRE FABRIC SHALL CONSIST OF FLAT SHEETS AND SHALL CONFORM TO ASTM A185, WITH A MINIMUM YIELD STRENGTH OF 65.0 KSI

H. PROVIDE FULL EMBEDMENT WITH STANDARD 90 DEGREE HOOKS FOR ALL DOWELS. IF NOT OTHERWISE SPECIFIED, THE DOWEL SIZE AND SPACING SHALL BE THE SAME AS THE MAIN REINFORCING.

WHEN REINFORCING STEEL IN GRADE BEAMS, WALLS, SLABS AND BEAMS, IS NOTED AS CONTINUOUS, SPLICE REINFORCING STEEL ONLY WHEN UNAVOIDABLE DUE TO STOCK LENGTHS. STAGGER ALL SPLICES A MINIMUM OF 4'-0". ADJACENT BAR SPLICES ARE NOT ACCEPTABLE.
LOCATE THE TOP BAR SPLICES WITHIN THE MIDDLE HALF OF THE SPAN AND LOCATE THE BOTTOM BAR SPLICES AT SUPPORTS OR BETWEEN SUPPORTS AND 1/3 SPAN POINT, UNLESS NOTED OTHERWISE ON PLANS, DETAILS OR SCHEDULES.

J. PROVIDE INTERIOR AND EXTERIOR HORIZONTAL LAPPED CORNER BARS AT ALL CORNERS TO MATCH THE SIZE, TYPE AND SPACING OF THE WALL AND GRADE BEAM HORIZONTAL REINFORCING.

K. UNLESS SPECIFICALLY NOTED, SCHEDULED OR DETAILED OTHERWISE, PROVIDE DEVELOPMENT LENGTH FOR REINFORCING IN CONCRETE COMPONENTS IN ACCORDANCE WITH THE SCHEDULE IN NOTE G. BELOW. THIS SCHEDULE SHALL APPLY TO ALL DEVELOPMENT LENGTHS NOT OTHERWISE NOTED, DETAILED OR SCHEDULED IN THE DRAWINGS OR SPECIFICATIONS.

L. REINFORCING BAR DEVELOPMENT LENGTHS (Ld) IN INCHES FOR VARIOUS CONCRETE STRENGTHS IN POUNDS PER SQUARE INCH (PSI). TOP BARS ARE DEFINED AS HORIZONTAL REINFORCING SO PLACED IN A MEMBER THAT MORE THAN 12 INCHES OF CONCRETE IS CAST BELOW THE BAR. ALL OTHER CONDITIONS ARE CONSIDERED BOTTOM BARS FOR DEVELOPMENT AND SPLICE LENGTH PURPOSES.

BAR SIZE	Ld FOR TOP BARS				Ld FOR BOTTOM BARS			
	28 DAY CYLINDER CONCRETE STRENGTH (PSI)				28 DAY CYLINDER CONCRETE STRENGTH (PSI)			
GRADE 60	3000	4000	5000	6000	3000	4000	5000	6000
#3	22	19	17	16	17	15	13	12
#4	29	25	23	21	22	19	17	16
#5	36	31	28	26	28	24	22	20
#6	43	37	34	31	33	29	26	24
#7	63	54	49	45	48	42	38	34
#8	72	62	56	51	55	48	43	39
#9	81	70	62	57	62	54	48	44
#10	89	78	69	63	69	60	53	49
#11	98	85	76	70	76	66	59	54

M. PROVIDE LAP SPLICE LENGTHS FOR REINFORCING BARS 1.3 TIMES THE Ld NOTED IN NOTE H ABOVE.

1. WHEN TWO BARS OF DIFFERENT SIZES ARE LAPPED, THE SMALLER SIZE SHALL GOVERN THE LAP LENGTH UNLESS SPECIFICALLY NOTED.
2. WELDED OR MECHANICAL SPLICES CAPABLE OF DEVELOPING 125% OF THE BAR YIELD STRENGTH MAY BE USED IN LIEU OF THE LAPS SUCH SPLICES MAY BE EITHER FULL BUTT WELDS OR SERIES "C CADWELDS OR EQUAL."

N. THE GENERAL NOTES, LAP LENGTHS OR DETAILS PERTAINING TO REINFORCING STEEL AS SHOWN ON THE DETAIL SHEETS OR OTHER SCHEDULES SHALL SUPERSEDE THE NOTES SHOWN ON THIS SHEET.

P. CONCRETE COVERAGE AROUND REINFORCEMENT SHALL CONFORM TO THE REQUIREMENTS OF ACI 318 SECTION 7.7, LATEST EDITION, AND MEET REQUIREMENTS BELOW. THE REINFORCING STEEL DETAILER SHALL ADJUST REINFORCING STEEL CAGE SIZES AT INTERSECTING REINFORCING MEMBERS AS REQUIRED TO ALLOW CLEARANCE FOR INTERSECTING BARS. SLAB ON GRADE REINFORCEMENT SHALL BE SUPPORTED AT EVERY THIRD BAR, NOT TO EXCEED 45-INCH INTERVALS.

1. UNFORMED SURFACES IN CONTACT WITH EARTH: 3 INCHES
2. UNIFORMED SURFACES OVER MOISTURE BARRIER: 2 INCHES
3. FORMED SURFACES EXPOSED TO EARTH OR WEATHER
   a. #6 AND LARGER: 2 INCHES
   b. #5 AND SMALLER: 1 1/2 INCHES
4. FORMED SURFACES NOT EXPOSED TO EARTH OR WEATHER
   a. SLABS AND WALLS: 3/4 INCHES
   b. BEAMS AND COLUMNS: 1 1/2 INCHES

Q. PROVIDE (1) #5 x 4'-0" BAR IN SLAB AT ALL RE-ENTRANT CORNERS, TYPICAL.

7. STRUCTURAL STEEL

A. ROLLED SHAPES:

1. ALL STRUCTURAL STEEL FOR ALL THE HORIZONTAL FRAMING MEMBER SHALL CONFORM TO ASTM A992, GRADE 50, UNLESS OTHERWISE NOTED
2. ALL STRUCTURAL STEEL FOR HOLLOW STRUCTURAL SECTIONS SHALL CONFORM TO ASTM A500, GRADE B, UNLESS OTHERWISE NOTED.
3. ALL STRUCTURAL STEEL FOR PIPE SHALL CONFORM TO ASTM A53, TYPE E OR S, GRADE B, UNLESS OTHERWISE NOTED.
4. ALL STRUCTURAL STEEL FOR ANGLES, PLATES AND MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A36, UNLESS OTHERWISE NOTED.
5. ALL EXPOSED STEEL TO BE GALVANIZED.

B. WELDS:

1. ALL WELDING MUST CONFORM TO THE AMERICAN WELDING SOCIETY ANSI/AWS D1.1 STANDARDS, AND SHALL CONFORM TO THE STANDARDS OF THE MANUAL OF STEEL CONSTRUCTION, [NINTH EDITION ASD OR SECOND EDITION LRFD], CHAPTER J. ALL WELDERS MUST BE CERTIFIED IN ACCORDANCE WITH AWS D1.1.
2. ELECTRODES FOR ALL FIELD AND SHOP WELDING SHALL BE CLASS E70XX. ELECTRODES FOR MOMENT CONNECTIONS SHALL BE CLASS E7018 WITH A CHARPY TOUGHNESS OF AT LEAST 20 FT-LBS AT -20 DEGREES FAHRENHEIT.
3. ALL MISCELLANEOUS WELDS SHALL BE MINIMUM SIZE FILLET ALL AROUND AND MUST BE IN ACCORDANCE WITH AISC. WELDING OF CONTINUOUS MEMBERS SHALL BE A MINIMUM OF 2 INCHES OF 3/16 INCH FILLET STITCH WELDS AT 12 INCHES O.C., STAGGERED EACH SIDE, UNLESS SHOWN OTHERWISE ON THE DRAWINGS. COLUMN BASE PLATES, STIFFENER PLATES AND CAP PLATES SHALL BE WELDED ALL AROUND.

C. NON-SHRINK GROUT FOR BASE PLATES AND BEARING PLATES:

1. ALL GROUT USED UNDER STEEL COLUMN BASE PLATES OR BEARING PLATES SHALL BE A NON-METALLIC, SHRINKAGE RESISTANT COMPOUND CONFORMING TO ASTM C1090 AND THE CORPS OF ENGINEERS SPECIFICATION CRD-C-621. THE GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 8000 PSI. 100 PERCENT OF VOID UNDER ALL BASE PLATES IS TO BE GROUTED. ALL BASE PLATES WITH A DIMENSION GREATER THAN 24" SHALL HAVE TWO 1" DIAMETER GROUT HOLES. IF THE SPACE UNDER A COLUMN BASE PLATE IS LESS THAN 1/4", A PRESSURE INJECTION SYSTEM SHALL BE USED.
2. GROUT SHALL BE PLACED UNDER BASE PLATES AFTER COLUMNS HAVE BEEN ERECTED AND PLUMB. GC SHALL COORDINATE WITH GROUT MANUFACTURER FOR REQUIRED CURING TIMES, BEFORE ANY ELEVATED CONCRETE OR FILLS ARE POURED.

D. CONNECTIONS

1. PROVIDE STANDARD BOLTED CONNECTIONS CONFORMING TO AISC BOLTED CONNECTIONS, USING ASTM A325 OR A490 BOLTS, FOR THE BEAM END SHEARS INDICATED IN THE DOCUMENTS. PROVIDE MINIMUM OF TWO BOLTS FOR ALL CONNECTIONS.
2. ALL WELDED CONNECTIONS SHALL CONFORM TO AWS UNLESS OTHERWISE NOTED.
3. SURVEY ALL PLANS, DETAILS, SECTIONS, SCHEDULES AND SPECIFICATIONS FOR SPECIAL CONNECTIONS.
4. UNLESS OTHERWISE NOTED AND/OR SPECIFIED, DESIGN ALL BEAM CONNECTIONS TO SUPPORT 1/2 OF THE TOTAL MEMBER SIZE AND SPAN AS DETERMINED BY THE TABLES FOR ALLOWABLE UNIFORM LOADS ON BEAMS IN THE 9TH EDITION OF THE AISC MANUAL OF STEEL CONSTRUCTION (LRFD).
5. WHERE BEAMS ARE TO RECEIVE HEADED SHEAR CONNECTORS, DESIGN THOSE BEAM CONNECTIONS FOR THE REACTIONS SHOWN. IF REACTIONS ARE NOT SHOWN, DESIGN THE CONNECTION TO SUPPORT 40 PERCENT OF THE MAXIMUM WEB SHEAR, V, FOR THE APPLICABLE MEMBER SIZE AS DETERMINED FOR THE VALUES TABULATED FOR ALLOWABLE UNIFORM LOADS ON BEAMS IN THE 14TH EDITION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL OF STEEL CONSTRUCTION (ASD)
6. MOMENT CONNECTIONS SHOWN SHALL BE DESIGNED TO FULLY DEVELOP THE SECTION IN FLEXURE AND TO SUPPORT 1/2 THE TOTAL UNIFORM LOAD FOR SHEAR AS DESCRIBED IN NOTE 4 ABOVE.
7. ALL STRUCTURAL STEEL DETAILS AND CONNECTIONS SHALL CONFORM TO STANDARDS OF THE AISC. DOUBLE CONNECTIONS THROUGH COLUMN WEBS, BEAM TO BEAM CONNECTIONS AND BEAMS THAT FRAME OVER THE TOP OF COLUMNS REQUIRE A BEAM ERECTION SEAT OR A STAGGERED CONNECTION WITH AT LEAST ONE INSTALLED BOLT REMAINING IN PLACE TO SUPPORT THE FIRST BEAM WHILE THE SECOND BEAM IS BEING ERECTED.
8. PROVIDE ALL NECESSARY HOLES IN STRUCTURAL STEEL MEMBERS FOR ATTACHMENT OF ALL NON-STRUCTURAL ITEMS (IE: HOLES FOR WINDOW HEAD ANCHORS). SEE ARCHITECTURAL DRAWINGS FOR ANY REQUIREMENTS.
9. SPLICING OF STRUCTURAL STEEL MEMBERS MUST BE APPROVED BY THE STRUCTURAL ENGINEER, IF NOT ALREADY SHOWN ON THE DRAWINGS.
10. SHOP BOLTED CONNECTIONS ARE PERMISSIBLE IF SUFFICIENT BOLT CLEARANCE IS AVAILABLE FOR TIGHTENING OF HIGH STRENGTH BOLTS. CLEARANCES SHALL BE IN ACCORDANCE WITH TABLE 8-4 OF THE SECOND EDITION OF THE LRFD MANUAL OF STEEL CONSTRUCTION OF THE AISC. ALL STEEL MEMBERS AND ASSEMBLIES SHALL BE SHOP FABRICATED TO THE GREATEST EXTENT POSSIBLE. TRUSSES SHALL BE FULLY SHOP ASSEMBLED. FIELD SPLICES FOR SHIPPING PURPOSES SHALL ONLY BE AS APPROVED BY THE ENGINEER OF RECORD. THE STEEL FABRICATOR AND THE STEEL ERECTOR SHALL COORDINATE THE SHOP FABRICATION, SHIPPING AND ERECTION OF ALL STRUCTURAL MEMBERS AND ASSEMBLIES.
11. ALL CONNECTION BOLTS FOR STRUCTURAL STEEL MEMBERS MUST CONFORM TO ASTM A325 UNLESS NOTED OTHERWISE. MINIMUM SIZE SHALL BE 3/4 INCH DIAMETER. BOLTS SHALL BE DIRECT TENSION INDICATING BOLTS CONFORMING TO ASTM F1852 WITH HARDENED WASHERS UNDER THE NUT AND SACRIFICIAL SPLINES. HEX NUTS MUST CONFORM TO ASTM A563 AND WASHERS MUST CONFORM TO ASTM F436.

8. WOOD TIMBER NOTES

1. ALL WALL DIMENSIONS ARE TO FACE STUDS, UNLESS NOTED OTHERWISE.
2. ALL FRAMING LUMBER SHALL BE #2 KD (UNO) AND MAX. 19% MOISTURE CONTENT. SOUTHERN YELLOW PINE, UNO. FOR EXPOSED USE ALL FRAMING LUMBER SHALL BE PRESSURE TREATED.
3. FRAMING LUMBER SHALL BE AS FOLLOWS, UNO:

   EXT. LOAD BEARING WALL STUDS 2X6 @ 16" O.C., UNO
   INT. LOAD BEARING WALL STUDS 2X4 @ 16" O.C, UNO

4. PLYWOOD DECKING AND SHEATHING SHALL BE AS FOLLOWS, UNO:

   ROOF DECKING 19/32" CDX PLYWOOD
   EXTERIOR SHEATHING 19/32" CDX PLYWOOD NAILED W/10d NAILS 3" LONG AT 3" O.C. AT PLYWOOD EDGES AND 12" O.C. AT INTERMEDIATE FRAMING MEMBERS

5. PROVIDE 19/32" CDX PLYWOOD OR 1X4 LET IN DIAGONAL BRACING AT ALL BUILDING CORNERS.
6. PROVIDE DUPONT "TYVEK" OR EQUAL AIR INFILTRATION BARRIER ON ALL EXTERIOR SHEATHING, WITH ALL JOINTS TAPED.
7. SOLE PLATES WITH IN 48" OF GRADE SHALL BE PRESSURE TREATED LUMBER. SOLE PLATES FOR EXTERIOR WALLS SHALL BE ATTACHED TO CONCRETE WITH 5/8" DIA. X 10" GALVANIZED "J" ANCHOR BOLTS @ 4'0" MAX. O.C., EACH SIDE OF DOOR OPENINGS AND CORNERS, AND WITHIN 12" OF ENDS OF PLATE MATERIAL.
8. BEARING AND EXTERIOR WALL STUDS SHALL BE CAPPED WITH DOUBLE TOP PLATES. INSTALL TO PROVIDE OVERLAPPING AT CORNERS AND AT INTERSECTIONS WITH OTHER. PARTITIONS. END JOINTS IN DOUBLE TOP PLATES SHALL BE OFFSET AT LEAST 48 INCHES.
9. ALL INTERIOR WALL AND EXTERIOR HEADERS SHALL BE (2)–2X6 BOX HEADER FOR OPENINGS UP TO 5'-0" OR LESS. (2)–2X8 FOR OPENINGS UP TO 10'-0" OR LESS.
10. ALL FLITCH PLATES TO BE CONTINUOUS, NAILED AND GLUED TO LUMBER.
11. RAISE HEADER HEIGHT APPROX. 3" AT POCKET DOOR OPENINGS TO ALLOW FOR HEAD TRACK.
12. LOAD BEARING PARTITIONS, COLUMNS AND ROOF POSTS, ETC. SHALL NOT BEAR ON PLYWOOD DECK ALONE, FLOOR JOISTS OR BLOCKING MUST BE PLACED UNDER FLOOR DECK TO TRANSFER LOAD TO FOUNDATIONS OR OTHER SUPPORTS.
13. PROVIDE 2-2X6 STRONGBACKS AT ALL CEILING JOISTS WITH SPANS OVER 10'0".
14. PROVIDE DOUBLE JOISTS (MIN.) AROUND ALL OPENINGS.
15. SEE PLAN SHEETS FOR NAILING SCHEDULE.
16. BOLT HOLES THROUGH WOOD SHALL BE 1/16" MAX. LARGER THAN THE DIAMETER OF THE BOLTS TO BE INSTALLED. BOLTS THROUGH WOOD SHALL BE FITTED WITH STANDARD WASHERS.
17. PROVIDE SIMPSON STRONG-TIE OR EQUAL CONNECTORS AS FOLLOWS: U.O.N.
    APB AT POST BASES UP TO 6X6
    CB AT LARGER POST BASES
    PC AT POST BEAM CONNECTIONS
    U AT FLUSH JOIST CONNECTIONS
    B/HB AT FLUSH BEAM CONNECTIONS
18. PROVIDE "DEADWOOD" AS NECESSARY FOR BLOCKING, ETC.
19. ALL EXTERIOR WOOD TRIM (FASCIA BOARDS, FRIEZE, ETC.) SHALL BE CEDAR. U.O.N.
20. ALL LAMINATED STRUCTURAL LUMBER (APB) SHALL BE SOUTHERN PINE LAMINATED TIMBER HAVING AN ALLOWABLE FLEXURAL STRESS Fb=3000 psi; E = 2.1x10 psi; Fch = 805 PSI AND Fv = 290 psi.
21. FRAMING SHALL BE HIGH-WIND RESISTIVE AND MUST HAVE A CONTINUOUS LOAD PATH TO THE FOUNDATION. SEE PLAN AND DETAILS FOR WIND STRAPPING DETAILS.
22. VERIFY ALL PLAN DIMENSIONS WITH ARCHITECTURAL PLAN AND FOUNDATION PLAN.
23. COORDINATE ALL CONFLICTING OR MISSING DIMENSIONS WITH OWNER AND ARCHITECT.
24. TRUSSES:
    A. PREFABRICATED TIMBER TRUSSES SHALL BE FABRICATED BY A CERTIFIED TIMBER TRUSS MANUFACTURER.
    B. FABRICATE WOOD TRUSS CHORDS AND WEBS IN ACCORDANCE WITH THE DESIGN SPECIFICATION FOR "METAL PLATE CONNECTED WOOD TRUSSES", TRUSS PLATE INSTITUTE, LATEST EDITION.
    C. PROVIDE ALL NECESSARY BRACING FOR TIMBER TRUSSES. BRACING SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS FOR BRACING WOOD TRUSSES, PUBLICATION BWT-76 BY THE TRUSS PLATE INSTITUTE.
    D. SUBMIT TRUSS SHOP DRAWINGS FOR APPROVAL SHOWING ALL MEMBER FORCES, SIZES AND CONNECTORS SEALED BY A REGISTERED ENGINEER IN THE STATE WHERE THE PROJECT IS LOCATED.
    E. TRUSS LOADING FROM WALLS IS SHOWN ON THE DRAWINGS. EXAMINE THE DRAWINGS FOR SPECIAL CONDITIONS AND/OR LOADS NOT SHOWN AND PROVIDE FOR SUCH IN THE DESIGN.

    DEFLECTION: LIMIT DEFLECTION UNDER DEAD LOAD TO 1/2"
    MAXIMUM DEFLECTION UNDER LIVE LOAD = L/480

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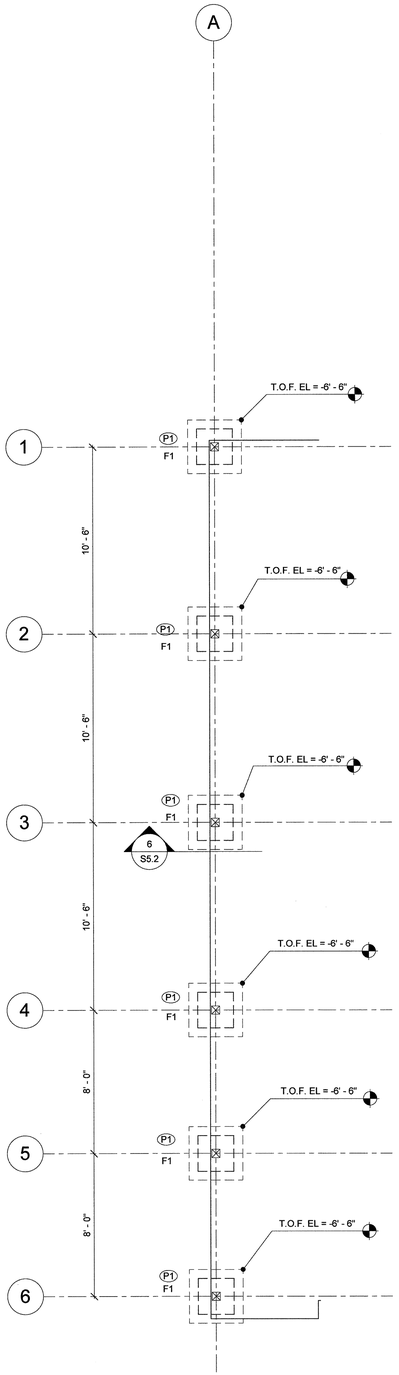
PROJECT NUMBER: 134174

DATE: 01/12/2018
DESIGNED BY:
DRAWN BY: TT
REVIEWED BY: OJ
REVISED:
REVISED:

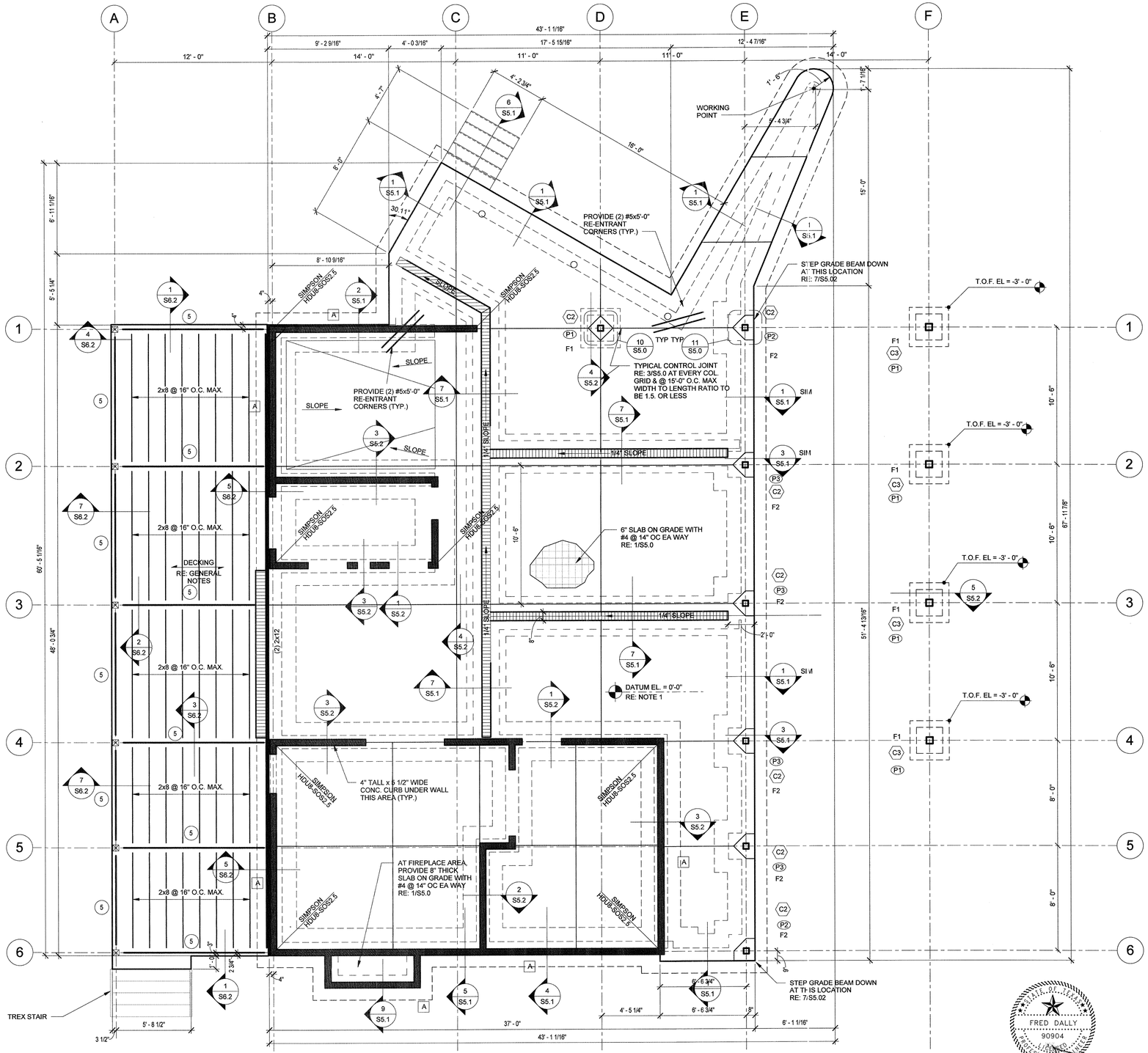
SHEET TITLE
GENERAL STRUCTURAL CRITERIA

SHEET NUMBER
S1.1

PERCENTAGE: ISSUED FOR BID



1 DECK FOUNDATION PLAN
1/4" = 1'-0"



2 FOUNDATION PLAN
1/4" = 1'-0"

SHEAR WALL SCHEDULE

MARK	ALLOWABLE LOAD	DESCRIPTION	NO. OF SIDES	SILL BOLTING	SHEAR TRANSFER	SILL NAILING	ALTERNATE SHEAR TRANSFER
A	392 plf	15/32" STRUCT I PLYWOOD WITH ALL JOINTS BLOCKED NAIL WITH 8d NAILS AT 4" OC AT PANEL EDGES	ONE	5/8"Ø BOLTS AT 35" OC 1/2"Ø BOLTS AT 23" OC	A35 AT 12" OC	16d AT 4" OC	LPT5 @ 14" OC

1. DATUM ELEVATION 0'-0" CORRESPONDS TO TRUE ELEVATION = RE: CIVIL. ALL ELEVATIONS ARE RELATIVE TO DATUM ELEVATION (0'-0").
2. NAIL ALL PANELS 12" O.C. AT INTERMEDIATE SUPPORTS UNLESS NOTED OTHERWISE. (ALL PANEL EDGES SHALL BE BLOCKED)

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SHEET TITLE
FOUNDATION PLAN

SHEET NUMBER
S2.0

PERCENTAGE: ISSUED FOR BID

01/12/2018

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NOTE: ALL EXTERIOR WALL STUDS SHALL BE 2x6 #2 GR SYP AT 16" O.C., UNLESS NOTED OTHERWISE AT SHEARWALL TYPE B. SEE SHEARWALL SCHEDULE.

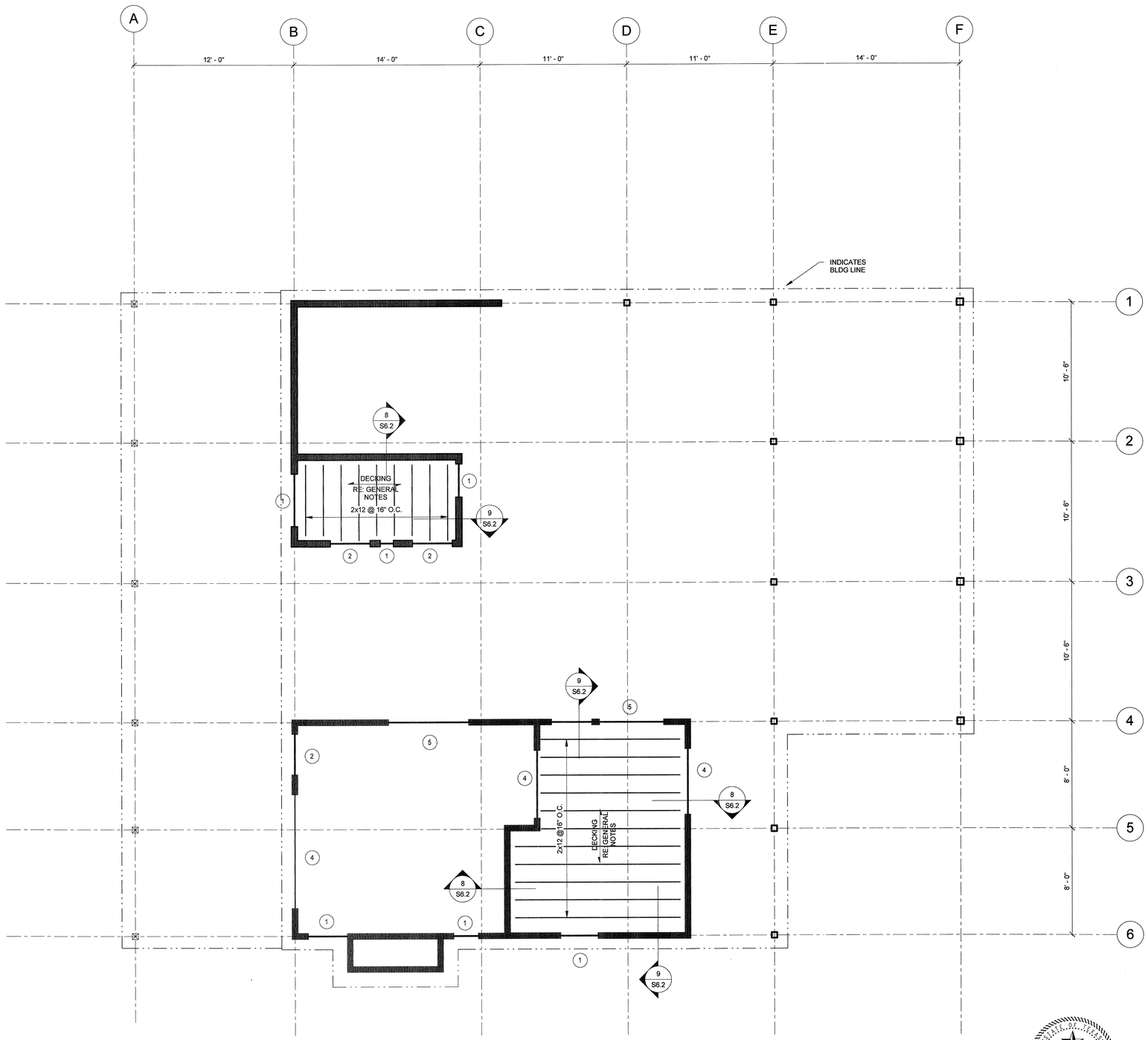
NOTE: THE LATERAL STABILITY OF THIS STRUCTURE IS DEPENDENT ON A NUMBER OF SHEARWALLS LOCATED THROUGHOUT THE BUILDING. THEREFORE, THIS STRUCTURE SHOULD BE FULLY BRACED IN ALL DIRECTIONS, UNTIL ALL WALL STUDS, HOLD DOWNS, AND SHEATHING ARE IN PLACE AND FULLY CONSTRUCTED.

HEADER SCHEDULE	
MARK	HEADER TYPE
1	(3) - 2x6
2	(3) - 2x8
3	(3) - 2x10
4	(3) - 2x12
5	5 1/2"x9 1/4" LSL BEAM
6	5 1/2"x11 1/4" LSL BEAM
7	5 1/2"x12" LSL BEAM
8	5 1/2"x14" LSL BEAM
9	5 1/2"x16" LSL BEAM
10	5 1/2"x20" LSL BEAM

NOTE: ALL HEADERS ARE TYPE 1 UNLESS NOTED
USE 1/2" PLYWOOD SPACERS AS REQ'D

NAILING SCHEDULE

CONNECTIONS	NAILING
1. JOIST TO SILL OR GIRDER, TOENAIL	3-8d
2. BRIDGING TO JOIST, TOENAIL EA. END	2-8d
3. 1"x6" SUBFLOOR OR LESS TO EA. JOIST, FACE NAIL	2-8d
4. WIDER THAN 1"x6" SUBFLOOR TO EA. JOIST FACE NAIL	3-8d
5. 2" SUBFLOOR TO JOIST OR GIRDER, BLIND AND FACE NAIL	2-16d
6. SOLE PLATE TO JOIST OR BLOCKING, FACE NAIL SOLE PLATE TO JOIST OR BLOCKING, AT BRACED WALL PANELS	16d @ 16"OC 3-16d PER 16"
7. TOP PLATE TO STUD, END NAIL	2-16d
8. STUD TO SOLE PLATE	4-8d, TOENAIL OR 2-16d, END NAIL
9. DOUBLE STUDS, FACE NAIL	16d @ 24"OC
10. DOUBLE TOP PLATES, FACE NAIL DOUBLE TOP PLATES, LAP SPLICE	16d @ 16"OC 8-16d
11. BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE, TOENAIL	3-8d
12. RIM JOIST TO TOP PLATE, TOENAIL	8d @ 6"OC
13. TOP PLATES, LAPS AND INTERSECTIONS, FACE NAIL	2-16d
14. CONTINUOUS HEADER, TWO PIECES	16d @ 16"OC ALONG EA. EDGE
15. CEILING JOIST TO PLATE, TOENAIL	3-8d
16. CONTINUOUS HEADER TO STUD, TOENAIL	4-8d
17. CEILING JOIST, LAPS OVER PARTITIONS, FACE NAIL	3-16d
18. CEILING JOIST TO PARALLEL RAFTERS, FACE NAIL	3-16d
19. RAFTER TO PLATE, TOENAIL	3-8d
20. 1" BRACE TO EA. STUD AND PLATE, FACE NAIL	2-8d
21. 1"x8" SHEATHING OR LESS TO EA. BEARING, FACE NAIL	2-8d
22. WIDER THAN 1"x8" SHEATHING TO EA. BEARING, FACE NAIL	3-8d
23. BUILT-UP CORNER STUDS	16d @ 24"OC
24. BUILT-UP GIRDER AND BEAMS	20d @ 32"OC AT TOP AND BOTTOM AND STAGGERED 2-20d @ EA. ENDS AND AT EA SPLICE
25. TRUSS TO PLATE, TOENAIL	3-16d



1 MEZZANINE FRAMING PLAN
1/4" = 1'-0"

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REVISED:

SHEET TITLE
MEZZANINE FRAMING PLAN

SHEET NUMBER
S2.1

PERCENTAGE: ISSUED FOR BID

NOTE: ALL EXTERIOR WALL STUDS SHALL BE 2x6 #2 GR SYP AT 16" O.C., UNLESS NOTED OTHERWISE AT SHEARWALL TYPE B. SEE SHEARWALL SCHEDULE.

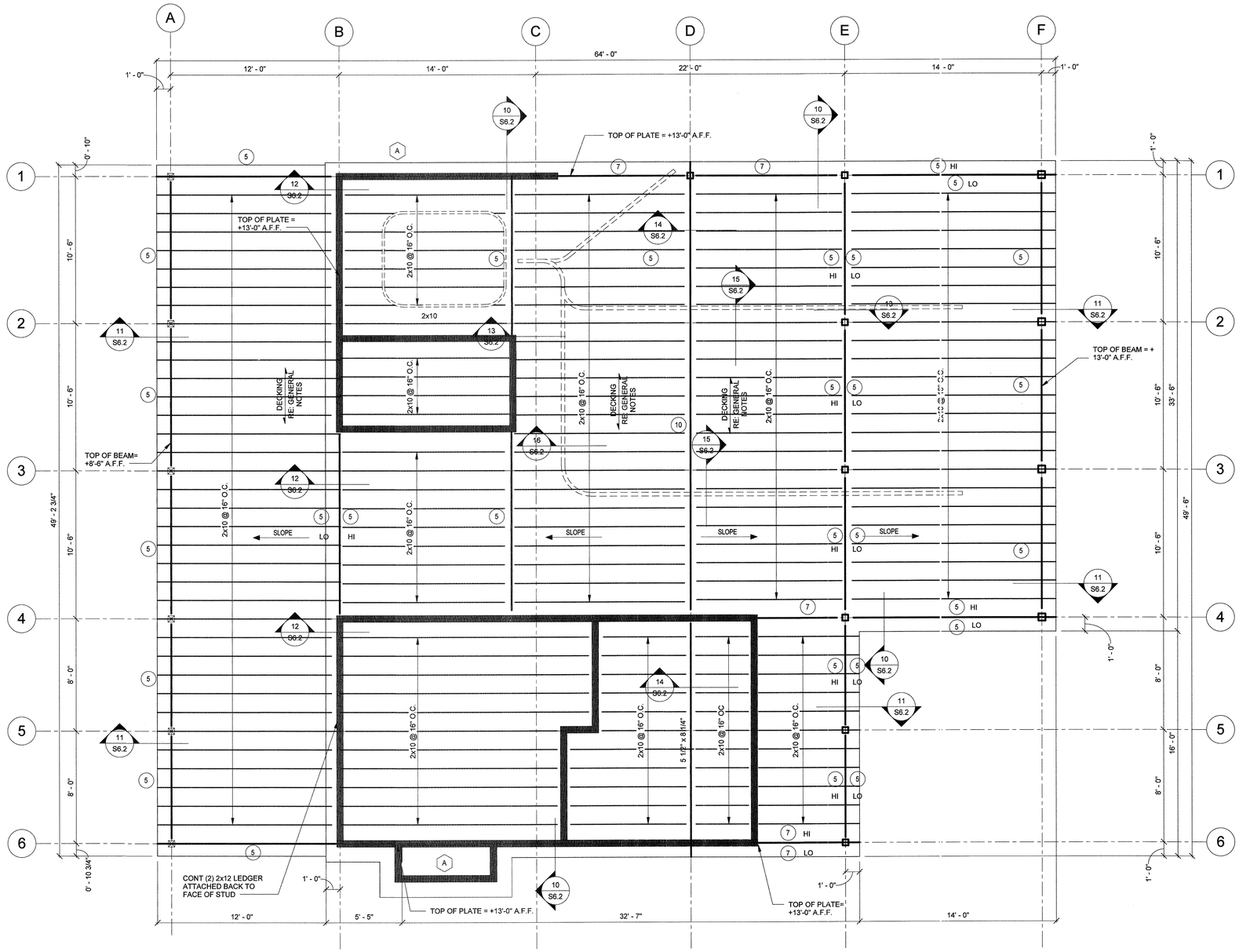
NOTE: THE LATERAL STABILITY OF THIS STRUCTURE IS DEPENDENT ON A NUMBER OF SHEARWALLS LOCATED THROUGHOUT THE BUILDING. THEREFORE, THIS STRUCTURE SHOULD BE FULLY BRACED IN ALL DIRECTIONS, UNTIL ALL WALL STUDS, HOLD DOWNS, AND SHEATHING ARE IN PLACE AND FULLY CONSTRUCTED.

HEADER SCHEDULE	
MARK	HEADER TYPE
1	(3) - 2x6
2	(3) - 2x8
3	(3) - 2x10
4	(3) - 2x12
5	5 1/2"x9 1/4" LSL BEAM
6	5 1/2"x11 1/4" LSL BEAM
7	5 1/2"x12" LSL BEAM
8	5 1/2"x14" LSL BEAM
9	5 1/2"x16" LSL BEAM
10	5 1/2"x20" LSL BEAM

NOTE: ALL HEADERS ARE TYPE 1 UNLESS NOTED
USE 1/2" PLYWOOD SPACERS AS REQ'D

NAILING SCHEDULE

CONNECTIONS	NAILING
1. JOIST TO SILL OR GIRDER, TOENAIL	3-8d
2. BRIDGING TO JOIST, TOENAIL EA. END	2-8d
3. 1"x6" SUBFLOOR OR LESS TO EA. JOIST, FACE NAIL	2-8d
4. WIDER THAN 1"x6" SUBFLOOR TO EA. JOIST FACE NAIL	3-8d
5. 2" SUBFLOOR TO JOIST OR GIRDER, BLIND AND FACE NAIL	2-16d
6. SOLE PLATE TO JOIST OR BLOCKING, FACE NAIL SOLE PLATE TO JOIST OR BLOCKING, AT BRACED WALL PANELS	16d @ 16"OC 3-16d PER 16"
7. TOP PLATE TO STUD, END NAIL	2-16d
8. STUD TO SOLE PLATE	4-8d, TOENAIL OR 2-16d, END NAIL
9. DOUBLE STUDS, FACE NAIL	16d @ 24"OC
10. DOUBLE TOP PLATES, FACE NAIL DOUBLE TOP PLATES, LAP SPLICE	16d @ 16"OC 8-16d
11. BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE, TOENAIL	3-8d
12. RIM JOIST TO TOP PLATE, TOENAIL	8d @ 6"OC
13. TOP PLATES, LAPS AND INTERSECTIONS, FACE NAIL	2-16d
14. CONTINUOUS HEADER, TWO PIECES	16d @ 16"OC ALONG EA. EDGE
15. CEILING JOIST TO PLATE, TOENAIL	3-8d
16. CONTINUOUS HEADER TO STUD, TOENAIL	4-8d
17. CEILING JOIST, LAPS OVER PARTITIONS, FACE NAIL	3-16d
18. CEILING JOIST TO PARALLEL RAFTERS, FACE NAIL	3-16d
19. RAFTER TO PLATE, TOENAIL	3-8d
20. 1" BRACE TO EA. STUD AND PLATE, FACE NAIL	2-8d
21. 1"x8" SHEATHING OR LESS TO EA. BEARING, FACE NAIL	2-8d
22. WIDER THAN 1"x8" SHEATHING TO EA. BEARING, FACE NAIL	3-8d
23. BUILT-UP CORNER STUDS	16d @ 24"OC
24. BUILT-UP GIRDER AND BEAMS	20d @ 32"OC AT TOP AND BOTTOM AND STAGGERED 2-20d @ EA. ENDS AND AT EA SPLICE
25. TRUSS TO PLATE, TOENAIL	3-16d



1 ROOF FRAMING PLAN
1/4" = 1'-0"

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DATE: 01/12/2018
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REVISED:
REVISED:

SHEET TITLE
ROOF FRAMING PLAN

SHEET NUMBER
S3.0

PERCENTAGE: ISSUED FOR BID

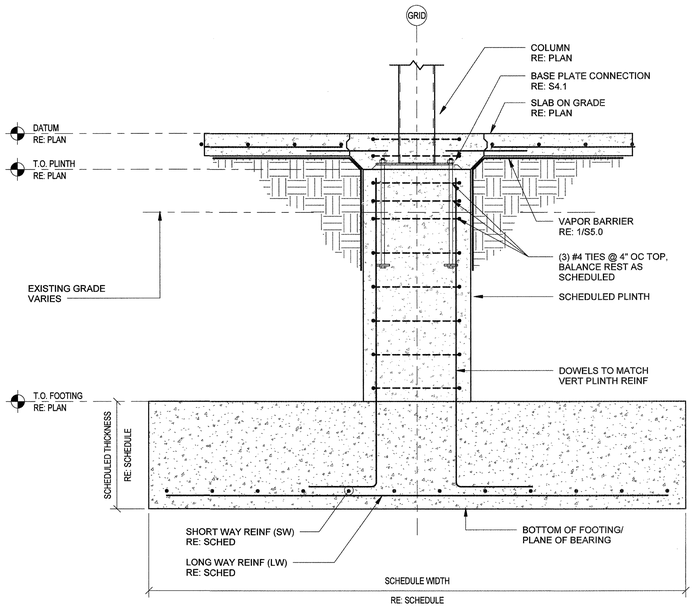
1. SPREAD FOOTING SCHEDULE

MARKED	SIZE			REINFORCING		REMARKS
	LENGTH	WIDTH	THICKNESS	BOTTOM	TOP	
F1	3'-0"	3'-0"	1'-0"	4 - #6 E.W.		
CF1	CONT.	3'-0"	1'-0"	#6 @ 12" OC (LONG) 4 - #5 (SHORT)		
F2	4'-0"	4'-0"	1'-0"	4 - #6 E.W.		

1B. SPREAD FOOTING GENERAL NOTES

1. THE INDEPENDENT TESTING LABORATORY SHALL CONFIRM THE ALLOWABLE SOIL BEARING CAPACITY IN THE FIELD AT THE ELEVATION DESIGNATED AS THE PLANE OF BEARING FOR THE FOOTING.
2. THE INDEPENDENT TESTING LABORATORY SHALL INSPECT THE BOTTOM AND SIDES OF THE FOOTING PRIOR TO PLACING REINFORCING AND CONCRETE.
3. CENTER ALL FOOTINGS UNDER THEIR COLUMNS AND WALLS, U.O.N.
4. PUMP OUT ANY STANDING WATER AND IMMEDIATELY PLACE REINFORCING STEEL AND CONCRETE.
5. PROVIDE NEW DEFORMED BILLET REINFORCING STEEL FOR FOOTINGS CONFORMING TO ASTM A615, GRADE 60.
6. UNIFORMLY DISTRIBUTE ALL SCHEDULE REINFORCING.

1A. SPREAD FOOTING DETAILS



2. PLINTH SCHEDULE

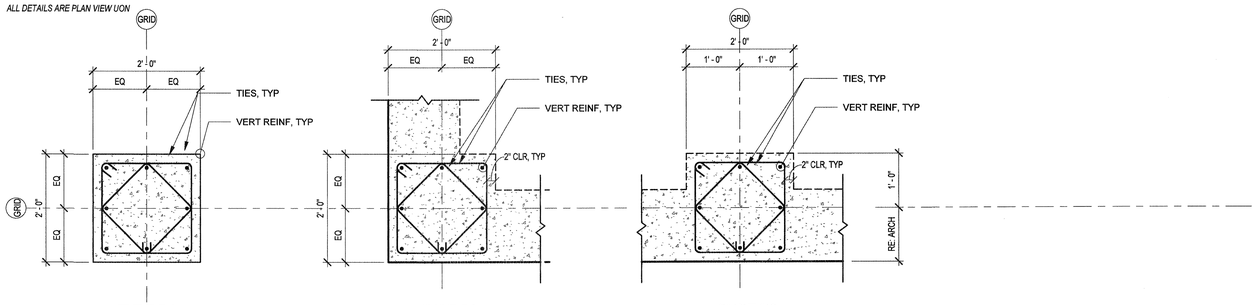
MARK	PLINTH TYPE	REINFORCING		REMARKS
		VERTICAL	TIES	
(P1)	P1	8 - #6	#3 @ 10" O.C.	
(P2)	P2	8 - #6	#3 @ 10" O.C.	
(P3)	P3	8 - #6	#3 @ 10" O.C.	

2B. PLINTH GENERAL NOTES

1. RE: PLAN FOR TYPE AND ORIENTATION OF PLINTHS.
2. WHERE A PLINTH IS INTEGRAL WITH A BEAM, EXTEND THE HORIZONTAL REINFORCING THROUGH THE PLINTH.

2A. PLINTH DETAILS

ALL DETAILS ARE PLAN VIEW U/ON



TYPE P1 TYPE P2 TYPE P3

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SHEET TITLE
FOOTING AND PLINTH SCHEDULE

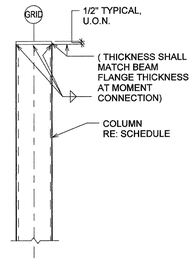
SHEET NUMBER
S4.0

PERCENTAGE: ISSUED FOR BID

1. COLUMN SCHEDULE AND DETAILS

LEVEL	COLUMN MARK	C1	C2
CAP PLATE DETAIL		A/S302	A/S302
ROOF		6x6 WOOD POST	HSS6x6x1/4" (GALV)
FLOOR FINISH			
F.F.E.= -4'-6"			
BOTTOM OF BASE PLATE EL.		- 3'-6"	- 6 1/2"
BASE PLATE MARK		BP1	BP2
REMARKS		-	-

A. CAP PLATE DETAIL
(NOT TO SCALE)



B. COLUMN GENERAL NOTES

1. PROVIDE STRUCTURAL STEEL FOR W SHAPES CONFORMING TO ASTM 992, GRADE 50.
2. PROVIDE STRUCTURAL STEEL FOR HSS COLUMNS CONFORMING TO ASTM A500, GRADE B.
3. PROVIDE STEEL FOR STIFFENER PLATES, CONNECTION PLATES AND ANGLES CONFORMING TO ASTM A36.
4. SAW OR MILL SURFACES NOTED FIN. (FINISHED) FOR TRUE AND FULL CONTACT.
5. USE E70XX WELDING ELECTRODES FOR ALL WELDS, UNLESS OTHERWISE NOTED.
6. WEB DOUBLER PLATES ARE NOT REQUIRED.

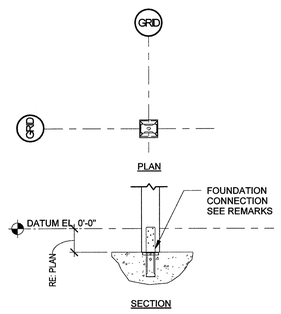
C. COLUMN REMARKS

E. BASE PLATE GENERAL NOTES

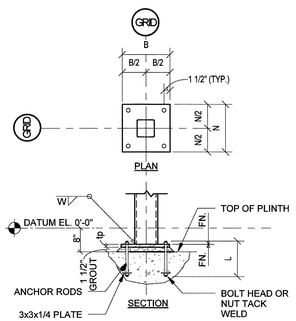
1. PROVIDE STEEL FOR BASE PLATES CONFORMING TO ASTM A36.
2. PROVIDE HOLES IN BASE PLATES 7/16" LARGER THAN THE SCHEDULED ANCHOR ROD DIAMETER, CONFORM WITH AISC-13TH EDITION.
3. PROVIDE ANCHOR RODS CONFORMING TO ASTM F1554, GRADE 55 WELDABLE.
4. PROVIDE ANCHOR RODS WITH PLATE WASHERS AND HEX NUTS.
5. USE E70XX WELDING ELECTRODES FOR ALL WELDS, UNLESS OTHERWISE NOTED.
6. MILL SURFACES NOTED FIN. (FINISHED) FOR TRUE AND FULL CONTACT.
7. SET ANCHOR RODS WITH TEMPLATE.
8. PROVIDE NON-METALLIC SHRINK-RESISTANT GROUT WITH 8000 PSI MINIMUM COMPRESSIVE STRENGTH AT 28-DAYS.

2. BASE PLATE SCHEDULE AND DETAILS

PLATE MARK	PLATE TYPE	DIMENSIONS B (IN)	DIMENSIONS N (IN)	DIMENSIONS tp (IN)	ANCHOR RODS NUMBER	ANCHOR RODS DIA. (IN)	ANCHOR RODS PROJECTION, P (IN)	ANCHOR RODS LENGTH, L (IN)	WELD SIZE W (IN)	REMARKS
BP1	A									SIMPSON CBSQ66
BP2	B	14	14	3/4"	4	1"	6	1'-4"	5/16	



TYPE A



TYPE B

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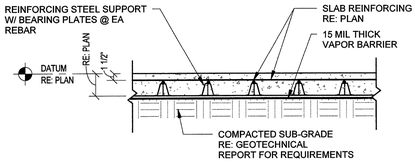
PROJECT NUMBER: 134174

DATE: 01/12/2018
DESIGNED BY:
DRAWN BY: TT
REVIEWED BY: OJ
REVISED:
REVISED:

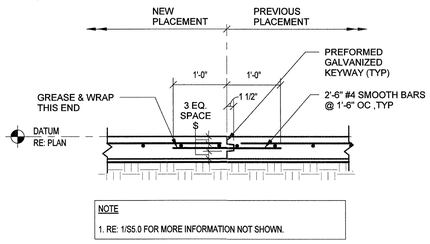
SHEET TITLE
COLUMN, BASE PLATES SCHEDULES & DETAILS

SHEET NUMBER
S4.1

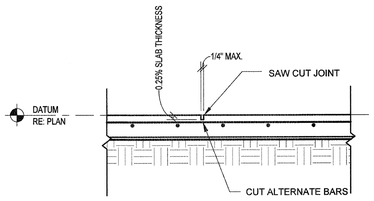
PERCENTAGE: ISSUED FOR BID



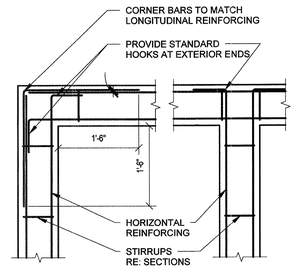
1 TYPICAL SLAB DETAIL
SCALE: 3/4" = 1'-0"



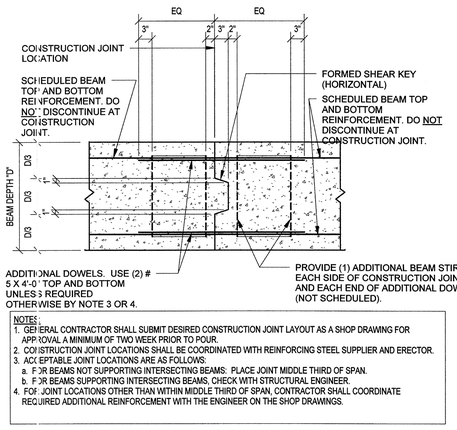
2 TYPICAL CONSTRUCTION SLAB JOINT
SCALE: NTS



3 TYPICAL SLAB CONTROL JOINT
SCALE: 3/4" = 1'-0"

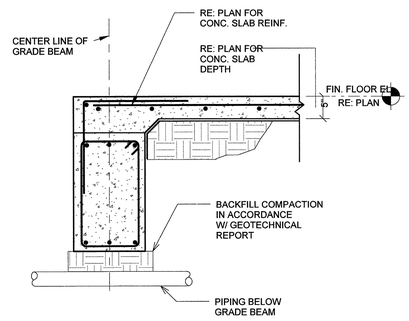


4 TYPICAL GRADE BEAM PLAN
SCALE: 3/4" = 1'-0"

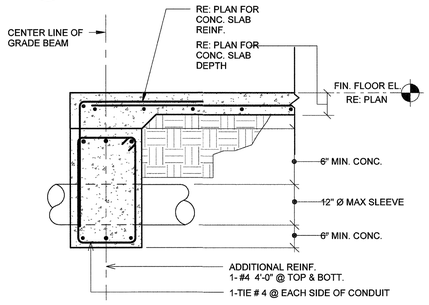


NOTES:
1. GENERAL CONTRACTOR SHALL SUBMIT DESIRED CONSTRUCTION JOINT LAYOUT AS A SHOP DRAWING FOR APPROVAL A MINIMUM OF TWO WEEK PRIOR TO POUR.
2. CONSTRUCTION JOINT LOCATIONS SHALL BE COORDINATED WITH REINFORCING STEEL SUPPLIER AND ERECTOR.
3. ACCEPTABLE JOINT LOCATIONS ARE AS FOLLOWS:
   a. FOR BEAMS NOT SUPPORTING INTERSECTING BEAMS: PLACE JOINT MIDDLE THIRD OF SPAN.
   b. FOR BEAMS SUPPORTING INTERSECTING BEAMS, CHECK WITH STRUCTURAL ENGINEER.
4. FOR JOINT LOCATIONS OTHER THAN WITHIN MIDDLE THIRD OF SPAN, CONTRACTOR SHALL COORDINATE REQUIRED ADDITIONAL REINFORCEMENT WITH THE ENGINEER ON THE SHOP DRAWINGS.

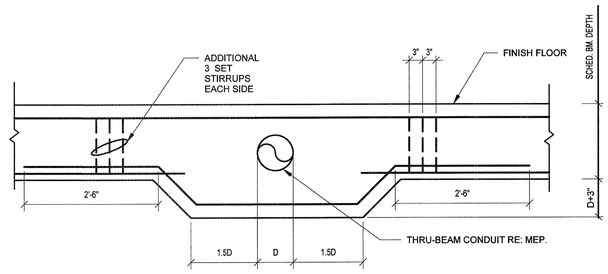
5 TYPICAL GRADE BEAM CONSTRUCTION JOINT
SCALE: 3/4" = 1'-0"



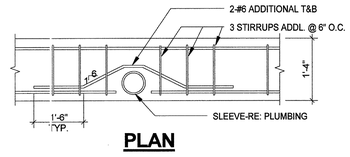
6 CONDUIT BELOW GRADE BEAM
SCALE: 3/4" = 1'-0"



7 CONDUIT THRU GRADE BEAM
SCALE: 3/4" = 1'-0"

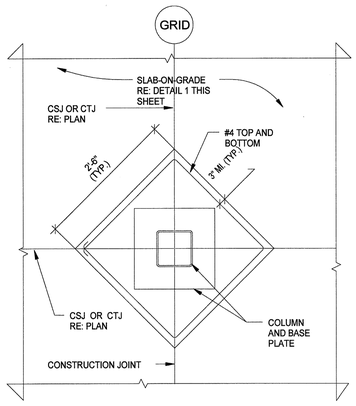


8 TYPICAL THRU. BEAM CONDUIT
SCALE: 3/4" = 1'-0"



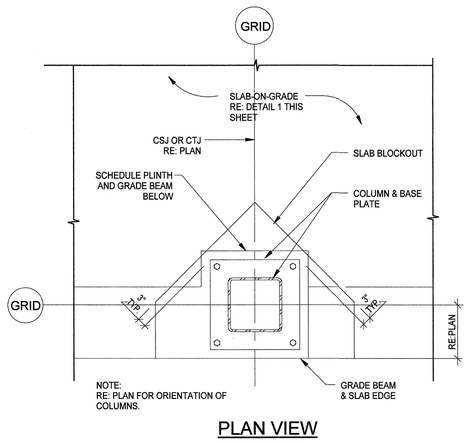
PLAN

9 GRADE BEAM VERTICAL PENETRATION
SCALE: 3/4" = 1'-0"



PLAN VIEW

10 INTERIOR COLUMN BLOCKOUT
SCALE: 3/4" = 1'-0"

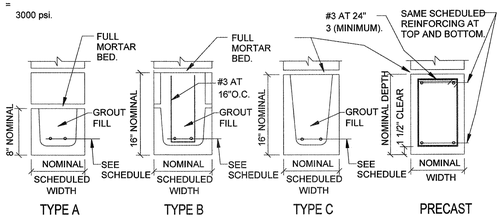


PLAN VIEW

11 PERIMETER COLUMN BLOCKOUT
SCALE: 3/4" = 1'-0"

CLEAR SPAN	REINFORCING REQUIREMENTS IN NOMINAL LINTEL SECTION								
	4x8	6x8	6x16	8x8	8x16	10x8	10x16	12x8	12x16
3-4	1-#3	1-#3	——	1-#3	——	2-#3	——	2-#3	——
4-0	1-#3	1-#4	——	2-#3	——	2-#3	——	2-#4	——
4-8	1-#4	1-#4	——	2-#4	——	2-#4	——	2-#4	——
5-4	1-#4	2-#4	——	2-#4	——	2-#4	2-#3	2-#5	——
6-0	1-#5	2-#4	1-#4	2-#4	2-#3	2-#5	2-#4	2-#5	2-#4
6-8	N/A	N/A	1-#5	N/A	2-#4	N/A	2-#4	2-#6	2-#4
7-4	↑	↑	1-#5	↑	2-#4	↑	2-#4	N/A	2-#5
8-0	↕	↕	1-#6	↕	2-#4	↕	2-#5	↑	2-#5
8-8	↕	↕	1-#6	↕	2-#5	↕	2-#5	↕	2-#6
9-4	N/A	N/A	1-#7	N/A	2-#5	N/A	2-#6	N/A	2-#6

NOTES:
1. SEE ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATION OF OPENINGS.
2. PROVIDE 1" OF BEARING AT EACH JAMB FOR EACH FOOT OF CLEAR SPAN BUT NOT LESS THAN 7 5/8".
   REINFORCEMENT SHALL PROJECT A MINIMUM OF 6" ONTO THE BEARING.
3. MINIMUM MASONRY COMPRESSIVE STRENGTH OF GROUTED PRISM f'm=1500 psi.
4. LINTELS SCHEDULED AS 16" HIGH MAY BE EITHER TYPE "B" OR TYPE "C" AS DETAILED BELOW.
5. PRECAST CONCRETE LINTELS AS SHOWN MAY BE USED WITH ARCHITECT'S APPROVAL. MINIMUM f'c = 3000 psi.



12 INTERIOR NON-LOAD BEARING BLOCK LINTEL SCHEDULE
3/4" = 1'-0"

CLEAR WALL HEIGHT (FEET)	6" CMU	8" CMU	10" CMU	12" CMU
H 6' ≤	#4 @ 48"	U.R.	U.R.	U.R.
6' < H 8' ≤	#4 @ 40"	#4 @ 48"	#4 @ 48"	U.R.
8' < H 10' ≤	#5 @ 40"	#5 @ 48"	#4 @ 48"	#4 @ 40"
10' < H 12' ≤	#5 @ 32"	#5 @ 40"	#5 @ 48"	#4 @ 40"
12' < H 14' ≤	N.A.	#5 @ 24"	#6 @ 48"	#5 @ 40"
14' < H 16' ≤	N.A.	N.A.	#6 @ 40"	#6 @ 48"
16' < H 18' ≤	N.A.	N.A.	#5 @ 16"	#7 @ 48"
18' < H 20' ≤	N.A.	N.A.	#4 @ 8"	#7 @ 40"
20' < H 22' ≤	N.A.	N.A.	N.A.	#5 @ 16"
22' < H 24' ≤	N.A.	N.A.	N.A.	#4 @ 8"
24' < H 26' ≤	N.A.	N.A.	N.A.	N.A.
26' < H 28' ≤	#6@8"	N.A.	N.A.	#6@8"
28' < H 30' ≤	N.A.	N.A.	N.A.	N.A.
30' < H 32' ≤	N.A.	N.A.	N.A.	N.A.
32' < H 34' ≤	N.A.	N.A.	N.A.	N.A.
34' < H 36' ≤	N.A.	N.A.	N.A.	N.A.
36' < H 38' ≤	N.A.	N.A.	N.A.	N.A.
38' < H 40'	N.A.	N.A.	N.A.	N.A.

NOTES:
1. DEFINITIONS: "H" CLEAR WALL HEIGHT, FEET, BETWEEN CONNECTIONS TO STRUCTURE.
   "U.R." UNREINFORCED WALL (NO VERTICAL REINFORCEMENT IS REQUIRED, EXCEPT AS DETAILED ON DRAWINGS AT OPENINGS, ETC.).
   "N.A." NOT APPLICABLE, THICKER WALL REQUIRED FOR SPAN.
2. SPECIFIED REINFORCING STEEL SHALL BE PLACED IN CENTER OF WALL. (Fy=60 ksi)
3. SEE GENERAL NOTES AND SPECIFICATIONS FOR HORIZONTAL REINFORCING REQUIREMENTS.
4. THIS TABLE SHALL ONLY BE USED FOR VERTICALLY SPANNING C.M.U. WALLS.
5. SEE TYPICAL DETAILS FOR BRACING REQUIREMENTS AT THE TOP/ENDS OF THE WALL AND DOWELS TO THE STRUCTURE. REINFORCING STEEL SHALL BE CENTERED IN THE C.M.U. WALL BY USING BAR POSITIONERS AT 8'-0" O.C. VERTICALLY.
6. SPLICING OF VERTICAL STEEL: SEE TYPICAL DETAIL FOR REQUIRED LAP SPLICE LENGTHS.
7. FOR USE WITH PORTLAND CEMENT/LIME MORTAR.

13 INTERIOR/EXTERIOR NON-LOAD BEARING CMU WALL REINFORCEMENT SCHEDULE
3/4" = 1'-0"

01/12/2018

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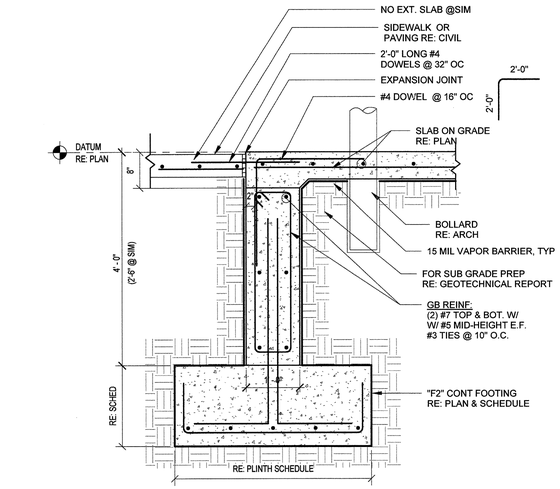
DATE: 01/12/2018
DESIGNED BY:
DRAWN BY: TT
REVIEWED BY: OJ
REVISED:
REVISED:

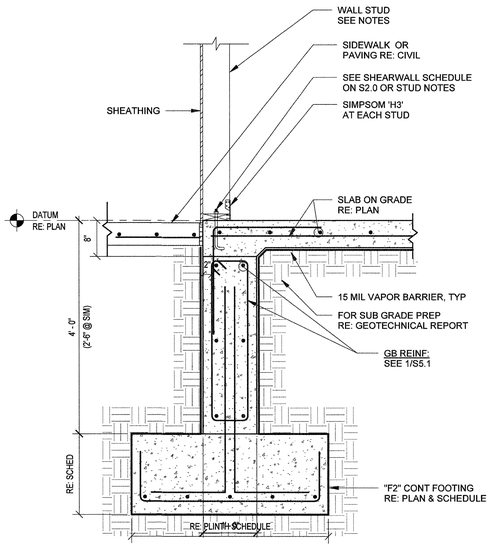
SHEET TITLE
TYPICAL FOUNDATION DETAILS

SHEET NUMBER
S5.0

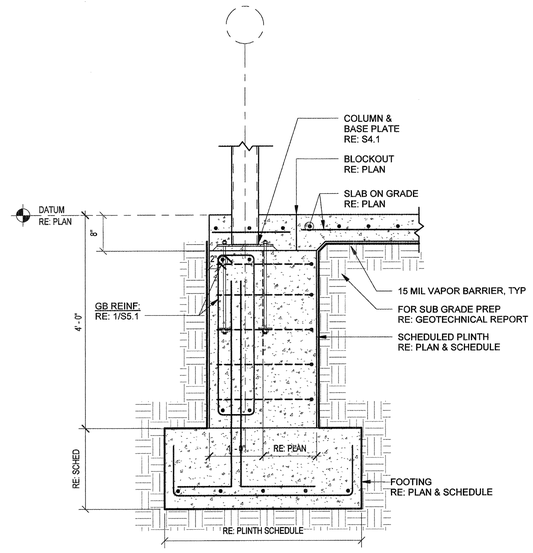
PERCENTAGE: ISSUED FOR BID



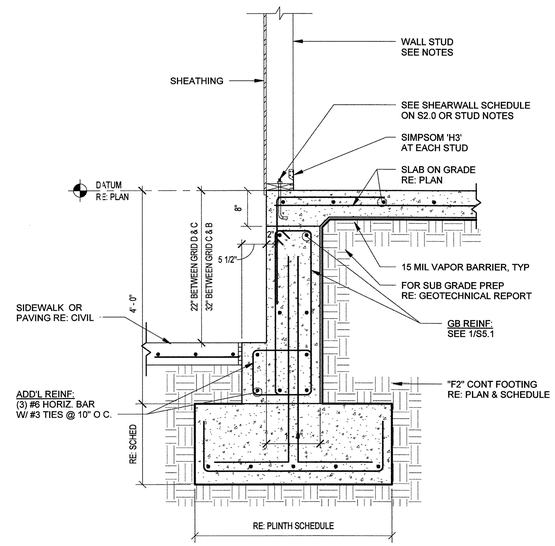
1 EXTERIOR GRADE BEAM
3/4" = 1'-0"



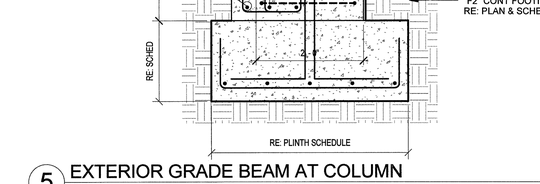
2 EXTERIOR GRADE BEAM AT WALL
3/4" = 1'-0"



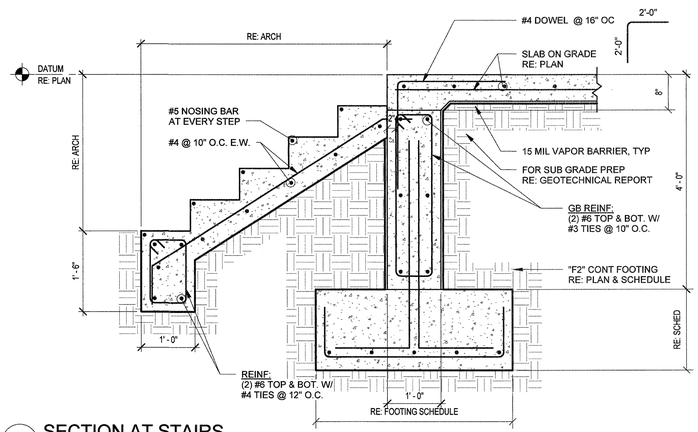
3 EXTERIOR GRADE BEAM AT COLUMN
3/4" = 1'-0"



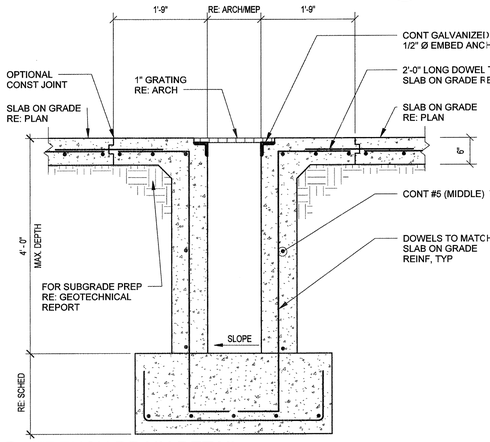
4 EXTERIOR GRADE BEAM AT BRICK LEDGE
3/4" = 1'-0"



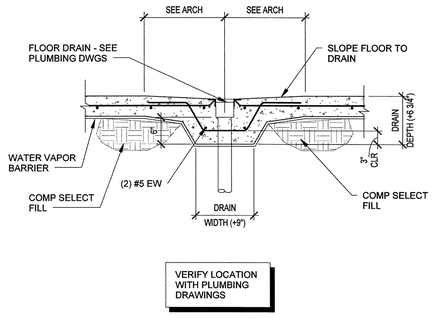
5 EXTERIOR GRADE BEAM AT COLUMN
3/4" = 1'-0"



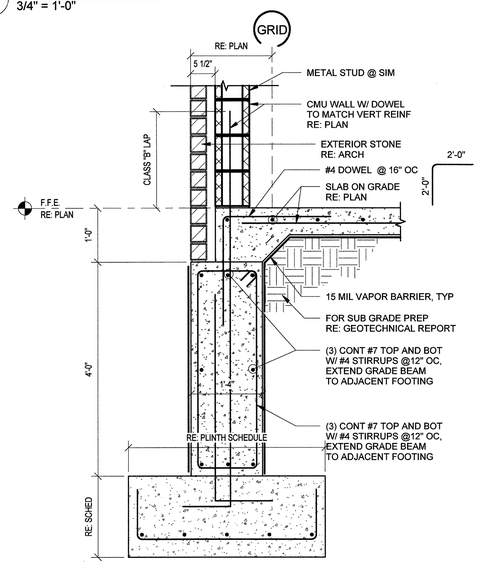
6 SECTION AT STAIRS
3/4" = 1'-0"



7 TRENCH DRAIN DETAIL
3/4" = 1'-0"



8 FLOOR DRAIN DETAIL
3/4" = 1'-0"



9 SECTION - BIO ADD. ALTERNATE NO. 2
3/4" = 1'-0"

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REVISED:
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SHEET TITLE
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SHEET NUMBER
S5.1

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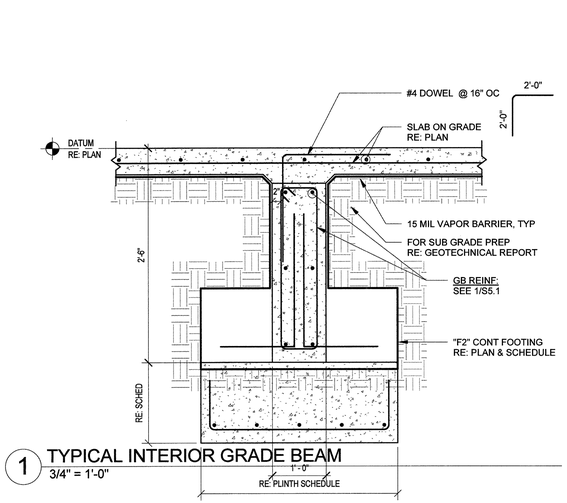
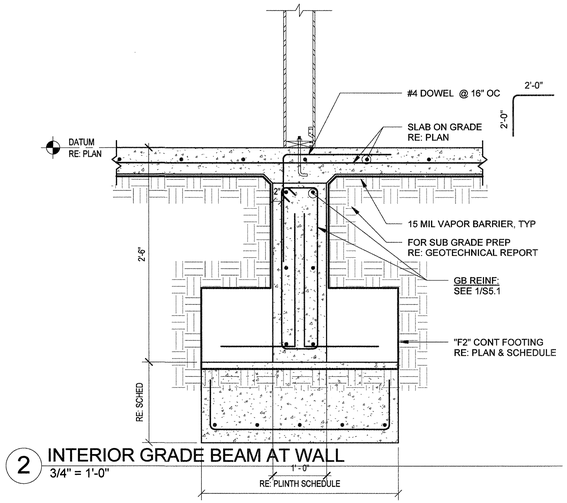
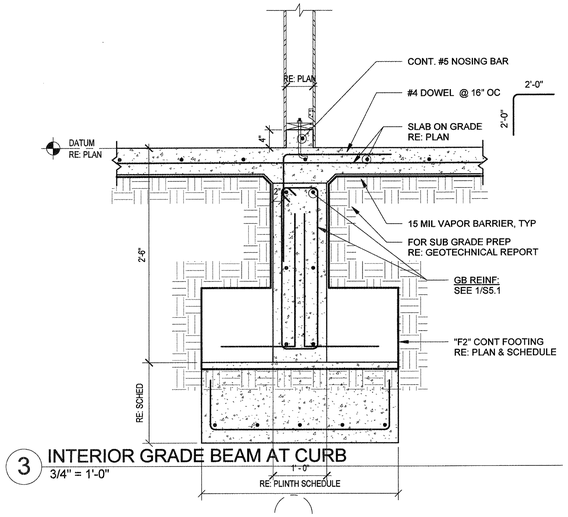


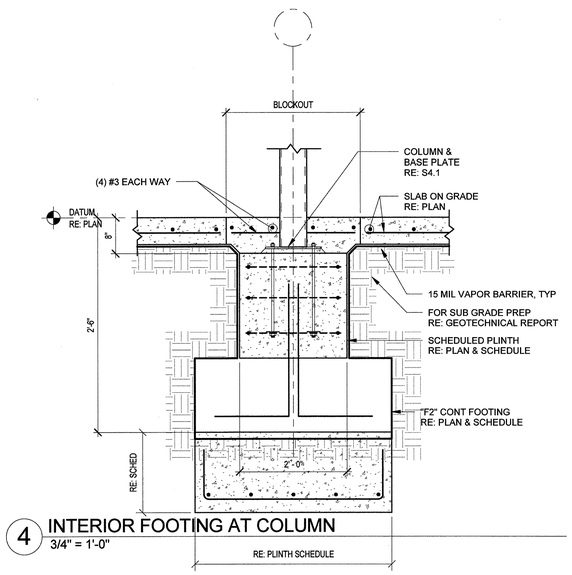
1 TYPICAL INTERIOR GRADE BEAM
3/4" = 1'-0"



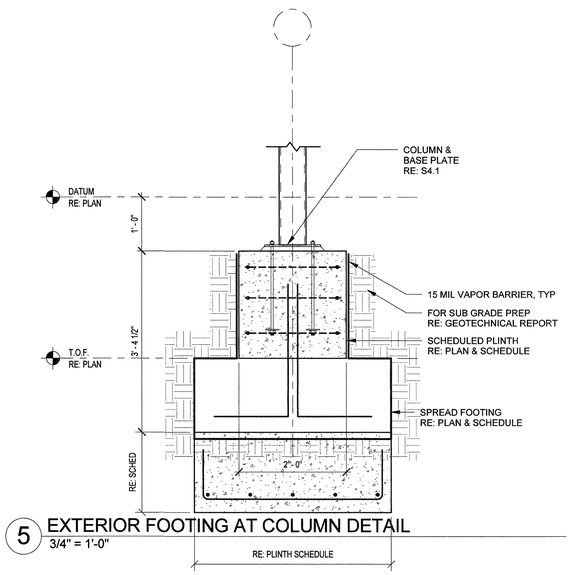
2 INTERIOR GRADE BEAM AT WALL
3/4" = 1'-0"



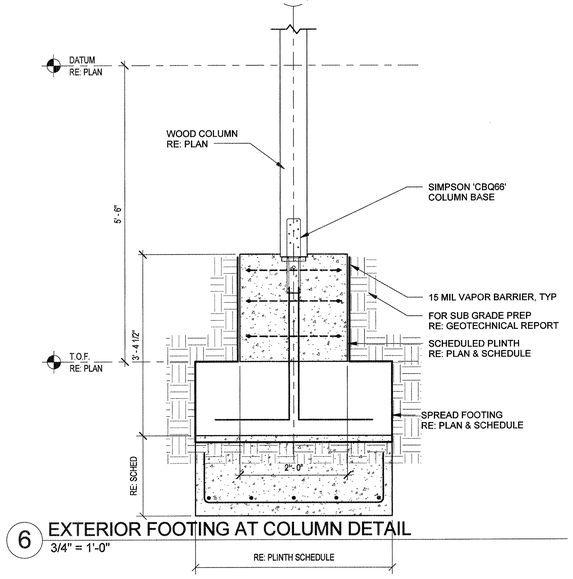
3 INTERIOR GRADE BEAM AT CURB
3/4" = 1'-0"



4 INTERIOR FOOTING AT COLUMN
3/4" = 1'-0"



5 EXTERIOR FOOTING AT COLUMN DETAIL
3/4" = 1'-0"



6 EXTERIOR FOOTING AT COLUMN DETAIL
3/4" = 1'-0"

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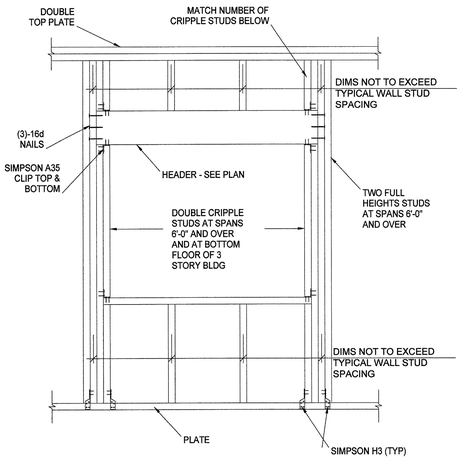
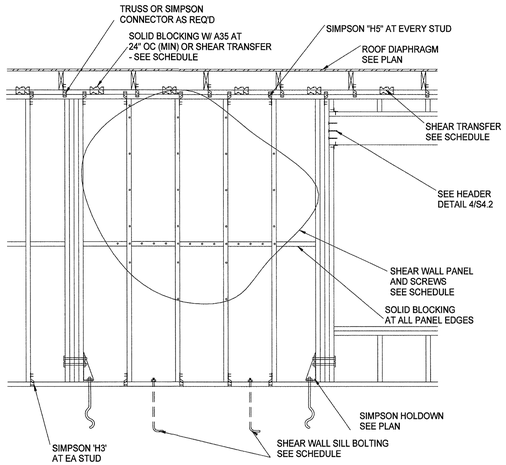
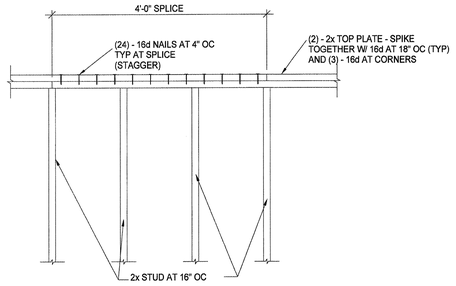


1 HEADER DETAIL
SCALE: 3/4" = 1'-0"



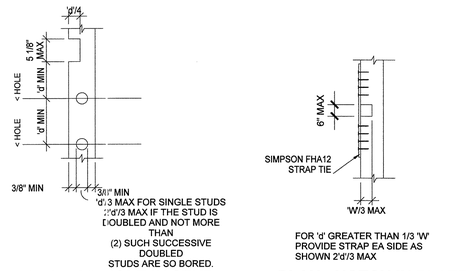
2 TYPICAL SHEARWALL ELEVATION
SCALE: 3/4" = 1'-0"



3 TOP PLATE SPLICE DETAIL
SCALE: 3/4" = 1'-0"

NOTE

1. HOLES SHALL BE DRILLED SO AS NOT TO SPLINTER THE STUD
2. 'd' = MEMBER DEPTH



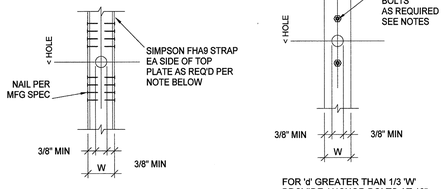
NOTCH OR HOLE IN STUD

PLAN - NOTCH IN PLATE

4 HOLE/NOTCH IN STUD/PLATE
SCALE: 3/4" = 1'-0"

NOTE

1. HOLES SHALL BE DRILLED SO AS NOT TO SPLINTER THE STUD
2. 'd' = MEMBER DEPTH



FOR 'd' GREATER THAN 1/3 'W' PROVIDE ANCHOR BOLTS AT 12" MAX FROM EA SIDE OF HOLE.

PLAN - DBL TOP PLATE

PLAN - SILL PLATE

5 HOLES IN PLATE
SCALE: 3/4" = 1'-0"

JOIST(BEAM OR TRUSS) HANGER SCHEDULE

2x6	LUS26
2x8	LUS26
2x10	LUS28
2x12	LUS210
(2)-2x6	HUS26-2TF
(2)-2x8	HUS28-2TF
(2)-2x10	HUS210-2TF
(2)-2x12	HUS210-2TF
(3)-2x10	HUS210-2TF
(3)-2x12	HU212-3TF
3 1/2 x 9 1/4 PARALLAM	HW 149.25
5 1/4 x 9 1/4 PARALLAM	WP 5.31/9.25
5 1/4 x 12 PARALLAM	HWU 5.50/12
TRUSS TO TRUSS	AS SPECIFIED BY TRUSS ENGINEER

PROVIDE HANGERS AT ALL LOCATIONS WHERE MEMBERS FRAME TOGETHER AT THE SAME ELEVATION (U.N.O.).

SEE TIMBER GENERAL NOTES No. 19.

WHERE WOOD BEAMS FRAME INTO STEEL COLUMNS, PROVIDE 1/4" PLATE SADDLE WITH

BEARING PLATE WELDED TO COLUMN.

PROVIDE SLOPED HANGERS WHERE REQUIRED.

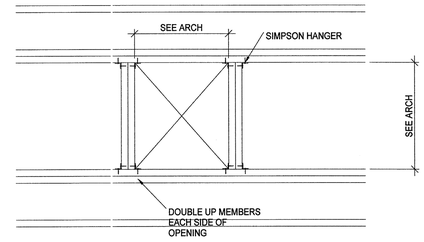
6 JOIST/HANGER SCHEDULE
SCALE: N.T.S.

ROOF TRUSS UPLIFT ANCHOR SCHEDULE

SIMPSON ANCHORS	ROOF TRUSS UPLIFT LOAD	REMARKS
H5	LOADS LESS THAN 455#	
H7 OR H10	LOADS LESS THAN 905#	WHERE STUD ALIGNS WITH TRUSS
MTS12 *	LOADS LESS THAN 1000#	OR GREATER SIZE AS REQ'D FOR INSTALLATION
H15	LOADS LESS THAN 1300#	12-10d TO STUD
MTT28B	LOADS LESS THAN 4455#(2-PLY) LOADS LESS THAN 3465#(1-PLY)	24-16d NAILS 24-10d NAILS (TWO REQ'D)
THA218-2 **	LOADS LESS THAN 1550#	TWO PLY TRUSS
LTT20B	LOADS LESS THAN 1750#	TWO PLY TRUSS 10-16d NAILS (TWO REQ'D)
2-HD8A OR 4-HD5A	6465#	TWO PLY TRUSS
2-HD5A	3705#	ONE PLY TRUSS

* INSTALL SIMPSON MTS12 NEAREST ADJACENT STUD TO TOP PLATE.
** INSTALL SIMPSON MTS12 AT TWO NEAREST ADJACENT STUDS TO TOP PLATE. INSTALL ALL ANCHORS IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS.

7 ROOF UPLIFT STRAP SCHEDULE
SCALE: N.T.S.



8 CEILING/ROOF OPENING DETAIL
SCALE: 3/4" = 1'-0"

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01/12/2018

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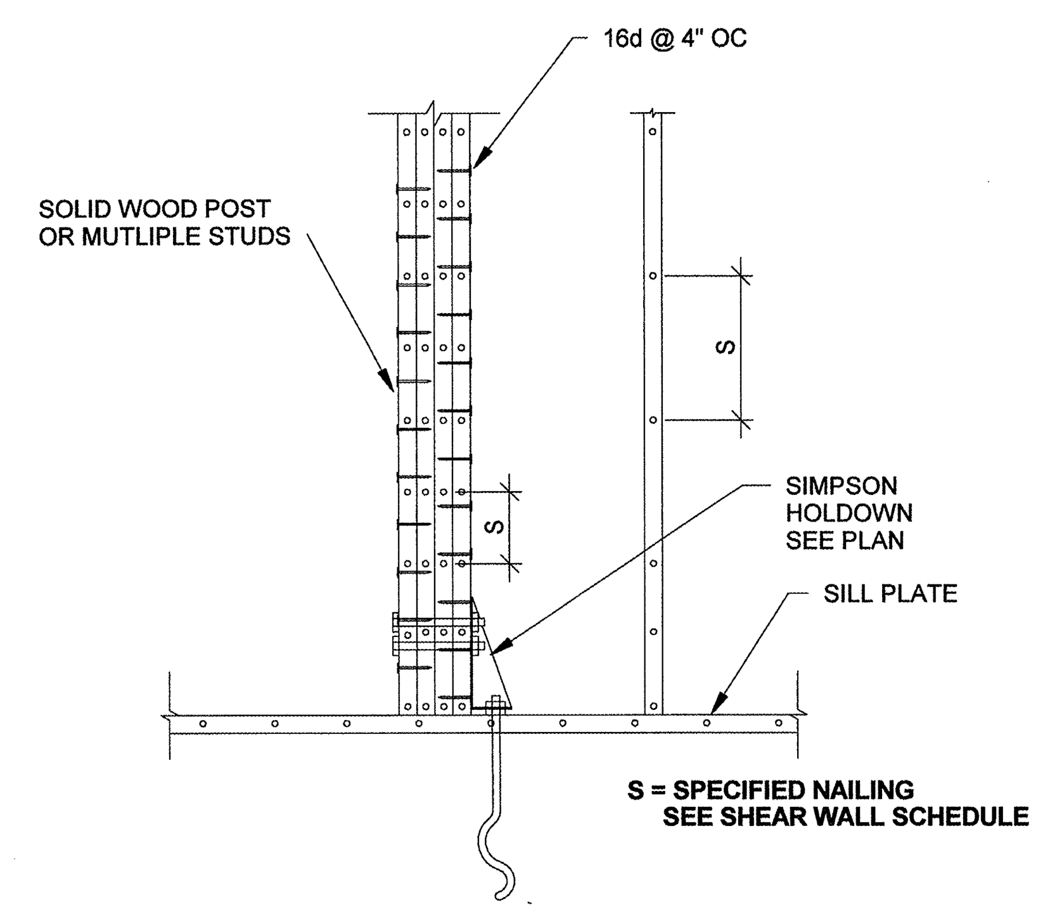
PROJECT NUMBER: 134174

DATE: 01/12/2018
DESIGNED BY:
DRAWN BY: TT
REVIEWED BY: OJ
REVISED:
REVISED:

SHEET TITLE
TYPICAL WOOD DETAILS

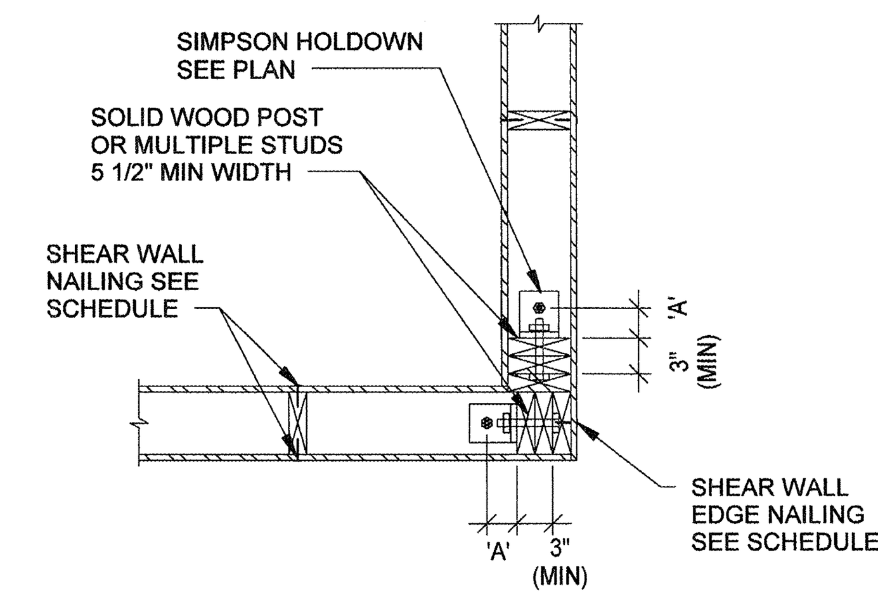
SHEET NUMBER
S6.0

PERCENTAGE: ISSUED FOR BID



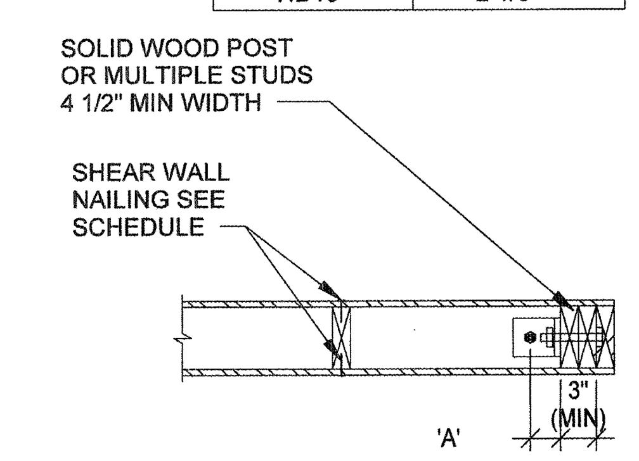
1 HOLDOWN STUD NAILING
3/4" = 1'-0"

HOLDOWN	DISTANCE 'A'
HD2A	1 7/16"
HD5A	2 3/16"
HD6A	2 1/16"
HD8A	2 1/16"
HD10A	2 1/16"
HD14A	2 3/16"
HD20A	2 3/8"
HD15	2 1/8"



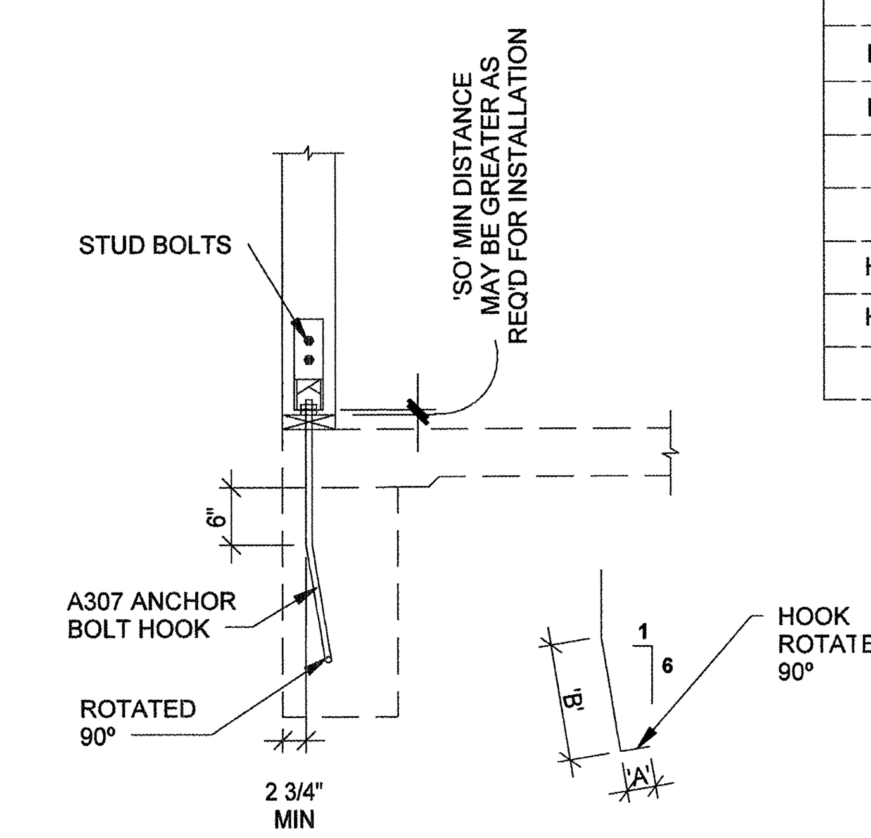
2 CORNER HOLDOWN PLAN
3/4" = 1'-0"

HOLDOWN	DISTANCE 'A'
HD2A	1 7/16"
HD5A	2 3/16"
HD6A	2 1/16"
HD8A	2 1/16"
HD10A	2 1/16"
HD14A	2 3/16"
HD20A	2 3/8"
HD15	2 1/8"



3 OPENING HOLDOWN PLAN
3/4" = 1'-0"

NOTE:
AT BRICK LEDGE LOCATIONS ANCHOR BOLT REQUIRES 90° HOOK ONLY



HOLDOWN	STUD BOLTS	ANCHOR BOLT DIA	3000 PSI		'SO'	SIMPSON ANCHOR BOLT
			A	B		
HD2A	(2) - 5/8"□	5/8"			3/8"	SSTB16
HD5A	(2) - 3/4"□	5/8"	4 1/2"	12"	1/2"	SSTB16
HD6A	(2) - 7/8"□	7/8"	4 1/2"	12"	9/16"	SSTB28
HD8A	(3) - 7/8"□	7/8"	4 1/2"	15"	9/16"	SSTB28
HD10A	(4) - 7/8"□	7/8"	4 1/2"	15"	9/16"	
HD14A	(4) - 1"□	1"	4 1/2"	15"	5/8"	
HD15	(5) - 1"□	1 1/4"	4 1/2"	15"	3 5/8"	

HOLDOWN	ALTERNATE ANCHOR BOLT
HD2A	**5/8"Ø x 5" EMBED HILTI HIT HYI50 ADHESIVE ANCHOR W/ "HAS" ROD**
HD5A	**5/8"Ø x 5" EMBED HILTI HIT HYI50 ADHESIVE ANCHOR W/ "HAS" ROD**
HD6A	**7/8"Ø x 7 1/2" EMBED HILTI HIT HYI50 ADHESIVE ANCHOR W/ "HAS" ROD**
HD8A	**7/8"Ø x 7 1/2" EMBED HILTI HIT HYI50 ADHESIVE ANCHOR W/ "HAS" ROD**
HD10A	**7/8"Ø x 11 1/4" EMBED HILTI HIT HYI50 ADHESIVE ANCHOR W/ "HAS" ROD**
HD14A	**1"Ø x 12 3/8" EMBED HILTI HIT HYI50 ADHESIVE ANCHOR W/ "HAS" ROD**
HD15	**1 1/4"Ø x 12" EMBED HILTI HIT HYI50 ADHESIVE ANCHOR W/ "HAS" ROD**

4 HOLDOWN ANCHOR SCHEDULE
3/4" = 1'-0"

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SHEET TITLE
TYPICAL
WOOD
DETAILS

SHEET NUMBER
S6.1

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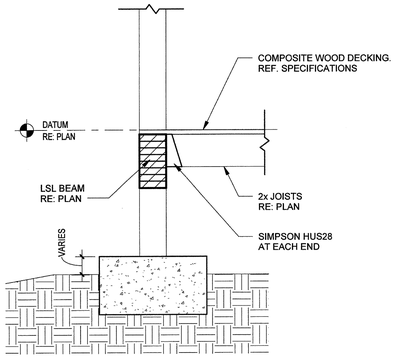
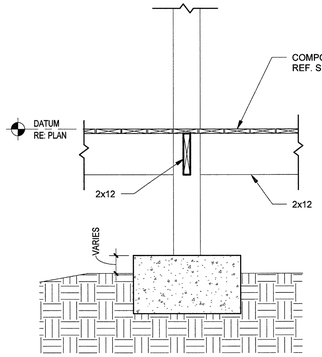


1 SECTION @ DECK
3/4" = 1'-0"



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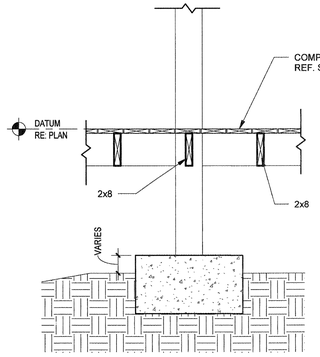
3/4" = 1'-0"



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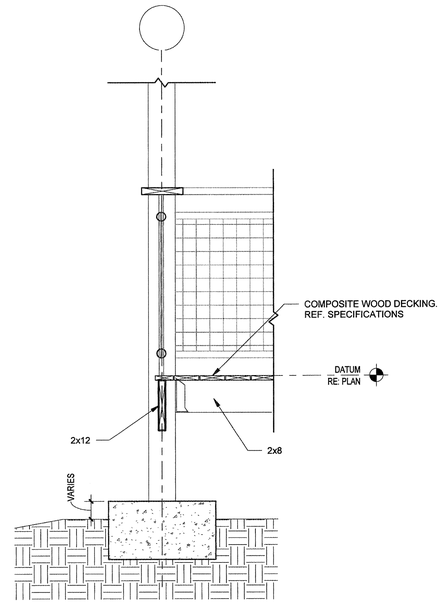
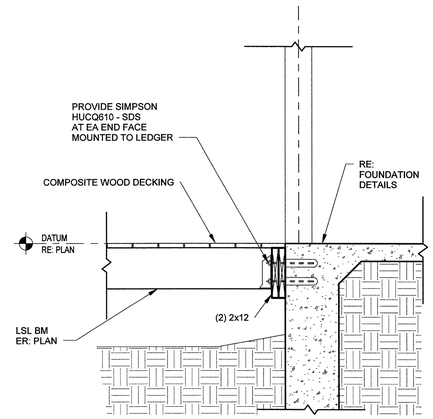


4 DETAIL AT DECK
3/4" = 1'-0"



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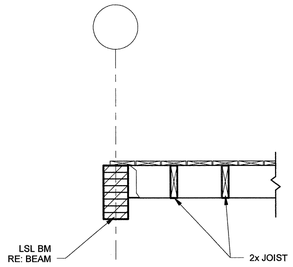
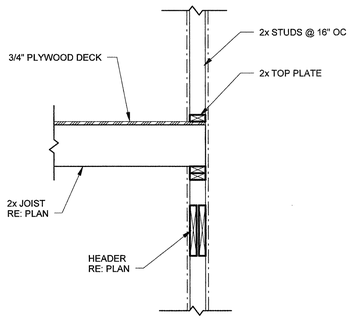
3/4" = 1'-0"



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



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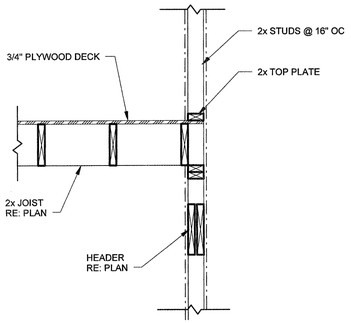
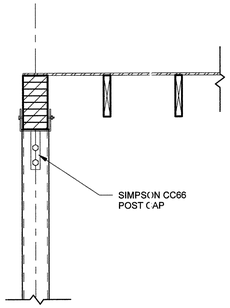
3/4" = 1'-0"



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



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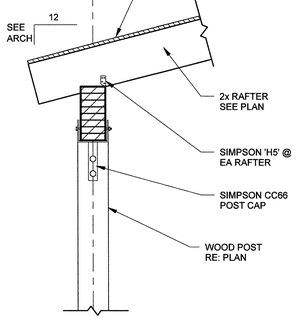
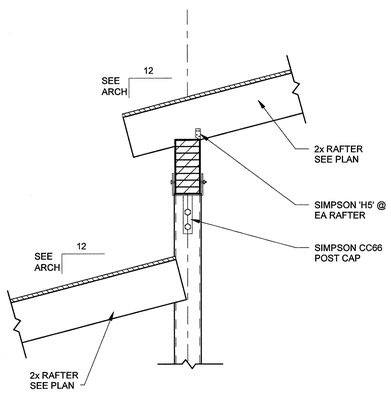
3/4" = 1'-0"



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



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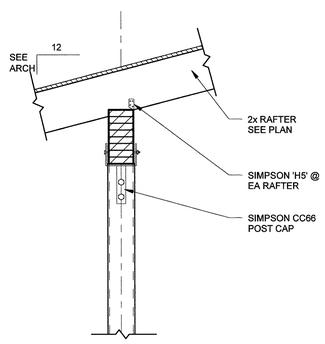
3/4" = 1'-0"



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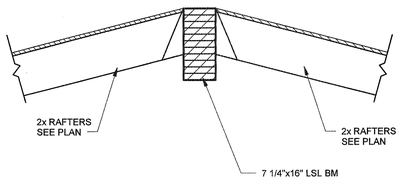
3/4" = 1'-0"



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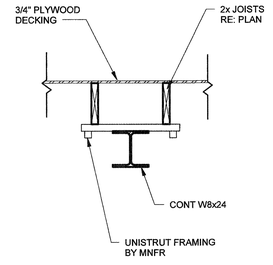
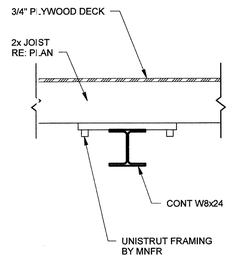
3/4" = 1'-0"



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



16 SECTION
3/4" = 1'-0"

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SHEET TITLE
WOOD FRAMING DETAILS

SHEET NUMBER
S6.2

PERCENTAGE: ISSUED FOR BID

SYMBOL LEGEND

	HOSE BIBB
	WATER HAMMER ARRESTER
	FLOOR DRAIN, AREA DRAIN, PLANT DRAIN, GARAGE DRAIN
	FLOOR SINK
	ROOF DRAIN
	OVERFLOW ROOF DRAIN
	POINT OF CONNECTION (NEW TO EXISTING)
	DEMO EXISTING PIPING TO THIS POINT
	FIRE DEPARTMENT CONNECTION
	FIRE HOSE VALVE
	FIRE HOSE VALVE CABINET
	FIRE DEPT. HOSE VALVE W/ CAP & CHAIN
	ROOF MANIFOLD
	SPRINKLER FLOOR CONTROL VALVE ASSEMBLY
	NEW FIRE HYDRANT
	EXISTING FIRE HYDRANT
	TAMPER SWITCH
ACV	ALARM CHECK VALVE W/ ALL RELATED APPURTENANCES
PACP	PRE-ACTION CONTROL PANEL
PAV	PRE-ACTION VALVE W/ ALL RELATED APPURTENANCES
DPV	DRY PIPE VALVE W/ ALL RELATED APPURTENANCES
DLV	DELUGE VALVE W/ ALL RELATED APPURTENANCES
DCVA	DOUBLE CHECK VALVE ASSEMBLY
DDCA	DOUBLE DETECTOR CHECK ASSEMBLY
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER ASSEMBLY
BA	DELUGE VALVE W/ ALL RELATED APPURTENANCES
	UPRIGHT SPRINKLER HEAD
	PENDANT SPRINKLER HEAD
	CONCEALED PENDANT SPRINKLER HEAD
	SIDEWALL SPRINKLER HEAD
	EXTENDED COVERAGE SPRINKLER HEAD
	BOTTOM PIPE CONNECTION
	TOP PIPE CONNECTION
	VALVE IN VERTICAL
	P-TRAP
	FLOOR CLEANOUT/GRADE CLEANOUT
	CLEANOUT (TWO-WAY) (PROVIDE CONCRETE PAD OUTSIDE 18" X 24" X 4")
	CLEANOUT/PLUG
	PIPE DOWN
	PIPE UP
	PIPE CAP
	CHANGE IN PIPE ELEVATION
	ARROW INDICATES DIRECTION OF FLOW
	INSULATED AND HEAT TRACED PIPING
	FRESH AIR INLET
	WALL HYDRANT
	PITCH PIPE DOWN IN DIRECTION OF ARROW
	BRANCH CONNECTION FROM THE SIDE
	ACCESS PANEL FOR TRAP PRIMER

DIFFUSER NECK SIZES

CFM RANGE	ROUND NECK SIZE	RECTANGULAR NECK SIZE
0 - 100	6"ø	6"x6"
101 - 200	8"ø	8"x8"
201 - 400	10"ø	10"x10"
401 - 600	12"ø	12"x12"
601 - 900	14"ø	14"x14"

DUCTWORK LEGEND

16x6 8x6 16x6 8x6	DUCT SPLIT WITH SPLIT SIZE
	RADIUS ELBOW
	ELBOW WITH TURNING VANES
	RECTANGULAR BRANCH TAKEOFF WITH BALANCING DAMPER
	RECTANGULAR SUPPLY DUCT UP
	RECTANGULAR SUPPLY DUCT DOWN
	RECTANGULAR RETURN DUCT UP
	RECTANGULAR RETURN DUCT DOWN
	RECTANGULAR EXHAUST DUCT UP
	RECTANGULAR EXHAUST DUCT DOWN
	ROUND SUPPLY DUCT UP
	ROUND SUPPLY DUCT DOWN
	ROUND RETURN DUCT UP
	ROUND RETURN DUCT DOWN
	ROUND EXHAUST DUCT UP
	ROUND EXHAUST DUCT DOWN

CONTROLS LEGEND

T	THERMOSTAT
H	HUMIDISTAT
P	PRESSURE SENSOR

PIPE RUN-OUT SIZES

GPM RANGE	PIPE SIZES
0 - 3	3/4"ø
3.1 - 6	1"ø
6.1 - 11	1-1/4"ø
11.1 - 17	1-1/2"ø
17.1 - 35	2"ø
35.1 - 65	2-1/2"ø
65.1 - 110	3"ø
110.1 - 230	4"ø
230.1 - 700	6"ø

DUCTWORK LEGEND

18x12 / 18x12	DUCT SIZE (CLEAR INSIDE DIMENSION) FIRST FIGURE INDICATES PLAN SIZE
18 ϕ / 18 ϕ	ROUND DUCT DIAMETER SIZE (CLEAR INSIDE DIMENSION)
	RECTANGULAR OR SQUARE TO ROUND OR OVAL TRANSITION
	FLEXIBLE CONNECTION
	DUCT END/CAP
	FLEXIBLE DUCT
	VOLUME DAMPER IN DUCT
M	MOTORIZED DAMPER
	FUSIBLE LINK FIRE DAMPER WITH DUCT ACCESS DOOR
	SMOKE DAMPER WITH DUCT ACCESS DOOR
M	MOTORIZED FIRE SMOKE DAMPER WITH DUCT ACCESS DOOR
	BACK DRAFT DAMPER WITH DUCT ACCESS DOOR
	LINEAR DIFFUSER
	LINEAR DIFFUSER WITH PLENUM
	CEILING DIFFUSER 1-WAY BLOW
	CEILING DIFFUSER 2-WAY BLOW
	CEILING DIFFUSER 3-WAY BLOW
	CEILING DIFFUSER 4-WAY BLOW
	CEILING DIFFUSER WITH FLEXIBLE DUCT CONNECTION
	RETURN REGISTER OR GRILLE
	RETURN REGISTER OR GRILLE WITH FLEXIBLE DUCT CONNECTION
	EXHAUST REGISTER OR GRILLE
	EXHAUST REGISTER OR GRILLE WITH FLEXIBLE DUCT CONNECTION
SR-A,12x8 (200) / SR-A,12x8 (200)	SUPPLY REGISTER WITH AIR OUTLET DEVICE DESIGNATION
ER-C,12x8 (200) / ER-C,12x8 (200)	RETURN OR EXHAUST REGISTER OR GRILLE WITH AIR INLET DEVICE DESIGNATION

MISCELLANEOUS

ϕ	DIAMETER
CT 1-1	EQUIPMENT DESIGNATION — EQUIPMENT TYPE; EQUIPMENT FLOOR AND NUMBER
CD-1,12x12 (550)	AIR OUTLET/INLET DEVICE DESIGNATION — CD-1,12x12 (550): TYPE, NECK OR FACE SIZE, CFM
LD-A,48x1.8ϕ (300)	LINEAR DIFFUSER DEVICE DESIGNATION — LD-A,48x1.8ϕ (300): TYPE, LENGTH & SLOT SIZE, PLENUM INLET SIZE, CFM

MECHANICAL GENERAL NOTES

1. GENERAL NOTES SHALL APPLY TO THE ENTIRE MECHANICAL DESIGN.
2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE BUILDING CODES, MECHANICAL CODE, AMERICAN DISABILITIES ACT, AND THE ENERGY CONSERVATION CODE WITH ALL APPROPRIATE REVISIONS AND AMENDMENTS.
3. REFER TO THE COMPLETED DRAWING PACKAGE TO COORDINATE HVAC SYSTEMS WITH OTHER TRADES.
4. FLEXIBLE DUCTWORK CONNECTIONS TO AIR DEVICES SHALL NOT EXCEED 4'-0" IN LENGTH. WHERE LONGER RUNS ARE REQUIRED; USE INSULATED RIGID SPIRAL ROUND DUCTWORK. SPLIT SEAM ROUND DUCT IS NOT ALLOWED.
5. PROVIDE MANUAL VOLUME DAMPER AT THE MAIN DUCT TAKE-OFF TO AIR DEVICES. DAMPERS SHALL BE LOCATED IN ACCESSIBLE LOCATIONS. CONTRACTOR SHALL AVOID THE INSTALLATION OF DAMPERS AT THE AIR DEVICE INLET.
6. UNLESS NOTED OTHERWISE, ALL TRANSITIONS SHALL BE SMOOTH AND GRADUAL WITH A MAXIMUM TRANSITION ANGLE OF 15º.
7. WHERE RETURN AIR PLENUMS ARE UTILIZED, THE CONTRACTOR SHALL INSURE A PATH OF SUFFICIENT OPENINGS IN WALLS ABOVE CEILINGS IS PROVIDED TO THE AIR UNIT.
8. AIR SYSTEMS SHALL BE BALANCED TO THE FLOWS INDICATED IN ACCORDANCE WITH A RECOGNIZED STANDARD. SUBMIT FINAL REPORT TO OWNER AND ENGINEER. WHEN PROVIDED REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
9. STANDARD DETAILS INCORPORATED IN THESE DOCUMENTS SHALL BE APPLIED TO ALL INSTANCES IN THE SYSTEM DESIGN.
10. DUCTWORK DIMENSIONS INDICATED ON DRAWINGS ARE INSIDE CLEAR. CONTRACTOR SHALL MAKE NECESSARY ADJUSTMENTS FOR INTERNAL OR EXTERNAL INSULATION. IF NECESSARY, RESIZING OF DUCT SHALL BE BASED ON THE EQUAL FRICTION METHOD.
11. CONTRACTOR SHALL VERIFY CLEARANCE REQUIREMENTS AND DETERMINE ROUTING OF NEW DUCTWORK BEFORE FABRICATION BEGINS AS RISES AND DROPS MAY BE NECESSARY DUE TO FIELD CONDITIONS.
12. WHERE NOT INDICATED ON ARCHITECTURAL OR MECHANICAL DOCUMENTS, MOUNT THERMOSTATS TO MEET ADA GUIDELINES.
13. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT DIFFUSER/GRILLE LOCATION AND COORDINATION WITH LIGHT FIXTURES. NOTIFY ARCHITECT OF CONFLICTS WITH SPRINKLER HEADS.
14. SPACES WITH DRYWALL CEILINGS SHALL HAVE FLANGE TYPE MOUNTS FOR CEILING DEVICES.
15. ALL DIFFUSERS IN SAME AREA SHALL HAVE THE SAME FACE SIZE. PROVIDE THE LARGEST SIZE AS REQUIRED FROM DIFFUSER AND GRILLE SCHEDULE.
16. UNLESS NOTED ON PLANS, DUCT SERVING DIFFUSER OR GRILLE SHALL BE AS INDICATED ON THE DIFFUSER AND GRILLE SCHEDULE.
17. TRANSITIONS SHALL BE PROVIDED ON THE OUTLET AND INLET OF ALL TERMINAL BOXES. TRANSITION FROM MANUFACTURER'S INLET/OUTLET SIZE TO DUCT SIZE INDICATED ON PLANS.
18. EXHAUST FAN OUTLETS AND PLUMBING VENTS THRU ROOF SHALL BE MINIMUM 10 FEET FROM AIR INTAKES AND OPENINGS INTO BUILDING.
19. AVOID INSTALLATION OF EQUIPMENT ABOVE DRYWALL CEILINGS. WHERE UNAVOIDABLE, PROVIDE ACCESS PANELS FOR EQUIPMENT, VALVES, BALANCING DAMPERS, FIRE, SMOKE AND/OR COMBINATION DAMPERS, REHEAT BOXES, ETC.
20. SLEEVE PIPE AND DUCT PENETRATIONS THROUGH WALLS AND FLOORS.
21. SEAL ALL INTERIOR WALL AND FLOOR PENETRATIONS AIR TIGHT AT PIPE, DUCTWORK AND CONDUIT PENETRATIONS. PROVIDE FIRE OR COMBINATION FIRE/SMOKE DAMPERS FOR PROTECTION REQUIRED. REFER TO ARCHITECTURAL PLANS FOR SEPARATION TYPE.
22. SEAL ALL EXTERIOR WALL, ROOF AND FLOOR PENETRATIONS AIR, WATER, AND VAPOR TIGHT AT PIPE, DUCTWORK AND CONDUIT PENETRATIONS.
23. FOR CLARITY, FLOOR PLANS AND ELEVATIONS MAY NOT INDICATE ALL VALVES, DAMPERS, OR ACCESSORIES FOR A COMPLETE INSTALLATION. REFER TO HVAC DETAILS FOR ADDITIONAL REQUIREMENTS FOR COMPLETE INSTALLATION.
24. EQUIPMENT SIZES AND SERVICE SPACE REQUIREMENTS MAY VARY BETWEEN MANUFACTURERS. CONTRACTOR IS RESPONSIBLE FOR THE FIT AND ACCESS OF THE MANUFACTURER PROVIDED.
25. WHERE NOT INDICATED ON PLAN, REFER TO SCHEDULES FOR BRANCH PIPE SIZES TO INDIVIDUAL EQUIPMENT.
26. PROVIDE MANUAL BALANCING DAMPERS IN EACH BRANCH RUN OUT TO SUPPLY DIFFUSERS AND RETURN OR EXHAUST GRILLES.
27. UNLESS NOTED OTHERWISE, PROVIDE 4" CONCRETE HOUSEKEEPING PAD FOR ALL FLOOR MOUNTED EQUIPMENT.
28. REFER TO ARCHITECTURAL ELEVATIONS FOR LOCATION OF LOUVERS.
29. PROVIDE AUTOMATIC MOTORIZED DAMPER AT ALL OUTDOOR AIR INTAKE OR RELIEF DISCHARGE LOCATIONS. DAMPER SHALL CLOSE WHEN EQUIPMENT IS NOT IN OPERATION. DAMPER SHALL FAIL CLOSED.
30. DUCTWORK ROUTED PARALLEL TO A RATED WALL SHALL MAINTAIN A MINIMUM OF 6-INCH CLEARANCE TO ALLOW INSPECTION OF WALL PENETRATIONS.

MECHANICAL SHEET LIST

SHEET NUMBER	SHEET NAME
M001	MECHANICAL COVER SHEET
M002	MECHANICAL SCHEDULES
M003	MECHANICAL DETAILS
M201	MECHANICAL FLOOR PLAN

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PROJECT NUMBER: 134174

DATE:	01/12/2017
DESIGNED BY:	BD
DRAWN BY:	BD, CD
REVIEWED BY:	
REVISED:	
REVISED:	

SHEET TITLE
MECHANICAL COVER SHEET

SHEET NUMBER
M001

PERCENTAGE: ISSUED FOR BID

STATE OF TEXAS
CORY W. DETTEN
111367
LICENSED
PROFESSIONAL ENGINEER
01/12/2018

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ABBREVIATIONS - MECHANICAL

(300)	CUBIC FEET OR AIR PER MINUTE OR GALLONS PER MINUTE
(E)	EXISTING TO REMAIN
(N)	NEW
(R)	EXISTING TO BE RELOCATED
(X)	EXISTING TO BE DEMOLISHED
ABV	ABOVE
AC	AIR CONDITIONING UNIT
ACC	AIR COOLED CHILLER
ACCH	AIR COOLED CHILLER
ACCU	AIR COOLED CONDENSING UNIT
ACD	AUTOMATIC CONTROL DAMPER
AD	ACCESS DOOR
AHU	AIR HANDLING UNIT
AL	ACOUSTICAL LINING
ARCH	ARCHITECTURAL
ATC	AUTOMATIC TEMPERATURE CONTROL
B	BOILER
BD	BALANCING DAMPER
BDD	BACK DRAFT DAMPER
BHP	BRAKE HORSEPOWER
BMS	BUILDING MANAGEMENT SYSTEM
BO	BLANK OFF
BTU	BRITISH THERMAL UNIT
CA	COMPRESSED AIR
CC	COOLING COIL
CD	CEILING DIFFUSER
CFF	CAP FOR FUTURE
CFM	CUBIC FEET PER MINUTE
CFU	CHEMICAL FILTRATION UNIT
CG	CEILING GRILLE
CH	CHILLER
CO	CLEANOUT
COMP	COMPRESSOR
CONV	CONVECTOR
CR	CEILING REGISTER
CT	COOLING TOWER
CU	CONDENSING UNIT
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
CW	CONDENSING UNIT
DB	DRY BULB
DEC	DIRECT EVAPORATIVE COOLER
DF	DUCT FURNACE
DIA	DIAMETER
DN	DOWN
DRX	CLOTHES DRYER EXHAUST
DX	DIRECT EXPANSION
EA	EXHAUST AIR
EC	ENTERING AIR TEMPERATURE
ECH	ELECTRIC CABINET HEATER
EDB	ENTERING DRY BULB
EF	EXHAUST FAN
EFF	EFFICIENCY
EHC	ELECTRIC HEATING COIL
ELEV	ELEVATOR
EUH	ELECTRIC UNIT HEATER
EWB	ENTERING WET BULB
EWT	ENTERING WATER TEMPERATURE
F	FILTER
FBO	FURNISHED BY OTHERS
FC	FLEXIBLE CONNECTION (DUCT OR PIPE)
FCC	FIRE CONTROL CENTER
FCU	FAN COIL UNIT
FD	FUSIBLE LINK FIRE DAMPER W/ DUCT ACCESS DOOR
FHX	FUME HOOD EXHAUST
FLA	FULL LOAD AMPS
FLR	FLOOR
FPB	FAN POWERED BOX
FPI	FINS PER INCH
FRE	FIRE RATED ENCLOSURE
FSD	COMBINATION FIRE AND SMOKE DAMPER
FT	FEET
FTR	FIN TUBE RADIATOR
GLY	GLYCOL
GPM	GALLONS PER MINUTE
GX	GENERAL EXHAUST
H	HUMIDIFIER
HC	HEATING COIL
HP	HORSEPOWER
HR	HOUR
HRU	HEAT RECOVERY UNIT
HTP	HEAT PUMP
HTW	HEATWHEEL
HV	HEATING AND VENTILATION
HW	HOT WATER
HX	HEAT EXCHANGER
ID	INSIDE DIMENSION
IDEC	INDIRECT EVAPORATIVE COOLER
KRX	KITCHEN RANGE HOOD EXHAUST (RESIDENTIAL)
KW	KILOWATT
KWH	KILOWATT HOURS
KX	KITCHEN EXHUAST
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LD	LINEAR DIFFUSER (CEILING, WALL, SILL OR FLOOR)
LRA	LOCK ROTOR AMPS
LWS	LOUVER WIRE SCREEN
LWT	LEAVING WATER TEMPERATURE
MAT	MIXED AIR TEMPERATURE
MAX	MAXIMUM
MBH	THOUSAND BTU PER HOUR
MFG	MANUFACTURER

ABBREVIATIONS - MECHANICAL

MFS	MAXIMUM FUSE SIZE
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
MUA	MAKE-UP AIR UNIT
NC	NORMALLY CLOSED
NFA	NET FREE AREA
NIC	NOT IN THIS CONTRACT
NK	NECK
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OAHU	OUTSIDE AIR HANDLING UNIT
OAI	OUTSIDE AIR INTAKE
OBD	OPPOSED BLADE DAMPER
OD	OUTSIDE DIMENSION
P	PUMP
PD	PRESSURE DROP
PHC	PRE-HEAT COIL
PHX	PLATE HEAT EXCHANGER
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH (GAUGE)
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
RA	RETURN AIR
RF	RETURN FAN
RH	RELATIVE HUMIDITY
RHC	REHEAT COIL
RPM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR
SAD	SEE ARCHITECTURAL DRAWINGS
SD	SMOKE DAMPER
SED	SEE ELECTRICAL DRAWINGS
SENS	SENSIBLE
SF	SUPPLY FAN
SM	SHEET METAL
SP	STATIC PRESSURE
SQFT	SQUARE FEET
ST	SOUND TRAP
STP	STAIR PRESSURIZATION
SX	SMOKE EXHAUST
TF	TRANSFER FAN
TRD	TRANSFER DUCT
TRG	TRANSFER GRILLE
TX	TOILET EXHAUST
TYP	TYPICAL
UFAD	UNDERFLOOR AIR DISTIBUTION
UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED
VAR	VARIABLE
VAV	VARIABLE AIR VOLUME
VD	VOLUME DMAPER
VFD	VARIABLE FREQUENCY DRIVE
VX	VAPOR HOOD EXHAUST
W/	WITH
WB	WET BULB
WG	WATER GUAGE
WMS	WIRE MESH SCREEN
WO-SIZE	WALL OPENING - [SIZE]
°F	DEGREES FAHRENHEIT

OUTSIDE AIR CALCULATION

ROOM TYPE	PEOPLE	PEOPLE OUTSIDE AIR RATE	AIR RATE	ROOM AREA	AREA OUTSIDE AIR RATE	AIR RATE2	TOTAL OUTSIDE AIR REQUIRED
OFFICE	3	5	15	190	0.06	11	26
TOTAL:							26 CFM

USING SECTION 402 OF 2012 IMC FOR NATURAL VENTILATION, THE MINIMUM OPENING FOR OUTSIDE AIR MUST BE 4% OF THE FLOOR AREA BEING VENTILATED

VENTILATED AREA	OPENABLE WINDOW AREA
190 X 4% =7.6 SF	7.95 + 4.44 + 7.95 = 20.35 SF

EXHAUST FAN SCHEDULE

DESIGNATION	MANUFACTURER MODEL NUMBER	LOCATION/ SERVICE	TYPE	CFM	STATIC PRESSURE (IN W.G.)	RPM	MOTOR				VARIABLE SPEED	EMERGENCY POWER	OPERATING WEIGHT (LBS.)	NOTES
							WATTS	HP	VOLTAGE	PHASE				
EF-1	GREENHECK SP-A70	RESTROOM	CEILING EXHAUST FAN	50	0.3	850	13.1	0.15	115	1	NO	NO	12	1,2,3

NOTES:

1. PROVIDE WITH FACTORY MOUNTED DISCONNECT AND ECM MOTOR.
2. FAN SHALL BE CONTROLLED BY LIGHT SWITCH.
3. PROVIDE WITH CEILING MOUNTING KIT.

DX SPLIT SYSTEM

DESIGNATION	SERVICE	MANUFACTURER MODEL NUMBER		INDOOR UNIT									CONDENSING UNIT							NOTES
				COOLING COIL												ELECTRICAL INFORMATION				
		INDOOR UNIT	OUTDOOR UNIT	CFM	FACE VELOCITY (FPM)	EAT DB (°F)	EAT WB (°F)	LAT DB (°F)	LAT WB (°F)	CAPACITY SENSIBLE MBH	CAPACITY TOTAL MBH	REFRIGERANT	OPERATING WEIGHT (LBS.)	DESIGNATION	AMBIENT TEMPERATURE	EER	VOLTAGE	PHASE	MCA	MOP	OPERATING WEIGHT (LBS.)	
FCU-1	OFFICE	MITSUBISHI - MSY-GL-12NA	MITSUBISHI - MUY-GL-12NA	250	500	75	62	55	54	10	12	R-410A	22	CU - 1	110	12.9	208	1	12.3	15	82	1,2,3,4,5,6,7

NOTES:

1. UNITS TO BE SELECTED AT MEDIUM SPEED.
2. PROVIDE WITH INTEGRAL DISCONNECT SWITCH.
3. UNIT IS TO BE SELECTED WITH LOW AMBIENT STANDARD.
4. MOUNT OUTDOOR UNIT ON 6", CONCRETE HOUSEKEEPING PAD.
5. PROVIDE WITH MERV 8 PREFILTER.
6. PROVIDE OVERFLOW SWITCH ON DRAIN PAN.
7. SPACE SHALL BE NATURALLY VENTILATED THROUGH OPERABLE WINDOWS WICH ARE COMPLIANNT WITH SECTION 402 OF 2012 IBC

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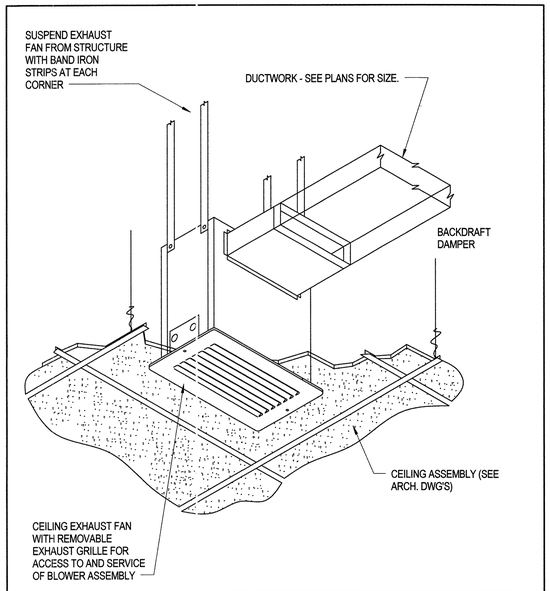
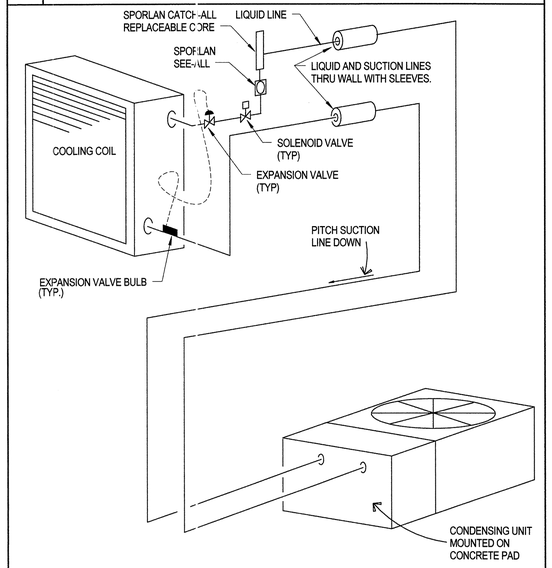
SHEET TITLE
MECHANICAL SCHEDULES

SHEET NUMBER
M002

PERCENTAGE: ISSUED FOR BID



2 CEILING MOUNTED EXHAUST FAN
SCALE: NOT TO SCALE



1 REFRIGERANT PIPING DIAGRAM (GRADE CU)
SCALE: NOT TO SCALE

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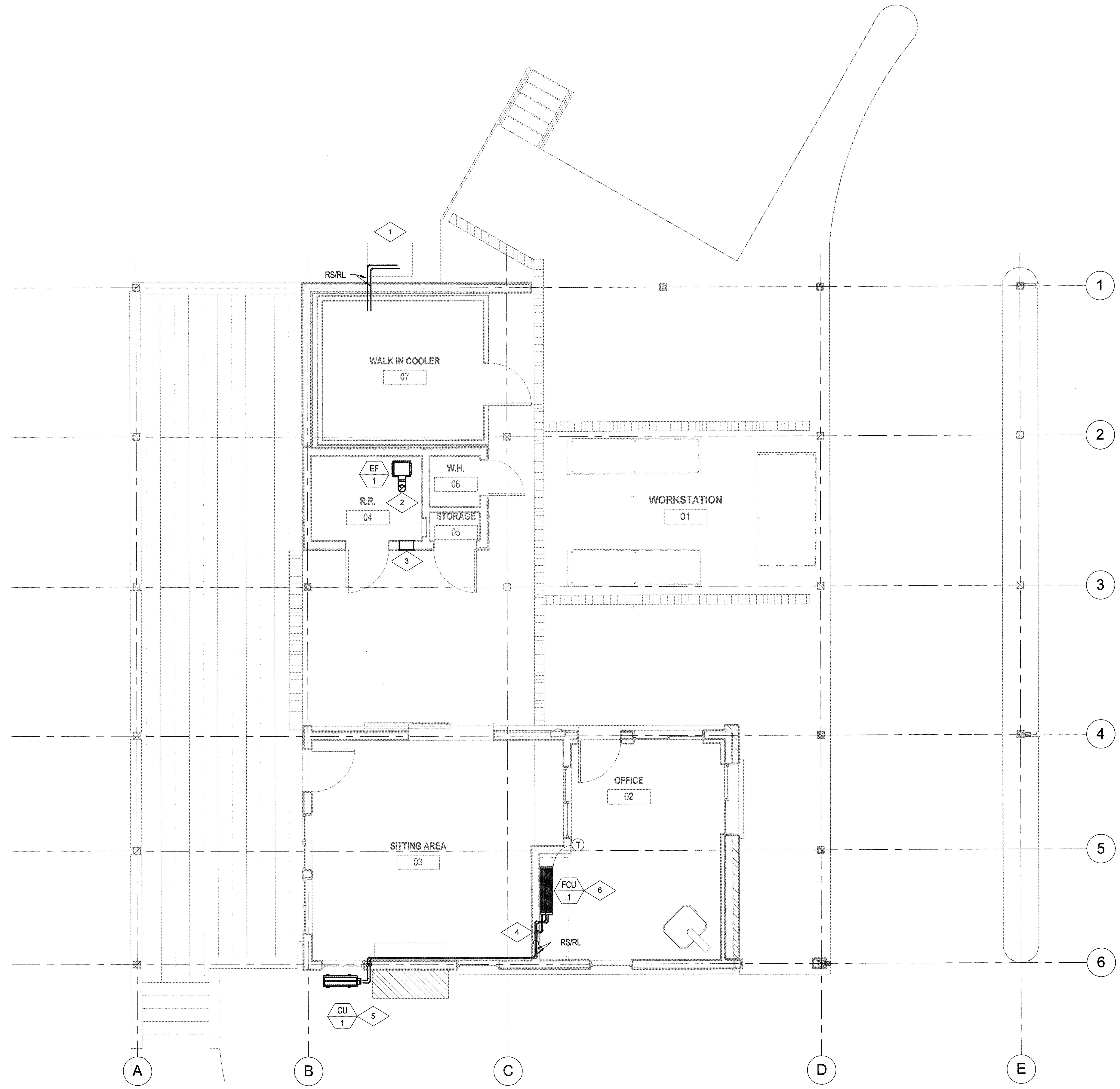
SHEET TITLE
MECHANICAL DETAILS

SHEET NUMBER
M003

PERCENTAGE: ISSUED FOR BID

NUMBERED NOTES

NUMBERED NOTES	DESCRIPTION
1	ENVIRONMENTAL CHAMBER CONDENSING UNIT BY OTHERS. CONTRACTOR TO SIZE AND ROUTE REFRIGERANT LINES TO AC. FIELD VERIFY EXACT LOCATION OF AC EVAPORATOR COIL. MOUNT UNIT ON 4" CONCRETE HOUSEKEEPING PAD.
2	6" DIAMETER DUCT FROM EXHAUST FAN TO ROOF. PROVIDE MINIMUM OF TEN FEET OF CLEARANCE FROM ALL AIR INTAKES. TERMINATE AT LEAST 12" ABOVE ROOF WITH GOOSE NECK. COORDINATE ROOF PENETRATION DETAILS WITH ROOF MANUFACTURE AND CREATE WATERPROOF SEAL AROUND ROOF PENETRATION.
3	PROVIDE 12"X12" INTAKE LOUVER FOR OUTSIDE AIR. CONFIRM WITH ARCHITECT ON EXACT/FINAL MOUNTING HEIGHT/SIZE/COLOR.
4	ROUTE 3/4" CONDENSATE LINE TO SINK TAILPIECE. REFER TO P101 AND P201 FOR COORDINATED LOCATION. REFER TO PLUMBING DETAIL ON CONNECTION.
5	MOUNT HEAT PUMP ON 6" CONCRETE PAD.
6	MOUNT FCU ON WALL AS HIGH AS POSSIBLE . ROUTE REFRIGERANT LINES THROUGH ATTIC TO CU-1. COORDINATE EXACT LOCATION WITH ARCHITECT. MANUFACTURER TO SIZE REFRIGERANT LINES BASED ON FINAL EQUIPMENT PLACEMENT.



1 MECHANICAL FLOOR PLAN LEVEL 1
1/4" = 1'-0"

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SHEET TITLE
MECHANICAL FLOOR PLAN

SHEET NUMBER
M201

PERCENTAGE: ISSUED FOR BID

WIRING DEVICE LEGEND

	SINGLE RECEPTACLE OUTLET: 125V; WALL MOUNTED
	DUPLEX RECEPTACLE OUTLET: 125V; WALL MOUNTED
	DUPLEX RECEPTACLE OUTLET: 125V TOP HALF SWITCHED
	DUPLEX RECEPTACLE OUTLET: 125V, DEDICATED; WALL MOUNTED
	DOUBLE DUPLEX RECEPTACLE OUTLET: 125V; WALL MOUNTED
	TRIPLE DUPLEX RECEPTACLE OUTLET: 125V
	SPECIAL PURPOSE RECEPTACLE OUTLET: RATING AS INDICATED; WALL MOUNTED
	CLOCK RECEPTACLE OUTLET: 125V, 15A
	POWER CONNECTION TO ELECTRIFIED FURNITURE SYSTEM
	SINGLE RECEPTACLE OUTLET: 125V; CEILING MOUNTED
	DUPLEX RECEPTACLE OUTLET: 125V; CEILING MOUNTED
	DUPLEX RECEPTACLE OUTLET: 125V, DEDICATED; CEILING MOUNTED
	DOUBLE DUPLEX RECEPTACLE OUTLET: 125V; CEILING MOUNTED
	SPECIAL PURPOSE RECEPTACLE OUTLET: RATING AS INDICATED; CEILING MOUNTED
	PUSH BUTTON
B	BUZZER
B	BELL
	POWER TYPE PLUGSTRIP OR SURFACE RACEWAY, LENGTH APPROXIMATELY AS SHOWN
	TELECOM TYPE PLUGSTRIP OR SURFACE RACEWAY, LENGTH APPROXIMATELY AS SHOWN
	TELECOM OUTLET
	TELECOM CONNECTION TO ELECTRIFIED FURNITURE SYSTEM
TV	TELEVISION OUTLET
$	SINGLE POLE SWITCH
$ 2	DOUBLE POLE SWITCH
$ 3	THREE WAY SWITCH
$ 4	FOUR WAY SWITCH
$ F	FAN SWITCH
$ H	ILLUMINATED HANDLE SWITCH
$ K	KEY SWITCH
$ MC	MOMENTARY CONTACT SWITCH
$ P	PILOT LIGHT SWITCH
TS	TIMER SWITCH
D	WALL DIMMER
LV	LOW VOLTAGE SWITCH
PC	PHOTOCELL
S	LINE VOLTAGE SHUT OFF SWITCH
OS	VACANCY SENSOR; WALL MOUNTED
OS	VACANCY SENSOR 360°; CEILING MOUNTED
OS	2 WAY VACANCY SENSOR; CEILING MOUNTED
OS	1 WAY VACANCY SENSOR; CEILING MOUNTED
OS	CORRIDOR VACANCY SENSOR; CEILING MOUNTED
2S	2-BUTTON LOW-VOLTAGE WALL SWITCH
2D	2-BUTTON LOW-VOLTAGE WALL-MOUNTED DIMMING SCENE SELECTOR WITH RAISE/FLOOR
4S	4-BUTTON LOW-VOLTAGE WALL SWITCH
4D	4-BUTTON LOW-VOLTAGE WALL-MOUNTED DIMMING SCENE SELECTOR WITH RAISE/FLOOR
DZC	DIMMING ZONE CONTROLLER, RECESSED IN WALL

FIRE ALARM LEGEND

	MANUAL PULL STATION
	AREA SMOKE DETECTOR, CEILING MOUNTED (SMOKE DETECTOR, SEMI-FLUSH MOUNTED IN CEILING)
	AREA SMOKE DETECTOR, WALL MOUNTED
	DUCT TYPE SMOKE DETECTOR
	HEAT DETECTOR, CEILING MOUNTED
BR BT	BEAM DETECTOR: R = RECEIVER, T = TRANSMITTER
W	SPRINKLER WATER FLOW SWITCH
T	SPRINKLER TAMPER SWITCH
S	FIRE ALARM SPEAKER; CEILING MOUNTED
S	FIRE ALARM SPEAKER; WALL MOUNTED
S	COMBINATION FIRE ALARM SPEAKER/VISUAL ALARM; CEILING MOUNTED
S	COMBINATION FIRE ALARM SPEAKER/VISUAL ALARM; WALL MOUNTED
H	FIRE ALARM HORN; CEILING MOUNTED
H	FIRE ALARM HORN; WALL MOUNTED
H	COMBINATION FIRE ALARM HORN/VISUAL ALARM; WALL MOUNTED
	VISUAL ALARM; CEILING MOUNTED
	VISUAL ALARM; WALL MOUNTED
J	FIREFIGHTER'S PHONE JACK
H	EMERGENCY TELEPHONE
H	MAGNETIC DOOR HOLDER
	FIRE ALARM BELL
FSD	FIRE/SMOKE DAMPER
SD	SMOKE DAMPER
FACP	FIRE ALARM AND CONTROL PANEL
FARP	FIRE ALARM REMOTE PANEL
FATC	FIRE ALARM TERMINAL CABINET
FARA	FIRE ALARM REMOTE ANNUNCIATOR
FTS	FIREFIGHTER'S TELEPHONE SYSTEM
VCS	VOICE COMMUNICATION SYSTEM
FCIP	FIREFIGHTER'S CONTROL AND INDICATING PANEL
FCIP	FIRE PUMP REMOTE STATUS PANEL
GSP	GENERATOR REMOTE STATUS PANEL
BATT	BATTERY
EVAC	FIRE ALARM VOICE EVACUATION PANEL
DACT	DIGITAL ALARM COMMUNICATOR TRANSMITTER

POWER LEGEND

	GROUND FAULT SENSOR
GFR	GROUND FAULT RELAY
	NORMALLY OPEN CONTACT
	NORMALLY CLOSED CONTACT
	RELAY OR CONTACTOR: CONTACTS SHOWN WITH COIL DEENERGIZED
	TRANSFORMER
	ROTARY SWITCH
R	PILOT LIGHT: A = AMBER LIGHT, G = GREEN LIGHT R = RED LIGHT, Y = YELLOW LIGHT
	NUMBERED NOTE
SF-1	EQUIPMENT TYPE
MCC-1A	PANEL NAME

POWER LEGEND

	ATS, CPC, DPH, DPL, DSH, DSL, MCC OR MS: SIZE APPROXIMATELY AS SHOWN. DOUBLE LINE INDICATES FRONT.
	SURFACE MOUNTED LPH, LRC, MP OR TC: SIZE APPROXIMATELY AS SHOWN
	RECESSED MOUNTED LPH, LRC, MP OR TC: SIZE APPROXIMATELY AS SHOWN
	SURFACE MOUNTED LP: SIZE APPROXIMATELY AS SHOWN
	RECESSED MOUNTED LP: SIZE APPROXIMATELY AS SHOWN
	TB: LENGTH APPROXIMATELY AS SHOWN
	BUSWAY RISER WITH PLUG IN UNIT, FUSE
	BUSWAY RISER WITH PLUG IN UNIT, BREAKER
	BUSWAY HORIZONTAL
CTB	CABLE TAP BOX
T F	STEP DOWN TRANSFORMER
G	GENERATOR
G	GENERATOR IN WP ENCLOSURE
	AUTOMATIC TRANSFER SWITCH
	HEAVY DUTY DISCONNECT SWITCH
	HEAVY DUTY DISCONNECT SWITCH WITH FUSE
	MOTOR STARTER
	MOTOR STARTER, NOT PROVIDED UNDER ELECTRICAL SCOPE
	COMBINATION MOTOR STARTER/DISCONNECT SWITCH
	COMBINATION MOTOR STARTER/DISCONNECT SWITCH, NOT PROVIDED UNDER ELECTRICAL SCOPE
	VFD WITH DISCONNECT, NOT PROVIDED UNDER ELECTRICAL SCOPE
	VFD WITHOUT DISCONNECT, NOT PROVIDED UNDER ELECTRICAL SCOPE
EPO	EMERGENCY POWER OFF BUTTON
$ MD	MOTORIZED DOOR CONTROLLER (FURNISHED WITH DOOR)
$ MS	MOTORIZED SHADE CONTROLLER (FURNISHED WITH SHADES)
$ PS	PROJECTION SCREEN CONTROLLER (FURNISHED WITH SCREEN)
$ SC	SPEED CONTROLLER (FURNISHED WITH EQUIPMENT)
$ T	THERMAL OVERLOAD/DISCONNECT SWITCH
M	MOTOR CONNECTION
J	JUNCTION BOX, CEILING MOUNTED
J	JUNCTION BOX, WALL MOUNTED
P B	PULL BOX
S B	SPLICE BOX
G	GROUND BUS CABINET
	GROUND ROD
	GROUND TEST WELL
	CIRCUIT BREAKER
	SWITCH AND FUSE
	DRAWOUT TYPE CIRCUIT BREAKER
	DRAWOUT TYPE SWITCH AND FUSE
	CIRCUIT BREAKER IN ENCLOSURE
M	CURRENT TRANSFORMER COMPARTMENT AND KWH METER

LIGHTING LEGEND

	LIGHTING FIXTURE; CEILING MOUNTED
	LIGHTING FIXTURE; WALL MOUNTED
	LIGHTING FIXTURE, SIZE APPROXIMATELY AS SHOWN; CEILING MOUNTED
	LIGHTING FIXTURE, SIZE APPROXIMATELY AS SHOWN; WALL MOUNTED
	LIGHTING FIXTURE CONNECTED TO
	EMERGENCY POWER SYSTEM
	LIGHTING FIXTURE, CONTINUOUS ROW; CEILING MOUNTED
	LIGHTING FIXTURE, WALL WASHER; CEILING MOUNTED
	LIGHTING FIXTURE(S); POLE MOUNTED
2 a A	LIGHTING FIXTURE SUBSCRIPTS: NUMBER INDICATES CIRCUIT, LOWERCASE LETTER INDICATES SWITCH CONTROL UPPERCASE LETTER INDICATES FIXTURE TYPE
	LIGHTING TRACK WITH FIXTURES, LENGTH APPROXIMATELY AS SHOWN
EXIT SIGNS	ARROWS AS SHOWN, ILLUMINATED FACE AS INDICATED BY SHADING, CONNECT TO EMERGENCY POWER SYSTEM
	EXIT SIGN; WALL MOUNTED
	EXIT SIGN; CEILING MOUNTED
R	EXIT SIGN; RECESSED IN WALL
P	EXIT SIGN; PENDENT MOUNTED
L	EXIT SIGN, LOW LEVEL; RECESSED IN WALL

RACEWAY LEGEND

	CONDUIT CONCEALED ABOVE CEILING OR WITHIN WALL
	CONDUIT BELOW GRADE OR EMBEDDED WITHIN SLAB
	CONDUIT UP
	CONDUIT DOWN
	CONDUIT STUBBED OUT WITH BUSHING NOTE: PROVIDE PULLSTRING IN EACH EMPTY RACEWAY
E	CONDUIT STUBBED OUT AND CAPPED NOTE: PROVIDE PULLSTRING IN EACH EMPTY RACEWAY
AV	AUDIO/VISUAL SYSTEM RACEWAY
CT	CABLE TRAY
G	GROUNDING SYSTEM RACEWAY
FA	FIRE ALARM SYSTEM RACEWAY
S	SECURITY SYSTEM RACEWAY NOTE: PROVIDE PULLSTRING IN EACH EMPTY RACEWAY
T	TELECOM SYSTEM RACEWAY NOTE: PROVIDE PULLSTRING IN EACH EMPTY RACEWAY
TV	TELEVISION SYSTEM RACEWAY NOTE: PROVIDE PULLSTRING IN EACH EMPTY RACEWAY
	CONDUIT HOMERUN NOTE: MAXIMUM OF THREE BRANCH CIRCUITS FOR EACH HOMERUN, UON
	PHASE CONDUCTOR(S) GROUNDING CONDUCTOR ISOLATED GROUNDING CONDUCTOR NEUTRAL CONDUCTOR

WIRING DEVICE SUBSCRIPT LEGEND

AC	AC = ABOVE COUNTER
GFI	GFI = GROUND FAULT INTERRUPTER
IG	IG = ISOLATED GROUND
WP	WP = WEATHERPROOF
a	a = LOWER CASE LETTER INDICATES SWITCH CONTROL
6	6 = NUMBER INDICATES CIRCUIT NUMBER
IG	IG = ISOLATED GROUND (ONE OF DOUBLE DUPLEX)
$ a	a = LOWER CASE INDICATES SWITCH CONTROL

ELECTRICAL SHEET LIST

SHEET NUMBER	SHEET NAME
E001	ELECTRICAL COVER SHEET
E002	ELECTRICAL NOTES AND LEGENDS
E003	ELECTRICAL DETAILS
E101	ELECTRICAL SITE PLAN
E201	POWER FLOOR PLAN
E301	LIGHTING PLAN
E302	LIGHTING PLAN ATTIC
E701	ONE LINE DIAGRAM & PANEL SCHEDULE

EQUIPMENT NAMING LEGEND

E O U S — ATS BUS DPH DPL DSH DSL LP LPH LRC MCC MP MS PDU T TB TC — 2 N A / 1,3,5

- CIRCUIT NUMBER(S)
- FIRST OF THIS TYPE ON FLOOR
- NORTH, EAST, SOUTH OR WEST
- FLOOR LEVEL

ATS	AUTOMATIC TRANSFER SWITCH
BUS	BUSWAY
DPH	DISTRIBUTION PANEL 277/480V
DPL	DISTRIBUTION PANEL 120/208V
DSH	DISTRIBUTION SWITCHBOARD 277/480V
DSL	DISTRIBUTION SWITCHBOARD 120/208V
LP	BRANCH CIRCUIT PANELBOARD 120/208V
LPH	BRANCH CIRCUIT PANELBOARD 277/480V
LRC	LIGHTING RELAY CABINET
MCC	MOTOR CONTROL CENTER
MP	MECHANICAL EQUIPMENT PANELBOARD
MS	MAIN SWITCHBOARD
PDU	POWER DISTRIBUTION UNIT
T	TRANSFORMER
TB	TELECOM BACKBOARD
TC	TELECOM CABINET

E	EMERGENCY LIFE SAFETY
O	OPTIONAL STANDBY POWER
U	UPS POWER
S	LEGALLY REQUIRED STANDBY

SECURITY LEGEND

	FIXED CCTV CAMERA
HU	PANIC BUTTON/HOLD-UP/DURESS ALARM
DC	DOOR CONTACT
RTE	REQUEST TO EXIT DEVICE
MS	MOTION SENSOR
LRR	LONG RANGE READER (TRANSIT READER)
ML	MAGNETIC LOCK
VD	VIBRATION DETECTOR
PD	PRESSURE DETECTOR (PRESSURE PAD)
KP	KEYPAD
DA	ELECTRONIC SOUNDER FOR DOOR BREACH (DOOR ALARM)
DR	REMOTE DOOR RELEASE
PB	PUSH BUTTON REQUEST TO EXIT DEVICE
CR	CARD READER
EL	ELECTRIC LOCK
ES	ELECTRIC STRIKE
VIP	VIP ARRIVAL
IC	REMOTE VIDEO INTERCOM SYSTEM
IC M	INTERCOM MASTER STATION
IC V	VIDEO INTERCOM
GB	ACOUSTIC GLASS BREAK SENSOR

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SHEET TITLE
ELECTRICAL COVER SHEET

SHEET NUMBER
E001

PERCENTAGE: ISSUED FOR BID

ABBREVIATIONS - ELECTRICAL

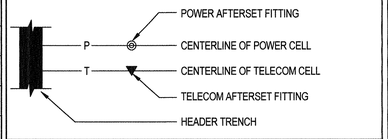
℄	CENTERLINE
(E)	EXISTING
(N)	NEW
(R)	EXISTING TO BE RELOCATED
(X)	EXISTING TO BE REMOVED
A	AMPERES
A/V	AUDIO/VISUAL
AF/AS	AMPERE RATING OF FUSE/SWITCH
AFF	ABVOFE FINISHED FLOOR
AIC	AMPERES INTERRUPTING CAPACITY
AL	ALUMINUM
AT/AF	AMPERE RATING OF CIRCUIT
BMS	BUILDING MANAGEMENT SYSTEM
C	CONDUIT (GENERIC TERM FOR RACEWAY - PROVIDE AS SPECIFIED)
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CU	COPPER
DPDT	DOUBLE POLE BOUBLE THROW
DPST	DOUBLE POLE SINGLE THROW
DWG	DRAWING
EC	EMPTY CONDUIT
ECC	ENGINEER'S CONTROL CENTER
ELEV	ELEVATOR
EMT	ELECTRICAL METALLIC TUBING
ESC	ESCALATOR
EWS	ELECTRIC WATER COOLER
FA	FIRE ALARM
FCC	FIRE CONTROL CENTER
FP	FIRE PROTECTION SYSTEM INSTALLER
GC	GENERAL CONTRACTOR
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
HP	HORSEPOWER
HVAC	HEATING, VENTILATING AND AIR CONDITIONING INSTALLER
IDF	INTERMEDIATE DISTRIBUTION FRAME ROOM
IG	ISOLATED GROUND
JB	JUNCTION BOX
KCMIL	THOUSAND CIRCULAR MILS
KVA	KILO-VOLT AMPERE
KW	KILO-WATT
LTG	LIGHTING
MCB	MAIN CIRCUIT BREAKER
MCP	MOTOR CIRCUIT PROTECTOR
MDF	MAIN DISTRIBUTION FRAME ROOM
MDP	MAIN DISTRIBUTION PANEL
MIC	MINERAL INSULATED CABLE
MLO	MAIN LUGS ONLY
MTD	MOUNTED
MTG	MOUNTING
MTS	MANUAL TRANSFER SWITCH
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
P	POLE
PB	PULL BOX
PH	PHASE
PL	PLUMBING SYSTEM INSTALLER
PVC	POLYVINLY CHLORIDE CONDUIT
PWR	POWER
RAC	RIGID ALUMINUM CONDUIT
RGS	RIGID GALVANIZED STEEL
RSC	RIGID STEEL CONDUIT
SCC	SECURITY CONTROL CENTER
SN	SOLID NEUTRAL
SPDT	SINGLE POLE DOUBLE THROW
SPST	SINGLE POLE SINGLE THROW
TB	TELECOM BACKBOARD
TEL	TELECOM
TVSS	TRANSIENT VOLTAGE SURGE SUPRESSION
TYP	TYOICAL
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
WP	WEATERPROOF
WT	WATERTIGHT
XP	EXPLOSION PROOF

FLOOR BOX LEGEND

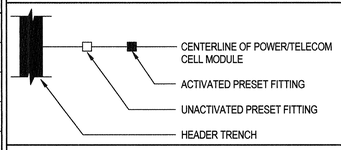
POKE THROUGH PEDESTAL	
	COMBINATION DUPLEX RECEPTACLE/TELECOM OUTLET: 125V
	COMBINATION DOUBLE DUPLEX RECEPTACLE/ TELECOM OUTLET: 125V
	TELECOM OUTLET
	POWER CONNECTION TO ELECTRIFIED FURNITURE SYSTEM
	TELECOM CONNECTION TO ELECTRIFIED FURNITURE SYSTEM
POKE THROUGH FLUSH	
	COMBINATION DOUBLE DUPLEX RECEPTACLE/TELECOM OUTLET: 125V
	COMBINATION DUPLEX RECEPTACLE/TELECOM OUTLET: 125V
	POWER CONNECTION TO ELECTRIFIED FURNITURE SYSTEM
	TELECOM CONNECTION TO ELECTRIFIED FURNITURE SYSTEM
	TELECOM OUTLET
RECESSED FLUSH	
	SINGLE RECEPTACLE OUTLET: 125V
	DUPLEX RECEPTACLE OUTLET: 125V
	DUPLEX RECEPTACLE OUTLET: 125V, DEDICATED
	DOUBLE DUPLEX RECEPTACLE OUTLET: 125V
	COMBINATION DUPLEX RECEPTACLE/TELECOM OUTLET: 125V
	COMBINATION DOUBLE DUPLEX RECEPTACLE/TELECOM OUTLET: 125V
	TELECOM OUTLET
	RAISED FLOOR ACCESS BOX, COMBINATION DOUBLE DUPLEX RECEPTACLE/TELECOM: 125V

FLOOR SYSTEM LEGEND

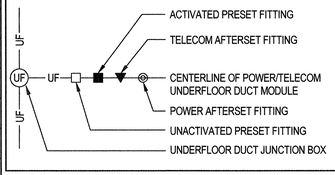
ELECTRIFIED CELLULAR DECK-AFTERSET FITTING



ELECTRIFIED CELLULAR DECK-PRESET FITTING



UNDERFLOOR DUCT SYSTEM



FLOOR FITTING SUBSCRIPT LEGEND

AFTERSET FITTING			
•	NONE	=	DUPLEX RECEPTACLE
	D	=	DOUBLE DUPLEX RECEPTACLE
	F	=	POWER CONNECTION TO ELECTRIFIED FURNITURE SYSTEM
▼	NONE	=	TELECOM OUTLET
	F	=	TELECOM CONNECTION TO ELECTRIFIED FURNITURE SYSTEM
PRESET FITTING			
■	NONE	=	DUPLEX RECEPTACLE/TELECOM
	D	=	DOUBLE DUPLEX RECEPTACLE/TELECOM
	F	=	POWER/TELECOM CONNECTION TO ELECTRIFIED FURNITURE SYSTEM

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RESEARCH, CONSERVATION AND EDUCATION STATION

PROJECT NUMBER: 134174

DATE: 01/12/2017
DESIGNED BY: JC
DRAWN BY: JC
REVIEWED BY: SS
REVISED:
REVISED:

SHEET TITLE
ELECTRICAL NOTES AND LEGENDS

SHEET NUMBER
E002

PERCENTAGE: ISSUED FOR BID

01/12/18

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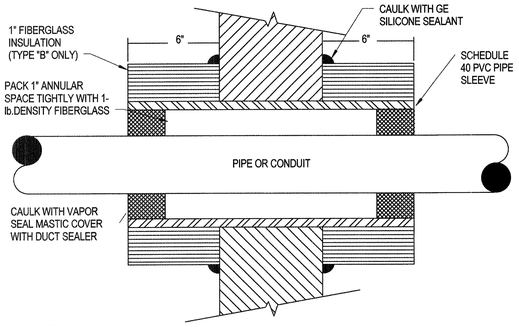
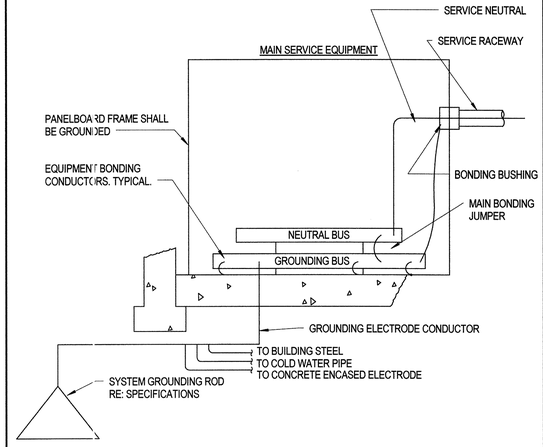


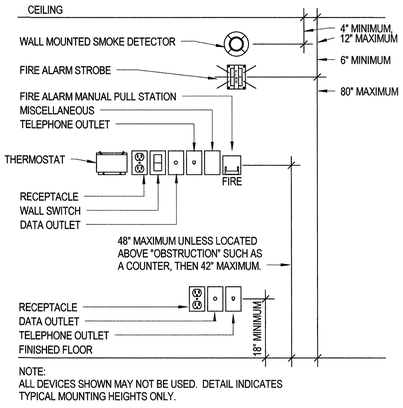
NOTES:

1. TYPICAL TREATMENT FOR PLUMBING PIPES AND H.V.A.C. PIPING FOR NON-FIRE-RATED WALLS.
2. SIZE SLEEVE TO ACCEPT CONDUIT.
3. FOR FIRE WALLS PROVIDE U.L. APPROVED SEAL ASSEMBLY FOR OPENING SIZE AND WALL TYPE.

4 CONDUIT SEALANT THRU WALLS
SCALE: NOT TO SCALE

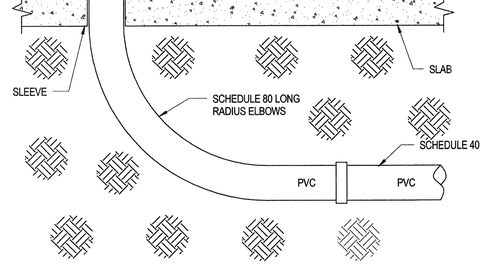


2 SERVICE GROUNDING & BONDING
SCALE: NOT TO SCALE

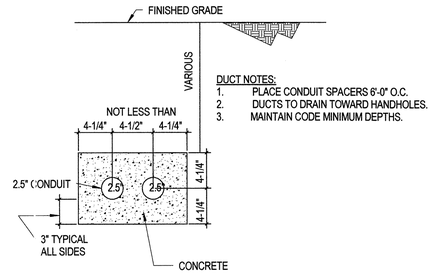


NOTE:
ALL DEVICES SHOWN MAY NOT BE USED. DETAIL INDICATES TYPICAL MOUNTING HEIGHTS ONLY.

5 MOUNTING HEIGHT DETAIL
SCALE: NOT TO SCALE



3 UNDERGROUND CONDUIT SWEEP
SCALE: NOT TO SCALE



1 DUCTBANK SECTION
SCALE: NOT TO SCALE

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RESEARCH, CONSERVATION AND EDUCATION STATION
PROJECT NUMBER: 134174

DATE: 01/12/2017
DESIGNED BY: JG
DRAWN BY: JG
REVIEWED BY: SS
REVISED:
REVISED:

SHEET TITLE
ELECTRICAL DETAILS

SHEET NUMBER
E003

PERCENTAGE! ISSUED FOR BID

01/12/18

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NUMBERED NOTES

NUMBERED NOTES	DESCRIPTION
1	STUB UP NEW UNDERGROUND ELECTRICAL CONDUITS INTO EXISTING TRANSFORMER.
2	FOR UNDERGROUND DUCT BANK REFER TO DETAIL 01/E003.
3	NEW UNDERGROUND ELECTRICAL CONDUITS TO BE STUB UP INTO NEW UTILITY DISCONNECT.

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RESEARCH, CONSERVATION AND EDUCATION STATION
PROJECT NUMBER: 134174

DATE:	01/12/2017
DESIGNED BY:	JG
DRAWN BY:	JG
REVIEWED BY:	SS
REVISED:	
REVISED:	

SHEET TITLE

ELECTRICAL SITE PLAN

SHEET NUMBER

E101

STATE OF TEXAS
BAGHER MEHRJOU
125 235
LICENSED
PROFESSIONAL ENGINEER

01/12/18

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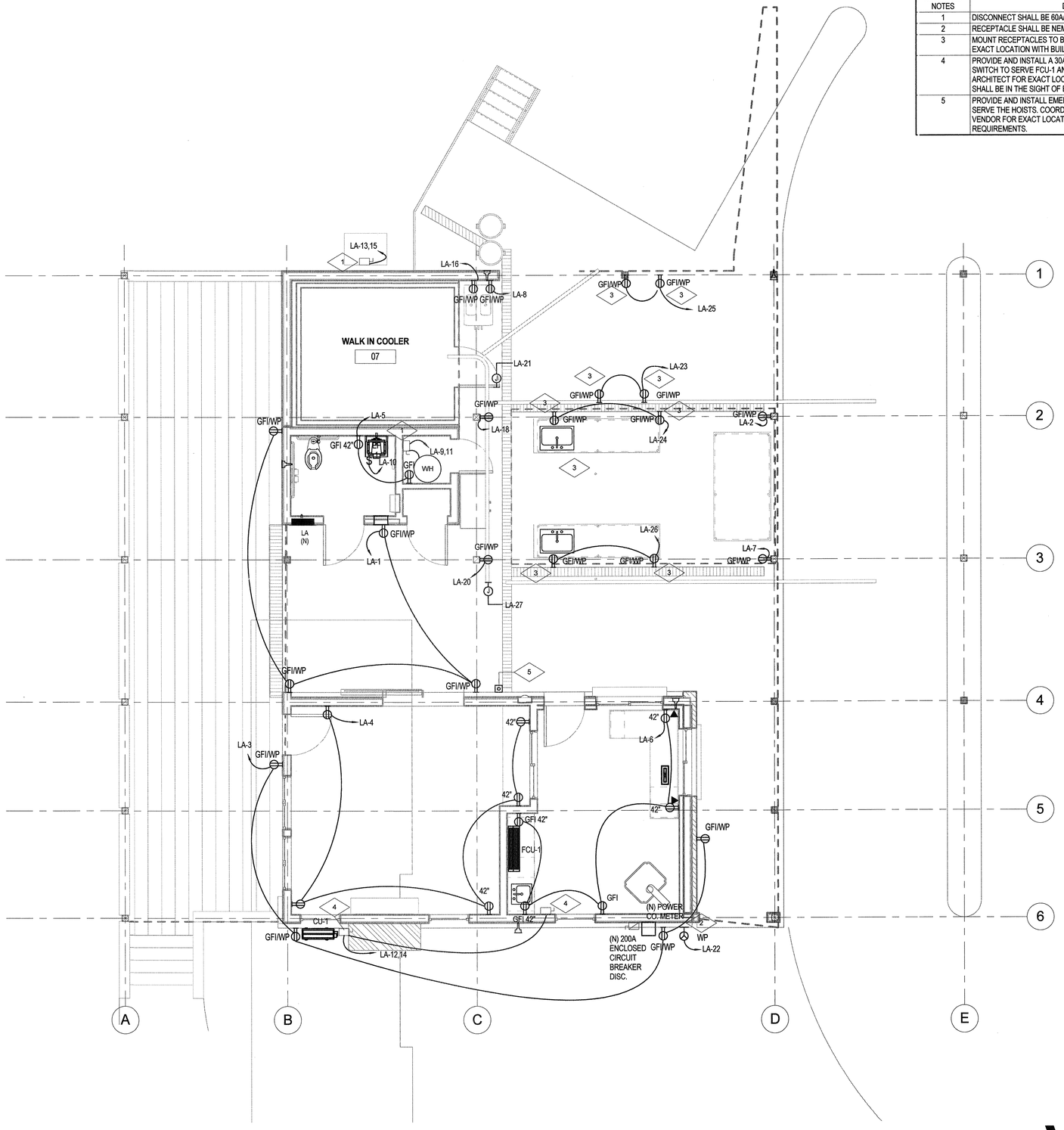
PERCENTAGE: ISSUED FOR BID

NUMBERED NOTES

NUMBERED NOTES	DESCRIPTION
1	DISCONNECT SHALL BE 60A/2P/240V/NF/N3R.
2	RECEPTACLE SHALL BE NEMA 5-30.
3	MOUNT RECEPTACLES TO BUILDING STRUCTURE. COORDINATE EXACT LOCATION WITH BUILDING OWNER.
4	PROVIDE AND INSTALL A 30A/240V/2P N3R SAFETY DISCONNECT SWITCH TO SERVE FCU-1 AND CU-1 AS SHOWN. COORDINATE WITH ARCHITECT FOR EXACT LOCATION. THE DISCONNECT SWITCH SHALL BE IN THE SIGHT OF EQUIPMENT.
5	PROVIDE AND INSTALL EMERGENCY SHUT OFF PUSH BUTTON TO SERVE THE HOISTS. COORDINATE WITH ARCHITECT AND HOISTS VENDOR FOR EXACT LOCATION, ELEVATION AND ALL REQUIREMENTS.



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RESEARCH, CONSERVATION AND EDUCATION STATION
PROJECT NUMBER: 134174

DATE: 01/12/2017
DESIGNED BY: JG
DRAWN BY: JG
REVIEWED BY: SS
REVISED:
REVISED:

SHEET TITLE
POWER FLOOR PLAN

SHEET NUMBER
E201

PERCENTAGE! ISSUED FOR BID

BAGHER MEHRJOU
125 235
LICENSED PROFESSIONAL ENGINEER
01/12/18

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TBPE Registration Number: F-14907

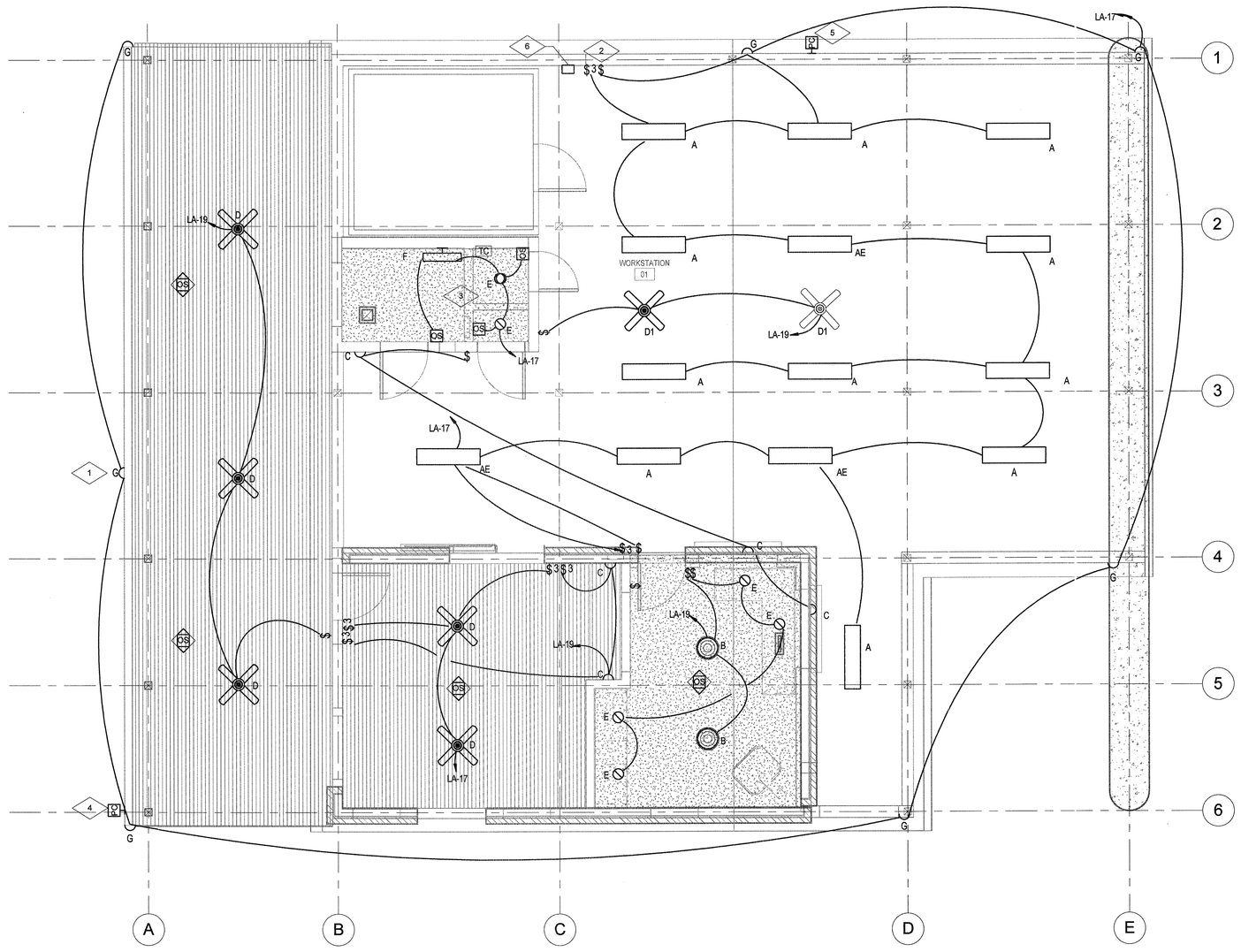
NUMBERED NOTES

NUMBERED NOTES	DESCRIPTION
1	CONTRACTOR TO PERMANENTLY AFFIX UL LISTED LABEL FOR G FIXTURE. ONLY 13 WATT LED BULB TO BE USED. TYPICAL OF ALL.
2	COORDINATE EXACT LOCATION WITH ARCHITECT. GANG TOGETHER ALL SWITCHES.
3	INTERMATIC TIME CLOCK.
4	PROVIDE PHOTOCELL FOR CONTROL OF CIRCUIT LA-17.
5	PROVIDE AND INSTALL A 20A-120V PHOTOCELL AS SHOWN. ALL EXTERIOR LIGHTS SHALL BE SERVED THROUGH THE PHOTOCELL. PLACE THE PHOTOCELL AT LEAST 10 FT A.F.F. COORDINATE WITH ARCHITECT FOR EXACT LOCATION AND ELEVATION.
6	PROVIDE AN ASTRONOMICAL LIGHTING TIME SWITCH TO TURN OFF ALL LIGHTING FIXTURE WHICH ARE NOT SERVED BY OCCUPANCY SENSORS. TIME SWITCH SHALL PROVIDE ALL REQUIREMENTS PER ARTICLE C405.2.2 OF 2015 VERSION OF IECC.

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER/CATALOG NO.	ALTERNATE MANUFACTURER	LAMP DATA				REMARKS
				QTY	DESCRIPTION	WATTS	VOLTS	
A	2X4 LED PENDANT LIGHT	COLUMBIA LIGHTING XEM-4-2-32-DFA-EP-U-XEHC		1	LED	64	UNV	CONTRACTOR TO PROVIDE LED EQUIVALENT LAMP.
AE	2X4 LED PENDANT LIGHT	COLUMBIA LIGHTING XEM-4-2-32-DFA-EP-U-XEHC-ELL14		1	LED	64	UNV	CONTRACTOR TO PROVIDE LED EQUIVALENT LAMP.
B	LED FLUSH MOUNT 14" DIAMETER LIGHT	BORDEN LIGHTING 122-20-CF2/32-120-MW-FAUX		1	LED	64	120	CONTRACTOR TO PROVIDE LED EQUIVALENT LAMP, 2700-3000K
C	LED MEDIUM SIZE WALLPACK	SPAULDING LMC-30LU-3K-3-1		1	LED	60	UNV	CONTRACTOR TO PROVIDE LED EQUIVALENT LAMP.
D	OUTSIDE FAN MOUNTED INCANDESCENT LIGHT	MINKA AIR K9401-L-HT		1	LED	50	120	
D1	OUTSIDE FAN MOUNTED INCANDESCENT LIGHT WITHOUT LIGHT KIT	MINKA AIR K9401-L-HT					120	NO LIGHTING KIT INSTALLED
E	LED DOWNLIGHT	HUBBELL LIGHTING LF6INC-MW60PAR38		1	LED	60	120	CONTACTOR TO PROVIDE LED EQUIVALENT LAMP
F	RESTROOM VANITY FIXTURE	BORDEN LIGHTING-571-LED2/12-120-MB		1	LED	24	120	
G	EXTERIOR FLOOD LIGHTING	HALOGEN P5203-20		1	LED	19	120	USE LED BULB '19PAR38HO/840NF25' OR EQUAL

1) REFER TO ARCHITECTURAL PLANS FOR FIXTURE LOCATIONS AND MOUNTING HEIGHTS.
2) COORDINATE LIGHT FIXTURE MODEL NO. AND LAMP REQUIREMENTS WITH ARCHITECT/OWNER PRIOR TO PURCHASE.
3) IN COMPLIANCE WITH NEC 410.130 ALL FLUORESCENT LUMINARIES UTILIZING DOUBLE-ENDED LAMPS SHALL INCLUDE A FACTORY INSTALLED INTEGRAL UL LISTED DISCONNECTING MEANS TO SIMULTANEOUSLY BREAK ALL SUPPLY CONDUCTORS, INCLUDING THE NEUTRAL CONDUCTOR, TO THE BALLAST. ANY EXISTING FLUORESCENT LUMINARIES WHICH ARE RELOCATED AND THEN RECONNECTED WILL BE CONSIDERED AS BEING INSTALLED AS A NEW LUMINAIRE AND THEREFORE REQUIRE A DISCONNECTING MEANS PER NEC 410.130.
4) WHEN SWITCHED VIA OCCUPANCY SENSOR, REPLACE FLUORESCENT INSTANT START BALLAST WITH PROGRAM START TYPE.



1 LEVEL 1 - LIGHTING RC
1/4" = 1'-0"

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STATE OF TEXAS
BAGHER MEHRJOU
125235
REGISTERED
PROFESSIONAL ENGINEER
01/12/18

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RESEARCH, CONSERVATION AND EDUCATION STATION
PROJECT NUMBER: 134174

DATE:	01/12/2017
DESIGNED BY:	JG
DRAWN BY:	JG
REVIEWED BY:	SS
REVISED:	
REVISED:	

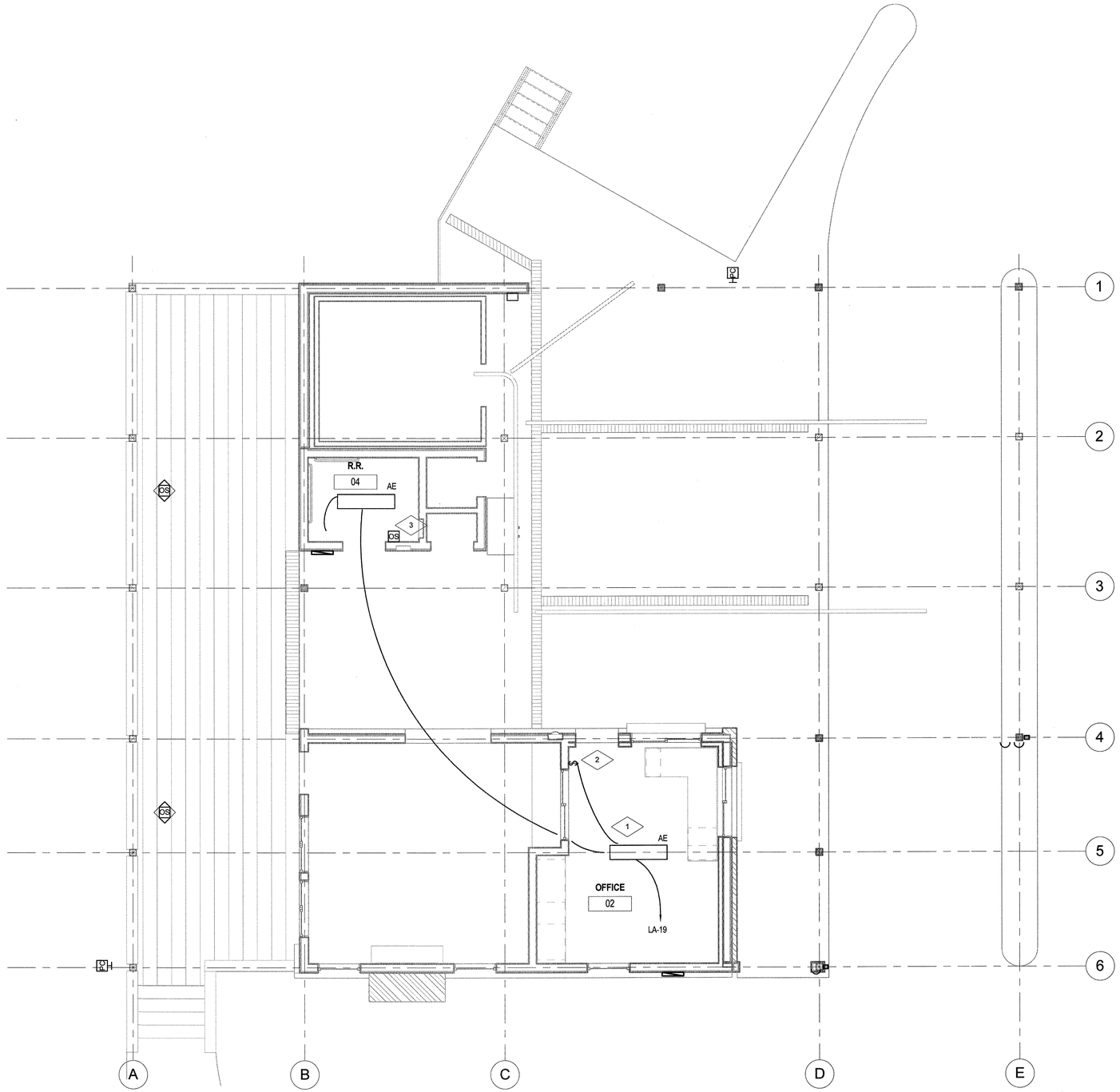
SHEET TITLE
LIGHTING PLAN

SHEET NUMBER
E301

PERCENTAGE: ISSUED FOR BID

NUMBERED NOTES

NUMBERED NOTES	DESCRIPTION
1	COORDINATE EXACT LOCATION OF LIGHTS WITH ARCHITECT AND OWNER.
2	PROVIDE AND INSTALL MANUAL OVERRIDE LIGHTING SWITCH AS SHOWN. THE SWITCH SHALL BE INCORPORATED WITH CEILING MOUNTED OCCUPANCY SENSOR. COORDINATE WITH ARCHITECT FOR EXACT LOCATION AND ELEVATION.
3	PROVIDE WALL MOUNTED VACANCY SENSOR FOR AUTOMATIC SHUT OFF LIGHTS AT THE AREA. PER 2015 VERSION OF IECC VACANCY SENSOR REQUIRED MANUAL ACTIVATION OF LIGHTS BY THE OCCUPANTS THEN TURNS THE LIGHTS OFF SOON AFTER THE AREA IS VACATED. COORDINATE WITH ARCHITECT FOR EXACT LOCATIONS AND ELEVATIONS.



1 MEZZANINE - LIGHTING PLAN
1/4" = 1'-0"

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KERR WMA
RESEARCH, CONSERVATION AND EDUCATION STATION
PROJECT NUMBER: 134174

DATE: 01/12/2017
DESIGNED BY: JG
DRAWN BY: JG
REVIEWED BY: SS
REVISED:
REVISED:

SHEET TITLE
LIGHTING PLAN ATTIC

SHEET NUMBER
E302

PERCENTAGE: ISSUED FOR BID

STATE OF TEXAS
BAGHER MEHRJOU
125235
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SHEET NOTES

A. PROVIDE CABLE TAP BOX(ES) AS REQUIRED PER POWER COMPANY'S SPECS AND STANDARDS.
B. PROVIDE BUSSED WEATHERHEAD, BUSSED C.T. CAN, SUPPORT RACK AND ALL ACCESSORIES AS REQUIRED AND AS REQUIRED PER POWER COMPANY'S SPECS AND STANDARDS.
C. PROVIDE 2" CONCRETE ENCASEMENT OF SERVICE FEEDERS BETWEEN THE POINT OF BLDG ENTRY AND MAIN ELECTRICAL EQPT.
D. ALL NEW WIRES SHALL HAVE THHN/THWN INSULATION.

FAULT CURRENT CALCULATION:

DATE OF CALCULATION: 11/28/2017

ASSUMPTIONS:
1. **UTILITY TRANSFORMER = 75 KVA**
2. **SHORT CIRCUIT IMPEDANCE = 1.5%**
3. **DISTANCE BETWEEN SERVICE EQUIPMENT AND TRANSFORMER = 20 FT.**

FAULT CURRENT RESULT AT THE SERVICE CONNECTION:
1. **THREE PHASE FAULT = 21,147 AMPS**
2. **SINGLE PHASE TO GROUND FAULT = 16,593 AMPS**

NEW

LA

LIGHTING PANELBOARD

REMARKS
1. SURFACE MOUNTED IN NEMA 1 ENCLOSURE
2. PROVIDE GROUND BUS

200	AMP MCB
208	VOLT P-P
120	VOLT P-N
1	PHASE
3	WIRE
42000	AIC SYMMETRICAL

B PH (AMP)	A PH (AMP)	N (AMP)	LOAD (VA)	TYPE	DESCRIPTION	WIRE	CKT BKR AMP /P	NO	NO	CKT BKR AMP /P	WIRE	DESCRIPTION	TYPE	LOAD (VA)	N (AMP)	A PH (AMP)	B PH (AMP)
	6.9	6.9	720	RP	RECEPTACLES	#12	20 /1	1	2	20 /1	#12	RECEPTACLES	RP	180	1.7	1.7	
8.7		8.7	900	RP	RECEPTACLES	#12	20 /1	3	4	20 /1	#12	RECEPTACLES	RP	900	8.7		8.7
	3.5	3.5	360	RP	RECEPTACLES	#12	20 /1	5	6	20 /1	#12	RECEPTACLES	RP	900	8.7	8.7	
1.7		1.7	180	RP	RECEPTACLES	#12	20 /1	7	8	20 /1	#12	RECEPTACLES	RP	1296	12.5		12.5
	38.5		8000	WH	EWH-1	#6	50 /2	9	10	20 /1	#12	EF-1	MC	480	4.7	4.7	
38.5				WH		–		11	12	15 /2	#12	FCU-1	AC	2046			9.8
	32.0		6656	MN	WALK-IN FREEZER	#8	40 /2	13	14		–		AC			9.8	
32.0				MN		–		15	16	20 /1	#12	RECEPTACLES	RP	1296	12.5		12.5
	9.4	9.4	980	LT	LIGHTING	#12	20 /1	17	18	20 /1	#12	RECEPTACLES	RP	180	1.7	1.7	
8.4		8.4	870	LT	LIGHTING	#12	20 /1	19	20	20 /1	#12	RECEPTACLES	RP	180	1.7		1.7
	13.8	13.8	1440	MM	OVERHEAD PULLEY-1	#10	30 /1	21	22	30 /1	#10	RECEPTACLE / GFI BREAKER	RP	2000	19.2	19.2	
3.5		3.5	360	RP	RECEPTACLES	#12	20 /1	23	24	20 /1	#12	RECEPTACLES	RP	360	3.5		3.5
	3.5	3.5	360	RP	RECEPTACLES	#12	20 /1	25	26	20 /1	#12	RECEPTACLES	RP	360	3.5	3.5	
12.0		12.0	1440	MM	OVERHEAD PULLEY-2	#10	30 /1	27	28	20 /1	–	SPARE					
					SPACE	–		29	30	20 /1	–	SPARE					

CONNECTED LOADS

0	B PH (AMP)	A PH (AMP)	N (AMP)	LOAD (VA)	TYPE	DESCRIPTION	0
					HT	ELECTRIC HEAT	
	29.4	29.4		6138	AC	AC REFRIGERATION	
	36.0	41.4		8640	MM	MISC. MOTORS	
	115.5	115.5		24000	WH	WATER HEATING	
					OL	OUTDOOR LIGHTING	
	27.3	30.6		6913	LT	INDOOR LIGHTING	
	149.8	138.5		31330	RP	RECEPTACLES	
					EX	EXISTING DEMAND	
		15.3		1592	MC	MISC. CONTINUOUS	
	96.0	96.0		19968	MN	MISC. NON-CONTINUOUS	
					KT	KITCHEN EQUIPMENT	
					SF	SUB-FEED	
	454.0	466.7		97681		*** TOTAL ***	
	12.0	13.8		2880		LARGEST MOTOR	

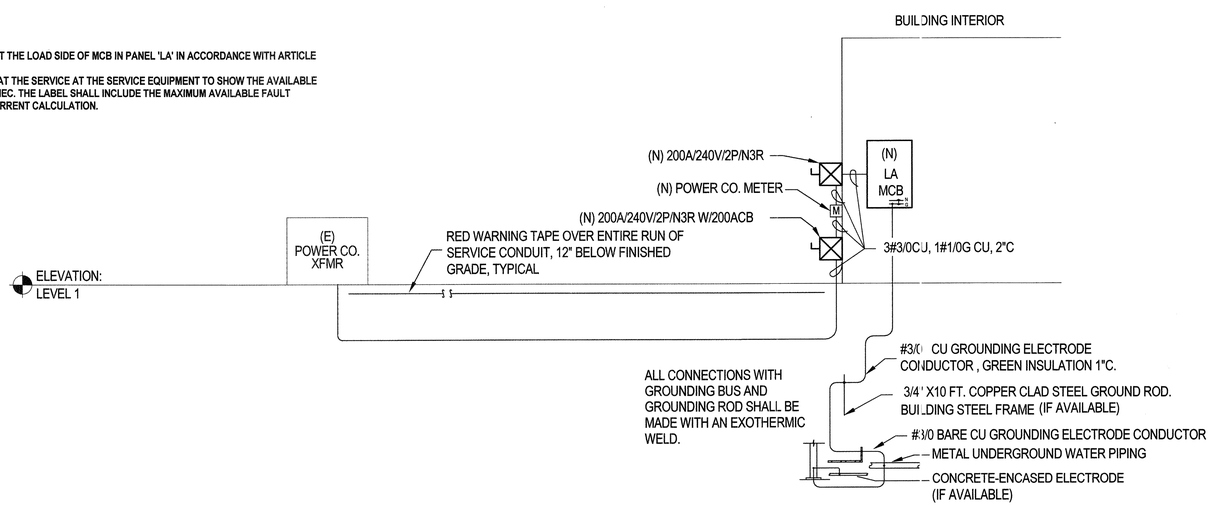
SUMMARIZED NEC LOADS

NEC FCTR	DESCRIPTION	TYPE	LOAD (VA)	N (AMP)	A PH (AMP)	B PH (AMP)	0
0.00	ELECTRIC HEAT	HT					
1.00	AC REFRIGERATION	AC	6138		29.4	29.4	
1.00	MISC. MOTORS	MM	8640		41.4	36.0	
1.00	WATER HEATING	WH	24000		115.5	115.5	
1.25	OUTDOOR LIGHTING	OL					
1.25	INDOOR LIGHTING	LT	7516		36.3	34.1	
220.44	RECEPTACLES	RP	20865	89.5	82.7	89.5	
1.25	EXISTING DEMAND	EX					
1.25	MISC. CONTINUOUS	MC	1920		19.1		
1.00	MISC. NON-CONTINUOUS	MN	19968		96.0	96.0	
0.65	KITCHEN EQUIPMENT	KT					
1.00	SUB-FEED	SF					
	FEED-THRU						
0.25	LARGEST MOTOR		720		3.5	3.0	
	*** TOTAL ***		89937	89.5	425.9	403.5	

ALL WIRES SHALL HAVE TYPE "THHN/THWN" INSULATION TYPICAL UNLESS NOTED OTHERWISE. ALL INDOOR CONDUITS SHALL BE EMT TYPICAL UNLESS NOTED OTHERWISE. ALL OUTDOOR CONDUITS SHALL BE RIGID GALV STEEL TYPICAL UNLESS NOTED OTHERWISE. ALL UNDERGROUND CONDUITS SHALL BE PVC SCH 40 TYPICAL UNLESS NOTED OTHERWISE.

ONE LINE DIAGRAM NOTES:

1. **PROVIDE AND INSTALL A TYPE 2 SPD AT THE LOAD SIDE OF MCB IN PANEL 'LA' IN ACCORDANCE WITH ARTICLE 285.24 OF NEC.**
2. **PROVIDE A DURABLE METALIC LABLE AT THE SERVICE AT THE SERVICE EQUIPMENT TO SHOW THE AVAILABLE FAULT CURRENT PER ARTICLE 110.24 NEC. THE LABEL SHALL INCLUDE THE MAXIMUM AVAILABLE FAULT CURRENT AND THE DATE OF FAULT CURRENT CALCULATION.**



1 PARTIAL RISER DIAGRAM
NO SCALE

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PROJECT NUMBER: 134174

DATE: 01/12/2017
DESIGNED BY: JG
DRAWN BY: BM
REVIEWED BY:
REVISED:
REVISED:

SHEET TITLE
ONE LINE DIAGRAM & PANEL SCHEDULE

SHEET NUMBER
E701

PERCENTAGE: ISSUED FOR BID

STATE OF TEXAS BAGHER MEHRJOU 125 235 LICENSED PROFESSIONAL ENGINEER
01/05/18

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PLUMBING GENERAL NOTES

1. PERMITS AND APPROVALS: GIVE ALL NOTICES, FILE ALL PLANS, OBTAIN ALL PERMITS AND LICENSES, PAY ALL FEES, AND OBTAIN ALL NECESSARY APPROVALS FROM AUTHORITIES HAVING JURISDICTION FOR THIS WORK.
2. INFORMATION PROVIDED ON THESE DRAWINGS HAS BEEN TAKEN FROM DESIGN DRAWINGS AND FIELD OBSERVATIONS. CONTRACTOR SHALL VERIFY ALL EXISTING FIELD CONDITIONS PRIOR TO PRICING AND COMMENCEMENT OF WORK.
3. THE CONTRACTOR SHALL INCLUDE IN THEIR BID THE COST OF REPLACEMENT, REPAIR, RELOCATION OR REMOVAL OF EXISTING MEP ELEMENTS AS REQUIRED TO COMPLETE THE INSTALLATION OF ALL SYSTEMS AS SPECIFIED, AND AS SHOWN ON THESE DRAWINGS. THE CONTRACTOR, BY SUBMITTING THEIR PROPOSAL, AGREES TO ACCEPT ALL EXISTING SITE CONDITIONS.
4. ALL WORK, METHODS AND INSTALLATIONS INVOLVED IN THE PLUMBING DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND NATIONAL CODES AND STANDARDS. WORK SHALL BE COMPLETE IN ALL RESPECTS AND IN ACCORDANCE WITH THE BEST ESTABLISHED AND ACCEPTED CONSTRUCTION PRACTICES.
5. THE DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC TO EXTENT THAT ALL OFFSETS, BENDS, SPECIAL FITTING LOCATIONS ARE NOT EXACTLY LOCATED. THE CONTRACTOR SHALL COORDINATE ROUTING OF PIPING IN CEILING SPACES WITH ALL TRADES. WORK SHOWN ON THESE DRAWINGS ARE INTENDED TO PROVIDE THE OVERALL ENGINEERING DESIGN CONCEPT AND DOES NOT PROVIDE FOR RELOCATIONS, OFFSETS, ETC., THAT ARE REQUIRED BY THE COORDINATION OF TRADES. THIS ADDITIONAL WORK SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT. SHOULD A CONFLICT OCCUR THIS CONTRACTOR SHALL NOTIFY THE ARCHITECT/ ENGINEER PRIOR TO INSTALLING AN ALTERNATE PIPING PLAN.
6. CONTRACTOR SHALL FURNISH ALL MATERIALS, EQUIPMENT, AND LABOR REQUIRED FOR A COMPLETE WORKING AND COORDINATED SYSTEM.
7. CONTRACTOR SHALL PROTECT EXISTING BUILDINGS, STRUCTURES AND UTILITIES FROM DAMAGE. ANY DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE CONTRACT.
8. ALL PENETRATIONS THROUGH EXISTING WALLS, PARTITIONS, AND FLOORS SHALL BE SLEEVED AND SEALED TO MAINTAIN THE INTEGRITY OF EXISTING STRUCTURE AND FIRE RATINGS.
9. ALL WORK SHALL BE SCHEDULED AND PERFORMED IN STRICT COORDINATION WITH ARCHITECTURAL PHASING PLANS. CONTRACTOR SHALL SCHEDULE AND PERFORM WORK IN SEQUENCE WITH THE PHASING PLAN.
10. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
11. ANY APPARATUS, APPLIANCE DEVICE, MATERIAL, OR WORK NOT SHOWN ON DRAWINGS BUT MENTIONED IN THE SPECIFICATIONS, OR VICE VERSA, OR ANY INCIDENTAL ACCESSORIES NECESSARY TO MAKE THE WORK COMPLETE AND PERFECT IN ALL RESPECTS AND READY FOR TESTING AND OPERATION, EVEN IF NOT PARTICULARLY SPECIFIED, SHALL BE FURNISHED, DELIVERED, AND INSTALLED BY CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.
12. THE CONTRACTOR SHALL AT ALL TIMES KEEP THE PREMISES FREE FROM ACCUMULATION OF WASTE MATERIAL OR RUBBISH, MAINTAIN THE WORK AREA IN A NEAT, ORDERLY MANNER, AND LEAVE THE PREMISES IN A BROOM-CLEAN CONDITION AT THE END OF EACH DAY. THE CONTRACTOR SHALL FURNISH TRASH BINS AND SHALL BE RESPONSIBLE FOR THE PROPER TRANSPORTATION AND DISPOSAL OF ALL WASTE MATERIAL. THE CONTRACTOR SHALL PROTECT EQUIPMENT AND WORK FROM DAMAGE DURING HANDLING AND INSTALLATION UNTIL COMPLETION OF CONSTRUCTION.
13. EXISTING FIXTURES, EQUIPMENT, SERVICES, AND CONNECTIONS WHICH ARE DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED AS REQUIRED TO PROVIDE ORIGINAL OPERATION TO THE SATISFACTION OF THE OWNER.
14. ANY INTERRUPTIONS AND/OR SHUTDOWN OF EXISTING SERVICES SHALL BE MADE ONLY WITH THE APPROVAL OF AND AT TIMES DESIGNATED BY OWNER.
15. UPON COMPLETION OF WORK THE CONTRACTOR SHALL DEMONSTRATE, TO THE OWNER'S SATISFACTION THE OPERATION OF THE INSTALLED EQUIPMENT AND SYSTEMS TO THE INTENT OF THE DESIGN.
16. ALL PLUMBING FIXTURES SHALL MEET TAS/ADA REQUIREMENTS. PLUMBING FIXTURES SHALL BE MOUNTED PER ARCHITECTURAL DIMENSIONS AND ELEVATIONS TO SATISFY TAS/ADA REQUIREMENTS. CONTRACTOR SHALL COORDINATE WITH ARCHITECTURAL CASEWORK DRAWINGS TO ENSURE ALL TAS/ADA REQUIREMENTS ARE SATISFIED.
17. ROUTE ALL PIPING AS TIGHT AS POSSIBLE TO STRUCTURE. PIPING SHALL BE INSTALLED PARALLEL/PERPENDICULAR TO WALLS AND COLUMN LINES.
18. INSTALL ALL FLOOR MOUNTED EQUIPMENT ON CONCRETE HOUSEKEEPING PADS. GENERAL CONTRACTOR SHALL PROVIDE HOUSEKEEPING PADS, COORDINATE REQUIREMENTS WITH GENERAL CONTRACTOR.
19. ALL CONNECTIONS BETWEEN PIPES OF DISSIMILAR MATERIALS SHALL BE MADE WITH DIELECTRIC UNIONS.
20. LOCATE ISOLATION VALVES FOR EQUIPMENT AS CLOSE TO THE MAIN AS POSSIBLE.
21. COORDINATE ALL WALL MOUNTED DEVICE LOCATIONS WITH ARCHITECTURAL INTERIOR ELEVATIONS.
22. COORDINATE LOCATION OF ALL DISCONNECTS, CONTROL PANELS AND ELECTRICAL CONNECTIONS FOR ALL EQUIPMENT TO MAINTAIN NEC REQUIRED CLEARANCES OF 42" DEEP AND 30" WIDE IN FRONT OF THE EQUIPMENT.
23. DO NOT ROUTE PIPING INSIDE ELECTRICAL AND COMMUNICATION ROOMS. IN UNAVOIDABLE INSTANCES, ALL EQUIPMENT SHALL BE PROTECTED FROM OVERHEAD PIPING WITH DRAIN PANS. ROUTE DRAIN FROM DRAIN PANS TO NEAREST FLOOR DRAIN OR OTHER RECEPTOR AS INDICATED ON CONTRACT DRAWINGS, OR NEAREST LAVATORY TAILPIECE. PROVIDE SENSOR IN DRAIN PAN TO SEND ALARM TO BAS IN CASE OF LEAKAGE INTO PAN.
24. PROVIDE ACCESS, INCLUDING NECESSARY ACCESS DOORS, FOR NEW AND EXISTING EQUIPMENT REQUIRING ACCESS FOR OPERATION AND/OR MAINTENANCE THROUGH HARD SURFACES (FOR ANY FLOW DEVICE, VALVES, ETC.). PROVIDE ADEQUATE LOCATIONS INFORMATION SO ACCESS CAN BE INSTALLED BY INTERIORS SUBCONTRACTOR IF SO REQUIRED BY GENERAL CONTRACTOR.
25. ALL MAJOR AND SECTIONAL/BALANCING VALVES SHALL BE TAGGED.
26. SLOPE AND ARRANGE WATER PIPING SYSTEMS TO ESTABLISH HIGH POINTS FOR AIR ELIMINATION AND LOW POINTS TO PERMIT PROPER DRAINING OF EACH LINE.
27. COORDINATE ALL PIPING ROOF PENETRATIONS AND FLOOR PENETRATIONS WITH STRUCTURAL.
28. sPACE LOCATIONS FOR MATERIALS, EQUIPMENT, AND FIXTURES HAVE BEEN MADE ON THE BASIS OF PRESENT AND KNOWN FUTURE REQUIREMENTS AND THE DIMENSIONS OF ITEMS OF EQUIPMENT OR FIXTURES OF A PARTICULAR MANUFACTURER WHETHER INDICATED OR NOT. THE CONTRACTOR SHALL VERIFY THAT ALL MATERIALS, EQUIPMENT, AND FIXTURES PROPOSED FOR USE ON THIS PROJECT ARE WITHIN THE CONSTRAINTS OF THE ALLOCATED SPACE.
29. ALL PIPE PENETRATIONS THROUGH WALLS AND FLOORS SHALL MAINTAIN THE CONSTRUCTION/FIRE RATING OF THE STRUCTURE.
30. REFER TO STRUCTURAL ENGINEER FOR METHOD OF PIPE PENETRATIONS THROUGH STRUCTURAL MEMBERS (BEAMS, JOISTS, ...)
31. INSULATE THE FIRST 20 FEET OF CONNECTED DRAIN PIPING RECEIVING CONDENSATE AND/OR ICE MACHINE WASTE.
32. COORDINATE VTR LOCATIONS WITH AIR INTAKE/EXHAUST LOCATIONS. THERE SHALL BE AT LEAST 10 FEET DISTANCE BETWEEN INTAKE AND EXHAUST LOCATIONS.
33. PROVIDE A BACKFLOW PREVENTER FOR EQUIPMENT AS REQUIRED BY CODE, APPLICABLE STANDARDS, AND SPECIFICATIONS.
34. PROVIDE TRAP PRIMER FOR ALL FLOOR DRAINS/FLOOR SINKS OR OTHER AHJ APPROVED TRAP SEAL PROTECTION DEVICES.
35. PROVIDE SHOCK ARRESTORS AT ENDS OF DCW & DHW PIPING RUNS; AT ALL QUICK-CLOSING FIXTURES SUCH AS SHOWERS, FLUSHVALVES, SOLENOID VALVES, SINGLE-HANDLED FAUCETS, AND SENSOR OPERATED FAUCETS; AND, FOR ALL GROUPS OF FIXTURES. SHOCK ARRESTORS SHALL BE PLACED AS CLOSE AS POSSIBLE TO THE LAST FIXTURE SERVED ON THE PIPING RUN.
36. PROVIDE OFFSETS OR EXPANSION LOOPS IN DHW/DHWR LINES IF STRAIGHT LENGTH EXCEEDS 100 FEET IN LENGTH.
37. PROVIDE ISOLATION VALVES AT EACH BRANCH TIE IN TO MAIN PLUMBING LINES, AT EACH PIECE OF EQUIPMENT, AT EACH TOILET ROOM GROUP OF FIXTURES, AND AT OTHER ROOMS THAT MAY HAVE MULTIPLE FIXTURES.
38. THIS CONTRACTOR SHALL LEAVE ALL WORK SPACES IN A CLEAN AND ORDERLY MANNER FREE OF ANY DEBRIS AS ORIGINALLY FOUND BEFORE EACH WORK SESSION.
39. BUILDING ENGINEER REVIEW: CONTACT THE BUILDING ENGINEER WHEN THIS PORTION OF THE WORK IS COMPLETE AND SCHEDULE AN INSPECTION OF THE PLUMBING SYSTEMS WITH THE BUILDING ENGINEER TO DETERMINE PUNCH LIST DEFICIENCIES PRIOR TO THE INSTALLATION OF THE CEILING.
40. PUMP IS CONTROLLED WITH ADJUSTABLE TIME CLOCK FOR HOURS OF OPERATION. DURING OPERATIONAL HOURS, PUMP IS TURNED ON AUTOMATICALLY BASED ON IDENTIFICATION OF DEMAND FOR HOT WATER. CONTROLLS SHALL AUTOMATICALLY TURN OFF PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED SET POINT OF THE AQUASTAT. (IECC 2015)
41. MAXIMUM K-FACTOR FOR FIBERGLASS INSULATION SHALL BE 0.23 @75 DEGREES F WITH A MINIMUM DENSITY OF 3 LBS PER CUBIC FOOT. INSULATION ON HOT WATER PIPING UNDER 1-1/2" DIAMETER REQUIRES 1" INSULATION AND HOT WATER PIPING ABOVE 2" DIAMETER REQUIRES 1.5" INSULATION. (IECC 2015 AND ASHRAE 90.1)

ABBREVIATIONS - PLUMBING

(E)	EXISTING
(N)	NEW
AFF	ABOVE FINISHED FLOOR
AP	ACCESS PANEL
BFF	BELOW FINISHED FLOOR
BLDG	BUILDING
BOP	BOTTOM OF PIPE
BV	BALANCING VALVE
CD	CONDENSATE DRAIN
CLG	CEILING
CO	CLEANOUT
CONN	CONNECTION
CONT	CONTINUATION
CP	CIRCULATION PUMP
CV	CHECK VALVE
CW	DOMESTIC COLD WATER
DF	DRINKING FOUNTAIN
DN	DOWN
DR	DRAIN
DROP	DROP (WITHIN FLOOR)
DWG	DRAWING
EL	ELEVATION
ET	EXPANSION TANK
EWH	ELECTRIC WATER HEATER
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FL	FLOOR
FP	FIRE PUMP
FSK	FLOOR SINK
FT	FEET
GPM	GALLONS PER MINUTE
GV	GATE VALVE
HB	HOSE BIBB
HD	HUB DRAIN
HW	HOT WATER
HWR	HOT WATER RETURN
IE	INVERT ELEVATION
IN	INCH
IW	INDIRECT WASTE
JP	JOCKEY PUMP
JS	JANITOR SINK
L	LAVATORY
MH	MANHOLE
MS	MOP SINK
NC	NORMALLY CLOSED
NIC	NOT IN THIS CONTRACT
NO	NORMALLY OPEN
NPW	NON-POTABLE
OFD	OVERFLOW DRAIN
OS&Y	OUTSIDE SCREW & YOKE GATE VALVE
OST	OVERFLOW STORM PIPING
POC	POINT OF CONNECTION
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
RD	ROOF DRAIN
RISE	RISE (WITH IN FLOOR)
SA	SHOCK ABSORBER
SAN	SANITARY
SF	SQUARE FEET
SH	SHOWER
SK	SINK
SPKR	SPRINKLER
ST	STORM PIPING
TD	TRENCH DRAIN
TMV	TEMPERATURE MIXING VALVE
TP	TRAP PRIMER
TYP	TYPICAL
UP	UP (PENETRATES FLOOR SLAB)
UR	URINAL
V	VENT
VB	VACUUM BREAKER
VR	VENT RISER
VTR	VENT THROUGH ROOF
WC	WATER CLOSET
WCO	WALL CLEANOUT
WF	WATER FILTER
WFU	WATER FIXTURE UNIT
WH	WALL HYDRANT
WTS	WATER TIGHT SLEEVE

SYMBOL LEGEND

	Y-STRAINER WITH BLOW OFF VALVE
	FLEXIBLE CONNECTION
	SEISMIC JOINT
PIV	POST INDICATOR VALVE
	SHOCK ABSORBER
	VACUUM BREAKER
M	MANUAL AIR VENT
A	AUTOMATIC AIR VENT
	PRESSURE GAUGE AND COCK
	THERMOMETER
	WATER FLOW SWITCH
	BASKET STRAINER
	VALVE (SPECIFICATION FOR TYPE)
	CHECK VALVE
	CHECK VALVE WITH A.B.D.
	SOLENOID VALVE
	PRESSURE REDUCING VALVE
	OS&Y (OUTSIDE SCREW & YOKE) VALVE
	AUTOMATIC FLOW CONTROL VALVE
	BUTTERFLY VALVE MANUAL
	GLOBE VALVE
	CALIBRATED BALANCING VALVE
	BALANCING VALVE
	VALVE WITH TAMPER SWITCH
	GAS COCK VALVE
	SEISMIC VALVE
	RELIEF VALVE
	ANGLE RELIEF VALVE
	TEMPERATURE MIXING VALVE
	UNION
	REDUCER
	ECCENTRIC REDUCER (E.R.)
	SLEEVE
	PUMP
M	METER
	HOSE BIBB
	WATER HAMMER ARRESTER
	FLOOR DRAIN, AREA DRAIN, PLANT DRAIN, GARAGE DRAIN
	FLOOR SINK
	ROOF DRAIN
	OVERFLOW ROOF DRAIN
	POINT OF CONNECTION (NEW TO EXISTING)
	DEMO EXISTING PIPING TO THIS POINT
	FIRE DEPARTMENT CONNECTION
	FIRE HOSE VALVE
	FIRE HOSE VALVE CABINET
	FIRE DEPT. HOSE VALVE W/ CAP & CHAIN
	ROOF MANIFOLD
	SPRINKLER FLOOR CONTROL VALVE ASSEMBLY
	NEW FIRE HYDRANT
	EXISTING FIRE HYDRANT
	TAMPER SWITCH
ACV	ALARM CHECK VALVE W/ ALL RELATED APPURTENANCES
PACP	PRE-ACTION CONTROL PANEL
PAV	PRE-ACTION VALVE W/ ALL RELATED APPURTENANCES
DPV	DRY PIPE VALVE W/ ALL RELATED APPURTENANCES
DLV	DELUGE VALVE W/ ALL RELATED APPURTENANCES
DCVA	DOUBLE CHECK VALVE ASSEMBLY

SYMBOL LEGEND

RPBP	REDUCED PRESSURE BACKFLOW PREVENTER ASSEMBLY
	UPRIGHT SPRINKLER HEAD
	PENDANT SPRINKLER HEAD
	CONCEALED PENDANT SPRINKLER HEAD
	SIDEWALL SPRINKLER HEAD
	EXTENDED COVERAGE SPRINKLER HEAD
	BOTTOM PIPE CONNECTION
	TOP PIPE CONNECTION
	VALVE IN VERTICAL
	P-TRAP
	FLOOR CLEANOUT/GRADE CLEANOUT
	CLEANOUT (TWO-WAY) (PROVIDE CONCRETE PAD OUTSIDE 18" X 24" X 4")
	CLEANOUT/PLUG
	PIPE DOWN
	PIPE UP
	PIPE CAP
	CHANGE IN PIPE ELEVATION
	ARROW INDICATES DIRECTION OF FLOW
	INSULATED AND HEAT TRACED PIPING
	WALL HYDRANT
	PITCH PIPE DOWN IN DIRECTION OF ARROW
	BRANCH CONNECTION FROM THE SIDE
	ACCESS PANEL FOR TRAP PRIMER

PIPING LEGEND

SAN	SANITARY (ABOVE FLOOR)
SAN	SANITARY (BELOW FLOOR)
V	VENT PIPING
ST	STORM DRAIN PIPING
OST	OVERFLOW STORM PIPING
IW	INDIRECT WASTE PIPING
CD	CONDENSATE DRAIN PIPING
SPD	SUMP PUMP DISCHARGE PIPING
SED	SEWAGE EJECTOR DISCHARGE PIPING
GW	GREASE WASTE PIPING
SPV	SUMP PUMP VENT PIPING
SEV	SEWAGE EJECTOR VENT PIPING
PDR	PLANTER DRAIN PIPING (ABOVE FLOOR)
PDR	PLANTER DRAIN PIPING (BELOW FLOOR)
PD	PUMP DISCHARGE
CL	CENTER LINE
G	NATURAL GAS PIPING (LOW PRESSURE)
AW	ACID WASTE PIPING
AV	ACID VENT PIPING
F	FIRE WATER SUPPLY PIPING
PA	PREACTION DRY PIPING
SP	SPRINKLER PIPING
FSP	FIRE STANDPIPE
DR	SPRINKLER DRAIN PIPING
DFS	DRY PIPE STANDPIPE
CW	DOMESTIC COLD WATER PIPING
HW	DOMESTIC HOT WATER PIPING
HWR	DOMESTIC HOT WATER RETURN PIPING
IRR	IRRIGATION PIPING
TW	TEMPERED WATER PIPING
DI	DEIONIZED WATER

PLUMBING SHEET LIST

SHEET NUMBER	SHEET NAME
P001	PLUMBING COVER SHEET
P002	PLUMBING SCHEDULES & ABBRVIATIONS
P101	PLUMBING UNDERFLOOR PLAN
P201	PLUMBING FLOOR PLAN
P401	PLUMBING RISER DIAGRAM
P501	PLUMBING DETAILS

PROJECT DESIGN CRITERIA

LOCATION: HOUSTON, TEXAS

APPLICABLE CODES (INCLUDING AHJ AMENDMENTS):

BUILDING:	2012 IBC	PLUMBING:	2012 UPC
MECHANICAL:	2012 UMC	FIRE:	2012 IFC
ELECTRICAL:	2014 NEC	FUEL GAS:	2012 IFGC
ENERGY:	2012 IEEC		

LATITUDE:
(DEGREES N. LATITUDE): X

ELEVATION:
(FT. ABOVE SEA LEVEL): X

PIPE MATERIAL SCHEDULE

ABOVE GRADE INSIDE BUILDING

SANITARY WASTE, VENT AND STORM PIPING SHALL BE STANDARD WEIGHT NO HUBB CAST IRON IN CONFORMANCE WITH ASTM888/ASTMA74 AND CISPI 301. USE HIGH TORQUE NO HUB COUPLINGS SERIES 301 IN COMPLIANCE WITH CISPI 301.

DOMESTIC WATER PIPING SHALL BE PEX PIPING.

SPRINKLER PIPING SHALL BE STANDARD WEIGHT BLACK STEEL PIPE SCHEDULE 40.

BELOW GRADE INSIDE BUILDING

SANITARY WASTE, VENT AND STORM PIPING SHALL BE HUB-SPIGOT SERVICE WEIGHT CAST IRON IN COMPLIANCE WITH ASTM A74 AND CISPI WITH PUSH ON RUBBER GASKET JOINTS IN COMPLIANCE WITH ASTM C564.

DOMESTIC WATER PIPING SHALL BE PEX PIPING BELOW GRADE.

SHOCK ARRESTOR SCHEDULE

	FIXTURE UNITS	SIZE	MODEL NUMBER*
A	1-11	1/2" NPT	SC-500
B	12-32	3/4" NPT	SC-750
C	33-60	1" NPT	SC-1000
D	61-113	1 1/4" NPT	SC-1250
E	114-154	1 1/2" NPT	SC-1500
F	155-330	2" NPT	SC-2000

NOTE: ALL ARRESTORS SHALL BE "A" UNLESS NOTED OTHERWISE
* MODEL NUMBERS ARE PRECISION PLUMBING PRODUCTS

MISCELLANEOUS

P / 1	P = SAN, VENT STACK OR DOMESTIC WATER RISER ST = STORM DRAIN LEADER RISER F = FIRE STANDPIPE RISER	RISER RISER NO.
CP / 1	EQUIPMENT DESIGNATION	EQUIPMENT EQUIPMENT NO.
1 / P2.1	DETAIL DESIGNATION	DETAIL NUMBER DWG. SHEET NO.
1	SHEET NOTE NUMBER	
1	REVISION NUMBER	

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DRAWN BY: CT SB
REVIEWED BY:
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STATE OF TEXAS
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SHEET TITLE
PLUMBING COVER SHEET

SHEET NUMBER
P001

PERCENTAGE: ISSUED FOR BID

PLUMBING FIXTURE SCHEDULE

DESIGNATION	TYPE	CONNECTION SIZES				DESCRIPTION
		WASTE	VENT	CW	HW	
FS-1	FLOOR SINK	AS NOTED ON PLANS	AS NOTED ON PLANS	-	-	JR SMITH 3100-Y CAST IRON BODY FLANGED RECEPTOR WITH ACID RESISTANT INTERIOR, NICKEL BRONZE RIM, AND SECURED 1/2 GRATE. FLOOR SINK SHALL HAVE 8-1/2" TOP GRATE WITH 6" SUMP, ALUMINUM DOME STRAINER, SEEPAGE FLANGE, MEMBRANE CLAMPING DEVICE.
HB-1	HOSE BIBB	-	-	3/4"	-	J.R. SMITH NON-FREEZE WALL HYDRANT MODEL No. 5609QT, SELF DRAINING, ANTI-SIPHON WITH VANDAL RESISTANT INTEGRAL VACUUM BREAKER.
HB-2	HOSE REEL	-	-	3/4"	-	T&S STAINLESS STEEL RETRACTABLE HOSE REELS MODEL NO B-7112-01, OPEN STAINLESS STEEL HOSE REEL, HIGH FLOW SPRAY VALVE, 3/8" X 15' HEAVY-DUTY NON-MARKING HOSE, RATCHETING SYSTEM, MULTI-FIT BRACKET, ADJUSTABLE HOSE BUMPER AND 3/8" NPT FEMALE INLET.
LV-1	LAVATORY/WALL HUNG ADA COMPLIANT FIXTURE	2"	1-1/4"	1/2"	1/2"	AMERICAN STANDARD LUCERNE NO. 0355.015 WHITE VITREOUS CHINA 8" CENTER, RECTANGULAR WALL HUNG LAVATORY WITH AMERICAN STANDARD 6540-L-10.180 CONCEALED FITTING FOR 8" CENTERS 6"WRIST BLADE HANDLES 5"GOOSENECK SPOUT FROM CENTERLINE OF FAUCET TO OUTLET 1.0 GPM FLOW CONTROL LAMINAR FLOW STREAM, PLAIN END. MCGUIRE NO. 155-WC, 1-1/4" OFFSET WHEELCHAIR STRAINER DRAIN. MCGUIRE 8872 CAST BRASS P-TRAP WITH CLEANOUT, TUBING WASTE TO WALL AND ESCUTCHEON. MCGUIRE 167LK CHROME PLATED ANGLE SUPPLY WITH 1/2"X1/2" FLEX RISER AND 1/2"X 3/8 LOOSE KEY STOP WITH WROUGHT ESCUTCHEON REFER TO ARCHITECTURAL FOR MOUNTING HIGH INSULATE DRAIN TAILPIECE, P-TRAP AND SUPPLIES WITH TRUEBRO OR PLUMBEREX INSULATION KIT
SK-1	SINGLE COMPARTMENT SINK	2"	1-1/2"	1/2"	1/2"	JUST US-1830-A (18"W x 30"L x 8"D) UNDERMOUNT SINGLE COMPARTMENT SINK, 18 GAUGE, 304 STAINLESS STEEL, SELF RIMMING TOP MOUNT WITH GRIP-RIM PLUS WITH STAINLESS STEEL MOUNTING CHANNELS. DRAIN PUNCHED FOR JUST J-35-SSF DRAIN. FAUCET: KROWNE ROYAL SERIES PLUMBING 8" CENTER DECK MOUNT PRE-RINSE FAUCET MODEL NO. 17-208W, 1.5 GPM. REFER TO ARCHITECT FOR MOUNTING HEIGHTS.
SK-2	SINGLE COMPARTMENT SINK, ADA COMPLIANT	2"	1-1/2"	1/2"	1/2"	JUST SL-ADA-17519-A-GR (19"W X 17-1/2"L X 5-1/2" D) 18 GAUGE, 304 STAINLESS STEEL SELF-RIMMING TOP MOUNT GRIP-RIM PLUS WITH STAINLESS STEEL MOUNTING CHANNELS. DRAIN PUNCH 3-1/2" CENTERED FOR JUST J-35 DRAIN. FAUCET: CHICAGO FAUCETS NO. 895-317GN2BE4ABCP, SINK FAUCET FOR HOT AND COLD WATER, DECK-MOUNTED WITH 4" FIXED CENTERS, CHROME PLATED. RIGID/SWING GOOSENECK SPOUT, 5-1/4" CENTER-TO-CENTER. 2.0 GPM, MALE ROSE SPRAY. 4" METAL, VANDAL-PROOF, WRISTBLADE HANDLES WITH SIXTEEN-POINT, TAPERED BROACH AND SECURED BLUE AND RED INDEX BUTTONS. QUATURN REBUILDABLE COMPRESSION CARTRIDGE, OPENS AND CLOSES 90°. CLOSES WITH WATER PRESSURE, FEATURES SQUARE, TAPERED STEM. 1/2" NPSM SUPPLY INLETS AND COUPLING NUT FOR 3/8" OR 1/2" FLEXIBLE RISER.
SK-3	SINLGE COMPARTMENT SINK (ADA COMPLIANT)	2"	1-1/2"	1/2"	1/2"	JUST US-ADA-1830-A (18"W x 30"L x 5-1/2"D) UNDERMOUNT, ADA COMPLIANT, SINGLE COMPARTMENT SINK, 18 GAUGE, 304 STAINLESS STEEL, SELF RIMMING TOP MOUNT WITH GRIP-RIM PLUS WITH STAINLESS STEEL MOUNTING CHANNELS. DRAIN PUNCHED FOR JUST J-35 DRAIN. FAUCET: KROWNE ROYAL SERIES PLUMBING 8" CENTER DECK MOUNT PRE-RINSE FAUCET MODEL NO. 17-208W 1.5 GPM. REFER TO ARCHITECT FOR MOUNTING HEIGHTS.
WC-1	WATERCLOSET FLOOR MOUNT,ED ADA COMPLIANT FIXTURE STAFF/PUBLIC AREAS	4"	2"	1-1/2"	-	AMERICAN STANDARD MADERA MODEL No. 3461.001 EVERCLEAN WHITE WATER CLOSET FLOOR MTD., VITREOUS CHINA, LOW CONSUMPTION 1.28 GPF, 16.5" RIM HEIGHT FOR ADA COMPLIANCE, 12" ROUGH-IN, ELONGATED BOWL, DIRECT FED SIPHON JET ACTION. FULLY GLAZED TRAPWAY, 1-1/2 TOP SPUD. PROVIDE EXPOSED MANUAL FLUSHOMETER MODEL SLOAN ROYAL 111-1.28, CHROME PLATED, HIGH BACK PRESSURE VACUUM BREAKER, FLUSH CONNECTION WITH ONE PIECE BOTTOM HEX COUPLING NUT, 1" IPS SCREWDRIVER BACK-CHECK, FREE SPINNING VANDAL RESISTANT STOP CAP, ADJUSTABLE TAILPIECE, SPUD COUPLING AND FLANGE FOR 1-1/2" TOP SPUD, WALL BUMPERS, MANUAL OVERRIDE FLUSH. PROVIDE OLSONITE NO. 95SSCT HEAVY DUTY, WHITE OPEN FRONT SEAT LESS COVER WITH SELF-SUSTAINING CHECK HINGE.

ELECTRIC WATER HEATER SCHEDULE

DESIGNATION	MANUFACTURER	MODEL	INPUT KW	STORAGE GALLONS	RECOVERY G.P.H.	DEGREE RISE °F	LWT °F	# OF ELEM.	VOLTAGE/PHASE	OPERATING WEIGHT	SIMUTANEOUS ELEMENT ORIENTATION	REMARKS
EWH-1	A.O. SMITH	DEN-66	8	66	32	100	120°F	1	208/1	727	NO	

HOT WATER RECIRCULATION PUMP SCHEDULE

DESIGNATION	MANUFACTURER	MODEL NO.	GPM	HEAD (FT. H2O)	MOTOR			NOTES
					WATTS	VOLTAGE	PHASE	
CP-1	BELL & GOSSET	NBF-8S/LW	1	5	39	115	1	

CROSS CONNECTION SCHEDULE

FIXTURE, EQUIPMENT OR APPLICATION REQUIRING BACKFLOW DEVICE	HAZARD LEVEL	DEVICE AT FIXTURE/EQUIPMENT	DEVICE MAKE & MODEL NUMBER	ADDITIONAL AREA DEVICE REQUESTED	ADDITIONAL DEVICE MAKE & MODEL NUMBER	NOTES
TRAP PRIMER (WASTE CONNECTION)	HIGH	AG	-	RPBP	WATTS # LF-009 OR # LF-909	1,2,3,4,5,6,7
MECHANICAL MAKE-UP	MODERATE	DCV	WATTS # LF-007 OR # LF-709	RPBP(2)	WATTS # LF-009 OR # LF-909	1,2,3,4,5,6,7
HOSE BIBBS	HIGH	AVB	V.B. INTEGRAL W/H.B.	RPBP	WATTS # LF-009 OR # LF-909	1,2,3,4,5,6,7
DOMESTIC WATER SERVICE	-	SEE NOTE 1	-	RPBP'S AT SERVICE ENTRANCE, SEE NOTE 3	WATTS # LF-909 OR # LF-909-RPDA	1,2,3,4,5,6,7
FIRE PROTECTION WATER SERVICE	HIGH	DETECTOR CHECK AT PROPERTY LINE	REFER TO CIVIL DRAWINGS	SEE NOTE 4	WATTS # LF-757, # 757DCDA, OR # 709DCDA	1,2,3,4,5,6,7
MOP SINKS/SERVICE SINKS	HIGH	AVB	V.B. INTEGRAL W/FAUCET	-	-	1,2,3,4,5,6,7
WATER HEATER DRAIN	LOW	6"AG	-	-	-	1,2,3,4,5,6,7
ICE DRAINS FROM WALK-IN COOLERS & FREEZERS, ICE MACHINES, STEAM TABLES, PREPARATION SINKS AND OTHER KITCHEN EQUIPMENT AS SPECIFIED.	HIGH	AG AT FD/FS	-	-	-	1,2,3,4,5,6,7

1. REFER TO THIS SCHEDULE FOR INDIVIDUAL FIXTURE & EQUIPMENT REQUIREMENTS.
2. RPZ DEVICE SHALL BE STAINLESS STEEL.
3. PARALLEL ASSEMBLIES REQUIRED, SEE DETAIL.
4. RPBP AT SERVICE ENTRANCE REQUIRED BY LOCAL AUTHORITY.
5. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION & REQUIREMENTS.
6. REFER TO THE AUTHORITY HAVING JURISDICTION FOR WATER CONTROL INSTALLATION REQUIREMENTS.

UNLESS NOTED OTHERWISE:
AG AIR GAP, 2 PIPE SIZES DISTANCE
AVB ATMOSPHERIC VACUUM BREAKER
DCV DOUBLE CHECK VALVE
PVB PRESSURE VACUUM BREAKER
RPBP REDUCED PRESSURE BACKFLOW PREVENTER

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DESIGNED BY: CT
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REVIEWED BY: SB
REVISED:
REVISED:

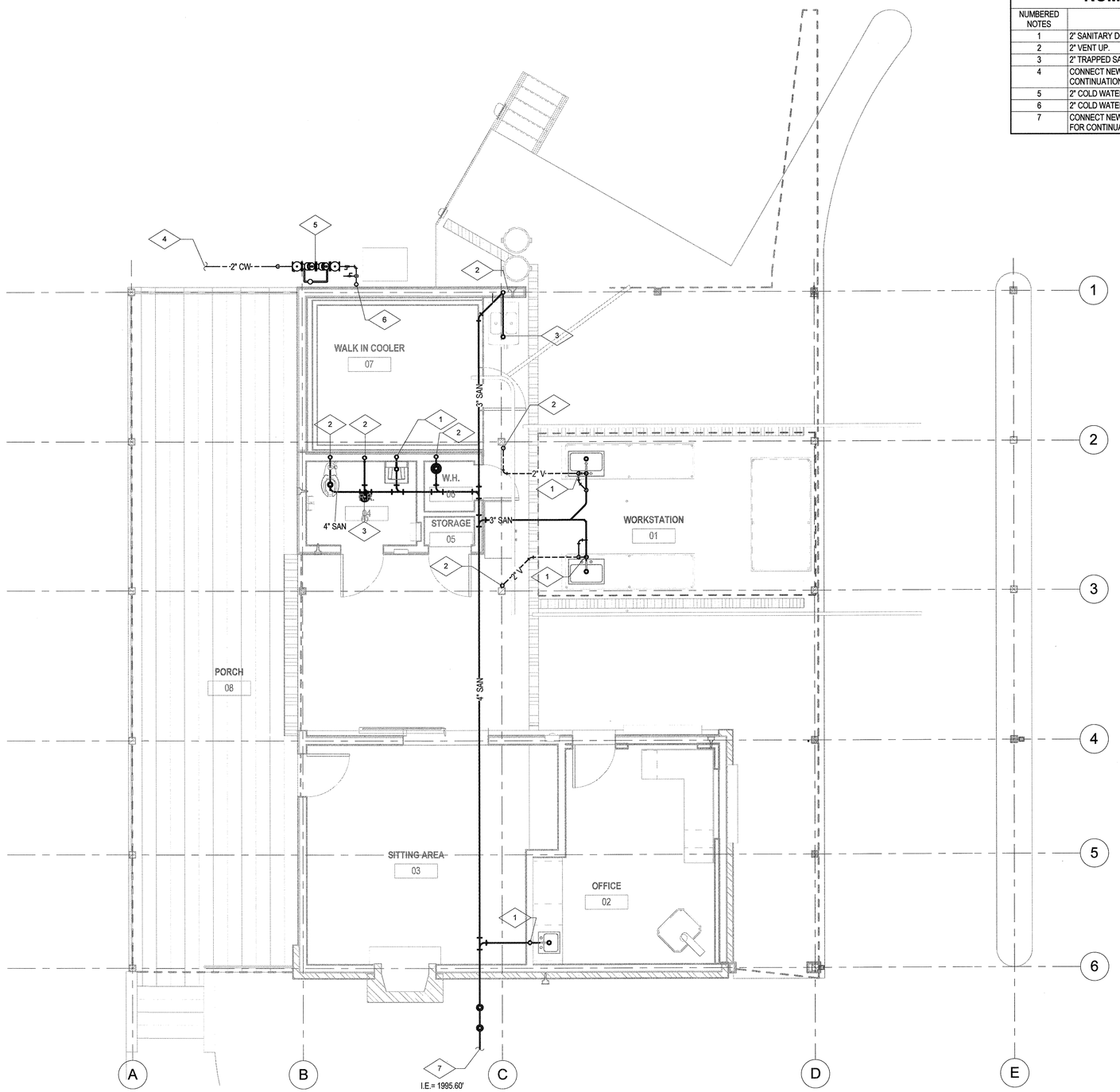
SHEET TITLE
PLUMBING SCHEDULES & ABBRVIATIONS

SHEET NUMBER
P002

PERCENTAGE: ISSUED FOR BID

NUMBERED NOTES

NUMBERED NOTES	DESCRIPTION
1	2" SANITARY DOWN FROM ABOVE.
2	2" VENT UP.
3	2" TRAPPED SANITARY DOWN FROM ABOVE.
4	CONNECT NEW 2" DCW TO EXISTING MAIN. REFER TO CIVIL FOR CONTINUATION.
5	2" COLD WATER TO BFP-1 TO SERVE BUILDING.
6	2" COLD WATER TO SERVE BUILDING.
7	CONNECT NEW 4" SANITARY TO EXISTING MAIN. REFER TO CIVIL FOR CONTINUATION.



1 PLUMBING UNDERFLOOR PLAN
1/4" = 1'-0"

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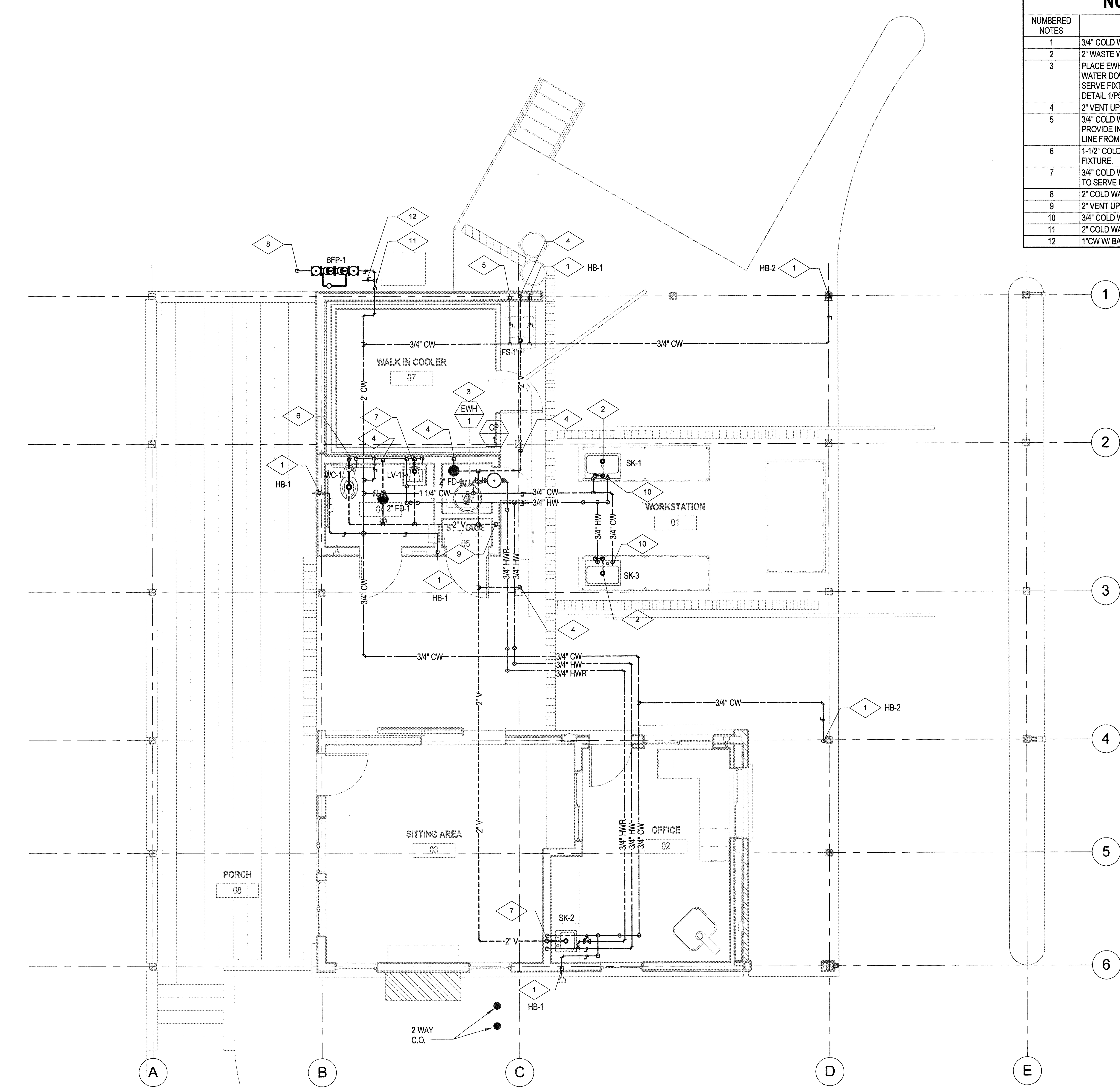
SHEET TITLE
PLUMBING UNDERFLOOR PLAN

SHEET NUMBER
P101

PERCENTAGE! ISSUED FOR BID



NUMBERED NOTES

NUMBERED NOTES	DESCRIPTION
1	3/4" COLD WATER DOWN TO SERVE HOSE BIBB.
2	2" WASTE WITH ISLAND VENT TO SERVE SINK.
3	PLACE EWH-1 ON FLOOR IN ACCESSIBLE LOCATION. ROUTE 1" COLD WATER DOWN TO SERVE EWH-1 AND 1" HOT WATER FROM EWH-1 TO SERVE FIXTURES. ROUTE DRAIN LINE TO FLOOR DRAIN. REFER TO DETAIL 1/P501.
4	2" VENT UP.
5	3/4" COLD WATER DOWN TO SERVE FREE-STANDING ICE-MAKER. PROVIDE IN-LINE FILTER EVERPURE IN-6 CG-S AND WB-1. ROUTE DRAIN LINE FROM ICE-MAKER TO FLOOR SINK.
6	1-1/2" COLD WATER, 4" SANITARY DOWN AND 2" VENT UP TO SERVE FIXTURE.
7	3/4" COLD WATER, 3/4" HOT WATER, 2" SANITARY DOWN AND 2" VENT UP TO SERVE FIXTURE.
8	2" COLD WATER TO BFP-1 TO SERVE BUILDING.
9	2" VENT UP TO VENT THRU ROOF.
10	3/4" COLD WATER, 3/4" HOT WATER DOWN.
11	2" COLD WATER TO SERVE BUILDING.
12	1"CW W/ BALL VALVE (NORMALLY CLOSED) FOR BUILDING DRAIN-DOWN.

1 PLUMBING FLOOR PLAN
1/4" = 1'-0"

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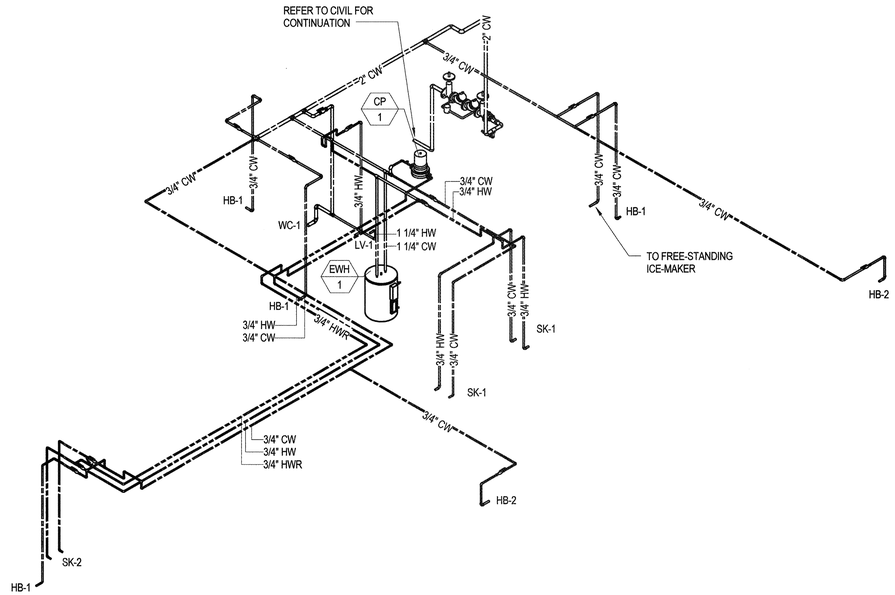
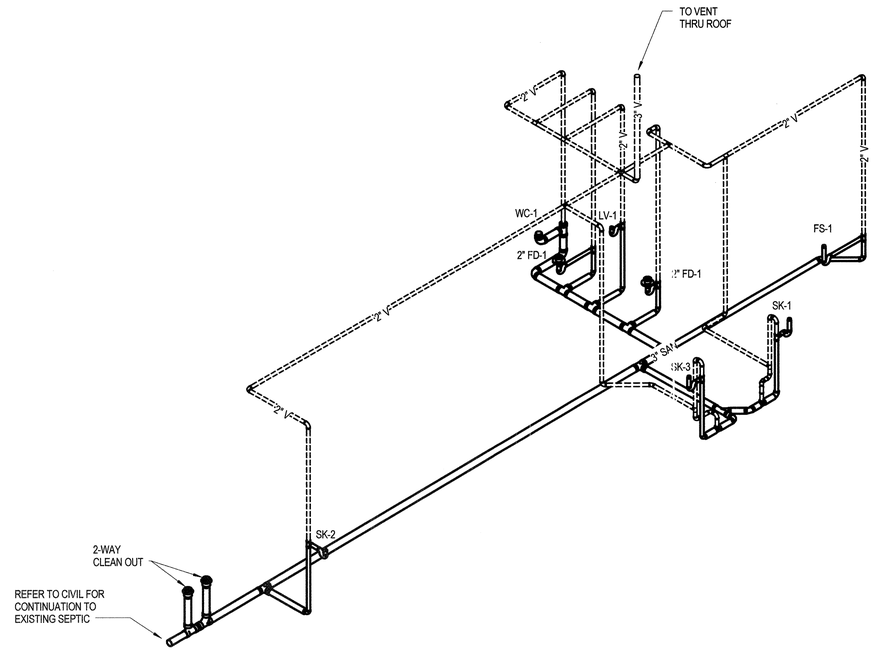
SHEET TITLE
PLUMBING FLOOR PLAN

SHEET NUMBER
P201

PERCENTAGE: ISSUED FOR BID



2 PLUMBING RISER DIAGRAM - DOMESTIC WATER



1 PLUMBING RISER DIAGRAM - SANITARY

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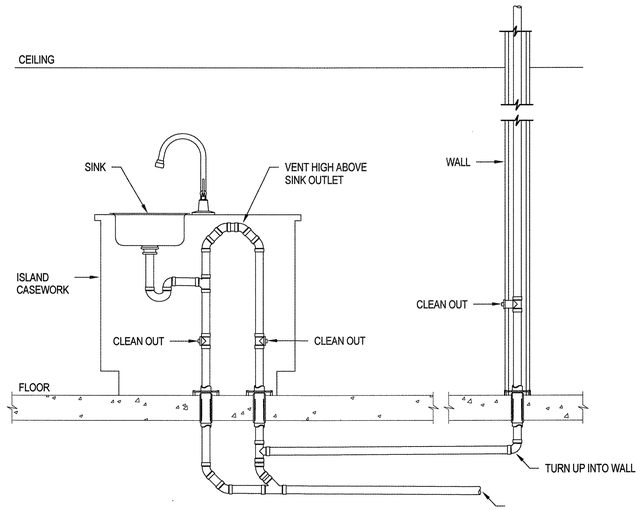
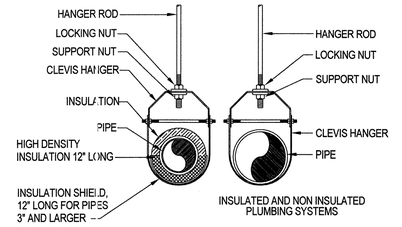
SHEET TITLE
PLUMBING RISER DIAGRAM

SHEET NUMBER
P401

PERCENTAGE: ISSUED FOR BID



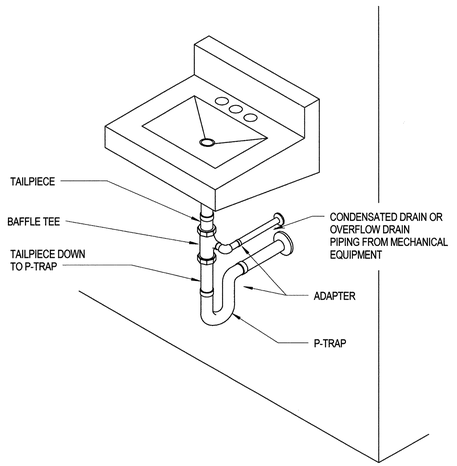
4 ISLAND SINK DETAIL
SCALE: NOT TO SCALE



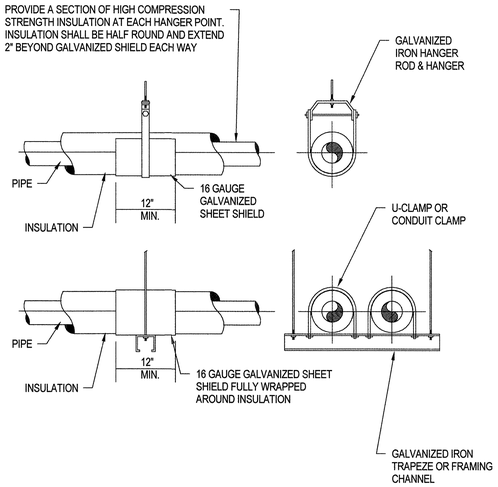
HANGER ROD SCHEDULE	
PIPE SIZE	ROD SIZE
UP TO 2"	3/8" DIA.
2 1/2" THRU 3"	1/2" DIA.
4" AND 5"	5/8"
6" THRU 8"	3/4"
12"	7/8"

HANGER ROD SPACING	
PIPE SIZE	MAX. ALLOWABLE SPACING
1"	7'
1 1/4"	8'
1 1/2"	9'
2"	10'
2 1/2"	11'
3" THRU 8"	12'
10" & 12"	15"

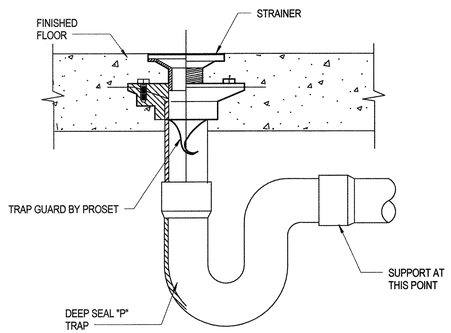
2 CLEVIS PIPE HANGER/ROD INSTALLATION DETAIL AND SCHEDULE
SCALE: NOT TO SCALE



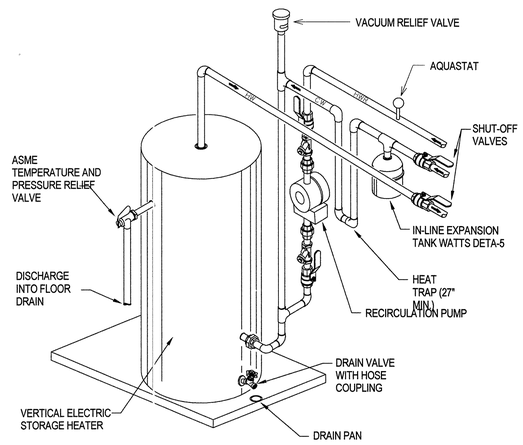
6 CONDENSATE LINE TO SINK TAILPIECE
SCALE: NOT TO SCALE



5 PIPE HANGER DETAIL
SCALE: NOT TO SCALE



3 FLOOR DRAIN DETAIL
SCALE: NOT TO SCALE



NOTE: PUMP IS CONTROLLED WITH ADJUSTABLE TIME CLOCK FOR HOURS OF OPERATION. DURING OPERATIONAL HOURS, PUMP IS TURNED ON AUTOMATICALLY BASED ON IDENTIFICATION OF DEMAND FOR HOT WATER. CONTROLLS SHALL AUTOMATICALLY TURN OFF PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED SET POINT OF THE AQUASTAT. (IECC 2015)

1 ELECTRIC WATER HEATER (EWH-1) WITH RECIRCULATING PUMP (CP-1)
SCALE: NOT TO SCALE

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SHEET TITLE
PLUMBING DETAILS

SHEET NUMBER
P501

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