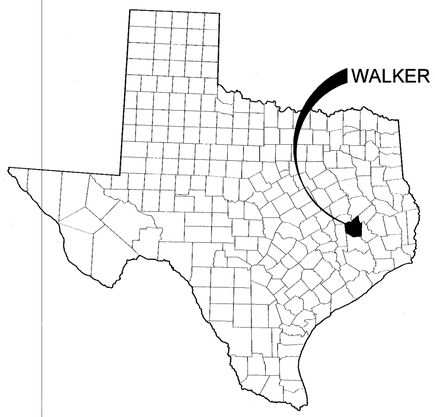
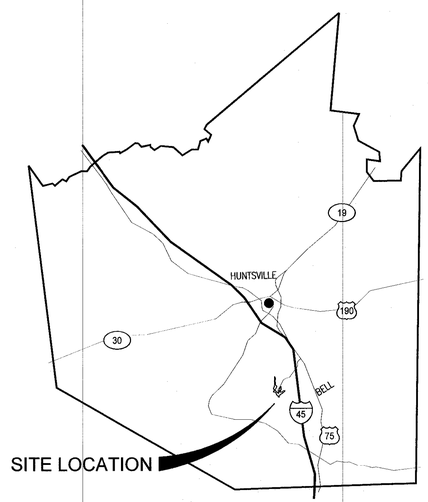


NORTH

COUNTY LOCATION MAP

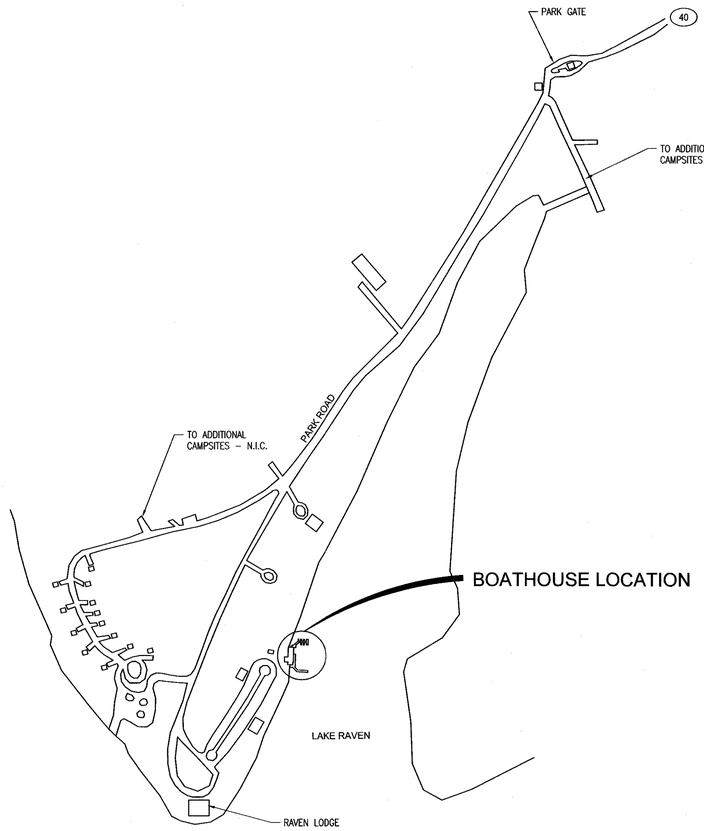
NOT TO SCALE



NORTH

VICINITY MAP

NOT TO SCALE



NORTH

SITE LOCATION MAP

NOT TO SCALE

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PROJECT

HUNTSVILLE STATE PARK

REPAIRS TO CCC BUILT STRUCTURES BOATHOUSE

PROJECT NO: 122865 DATE: 08-28-2020

INDEX OF DRAWINGS

SCOPE OF WORK

BASE BID: ACCESSIBLE SIDEWALK, SITE DRAINAGE MODIFICATIONS, STRUCTURAL WORK, ARCHITECTURAL WORK AT BOATHOUSE. MASONRY PATIO WALL AT RAVEN LODGE.

ADD ALTERNATE #1: MECHANICAL, ELECTRICAL AND PLUMBING WORK. (REFER TO SHEET A0.01, A1.02A, ME1.0, M2.1, M5.1, ED2.1, ED2.2, E2.1, E2.2, E5,1)
ADD ALTERNATE #2: ROOF REPLACEMENT AND CUPOLA REPAIRS. (REFER TO SHEET A1.03, A6.02)
ADD ALTERNATE #3: NORTH WALK. (REFER TO SHEET C.1.02)

BUILDING CODE SUMMARY

A. INTERNATIONAL CODE COUNCIL ADOPTIONS*

i	BUILDING CODE	INTERNATIONAL BUILDING CODE 2015
ii	STRUCTURAL CODE	INTERNATIONAL BUILDING CODE 2015
iii	PLUMBING CODE	INTERNATIONAL PLUMBING CODE 2015
iv	MECHANICAL CODE	INTERNATIONAL MECHANICAL CODE 2015
v	GAS CODE	INTERNATIONAL FUEL GAS CODE 2015
vi	RESIDENTIAL CODE	INTERNATIONAL RESIDENTIAL CODE 2015
vii	EXISTING BUILDINGS	INTERNATIONAL EXISTING BUILDINGS CODE 2015

*Note: The International fire code specifically excluded from this list/not applicable to TPWD sites and facilities, however fire protection should be followed as stated in all other codes listed.

B. NATIONAL FIRE PROTECTION ASSOCIATION

i	ELECTRICAL CODE	NATIONAL ELECTRICAL CODE 2017
ii	FIRE CODE	NFPA–1 2015
iii	LIFE SAFETY CODE	NFPA–101 2015

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 CODES
- i US DEPT. OF JUSTICE, 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN
- ii US 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.

TEXAS PARKS & WILDLIFE

TEXAS PARKS AND WILDLIFE

INFRASTRUCTURE DIVISION

4200 SMITH SCHOOL ROAD · AUSTIN, TEXAS 78744-3292

REGISTERED ARCHITECT NANCY McCOY 27785 STATE OF TEXAS 12.27.20

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STATE OF TEXAS CHRISTOPHER A. BAKER 112676 LICENSED PROFESSIONAL ENGINEER 8-28-20

STATE OF TEXAS JOSUE GARCIA 92730 LICENSED PROFESSIONAL ENGINEER 8/28/20

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TEXAS PARKS & WILDLIFE

RELEASED FOR SOLICITATION

INFRASTRUCTURE DIVISION

PROJECT NUMBER: 122865 -
DRAWING NUMBER: 122865 - Cover.dwg

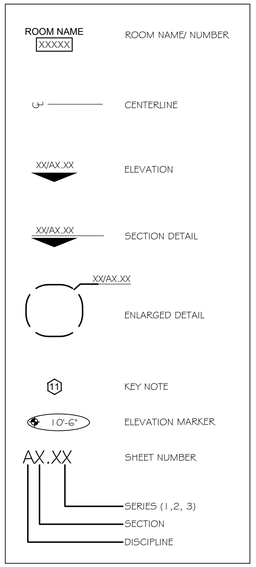
SET NO:

PATH: M:\MCPA Projects\2016-17 TPWD Huntsville Boat House Task Order 1\Phase 1\1.5 CADD\1.5.1 CADD Current\1.5.1.1 QMC\1.5.1.4 CD\122865 - Cover.dwg

ABBREVIATIONS

AB	Anchor Bolt
AD	Area Drain
ADD	Addendum
ADD'L	Additional
ADJ	Adjacent
AFF	Above Finished Floor
AGGR	Aggregate
AL ALUM	Aluminum
ALT	Alternate
ANOD	Anodized
APPROX	Approximate
ARCH	Architectural
B.M.	Bench Mark
BD	Board
BETW	Between
BF	Backface
BG	Bumper Guard
BL	Bed Locator
BL	Building Line
BLDG	Building
BLKG	Blocking
BM	Beam
BOT	Bottom
BR	Bumper Rail
BRG	Bearing
BSMT	Basement
BU ROD	Back-Up Rod
BUR	Built-Up Roof
BW	Bearing Wall
C	Compact Parking Space
CDR	Card Reader
CEM	Cement
CER	Ceramic
CG	Corner Guard
CIP	Cast In Place
CJ	Control Joint
CJ	Construction Joint
CL	Center Line
CLG	Ceiling
CLR	Clear
CMU	Concrete Masonry Unit
COL	Column
COMM	Communications
CONC	Concrete
CONN	Connection
CONST	Construction
CONT	Continuous
COORD	Coordinate
CORR	Corridor
CR	Cold Rolled
CR	Crash Rail
CSK	Countersunk
CT	Ceramic Tile
CTD	Centered
CTR	Center
CW	Curtain Wall
D	Depth
DBA	Deformed Bar Anchor
DET	Detail
DIA	Diameter
DIAPH	Diaphragm
DIM	Dimension
DJ	Deflection Joint
DL	Dead Load
DN	Down
DRG	Drawing
DS	Down Spout
DWGS	Drawings
DWLS	Dowels
EA	Each
EF	Each Face
EIFS	Exterior Insulation and Finish System
EJ	Expansion Joint
EL	Elevation
ELEC	Electric
ELEV	Elevator
EQ	Equal
EQUIP	Equipment
ESC	Escalator
EW	Each Way
EWC	Electric Water Cooler
EXIST	Existing
EXP BLT	Expansion Bolt
EXT	Exterior
FD	Floor Drain
FDN	Foundation
FE	Fire Extinguisher
FEC	Fire Extinguisher Cabinet
FF	Finish Floor
FHC	Fire Hose Cabinet
FIN	Finish
FIN FLR	Finish Floor
FLR	Floor
FS	Far Side
FT	Foot
FTG	Footing
FV	Field Verify
FVC	Fire Valve Cabinet
GA	Gauge
GALV	Galvanized
GB	Grade Beam
GEN	General
GFRC	Glass-Fiber Reinforced Concrete
GI	Galvanized Iron
GL	Glass
GND	Ground
GR	Grade
GRG	Glass-Reinforced Gypsum
GYP BD	Gypsum Board
HB	Hose Bib
HDW	Hardware
HDWD	Hardwood
HK	Hook
HM	Hollow Metal
HOR	Horizontal
HP	High Point
HR	Hour
HS	Headed Stud
HSKP	Housekeeping
HT	Height
HW	Hand Wash
ID	Inside Diameter
INSUL	Insulation
INT	Interior
JT	Joint
K	Kips (1000 LB)
KO	Knock-Out
KP	Kickplate
KPD	Keypad
KSF	Kips Per Square Foot
L	Angle
LAV	Lavatory
LG	Long
LKB	Lockable
LL	Live Load
LLH	Long Leg Hor.
LLV	Long Leg Vertical
LOC	Location
LP	Low Point
LT	Light
LWC	Lightweight Concrete
MAS	Masonry
MAT'L	Material
MAX	Maximum
MECH	Mechanical
MEMB	Membrane
MFG	Manufacturer
MIN	Minimum
MISC	Miscellaneous
MO	Masonry Opening
MOD BIT	Modified Bitumen
MOD	Modified
MSL	Mean Sea Level
MTL	Metal
N/A	Not Applicable
NA	Not Available
NIC	Not in Contract
NOM	Nominal
NS	Near Side
NTS	Not to Scale
NWC	Normal Weight Concrete
OA	Over All
OC	On Center
OD	Outside Diam.
OD	Overflow Drain
OFCI	Owner Furnished, Contractor Installed
OFOI	Owner Furnished, Owner Installed
OH	Opposite Hand
OPNG	Opening
OPP	Opposite
OSF	Outside Face
P LAM	Plastic Laminate
PCF	Pounds per Cubic Foot
PENT	Penthouse
PL	Property Line
PL	Plate
PLUMB	Plumbing
PLYWD	Plywood
PP	Push Plate
POL	Polished
PORT CEM	Portland Cement
PR	Pair
PREFAB	Prefabricated
PSF	Pounds per Square Foot
PSI	Pounds per Square Inch
PT	Point
PTD	Painted
R	Riser
RAD	Radius
RAF	Rubberized Asphalt Flashing
RAM	Rubberized Asphalt Membrane
RAU	Rubberized Asphalt Underlayment
RCP	Reflected Ceiling Plan
RD	Roof Drain
REBAR	Reinforcing Bar
RECP	Receptacle
REF	Refer or Reference
REINF	Reinforcing
RELOC	Relocate/Relocated
REQ'D	Required
RFVC	Recessed Fire Valve Cab
RM	Room
RO	Rough Opening
SAB	Sound Attenuation Blanket
SBC	Standard Building Code
SCHED	Schedule
SDL	Superimposed Dead Load
SECT	Section
SHR	Shower
SHT	Sheet
SHW	Shower
SIM	Similar
SO	Structural Opening
SOG	Slab on Grade
SP	Stand Pipe
SPA	Space, Spacing
SPEC	Specification
SQ	Square
SS	Stainless Steel
STA	Station
STC	Sound Transmission Class
STD	Standard
STIFF	Stiffener
STIR	Stirrup
STL	Steel
STRUC	Structural
SYM	Symmetrical
SYS	System
T	Tread
T&B	Top and Bottom
TC	Top of Curb
TEL	Telephone
TEMP	Temperature
THK	Thick
TLT	Toilet
TOB	Top of Beam
TOC	Top of Concrete
TOF	Top of Footing
TOP	Top of Parapet
TOS	Top of Slab
TOSTL	Top of Steel
TW	Top of Wall
TYP	Typical
UNO	Unless Noted Otherwise
VAR	Varies
VCT	Vinyl Composition Tile
VERT	Vertical
VEST	Vestibule
VWC	Vinyl Wall Covering
W/	With
W/O	Without
W	Width
W.P.	Waterproof(ing)
WD	Wood
WF	Wide Flange
WL	Wind Load
WP	Work Point
WWF	Welded Wire Fabric

DRAWING SYMBOLS



LEGEND

- ELEMENT TO BE REMOVED
- EXISTING ELEMENT
- CONSTRUCTION ELEMENT
- EXISTING DOOR TO REMAIN
- DOOR

MATERIALS LEGEND

- CONCRETE/ PRECAST CONCRETE
- SOIL
- WOOD
- STONE MASONRY
- SHINGLE ROOFING
- PLYWOOD
- STONE

GENERAL NOTES

1. HISTORIC PROTECTION- THE EXISTING 1940 BOATHOUSE STRUCTURE IS LOCATED WITHIN HUNTSVILLE STATE PARK AND THE PARK IS ELIGIBLE FOR LISTING IN THE NATIONAL REGISTER AS A HISTORIC DISTRICT. PROTECT THE HISTORIC MATERIALS AND "FABRIC" OF THIS HISTORIC SITE AND BUILDING DURING THE WORK OF THIS CONTRACT. IF HISTORIC MATERIALS ARE ENCOUNTERED IN THE COURSE OF REMOVALS, NOTIFY THE ARCHITECT IMMEDIATELY. THE ARCHITECT WILL DETERMINE IF THE MATERIAL SHOULD BE REMOVED AND IF SO, IF THE MATERIAL WILL BE SALVAGED. IF ARTIFACTS OR STRUCTURES ARE ENCOUNTERED DURING ANY EXCAVATIONS, STOP WORK IN THAT AREA AND NOTIFY THE CONSTRUCTION MANAGER IMMEDIATELY.
2. BUILDING CODES AND ORDINANCES SHALL GOVERN CONSTRUCTION ON THE PROJECT AND SHALL TAKE PRECEDENCE OVER DRAWINGS AND SPECIFICATIONS.
3. HISTORIC DESIGNATIONS REQUIRE THAT WORK MEET THE STANDARDS AND GUIDELINES, OF THE "SECRETARY OF THE INTERIOR STANDARDS FOR REHABILITATION," AS PUBLISHED BY THE NATIONAL PARK SERVICE.
4. EXISTING CONSTRUCTION- MATERIALS AND ELEMENTS ARE SO DESIGNATED. THE TERMS "RESTORE", "REPAIR", "REFINISH", "REPOLISH", AND "REPLACE" DESIGNATE WORK TO MATERIALS, ELEMENTS AND CONSTRUCTION THAT ARE EXISTING. WORK NOT DESIGNATED AS EXISTING SHALL BE PRESUMED TO BE NEW WORK.
5. EXISTING CONDITIONS - INFORMATION CONTAINED WITHIN THESE DRAWINGS WITH REGARD TO EXISTING CONDITIONS DOES NOT RELEASE THE CONTRACTOR FROM RESPONSIBILITY TO VERIFY EXISTING FIELD CONDITIONS PRIOR TO THE EXECUTION OF WORK. EXISTING CONDITIONS INCLUDE, BUT ARE NOT LIMITED TO ELECTRICAL, PLUMBING, LIFE SAFETY DEVICES AND ANY OTHER REQUIRED ITEMS.
6. NON-CONFORMING EXISTING CONDITIONS NOTIFICATION- IF CONDITIONS ARE ENCOUNTERED THAT DIFFER FROM THOSE CONTAINED IN THESE DRAWINGS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IMMEDIATELY, PROVIDING SKETCHES AND PHOTOGRAPHS. THE CONTRACTOR SHALL GENERALLY ASSIST THE ARCHITECT BY PROVIDING PROMPT AND ACCURATE INFORMATION ABOUT THE DIFFERING EXISTING CONDITIONS ENCOUNTERED. THE CONTRACTOR WILL NOT BE REIMBURSED FOR WORK DONE WITHOUT THE CONSENT OF THE ARCHITECT AND OWNER.
7. SELECTIVE DEMOLITION- PROTECT THE EXISTING MATERIALS TO REMAIN DURING THE WORK OF THIS CONTRACT. SELECTIVE DEMOLITION WORK AND REMOVALS WILL BE UNDERTAKEN USING THE LEAST DAMAGING MEANS AND METHODS POSSIBLE, WITH INTENT TO SALVAGE EXISTING MATERIALS FOR REUSE, WHERE INDICATED, OR FOR DELIVERY TO THE OWNER. THE ARCHITECT HAS ENDEAVORED TO PROVIDE AS MUCH INFORMATION AS POSSIBLE ABOUT THE EXISTING CONDITIONS AFFECTING THE WORK, INCLUDING THE DEMOLITION WORK THAT IS NECESSARY TO ACCOMPLISH THE WORK. THIS INFORMATION IS NOT INTENDED TO MEAN THAT DEMOLITION IS LIMITED ONLY TO THOSE AREAS INDICATED. THE CONTRACTOR WILL INCLUDE DEMOLITION WORK AS REQUIRED TO EXECUTE THE WORK.
8. SALVAGE FOR RE-USE SHALL INCLUDE THE CAREFUL REMOVAL, CATALOGUING, AND TAGGING, DOCUMENTATION OF ORIGINAL LOCATION, PACKAGING AND CRATING FOR REINSTALLATION AT A LATER POINT DURING THE WORK.
9. CUTTING & PATCHING- PATCH AND REPAIR EXISTING MATERIALS SHOWN TO REMAIN AFTER DEMOLITION OR REMOVALS TO MATCH EXISTING OR ADJACENT SURFACES TO A CHANGE IN PLANE. CUTTING AND PATCHING WORK NECESSARY TO COMPLETE THE WORK SHALL BE PROVIDED, AS REQUIRED.
10. FIELD VERIFICATION- SHALL BE UNDERTAKEN BY THE CONTRACTOR AND IDENTIFIED ON SUBMITTALS PRIOR TO THE SUBMITTAL OF SHOP DRAWINGS, PRODUCTS AND SAMPLES. SUBMITTALS WITHOUT FIELD VERIFICATION WILL BE RETURNED AS INCOMPLETE
11. SUBMITTALS- PROJECT SUBMITTALS WILL BE MADE USING TPWD STANDARD SUBMITTAL FORM # PROCEDURES. THE PROCEDURES INCLUDE PROVISION OF AND DISTRIBUTION OF COPIES BY THE CONTRACTOR OF SUBMITTALS BEFORE AND AFTER REVIEW BY THE ARCHITECT.
12. TEMPORARY FENCING- TEMPORARY FENCING OR OTHER FORMS OF SECURING THE PROJECT SITE ARE THE RESPONSIBILITY OF THE CONTRACTOR. PROPOSED CONSTRUCTION FENCING AND SILT FENCE SHOWN ON SHEET A0.01, IT IS INTENDED AS A GUIDE TO DESCRIBE LIMITATIONS THAT MAY BE PLACED UPON THE CONTRACTOR WITH RESPECT TO THE WORK AREA. UTILITY, HARDSCAPE OR LANDSCAPE WORK MAY NEED TO BE PERFORMED OUTSIDE OF THE FENCED AREA.
13. BLOCKING AND FRAMING NEEDED TO PERFORM THE WORK SHALL BE PROVIDED AS REQUIRED.
14. SHORING, SCAFFOLDING AND ACCESS TO THE WORK- REQUIRED DURING RESTORATION, NEW CONSTRUCTION OR SELECTIVE DEMOLITION IS CONSIDERED THE CONTRACTORS MEANS AND METHODS AND IS THE RESPONSIBILITY OF THE CONTRACTOR.
15. MANUFACTURER'S RECOMMENDATIONS- MATERIALS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDED SPECIFICATIONS, INSTRUCTION AND REQUIREMENTS.
16. PROPOSED CHANGES & CHANGES- NO DEVIATIONS FROM THE CONTRACT DOCUMENTS ARE TO BE MADE WITHOUT PROPOSING CHANGES TO THE ARCHITECT AND OWNER. PROPOSED CHANGES WITH COST OR SCHEDULE IMPACTS SHALL BE SUBMITTED TO THE OWNER AND ARCHITECT BY THE CONTRACTOR IN ACCORDANCE WITH SPECIFICATIONS.
17. TO MATCH EXISTING- TO MATCH EXISTING IS DEFINED TO MEAN TO MATCH HISTORIC ELEMENT IN RESPECT TO MATERIAL, STRENGTH, COLOR, TEXTURE, APPEARANCE, SIZE AND CONFIGURATION. EXISTING MATERIALS ARE ASSUMED ORIGINAL UNLESS NOTED OTHERWISE.
18. THE WORDS "RESTORATION", "STABILIZATION" AND "PRESERVATION" ARE SYNONYMOUS FOR THE PURPOSES OF THESE CONTRACT DOCUMENTS.
19. TPWD WILL ASSIGN A MONITOR TO WATCH EXCAVATIONS AT LODGE PATIO WALL WORK. WORK WILL CEASE IF BURIED ARCHEOLOGICAL DEPOSITS OR UNKNOWN CULTURAL RESOURCES ARE ENCOUNTERED. TPWD CULTURAL RESOURCES COORDINATOR WILL BE CONACTED AND ARTIFACTS DOCUMENTED BEFORE EXCAVATION CAN PROCEED.
20. PRIOR TO MOBILIZATION, INSTALL EROSION CONTROL AND TREE PROECTION AT AREAS OF WORK, REF. ALSO CIVIL.
21. PRIOR TO START OF CONSTRUCTION, LOCATE AND UNCOVER UTILITY TIE-IN AND CONNECTION POINTS TO VERIFY LOCATION AND ELEVATION. NOTIFY ARCHITECT OF ANY DISCREPANCIES.
22. SOUTH ENTRANCE - CONTRACTOR SHALL VERIFY SPOT GRADES AT PAVING, STEPS, DOORS, AND EXISTING GRADE AND TRANSMIT THIS INFORMATION AT THE BEGINNING OF CONSTRUCTION TO THE ARCHITECT FOR FINALIZATION OF DIMENSIONS AND ELEVATIONS PRIOR TO CONSTRUCTION. SLOPE SURFACES TO DRAIN, TYP.
23. ARCHITECTS DRAWINGS DISCLAIM ANY AND ALL RESPONSIBILITY AND LIABILITY FOR THE ABATEMENT WORK. PROFESSIONAL SERVICE INDUSTRIES, INC. IS SOLELY RESPONSIBLE FOR THE ABATEMENT SERVICES AND PLANS. PROFESSIONAL SERVICES INDUSTRIES, INC. DOCUMENTS ARE PART OF VOLUME 2 OF THE PROJECT MANUAL.

TEXAS PARKS & WILDLIFE

REGISTERED ARCHITECT NANCY McCOY 17785 STATE OF TEXAS 09-27-20

HUNTSVILLE STATE PARK
REPAIRS TO CCC BUILT STRUCTURES
BOATHOUSE
PROJECT NUMBER: 122865

McCoy Collaborative
Preservation Architecture, PLLC
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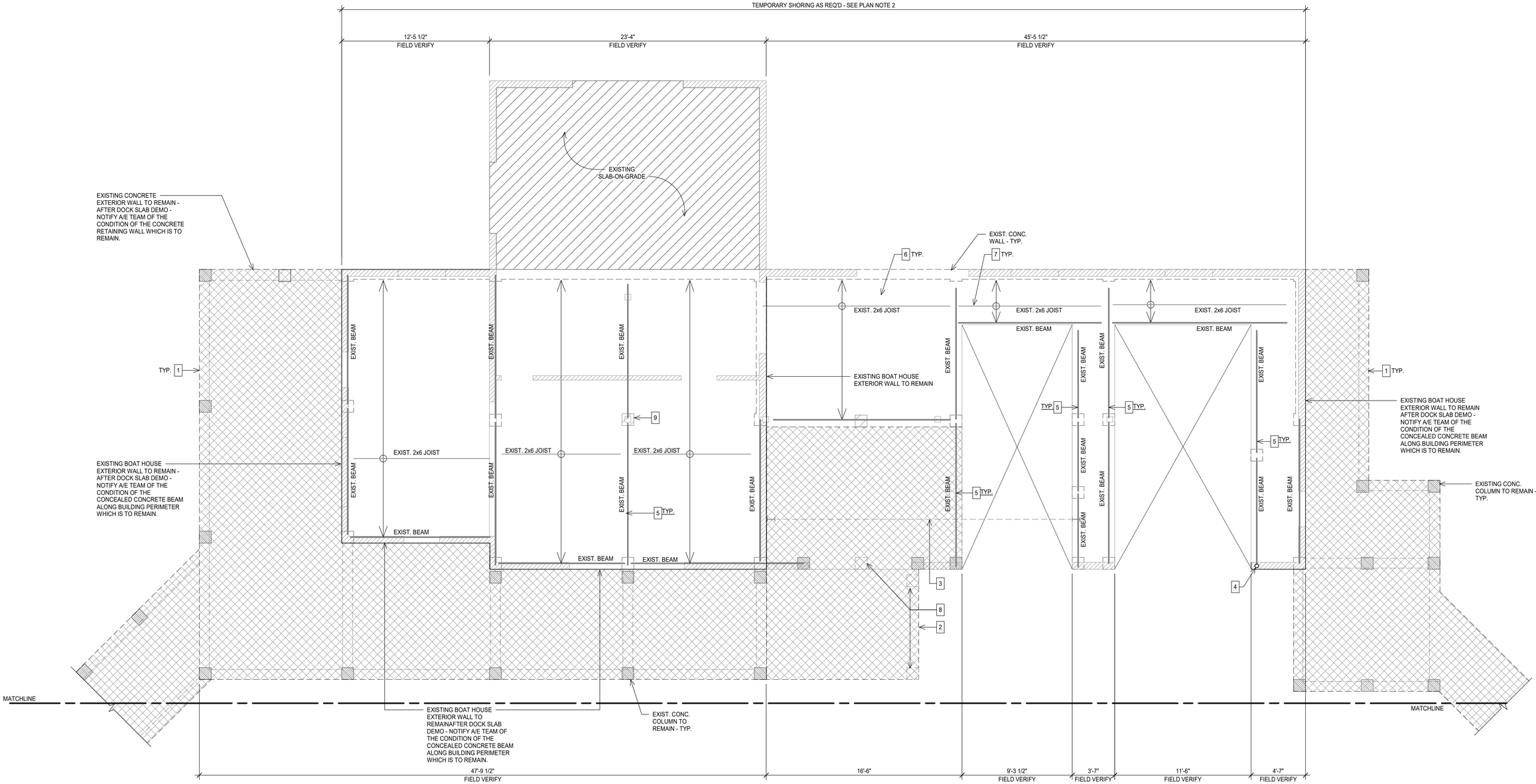
Ph: 214.977.9118

DATE: 08-28-2020
DESIGNED BY: GJ
DRAWN BY: GJ
REVIEWED BY: NM
REVISED:
REVISED:
REVISED:

SHEET TITLE
GENERAL NOTES, SYMBOLS AND ABBREVIATIONS

SHEET NUMBER
G1.01
122865 - G101.dwg



TRUE NORTH PLAN NORTH

01 BOATHOUSE FRAMING DEMOLITION PLAN

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

KEYNOTES:

1. DEMOLISH EXISTING CONCRETE DOCK SLAB AND BEAMS - SEE 1/S5.01.
2. DEMOLISH EXISTING DOCK WHERE SHOWN TO RESTORE ORIGINAL BOAT SLIP.
3. DEMOLISH EXISTING STEEL HOIST FRAMING IN WALLS AND ROOF.
4. DEMOLISH EXISTING STEEL PIPE COLUMN - SEE 5/S5.01.
5. REMOVE EXISTING WOOD BEAMS UNDER BOATHOUSE - SEE 3/S5.01.
6. DEMOLISH DETERIORATED TONGUE & GROOVE WOOD FLOORING - SEE 4/S5.01.
7. DEMOLISH DETERIORATED WOOD FLOOR JOISTS - SEE 4/S5.01.
8. DEMOLISH EXISTING DOCK COLUMN. FIELD VERIFY LOCATION OF EXISTING COLUMN AND NOTIFY A/E TEAM PRIOR TO DEMOLITION.
9. DEMOLISH EXISTING DETERIORATED COLUMN. FIELD VERIFY LOCATION OF EXISTING COLUMN AND NOTIFY A/E TEAM PRIOR TO DEMOLITION.

PLAN NOTES:

1. CONTRACTOR SHALL INSTALL A TEMPORARY BULKHEAD IN LAKE AS REQUIRED TO PERFORM DEMOLITION AND REPAIRS. SEE A0.01 AND C1.02 AND SPECIFICATIONS (DELEGATED DESIGN).
2. CONTRACTOR SHALL SHORE EXISTING STRUCTURE AS REQUIRED TO PERFORM DEMOLITION AND REPAIRS.

SYMBOLS LEGEND	
SYMBOL	DESCRIPTION
	DEMOLISH
	EXISTING STRUCTURE

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PROJECT NO: 4160267
TBPE FIRM F-7986

TEXAS PARKS & WILDLIFE

100% CD DOCUMENT

STATE OF TEXAS
CHRISTOPHER A. BAKER
112676
LICENSED PROFESSIONAL ENGINEER
8-28-20

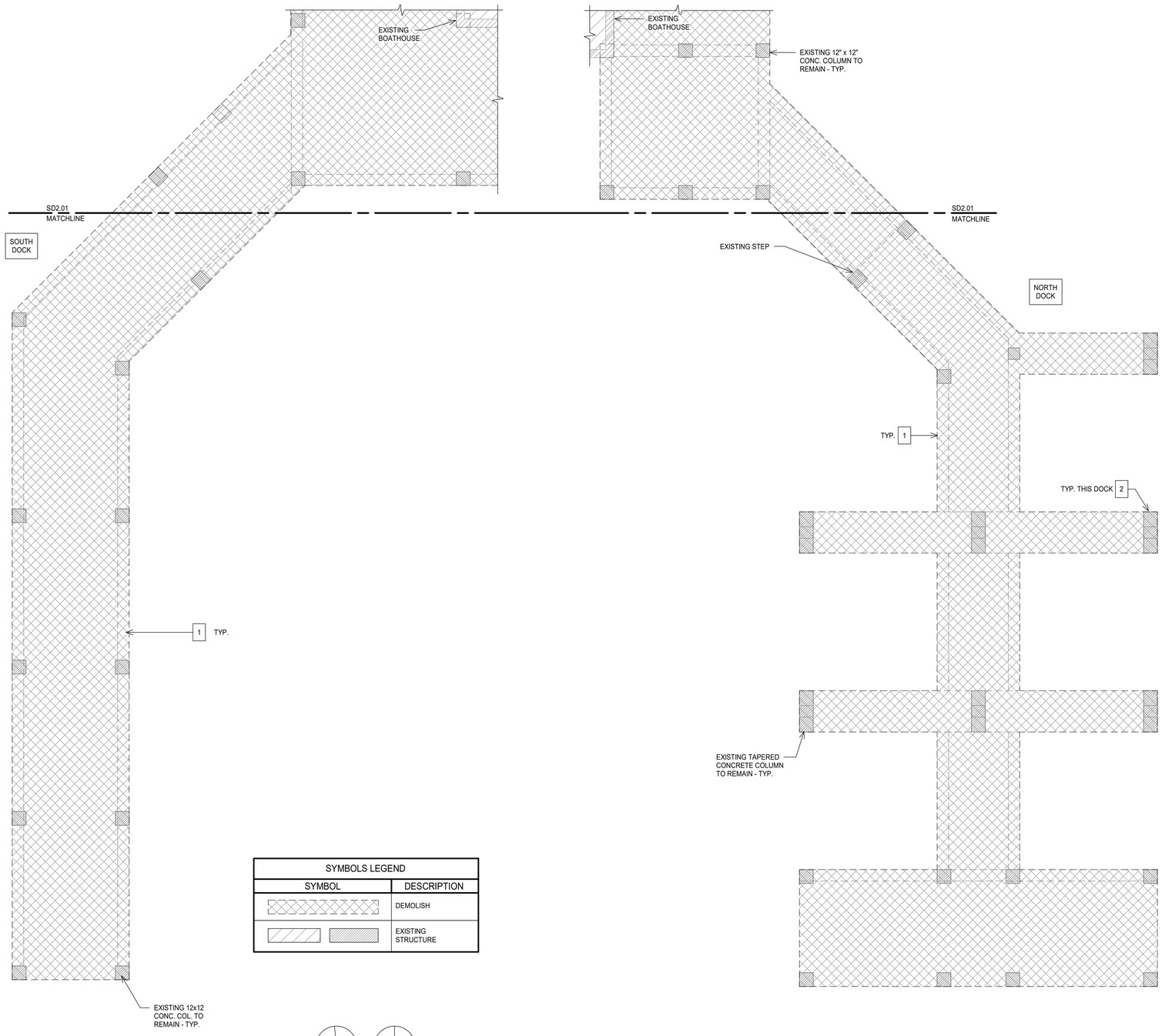
HUNTSVILLE STATE PARK
REPAIRS TO CCC BUILT STRUCTURES
BOATHOUSE
PROJECT NUMBER: 122865

DATE: 08-28-2020
DESIGNED BY: CB
DRAWN BY: JS
REVIEWED BY: CB
REVISED:
REVISED:
REVISED:

100% CD DOCUMENT

SHEET TITLE
BOATHOUSE FRAMING DEMOLITION PLAN

SHEET NUMBER
SD2.01



SYMBOLS LEGEND	
SYMBOL	DESCRIPTION
	DEMOLISH
	EXISTING STRUCTURE

TRUE NORTH
PLAN NORTH
1/4" = 1'-0"
1' 2' 4' 8'

01 BOAT DOCK DEMOLITION PLAN

PLAN NOTES:

1. CONTRACTOR SHALL INSTALL A TEMPORARY BULKHEAD IN LAKE AS REQUIRED TO PERFORM DEMOLITION AND REPAIRS. SEE A0.01 AND C1.02 AND SPECIFICATIONS (DELEGATED DESIGN).
2. CONTRACTOR SHALL SHORE STRUCTURE AS REQUIRED TO PERFORM DEMOLITION AND REPAIRS.

KEYNOTES:

1 DEMOLISH EXISTING CONCRETE DOCK SLAB AND BEAMS - TYPICAL - SEE 1/S5.01.

2 DEMOLISH APPROXIMATELY 11"+/- OF TOP OF DOCK COLUMNS ON NORTH DOCK TO LEVEL SURFACE - SEE ARCH'L.

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STATE OF TEXAS
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8-28-20

HUNTSVILLE STATE PARK
REPAIRS TO CCC BUILT STRUCTURES
BOATHOUSE
PROJECT NUMBER: 122865

DATE: 08-28-2020
DESIGNED BY: CB
DRAWN BY: JS
REVIEWED BY: CB
REVISED:
REVISED:
REVISED:

SHEET TITLE
BOAT DOCK DEMOLITION PLAN

SHEET NUMBER
SD2.02

100% CD DOCUMENT

GENERAL NOTES DEMOLITION PLAN

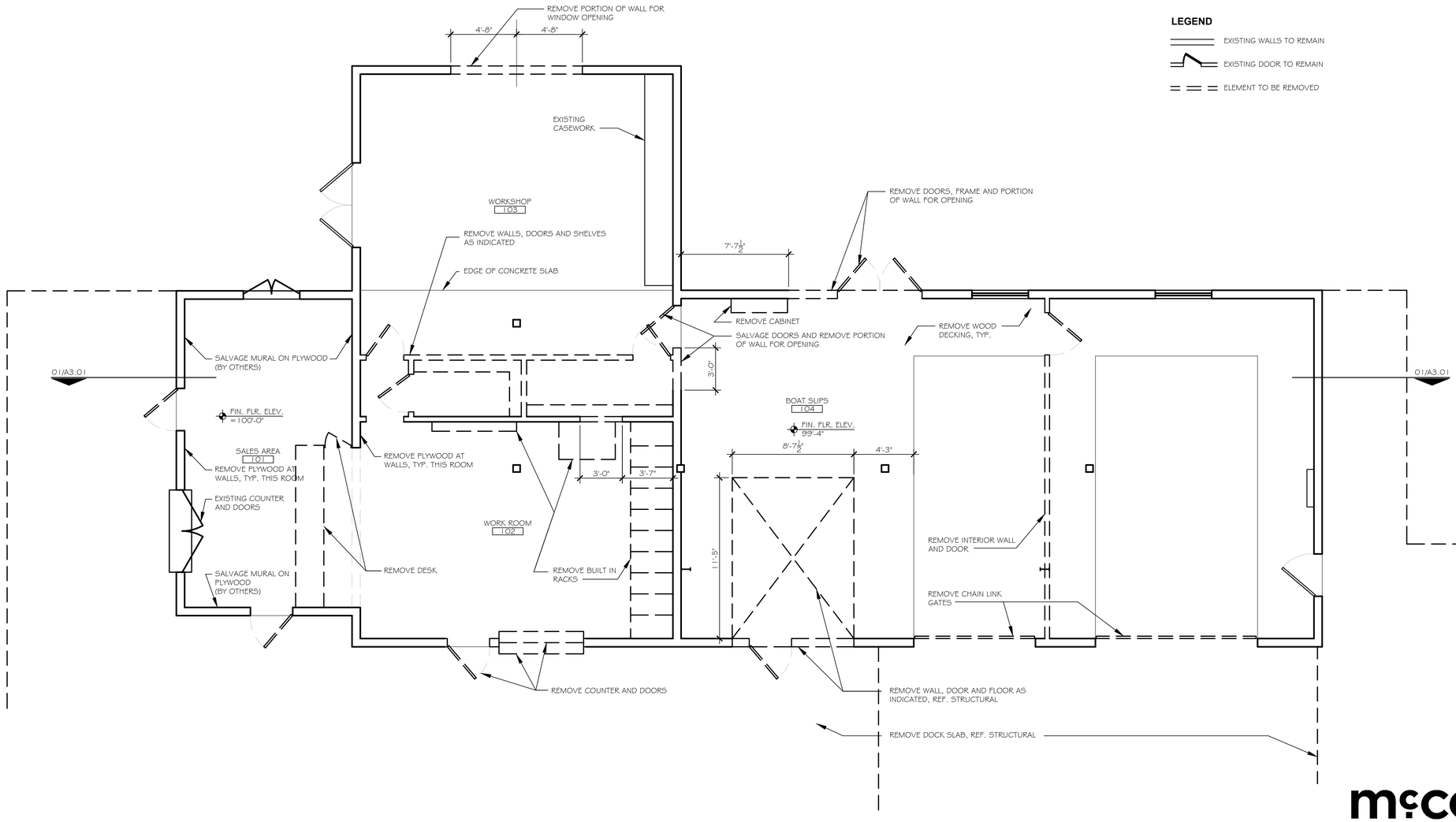
1. REFER ALSO TO GENERAL PROJECT NOTES ON G1.01.
2. REFER TO STRUCTURAL DRAWINGS.
3. REFERENCE OTHER DISCIPLINES FOR ADDITIONAL DEMOLITION WORK, AND FOR WORK THAT MAY REQUIRE DEMOLITION OF ARCHITECTURAL ELEMENTS.
4. WOOD FRAMING IS LOAD-BEARING INS SOME AREAS. SHORE, RE-SUPPORT AND TEMPORARILY SUPPORT ELEMENTS TO REMAIN THAT ARE AFFECTED BY ADJACENT DEMOLITION OPERATIONS.
5. CLEAN WOOD FRAMING AND DEBRIS AT UNDERSIDE OF FLOOR.
6. REMOVE CARPET AND PLYWOOD AT FLOOR AND REPLACE WOOD SUBFLOOR, REF. STRUCTURAL.
7. REMOVE PLYWOOD AT WALLS AND CEILINGS OF ROOMS 101 AND 102.

LEGEND

EXISTING WALLS TO REMAIN

EXISTING DOOR TO REMAIN

ELEMENT TO BE REMOVED



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

TRUE NORTH PLAN NORTH

0 1 2 4 8 12

TEXAS PARKS & WILDLIFE

REGISTERED ARCHITECT NANCY McCOY 17785 STATE OF TEXAS
12-27-20

HUNTSVILLE STATE PARK
REPAIRS TO CCC BUILT STRUCTURES
BOATHOUSE
PROJECT NUMBER: 122865

DATE: 08-28-2020
DESIGNED BY: GJ
DRAWN BY: GJ
REVIEWED BY: NM
REVISED:
REVISED:
REVISED:

McCoy Collaborative
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SHEET TITLE
DEMOLITION PLAN

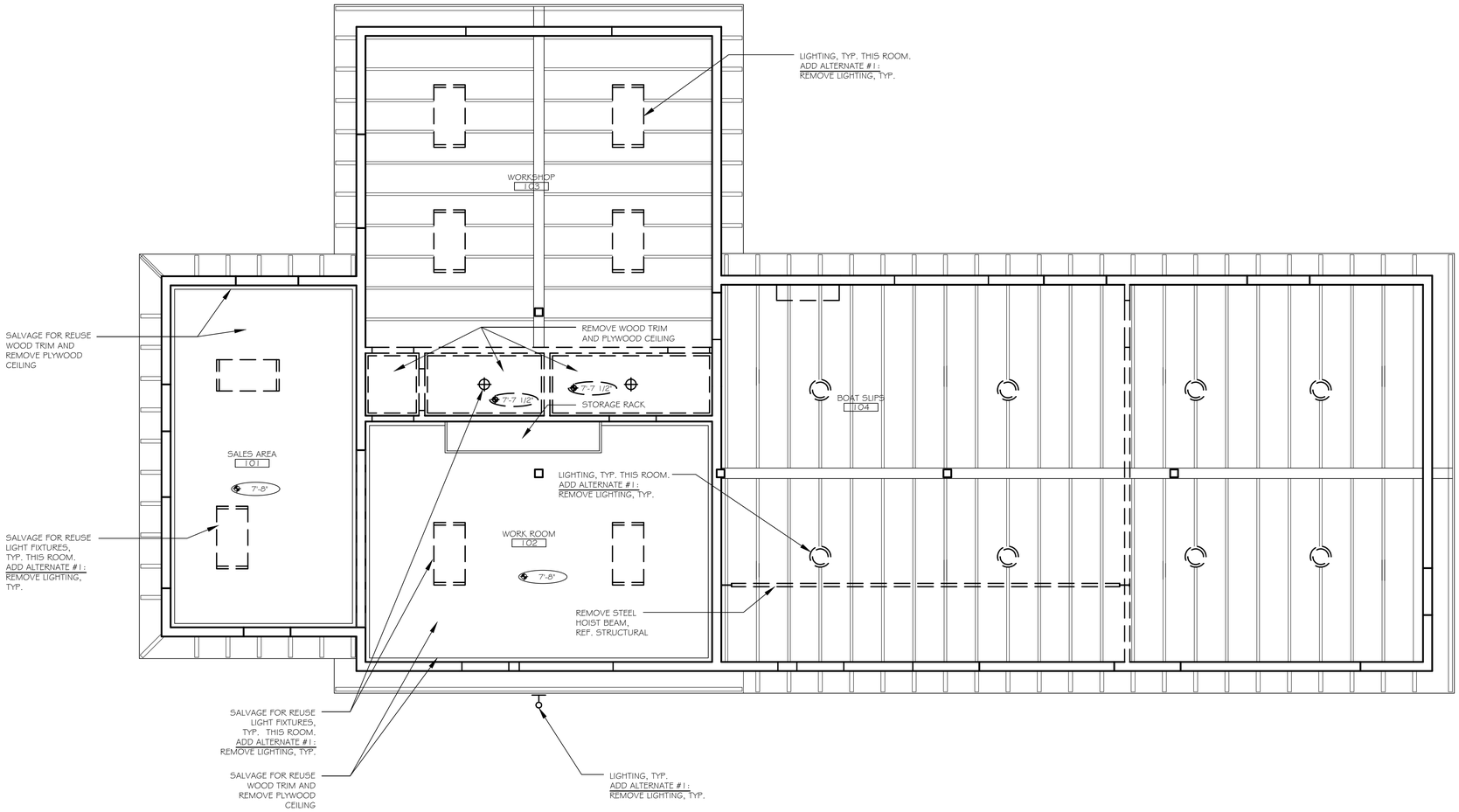
SHEET NUMBER
D1.01

122865 - D101.dwg

PATH: M:\MCPA Projects\2016-17 TPWD Huntsville Boat House Task Order 1\Phase 1\1.5 CADD\1.5.1 CADD Current\1.5.1.1 QMc\1.5.1.4 CD\122865 - D101.dwg

GENERAL NOTES DEMOLITION PLAN

1. REFER ALSO TO GENERAL PROJECT NOTES ON G1.01.
2. REFERENCE OTHER DISCIPLINES FOR ADDITIONAL DEMOLITION WORK, AND FOR WORK THAT MAY REQUIRE DEMOLITION OF ARCHITECTURAL ELEMENTS.
3. CLEAN WOOD FRAMING AND UNDERSIDE OF WOOD DECKING.



01 DEMOLTION REFLECTED CEILING PLAN
SCALE: 1/4"=1'-0"

TRUE NORTH PLAN NORTH

0 1 2 4 8 12

TEXAS PARKS & WILDLIFE

REGISTERED ARCHITECT
NANCY McCOY
17785
STATE OF TEXAS
12-27-20

HUNTSVILLE STATE PARK
REPAIRS TO CCC BUILT STRUCTURES
BOATHOUSE
PROJECT NUMBER: 122865

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SHEET TITLE
DEMOLITION REFLECTED CEILING PLAN

SHEET NUMBER
D1.02

122865 - D102.dwg

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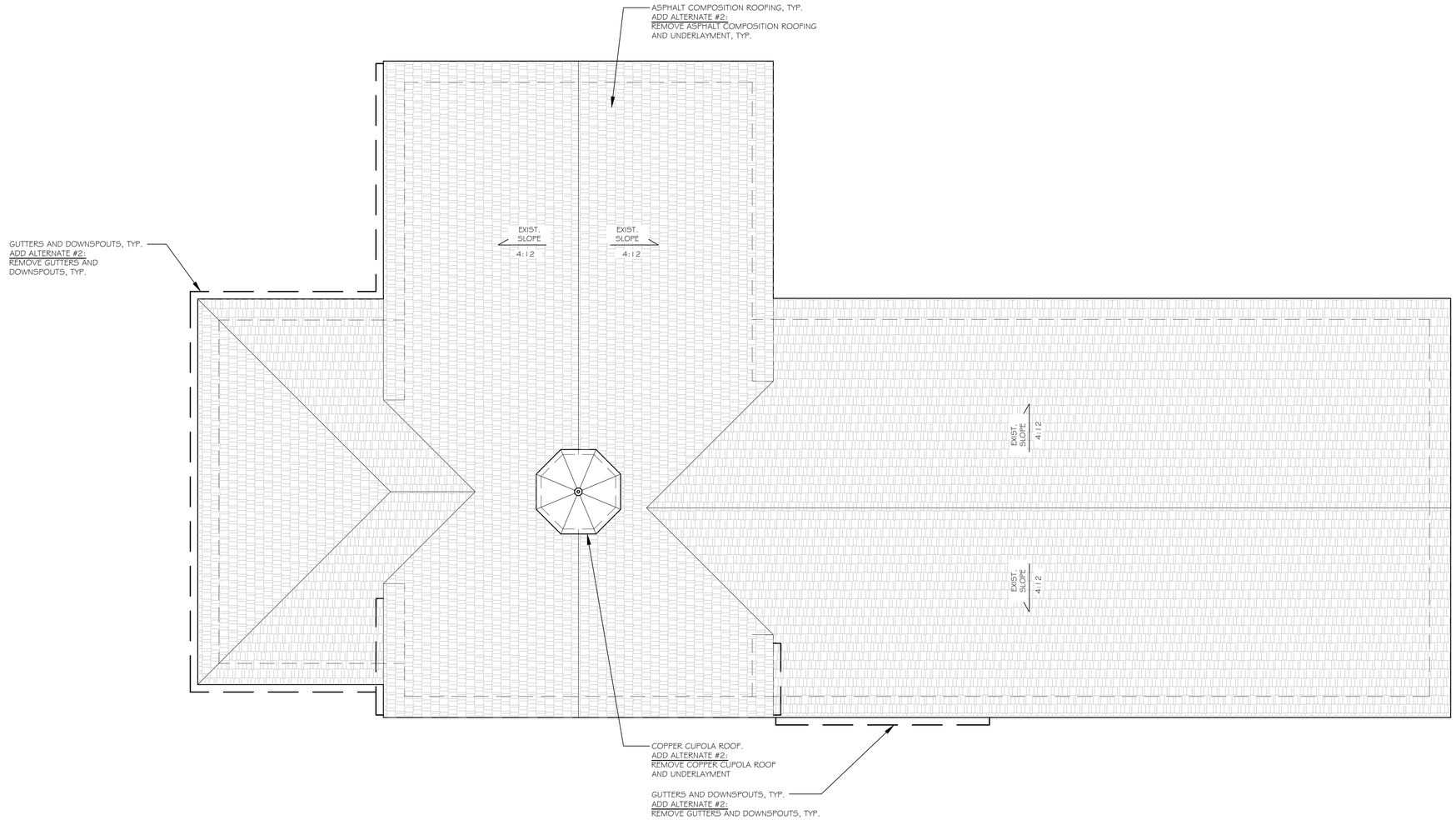
GENERAL NOTES - DEMOLITION ROOF

1. REFER TO HAZARDOUS MATERIALS ABATEMENT DRAWINGS (PREPARED BY OTHERS).
2. AFTER REMOVAL OF ROOFING, INSPECT CONDITION OF ROOF DECK AND PROVIDE ARCHITECT WITH WRITTEN REPORT AS A SUBMITTAL. INCLUDE QUANTITIES OF ROOF DECK REPLACEMENT RECOMMENDATION, IF ANY.



01 DEMOLTION ROOF PLAN
SCALE: 1/4"=1'-0"

TRUE NORTH
PLAN NORTH

0 1 2 4 8 12

TEXAS PARKS & WILDLIFE

REGISTERED ARCHITECT
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17785
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12-27-20

HUNTSVILLE STATE PARK
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BOATHOUSE
PROJECT NUMBER: 122865

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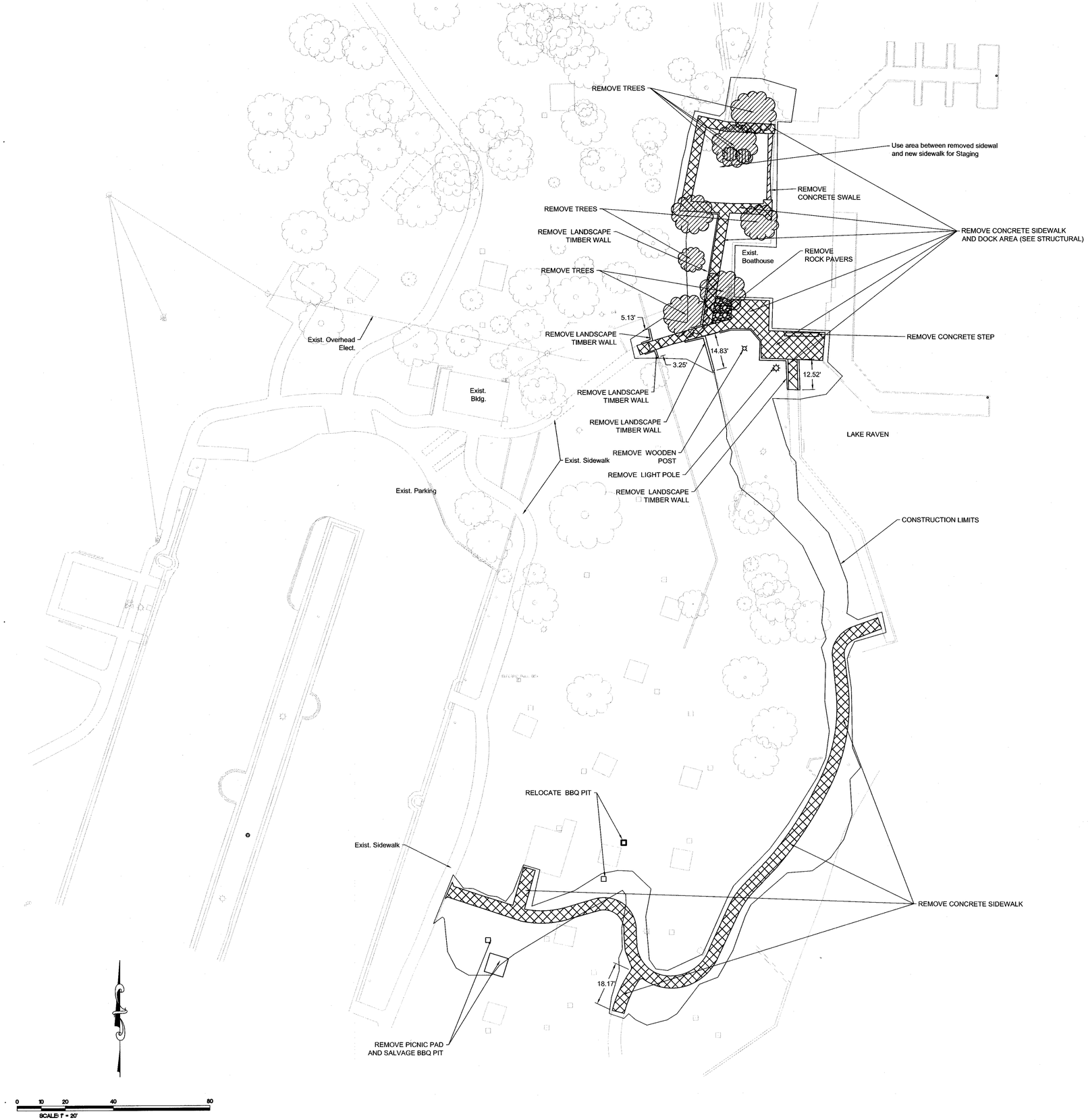
SHEET TITLE
DEMOLITION ROOF PLAN

SHEET NUMBER
D1.03

122865 - D103.dwg



NOTE:
TREES INDICATED TO BE REMOVED INCLUDING ROOT BALL AND FILLED BACK WITH SOIL IN 6" LAYERS AND COMPACTED TO 90% PROCTOR.

POLES AND BOLLARDS INDICATED TO BE REMOVED SHALL BE COMPLETELY REMOVED AND FILLED BACK WITH SOIL IN 6" LAYERS AND COMPACTED TO 90% PROCTOR.

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8-24-20

HUNTSVILLE STATE PARK
REPAIRS TO CCC BUILT STRUCTURES
BOATHOUSE
PROJECT NUMBER: 122865

DATE: 08-28-2020
DESIGNED BY: CDF
DRAWN BY: SS
REVIEWED BY: CDF
REVISED:
REVISED:
REVISED:

SHEET TITLE
CIVIL
DEMOLITION PLAN

SHEET NUMBER
C.1.01

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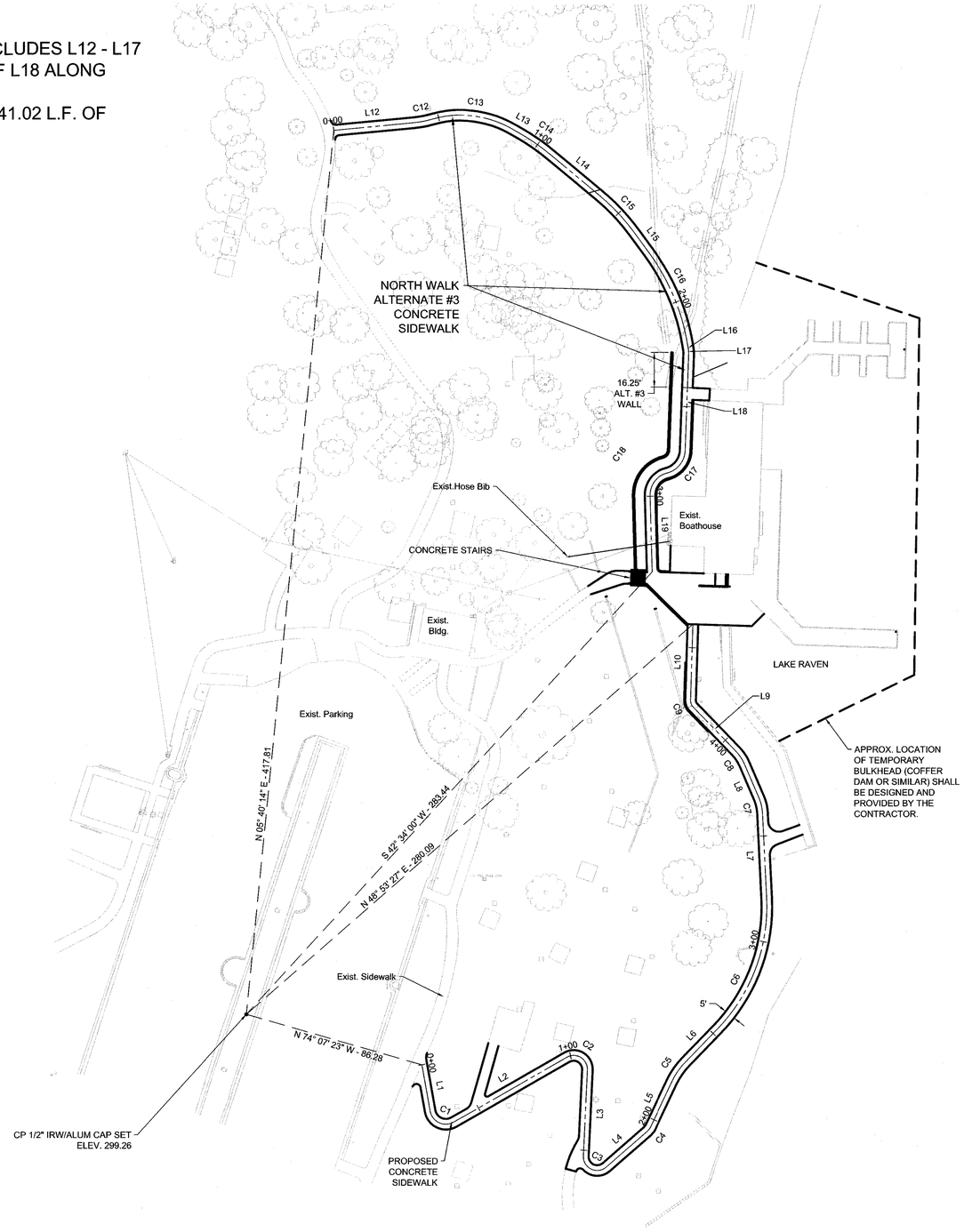
ALTERNATE #3 INCLUDES L12 - L17 AND 16.14 FEET OF L18 ALONG WITH C12 - C16
FOR A TOTAL OF 241.02 L.F. OF SIDEWALK

Line Table: Alignments						
Line #	Length	Direction	Start Point	End Point	START	END
L1	22.147	S10° 09' 02.94"E	(3806148.6638,10219979.8493)	(3806152.5671,10219958.0485)	0+00.00	0+22.15
L2	61.603	N60° 02' 06.45"E	(3806163.6957,10219952.8728)	(3806217.0646,10219983.6417)	0+36.52	0+98.13
L3	40.692	S02° 38' 11.19"W	(3806226.8043,10219977.7116)	(3806224.9325,10219937.0625)	1+12.03	1+52.73
L4	25.600	N48° 48' 20.84"E	(3806235.7066,10219931.8724)	(3806254.9701,10219948.7329)	1+67.91	1+93.51
L5	23.610	N25° 20' 05.19"E	(3806256.8093,10219951.1673)	(3806266.9123,10219972.5069)	1+96.58	2+20.19
L6	21.407	N44° 06' 56.72"E	(3806273.4487,10219981.7573)	(3806288.3505,10219997.1264)	2+31.57	2+52.98
L7	40.387	N02° 47' 05.54"W	(3806311.5235,10220058.5638)	(3806309.5612,10220098.9032)	3+20.51	3+60.90
L8	17.332	N23° 17' 32.32"W	(3806307.9548,10220105.8399)	(3806301.1012,10220121.7597)	3+68.06	3+85.39
L9	29.008	N44° 06' 54.59"W	(3806297.0901,10220127.7733)	(3806276.8976,10220148.5993)	3+92.66	4+21.67
L10	35.762	N01° 43' 50.65"E	(3806275.6304,10220151.8677)	(3806276.7105,10220187.6136)	4+25.27	4+61.03

Line Table: Alignments						
Line #	Length	Direction	Start Point	End Point	START	END
L12	37.927	N84° 31' 33.57"E	(3806106.9557,10220419.2215)	(3806144.7093,10220422.8395)	0+00.00	0+37.93
L13	3.905	S60° 26' 30.88"E	(3806191.4307,10220420.0664)	(3806194.8277,10220418.1399)	0+86.14	0+90.04
L14	30.141	S50° 32' 24.01"E	(3806208.9089,10220408.4590)	(3806232.1797,10220389.3032)	1+07.15	1+37.29
L15	12.212	S36° 29' 24.95"E	(3806248.8531,10220371.7424)	(3806256.1155,10220361.9243)	1+61.57	1+73.78
L16	1.673	S08° 50' 38.51"E	(3806274.3466,10220318.2712)	(3806274.6039,10220316.6180)	2+21.55	2+23.22
L17	1.656	S03° 24' 49.81"E	(3806274.6039,10220316.6180)	(3806274.7025,10220314.9654)	2+23.22	2+24.88
L18	45.681	S02° 00' 58.89"W	(3806274.7025,10220314.9654)	(3806273.0952,10220269.3126)	2+24.88	2+70.56
L19	35.888	S01° 34' 03.69"E	(3806256.4253,10220248.0827)	(3806257.4071,10220212.2078)	2+99.63	3+35.51

Curve Table: Alignments							
Curve #	Radius	Length	Chord Direction	Start Point	End Point	START	END
C1	7.500	14.375	S65° 03' 28.24"E	(3806152.5671,10219958.0485)	(3806163.6957,10219952.8728)	0+22.15	0+36.52
C2	6.500	13.909	S58° 39' 51.18"E	(3806217.0646,10219983.6417)	(3806226.8043,10219977.7116)	0+98.13	1+12.03
C3	6.500	15.183	S64° 16' 43.99"E	(3806224.9325,10219937.0625)	(3806235.7066,10219931.8724)	1+52.73	1+67.91
C4	7.500	3.072	N37° 04' 11.17"E	(3806254.9701,10219948.7329)	(3806256.8093,10219951.1673)	1+93.51	1+96.58
C5	32.905	11.383	N35° 14' 43.04"E	(3806266.9123,10219972.5069)	(3806273.4487,10219981.7573)	2+20.19	2+31.57
C6	82.500	67.532	N20° 39' 55.59"E	(3806288.3505,10219997.1264)	(3806311.5235,10220058.5638)	2+52.98	3+20.51
C7	20.000	7.158	N13° 02' 18.93"W	(3806309.5612,10220098.9032)	(3806307.9548,10220105.8399)	3+60.90	3+68.06
C8	20.000	7.269	N33° 42' 13.45"W	(3806301.1012,10220121.7597)	(3806297.0901,10220127.7733)	3+85.39	3+92.66
C9	4.500	3.601	N21° 11' 31.97"W	(3806276.8976,10220148.5993)	(3806275.6304,10220151.8677)	4+21.67	4+25.27

Curve Table: Alignments							
Curve #	Radius	Length	Chord Direction	Start Point	End Point	START	END
C12	51.060	9.465	N79° 12' 56.63"E	(3806144.7093,10220422.8395)	(3806153.9935,10220424.6079)	0+37.93	0+47.39
C13	48.235	38.745	S83° 04' 59.74"E	(3806153.9935,10220424.6079)	(3806191.4307,10220420.0664)	0+47.39	0+86.14
C14	99.000	17.109	S55° 29' 27.44"E	(3806194.8277,10220418.1399)	(3806208.9089,10220408.4590)	0+90.04	1+07.15
C15	99.000	24.276	S43° 30' 54.48"E	(3806232.1797,10220389.3032)	(3806248.8531,10220371.7424)	1+37.29	1+61.57
C16	99.000	47.769	S22° 40' 01.73"E	(3806256.1155,10220361.9243)	(3806274.3466,10220318.2712)	1+73.78	2+21.55
C17	11.500	14.851	S39° 00' 44.96"W	(3806273.0952,10220269.3126)	(3806264.3827,10220258.5584)	2+70.56	2+85.41
C18	10.500	14.217	S37° 13' 13.67"W	(3806264.3827,10220258.5584)	(3806256.4253,10220248.0827)	2+85.41	2+99.63



TEXAS PARKS & WILDLIFE

STATE OF TEXAS
CHRISTAPHER D. FULLER
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REGISTERED PROFESSIONAL ENGINEER
8-24-20

HUNTSVILLE STATE PARK
REPAIRS TO CCC BUILT STRUCTURES
BOATHOUSE
PROJECT NUMBER: 122865

DATE: 08-28-2020
DESIGNED BY: CDF
DRAWN BY: SS
REVIEWED BY: CDF
REVISED:
REVISED:
REVISED:

SHEET TITLE
CIVIL
OVERALL SITE LAYOUT

SHEET NUMBER
C.1.02

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02 - GEN LAY AND NOTES - 116716-051.dwg

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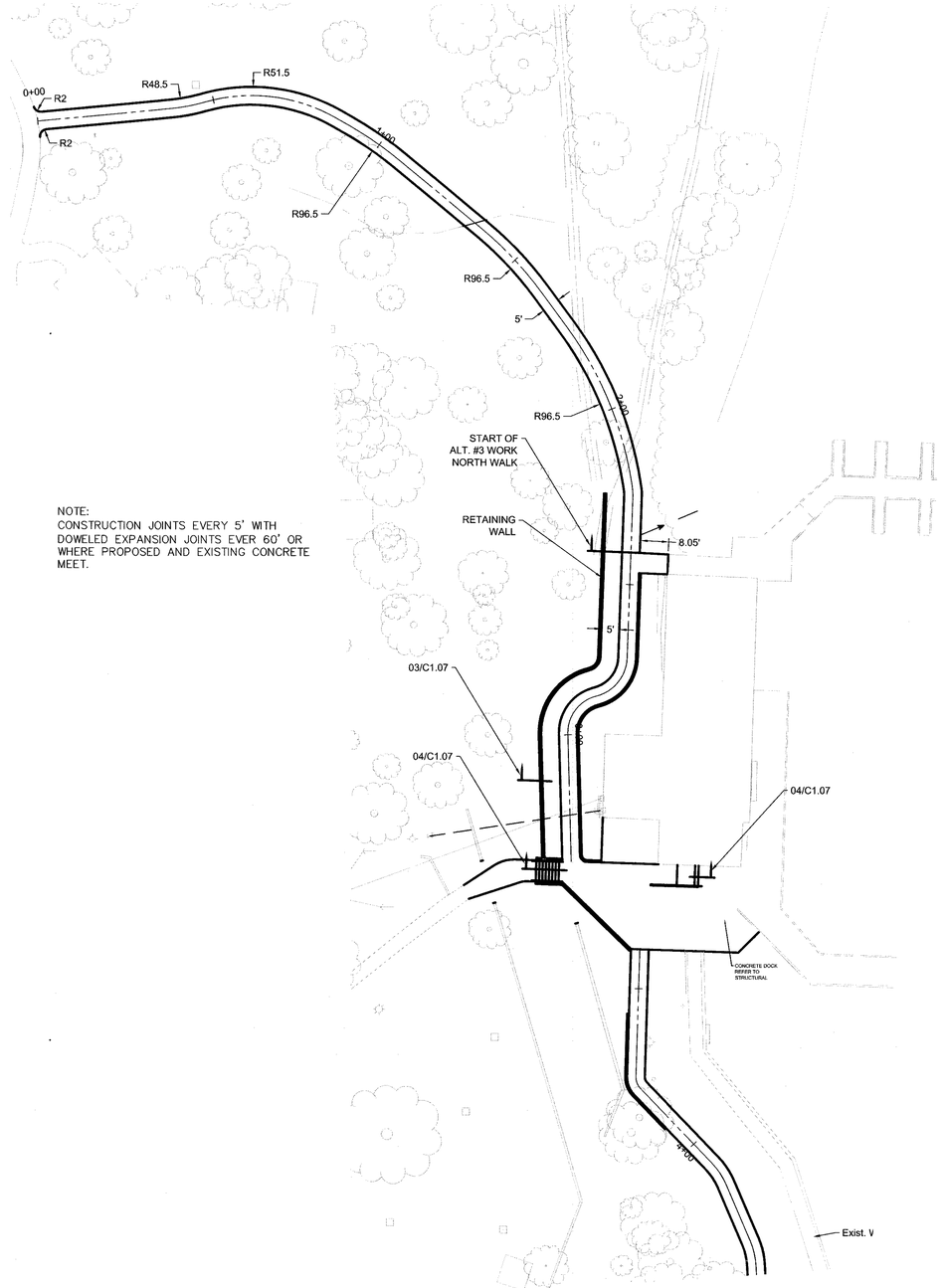
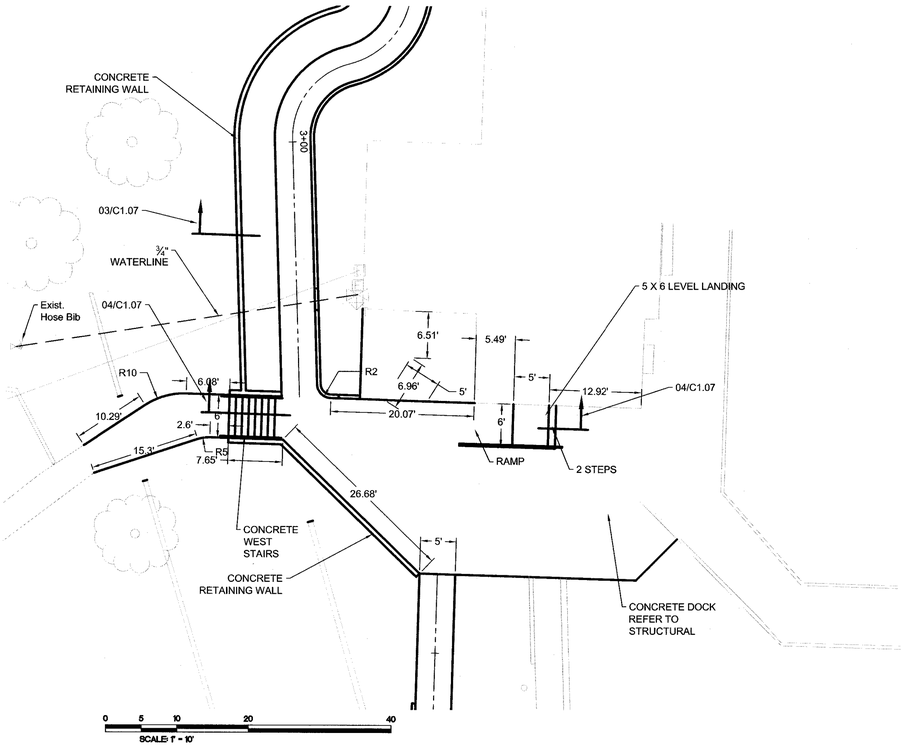
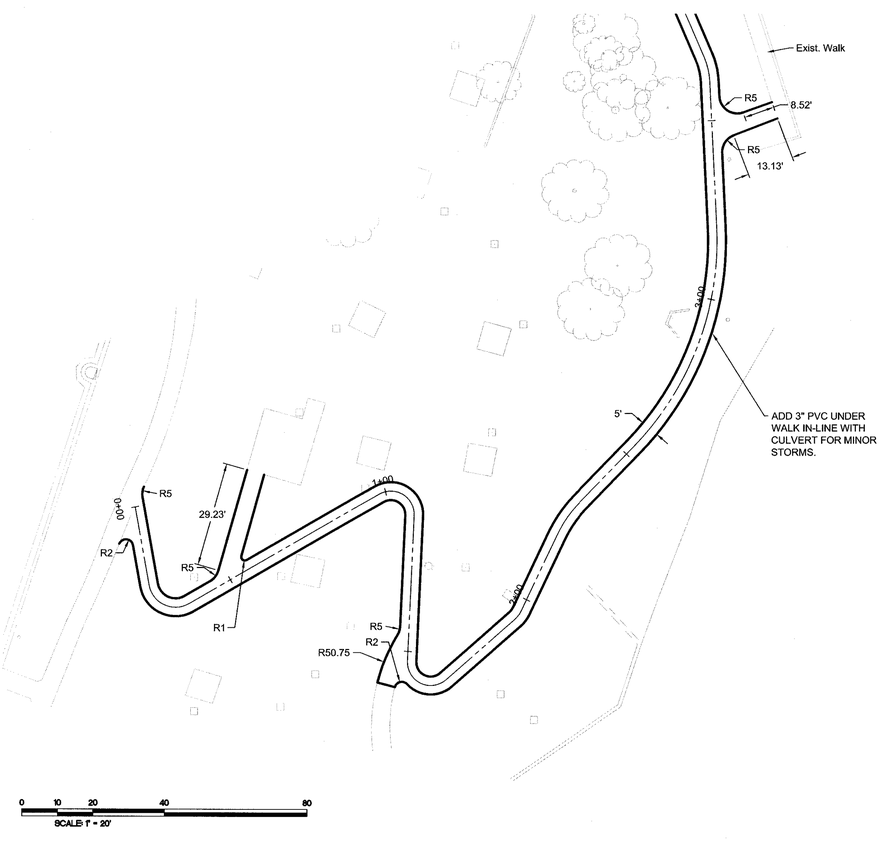


NOTE:
CONSTRUCTION JOINTS EVERY 5' WITH DOWELED EXPANSION JOINTS EVER 60' OR WHERE PROPOSED AND EXISTING CONCRETE MEET.





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CHRISTOPHER D. FULLER
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6-24-20

HUNTSVILLE STATE PARK
REPAIRS TO CCC BUILT STRUCTURES
BOATHOUSE
PROJECT NUMBER: 122865

DATE: 08-28-2020
DESIGNED BY: CDF
DRAWN BY: SS
REVIEWED BY: CDF
REVISED:
REVISED:
REVISED:

SHEET TITLE
CIVIL
ENLARGED PLANS

SHEET NUMBER
C.1.03
2A

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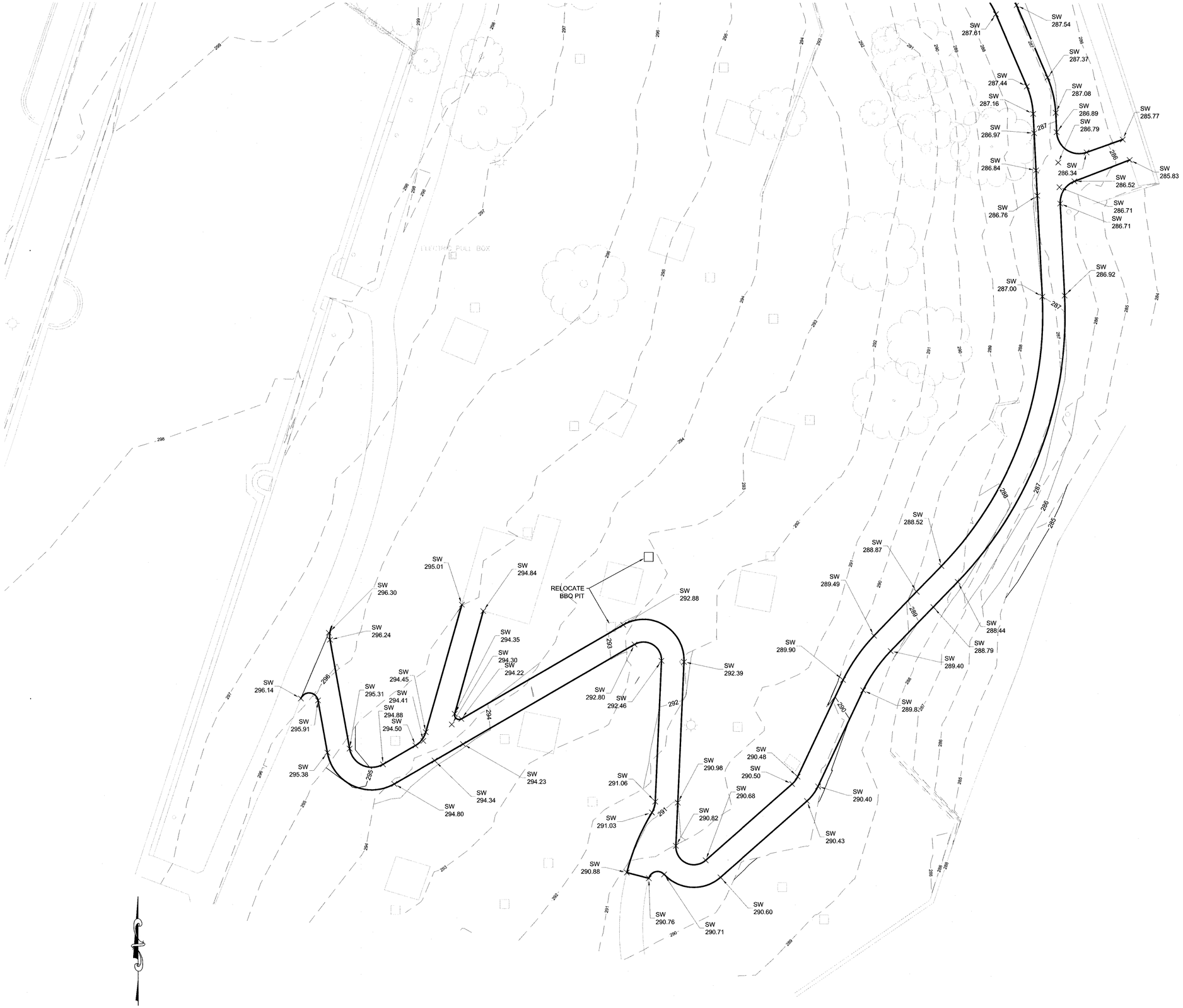

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8-24-20

HUNTSVILLE STATE PARK
REPAIRS TO CCC BUILT STRUCTURES
BOATHOUSE
PROJECT NUMBER: 122865

DATE: 08-28-2020
DESIGNED BY: CDF
DRAWN BY: SS
REVIEWED BY: CDF
REVISED:
REVISED:
REVISED:

SHEET TITLE
CIVIL
PARTIAL
GRADING PLAN

SHEET NUMBER
C.1.04
3A

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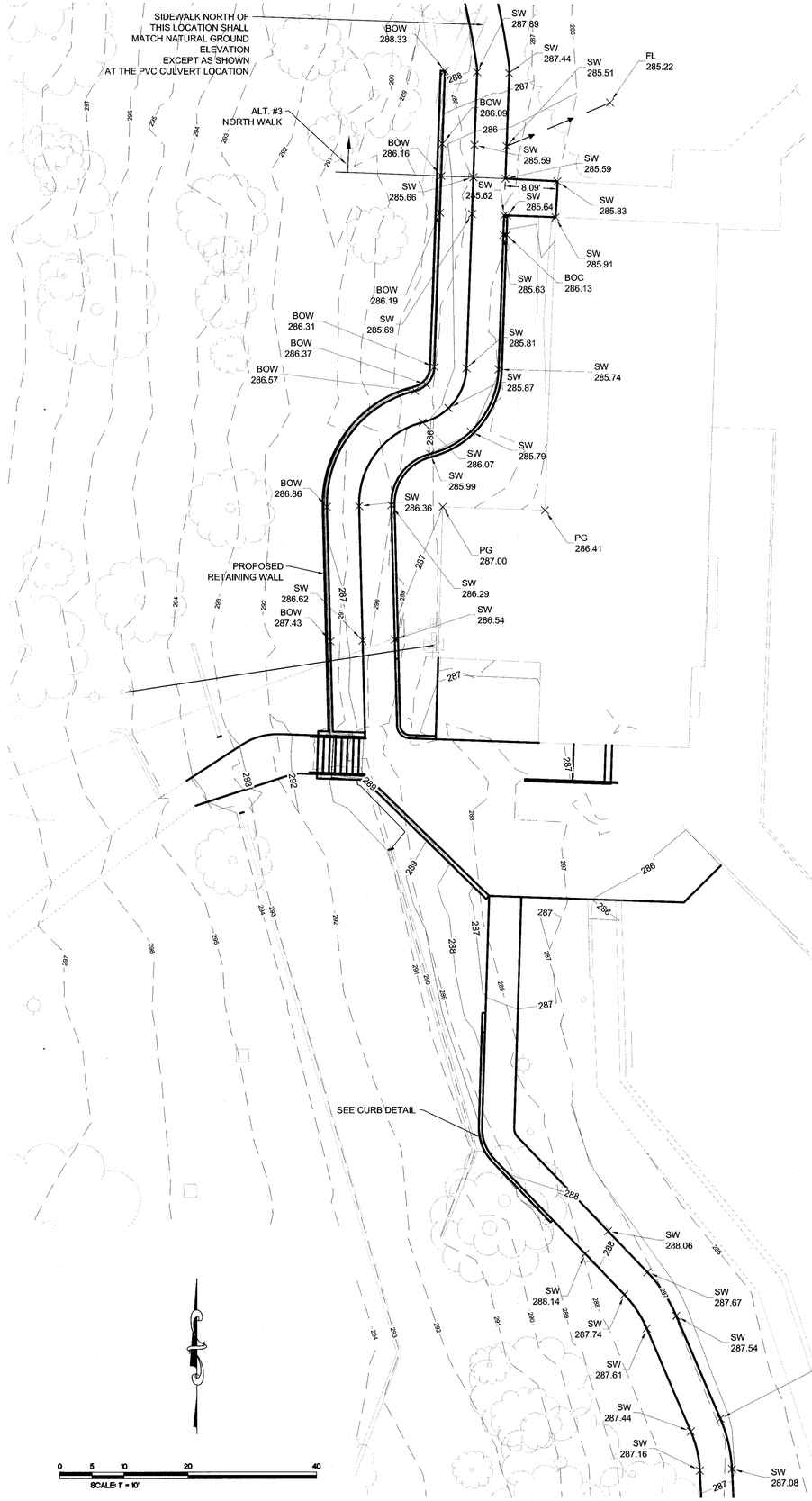
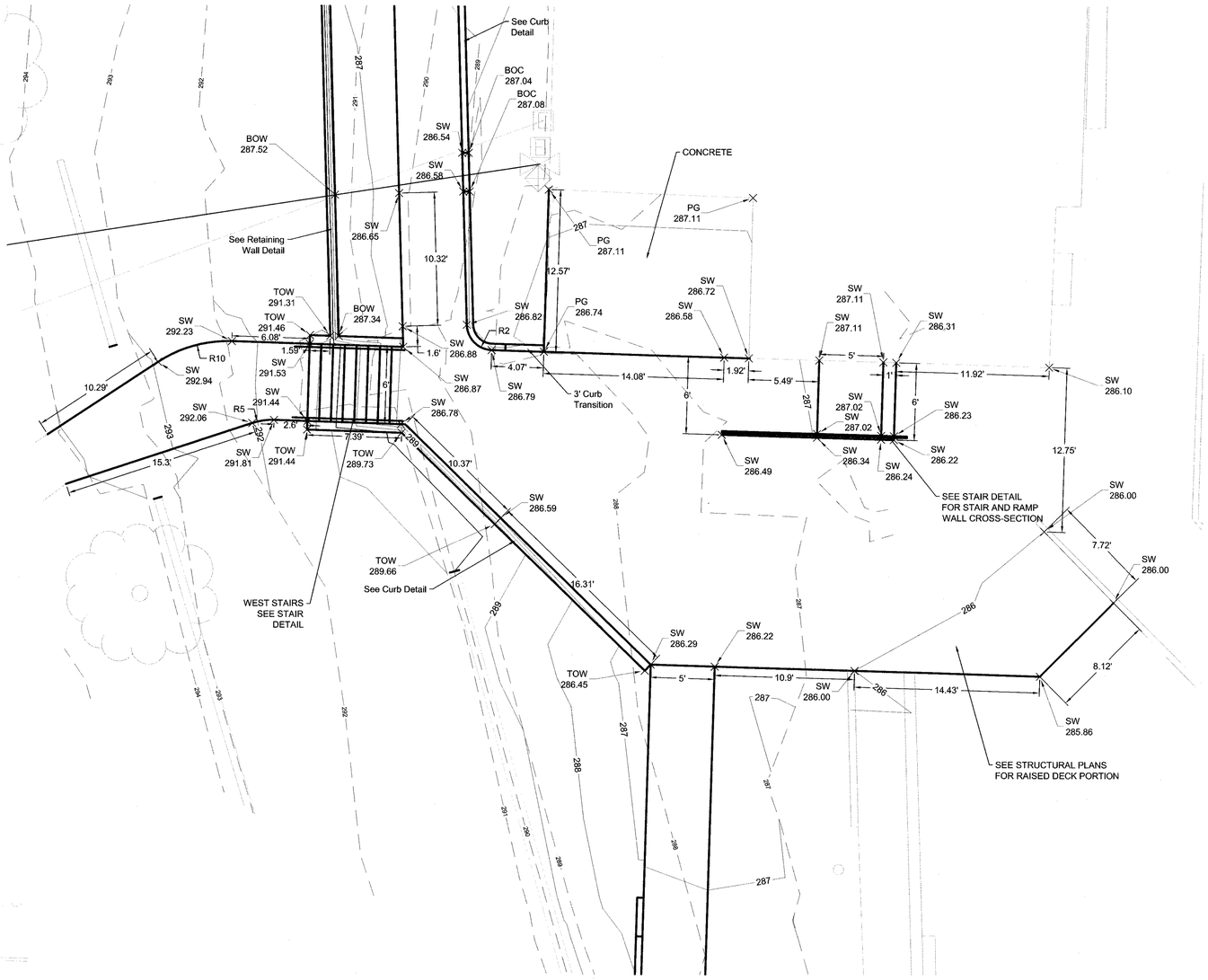
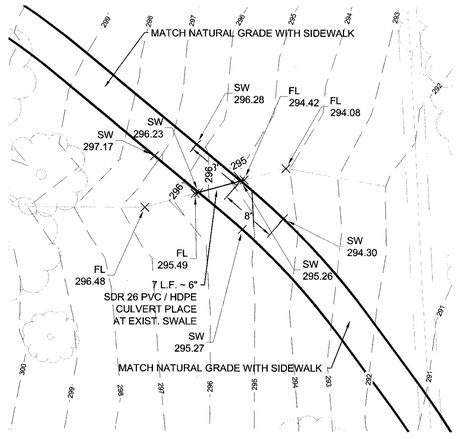




BOATHOUSE INSET DETAIL

0 2.5 5 10 20
SCALE: 1" = 5'



NORTH WALK DRAINAGE DETAIL

0 5 10 20 40
SCALE: 1" = 10'

TEXAS PARKS & WILDLIFE

CHRISTOPHER D. FULLER 108591 REGISTERED PROFESSIONAL ENGINEER STATE OF TEXAS

6-24-20

HUNTSVILLE STATE PARK
REPAIRS TO CCC BUILT STRUCTURES
BOATHOUSE
PROJECT NUMBER: 122865

DATE: 08-28-2020
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DRAWN BY: SS
REVIEWED BY: CDF
REVISED:
REVISED:
REVISED:

SHEET TITLE
CIVIL
PARTIAL GRADING PLAN

SHEET NUMBER
C.1.05
3B

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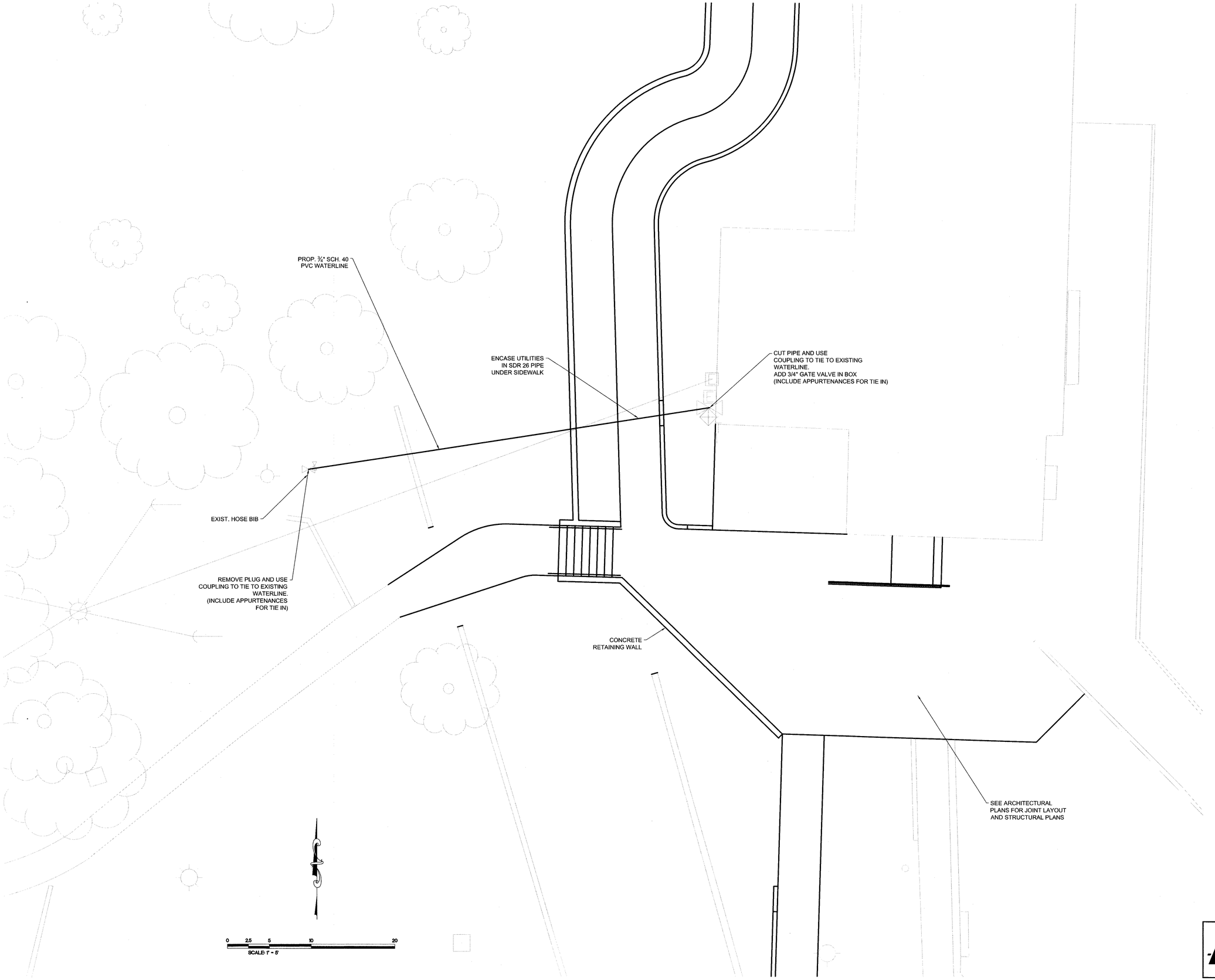

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CHRISTAPHER D. FULLER
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8-24-20

HUNTSVILLE STATE PARK
REPAIRS TO CCC BUILT STRUCTURES
BOATHOUSE
PROJECT NUMBER: 122865

DATE: 08-28-2020
DESIGNED BY: CDF
DRAWN BY: SS
REVIEWED BY: CDF
REVISED:
REVISED:
REVISED:

SHEET TITLE
CIVIL
UTILITY PLAN

SHEET NUMBER
C.1.06
4

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04 - UTILITY PLAN - 116717-051.dwg

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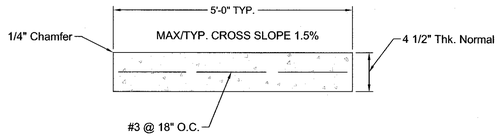
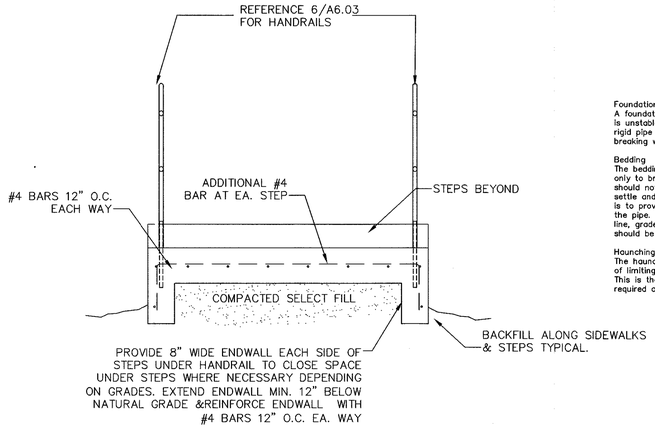
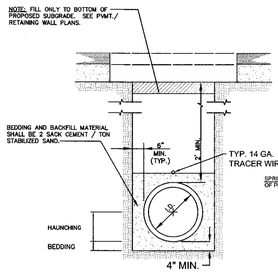


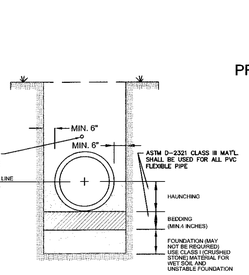
SIDEWALK DETAIL



(01) SECTION @ TYP STEPS



TYPICAL PAVING / RETAINING WALL TRENCH BEDDING



TYPICAL TRENCH BEDDING

ASTM D 2321

Description of embedment materials

Class I
Angular, 1/4" to 1 1/2" graded stone, including a number of fill materials that have regional significance, such as coral, slag, cinders, crushed stone and crushed shells.

Class II
Coarse sands and gravels with maximum particle size of 1 1/2", including variously graded sands and gravels containing small percentages of fines, generally granular and noncohesive, either wet or dry. Soil Types GW, GP, SW, and SP are included in this class.

Class III
Fine sand and clayey gravels including fine sands, sand-clay mixtures, and gravel-clay mixtures. Soil Types GM, GC, SM, and SC are included in this class.

Class IV
Silt, silty clays, and clays, including inorganic clays and silts of medium to high plasticity and liquid limits. Soil Types MH, ML, CH and CL are included in this class.

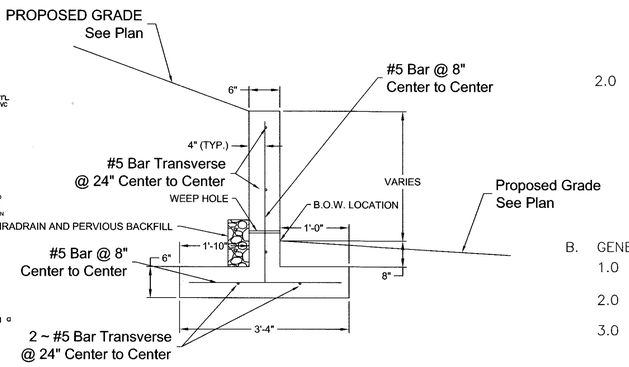
Class V
This class includes the organic soils OL, OH, and PT as well as soils containing frozen earth, debris, rocks larger than 1 1/2" in diameter, and other foreign materials. These materials are not recommended for bedding, haunching, or initial backfill.

Foundation
A foundation is required when the trench bottom is unstable. Any foundation that will support a rigid pipe without causing loss of grade or flexural breaking will be more than adequate for PVC pipe.

Bedding
The bedding directly underneath the pipe is required only to bring the trench bottom up to grade. It should not be so thick or soft that the pipe will settle and lose grade. The purpose of the bedding is to provide a firm, stable and uniform support of the pipe. A layer of material sufficient to establish line, grade, and support should be placed. Bell holes should be excavated to insure uniform bearing.

Haunching
The haunching area is the most important in terms of limiting the deflection of a flexible pipe. This is the area that should be compacted to the required or specific density.

(02) TYPICAL BEDDING AND TRENCH DETAIL FOR 3/4" WATER LINE



CROSS-SECTION VIEW
Not To Scale

(03) RETAINING WALL 1

RETAINING WALL SPECIFICATIONS

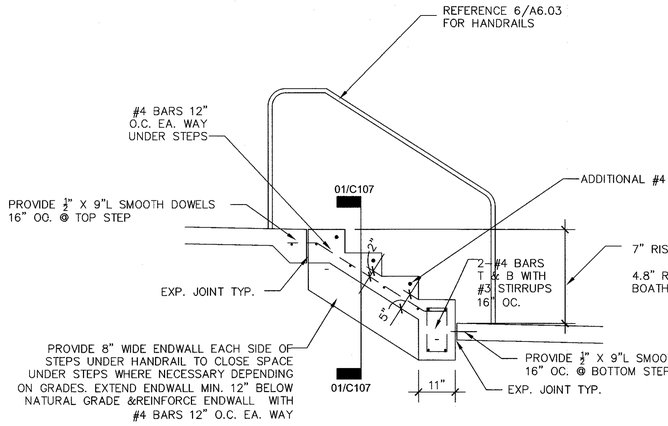
A. MATERIAL — ASTM SPECIFICATION (MINIMUM)

1.0 STEEL
1.01 CONCRETE REINFORCING — A615 GRADE 60 A305
1.02 ALL REINFORCED STEEL SHALL BE DETAILED AND INSTALLED PER MOST RECENT AMERICAN CONCRETE INSTITUTE (ACI) SPECIFICATIONS (ACI 315).

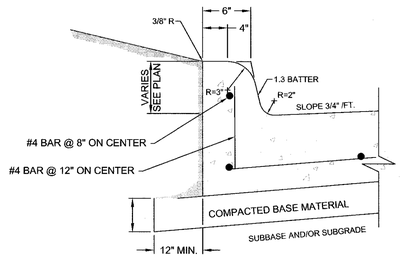
2.0 CONCRETE
2.01 PORTLAND CEMENT — C-150
2.02 AGGREGATE — C-33
2.03 ALL CONCRETE SHALL HAVE A MINIMUM COMPESSIVE STRENGTH AT 28 DAYS OF 4,000 PSI. USE OF CALCIUM CHLORIDE OR FLY ASH IS PROHIBITED. CONCRETE SHALL BE PLACED AND CURED PER LATEST ACI SPECIFICATIONS. CONCRETE SHALL NOT BE PLACED IN FREEZING WEATHER.

B. GENERAL
1.0 SOIL BEARING SPECIFICATIONS: 2,500 PSF MINIMUM
2.0 DESIGNS ARE NOT INTENDED TO BE USED WHERE ICE COULD FORM UNDER FOUNDATIONS OR ADJACENT TO WALL.
3.0 NO WATER LINES SHALL BE PERMITTED BEHIND RETAINING WALL. STANDING WATER BEHIND WALL IS PROHIBITED. POSITIVE DRAINAGE OF ALL SURFACE WATER BEHIND RETAINING WALL IS REQUIRED.

NOTES:
1. CONSTRUCTION JOINT AT 30' MAX. O.C.
2. EXPANSION JOINT AT 30' MAX. O.C. ACCORDING TO DETAIL.
3. 2" ø PVC DRAINS AT 10' O.C.
4. 12" X 12" MIRADRAIN OR EQUAL COMPOSITE DRAINAGE MAT CENTERED AT EACH DRAIN AND ANCHORED TO BACK FACE.
5. 12" X 12" PERVIOUS BACKFILL CONTINUOUS BEHIND WALL.
6. 36" X #4 @ 12" O.C. CORNER BARS AT ALL ANGLE POINTS AND CONSTRUCTION JOINTS.
7. 2-#4 HOOPS AT ALL 12" ø OR LARGER PENETRATIONS.



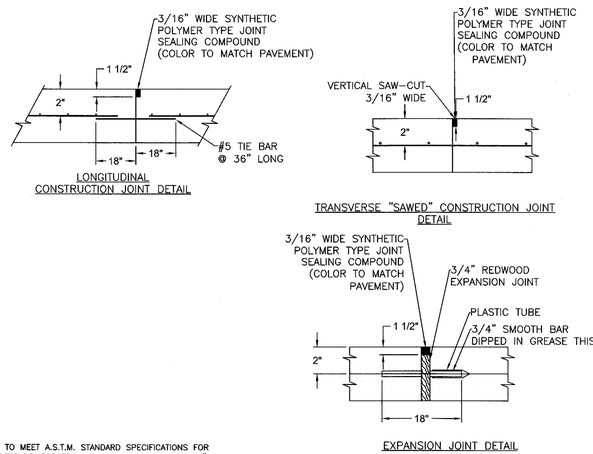
(04) SECTION @ TYP STEPS



NOTES:

1. Curb and gutter concrete shall be Class "A" (3000 psi).
2. Reinforcing steel as shown.
3. Expansion joints at a maximum length of 60 feet.
4. Sawed contraction joint every 5 feet between expansion joints.

(05) STANDARD CURB / WALL ATTACHED TO SIDEWALK/DOCK



NOTE:

STEEL TO MEET A.S.T.M. STANDARD SPECIFICATIONS FOR CONCRETE REINFORCED BAR UNITS TO BE SPACED 24" LONGITUDINAL AND 18" TRANSVERSE

(06) CONCRETE PAVEMENT AND CONSTRUCTION JOINT DETAILS

McCoy Collaborative
Preservation Architecture, PLLC
3200 Main Street #3.6
Dallas, Texas 75226
Ph: 214.977.9118

AMERICAN CIVIL ENGINEERING SERVICES, L.P.
P.O. Box 3220 * Conroe, Texas 77305 * FRN - 7349
936-760-3280 * 936-760-3270 (Fax) * www.americances.com

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TEXAS PARKS & WILDLIFE

STATE OF TEXAS
CHRISTOPHER D. FULLER
108591
REGISTERED
PROFESSIONAL ENGINEER
6-24-20

HUNTSVILLE STATE PARK
REPAIRS TO CCC BUILT STRUCTURES
BOATHOUSE
PROJECT NUMBER: 122865

DATE: 08-28-2020
DESIGNED BY: CDF
DRAWN BY: SS
REVIEWED BY: CDF
REVISED:
REVISED:
REVISED:

SHEET TITLE
CIVIL
DETAILS

SHEET NUMBER
C.1.07
5

PATH: Z:\Files_PROJECTS\117217-051 Quimby McCoy Huntsville State Park\ConstDwg\05 - DETAILS - 116717-051.dwg

S T R U C T U R A L N O T E S

COORDINATION

A. The Contractor shall compare the Architectural, Structural, Mechanical, Electrical, Plumbing, and other series drawings and report any discrepancies between each set of drawings and within each set of drawings prior to fabrication and installation of any structural members.

B. Only larger sleeve openings and framed openings in structural framing component members are indicated on the Structural Drawings. However, all sleeves, inserts and openings, including frames and/or sleeves shall be provided for passage, provision and/or incorporation of the work of the contract, including but not limited to Mechanical, Electrical and Plumbing work. This work shall include the coordination of sizes, alignment, dimensions, position, locations, elevations and grades as required to serve the intended purpose. Openings not indicated on the Structural Drawings, but required as noted above, shall be submitted to the Engineer for review.

C. Refer to Architectural, Mechanical, Electrical and Plumbing drawings for floor elevations, slopes, drains and location of depressed and elevated floor areas.

D. Compatibility of the structure and provisions for building equipment supported on or from structural components shall be verified as to size, dimensions, clearances, accessibility, weights and reaction with the equipment for which the structure has been designed prior to submission of shop drawings and data for each piece of equipment and for structural components. Differences shall be noted on the submittals.

E. Shop drawings shall be prepared for all structural items and submitted for review by the Engineer. Structural Drawings shall not be reproduced and used as shop drawings. All items deviating from the Structural Drawings or from previously submitted shop drawings shall be clouded.

F. The details designated as "Typical Details" apply generally to the Structural Drawings in all areas where conditions are similar to those described in the details.

G. All dimensions and conditions of existing construction shall be verified at the job site prior to the preparation of shop drawings. Differences between existing construction and that shown on the Structural Drawings shall be referred to the Architect. Differences shall also be clouded on the shop drawings.

H. All structural elements of the project have been designed by the Engineer to resist the required code vertical and lateral forces that could occur in the final completed structure only. It is the responsibility of the Contractor to provide all required bracing during construction to maintain the stability and safety of all structural elements during the construction process until the lateral-load resisting or stability-providing system is completely installed and the structure is completely tied together. Temporary supports shall not result in the overstress or damage of the elements to be braced nor any elements used as brace supports.

I. The Contract Structural Drawings and Specifications represent the finished structure, and except where specifically shown, do not indicate the means or methods of construction. The Contractor and their Sub-Contractors shall supervise and direct the Work and shall be solely responsible for all construction means, methods, procedures, techniques, sequences and safety measures including, but not limited to, adherences to all OSHA guidelines. The Engineer shall not have control of, and shall not be responsible for, construction means, methods, techniques, sequences or procedures, for safety precautions and programs in connection with the Work, for the acts or omissions of the Contractor, Subcontractors, or any other person performing any of the Work, or for the failure of any of these persons to carry out the Work in accordance with the Structural Contract Documents.

J. Where conflict exists among the various parts of the Structural Contract Documents, Structural Drawings, General Notes, and Specifications, the strictest requirements, as indicated by the Engineer, shall govern.

K. Periodic site observation by field representatives of JQ is solely for the purpose of determining if the Work is proceeding in accordance with the Structural Contract Documents. This limited site observation is not intended to be a check of the quality or quantity of the Work, but rather a periodic check in an effort to inform the Owner against defects and deficiencies in the work of the Contractor.

SUBSTITUTIONS

A. All requests for substitutions of materials or details shown in the Structural Contract Documents shall be submitted for approval during the bidding period.

B. Once bids are accepted, proposed substitutions will be considered only when they are officially submitted with an identified savings or duration to be deducted from the contract and/or schedule impact. Submittals not satisfying the above criteria will not be considered.

CODES & REFERENCED REPORTS

A. The General Building Code used as the basis for the structural design is as follows:
1. International Building Code, 2015 Edition
2. International Existing Building Code, 2015 Edition

B. Structural Concrete: Building Code Requirements for Reinforced Concrete, American Concrete Institute, ACI 318, as referenced by the General Building Code.

C. Structural Steel: Manual of Steel Construction, American Institute of Steel Construction Inc., ANSI/AISC 360, as referenced by the General Building Code.

D. Wood Framing: National Design Specifications for Wood Construction with Supplement, National Forest and Paper Products Association, as referenced by the General Building Code.

E. Structural Plywood: Plywood Design Specification, American Plywood Association, as referenced by the General Building Code.

F. Geotechnical Report: Foundation elements have been designed in accordance with information provided in the following geotechnical report:

Geotechnical engineer:	Terracon
Report Number:	97165124
Date:	1-Mar-17

DESIGN LOADS

A. Dead Loads include the self-weight of the structural elements and the following superimposed loads:

1.	Ceiling and Mechanical at roof	10 psf
2.	Roofing and rigid insulation	8 psf

B. Live Loads

	OCCUPANCY OR USE	UNIFORM (psf)	CONCENTRATED (lbs.)
1.	Boathouse and piers	100	2000
2.	Roof - Reduced	20	N/A

C. Live Load Reduction
1. Live loads have been reduced on any member supporting more than 150 square feet, including flat slabs, except for floors in places of public assembly and for live loads greater than 100 pounds per square foot in accordance with the following formula:
   a. r(A-150) >= R >= 23.1(1+D/L)
      Where R = Reduction in percent.
      r = Rate of reduction equal to .08 percent for floors.
      A = Area of floor supported by the member.
      D = Total dead load supported by the member.
      L = Total unreduced live load supported by the member.
   b. The reduction, R, shall not exceed 40 percent for members supporting one level only, 60 percent for other members, or R as calculated in the following formula:
2. Live loads exceeding 100 pounds per square foot have not been reduced, except columns supporting 2 or more stories, live loads have been reduced 20 percent.
3. Roof live load has been reduced using the formula 20 x R1 x R2 according to the General Building Code.

D. Snow loads
1. Ground snow load, Pg — 5 psf

E. Wind loads
1. Wind lateral load on structural frame is based on ASCE 7-10 using the following:
   a. Basic Wind Speed (Ultimate) — 115 mph
   b. Exposure — C
   c. Internal Pressure Coefficient, Gcpi — +/-0.18
   d. Risk Category — II
2. Components and cladding wind pressures:

Surface	(PSF)	Zone	Area At (ft2)
Exterior walls	+30.5	Interior and edge	10 or less
	-33.1	Interior	10 or less
	-40.7	Edge	10 or less
	+22.9	Interior and edge	500 or greater
	-25.4	Interior	500 or greater
	-25.4	Edge	500 or greater
Roof	-33.4	Interior	10 or less
	-56.0	Edges	10 or less
	-84.2	Corners	10 or less
	-30.5	Interior	100 or greater
	-36.2	Edges	100 or greater
	-36.2	Corners	100 or greater

- Pressures for Tributary Areas in between the listed values may be linearly interpolated.
- Negative value signifies pressure acting away from the surface (suction).
- Edge and Corner zone distances shall be determined in accordance with referenced standard.
- Pressures on parapets shall be determined by combining positive and negative wall pressures or wall and roof pressures listed above in accordance with the referenced standard.

* Pressures are for gross uplift conditions. Refer to roof plan(s) for net uplift values for design of joists, joist girders, and bridging.

EXCAVATION PROTECTION

A. Contractor shall comply with all Occupational Safety and Health Administration standards and all other regulatory agency standards regarding excavation safety.

DRIVEN PILES

A. Pile design is based on an allowable capacity of 5 tons in accordance with the referenced geotechnical report.

B. Bearing stratum shown on the pile details is natural material below a depth of 10 feet from existing grade. Assume overall pile length is 20'-0"

C. Piles may be steel, concrete or timber. unless noted otherwise. Contractor shall submit proposed material and installation methodology for review.

D. After piling is driven and cut off at final elevation.

E. Pile cut off elevations are shown on the pile cap details.

F. Piles may require additional aids such as preboring to reach the required depth, but preboring depth shall not exceed 5 feet.

G. All piles shall be driven a sufficient distance in to the bearing stratum to develop the required resistance. Driving criteria shall be in accordance with the driving formula developed by the Geotechnical Engineer and confirmed by test piles.

H. All piles shall be driven in the presence of and inspected by a geotechnical inspector in order to ensure that the proper pile capacity has been attained. Geotechnical Engineer shall be the sole judge of the ability of the piles to sustain the design loads.

I. Contractor shall make and maintain accurate records of the pile depths, and location (including off-center eccentricities), and shall submit this information to the Engineer.

CONCRETE FOOTINGS

A. Concrete footing design is based on an allowable net bearing capacity of 2,500 psf in accordance with the referenced geotechnical report.

B. Bearing stratum shown on the footing details is undisturbed native soil.

C. Footings not specifically located on the plan shall be located on centerline of pilaster or column above. Where no pilaster or column occurs, locate on centerline of wall or beam.

D. Elevation of top of plinths/footings, unless noted otherwise on the Structural Drawings, is at the bottom of the deepest intersecting beam or wall supported by the footing.

E. Footing excavations shall be to neat lines and shall be free of loose or wet materials.

F. Footing reinforcing and concrete shall be placed immediately after excavations are complete; in no case shall a footing be excavated that cannot be placed by the end of the workday.

G. Reinforcing steel shop drawings shall include placing drawings for templates to set dowels in footings.

H. All footings shall be inspected by a geotechnical inspector in order to ensure that the proposed bearing material has been reached in accordance with the recommendations given in the referenced geotechnical report and that the footing has been constructed to specified size, with detailed reinforcing, and to specified tolerances.

CAST-IN-PLACE CONCRETE

A. CONCRETE MIX USAGE SCHEDULE:
All concrete shall conform to the requirements as specified in the table below, unless noted otherwise on the Structural Drawings:

Use	Strength psi	Agg. Type	Agg. Size	Slump Inches	Max w/c	Air Content
Footings	3500	NWT	1"	3-5	-----	-----
Structural Columns, Beams and Slab*	4500	NWT	1"	3-5	0.45	3.5 to 6%

* Denotes see additional concrete mix design notes B and D below.

1. "NWT" refers to normal concrete having air dry unit weight of approximately 145 PCF (ASCE C33 aggregate)
2. Where the w/c ratio is not indicated in the table above, it shall be as necessary to meet strength requirements.
3. Where the w/c ratio is shown, it shall be adhered to regardless of strength requirements.
4. "Strength" is required compressive cylinder strength at an age of 28 days.

B. In addition, formed slabs and beams for the exposed boat dock shall meet the following additional requirements:
1. A maximum water/cement ratio of 0.45.
2. A high-range water reducing admixture shall be added to increase the slump to 5-6". The noted slump applies before the addition of the admixture.
3. Maximum shrinkage of the concrete shall be 0.03% at 28 days as determined by ASTM C157.
4. Minimum entrained air content shall be 5 to 7 percent.

C. A maximum of 20% of the cementitious materials used in mix designs may be replaced with class C or F fly ash.

D. Concrete mix used for the pier, supporting columns and beams under boat house shall be designed to match existing for color and finish. This may include the use of colored cements and alternative finishing methods. Formed exposed concrete surfaces shall have board finish to match existing.

E. Horizontal construction joints in concrete placements shall be permitted only where indicated on the Structural Drawings. All vertical construction joints shall be made in the center of spans in accordance with the typical details. Contractor shall submit proposed locations for construction joints not shown on the Structural Drawings for review by the Architect and Engineer. Additional construction joints may require additional reinforcing as specified by the Engineer which shall be provided by the contractor at no additional cost to the owner.

F. Embedded conduits, pipes, and sleeves shall meet the requirements of ACI 318, Section 26.8, including the following:
1. Conduits and pipes embedded within a slab, wall, or beam (other than those passing through) shall not be larger in outside dimension than 1/3 the overall thickness of the slab, wall or beam in which they are embedded.
2. Conduits, pipes and sleeves shall not be spaced closer than three diameters or widths on center.

G. Submittal: Submit proposed mix designs in accordance with ACI 301, chapter 4.2. Each proposed mix design shall be accompanied by a record of past performance based on at least 30 consecutive strength tests, or by three laboratory trial mixtures with confirmation tests.

H. Grade beams in contact with earth shall be formed both sides unless noted otherwise in details.

I. Concrete sampling for quality assurance: Concrete that is pumped shall be sampled at the point of discharge from the truck for information, including slump; and shall be sampled at the point of placement for acceptance of slump and air content.

CONCRETE REINFORCING

A. Concrete reinforcement for the project shall conform to the following:
1. All reinforcing steel shall be new billet steel in accordance ASTM A615, Grade 60, unless noted otherwise in the Structural Drawings or these notes.
2. Epoxy-Coated Reinforcing Steel. Provide epoxy-coated reinforcing steel according to ASTM A775 where noted on the drawings.
3. Deformed Bar Anchors. ASTM A496 minimum yield strength 70,000 psi as noted on the Structural Drawings. Reinforcing bars shall not be substituted for deformed bar anchors.

B. Detailing of reinforcing steel shall conform to the American Concrete Institute 315 Detailing Manual and all hooks and bends in reinforcing bars shall conform to ACI detailing standards, unless noted otherwise on the Structural Drawings.

C. In unscheduled grade beams, walls, and slabs, detail reinforcing as follows:
1. Class A lap beam top reinforcing bars at mid span.
2. Class A lap beam bottom reinforcing bars at the supports.
3. Provide Class B lap at other location pending Engineer's approval.
4. Provide standard hooks in top bars at cantilever and discontinuous ends of beams, walls and slabs.
5. Provide corner bars for all horizontal bars at the inside and outside faces of intersecting beams or walls. Corner bars are not required if horizontal bars are hooked.
6. Provide 2-#4 diagonal bars at all slab re-entrant corners placed under the top mat of steel.

D. Welding of reinforcing steel will not be permitted unless specifically shown on the Structural Drawings.

E. Heat shall not be used in the fabrication or installation of reinforcement.

F. Reinforcing steel clear cover shall be as follows:

1.	Beams	2"
2.	Columns	3"
3.	Footings	3"
4.	Formed grade beams	2" top and sides, 3" bottom
5.	One way slabs	1"
6.	Slab-on-grade	3/4" top
7.	Walls	2"

POLYMER MODIFIED REPAIR MORTAR

A. Polymer modified repair mortar shall be manufactured by the Sika Corporation. Comply with all handling, mixing, placing and curing requirements as specified by the Sika Corporation.

B. Chip out all loose and unsound concrete and as required to provide minimum application thickness. Surface preparation shall be in accordance with ICRI Guideline 310.2R-2013: "Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, and Polymer Overlays". Concrete surface profile shall be a minimum of CSP-5. Waterblast concrete surface. Mortar shall be applied to saturated surface dry (SSD) surface.

C. Apply a scrub coat of repair mortar to existing concrete surface prior to placing the repair mortar mix. Repair mortar must be applied into wet scrub coat before it dries.

D. Bonding agent (where called for) shall be Sika Armatec 110 Epocem bonding agent. Apply prior to application of repair mortar. Comply with time between application of bonding agent and repair mortar requirements.

E. Clean exposed reinforcing steel by oil-free abrasive blasting or high pressure water blasting. Verify that the reinforcing steel and concrete surface are free from dirt, oil, cement fines (slurry), or any material that may interfere with the bond of the repair mortar.

F. Coat exposed reinforcing steel with Sika Armatec 110 Epocem bonding agent in accordance with manufacturer's instructions.

G. Repair mortar for horizontal surfaces (hand applied):
1. Repair mortar shall be Sika Sikatop 122 PLUS Polymer Modified Repair Mortar, or accepted equal.
2. Application thickness:
   a. Minimum: 1/4 inch
   b. Maximum in one lift: 1 inch
3. For installations greater than 1 inch and less than 4 inches in thickness, extend repair mortar with 3/8 inch coarse aggregate, not to exceed 42 lbs. per bag.

H. Repair mortar for vertical and overhead surfaces (hand-applied):
1. Repair mortar shall be Sika SikaTop 123 PLUS Polymer Modified Repair Mortar, or accepted equal.
2. Application thickness:
   a. Minimum: 1/4 inch
   b. Maximum in one lift: 1 inch

I. Repair of exposed reinforcing and spalled or honeycombed concrete on vertical or overhead surfaces (form and pour or pump):
1. Repair mortar shall be Sika Monotop 611 Pump and Pour Repair Mortar, or accepted equal.
2. Provide fully supported formwork as necessary to restore structural member to original configuration. Provide access chutes (for pour installations), valve inlets (for pump installations), and vent holes/tubes in formwork as necessary.
3. For installations greater than 1 inch in depth, extend material with up to 42 lbs. of 3/8 inch clean, coarse, well-grade, non-reactive, aggregate complying with ASTM C33 size number 8 per Table 2.
4. Application thickness:
   a. Minimum (neat): 2 inch
   b. Maximum (neat): 1 inch
   c. Minimum (extended): 1 inch
   d. Maximum (extended): 6 inches

J. Repair of exposed reinforcing and spalled or honeycombed concrete on vertical or overhead surfaces (spray-applied):
1. Repair mortar shall be SikaRepair 224 Sprayable Mortar, or accepted equal.
2. Apply material perpendicular to the surface using conventional wet-process shotcreting equipment.
3. Application thickness
   a. Minimum: 3/8 inch
   b. Maximum per lift (vertical): 2 inches
   c. Maximum per lift (overhead): 1.5 inches

PRESSURE INJECTED EPOXY ADHESIVE

A. Work related to pressure injected epoxy adhesive shall be performed in accordance with ACI 503.1.

B. Epoxy adhesive shall be water insensitive and shall comply with ASTM C881, Type I. Submit proposed adhesive for review and approval. Epoxy adhesives offered by the following manufacturers are acceptable:
1. Sika Corporation
2. Euclid Chemical Company
3. BASF

C. Only automated, two-component injection equipment shall be used for applications involving the repair of critical structural elements. Equipment shall be operated only by trained, experienced personnel.

D. All surfaces to receive adhesive shall be free of all loose and unsound material, oil, grease, wax, or other bond inhibiting agents. Use sandblast or waterblast to clean surface. Acid etching shall not be used.

E. Set appropriate injection ports based on system used and width of crack. Recessed ports shall be used for cracks less than 25 mils (0.025 inch) in width. Mix and place adhesive, and install surface sealer over face of crack and around injection ports in accordance with manufacturer's recommendations.

F. Perform ratio measurement and pressure tests of the automated two-component injection equipment at the beginning of each shift in accordance with ICRI Guideline 210.1-2016 "Guide for Verifying Field Performance of Epoxy Injection of Concrete Cracks" (formerly No. 03734).

G. The testing agency shall obtain samples of epoxy adhesive from the injection equipment at the point where adhesive is introduced to the injection ports for the first 50 linear feet of crack injected, and thereafter for every 100 linear feet of crack injected. Samples shall be stored in capped test tubes clearly marked as to date and location. Samples shall be retained to verify proper set and curing of the adhesive.

H. Begin injection of adhesive at the injection port of lowest elevation, or at one end of horizontal crack. When adhesive appears at the adjacent port, plug the port being injected, and begin injection at the adjacent port. Repeat process until all ports have been injected. Injection process shall not be interrupted once begun.

I. After adhesive has cured, remove all injection ports and surface sealer flush with surrounding concrete. Surface sealer shall be ground off. Contractor shall not remove sealer by application of heat.

J. After locating embedded steel reinforcement, the Contractor shall provide 2" diameter (minimum) core samples for every 100 linear feet of injected crack to the Engineer for verification of complete penetration of the adhesive. Locations of cores shall be reviewed and approved by the Engineer prior to taking of the cores.

POST-INSTALLED ANCHORS AND DOWELS

A. Expansion Anchors:
1. In Concrete: Expansion Anchors shall be one of the following:
   a. Kwik Bolt TZ, Hilti Inc.
   b. Strong Bolt 2, Simpson Strong-Tie Co., Inc.

B. Screw Anchors:
1. In Concrete: Qualifying anchors shall be one of the following:
   a. Kwik HUS-EZ, Hilti Inc.
   b. Titen HD, Simpson Strong-Tie Co., Inc.

C. Adhesive Anchors with Threaded Rod:
1. In Concrete: Qualifying anchors shall be one of the following products:
   a. Acrylic: HIT-HY 200 SAFE SET, Hilti Inc.
   b. Acrylic: AT-XP (IAPMO-ER-0281), Simpson Strong-Tie Co., Inc.
2. Threaded anchor rod shall be one of the following:
   a. Hilti adhesive: "HIT-Z-R" AISI type 304/316 stainless steel
   b. Simpson adhesive: 304 Stainless steel meeting the requirements of ASTM A193, grade B8.
   c. Anchor rod shall have a chamfered end on one end to accept a nut and washer; it may have a 45-degree chisel point on the other end.

POST-INSTALLED ANCHORS AND DOWELS (CONT'D.)

D. Adhesive Rebar Dowelling
1. Adhesive dowels are not permitted to be substituted for cast-in dowels unless authorized in advance by JQ for each specific location.
2. Qualifying anchors shall be one of the following products:
   a. Epoxy: HIT-RE 500V3, Hilti Inc.
   b. Epoxy: SET-XP, Simpson Strong-Tie Co., Inc.

E. Anchor and Dowel Installation
1. Anchors and dowels of the size and embedment shown on the Drawings shall be installed in accordance with the Contract Documents, the manufacturer's recommendations, and the manufacturer's current evaluation (ICC-ES or IAPMO-ES) report for the anchor. If conflicts exist between these referenced documents, the most stringent requirements shall govern.

F. For adhesive anchors installed in a horizontal orientation subject to sustained tension loading and all upwardly inclined (including soffit installations) orientation:
1. Per ACI 318-14 (17.8.2.2): Installation shall be performed by personnel certified by ACI/CRSI "Adhesive Anchor Installer Certification Program." Certification shall include written and performance tests.

STRUCTURAL STEEL

A. Material
1. All hot rolled steel members shall be new and conform to ASTM specification A6.
2. ASTM Specification and Grade - clearly mark the grade on each member.
3. Unless Noted otherwise on the Structural Drawings, structural steel members shall be:
   a. W-shapes shall conform to ASTM A992.
   b. Channels shall conform to ASTM A36.
   c. Angles shall conform to ASTM A36.
   d. Steel pipe shall conform to ASTM A53, Type E or S, Grade B.
   e. Round hollow structural shape members shall conform to ASTM A500, Grade B Fy = 42 ksi.
   f. Square or rectangular hollow structural shape members shall conform to ASTM A500 Grade B, Fy = 46 ksi.
   g. Structural steel plate shall conform to ASTM A36.
   h. Any other steel shall conform to ASTM A36.

B. Fabrication
1. Splicing of structural steel members is prohibited without prior approval of the Engineer as to location and type of splice to be made. Any member having splice not shown and detailed on shop drawings will be rejected.
2. Dimensional tolerances of fabricated structural steel shall conform to Section 6.4 of the AISC Code of Standard Practice unless noted otherwise on the Structural Drawings.
3. Shop painting: Paint structural steel with one coat of manufacturer's standard red oxide primer applied at a rate to provide a uniform dry film thickness of 2.5 mils.

C. Erection
1. Erection tolerances of anchor bolts, embedded items, and all structural steel unless specified otherwise on the Structural Drawings shall conform to the AISC Code of Standard Practice.
2. Field cutting of structural steel or any field modifications to structural steel shall not be made without prior approval of the Engineer.
3. Contractor shall protect any unprimed structural steel from detrimental effects of corrosion, as required, until the steel is enclosed and protected by the new construction.
4. Hot dip galvanize after fabrication all structural steel items and connections permanently exposed to the weather, whether specified on the Structural Drawings or not. Such items include, but are not limited to:
   a. All embedded plates in concrete
   b. Examine the Architectural and Structural Drawings for other items required to be hot dipped galvanized. Galvanize all nuts, bolts, and washers used in connection with such steel. Field welded connections shall have welds protected with "Z.R.C. Cold Galvanizing Compound" as manufactured by Z.R.C. Company.

STRUCTURAL STEEL CONNECTIONS

A. Welded Connections
1. All welding shall conform to ANSI/AWS D1.1, latest edition.
2. Fillet welds with no size specified shall be 3/16 inch or minimum size required by AISC, whichever is larger.

B. Bolted Connections
1. Unless noted otherwise on the Structural Drawings, bolts shall be 3/4 inch diameter and conform to ASTM A325. Bolts shall be designed using values for bearing type bolts with thread allowed in the shear plane.
2. Bolts shall be tightened to "snug tight" as defined by AISC, unless noted otherwise on the Structural Drawings.

C. Structural steel connections not specifically detailed on the Structural Drawings shall be designed and detailed by the Contractor under the direct supervision of a professional engineer licensed in the state having jurisdiction at the project site. Sealed calculations for all connections designed by the Contractor shall be submitted for the Architect's files.

D. Beam connections shall be designed and detailed as follows, unless noted otherwise on the Structural Drawings:
1. Connections shall be AISC type 2 simple framing connections. Shear tab connections shall not be used unless specifically detailed on the Structural Drawings, or connections are designed and detailed by the fabricator's registered professional engineer licensed in the State of [XX] and sealed calculations are submitted.
2. In general, shop connections shall be bolted or welded and field connections shall be bolted.
3. Where indicated, connections shall be designed for the scheduled shear force. The shear force is indicated on the Structural Drawings as "R = ", and the horizontal force indicated as "H = ".
4. If not indicated on the Structural Drawings, connections shall be designed for 55 percent of the total load capacity for the beam span shown in the beam tables in the AISC Manual referenced in the "Codes & Referenced Reports" notes.
5. Short slotted holes shall be permitted provided washers are installed in accordance with AISC requirements. Washers shall be hardened where A325 bolts are utilized.

E. All beam shears, reactions, member forces, moments, etc. shown on the Structural Drawings are unfactored loads conforming to the requirements of AISC Allowable Stress Design (ASD).

F. For connections not specifically addressed by these notes or the Structural Drawings, provide fillet welds at all contact surfaces sufficient to develop the tensile strength of the smaller member at the joint.

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REPAIRS TO CCC BUILT STRUCTURES
BOATHOUSE
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DRAWN BY: JS
REVIEWED BY: CB
REVISED:
REVISED:
REVISED:

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SHEET TITLE
STRUCTURAL NOTES

SHEET NUMBER
S1.01

S T R U C T U R A L N O T E S

TIMBER FRAMING

A. Unless noted otherwise on the Structural Drawings, all structural framing lumber shall be clearly marked No. 2 Southern yellow pine or Douglas fir, except that non-load bearing interior walls may be stud grade Southern yellow pine, Douglas fir, or Spruce-pine-fir.

B. Studs shall be 2 x 4's at 16 inches on center, typical, unless noted otherwise on the Structural Drawings.

C. Wood Preservative Treated Lumber (Pressure Treated):
   1. Preservative Treated Lumber shall be Southern Yellow Pine and shall be treated as described below.
   2. Preservative Treatment by Pressure Process should be performed according to the AWPA methods described below. The preservative chemicals shall be waterborne and can include Alkaline Copper Quat (ACQ-C, ACQ-D) and Copper Azole (CBA-C & CA-B) for interior or exterior uses and Inorganic Boron (SBX) for interior use only. Preservative shall not contain arsenic or chromium and shall not contain ammonia carriers.
   3. Wood Installed for above ground use shall be preservative treated using water-borne preservatives in accordance with AWPA U2, use category UC3B. The locations to be treated are as follows:
      a. Wood joists or wood floor without joists are closer than 18 inches or wood girders are closer than 12 inches to the exposed ground in crawl space.
      b. Wood Framing members including wood sheathing which rest on exterior foundation walls and are less than 8inches from the exposed earth.
      c. Wood framing members or furring strips attached directly to the interior of exterior or concrete walls below grade.
      d. Wood sleepers and sill plates on concrete or masonry slab that is in direct contact with earth.
      e. Wood Girder ends supported by exterior masonry or concrete walls unless 1/2 inch airspace is provided on top, sides, and end.
      f. Wood Siding closer than 6 inches to earth.
      g. Posts or columns supported directly on a footing unless separated by an impervious moisture barrier and a minimum 6 inches above grade and 1 inch above slab where a slab exists or 8 inches above earth on a concrete pier where no slab exists.
      h. Portions of Glued-laminated timbers exposed to weather.
   4. Wood in contact with Ground (exposed earth) or fresh water shall be preservative treated using water-borne preservatives in accordance with AWPA U1, with use category UC4C.
   5. Wood member that form supports of buildings, balconies, porches, or similar permanent building appurtenances where such members are exposed to the weather without adequate protection from the roof, eave, overhang, etc. to prevent water accumulation on the surface or between joints shall be preservative treated using water-borne preservatives in accordance with AWPA U1 with use category UC3A.
   6. Other wood members noted in the drawings shall be preservative treated using water-borne preservatives in accordance with AWPA U1 with use category UC3A.

D. All wood stud walls shall be full height without intermediate plate line unless detailed otherwise.

E. All load bearing walls shall have solid 2x blocking at 4'□0" on center maximum vertically. End nail with 2-16d nails or side toe nail with 2-16d nails.

F. Provide double studs at all wall corners and on each side of all openings, unless noted or detailed otherwise.

G. All framing members framing into the side of a header shall be attached using metal joist hangers of type "LU" as manufactured by the Simpson Company or equal. The hanger shall be sized and installed in accordance with the manufacturer's recommendations for the size of joist supported.

H. Nailing and attachment of all framing members and sheathing shall be as specified in the International Building Code Nailing Schedule unless noted otherwise on the Structural Drawings. Common wire nails or spikes, or galvanized box nails shall be used for all framing unless noted otherwise on the Structural Drawings.

I. Place a single plate at the bottom and a double plate at the top of all stud walls.

J. Simpson Strong Tie steel connectors in contact with Pressure Treated Lumber shall the following composition/ finish:

Usage	Type of Preservative Retention Level	Simpson Finish
Interior	SBX/DOT	G90
Interior/Exterior	ACQ (All) / 0.40 pcf (max)	HDG / ZMAX
Interior/Exterior	CBA-A / 0.41 pcf (max)	HDG / ZMAX
Interior/Exterior	CA-B / 0.21 pcf (max)	HDG / ZMAX

Uncertain or retention levels greater than noted above will require Type 304 or 316 Stainless Steel connectors and fasteners.

K. As an alternate, plates may be attached to concrete foundation elements with power actuated fasteners. Provide washers at least 0.08 inches thick, and 1.1 inches square or 1.425 inches in diameter at each fastener. Fasteners shall be 3" long and shall have a minimum shank diameter of 0.145 inches. Provide two fasteners located 6 and 10 inches from the end of each sill plate piece, and then at a maximum spacing of 18 inches on center maximum at exterior walls and at interior party walls. At interior non-load bearing partitions, fasteners may be spaced at 36" on center, maximum. Fasteners shall be Hilti X-CR 72P8 pins or equal. Submit manufacturer's information on fastener to be used prior to start of construction.

L. Provide double joists under all interior partition walls oriented parallel to the joists.

M. All bolts and lag screws shall have standard washers. All anchor and expansion bolts used in wood to concrete connections shall be hot dip galvanized or stainless steel.

N. Refer to the Architectural Drawings for additional wood framing members. Provide additional wood framing members shown on the Architectural Drawings even though they may not be shown on the Structural Drawings.

DESIGN BY OTHERS

A. In accordance with the Specifications the items listed below are not included in the Contract Documents. Design of these elements shall be the responsibility of the Contractor, and shall be designed and sealed by a registered professional engineer licensed in the state having jurisdiction at the project site.
   1. Steel Connections
   2. Guardrail and Handrail Systems
   3. Embedded assemblies and inserts, clamps, hangers, trapezes, unistrut, etc. for the support of MEP systems.
   4. Excavation Support and Protection
   5. Driven pile systems

B. Design of the items listed above shall be in accordance with the General Building Code, and shall include all attachments to the structure.

SYMBOLS LEGEND

SYMBOL	DESCRIPTION
BEAM SIZE, NO. OF HEADED STUDS, WXXxXX (X) C=X", R=XX, REACTION (SERVICE LOAD), CAMBER	COMPOSITE STEEL BEAM
PIER TYPE, T.O PIER EL, T.O PIER DETAIL	CONCRETE PIER
MOMENT CONNECTION, BEAM SIZE, WXXxXX, MOMENT CONNECTION	STEEL BEAM MOMENT CONNECTION
COLUMN SIZE, BASE PLATE TYPE	STEEL COLUMN
	EXISTING CONCRETE COLUMN BELOW
	NEW CONCRETE COLUMN BELOW
	WELDED METAL BAR GRATING
	SLAB OR DECK SPAN DIRECTION
	DROP IN SLAB OR DECK
	DROP AND SLOPE IN SLAB OR DECK
	SLOPE IN SLAB OR DECK
BRACE-x	VERTICAL STEEL BRACE
	STEEL BEAM SPLICE
	NONLOAD-BEARING WALL
SW-x	SHEARWALL, SEE SCHEDULE
	LOAD-BEARING WALL, SEE SCHEDULE
SW-x	CONCRETE SHEAR WALL, SEE SCHEDULE
	EXISTING CONSTRUCTION
	MISCELLANEOUS, SEE PLAN
	ROOF TOP UNIT (RTU)

STRUCTURAL ABBREVIATIONS

ABOVE	- ABV.
ABOVE FINISHED FLOOR	- A.F.F.
ADDITIONAL	- ADDN'L.
ADHESIVE	- ADH.
ADJACENT	- ADJ.
AGGREGATE	- AGGR.
AIR CONDITIONER	- A/C
AIR HANDLING UNIT	- AHU
ALTERNATE	- ALT.
AMERICAN CONCRETE INSTITUTE	- A.C.I.
AMERICAN INSTITUTE OF STEEL CONSTRUCTION	- A.I.S.C.
ANCHOR BOLT	- A.B.
AND	- &
ANGLE	- L
APPROVED	- APPD.
APPROXIMATE	- APPROX.
ARCHITECT	- ARCH.
ARCHITECTURAL	- ARCH'L
ARCHITECTURALLY EXPOSED STRUCTURAL STEEL	- A.E.S.S.
ARCHITECTURALLY EXPOSED CONCRETE	- A.E.C.
AT	- @
BACK FACE	- B.F.
BACK TO BACK	- B. TO B.
BASEMENT	- BSMT.
BEAM	- BM.
BEARING	- BRG.
BELOW FINISH FLOOR	- B.F.F.
BETWEEN	- BTWN.
BEVEL(ED)	- BEV('D)
BLOCK	- BLK.
BLOCK LINTEL	- B.L.
BLOCKING	- BLKG.
BOTTOM	- BOT.
BOTTOM OF	- B.O.
BOTTOM OF STEEL	- B.O.S.
BRACKET	- BRKT.
BRICKLEDGE	- BR.L.
BRIDGING	- BRDG.
BUILDING	- BLDG.
CAMBER	- C
CAST-IN-PLACE	- C.I.P.
CEILING	- CLG.
CENTER LINE	- C.L.
CENTER OF GRAVITY	- C.G.
CENTER OF GRAVITY OR STRAND	- C.G.S.
CLEAR OR CLEARANCE	- CLR.
COLD FORMED STEEL	- CFS
COLUMN	- COL.
COMPRESSION	- C OR COMP.
CONCRETE	- CONC.
CONCRETE MASONRY UNIT	- CMU
CONNECTION(S)	- CONN(S)
CONTINUOUS	- CONT.
CONTRACTOR	- CONTR.
CONTROL JOINT	- C.J.
CONSTRUCTION	- CONST.
CONSTRUCTION JOINT	- CONST. JT.
COORDINATE	- COORD.
COVER PLATE	- COV. PL.
DETAIL	- DTL.
DEAD LOAD	- D.L.
DEFORMED BAR ANCHOR	- D.B.A.
DIAGONAL	- DIAG.
DIAMETER	- DIA. OR Ø
DIMENSION(S)	- DIM(S).
DOUBLE	- DBL.
DOUBLE EXTRA STRONG	- XX-STR
DOVETAIL	- DVTL.
DOWEL(S)	- DWL(S).
DOWNSPOUT	- DS.
DRAWING(S)	- DWG(S).
EACH	- EA.
EACH FACE	- E.F.
EACH WAY	- E.W.
ELECTRICAL	- ELEC.
ELEVATION	- EL.
ELEVATOR	- ELEV.
EMBEDMENT	- EMBED.
ENGINEER	- ENGR.
EQUAL	- EQ.
EQUIPMENT	- EQUIP.
EXHAUST FAN	- EF
EXISTING	- EXIST.
EXPANSION	- EXP.
EXPANSION JOINT	- E.J.
EXTERIOR	- EXT.
EXTRA STRONG	- X-STR
FACE TO FACE	- F. TO F.
FABRICATOR	- FABR.
FAR SIDE	- F.S.
FIELD VERIFY	- F.V.
FINISH(ED)	- FIN('D)
FINISHED FLOOR	- FIN.FL.
FIREPROOF(ING)	- FP.
FLANGE	- FLG.
FLOOR	- FL.
FLOOR DRAIN	- F.D.
FOOT(OR)FEET	- FT.
FOUNDATION	- FDN.
FRAMING	- FRMG
GAGE OR GAUGE	- GA.
GALVANIZED	- GALV.
GENERAL CONTRACTOR	- G.C.
GRADE	- GR.
GRADE BEAM	- GR.BM.
HEADED STUD ANCHOR	- H.S.A.
HEIGHT	- HT.
HIGH POINT	- H.P.
HOLLOW STRUCTURAL SECTION	- HSS
HOOK	- HK.
HORIZONTAL	- HORIZ.
HORIZONTAL BRACE	- H.B.
HOT-DIP	- H.D.
INCH	- IN.
INFORMATION	- INFO.
INSIDE DIAMETER	- I.D.
INSIDE FACE	- I.F.
INTERIOR	- INT.
INTERMEDIATE	- INTERM.
JOINT	- JT.
JOIST(S)	- JST(S)
JOIST GIRDER	- J.G.
KIPS(1000 LBS)	- K
KIP PER LINEAR FOOT	- KLF
KIP PER SQUARE FOOT	- KSF
KIP PER SQUARE INCH	- KSI
LENGTH	- L.
LIGHTWEIGHT	- L.W.
LIGHTWEIGHT CONCRETE	- L.W.C.
LIVE LOAD	- L.L.
LOCATION	- LOC.
LONGITUDINAL	- LONG.
LONG LEG HORIZONTAL	- LLH
LONG LEG VERTICAL	- LLV
LONG SIDE HORIZONTAL	- LSH
LONG SIDE VERTICAL	- LSV
LONG SLOTTED HOLE	- LSL
LOW POINT	- L.P.
MANUFACTURE(R)	- MFR.
MASONRY	- MAS.
MATERIAL	- MAT.
MAXIMUM	- MAX.
MECHANICAL	- MECH.
MECHANICAL, ELECTRICAL, PLUMBING	- MEP
METAL	- MTL.
MEZZANINE	- MEZZ.
MIDDLE	- MID.
MINIMUM	- MIN.
MISCELLANEOUS	- MISC.
MOMENT	- M
MOMENT CONNECTION(S)	- M.C.
NEAR FACE	- N.F.
NOMINAL	- NOM.
NON-SHRINK	- N.S.
NOT IN CONTRACT	- N.I.C.
NOT TO SCALE	- N.T.S.
NUMBER	- NO. OR #
ON CENTER	- O.C.
OPENING(S)	- OPNG(S)
OPPOSITE	- OPP.
OPPOSITE HAND	- O.H.
OUTSIDE FACE	- O.F.
OUTSIDE DIAMATER	- O.D.
OVER-SIZED HOLE	- OVS
PAN	- P
PANEL JOINT	- P.J.
PARALLEL	- PAR.
PERPENDICULAR	- PERP.
PIECE	- PC.
PLATE	- PL.
POINT	- PT.
POST-TENSION(ED)	- P-T
POUNDS	# OR LBS.
POUNDS PER CUBIC FOOT	- PCF
POUNDS PER LINEAR FOOT	- PLF
POUNDS PER SQUARE FOOT	- PSF
POUNDS PER SQUARE INCH	- PSI
PRECAST CONCRETE	- P/C
PRE-ENGINEERED METAL BUILDING	- P.E.M.B.
PREFABRICATED	- PREFAB.
PRELIMINARY	- PRELIM.
PRESSURE TREATED	- P.T.
PROJECTION	- PROJ.
QUANTITY	- QTY.
RADIUS	- R
REINFORCED CONCRETE PIPE	- RCP
REINFORCE(ING)(ED)(MENT)	- REINF.
REMAINDER	- REM.
REQUIRE	- REQ.
REQUIRED	- REQ'D.
RETENTION SYSYTEM	- RET.SYS.
RISER	- RIS.
ROOF	- RF.
ROOF DRAIN	- R.D.
ROOF TOP UNIT	- R.T.U.
ROOM	- RM.
ROUGH OPENING	- R.O.
ROUND	- RND.
SCHEDULE(D)	- SCHED.
SECTION	- SECT.
SHEAR	- V.
SHEET	- SHT.
SHORT SLOTTED HOLE	- SSL
SIDEWALK	- SW.
SIMILAR	- SIM.
SLAB ON GRADE	- S.O.G.
SPACE	- SPA.
SPECIFICATIONS(S)	- SPEC(S)
SPECIFIED	- SPEC'D
SQUARE	- SQ.
SQUARE FOOT	- S.F.
STAGGERED	- STAGG.
STAINLESS STEEL	- S.S.
STANDARD	- STD.
STEEL	- STL.
STEEL JOIST INSTITUTE	- S.J.I.
STIFFENER	- STIFF
STRAIGHT	- STR.
STIRRUPS	- STIRR.
STRUCTURAL	- STRUCT'L
STRUCTURE	- STRUCT.
SUBCONTRACTOR	- SUBCONTR.
SUPPORT(S)	- SUPT(S).
TEMPERATURE	- TEMP.
TENSION	- T
TERRAZZO	- TERR.
THICK	- THK.
THREAD(ED)	- THRD.
TONGUE AND GROOVE	- T&G
TOP AND BOTTOM	- T&B
TOP OF	- T.O.
TOP OF BEAM	- T.O.B.
TOP OF CONCRETE	- T.O.C.
TOP OF FOOTING	- T.O.F.
TOP OF JOIST	- T.O.J.
TOP OF PIER	- T.O.P
TOP OF PIER (PIPLE) CAP	- T.O.P.C.
TOP OF STEEL	- T.O.S.
TOP OF WALL	- T.O.W.
TRANSVERSE	- TRANSV.
TREAD	- TR.
TYPICAL	- TYP.
UNLESS NOTED OTHERWISE	- U.N.O.
VERTICAL	- VERT.
VERTICAL BRACE	- V.B.
WATERPROOFING	- WPFG.
WATERSTOP	- WS.
WEIGHT	- WT.
WELDED WIRE MESH	- W.W.M.
WIDTH	- W.
WIND LOAD	- W.L.
WINDOW	- WDW.
WITH	- W/
WITHOUT	- W/O
WOOD	- WD.
WORK POINT	- W.P.

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TBPE FIRM F-7986

SPECIAL INSPECTIONS

1. Special Inspections shall be performed in accordance with Chapter 17 of the 2015 International Building Code (IBC) by a Special Inspector hired by the Owner to perform the Special Inspections listed below. The Special Inspector shall be qualified by an approved agency according to the City's building official to perform the special inspections for which they will be undertaking. The Contractor shall coordinate with and notify the Special Inspector of all tests. The Special Inspector shall be responsible to verify that the items detailed in the Construction Documents were built accordingly and shall prepare, sign, and furnish inspection reports to the building official and the Architect for all time spent at the site. The Inspector shall bring discrepancies to the immediate attention of the General Contractor for correction. If the discrepancies are not corrected, the discrepancies shall be brought to the attention of the building official and to the Architect prior to the completion of that phase of the work. These special inspections are in addition to the other inspections listed in these Structural Notes or Project Specifications.

2. Where structural load-bearing members and assemblies are shop fabricated, the Special Inspector shall verify that the fabricator maintains detailed fabrication and quality control procedures that provide a basis for inspection control of the workmanship and the fabricator's ability to conform to the Construction Documents and Referenced Standards, unless the fabricator is registered and approved to perform such work without special inspection.

VERIFICATION AND INSPECTION TASKS FOR WELDING OF STRUCTURAL STEEL [1] (AISC 360-10 Table N5.4)

SPECIAL INSPECTION REQUIRED	VERIFICATION AND INSPECTION	INSPECTION FREQUENCY		REFERENCED STANDARD	IBC REFERENCE
		CONTINUOUS	PERIODIC		
	1. Inspection tasks prior to welding:				
YES	a. Welding procedure specifications (WPSs) available	X	--	AISC 360-10 N5.4-1: AWS D1.1	1705.2.1
YES	b. Manufacturer certifications for welding consumables available	X	--		
YES	c. Material identification (type/grade) [2]	--	X		
YES	d. Welder identification system [2]	--	X		
YES	e. Fit-up of groove welds (including joint geometry) [2] 1) Joint preparation 2) Dimensions (alignment, root opening, root face, bevel) 3) Cleanliness (condition of steel surfaces) 4) Tacking (tack weld quality and location) 5) Backing type and fit (if applicable)	--	X		
YES	f. Configuration and finish of access holes. [2]	--	X		
YES	g. Fit-up of fillet welds [2] 1) Dimensions (alignment, gaps at root) 2) Cleanliness (condition of steel surfaces) 3) Tacking (tack weld quality and location)	--	X		
YES	h. Check welding equipment	--	X		
	2. Inspection tasks during welding:				
YES	a. Use of qualified welders	--	X	AISC 360-10 N5.4-2: AWS D1.1	1705.2.1
YES	b. Control and handling of welding consumables [2] 1) Packaging 2) Exposure control	--	X		
YES	c. No welding over cracked tack welds [2]	--	X		
YES	d. Environmental conditions [2] 1) Wind speed within limits 2) Precipitation and temperature	--	X		
YES	e. WPS followed [2] 1) Settings on weld equipment 2) Travel speed 3) Selected welding materials 4) Shielding gas type/flow rate 5) Preheat applied 6) Interpass temperature maintained (min./max.) 7) Proper position (F, V, H, OH)	--	X		
YES	f. Welding techniques [2] 1) Interpass and final cleaning 2) Each pass within profile limitations 3) Each pass meets quality requirements	--	X		
	3. Inspection tasks after welding:				
YES	a. Welds cleaned	--	X	AISC 360-10 N5.4-2: AWS D1.1	1705.2.1
YES	b. Size, length and location of welds	X	--		
YES	c. Welds meet visual acceptance criteria 1) Crack prohibition 2) Weld/base-metal fusion 3) Crater cross section 4) Weld profiles 5) Weld size 6) Undercut 7) Porosity	X	--		
YES	d. Arc strikes	X	--		
YES	e. k-area [3]	X	--		
YES	f. Backing removed and weld tabs removed (if required)	X	--		
YES	g. Repair activities	X	--		
YES	h. Document acceptance or rejection of welded joint or member	X	--		

1. Inspection tasks noted in this table are the responsibility of the Special Inspector or Quality Assurance Inspector (QAI). The fabricator and erector are responsible for all inspection tasks indicated in AISC 360-10 Section N5 and assigned to the Quality Control Inspector (QCI)

2. Inspection tasks may be coordinated with the fabricator or erector's Quality Control Inspector (QCI) where indicated with this footnote. All other tasks shall be performed by the Special Inspector.

3. When welding of doubler plates, continuity plates or stiffeners has been performed in the k-area, visually inspect the web k-area for cracks within 3 in. (75 mm) of the weld.

VERIFICATION AND INSPECTION TASKS FOR BOLTING STRUCTURAL STEEL [1] (AISC 360-10 Tables N5.6)

SPECIAL INSPECTION REQUIRED	VERIFICATION AND INSPECTION	INSPECTION FREQUENCY		REFERENCED STANDARD	IBC REFERENCE
		CONTINUOUS	PERIODIC		
	1. Inspection tasks prior to bolting:				
YES	a. Manufacturer's certifications available for fastener materials	X	--	AISC 360-10 N5.6-1	1705.2.1
YES	b. Fasteners marked in accordance with ASTM requirements	--	X		
YES	c. Proper fasteners selected for the joint detail (grade, type, bolt length if threads are to be excluded from shear plane) [2]	--	X		
YES	d. Proper bolting procedure selected for joint detail [2]	--	X		
YES	e. Connecting elements, including the appropriate faying surface condition and hole preparation, if specified, meet applicable requirements	--	X		
YES	f. Pre-installation verification testing by installation personnel observed and documented for fastener assemblies and methods used	--	X		
YES	g. Proper storage provided for bolts, nuts, washers and other fastener components	--	X		
	2. Inspection tasks during bolting:				
YES	a. Fastener assemblies, of suitable condition, placed in all holes and washers (if required) are positioned as required [2]	--	X	AISC 360-10 N5.6-2	1705.2.1
YES	b. Joint brought to the snug-tight condition prior to the pretensioning operation [2]	--	X		
YES	c. Fastener component not turned by the wrench prevented from rotating. [2]	--	X		
YES	d. Fasteners are pretensioned in accordance with the RCSC Specification, progressing systematically from the most rigid point toward the free edges	--	X		
	3. Inspection tasks after bolting:				
YES	a. Document acceptance or rejection of bolted connections	X	--	AISC 360-10 N5.6-3	1705.2.1

1. Inspection tasks noted in this table are the responsibility of the Special Inspector or Quality Assurance Inspector (QAI). The fabricator and erector are responsible for all inspection tasks indicated in AISC 360-10 Section N5 and assigned to the Quality Control Inspector (QCI)

2. Inspection tasks may be coordinated with the fabricator or erector's Quality Control Inspector (QCI) where indicated with this footnote. All other tasks shall be performed by the Special Inspector.

VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION (IBC TABLE 1705.3)

SPECIAL INSPECTION REQUIRED	VERIFICATION AND INSPECTION	INSPECTION FREQUENCY		REFERENCED STANDARD	IBC REFERENCE
		CONTINUOUS	PERIODIC		
YES	1. Inspection of reinforcing steel, including prestressing tendons, and placement.	--	X	ACI 318 Ch. 20, 25.2, 25.3, 26.5.1-26.5.3	1908.4
	2. Reinforcing bar welding:			AWS D1.4 ACI 318: 26.5.4	--
YES	a. Verify weldability of reinforcing bars other than ASTM A706	--	X		
YES	b. Inspect single-pass fillet welds, maximum 5/16"	--	X		
YES	c. Inspect all other welds.	X	--		
YES	3. Inspection of anchors cast in concrete.	--	X	ACI 318: 17.8.2	--
	4. Inspection of post-installed anchors in hardened concrete.				
YES	a. Adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension loads.	X	--	ACI 318: 17.8.2.4	--
YES	b. Mechanical anchors and adhesive anchors not defined in 4.a.	--	X	ACI 318: 17.8.2	
YES	Special Inspector must be certified by ACI/CRSI "Adhesive Anchor Installer. A report must be submitted to the licensed design professional and building official documenting, stating how each anchor was installed, including the Manufacturer's Printed Installation Instructions per ACI 318	--	--	ACI 318: 17.8.2.2 17.8.2.4	
YES	5. Verify use of required design mix.	--	X	ACI 318: Ch. 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3
YES	6. Prior to concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	X	--	ASTM C172 ASTM C31 ACI 318: 26.4.5, 26.12	1908.10
YES	7. Inspect concrete and shotcrete placement for proper application techniques.	X	--	ACI 318: 26.4.5	1908.6, 1908.7, 1908.8
YES	8. Verify maintenance of specified curing temperature and techniques.	--	X	ACI 318: 26.4.7-26.4.9	1908.9
	9. Inspection of prestressed concrete:				
NO	a. Application of prestressing forces	X	--	ACI 318: 26.9.2.1	--
NO	b. Grouting of bonded prestressing tendons	X	--	ACI 318: 26.9.2.3	
NO	10. Inspect erection of precast concrete members.	--	X	ACI 318: 26.8	--
NO	11. Verify in-situ concrete strength, prior to stressing of tendons in post-tensioned concrete and prior to removal of shores and forms from beams and structural slabs.	--	X	ACI 318: 26.10.2	--
YES	12. Inspect formwork for shape, location and dimensions of the concrete member being formed.	--	X	ACI 318: 26.10.1(b)	--

VERIFICATION AND INSPECTION OF SOILS (IBC TABLE 1705.6)

SPECIAL INSPECTION REQUIRED	VERIFICATION, INSPECTION AND TESTING	INSPECTION FREQUENCY	
		CONTINUOUS	PERIODIC
YES	1. Verify materials below shallow foundations are adequate to achieve the design bearing capacity.	--	X
YES	2. Verify excavations are extended to proper depth and have reached proper material.	--	X
YES	3. Perform classification and testing of compacted fill materials.	--	X
YES	4. Verify use of proper materials, densities and lift thicknesses during placement and compaction of compacted fill.	X	--
YES	5. Prior to placement of compacted fill, inspect subgrade and verify that site has been prepared properly.	--	X

VERIFICATION AND INSPECTION OF DRIVEN DEEP FOUNDATION ELEMENTS (IBC TABLE 1705.7)

SPECIAL INSPECTION REQUIRED	VERIFICATION, INSPECTION AND TESTING	INSPECTION FREQUENCY	
		CONTINUOUS	PERIODIC
YES	1. Verify element materials, sizes and lengths comply with the requirements.	X	--
YES	2. Determine capacities of test elements and conduct additional load tests, as required.	X	--
YES	3. Inspect driving operations and maintain complete and accurate records for each element.	X	--
YES	4. Verify placement locations and plumbness, confirm type and size of hammer, record number of blows per foot of penetration, determine required penetrations to achieve design capacity, record tip and butt elevations and document any damage to foundation element.	X	--
YES	5. For steel elements, perform additional inspections in accordance with IBC Section 1705.2 and the steel special inspection table.	--	--
YES	6. For concrete elements and concrete-filled elements, perform additional inspections in accordance with IBC Section 1705.3.	--	--
YES	7. For specialty elements, perform additional inspections as determined by the registered design professional in responsible charge.	--	--
YES	8. Protected zone - no holes and unapproved attachments made by the responsible contractor, as applicable	X	--

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HUNTSVILLE STATE PARK
REPAIRS TO CCC BUILT STRUCTURES
BOATHOUSE
PROJECT NUMBER: 122865

DATE: 08-28-2020
DESIGNED BY: CB
DRAWN BY: JS
REVIEWED BY: CB
REVISED:
REVISED:
REVISED:

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SHEET TITLE
SPECIAL INSPECTIONS

SHEET NUMBER
S1.03

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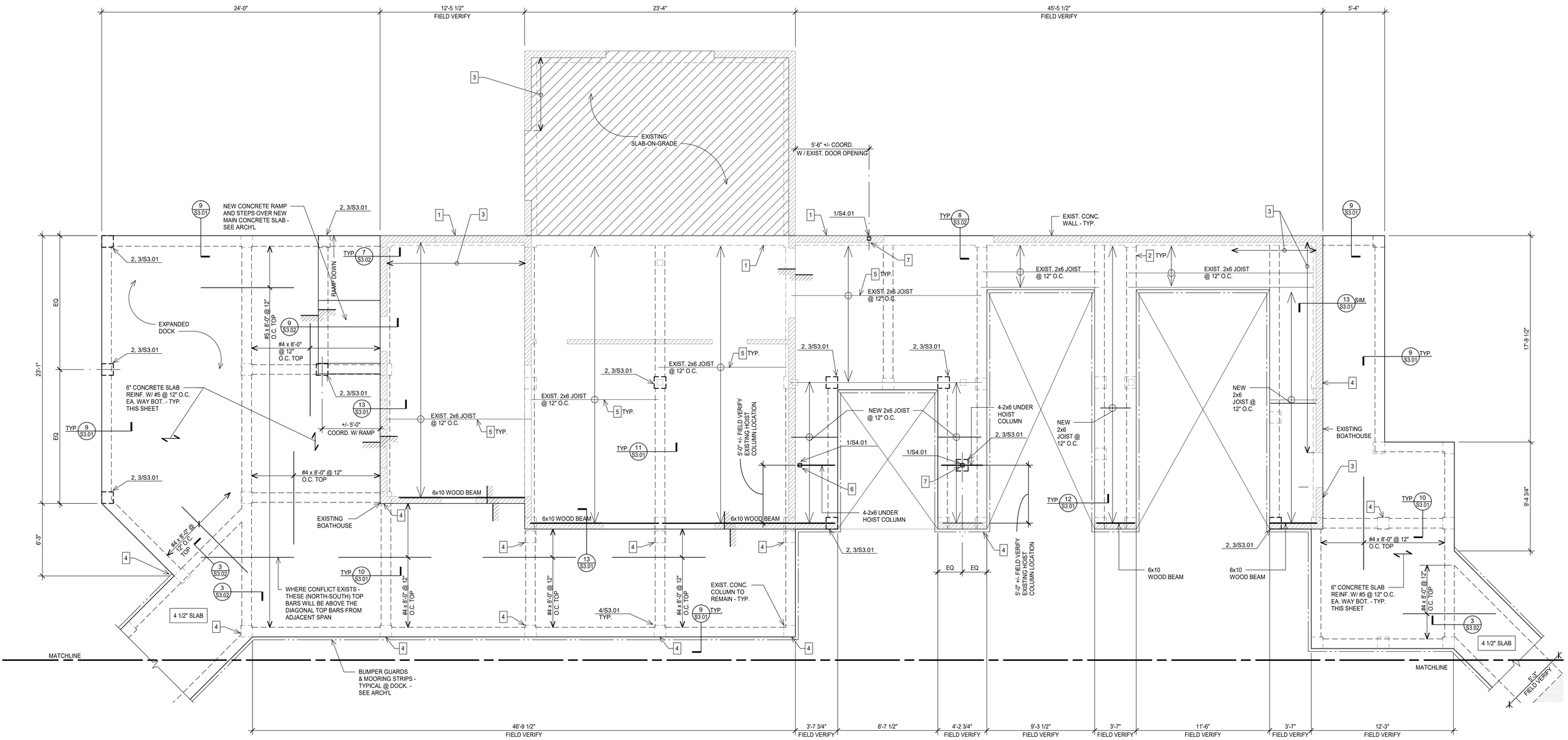

TRUE NORTH PLAN NORTH

1 BOATHOUSE & EXPANDED DOCK FRAMING PLAN

1/4" = 1'-0"

PLAN NOTES:

1. CONTRACTOR SHALL INSTALL A TEMPORARY BULKHEAD IN LAKE AS REQUIRED TO PERFORM DEMOLITION AND REPAIRS. SEE A0.01 AND C1.02 - SEE SPECIFICATIONS. (DELEGATED DESIGN)
2. EXISTING FLOOR / SLAB ELEVATIONS TO REMAIN U.N.O. - TYP.
3. ALL ADDITIONAL TOP BARS SHOWN ARE STAGGERED WITH THE MAIN SLAB REINFORCEMENT.

KEYNOTES:

1. BACKFILL ERODED AREAS AT CONCRETE FOUNDATION WALL - SEE 2/S5.01
2. CONCRETE BEAMS.
3. REPAIR BASE OF DETERIORATED STUDS AND SILL PLATE OR REMOVE AND REPLACE - SEE 7/S5.01.
4. REPAIR SURFACE OF DETERIORATED CONCRETE COLUMNS TO RESTORE COVER, TYP. - SEE 6/S5.01 AND 11/S3.02 - SEE DOCK PILING AND FOOTER SURVEY FOR ADDITIONAL INFO.
5. REPLACE DETERIORATED WOOD JOISTS AND DECK, THROUGHOUT BUILDING - TYP. - SEE 4/S5.01.
6. REPLACE STEEL HOIST COLUMN WITH HSS3 1/2 x3 1/2x1/4.
7. NEW HOIST COLUMN HSS3 1/2x3 1/2x1/4

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REVISED:
REVISED:
REVISED:

SHEET TITLE
BOATHOUSE & EXPANDED DOCK FRAMING PLAN

SHEET NUMBER
S2.01

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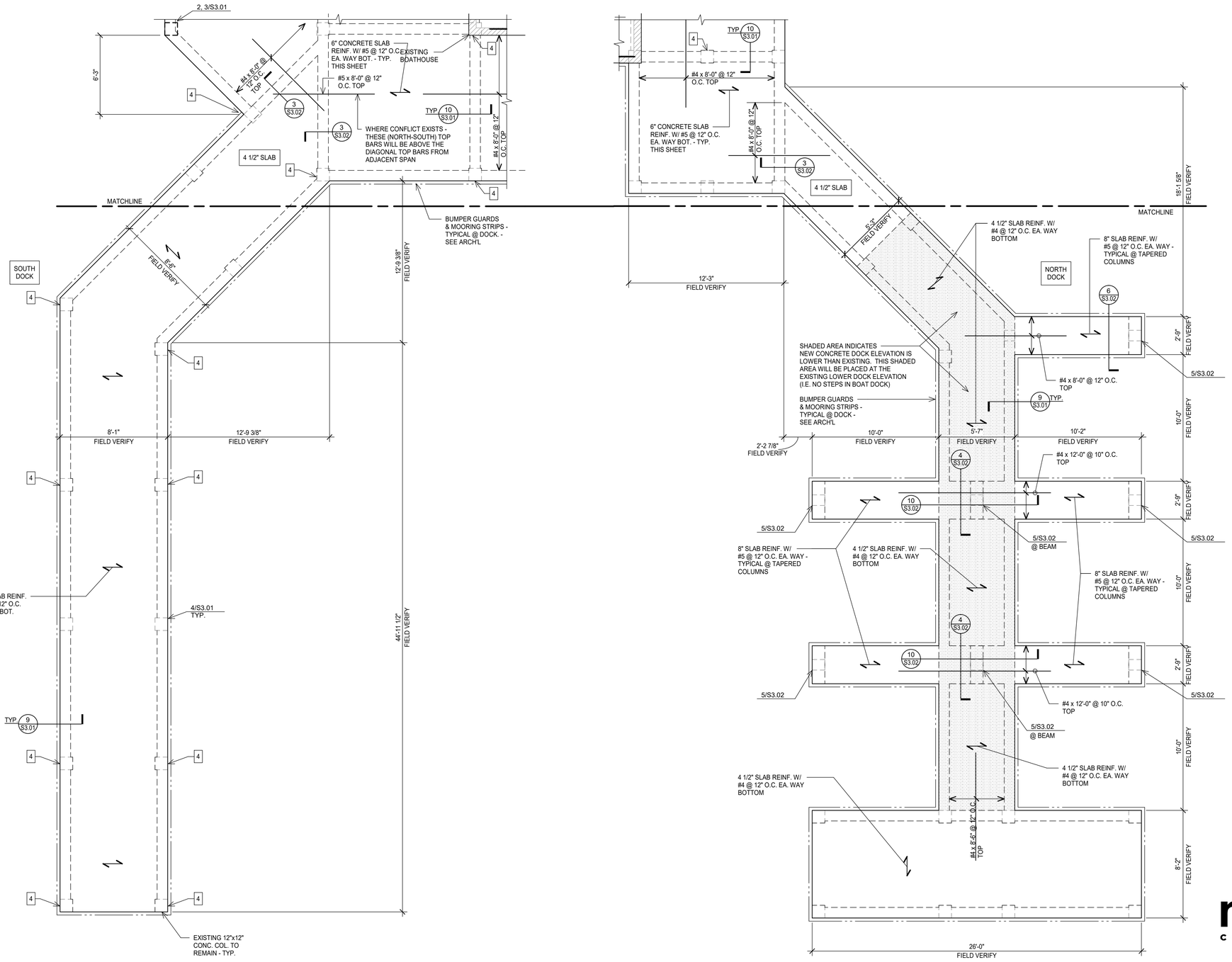

TRUE NORTH PLAN NORTH

1 NORTH AND SOUTH BOAT DOCK FRAMING PLANS

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

PLAN NOTES:

1. CONTRACTOR SHALL INSTALL A TEMPORARY BULKHEAD IN LAKE AS REQUIRED TO PERFORM DEMOLITION AND REPAIRS. SEE A0.01 AND C1.02 - SEE SPECIFICATIONS. (DELEGATED DESIGN)
2. EXISTING FLOOR / SLAB ELEVATIONS TO REMAIN U.N.O. - TYP. SHADED AREA INDICATES NEW CONCRETE DOCK ELEVATION IS LOWER THAN EXISTING. THIS SHADED AREA WILL BE PLACED AT THE EXISTING LOWER DOCK ELEVATION (I.E. NO STEPS IN BOAT DOCK)

KEYNOTES:

1. BACKFILL ERODED AREAS AT CONCRETE FOUNDATION WALL - SEE 2/S5.01
2. CONCRETE BEAMS.
3. REPAIR BASE OF DETERIORATED STUDS AND SILL PLATE OR REMOVE AND REPLACE - SEE 7/S5.01.
4. REPAIR SURFACE OF DETERIORATED CONCRETE COLUMNS TO RESTORE COVER, TYP. - SEE 6/S5.01 AND 11/S3.02 - SEE DOCK PILING AND FOOTER SURVEY FOR ADDITIONAL INFO.
5. REPLACE DETERIORATED WOOD JOISTS AND DECK, THROUGHOUT BUILDING - TYP. - SEE 4/S5.01.
6. REPLACE STEEL HOIST COLUMN WITH HSS3 1/2 x3 1/2x1/4.
7. NEW HOIST COLUMN HSS3 1/2x3 1/2x1/4

JQI HAS ATTEMPTED BY VISUAL OBSERVATION AND STUDY OF ORIGINAL CONSTRUCTION DOCUMENTS TO DETERMINE EXISTING DIMENSIONS, THE CONDITION OF VARIOUS STRUCTURAL ELEMENTS AND EXISTING CONDITIONS.

HOWEVER, AS SOME CONDITIONS CANNOT BE DETERMINED UNTIL AFTER DEMOLITION OF THE EXISTING BUILDING FINISHES, THE CONTRACTOR MUST CONSIDER AND ALLOW FOR THE FACT THAT DIMENSIONS, THE CONDITION OF STRUCTURAL ELEMENTS, AND DETAIL CONDITIONS MAY BE DIFFERENT FROM THOSE SHOWN ON THESE DRAWINGS.

NOTIFY ENGINEER WHERE CONDITIONS ARE DIFFERENT FROM THOSE SHOWN ON THESE DRAWINGS.

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REVISED:
REVISED:
REVISED:

SHEET TITLE
BOAT DOCK FRAMING PLAN

SHEET NUMBER
S2.02

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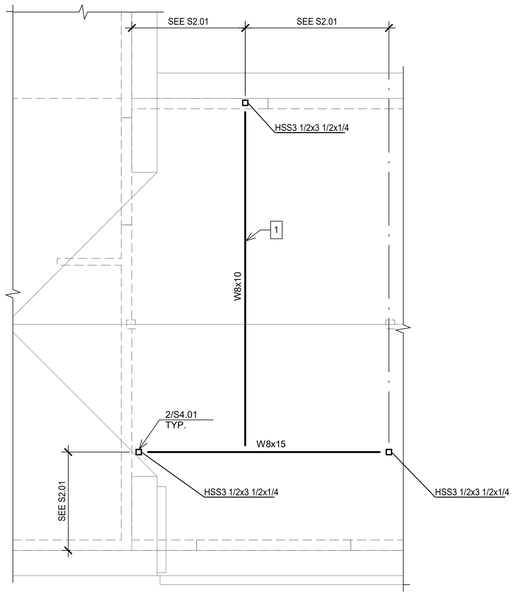


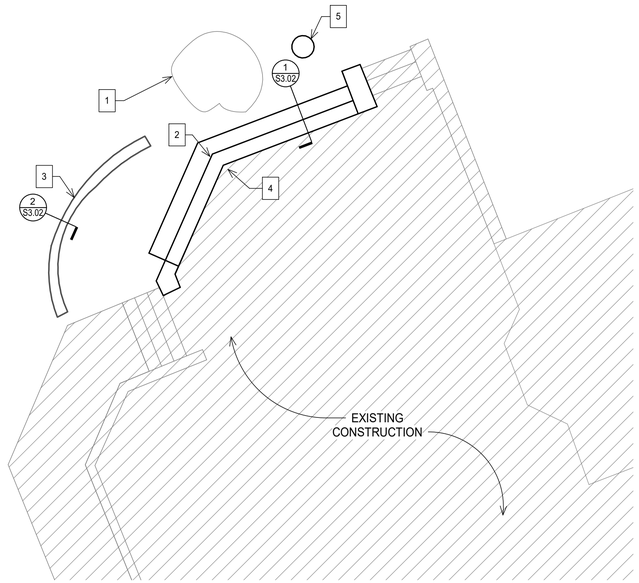
TRUE NORTH PLAN NORTH

1 BOATHOUSE HOIST FRAMING PLAN

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

KEYNOTES:

1. STEEL HOIST BEAM AND COLUMN, MAXIMUM CAPACITY = 1000 LBS.
2. ALL STEEL IS TO BE HOT-DIPPED GALVANIZED.



TRUE NORTH PLAN NORTH

2 RAVEN LODGE SITE WALL PLAN

KEYNOTES:

1. EXISTING TREE TO BE REMOVED - SEE 8/S5.01.
2. RECONSTRUCT EXISTING RETAINING WALL, INCLUDING REPLACEMENT OF EXISTING CONCRETE FOOTING - SEE 9/S5.01. SEE ARCHITECTURAL FOR STONE MASONRY RECONSTRUCTION.
3. RECONSTRUCT LOWER RETAINING WALL - SEE 10/S5.01. SEE ARCHITECTURAL FOR STONE MASONRY RECONSTRUCTION.
4. SETTLED EXISTING CONCRETE SLAB-ON-GRADE.
5. REMOVE EXISTING TREE STUMP.

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REVISED:
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REVISED:

SHEET TITLE
BOATHOUSE HOIST FRAMING AND RAVEN LODGE SITE WALL PLAN

SHEET NUMBER
S2.03

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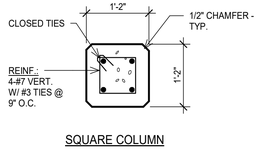
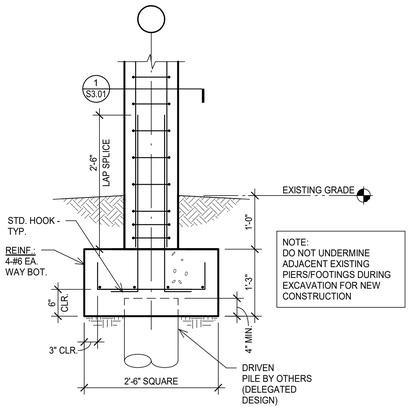
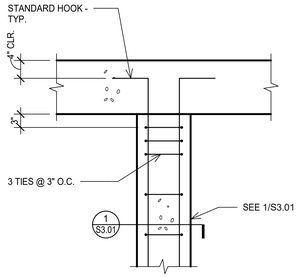


SQUARE COLUMN

1 TYPICAL COLUMN DETAIL
NO SCALE



2 TYPICAL FOOTING/PILE DETAIL
NO SCALE



3 TYPICAL COLUMN TERMINATION DETAIL
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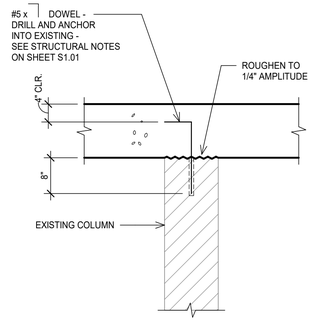
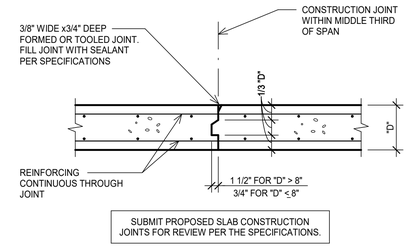
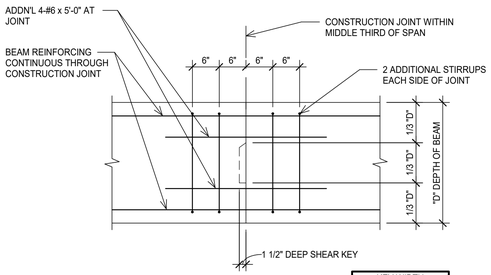


4 TYPICAL EXISTING COLUMN DETAIL
NO SCALE



5 TYPICAL STRUCTURAL SLAB CONSTRUCTION JOINT DETAIL
NO SCALE



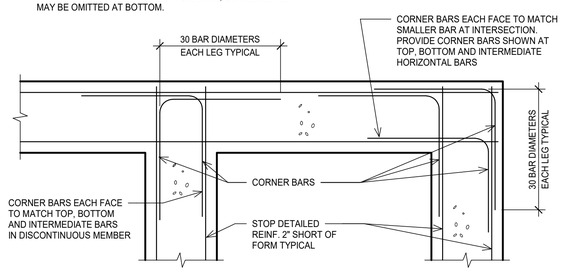
ELEVATION

KEY WIDTH	
GRADEBEAM WIDTH "T"	W
≤ 12"	3 1/2"
12" TO 16"	5 1/2"
16" TO 20"	7 1/4"
20" TO 24"	9 1/4"
24" TO 30"	11 1/4"

6 TYPICAL CONCRETE BEAM CONSTRUCTION JOINT DETAIL
NO SCALE

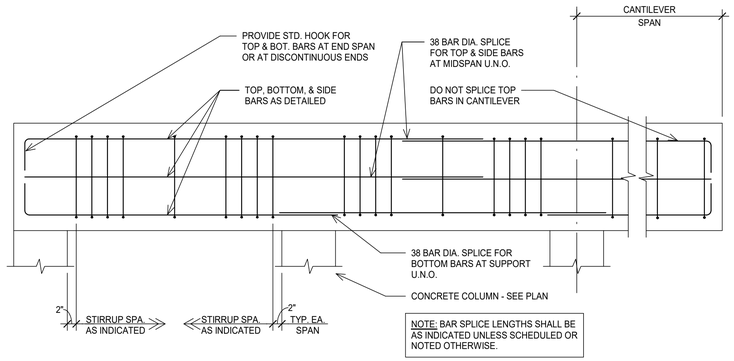
NOTES:

1. MATCH SIZE, LOCATION AND NUMBER OF HORIZONTAL BEAM AND WALL BARS, EXCEPT THAT WHERE THERE ARE MORE THAN 2 TOP OR BOTTOM BARS, ONLY THE INSIDE AND OUTSIDE BARS MUST BE MATCHED.
2. WHERE 90 DEGREE HOOKS ARE PROVIDED FOR TOP BARS CORNER BARS MAY BE OMITTED AT TOP. WHERE 90 DEGREE HOOKS ARE PROVIDED FOR BOTTOM BARS, CORNER BARS MAY BE OMITTED AT BOTTOM.

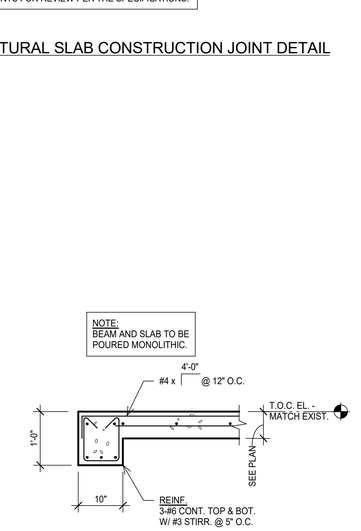


PLAN

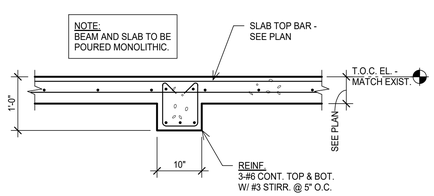
7 TYPICAL CORNER BARS AT WALL OR GRADE BEAM INTERSECTION DETAIL
NO SCALE



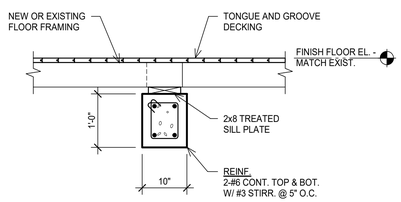
8 TYPICAL BEAM REINFORCING DETAIL
NO SCALE



9 TYPICAL DOCK PERIMETER BEAM SECTION
NO SCALE



10 TYPICAL DOCK INTERIOR BEAM SECTION
NO SCALE



11 TYPICAL BOATHOUSE INTERIOR BEAM SECTION
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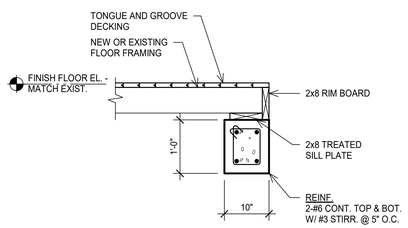
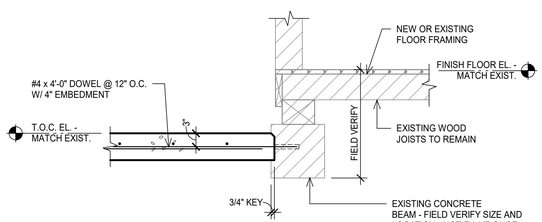


12 TYPICAL BOATHOUSE PERIMETER BEAM SECTION
NO SCALE



13 TYPICAL BOAT HOUSE PERIMETER CONNECTION TO DOCK SLAB SECTION
NO SCALE

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SHEET TITLE
TYPICAL CONCRETE DETAILS

SHEET NUMBER
S3.01

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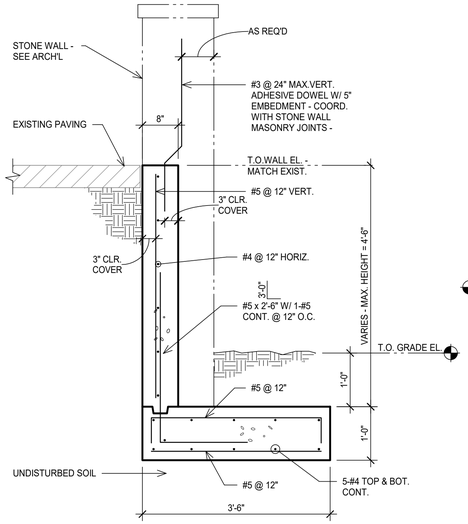
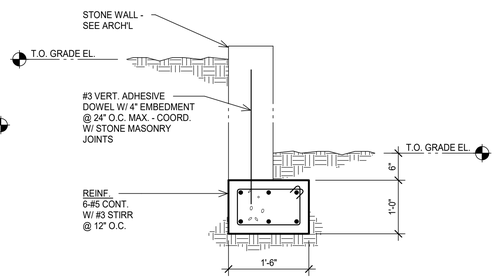
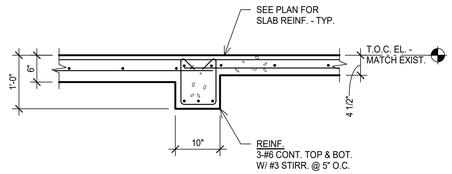


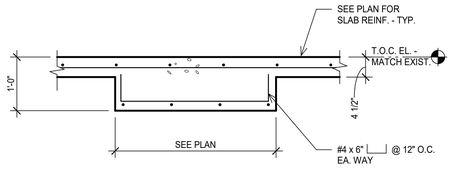
1 TYPICAL RETAINING WALL DETAIL
NO SCALE



2 TYPICAL FOOTING AT LOW WALL SECTION
NO SCALE



3 SECTION
NO SCALE



4 SECTION
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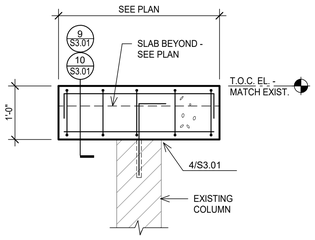

5 SECTION
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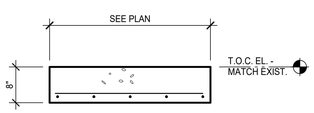
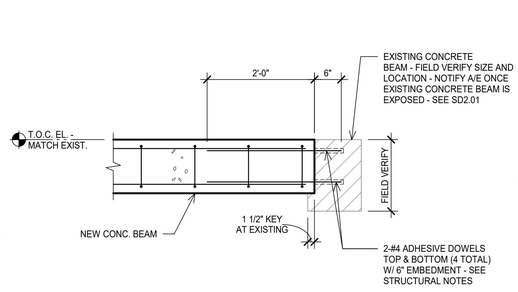
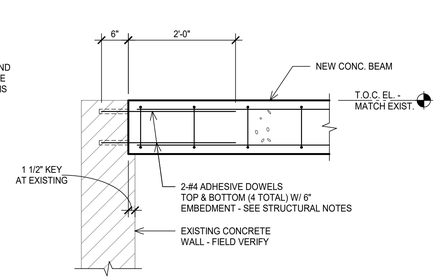


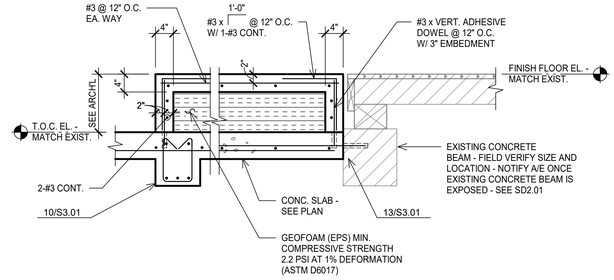
6 SECTION
NO SCALE



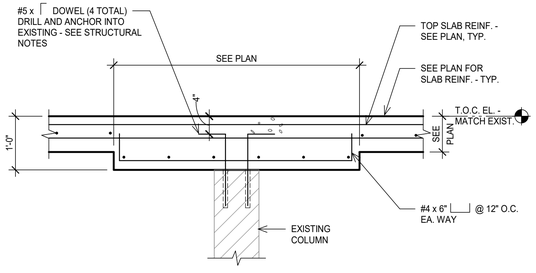
7 CONCRETE BEAM CONNECTION DETAIL
NO SCALE



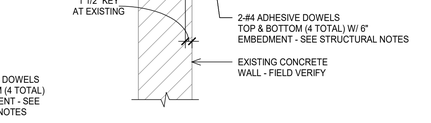
8 CONCRETE BEAM CONNECTION DETAIL
NO SCALE



9 SECTON AT RAMP LANDING
NO SCALE

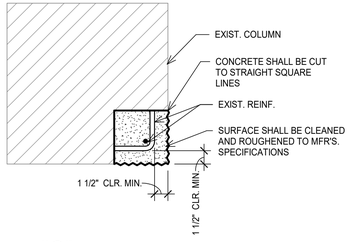


10 SECTION AT CAP
NO SCALE



"A" TYPICAL REPAIR W/ EXPOSED REINFORCING

"B" TYPICAL REPAIR WITHOUT EXPOSED REINFORCING



"C" COLUMN REPAIR W/ EXPOSED REINFORCING

REPAIR MORTAR NOTES:

1. CONCRETE REPAIR MORTAR SHALL BE EQUAL TO * SIKATOP 123 PLUS" NON-SAG MORTAR BY THE SIKA CORPORATION WITH A FERRO GUARD PENETRATING CORROSION INHIBITOR.
2. ALL SURFACES TO WHICH CONCRETE REPAIR MORTAR IS TO BE APPLIED SHALL HAVE ALL LOOSE AND UNSOUND MATERIAL REMOVED. MANUFACTURER'S RECOMMENDATIONS. WIRE BRUSH, POWER TOOL BRUSH, OR SANDBLAST ANY EXPOSED RUSTED REINFORCING STEEL TO REMOVE LOOSE RUST.
3. AT PERIMETER OF AREA TO BE REPAIRED, CHIP OUT EXISTING CONCRETE TO A MINIMUM DEPTH OF 3/8". DO NOT FEATHER REPAIR MORTAR AT EDGES.
4. COMPLY WITH ALL HANDLING, MIXING, PLACING AND CURING REQUIREMENTS AS SPECIFIED BY THE REPAIR MANUFACTURER.
5. APPLY SCRUB COAT OF REPAIR MORTAR TO SATURATED SURFACE DRY CONCRETE IN ACCORDANCE TO PRODUCT SPECIFICATIONS.
6. PRIME REINFORCING STEEL WITH "SIKA ARMATEC 110" OR EQUAL BONDING AGENT IN ACCORDANCE TO MANUFACTURER'S INSTRUCTIONS.
7. FINISH REPAIR MORTAR TEXTURE TO MATCH TEXTURE OF SURROUNDING CONCRETE.

11 COLUMN SPALL REPAIR DETAILS
NO SCALE

TEXAS PARKS & WILDLIFE

100% CD DOCUMENT

STATE OF TEXAS
CHRISTOPHER A. BAKER
112676
LICENSED
PROFESSIONAL ENGINEER
8-28-20

HUNTSVILLE STATE PARK
REPAIRS TO CCC BUILT STRUCTURES
BOATHOUSE
PROJECT NUMBER: 122865

DATE: 08-28-2020
DESIGNED BY: CB
DRAWN BY: JS
REVIEWED BY: CB
REVISED:
REVISED:
REVISED:

SHEET TITLE
TYPICAL CONCRETE DETAILS

SHEET NUMBER
S3.02

100% CD DOCUMENT

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JQENG.COM
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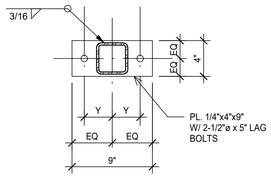
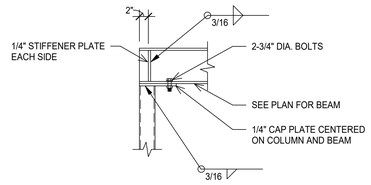
TBPE FIRM F-7986



1 TYPICAL BASE PLATE DETAIL - EDGE COLUMN
NO SCALE



2 TYPICAL CAP PLATE - BOLTED CONNECTION DETAIL
NO SCALE

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SHEET TITLE
TYPICAL STEEL DETAILS

SHEET NUMBER
S4.01

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100% CD DOCUMENT

01 DETERIORATED CONCRETE BEAM
NO SCALE

02 EROSION AT CONCRETE WALL
NO SCALE

03 DETERIORATED WOOD BEAM
NO SCALE

04 DETERIORATED WOOD JOISTS & DECK
NO SCALE

05 CORRODED STEEL PIPE COLUMN
NO SCALE

06 DETERIORATED CONCRETE COLUMNS
NO SCALE

07 DETERIORATED WOOD WALL STUDS
NO SCALE

08 CRACKED & SETTLED RETAINING WALL
NO SCALE

09 CRACKED & SHIFTED RETAINING WALL
NO SCALE

10 DETERIORATED LOWER RETAINING WALL
NO SCALE

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REVISED:

SHEET TITLE
TYPICAL
PHOTOGRAPHS

SHEET NUMBER
S5.01

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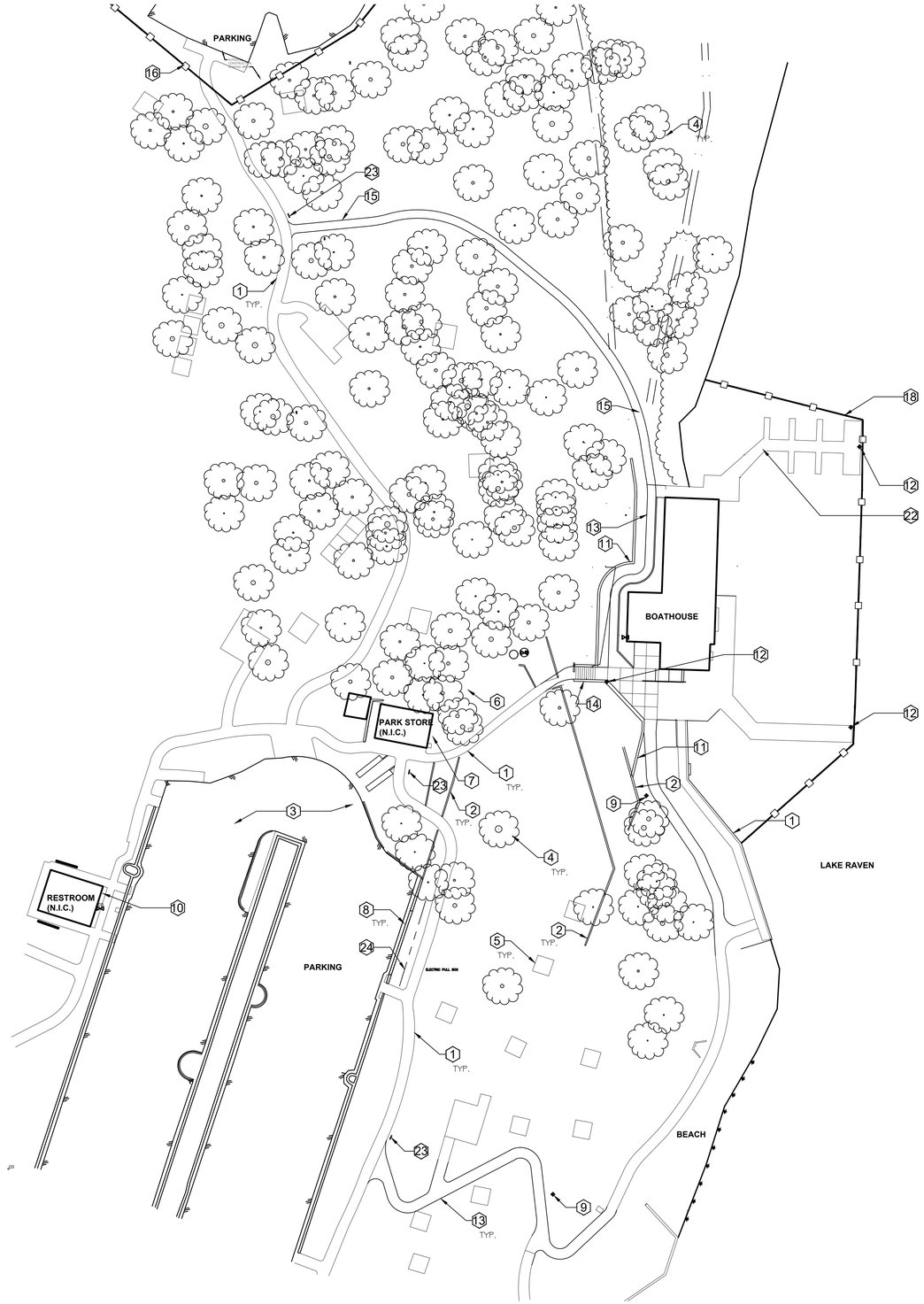
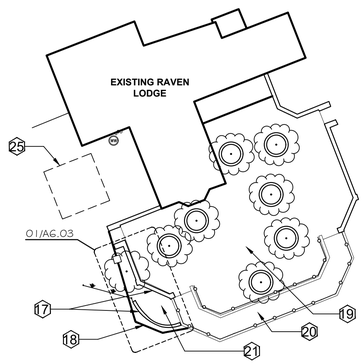


01 ARCHITECTURAL SITE PLAN
SCALE: 1"=30'-0"



02 PARTIAL SITE PLAN AT LODGE
SCALE: 1"=30'-0"

GENERAL NOTES SITE PLAN

1. REFER CIVIL DRAWINGS FOR DIMENSIONS, DISTANCES TO PROPERTY LINES AND OTHER INFORMATION.
2. SEED WITHIN AREAS OF CONSTRUCTION FENCING, REMOVAL OF SIDEWALK AND OTHER FEATURES, ADJACENT TO FENCING, OTHER AREAS OF WORK AND AREAS DAMAGED AS A RESULT OF CONSTRUCTION OPERATIONS.

KEYNOTES

1. EXISTING CONCRETE WALK
2. EXISTING TIMBER RETAINING WALL
3. EXISTING PAVING
4. EXISTING TREE
5. EXISTING PICNIC AREA
6. EXISTING UTILITY POLE
7. EXISTING WATER SHUT-OFF
8. EXISTING CONCRETE CURB
9. EXISTING LIGHT POLE
10. SIGNAGE OWNER PROVIDED, CONTRACTOR INSTALLED - "ACCESSIBLE RESTROOMS LOCATED AT SOUTH SIDE OF PARKING LOT"
11. CONCRETE RETAINING WALL, REF. CIVIL
12. ADD ALTERNATE #1: LIGHT POLE, 12" DIA. X 12'-0" HIGH. REF. 06/AG.03
13. CONCRETE PAVING, REF. CIVIL
14. CONCRETE STEPS, REF. CIVIL, AND 05/AG.03
15. ADD ALTERNATE #3: NORTH WALK CONCRETE PAVING, REF. CIVIL
16. POTENTIAL CONTRACTOR STAGING AND PARKING AREA DURING CONSTRUCTION
17. SALVAGE FOR REUSE STONE AND REPLACE CONCRETE RETAINING WALL. REF. STRUCTURAL & AG.03
18. LIMITS OF CONSTRUCTION - APPROXIMATE TEMPORARY BULKHEAD (COFFER DAM) AT LAKE LOCATION. REF. STRUCTURAL AND CIVIL
19. EXISTING LODGE PATIO
20. EXISTING CONCRETE DOCK
21. AT MARSH GRASS AREA, REMOVE MARSH GRASS/ TOPSOIL TO A DEPTH OF 1'-0" +/- (TO CAPTURE MARSH GRASS ROOTS) AND SET ASIDE ON NEARBY LAND, REPLACE FOLLOWING COMPLETION OF WORK TO MATCH ORIGINAL ELEVATION AND CONTOUR
22. REMOVE AND REPLACE CONCRETE DOCK SLABS. REMOVE TOP PORTION OF CONCRETE COLUMNS SO THAT REPLACEMENT SLAB IS LEVEL. REF. STRUCTURAL.
23. METAL SIGN, 12"X18" AT 36" ABOVE GRADE WITH METAL POLE SET IN CONCRETE. DIRECTIONAL SIGNAGE TO ACCESSIBLE ROUTE
24. APPROXIMATE LOCATION OF EXISTING WATER LINE. CONFIRM EXACT LOCATION PRIOR TO STARTING WORK
25. APPROXIMATE TEMPORARY LOCATION FOR EXCAVATED MATERIAL

PROTECTIVE FENCING

PROTECT TREES DURING THE WORK INCLUDING 4' HIGH PROTECTIVE FENCING WHICH COMPLETELY ENCLOSES THE DRIP LINE OF THE TREE UNTIL CONSTRUCTION IS COMPLETED. DURING CONSTRUCTION, NO EXCESS SOIL, ADDITIONAL FILL, EQUIPMENT, LIQUIDS, OR CONSTRUCTION DEBRIS MAY BE PLACED INSIDE THE PROTECTIVE BARRIER, NOR MAY ANY SOIL BE REMOVED FROM WITHIN THE BARRIER. ASSUME 25 TREES.

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NORTH

0 15 30 60 90

TEXAS PARKS & WILDLIFE

REGISTERED ARCHITECT
NANCY McCOY
17785
STATE OF TEXAS
12-27-20

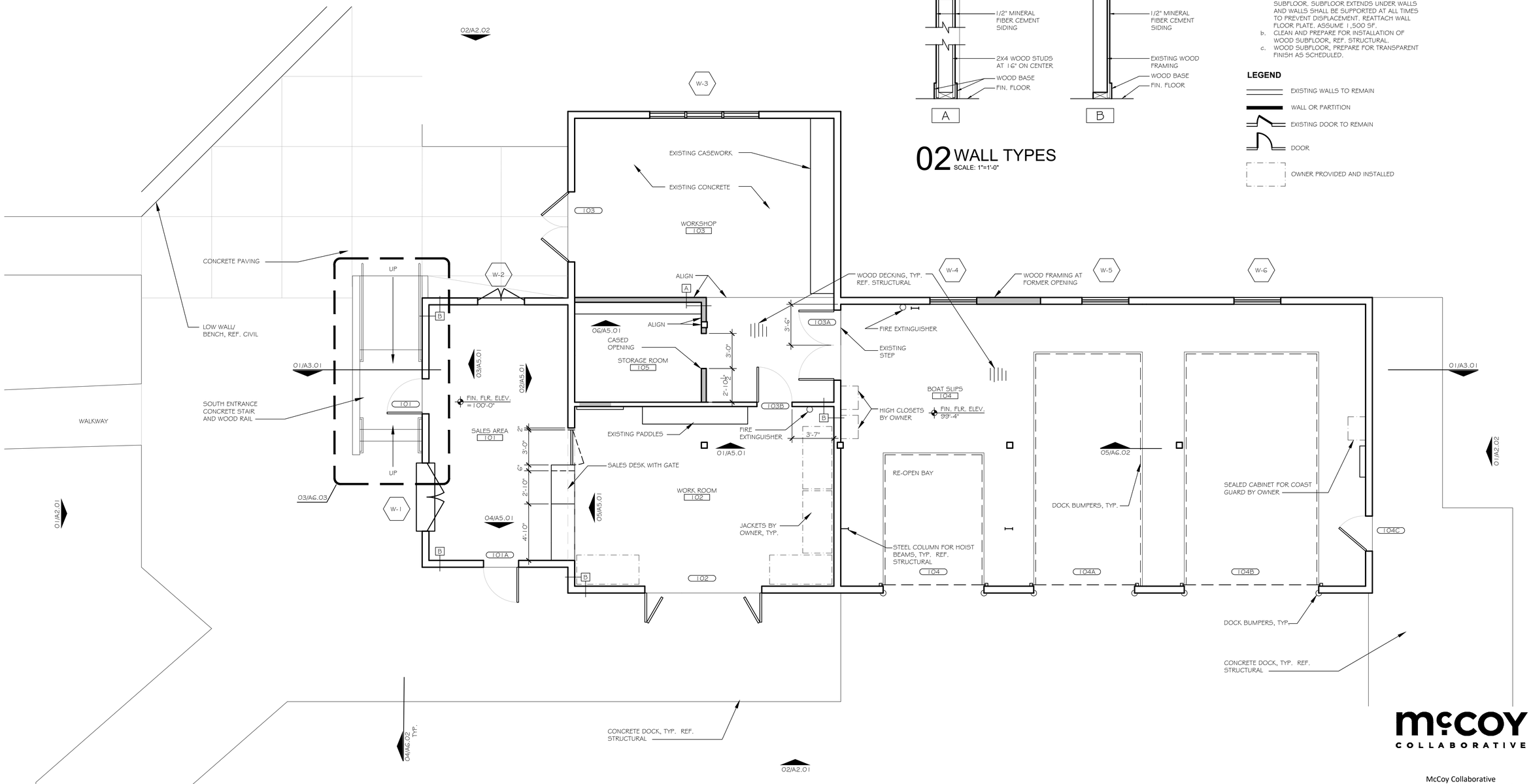
HUNTSVILLE STATE PARK
REPAIRS TO CCC BUILT STRUCTURES
BOATHOUSE
PROJECT NUMBER: 122865

DATE: 08-28-2020
DESIGNED BY: GJ
DRAWN BY: GJ
REVIEWED BY: NM
REVISED:
REVISED:
REVISED:

SHEET TITLE
ARCHITECTURAL SITE PLAN

SHEET NUMBER
A0.01

122865 - A001.dwg



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

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

GENERAL NOTES FLOOR PLAN

1. REFER ALSO TO GENERAL PROJECT NOTES ON G1.02.
2. REFER TO STRUCTURAL DRAWINGS.
3. REPLACE WOOD SUBFLOOR EXCEPT WHERE NOTED OTHERWISE, REF. STRUCTURAL.
4. WOOD DECKING / SUBFLOOR REPLACEMENT INCLUDES:
   a. SHORING AS REQUIRED TO REMOVE AND REPLACE DAMAGED AND DETERIORATED WOOD SUBFLOOR. SUBFLOOR EXTENDS UNDER WALLS AND WALLS SHALL BE SUPPORTED AT ALL TIMES TO PREVENT DISPLACEMENT. REATTACH WALL FLOOR PLATE. ASSUME 1,500 SF.
   b. CLEAN AND PREPARE FOR INSTALLATION OF WOOD SUBFLOOR, REF. STRUCTURAL.
   c. WOOD SUBFLOOR, PREPARE FOR TRANSPARENT FINISH AS SCHEDULED.

LEGEND

- EXISTING WALLS TO REMAIN
- WALL OR PARTITION
- EXISTING DOOR TO REMAIN
- DOOR
- OWNER PROVIDED AND INSTALLED

TRUE NORTH / PLAN NORTH

0 1 2 4 8 12

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DATE: 08-28-2020
DESIGNED BY: GJ
DRAWN BY: GJ
REVIEWED BY: NM
REVISED:
REVISED:
REVISED:

SHEET TITLE
FLOOR PLAN

SHEET NUMBER
A1.01

122865 - A101.dwg

GENERAL NOTES REFLECTED CLG PLAN

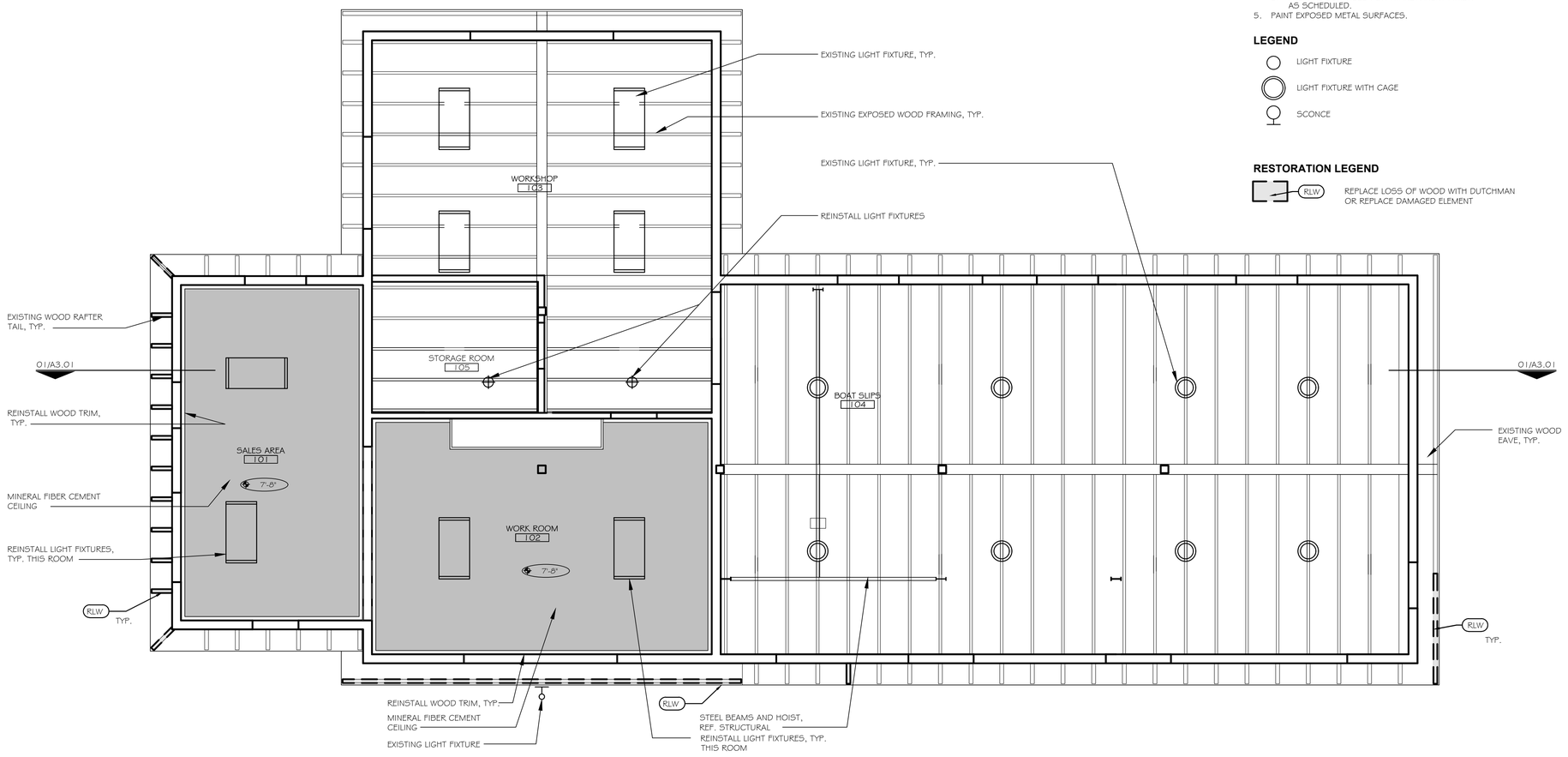
1. RESTORE EXTERIOR MATERIALS, EXCEPT WHERE NOTED OTHERWISE.
2. CARPENTRY RESTORATION SHOWN ON THE DRAWINGS INDICATES THE APPROXIMATE LOCATION AND SIZE OF SUCH WORK; SUCH WORK IS TO BE UNDERTAKEN ONLY WHERE NEEDED. IN ADDITION TO REPAIR WORK SHOWN ON DRAWINGS, PROVIDE AN ADDITIONAL 20% OF THE TOTAL QUANTITY SHOWN ON THE DRAWINGS. LOCATION AND QUANTITIES TO BE VERIFIED WITH ARCHITECT PRIOR TO BEGINNING WORK.
3. THE RESTORATION OF WOOD ELEMENTS TO INCLUDE SOFFITS, TRIM, EAVES AND RAFTER TAILS.
4. CARPENTRY RESTORATION INCLUDES:
   a. REMOVE PAINT TO BARE WOOD.
   b. REMOVE BIOLOGICAL GROWTH.
   c. REPAIR DETERIORATED OR DAMAGED WOOD AND REPLACE WHERE REPAIR IS NOT FEASIBLE.
   d. SEALANT.
   e. PREPARE SURFACES FOR TRANSPARENT FINISH AS SCHEDULED.
5. PAINT EXPOSED METAL SURFACES.

LEGEND

- LIGHT FIXTURE
- LIGHT FIXTURE WITH CAGE
- SCONCE

RESTORATION LEGEND

- RLW — REPLACE LOSS OF WOOD WITH DUTCHMAN OR REPLACE DAMAGED ELEMENT



01 REFLECTED CEILING PLAN
SCALE: 1/4"=1'-0"

TRUE NORTH / PLAN NORTH

0 1 2 4 8 12

TEXAS PARKS & WILDLIFE

REGISTERED ARCHITECT NANCY McCOY 17756 STATE OF TEXAS 12-27-20

HUNTSVILLE STATE PARK
REPAIRS TO CCC BUILT STRUCTURES
BOATHOUSE
PROJECT NUMBER: 122865

DATE: 08-28-2020
DESIGNED BY: GJ
DRAWN BY: GJ
REVIEWED BY: NM
REVISED:
REVISED:
REVISED:

SHEET TITLE
REFLECTED CEILING PLAN - BASE BID

SHEET NUMBER
A1.02
122865 - A102.dwg

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GENERAL NOTES REFLECTED CLG PLAN

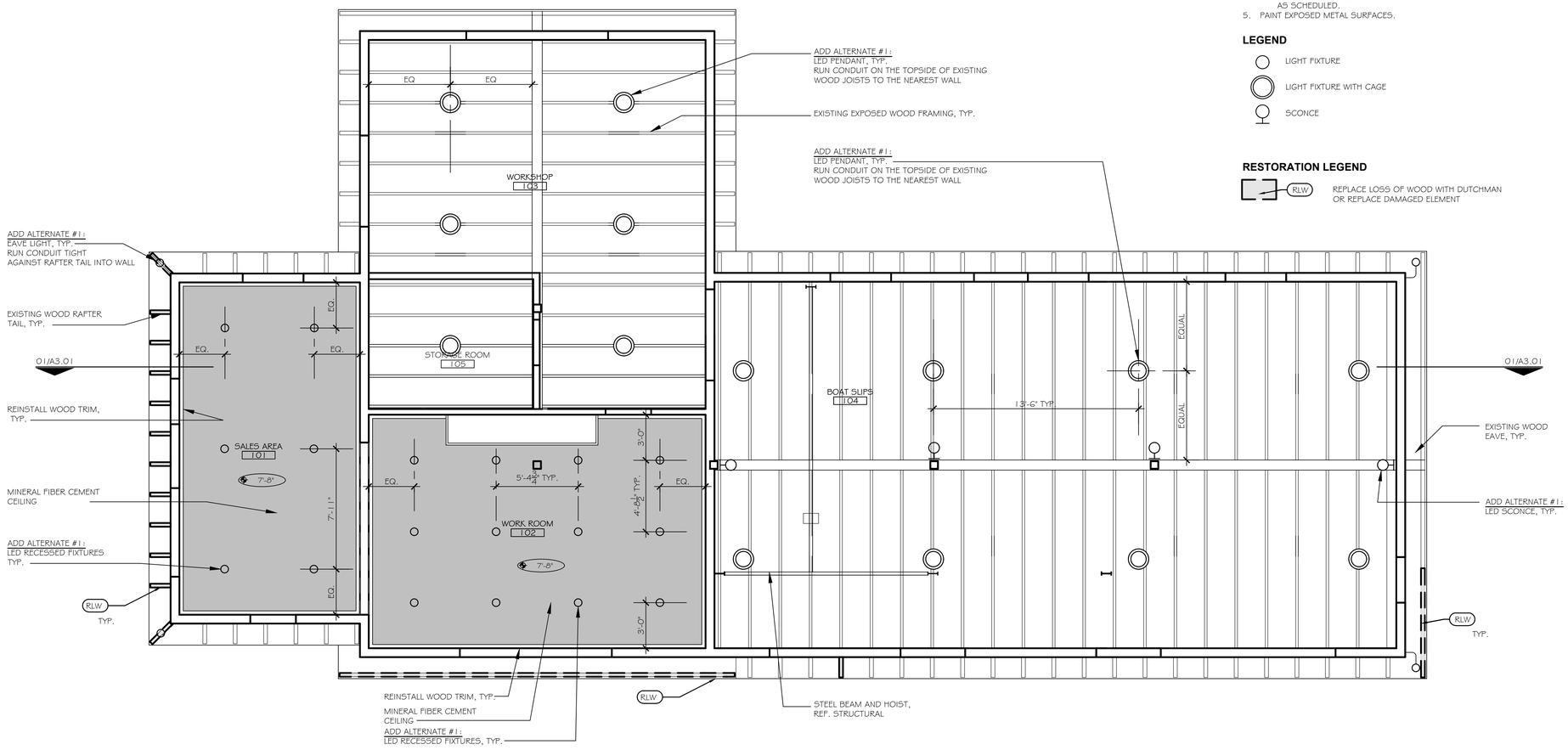
1. RESTORE EXTERIOR MATERIALS, EXCEPT WHERE NOTED OTHERWISE.
2. CARPENTRY RESTORATION SHOWN ON THE DRAWINGS INDICATES THE APPROXIMATE LOCATION AND SIZE OF SUCH WORK; SUCH WORK IS TO BE UNDERTAKEN ONLY WHERE NEEDED. IN ADDITION TO REPAIR WORK SHOWN ON DRAWINGS, PROVIDE AN ADDITIONAL 20% OF THE TOTAL QUANTITY SHOWN ON THE DRAWINGS. LOCATION AND QUANTITIES TO BE VERIFIED WITH ARCHITECT PRIOR TO BEGINNING WORK.
3. THE RESTORATION OF WOOD ELEMENTS TO INCLUDE SOFFITS, TRIM, EAVES AND RAFTER TAILS.
4. CARPENTRY RESTORATION INCLUDES:
   a. REMOVE PAINT TO BARE WOOD.
   b. REMOVE BIOLOGICAL GROWTH.
   c. REPAIR DETERIORATED OR DAMAGED WOOD AND REPLACE WHERE REPAIR IS NOT FEASIBLE.
   d. SEALANT.
   e. PREPARE SURFACES FOR TRANSPARENT FINISH AS SCHEDULED.
5. PAINT EXPOSED METAL SURFACES.

LEGEND

- LIGHT FIXTURE
- LIGHT FIXTURE WITH CAGE
- SCONCE

RESTORATION LEGEND

- RLW — REPLACE LOSS OF WOOD WITH DUTCHMAN OR REPLACE DAMAGED ELEMENT



01 REFLECTED CEILING PLAN - ADD ALTERNATE #1
SCALE: 1/4"=1'-0"

TRUE NORTH / PLAN NORTH

0 1 2 4 8 12

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REVISED:
REVISED:
REVISED:

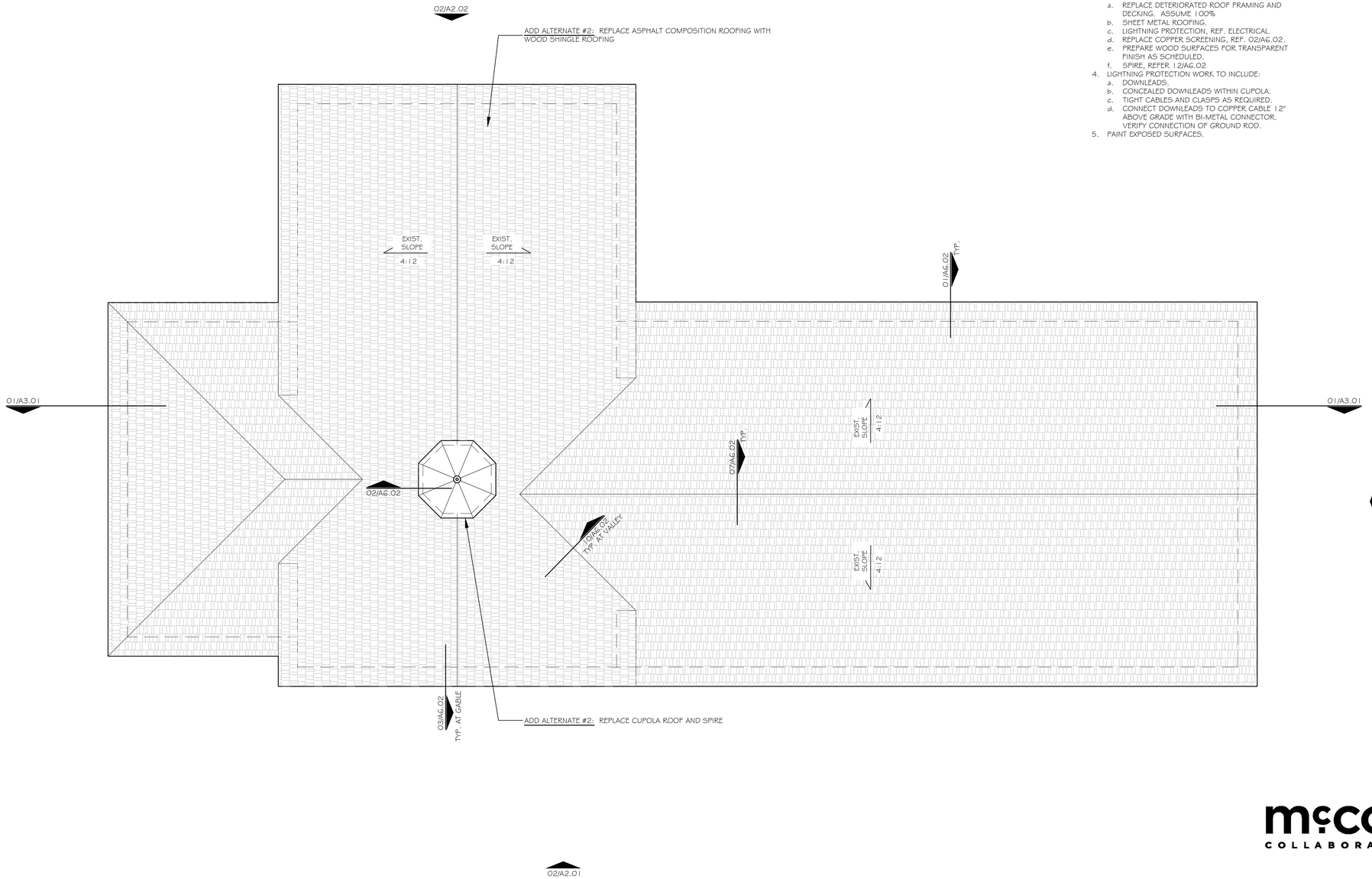
SHEET TITLE
REFLECTED CEILING PLAN

SHEET NUMBER
A1.02A

122865 - A102A.dwg

GENERAL NOTES FLOOR PLAN

1. RESTORE EXTERIOR MATERIALS, EXCEPT WHERE NOTED OTHERWISE.
2. WOOD SHINGLE ROOFING, WORK TO INCLUDE:
   a. REPAIR AND REPLACE DETERIORATED DECKING. ASSUME 25%.
   b. UNDERLAYMENT AND VENTILATED UNDERLAYMENT.
   c. WOOD SHINGLE ROOFING.
   d. SHINGLE RIDGE. 7 ½" EXPOSURE.
3. SHEET METAL ROOFING / CUPOLA WORK TO INCLUDE:
   a. REPLACE DETERIORATED ROOF FRAMING AND DECKING. ASSUME 100%
   b. SHEET METAL ROOFING.
   c. LIGHTNING PROTECTION, REF. ELECTRICAL.
   d. REPLACE COPPER SCREENING, REF. 02/A6.02.
   e. PREPARE WOOD SURFACES FOR TRANSPARENT FINISH AS SCHEDULED.
   f. SPIRE, REFER 12/A6.02
4. LIGHTNING PROTECTION WORK TO INCLUDE:
   a. DOWNLEADS.
   b. CONCEALED DOWNLEADS WITHIN CUPOLA.
   c. TIGHT CABLES AND CLASPS AS REQUIRED.
   d. CONNECT DOWNLEADS TO COPPER CABLE 12" ABOVE GRADE WITH BI-METAL CONNECTOR. VERIFY CONNECTION OF GROUND ROD.
5. PAINT EXPOSED SURFACES.



01 ROOF PLAN - ADD ALTERNATE #2
SCALE: 1/4"=1'-0"

TRUE NORTH PLAN NORTH

0 1 2 4 8 12

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HUNTSVILLE STATE PARK
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BOATHOUSE
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DRAWN BY: GJ
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REVISED:
REVISED:
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SHEET TITLE
ROOF PLAN

SHEET NUMBER
A1.03
122865 - A103.dwg

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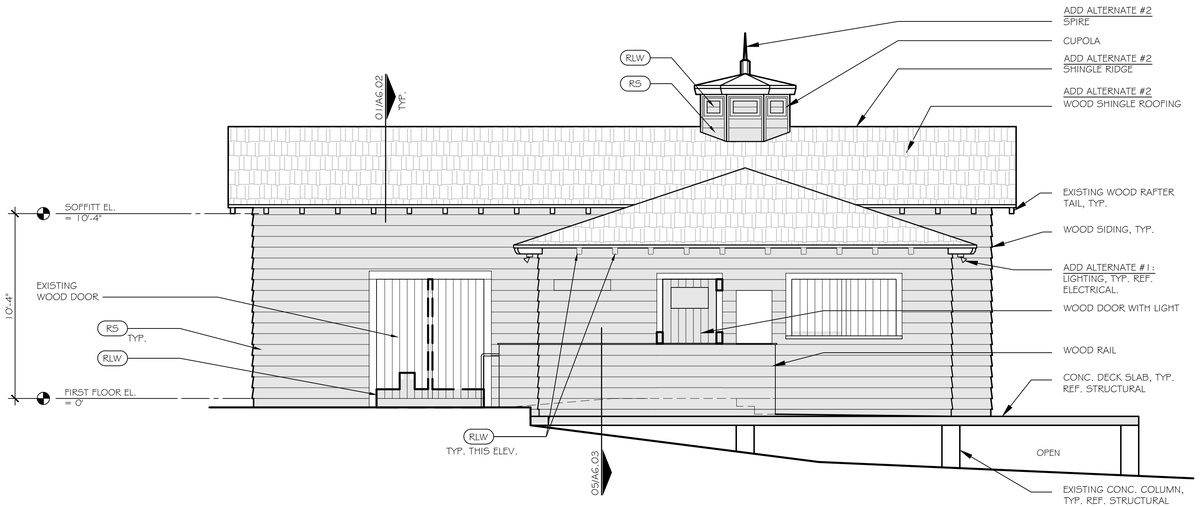
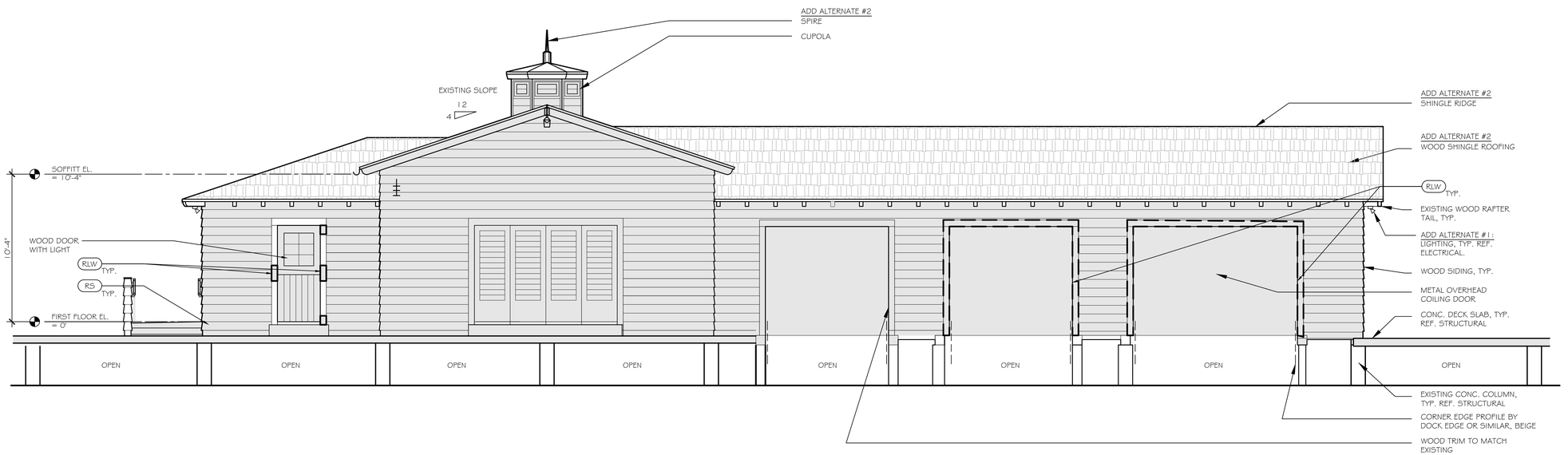


01 SOUTH ELEVATION
SCALE: 1/4"=1'-0"



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

0 1 2 4 8 12

GENERAL NOTES ELEVATIONS

1. RESTORE EXTERIOR MATERIALS, EXCEPT WHERE NOTED OTHERWISE.
2. CARPENTRY RESTORATION SHOWN ON THE DRAWINGS INDICATES THE APPROXIMATE LOCATION AND SIZE OF SUCH WORK; SUCH WORK IS TO BE UNDERTAKEN ONLY WHERE NEEDED. FINAL LOCATION MAY VARY.
3. FOR CARPENTRY RESTORATION, INCLUDE AN ADDITIONAL 20% OF THE TOTAL QUANTITY OF REPAIR WORK ON THE DRAWINGS. THE REPAIR COULD BE ANYWHERE ON THE BUILDING.
4. CARPENTRY RESTORATION INCLUDES DOORS, OPENINGS, RAFTER TAILS, WOOD DECKING AND TRIM.
5. CARPENTRY RESTORATION WORK TO INCLUDE:
   a. STRIP PAINT TO BARE WOOD.
   b. REPAIR AND REPLACE AS INDICATED.
   c. CLEAN.
   d. PREPARE SURFACES FOR TRANSPARENT FINISH AS SCHEDULED.
6. RESTORE DOORS.
7. RESTORE OPENINGS.
8. RESTORE RAFTER TAILS.
9. WOOD SIDING WORK TO INCLUDE:
   a. REMOVE AND REPLACE 100% TO MATCH EXISTING.
   b. REMOVE METAL CAPS.
   c. PREPARE SURFACES FOR TRANSPARENT FINISH AS SCHEDULED.
10. REMOVE EXTRANEOUS AND ABANDONED ANCHORS, NAILS AND OTHER ELEMENTS.
11. PAINT EXPOSED PREVIOUSLY PAINTED METAL SURFACES AS SCHEDULED.

RESTORATION LEGEND

R5 — REPLACE SIDING

RLW — REPLACE LOSS OF WOOD WITH DUTCHMAN OR REPLACE DAMAGED ELEMENT

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12-27-20

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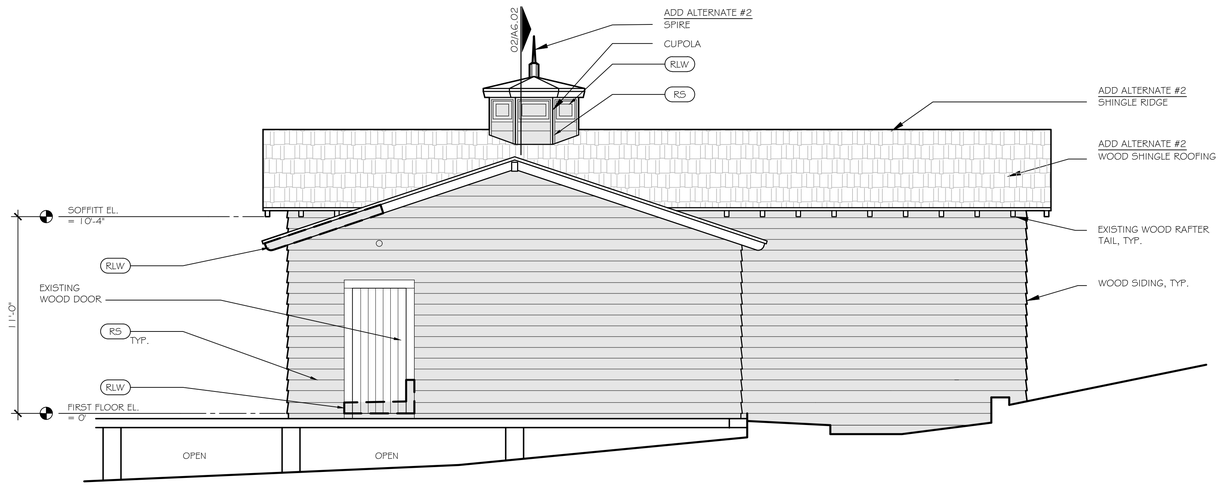
REVIEWED BY: NM
REVISED:
REVISED:
REVISED:

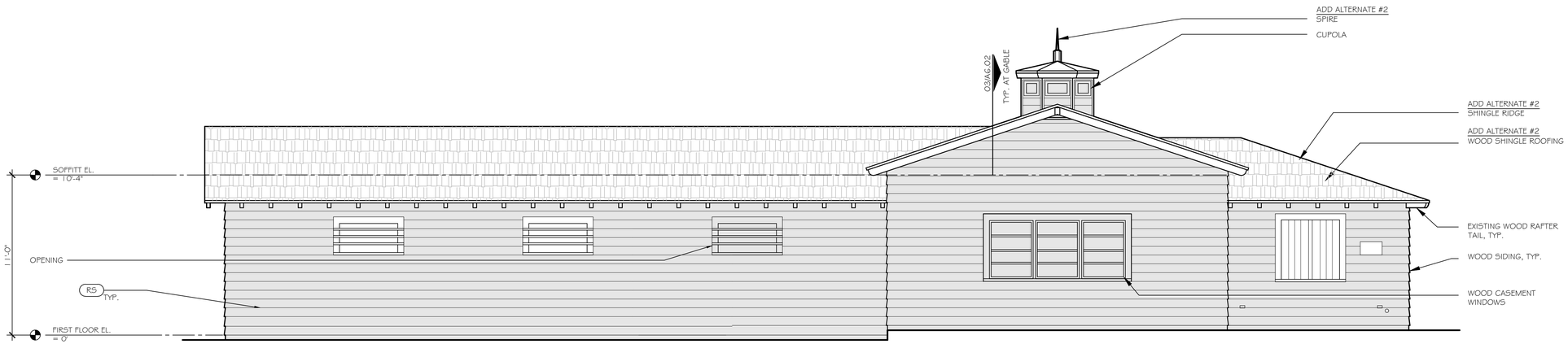
SHEET TITLE
EXTERIOR ELEVATIONS

SHEET NUMBER
A2.01

122865 - A201.dwg



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



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

0 1 2 4 8 12

GENERAL NOTES ELEVATIONS

1. RESTORE EXTERIOR MATERIALS, EXCEPT WHERE NOTED OTHERWISE.
2. CARPENTRY RESTORATION SHOWN ON THE DRAWINGS INDICATES THE APPROXIMATE LOCATION AND SIZE OF SUCH WORK; SUCH WORK IS TO BE UNDERTAKEN ONLY WHERE NEEDED. FINAL LOCATION MAY VARY.
3. FOR CARPENTRY RESTORATION, INCLUDE AN ADDITIONAL 20% OF THE TOTAL QUANTITY OF REPAIR WORK ON THE DRAWINGS. THE REPAIR COULD BE ANYWHERE ON THE BUILDING.
4. CARPENTRY RESTORATION INCLUDES DOORS, OPENINGS, RAFTER TAILS, WOOD DECKING AND TRIM.
5. CARPENTRY RESTORATION WORK TO INCLUDE:
   a. STRIP PAINT TO BARE WOOD.
   b. REPAIR AND REPLACE AS INDICATED.
   c. CLEAN.
   d. PREPARE SURFACES FOR TRANSPARENT FINISH AS SCHEDULED.
6. RESTORE DOORS.
7. RESTORE OPENINGS.
8. RESTORE RAFTER TAILS.
9. WOOD SIDING WORK TO INCLUDE:
   a. REMOVE AND REPLACE 100% TO MATCH EXISTING.
   b. REMOVE METAL CAPS.
   c. PREPARE SURFACES FOR TRANSPARENT FINISH AS SCHEDULED.
10. REMOVE EXTRANEOUS AND ABANDONED ANCHORS, NAILS AND OTHER ELEMENTS.
11. PAINT EXPOSED PREVIOUSLY PAINTED METAL SURFACES AS SCHEDULED.

RESTORATION LEGEND

R5 — REPLACE SIDING

RLW — REPLACE LOSS OF WOOD WITH DUTCHMAN OR REPLACE DAMAGED ELEMENT

TEXAS PARKS & WILDLIFE

REGISTERED ARCHITECT
NANCY McCOY
17785
STATE OF TEXAS
12-27-20

HUNTSVILLE STATE PARK
REPAIRS TO CCC BUILT STRUCTURES
BOATHOUSE
PROJECT NUMBER: 122865

McCoy Collaborative
Preservation Architecture, PLLC
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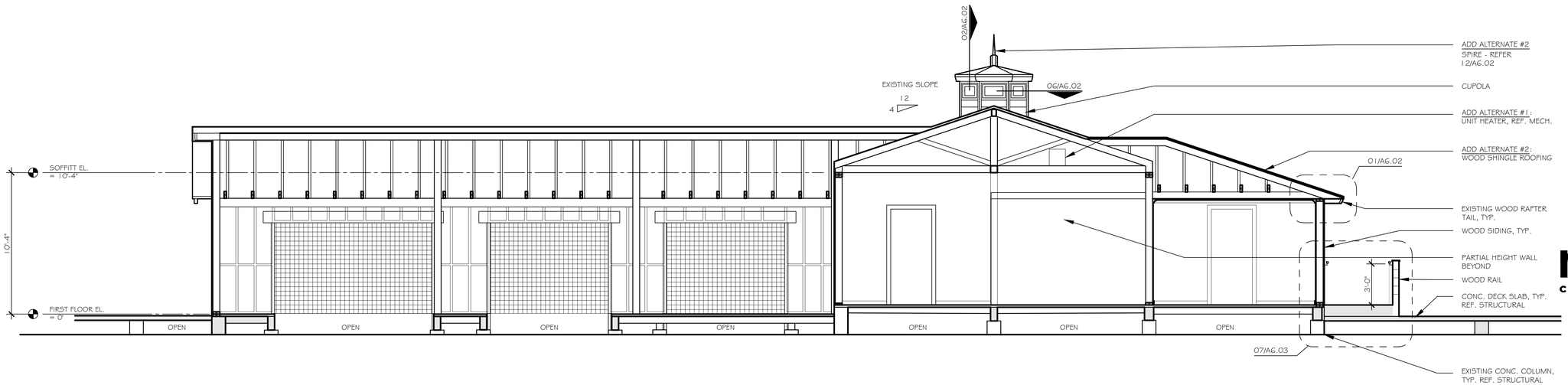
Ph: 214.977.9118

DATE: 08-28-2020
DESIGNED BY: GJ
DRAWN BY: GJ
REVIEWED BY: NM
REVISED:
REVISED:
REVISED:

SHEET TITLE
EXTERIOR ELEVATIONS

SHEET NUMBER
A2.02

122865 - A202.dwg



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

0 1 2 4 8 12

TEXAS PARKS & WILDLIFE

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mcCOY COLLABORATIVE

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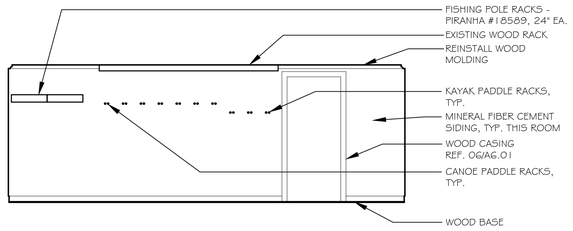
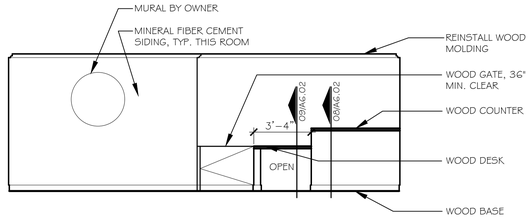
SHEET TITLE
BUILDING SECTION

SHEET NUMBER
A3.01

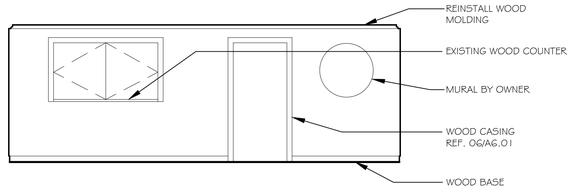
122865 - A301.dwg



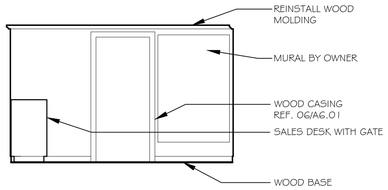
01 WORK ROOM WEST ELEVATION
SCALE: 1/4"=1'-0"



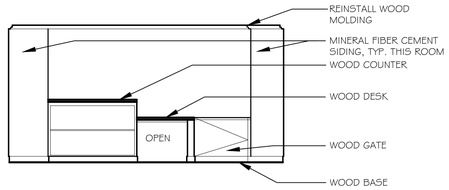
02 SALES AREA NORTH ELEVATION
SCALE: 1/4"=1'-0"



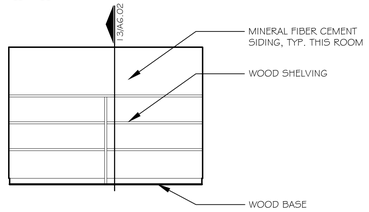
03 SALES AREA SOUTH ELEVATION
SCALE: 1/4"=1'-0"



04 SALES AREA EAST ELEVATION
SCALE: 1/4"=1'-0"



05 SALES DESK WITH GATE ELEVATION
SCALE: 1/4"=1'-0"



06 STORAGE ROOM WEST ELEVATION
SCALE: 1/4"=1'-0"

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REPAIRS TO CCC BUILT STRUCTURES
BOATHOUSE
PROJECT NUMBER: 122865

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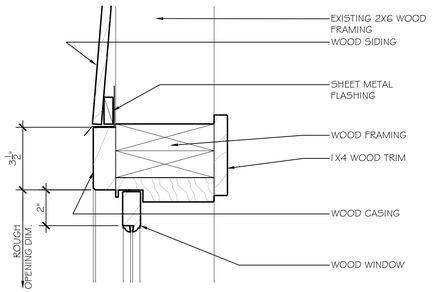
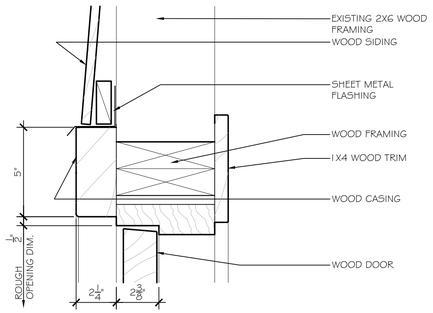
REVIEWED BY: NM
REVISED:
REVISED:
REVISED:

SHEET TITLE
INTERIOR ELEVATIONS

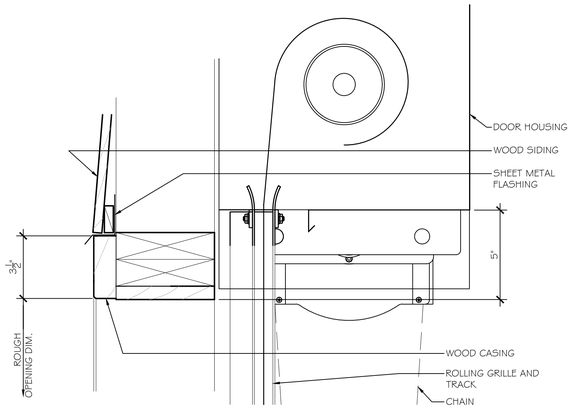
SHEET NUMBER
A5.01
122865 - A501.dwg



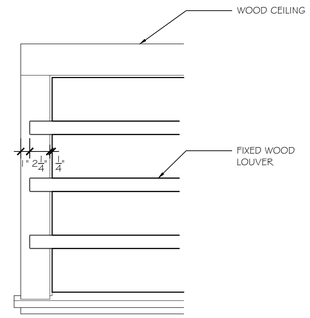
01 WINDOW HEAD
SCALE: 3"=1'-0"



02 EXTERIOR DOOR HEAD
SCALE: 3"=1'-0"



03 OVERHEAD COILING HEAD
SCALE: 3"=1'-0"



04 ELEVATION OF OPENING
SCALE: 1 1/2"=1'-0"

05 WINDOW JAMB
SCALE: 3"=1'-0"

06 INTERIOR DOOR HEAD
SCALE: 1-1/2"=1'-0"

07 OVERHEAD COILING JAMB
SCALE: 3"=1'-0"

08 SECTON OF OPENING
SCALE: 1 1/2"=1'-0"

09 WINDOW SILL
SCALE: 3"=1'-0"

10 EXTERIOR DOOR SILL
SCALE: 3"=1'-0"

TEXAS PARKS & WILDLIFE

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HUNTSVILLE STATE PARK
REPAIRS TO CCC BUILT STRUCTURES
BOATHOUSE
PROJECT NUMBER: 122865

DATE: 08-28-2020
DESIGNED BY: GJ
DRAWN BY: GJ
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REVISED:
REVISED:
REVISED:

SHEET TITLE
DETAILS

SHEET NUMBER
A6.01
122865 - A601.dwg

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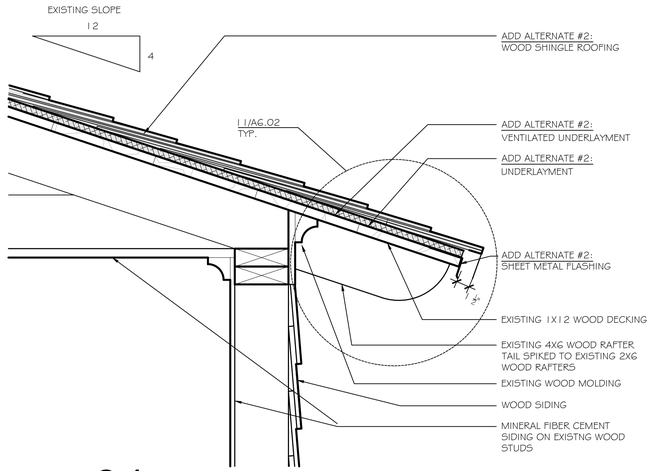
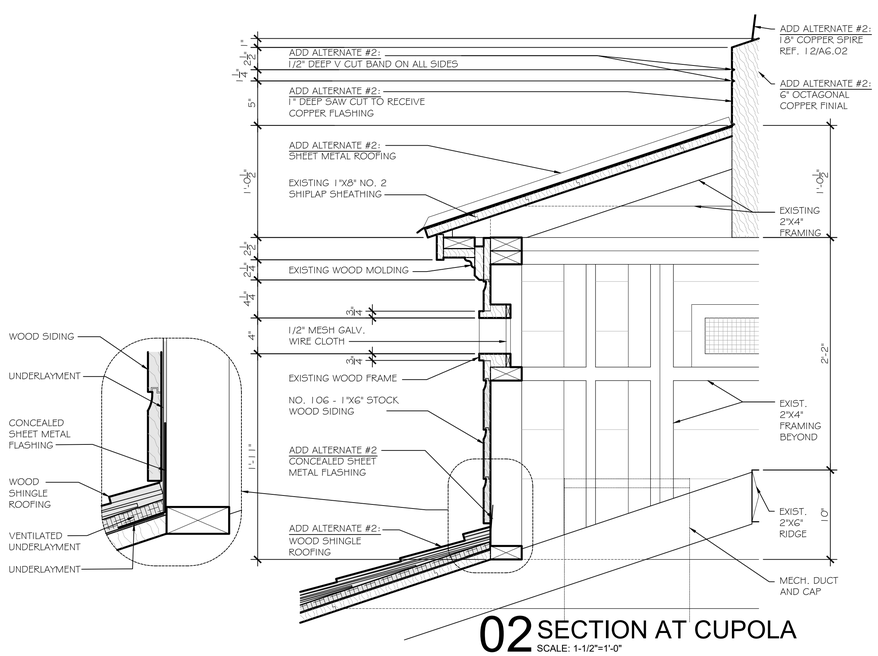
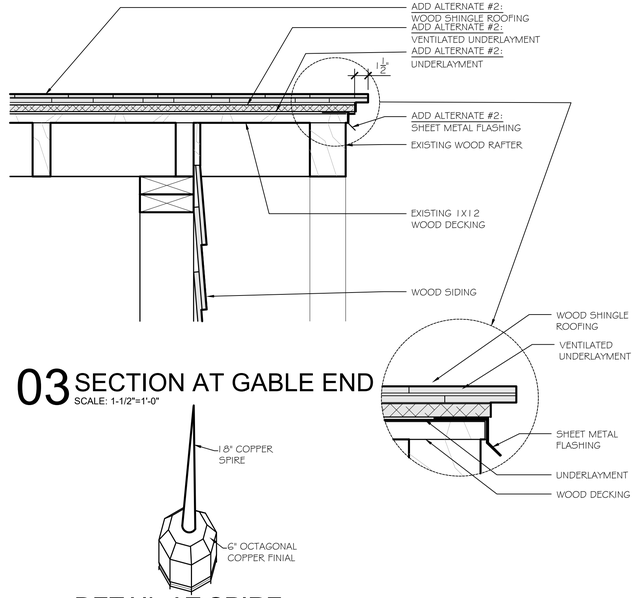


01 SECTION AT EAVE
SCALE: 1-1/2"=1'-0"



02 SECTION AT CUPOLA
SCALE: 1-1/2"=1'-0"



03 SECTION AT GABLE END
SCALE: 1-1/2"=1'-0"

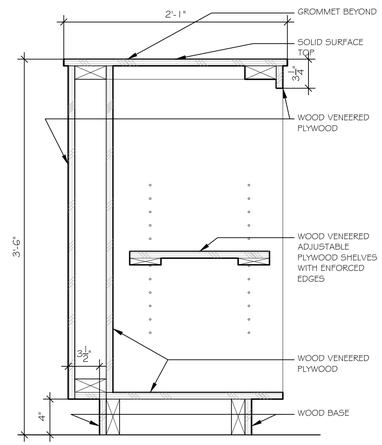
12 DETAIL AT SPIRE - ADD ALTERNATE #2
SCALE: 1-1/2"=1'-0"

04 DOCK EDGE
SCALE: 1-1/2"=1'-0"

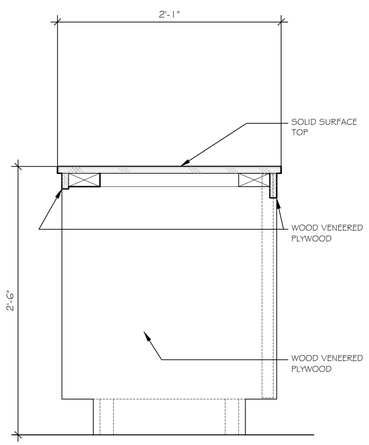
05 DOCK EDGE
SCALE: 1-1/2"=1'-0"

06 PLAN AT CUPOLA
SCALE: 1-1/2"=1'-0"

07 TYP. SHINGLE RIDGE DETAIL - ADD ALTERNATE #2
SCALE: 1-1/2"=1'-0"



08 SECTION AT COUNTER
SCALE: 1-1/2"=1'-0"



09 SECTION AT COUNTER
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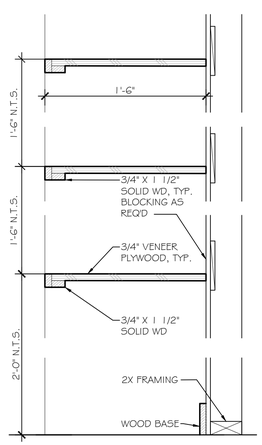
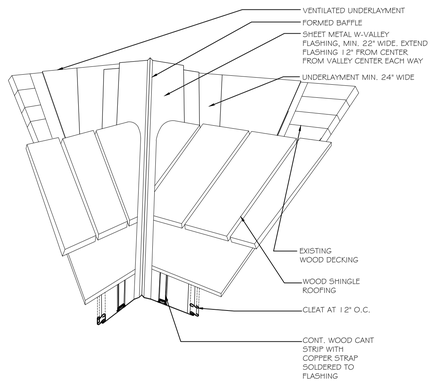
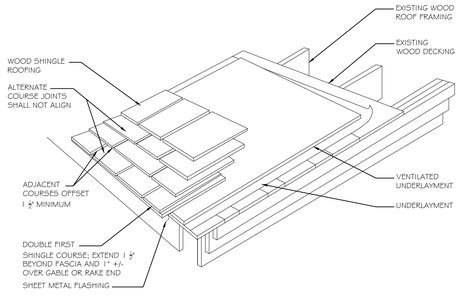


13 SHELVING
SCALE: 1-1/2"=1'-0"



10 VALLEY DETAIL - ADD ALTERNATE #2
SCALE: 1-1/2"=1'-0"



11 TYP. EAVE DETAIL - ADD ALTERNATE #2
SCALE: 1-1/2"=1'-0"

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TEXAS PARKS & WILDLIFE

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17756
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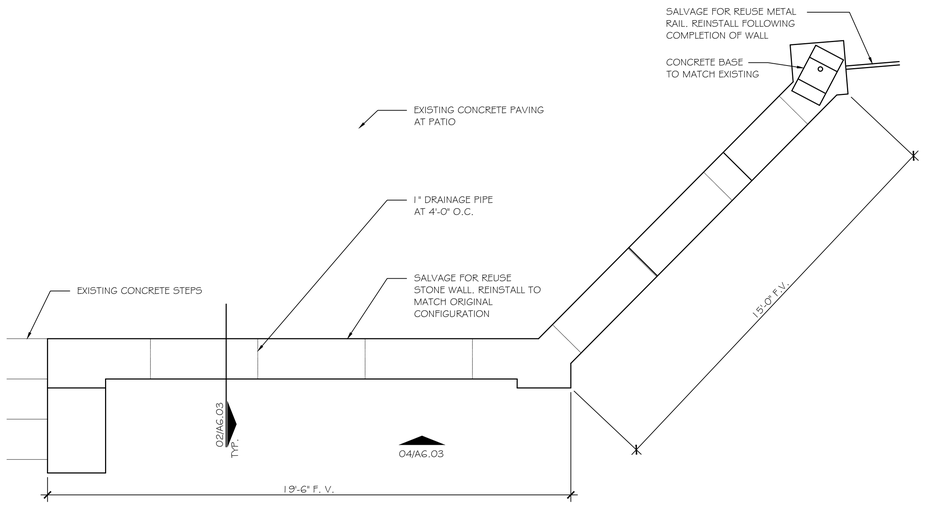
REPAIRS TO CCC BUILT STRUCTURES
BOATHOUSE
PROJECT NUMBER: 122865

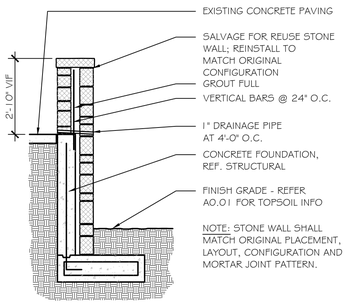
DATE: 08-28-2020
DESIGNED BY: GJ
DRAWN BY: GJ
REVIEWED BY: NM
REVISED:
REVISED:
REVISED:

SHEET TITLE
DETAILS

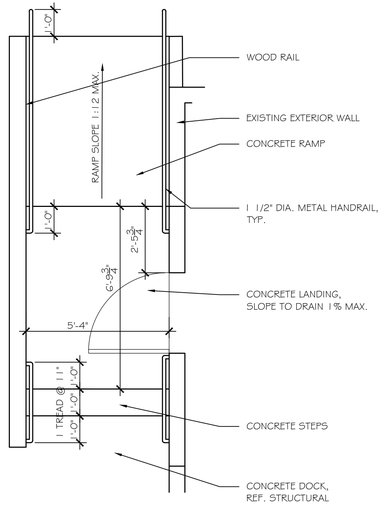
SHEET NUMBER
A6.02
122865 - A602.dwg



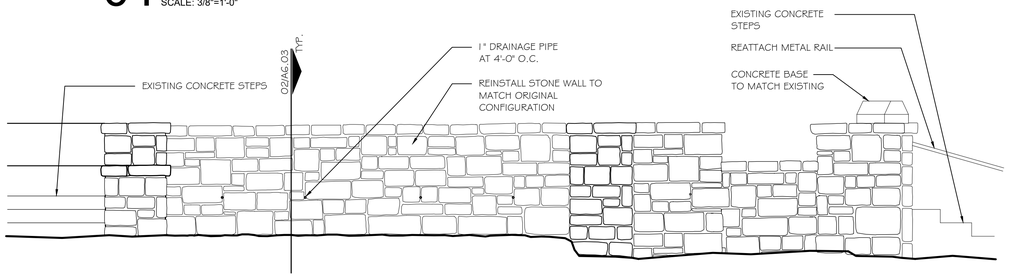
01 ENLARGED PLAN RETAINING WALL
SCALE: 3/8"=1'-0"



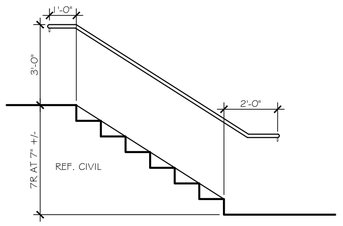
02 WALL SECTION
SCALE: 3/8"=1'-0"



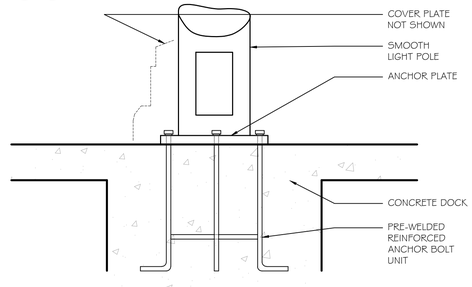
03 ENLARGED PLAN AT SOUTH ENTRANCE
SCALE: 3/8"=1'-0"

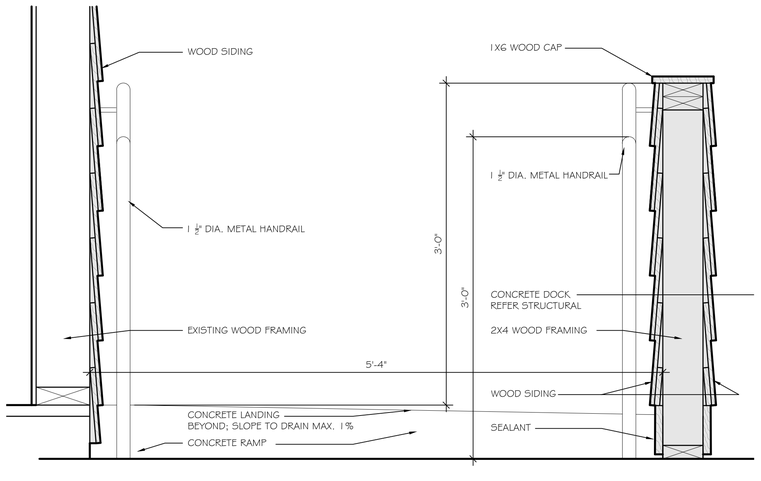


04 RETAINING WALL ELEVATION
SCALE: 3/8"=1'-0"



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





07 SECTION AT LANDING
SCALE: 1 1/2"=1'-0"

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HUNTSVILLE STATE PARK
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PROJECT NUMBER: 122865

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REVISED:

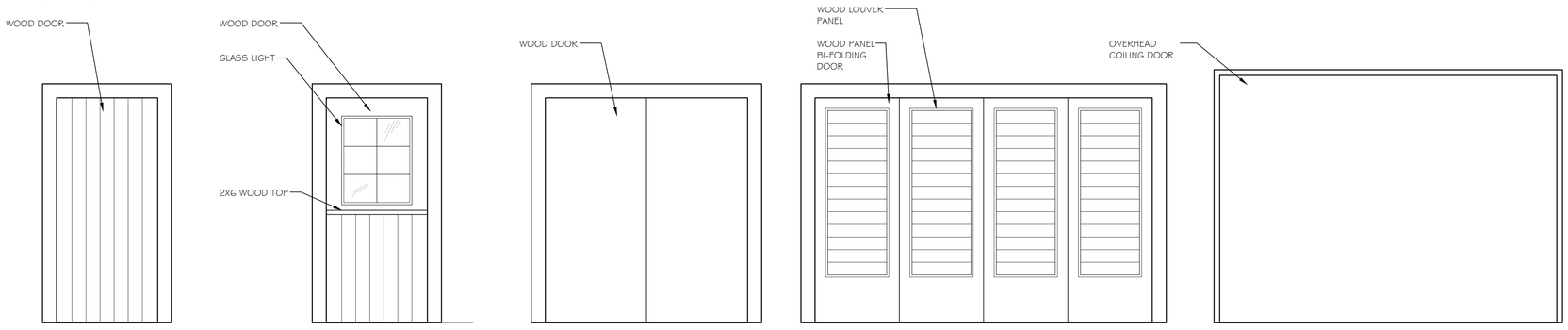
SHEET TITLE
DETAILS

SHEET NUMBER
A6.03
122865 - A603.dwg

PATH: M:\MCPA Projects\2016-17 TPWD Huntsville Boat House Task Order 1\Phase 1\1.5 CADD\1.5.1 CADD Current\1.5.1.1 QMc\1.5.1.4 CD\122865 - A603.dwg

ID	DOOR						FRAME			THRESHOLD	DETAILS			HDWR SET	KEYNOTES
	TYPE	OPENING SIZE	EXISTING	MATERIAL	FINISH	GLAZING	EXISTING	MATERIAL	FINISH		HEAD	JAMB	SILL		
101	A	3'-0" X 6'-8" X 2 1/4"	-	WOOD	STAIN	LIGHT	Y	WOOD	STAIN	WOOD	-	-	-	01	4
101A	B	3'-0" X 6'-8" X 2 1/4"	-	WOOD	STAIN	HALF	Y	WOOD	STAIN	WOOD	-	-	-	02	4
102	D	10'-0" X 8'-0" X 2 1/4"	-	WOOD	STAIN	-	-	WOOD	STAIN	WOOD	02/AG.01	02/AG.01 SIM.	10/AG.01	03	
103	(EX'G)	PR 3'-0" X 6'-8" X 2 1/4"	Y	WOOD	STAIN	-	Y	WOOD	STAIN	WOOD	-	-	-	07	1, 2, 3, 4
103A	C	PR 3'-0" X 6'-8" X 1 3/4"	-	WOOD	STAIN	-	-	WOOD	STAIN	WOOD	06/AG.01	06/AG.01 SIM.	-	04	
103B	(S)	3'-0" X 6'-8" X 2 1/4"	Y	WOOD	STAIN	-	-	WOOD	STAIN	WOOD	06/AG.01	06/AG.01 SIM.	-	05	1,2
104	E	8'-8" X 7'-4"	-	METAL	MFR	-	-	METAL	PRE-FIN	-	03/AG.01	07/AG.01	-	06	
104A	E	8'-8" X 7'-4"	-	METAL	MFR	-	-	METAL	PRE-FIN	-	03/AG.01	07/AG.01	-	06	
104B	E	11'-6" X 7'-4"	-	METAL	MFR	-	-	METAL	PRE-FIN	-	03/AG.01	07/AG.01	-	06	
104C	(EX'G)	3'-0" X 6'-8" X 2 1/4"	Y	WOOD	STAIN	-	Y	WOOD	STAIN	WOOD	-	-	-	08	1, 2, 4

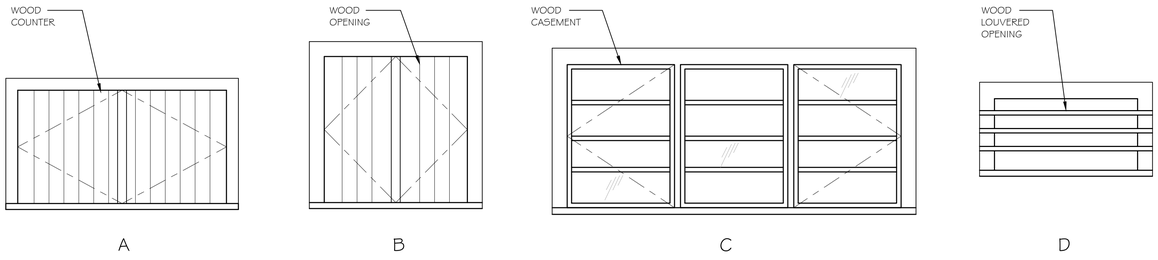
01 DOOR SCHEDULE
SCALE: N.T.S.



02 DOOR TYPES
SCALE: NTS

ID	EXISTING	SIZE	WINDOW				FRAME	SILL	DETAILS			KEYNOTES
			TYPE	OPERATION	MATERIAL	GLASS	MATERIAL	MATERIAL	HEAD	JAMB	SILL	
W-1	Y	5'-10" X 3'-2"	A	COUNTER	WOOD	-	WOOD	WOOD	-	-	-	A, C
W-2	Y	4'-0" X 4'-1"	B	CASEMENT	WOOD	-	WOOD	WOOD	-	-	-	A, C
W-3		9'-4" X 4'-0"	C	CASEMENT	WOOD	TEMPERED	WOOD	WOOD	01/AG.01	05/AG.01	09/AG.01	
W-4		4'-0" X 2'-0"	D	FIXED	WOOD	-	WOOD	WOOD	04/AG.01	-	08/AG.01	
W-5	Y	4'-0" X 2'-0"	D	FIXED	WOOD	-	WOOD	WOOD	-	-	-	B
W-6	Y	4'-0" X 2'-0"	D	FIXED	WOOD	-	WOOD	WOOD	-	-	-	B

03 WINDOW SCHEDULE
SCALE: N.T.S.



04 WINDOW TYPES
SCALE: NTS

ROOM NUMBER	ROOM NAME	FLOOR		BASE		NORTH WALL		EAST WALL		SOUTH WALL		WEST WALL		CEILING		WOOD MOLDING		CASEWORK		KEYNOTES
		MAT'L	FINISH	MAT'L	FINISH	MAT'L	FINISH	MAT'L	FINISH	MAT'L	FINISH	MAT'L	FINISH	MAT'L	FINISH	MAT'L	FINISH	MAT'L	FINISH	
101	SALES AREA	WOOD	P-4	WOOD	P-5	MIN. FIBER CEMENT	P-3	MIN. FIBER CEMENT	P-3	MIN. FIBER CEMENT	P-3	MIN. FIBER CEMENT	P-3	MIN. FIBER CEMENT	P-3	EXIST. WOOD	P-5	WOOD	P-6	-
102	WORK ROOM	WOOD	P-4	WOOD	P-5	MIN. FIBER CEMENT	P-3	MIN. FIBER CEMENT	P-3	MIN. FIBER CEMENT	P-3	MIN. FIBER CEMENT	P-3	MIN. FIBER CEMENT	P-3	EXIST. WOOD	P-5	WOOD	P-6	-
103	WORKSHOP	WOOD / CONC	P-4	-	-	EXPOSED FRAMING	-	MIN. FIBER CEMENT / EXPOSED FRAMING	P-3 / -	EXPOSED FRAMING	-	EXPOSED FRAMING	-	EXIST. EXPOSED	-			EXISTING WOOD	P-6	-
104	BOAT SLIPS	WOOD	P-4	-	-	EXPOSED FRAMING	-	EXPOSED FRAMING	-	EXPOSED FRAMING	-	EXPOSED FRAMING	-	EXIST. EXPOSED	-					-
105	STORAGE ROOM	WOOD	P-4	WOOD	P-5	MIN. FIBER CEMENT	P-3	EXPOSED FRAMING	-	EXPOSED FRAMING	-	MIN. FIBER CEMENT	P-3	EXIST. EXPOSED	-			WOOD	P-6	-

05 FINISH SCHEDULE
SCALE: N.T.S.

GENERAL NOTES DOORS:

1. FIELD VERIFY EXISTING DOOR SIZES.
2. CLEAN EXISTING AND SALVAGED DOORS, FRAMES AND HARDWARE. REPLACE HARDWARE AS INDICATED.
3. DOOR RESTORATION SCOPE TO INCLUDE:
   A. RESTORE DOORS 103, 103B AND 104C.
   B. CHEMICALLY STRIP PAINT TO BARE WOOD. PERFORM MINOR REPAIRS SUCH AS THE REMOVAL OF UNUSED ANCHORS, NAILS OR OTHER EXTRANEOUS DEVICES, PATCHING OF SMALL HOLES, DENTS AND OTHER IMPERFECTIONS IN THE FINISHED SURFACE. REPLACE WHOLE ELEMENTS, PERFORM DUTCHMEN REPAIRS AND EPOXY REPAIRS AS SCHEDULED. REPLACEMENT WOOD AND DUTCHMAN REPAIRS SHALL MATCH ORIGINAL SPECIES.
   C. REMOVE AND REPLACE WEATHERSTRIPPING.
   D. RESTORE DOORS, BOTH SIDES: REMOVE LOOSE AND DETERIORATED PAINT. PERFORM DUTCHMAN REPAIRS AND EPOXY REPAIRS AS REQUIRED. REPLACEMENT WOOD AND DUTCHMAN REPAIRS SHALL MATCH ORIGINAL SPECIES.
   E. REPLACE HARDWARE TO MATCH EXISTING.
   F. REPLACE THRESHOLD.
   G. DOORS SHALL BE FULLY FUNCTIONING UPON COMPLETION OF RESTORATION.
   H. RESTORE DOOR FRAMES AND CASING WITH OTHER CARPENTRY RESTORATION WORK.
4. PREPARE SURFACES FOR TRANSPARENT FINISH AS SCHEDULED.

DOOR RESTORATION KEYNOTES

1. REPAIR LOST, CRACKED, SPLIT OR DETERIORATED WOOD WITH WOOD DUTCHMAN OR WITH EPOXY REPAIR SYSTEM
2. PLANE DOOR TO ACHIEVE PROPER FIT.
3. REPLACE STILE, OR RAIL ELEMENT TO MATCH ORIGINAL.
4. REPALCE EXISTING WOOD FRAME WITH DUTCHMAN AT PREVIOUS HING AND LATCH LOCATIONS.

GENERAL NOTES WINDOWS:

1. FIELD VERIFY EXISTING WINDOW SIZES.
2. WINDOW RESTORATION SCOPE TO INCLUDE:
   A. RESTORE WINDOWS W-1, W-2, W-5 AND W-6.
   B. REMOVE AND REPLACE WEATHERSTRIPPING.
   C. CHEMICALLY STRIP PAINT TO BARE WOOD. PERFORM MINOR REPAIRS SUCH AS THE REMOVAL OF UNUSED ANCHORS, NAILS OR OTHER EXTRANEOUS DEVICES, PATCHING OF SMALL HOLES, DENTS AND OTHER IMPERFECTIONS IN THE FINISHED SURFACE. REPLACE WHOLE ELEMENTS, PERFORM DUTCHMEN REPAIRS AND EPOXY REPAIRS AS SCHEDULED. REPLACEMENT WOOD AND DUTCHMAN REPAIRS SHALL MATCH ORIGINAL SPECIES
   D. RESTORE EXTERIOR AND INTERIOR WINDOW FRAME AND SILL WITH OTHER CARPENTRY RESTORATION WORK.
3. PREPARE SURFACES FOR TRANSPARENT FINISH AS SCHEDULED.

WOOD WINDOW RESTORATION KEYNOTES

A. DUTCHMAN REPAIR OF ELEMENT
B. EPOXY REPAIR OF ELEMENT
C. ADD SHUTTER LOCK

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TEXAS PARKS & WILDLIFE

REGISTERED ARCHITECT NANCY MCCOY 17785 STATE OF TEXAS 12-27-20

HUNTSVILLE STATE PARK
REPAIRS TO CCC BUILT STRUCTURES
BOATHOUSE
PROJECT NUMBER: 122865

DATE: 08-28-2020
DESIGNED BY: GJ
DRAWN BY: GJ
REVIEWED BY: GJ
REVISED:
REVISED:
REVISED:

SHEET TITLE
SCHEDULES

SHEET NUMBER
A8.01

122865 - A801.dwg

MECHANICAL AND PLUMBING SYMBOLS

SYMBOL	DESCRIPTION
	THIN LINE WEIGHTS REPRESENT EXISTING WORK
	BOLD LINE WEIGHTS REPRESENT NEW WORK
	EXISTING DUCTWORK TO BE REMOVED
	EXISTING DUCTWORK
	NEW DUCTWORK
→D	CHANGE OF ELEVATION - RISE (R) DROP (D)
	DUCT UP, POSITIVE PRESSURE FIRST FIGURE IS TOP DIMENSION
	DUCT UP, NEGATIVE PRESSURE FIRST FIGURE IS TOP DIMENSION
	DUCT DOWN, POSITIVE PRESSURE FIRST FIGURE IS TOP DIMENSION
	DUCT DOWN, NEGATIVE PRESSURE FIRST FIGURE IS TOP DIMENSION
	MANUAL VOLUME DAMPER
	FIRE DAMPER, VERTICAL POSITION
	FIRE DAMPER, HORIZONTAL POSITION
	CEILING DIFFUSER
	CEILING EXHAUST/RETURN GRILLE
	SLOT DIFFUSER
	SIDEWALL GRILLE OR REGISTER
	INDICATES DIRECTION OF AIRFLOW
AIR DEVICE TAG	A — SCHEDULE DESIGNATION; 10"ø — NECK SIZE; 200 — AIR QUANTITY (CFM)
DETAIL TAG	01 / M201 — DETAIL NUMBER / SHEET ON WHICH DETAIL APPEARS
RISER TAG	P1 — P: PLUMBING RISER/F: FIRE RISER; RISER NUMBER
H	HUMIDISTAT SENSOR
G	TEMPERATURE AND HUMIDITY GAUGE
S	TEMPERATURE SENSOR
T	THERMOSTAT
	EXISTING PIPING TO BE REMOVED
SAN	SANITARY SEWER
GW	GREASE WASTE
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	DOMESTIC HOT WATER RETURN
	VENT
CD	CONDENSATE DRAIN
F	FIRE PIPING
G	GAS PIPING
TW	TEMPERED WATER PIPING
	CONNECT NEW TO EXISTING
	PIPE, TURNED UP
	PIPE, TURNED DOWN
	CONNECTION, BOTTOM
	CONNECTION, TOP
	ELBOW
	TEE
	CAP
	STRAINER
	UNION
	FLANGE
	CONCENTRIC REDUCER
	ECCENTRIC REDUCER
	ANGLE VALVE
	SHUT-OFF VALVE
	BUTTERFLY VALVE
	CHECK VALVE
	GATE VALVE
	GLOBE VALVE
	PLUG VALVE
	PRESSURE RELIEF VALVE
	PRESSURE REDUCING VALVE
	AUTOMATIC BUTTERFLY VALVE
	AUTOMATIC 2-WAY VALVE
	AUTOMATIC 3-WAY VALVE
	PENETRATION
	WATER HAMMER ARRESTER

NOTES:
1. ALL SYMBOLS MAY NOT APPEAR ON DRAWINGS.
2. ALL WALL MOUNTED DEVICES (POWER, DATA, TELEPHONE, ETC.) SHALL BE MOUNTED NO LESS THAN 15" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE. DATA OUTLETS SHALL BE MOUNTED AT SAME HEIGHT AS ADJACENT RECEPTACLE.
3. ALL LIGHT SWITCHES SHALL BE MOUNTED NO MORE THAN 48" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE.
4. COORDINATE FINISH OF ELECTRICAL DEVICES WITH ARCHITECT UNLESS NOTE OTHERWISE.

ELECTRICAL AND LIGHTING SYMBOLS

SYMBOL	DESCRIPTION
	THIN LINE WEIGHTS REPRESENT EXISTING WORK
	BOLD LINE WEIGHTS REPRESENT NEW WORK
	DASHED LINE REPRESENTS DEMO WORK
	CONDUIT
	UNDERGROUND/UNDERFLOOR CONDUIT
	FLEXIBLE CONDUIT
	WIRE MOLD
	WIRING, HOMERUN
	WIRING, NEUTRAL
	WIRING, HOT
	WIRING, SWITCHLEG
	WIRING, GROUND
	WIRING, ISOLATED GROUND
	CONTINUATION
	SIMPLEX RECEPTACLE
	DUPLEX RECEPTACLE
	FLUSH FLOOR MOUNTED DUPLEX RECEPTACLE
	CEILING MOUNTED DUPLEX RECEPTACLE
	ABOVE COUNTER DUPLEX RECEPTACLE MOUNT @ 44" AFF UNO
	IG RECEPTACLE
	QUADRAPLEX RECEPTACLE
	FLUSH FLOOR MOUNTED QUADRAPLEX RECEPTACLE
	CEILING MOUNTED QUADRAPLEX RECEPTACLE
	ABOVE COUNTER QUADRAPLEX RECEPTACLE MOUNT @ 44" AFF UNO
	IG QUADRAPLEX RECEPTACLE
	SPECIAL PURPOSE RECEPTACLE (VERIFY EXACT NEMA CONFIGURATION IN FIELD)
	FLUSH FLOOR MOUNTED SPECIAL PURPOSE RECEPTACLE (VERIFY EXACT NEMA CONFIGURATION IN FIELD)
	CEILING MOUNTED SPECIAL PURPOSE RECEPTACLE (VERIFY EXACT NEMA CONFIGURATION IN FIELD)
	DUPLEX RECEPTACLE ON EMERGENCY CIRCUIT
	ABOVE COUNTER DUPLEX RECEPTACLE ON EMERGENCY CIRCUIT MOUNT @ 44" AFF UNO
	QUADRAPLEX RECEPTACLE ON EMERGENCY CIRCUIT
	ABOVE COUNTER QUAD RECEPTACLE ON EMERGENCY CIRCUIT MOUNT @ 44" AFF UNO
	DATA COMMUNICATIONS OUTLET WITH 3/4" EC AND PULL STRING TO 6" ABOVE ACCESSIBLE CEILING. CONDUIT SIZE IS BASED ON MAX OF (6) CAT 5E CABLES. COORDINATE WITH OWNER PRIOR TO INSTALLATION.
	FLUSH FLOOR DATA COMMUNICATIONS OUTLET
	TELEPHONE OUTLET WITH 3/4" EC TO 6" ABV. CLG.
	FLUSH FLOOR TELEPHONE OUTLET
	TELEPHONE / DATA OUTLET WITH 3/4" EC AND PULL STRING TO 6" ABOVE ACCESSIBLE CEILING. CONDUIT SIZE IS BASED ON MAX OF (6) CAT 5E CABLES. COORDINATE WITH OWNER PRIOR TO INSTALLATION.
	FLUSH FLOOR TELEPHONE / DATA OUTLET
	FLUSH FLOOR BOX FOR RECEPTACLES, COMMUNICATIONS AND/OR A/V DEVICES. PROVIDE BOX SUITABLE FOR APPLICATION.
	VERTICAL DROP POLE WITH 2 CHANNELS FOR POWER AND COMMUNICATIONS. MODEL SHALL BE WIREMOLD #25DTC UNO ON PLANS. VERIFY LENGTH AND FINISH PRIOR INSTALLATION.
TV	RECESSED COMBINATION A/V (TELEVISION) OUTLET AND DUPLEX RECEPTACLE MOUNTED AT 84" AFF UNO ON PLANS. UTILIZE RECEPTACLE SHOWN ADJACENT TO DEVICE ON FLOOR PLAN. PROVIDE 3/4" EC AND PULL STRING TO 6" ABOVE ACCESSIBLE CEILING FOR LOW-VOLTAGE. MODEL SHALL BE PASS & SEYMOUR #TV2MW.
TV	CEILING MOUNTED A/V (TELEVISION) OUTLET
J	JUNCTION BOX
J	WALL MOUNTED JUNCTION BOX
	DISCONNECT SWITCH
	FUSED DISCONNECT SWITCH
	COMBINATION MOTOR STARTER
	VFD (VARIABLE FREQUENCY DRIVE)
	TVSS (TRANSIENT VOLTAGE SURGE SUPPRESSOR)
M	MOTOR RATED SWITCH
	MOTOR
M	MOTION DETECTOR
M	CEILING MOUNTED MOTION DETECTOR
OS	OCCUPANCY SENSOR
OS	CEILING MOUNTED OCCUPANCY SENSOR
VS	VACANCY SENSOR
VS	CEILING MOUNTED VACANCY SENSOR
CL 17A	CURRENT LIMITER FOR TRACK LIGHTING WITH AMP RATING.
	SWITCH
2	DOUBLE POLE SWITCH
3	THREE-WAY SWITCH
4	FOUR-WAY SWITCH
	DIMMER SWITCH. MODEL SHALL BE LUTRON NOVA OR NOVA T. REFER TO DRAWINGS FOR LOAD AND LIGHT TYPE.
	LOW-VOLTAGE CONTROLS
P	PILOT LIGHT SWITCH
T	TIMECLOCK SWITCH. MODEL SHALL BE INTERMATIC ST700W OR EQUAL.
S	SPEAKER
V	WALL MOUNTED VOLUME CONTROL (P.A.)

ELECTRICAL AND LIGHTING SYMBOLS

SYMBOL	DESCRIPTION
CR	CARD READER
DC	DOOR CONTACT
KP	KEY PAD
ML	MAG-LOCK
G	GENERATOR
ST	SHUNT TRIP
C	CLOCK
M	METER
	120V/208Y OR 120/240V ELECTRICAL PANEL
	277V/480Y ELECTRICAL PANEL
	TRANSFORMER
	GROUND BUS. PROVIDE 1/4" X 4" X 12" COPPER GROUND BUS ON ISOLATORS UNO ON PLANS
	VIA LIGHTING CONTACTOR
LIGHT FIXTURE LABELS	a — SWITCH DESIGNATION; A — LIGHT FIXTURE TYPE
	HATCH REPRESENTS EMERGENCY FIXTURE
	2' X 4' LIGHT FIXTURE. REFERENCE LIGHT FIXTURE SCHEDULE.
	2' X 2' LIGHT FIXTURE. REFERENCE LIGHT FIXTURE SCHEDULE.
	UTILITY STRIP. REFERENCE LIGHT FIXTURE SCHEDULE.
	DOWNLIGHT. REFERENCE LIGHT FIXTURE SCHEDULE.
	SCONCE. REFERENCE LIGHT FIXTURE SCHEDULE.
	WALL WASHER. REFERENCE LIGHT FIXTURE SCHEDULE.
	PENDANT. REFERENCE LIGHT FIXTURE SCHEDULE.
	UNDER CABINET LIGHT FIXTURE. REFERENCE LIGHT FIXTURE SCHEDULE.
	WALL PACK. REFERENCE LIGHT FIXTURE SCHEDULE.
	POLE MTD. SITE LIGHT FIXTURE REFERENCE LIGHT FIXTURE SCHEDULE.
	EXIT SIGN CHEVRON
	SINGLE FACE EXIT SIGN SHADED AREA INDICATES ILLUMINATED FACE. MODEL SHALL BE DUAL-LITE #LXURWEI UNO ON PLANS.
	DOUBLE FACE EXIT SIGN SHADED AREA INDICATES ILLUMINATED FACE. MODEL SHALL BE DUAL-LITE #LXURWEI UNO ON PLANS.
	SINGLE FACE WALL MOUNTED EXIT SIGN. MODEL SHALL BE DUAL-LITE #LXURWEI UNO ON PLANS.
	DOUBLE FACE WALL MOUNTED EXIT SIGN. MODEL SHALL BE DUAL-LITE #LXURWEI UNO ON PLANS.
	EMERGENCY LIGHTING FIXTURE. MODEL SHALL BE DUAL-LITE #LZ2I UNO ON PLANS.
	EXTERIOR EMERGENCY LIGHTING FIXTURE. MODEL SHALL BE DUAL-LITE #PGN UNO ON PLANS. VERIFY FINISH.

FIRE ALARM SYMBOLS

SYMBOL	DESCRIPTION
	THIN LINE WEIGHTS REPRESENT EXISTING WORK
	BOLD LINE WEIGHTS REPRESENT NEW WORK
	DASHED LINE REPRESENTS DEMO WORK
A	FM 200 ABORT SWITCH
M	MANUAL FM 200 RELEASE PULL STATION
DH	DOOR HOLDER
FAA	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FS	FIRE ALARM SYSTEM FLOW SWITCH
TS	FIRE ALARM TAMPER SWITCH
GEN	GENERATOR REMOTE ANNUNCIATOR PANEL
H	ADA APPROVED FIRE ALARM HORN. MOUNT @ 80" AFF.
	ADA APPROVED FIRE ALARM HORN. CEILING MOUNTED.
F	ADA APPROVED AUDIO/VISUAL FIRE ALARM SIGNALING DEVICE. MOUNT @ 80" AFF.
	ADA APPROVED AUDIO/VISUAL FIRE ALARM SIGNALING DEVICE. CEILING MOUNTED.
S	ADA APPROVED STROBE ONLY FIRE ALARM DEVICE. MOUNT @ 80" AFF.
S	ADA APPROVED STROBE ONLY FIRE ALARM DEVICE. CEILING MOUNTED.
F	ADA APPROVED FIRE ALARM PULLSTATION DEVICE
	SMOKE DETECTOR
U	UNDERFLOOR SMOKE DETECTOR
D	DUCT MOUNTED SMOKE DETECTOR
	REMOTE PILOT LIGHT
	HEAT DETECTOR
U	UNDERFLOOR HEAT DETECTOR
	FLAME DETECTOR
F	FIRE ALARM SPEAKER

ABBREVIATIONS

SYMBOL	DESCRIPTION
ADA	AMERICANS WITH DISABILITIES ACT
AFF	ABOVE FINISHED FLOOR
B	EXISTING JUNCTION BOX WITH BLANK PLATE
BDD	BACKDRAFT DAMPER
BOD	BOTTOM OF DUCT
BFF	BELOW FINISHED FLOOR
BFP	BACKFLOW PREVENTER
BHP	BRAKE HORSEPOWER
C	CONDUIT
CB	CIRCUIT BREAKER
CD	CONDENSATE DRAIN
CFM	CUBIC FEET PER MINUTE
CHR	CHILLED WATER RETURN
CHS	CHILLED WATER SUPPLY
CR	CONDENSER WATER RETURN
CS	CONDENSER WATER SUPPLY
CU	COPPER
CW	DOMESTIC COLD WATER
D	EXISTING TO BE DEMOLISHED
DCO	DOUBLE CLEANOUT
E	EXISTING TO REMAIN
E/A	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EC	EMPTY CONDUIT
ESP	EXTERNAL STATIC PRESSURE
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EWT	ENTERING WATER TEMPERATURE
°F	DEGREES FAHRENHEIT
F	FIRE LINE
FCO	FLOOR CLEANOUT
FDS	FUSED DISCONNECT SWITCH
FLD	FLOOR DRAIN
FD	FIRE DAMPER
FS	FLOOR SINK
FSD	COMBINATION FIRE SMOKE DAMPER
G	GAS
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
GPM	GALLONS PER MINUTE
HG	REFRIGERANT HOT GAS
HP	HORSEPOWER
HR	HEATING HOT WATER RETURN
HS	HEATING HOT WATER SUPPLY
HW	HOT WATER SUPPLY
HWR	HOT WATER RETURN
IC	IN COUNTER
IG	ISOLATED GROUND
K/E	KITCHEN EXHAUST
KW	KILOWATT
M/A	MAKE-UP AIR
MTD	MOUNTED
N	NEW
NIC	NOT IN CONTRACT
N3R	NEMA 3R
O/A	OUTSIDE AIR
OBD	OPPOSED BLADE DAMPER
OCD	OVERFLOW CONDENSATE DRAIN
OCPD	OVERCURRENT PROTECTIVE DEVICE
OD	OVERFLOW ROOF DRAIN
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
PBD	PARALLEL BLADE DAMPER
PSI	POUNDS PER SQUARE INCH
R	EXISTING TO BE RELOCATED
R/A	RETURN AIR
RD	ROOF DRAIN
RL	REFRIGERANT LIQUID
RO	REVERSE OSMOSIS
RS	REFRIGERANT SUCTION
S	SINK
S/A	SUPPLY AIR
SAN	SANITARY SEWER
SD	STORM DRAIN
SIM	SIMILAR
SPD	SURGE PROTECTION DEVICE
TP	TRAP PRIMER
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
TW	TEMPERED WATER
U	URINAL
UF	UNDERFLOOR
UG	UNDERGROUND

ABBREVIATIONS

SYMBOL	DESCRIPTION
UNO	UNLESS NOTED OTHERWISE
USB	UNIVERSAL SERIAL BUS. PROVIDE NEMA 5-20R DUPLEX RECEPTACLE WITH (2) USB TYPE 'A' PORTS RATED FOR 5.0 AMPS. PROVIDE HUBBELL USB20A5W OR EQUAL.
USBC	UNIVERSAL SERIAL BUS. PROVIDE NEMA 5-20R DUPLEX RECEPTACLE WITH (1) USB TYPE 'A' PORT & (1) USB TYPE 'C' PORT RATED FOR 5.0 AMPS. PROVIDE HUBBELL USB20AC5W OR EQUAL.
V	VENT
VFD	VARIABLE FREQUENCY DRIVE
VIF	VERIFY IN FIELD
VTR	VENT THROUGH ROOF
W	WALL MOUNTED
WC	WATER CLOSET
WCO	WALL CLEANOUT
WP	WEATHER PROOF

ADD ALTERNATE #1
SCALE: NOT TO SCALE

mcCOY COLLABORATIVE

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TEXAS PARKS & WILDLIFE

STATE OF TEXAS — JOELA J. GARCIA — 92730 — LICENSED PROFESSIONAL ENGINEER

HUNTSVILLE STATE PARK
REPAIRS TO CCC BUILT STRUCTURES
BOATHOUSE
PROJECT NUMBER: 122865

DATE: 08-28-2020
DESIGNED BY: JG
DRAWN BY: AV
REVIEWED BY: JG
REVISED:
REVISED:
REVISED:

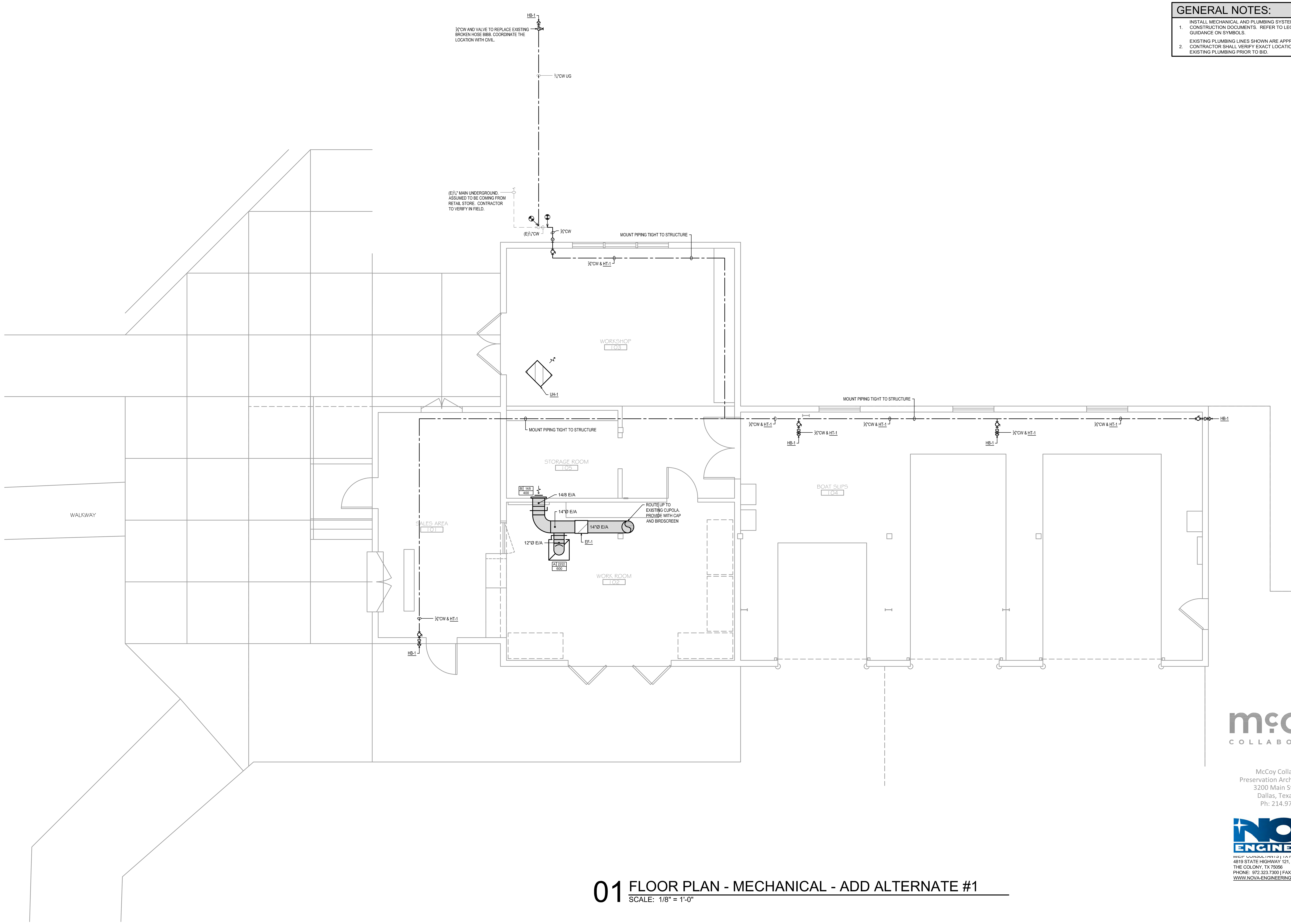
SHEET TITLE
SYMBOLS AND ABBREVIATIONS

SHEET NUMBER
ME1.0
-MEPPLANS.dwg

PATH: G:\Shared drives\Projects\17176 - Huntsville State Park - Boathouse\Drawings\Issue_working\-MEPPLANS.dwg

GENERAL NOTES:

1. INSTALL MECHANICAL AND PLUMBING SYSTEMS PER THE CONSTRUCTION DOCUMENTS. REFER TO LEGEND FOR GUIDANCE ON SYMBOLS.
2. EXISTING PLUMBING LINES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL VERIFY EXACT LOCATIONS AND SIZES OF EXISTING PLUMBING PRIOR TO BID.



01 FLOOR PLAN - MECHANICAL - ADD ALTERNATE #1

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

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100% CD DOCUMENT

HUNTSVILLE STATE PARK
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DATE: 03-05-2019
DESIGNED BY: xx
DRAWN BY: xx
REVIEWED BY: xx
REVISED:
REVISED:
REVISED:

SHEET TITLE
FLOOR PLAN - MECHANICAL

SHEET NUMBER
M2.1

-MPLANS.dwg

100% CD DOCUMENT

AIR DEVICE SCHEDULE - ADD ALTERNATE #1

MARK	DUTY	TYPE	FACE SIZE	NECK SIZE	CFM	MAX. T.P. (" W.G)	MAX. N.C.	MFG.	MODEL NO.	REMARKS
A	RETURN/EXH	CEILING	24"X24"	22"X22"	AS NOTED	0.15	25	TITUS	50F - 1"	1,2
B	RETURN/EXH	CEILING	PER NECK	AS NOTED	AS NOTED	0.15	25	TITUS	350FS	1,2

1. AIR DEVICE SHALL BE FURNISHED WHITE UNLESS SPECIFIED OTHERWISE BY THE ARCHITECT.
2. AIR DEVICE SHALL HAVE FRAMES AND BORDERS SUITABLE FOR THE CONSTRUCTION IN WHICH THEY WILL BE INSTALLED.

VENT FAN SCHEDULE - ADD ALTERNATE #1

MARK	DRIVE	CFM	E.S.P. (" WC)	FAN RPM	ELECTRICAL			MANUFACTURER	MODEL NO.	REMARKS
					WATT	BHP	VOLTS			
EF-1	DIRECT	1000	0.50	1,130	---	0.2	120/1 Ø	GREENHECK	CSP-A1750	1,2,3

1. PROVIDE FACTORY FURNISHED GRAVITY BACKDRAFT DAMPER.
2. SPEED CONTROLLER.
3. CONTROL SHALL BE INTERLOCKED WITH SWITCH ON WALL.

PLUMBING FIXTURE SCHEDULE - ADD ALTERNATE #1

FIXTURE	SPECIFICATION	CW	HW	SAN/GW	VENT
HB-1	WATTS DRAINAGE HY-420 NON-FREEZE KEY OPERATED WALL HYDRANT WITH CHROME PLATED FACE, INTEGRAL VACUUM BREAKER, ¾" HOSE CONNECTION, ¾" FEMALE X 1" MALE PIPE CONNECTION, ALL BRONZE HEAD, SEAT CASTING AND INTERNAL WORKING PARTS, BRONZE WALL CASING, AND LOOSE KEY. COMPLIES WITH ASSE 1019-2004, UPC/IAMPO LISTED. MAX. OPERATING PRESSURE 125 PSI.	¾"	–	–	–

ALL FIXTURES REQUIRING 'P' TRAPS, TUBING WASTE TO WALL, AND TAILPIECES SHALL BE 17 GAUGE CHROME PLATED, MCGUIRE OR EQUAL. MOUNTING TO COMPLY WITH ADA & TAS. LOCATE FLUSH VALVE ON WIDE SIDE OF STALL.

NOTE: ABOVE SIZES ARE MINIMUM UNLESS OTHERWISE NOTED ON DWG.

GENERAL NOTES:
1. PITCH ALL DRAINAGE PIPING AT ¼" FOOT MINIMUM UNLESS OTHERWISE NOTED.
2. ALL UNDERGROUND DRAINAGE PIPING SHALL BE MINIMUM OF 2" IN SIZE & ¼" PER FT. SLOPE.
3. PROVIDE TRAP PRIMER UNITS FOR ALL FLOOR DRAINS WITHOUT INDIRECT WASTE PIPING.

UNIT HEATER SCHEDULE - ADD ALTERNATE #1

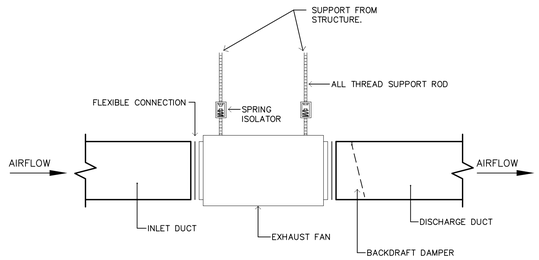
MARK	SERVES	KW	VOLTS/PHASE	MANUFACTURER	MODEL NO.	REMARKS
UH-1	---	5	240/1ø	QMARK	MUH	1,2,3

1. WITH 2 STAGE HEAT CONTROL.
2. INTEGRAL THERMOSTAT.
3. CEILING MOUNTED MOUNTING BRACKET KIT.

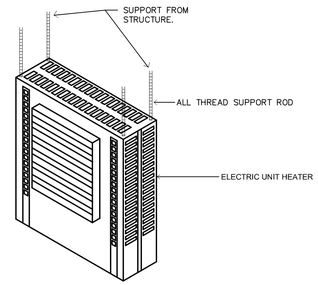
HEAT TRACE SCHEDULE - ADD ALTERNATE #1

MARK	SERVES	W/FT	DISTANCE (FT)	VOLTS/ PHASE	MANUFACTURER	REMARKS
HT-1	HOT WATER	5	100	120/1Ø	DELTA-THERM	1

1. VERIFY EXACT LENGTH OF PIPE PRIOR TO ORDERING AND INSTALLING NEW HEAT TRACE.



02 EXHAUST FAN DETAIL - ADD ALTERNATE #1
SCALE: NOT TO SCALE



01 UNIT HEATER DETAIL - ADD ALTERNATE #1
SCALE: NOT TO SCALE

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REVISED:

SHEET TITLE
SCHEDULES AND DETAILS - MECHANICAL

SHEET NUMBER
M5.1
-MPLANS.dwg

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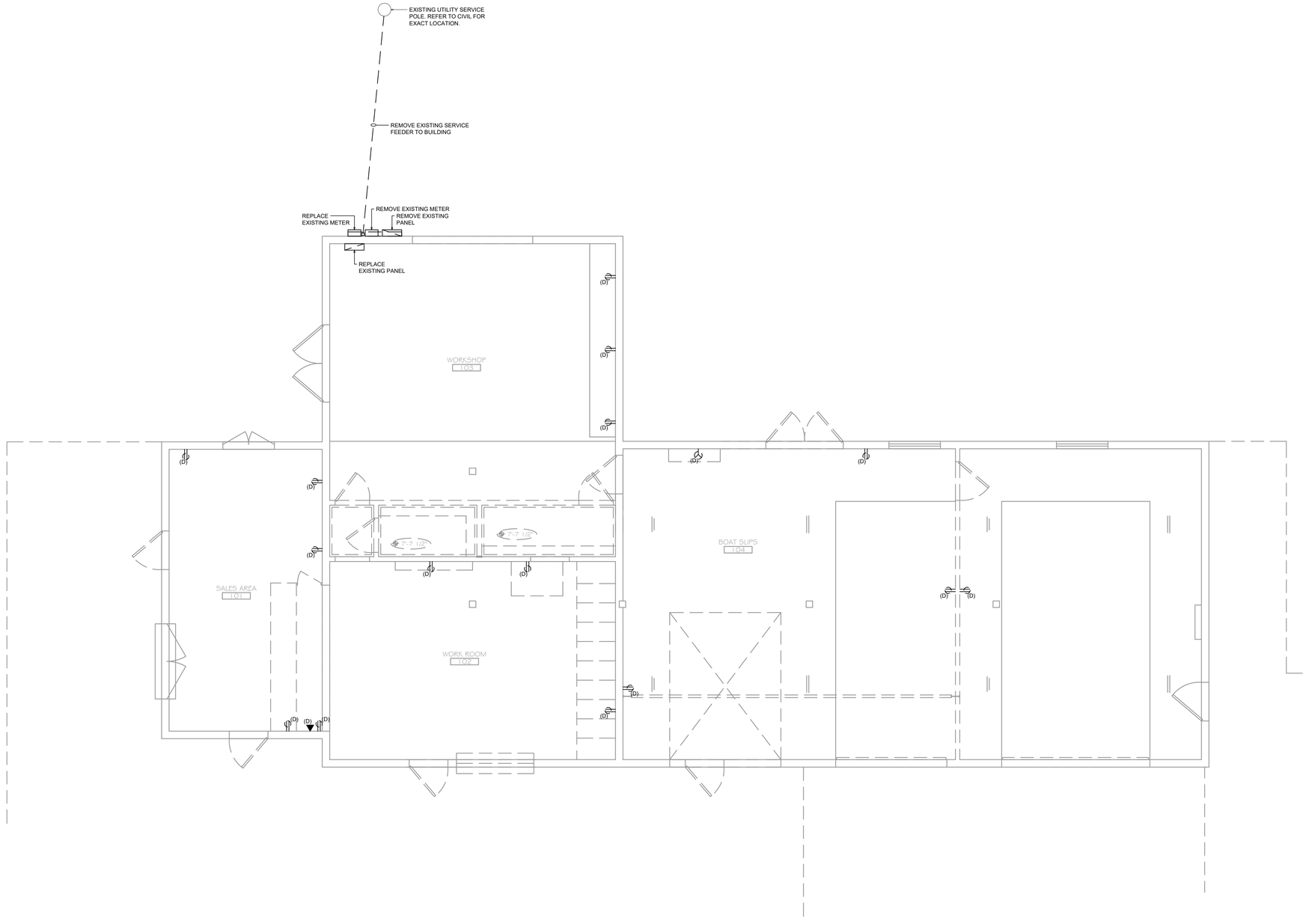

DEMOLITION NOTES:

1. REMOVE RECEPTACLES, SWITCHES, LIGHTS, JUNCTION BOXES, AND DISCONNECTS CONTAINED WITHIN OR MOUNTED TO WALLS OR CEILINGS BEING DEMOLISHED.
2. REMOVE ASSOCIATED ELECTRICAL DEVICES FROM MECHANICAL AND/OR PLUMBING SYSTEMS WHICH ARE BEING DEMOLISHED.
3. REMOVE CONDUIT AND WIRE ASSOCIATED WITH THE DEMOLITION OF ELECTRICAL DEVICES AND LIGHTING BACK TO PANEL.

01 DEMOLITION FLOOR PLAN - ELECTRICAL - ADD ALTERNATE #1
SCALE: 1/4" = 1'-0"

TEXAS PARKS & WILDLIFE

STATE OF TEXAS
JOELA GARCIA
92730
LICENSED PROFESSIONAL ENGINEER

HUNTSVILLE STATE PARK
REPAIRS TO CCC BUILT STRUCTURES
BOATHOUSE
PROJECT NUMBER: 122865

DATE: 08-28-2020
DESIGNED BY: JG
DRAWN BY: AV
REVIEWED BY: JG
REVISED:
REVISED:
REVISED:

SHEET TITLE
DEMOLITION FLOOR PLAN - ELECTRICAL

SHEET NUMBER
ED2.1
-EPLANS.dwg

McCOY COLLABORATIVE

NOVA ENGINEERING
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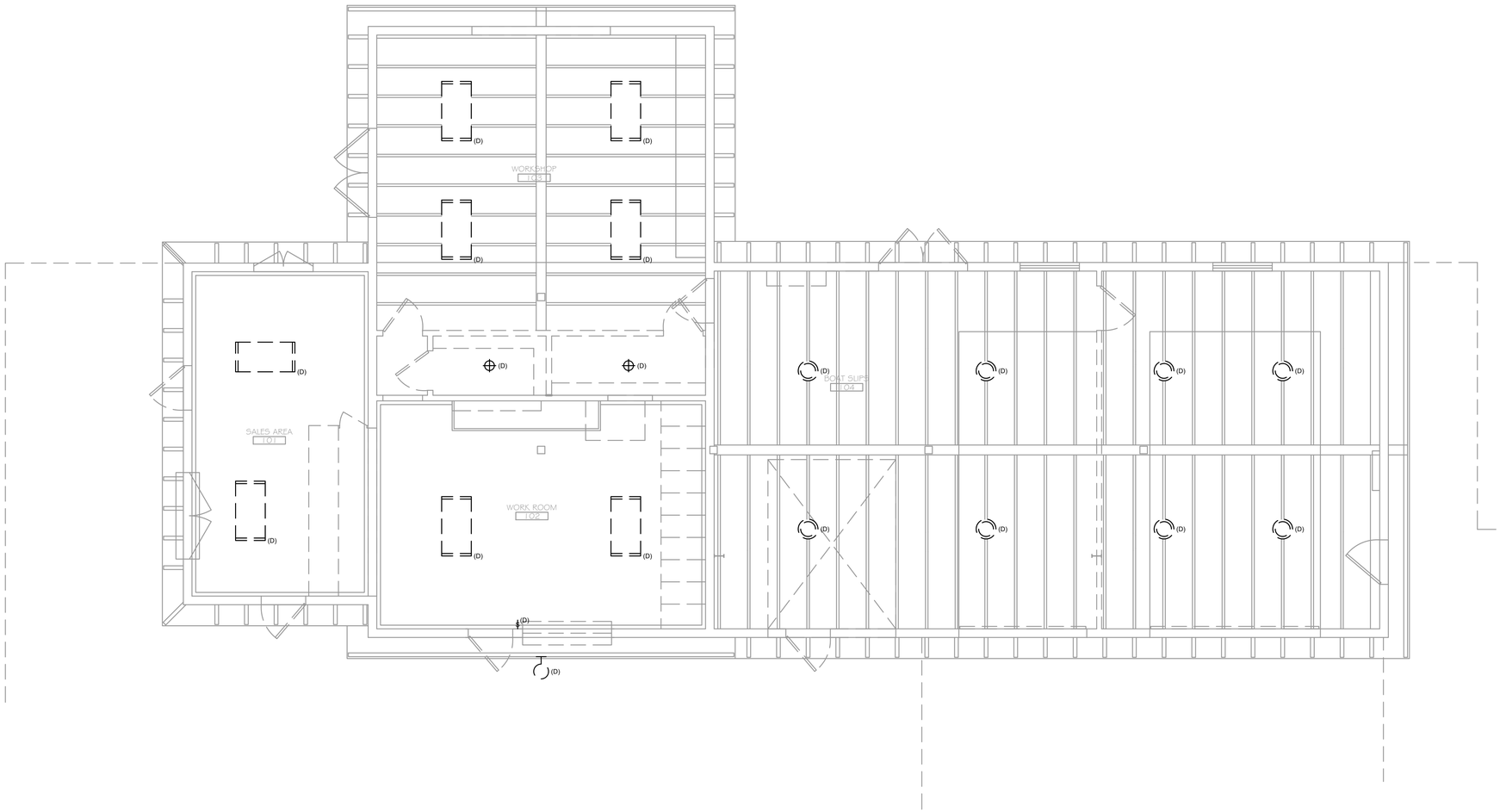

01 DEMOLITION FLOOR PLAN - LIGHTING - ADD ALTERNATE #1
SCALE: 1/4" = 1'-0"

TEXAS PARKS & WILDLIFE

STATE OF TEXAS
JOELA GARCIA
92730
LICENSED PROFESSIONAL ENGINEER
07-28-20

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REVISED:
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SHEET TITLE
DEMOLITION FLOOR PLAN - LIGHTING

SHEET NUMBER
ED2.2
-EPLANS.dwg

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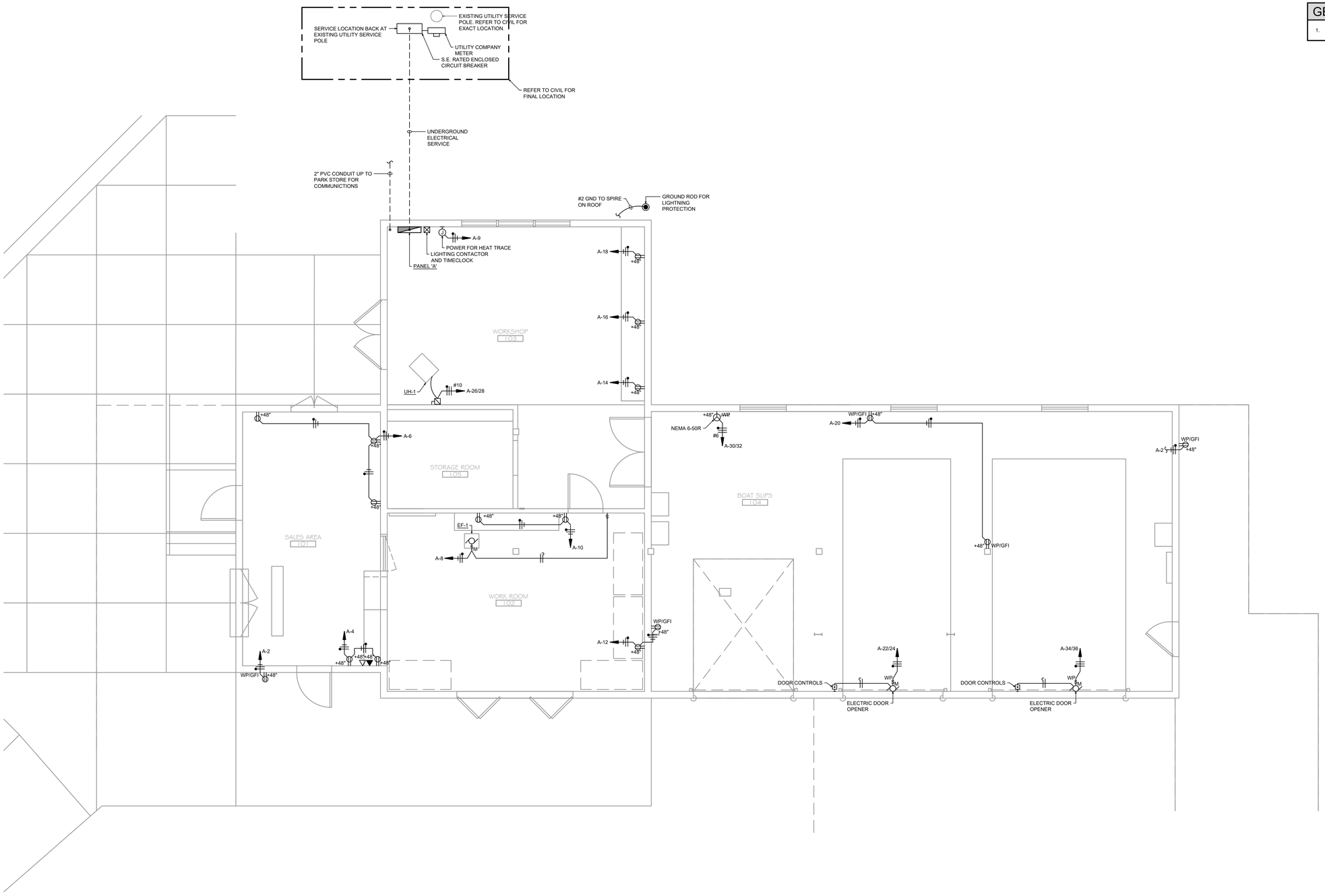
GENERAL NOTES:

1. CONDUIT SHALL BE ROUTED IN WALLS AND ABOVE CEILINGS. WHERE CONDUITS ARE EXPOSED, ROUT CONDUIT ABOVE EXPOSED STRUCTURE.



01 FLOOR PLAN - ELECTRICAL - ADD ALTERNATE #1
SCALE: 1/4" = 1'-0"

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LIGHTING FIXTURE SCHEDULE - ADD ALTERNATE #1

TYPE	DESCRIPTION	MANUFACTURER	MODEL NO.	LAMPS				VOLTAGE
				QTY	TYPE	LUMENS	WATTS	
A	SEALED AND GASKETED 7" LED DOWNLIGHT.	KIRLIN LIGHTING	LRR-07462-1500L-120-30K-SPT-WA	1	LED	1514	20	120V
AE	SAME AS TYPE 'A' EXCEPT WITH EMERGENCY BATTERY PACK.	KIRLIN LIGHTING	LRR-07462-1500L-120-EM-30K-SPT-WA	1	LED	1514	20	120V
B	LED PENDANT.	HI-LITE MGG CO., INC.	H-94716-96/FSMC-96/WGU-96-RIB/12W/LED3/30/BCM-M	1	LED	1400	12	120V
C	LED VAPOR JAR SCONCE.	HI-LITE MGG CO., INC.	H-CGU-1HB-96-RIB/12W/LED3/30/BCM-M	1	LED	1400	12	120V
D	EXTERIOR SINGLE HEAD LED FLOOD LIGHT.	ECOSENSE	F080-2H-HO-35-8-90-Z-H-A/RISE-CANOPY-04-Z	1	LED	744	11.5	120V
E	LED POLE TOP VAPOR JAR. WITH MATCHING 8'-0" POLE.	HI-LITE MGG CO., INC.	H-LCGU-14-PM-96-RIB/12W/LED3/30/PLB-M/3"/SM/BDB/8'6"/96/PGRG	1	LED	1400	12	120V
X	LED EXIT SIGN.	LITHONIA LIGHTING	WLTE-W-1-R-EL	1	LED	-	5	120V

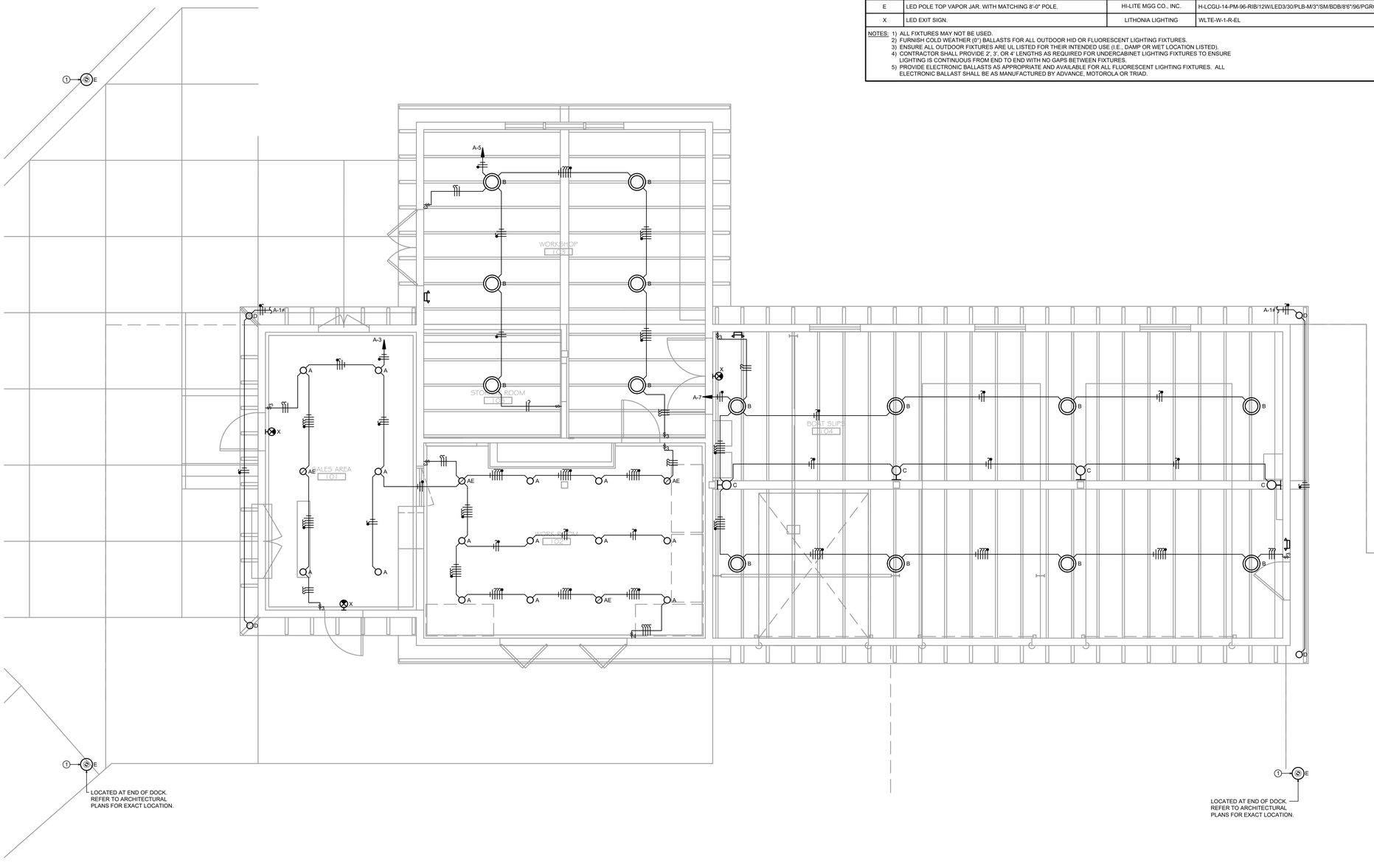
NOTES:
1) ALL FIXTURES MAY NOT BE USED.
2) FURNISH COLD WEATHER (0°) BALLASTS FOR ALL OUTDOOR HID OR FLUORESCENT LIGHTING FIXTURES.
3) ENSURE ALL OUTDOOR FIXTURES ARE UL LISTED FOR THEIR INTENDED USE (I.E., DAMP OR WET LOCATION LISTED).
4) CONTRACTOR SHALL PROVIDE 2', 3', OR 4' LENGTHS AS REQUIRED FOR UNDERCABINET LIGHTING FIXTURES TO ENSURE LIGHTING IS CONTINUOUS FROM END TO END WITH NO GAPS BETWEEN FIXTURES.
5) PROVIDE ELECTRONIC BALLASTS AS APPROPRIATE AND AVAILABLE FOR ALL FLUORESCENT LIGHTING FIXTURES. ALL ELECTRONIC BALLAST SHALL BE AS MANUFACTURED BY ADVANCE, MOTOROLA OR TRIAD.

GENERAL NOTES:

1. CIRCUIT EXIT SIGNS AND EMERGENCY EGRESS FIXTURES TO NEAREST NORMAL LIGHTING CIRCUIT SERVING THIS AREA ON A NON-SWITCHED HOT LEG.
2. HATCHED LIGHT FIXTURES INDICATE EMERGENCY CIRCUIT OR BATTERY BACK-UP. EMERGENCY LIGHT FIXTURES SHALL BE WIRED TO REMAIN ON AT ALL TIMES AND SERVE AS NIGHT LIGHTS WHEN SURROUNDING FIXTURES ARE SWITCHED OFF UNLESS NOTED OTHERWISE ON PLANS.

KEYED NOTES BY SYMBOL:

(1) ALTERNATE NO. 1.
PROVIDE POWER TO LED POLE LIGHTS ON SITE. REFERENCE ARCHITECTURAL PLANS FOR EXACT LOCATION. CIRCUIT TO A-1 THRU LIGHTING CONTACTOR.



01 FLOOR PLAN - LIGHTING - ADD ALTERNATE #1
SCALE: 1/4" = 1'-0"

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PANEL [A] SCHEDULE - ADD ALTERNATE #1

DESCRIPTION	P	AMP	LIGHT	RECEP	MOTOR	HEAT	KITCH	COMP	OTHER	PHASE	OTHER	COMP	KITCH	HEAT	MOTOR	RECEP	LIGHT	P	AMP	DESCRIPTION
SITE LIGHTING	1	20	140	0	0	0	0	0	0	1 A 2	0	0	0	0	0	400	0	1	20	(2) WP/GFI RECEPTACLES
LIGHTING	1	20	378	0	0	0	0	0	0	3 B 4	0	0	0	0	0	400	0	1	20	(2) RECEPTACLES
LIGHTING	1	20	126	0	0	0	0	0	0	5 A 6	0	0	0	0	0	600	0	1	20	(3) RECEPTACLES
LIGHTING	1	20	252	0	0	0	0	0	0	7 B 8	0	0	0	0	696	0	0	1	20	EF-1
HEAT TRACE	1	20	0	0	0	500	0	0	0	9 A 10	0	0	0	0	0	400	0	1	20	(2) RECEPTACLES
SPARE	1	20	0	0	0	0	0	0	0	11 B 12	0	0	0	0	0	400	0	1	20	(2) RECEPTACLES
SPARE	1	20	0	0	0	0	0	0	0	13 A 14	1920	0	0	0	0	0	0	1	20	WORKSHOP RECEPTACLE
SPARE	1	20	0	0	0	0	0	0	0	15 B 16	1920	0	0	0	0	0	0	1	20	WORKSHOP RECEPTACLE
SPARE	1	20	0	0	0	0	0	0	0	17 A 18	1920	0	0	0	0	0	0	1	20	WORKSHOP RECEPTACLE
SPARE	1	20	0	0	0	0	0	0	0	19 B 20	0	0	0	0	0	400	0	1	20	(2) RECEPTACLES
SPARE	1	20	0	0	0	0	0	0	0	21 A 22	0	0	0	0	1920	0	0	2	20	(ELECTRIC DOOR
SPARE	1	20	0	0	0	0	0	0	0	23 B 24	0	0	0	0	1920	0	0			(
SPARE	1	20	0	0	0	0	0	0	0	25 A 26	0	0	0	2500	0	0	0	2	30	(UH-1
SPARE	1	20	0	0	0	0	0	0	0	27 B 28	0	0	0	2500	0	0	0			(
SPARE	1	20	0	0	0	0	0	0	0	29 A 30	4800	0	0	0	0	0	0	2	50	(NEMA RECEPTACLE
			0	0	0	0	0	0	0	31 B 32	4800	0	0	0	0	0	0			(
			0	0	0	0	0	0	0	33 A 34	0	0	0	0	1920	0	0	2	20	(ELECTRIC DOOR
			0	0	0	0	0	0	0	35 B 36	0	0	0	0	1920	0	0			(
			0	0	0	0	0	0	0	37 A 38	0	0	0	0	0	0	0	1	20	SPARE
			0	0	0	0	0	0	0	39 B 40	0	0	0	0	0	0	0	1	20	SPARE
			0	0	0	0	0	0	0	41 A 42	0	0	0	0	0	0	0	1	20	SPARE
TOTALS			896	0	0	500	0	0	0		15360	0	0	5000	8376	2600	0			TOTALS

LOAD SUMMARY	CON KVA	CON AMP	C W/SF	DIV. FAC	DES KVA	DES AMP	D W/SF
1. LIGHTING	0.9	3.7	0.9	1.25	1.1	4.7	1.1
2. RECEPTACLES	2.6	10.8	2.6	1.00	2.6	10.8	2.6
3. MOTORS	8.4	34.9	8.4	1.00	8.4	34.9	8.4
4. ELECTRIC HEAT	5.5	22.9	5.5	1.00	5.5	22.9	5.5
5. KITCHEN EQUIPMENT	0.0	0.0	0.0	1.00	0.0	0.0	0.0
6. COMPUTER EQUIPMENT	0.0	0.0	0.0	1.00	0.0	0.0	0.0
7. OTHER	15.4	64.0	15.4	1.00	15.4	64.0	15.4
8. SPARE CAPACITY	0.0			1.00	0.0	0.0	0.0
TOTAL:	33	136	33		33	137	33

NOTES:
1. MINIMUM INTEGRATED EQUIPMENT RATING 22KAIC (240V).
2. PROVIDE FULL SIZE NEUTRAL AND GROUND BUS.

JOB NM: HUNTSVILLE STATE PARK - BOATHOUSE

UPSTREAM O.C.P.D.

NOTE: CONTRACTOR TO BALANCE PHASES WITHIN +/- 10%

JOB #: 17176.00

SUMMARY	
1φ VOLTAGE:	240
MCB/MLO:	MLO
AMPS:	400
# OF POLES:	42
MOUNT:	SURFACE
BY:	---
TIME:	2:19:55 PM
DATE:	8/26/2020
AREA (SF):	1000

FEEDER SCHEDULE - ADD ALTERNATE #1

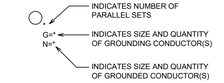
3 CONDUCTOR			COPPER CONDUCTORS WITH GROUND WIRE				4 CONDUCTOR		
CODE	WIRES	CONDUIT	SIZE	AMP	DEG.	LUGS	CODE	WIRES	CONDUIT
(45)	(3) #12 & (1) #12 G.	¾"	#12	20	60°	MECH.	(67)	(4) #12 & (1) #12 G.	¾"
(46)	(3) #10 & (1) #10 G.	¾"	#10	30	60°	MECH.	(68)	(4) #10 & (1) #10 G.	1"
(47)	(3) #8 & (1) #10 G.	¾"	#8	40	60°	MECH.	(69)	(4) #8 & (1) #10 G.	1"
(48)	(3) #6 & (1) #10 G.	1"	#6	55	60°	MECH.	(70)	(4) #6 & (1) #10 G.	1"
(49)	(3) #4 & (1) #8 G.	1¼"	#4	70	60°	MECH.	(71)	(4) #4 & (1) #8 G.	1¼"
(50)	(3) #3 & (1) #8 G.	1¼"	#3	85	60°	MECH.	(72)	(4) #3 & (1) #8 G.	1¼"
(51)	(3) #2 & (1) #8 G.	1¼"	#2	95	60°	MECH.	(73)	(4) #2 & (1) #8 G.	1½"
(52)	(3) #1 & (1) #6 G.	1½"	#1	110	60°	COMP.	(74)	(4) #1 & (1) #6 G.	2"
(53)	(3) #2 & (1) #6 G.	1½"	#2	115	75°	COMP.	(75)	(4) #2 & (1) #6 G.	1½"
(54)	(3) #1 & (1) #6 G.	1½"	#1	130	75°	COMP.	(76)	(4) #1 & (1) #6 G.	2"
(55)	(3) #1/0 & (1) #6 G.	1½"	#1/0	150	75°	COMP.	(77)	(4) #1/0 & (1) #6 G.	2"
(56)	(3) #2/0 & (1) #6 G.	2"	#2/0	175	75°	COMP.	(78)	(4) #2/0 & (1) #6 G.	2"
(57)	(3) #3/0 & (1) #6 G.	2"	#3/0	200	75°	COMP.	(79)	(4) #3/0 & (1) #6 G.	2½"
(58)	(3) #4/0 & (1) #4 G.	2"	#4/0	230	75°	COMP.	(80)	(4) #4/0 & (1) #4 G.	2½"
(59)	(3) #250MCM & (1) #4 G.	2½"	#250MCM	255	75°	COMP.	(81)	(4) #250MCM & (1) #4 G.	3"
(60)	(3) #300MCM & (1) #4 G.	2½"	#300MCM	285	75°	COMP.	(82)	(4) #300MCM & (1) #4 G.	3"
(61)	(3) #350MCM & (1) #3 G.	3"	#350MCM	310	75°	COMP.	(83)	(4) #350MCM & (1) #3 G.	3"
(62)	(3) #400MCM & (1) #3 G.	3"	#400MCM	335	75°	COMP.	(84)	(4) #400MCM & (1) #3 G.	3"
(63)	(3) #500MCM & (1) #3 G.	3"	#500MCM	380	75°	COMP.	(85)	(4) #500MCM & (1) #3 G.	4"
(64)	(3) #600MCM & (1) #2 G.	4"	#600MCM	420	75°	COMP.	(86)	(4) #600MCM & (1) #2 G.	4"
(65)	(3) #700MCM & (1) #2 G.	4"	#700MCM	460	75°	COMP.	(87)	(4) #700MCM & (1) #2 G.	4"
(66)	(3) #750MCM & (1) #2 G.	4"	#750MCM	475	75°	COMP.	(88)	(4) #750MCM & (1) #2 G.	4"
EF	EXISTING FEEDER. WIRE AND CONDUIT TO REMAIN.								

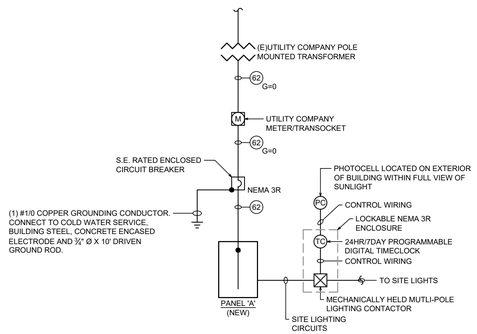
FEEDER SCHEDULE NOTES:

1. WHERE PARALLEL FEEDERS ARE USED, RESIZE GROUND WIRE PER NEC TABLE 250.122.

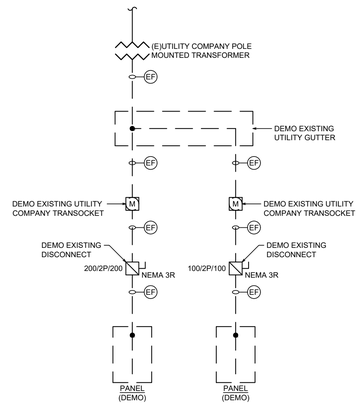
2. RESIZE MOTOR CIRCUIT GROUND WIRES PER OVERCURRENT DEVICE AS SCHEDULED IN NEC TABLE 250.122.

3. PROVIDE COMPRESSION LUGS ON LOADS ABOVE 100 AMPS.





02 SINGLE LINE DIAGRAM - ELECTRICAL - ADD ALTERNATE #1
SCALE: NONE



01 DEMO SINGLE LINE DIAGRAM - ELECTRICAL - ADD ALTERNATE #1
SCALE: NONE

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