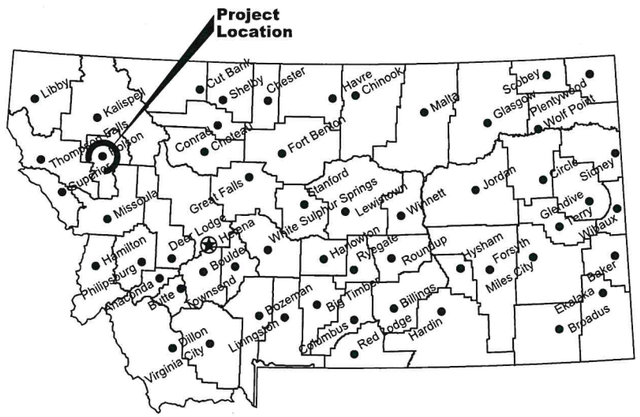
Montana Fish, Wildlife & Parks

Finley Point State Park
Diversified Lodging Project

Polson, Montana

FWP Project No. - FP 7216609



Location Map

No Scale

Vicinity Map

No Scale

N

MONTANA FISH, WILDLIFE AND PARKS
DESIGN AND CONSTRUCTION

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PHYSICAL ADDRESS:
1522 9th AVENUE
HELENA, MT 59601

PROJECT LOCATION:
31453 S. FINLEY POINT RD.
POLSON, MT 59860
47.75536/-114.08237

DRAWING INDEX

MONTANA
PHILLIP N. JAGODA
No. 49280PE
LICENSED PROFESSIONAL ENGINEER
2/18/22

Kristen Gill Feb. 17, 2022 DRAWN BY: DATE: CHECKED BY: DATE:	APPROVED BY: DATE: APPROVED BY: DATE:	APPROVED BY: DATE: APPROVED BY: DATE:	MONTANA FISH, WILDLIFE & PARKS 125

Finley Point State Park Diversified Lodging Project
Cover Sheet

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PROJECT SITE

ACCESS ROUTE

STAGING AND MATERIAL STORAGE

SOUTH FINLEY POINT ROAD

TRACT A COS 4405

TRACT A COS 4098

PORTION OF AMENDED TRACT A-1 AMENDED TRACT A-1 34SA

TRACT B COS 4405

NOTES:
1. CONTRACTOR TO COORDINATE ACCESS ROUTE AND STAGING AREA WITH OWNER
2. CABINS NOT TO BE STORED ON PROJECT SITE
3. CONTRACTOR TO STAKE PADS AND CABIN CORNERS TO BE APPROVED BY OWNER PRIOR TO CONSTRUCTION

Scale: 1" = 80'

0' 80' 160'

N

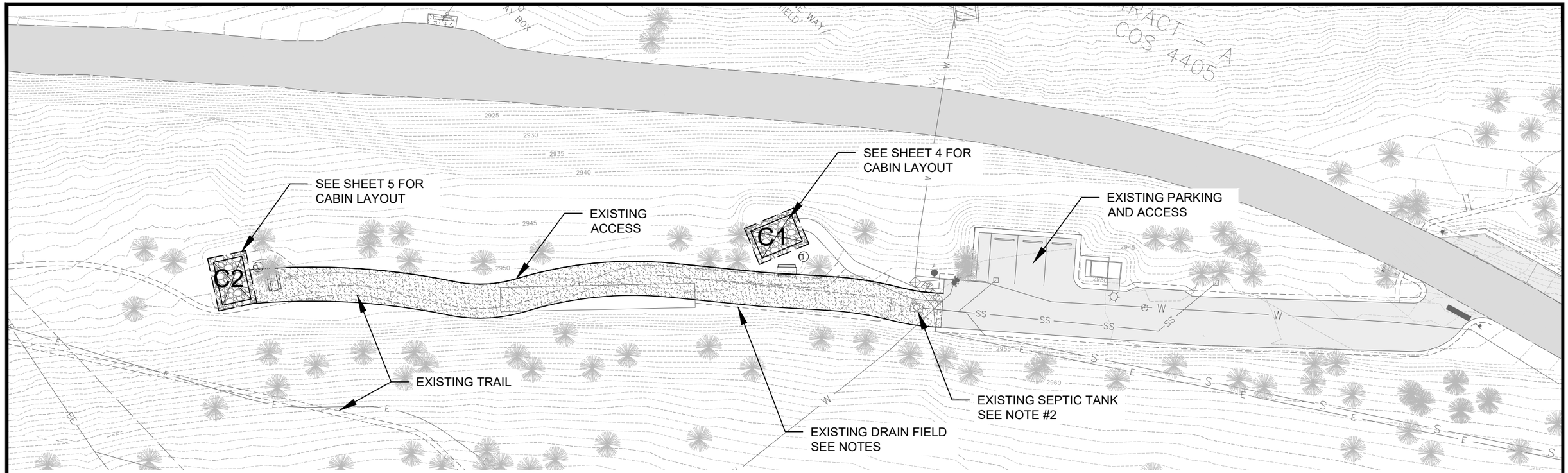
1/2 STAGING PLAN

SCALE: 1"=80'

K. Gill Feb. 17, 2022 DRAWN BY: DATE: CHECKED BY: DATE:	APPROVED BY: DATE: APPROVED BY: DATE:	APPROVED BY: DATE: APPROVED BY: DATE:	MONTANA FISH, WILDLIFE & PARKS 126

Finley Point State Park Diversified Lodging Project
Staging Plan

SHEET: 2 of 8



NOTES:

1. CONTRACTOR TO VERIFY TREE LOCATIONS AND CANOPY. VERIFY HORIZONTAL AND VERTICAL SPACE NEEDED FOR CLEARANCE.
2. CONTRACTOR TO VERIFY LOCATION OF SEPTIC TANK AND PROVIDE SUFFICIENT CUSHION LAYER FOR PROTECTION OF TANK AND LID. REPAIRS TO THE TANK WILL BE AT THE CONTRACTOR'S EXPENSE.
3. IT IS ACKNOWLEDGED THAT THE SEPTIC DRAINFIELD SERVING THE CAMPGROUND HOSTS COULD BE DAMAGED IN THE CONSTRUCTION PROCESS. CONTRACTOR TO POTHOLE THREE LOCATIONS ON EACH LATERAL TO DETERMINE EXTENT OF DAMAGE, IF ANY, AFTER CONSTRUCTION IS COMPLETED. CONTRACTOR TO REPAIR ANY DAMAGED OR BROKEN SECTIONS OF SEPTIC DRAINFIELD LATERALS, WITH LIKE MATERIAL AND CONSTRUCTION. CONTRACTOR TO OBTAIN COUNTY SEPTIC PERMIT IF NEEDED, DEPENDENT ON DEGREE OF REPAIR NEEDED.
4. CONTRACTOR TO SUBMIT CABIN DELIVERY AND INSTALLATION PLAN OF CABINS FOR APPROVAL. SEE SPECIFICATIONS FOR REQUIREMENTS.
5. CABIN DELIVERY MAY ONLY OCCUR ON TUESDAYS, WEDNESDAYS OR THURSDAYS, TO AVOID CONFLICT WITH CAMPERS. EXACT DATES TO BE SUBMITTED AND APPROVED BY OWNER THREE WEEKS PRIOR TO INSTALLATION.
6. EXISTING PEDESTRIAN TRAILS TO BE RECLAIMED TO ORIGINAL CONDITION AT COMPLETION OF CABIN INSTALLATION.
7. DISTURBED AREAS TO BE RECLAIMED AND RE-SEEDED WITH GRASS MIX APPROVED BY OWNER.
8. PICNIC TABLE AND FIRE RING TO BE PROVIDED AND INSTALLED BY OWNER.
9. CABINS TO BE SINGLE ROOM, GABLE ROOF STYLE STRUCTURES AS SOLD BY PRAIRIE KRAFT SPECIALTIES, GREAT FALLS, MT, OR EQUAL. SEE PROJECT SPECIFICATIONS FOR FURTHER REQUIREMENTS. CABINS TO BE DELIVERED FULLY ASSEMBLED.

Scale: 1" = 40'

0' 40' 80'

N

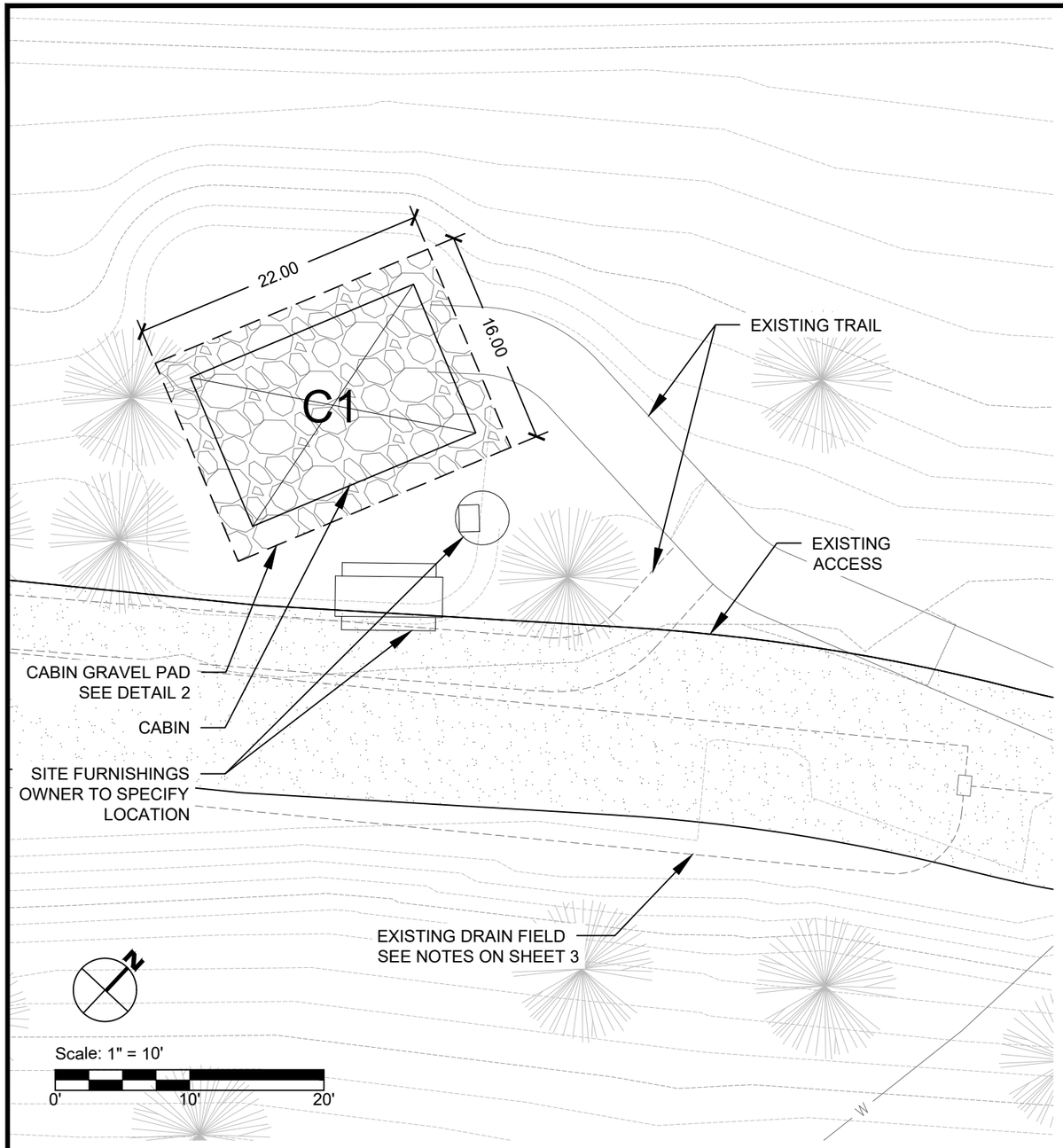
1/3 OVERALL SITE PLAN

SCALE: 1"=40'

K. Gill Feb. 17, 2022 DRAWN BY: DATE: CHECKED BY: DATE:	APPROVED BY: DATE: APPROVED BY: DATE:	APPROVED BY: DATE: APPROVED BY: DATE:	MONTANA FISH, WILDLIFE & PARKS 127

Finley Point State Park Diversified Lodging Project
Overall Site Plan

SHEET: 3 of 8

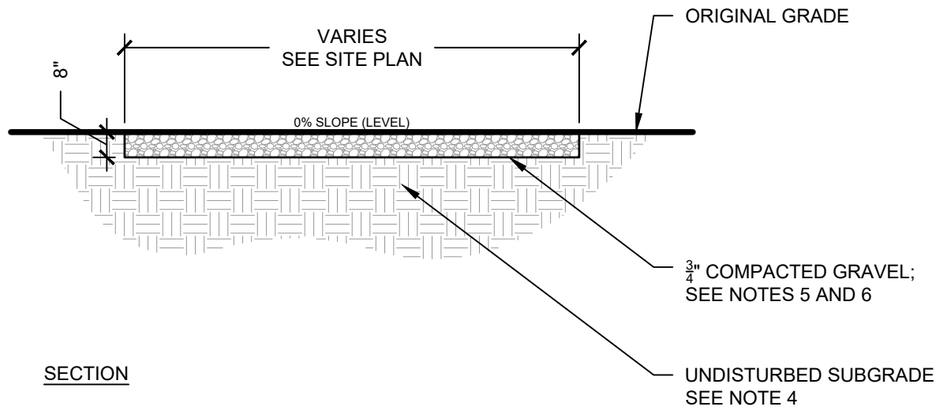


1/4 CABIN C1 SITE PLAN

SCALE: 1"=10'

NOTES:

1. C1 = CAMPSITE T8
2. CONTRACTOR TO REMOVE EXISTING WOOD FRAME AROUND TENT PAD
3. NEW PAD SHALL BE CONSTRUCTED IN ACCORDANCE WITH CABIN MANUFACTURER'S REQUIREMENTS
4. CABIN GRAVEL PADS MUST BE PLACED ON SMOOTH, UNDISTURBED SUBGRADE OR BASEMENT SOIL. BLADE SUBGRADE 2% TO DRAIN TO THE WEST (FRONT OF CABIN).
5. CABIN GRAVEL PADS MUST BE CONSTRUCTED TO MINIMUM DIMENSIONS SHOWN AND TO A DEPTH OF 8". USE 3/4" MINUS CRUSHED, WASHED GRAVEL AS DESCRIBED IN PROJECT SPECIFICATIONS.
6. CABIN GRAVEL PAD TO BE COMPACTED WITH PLATE COMPACTOR AND FINISHED LEVEL WITH NO SLOPE.
7. CABIN C1 TO BE EQUIPPED WITH ADA HANDICAP RAMP TO PORCH

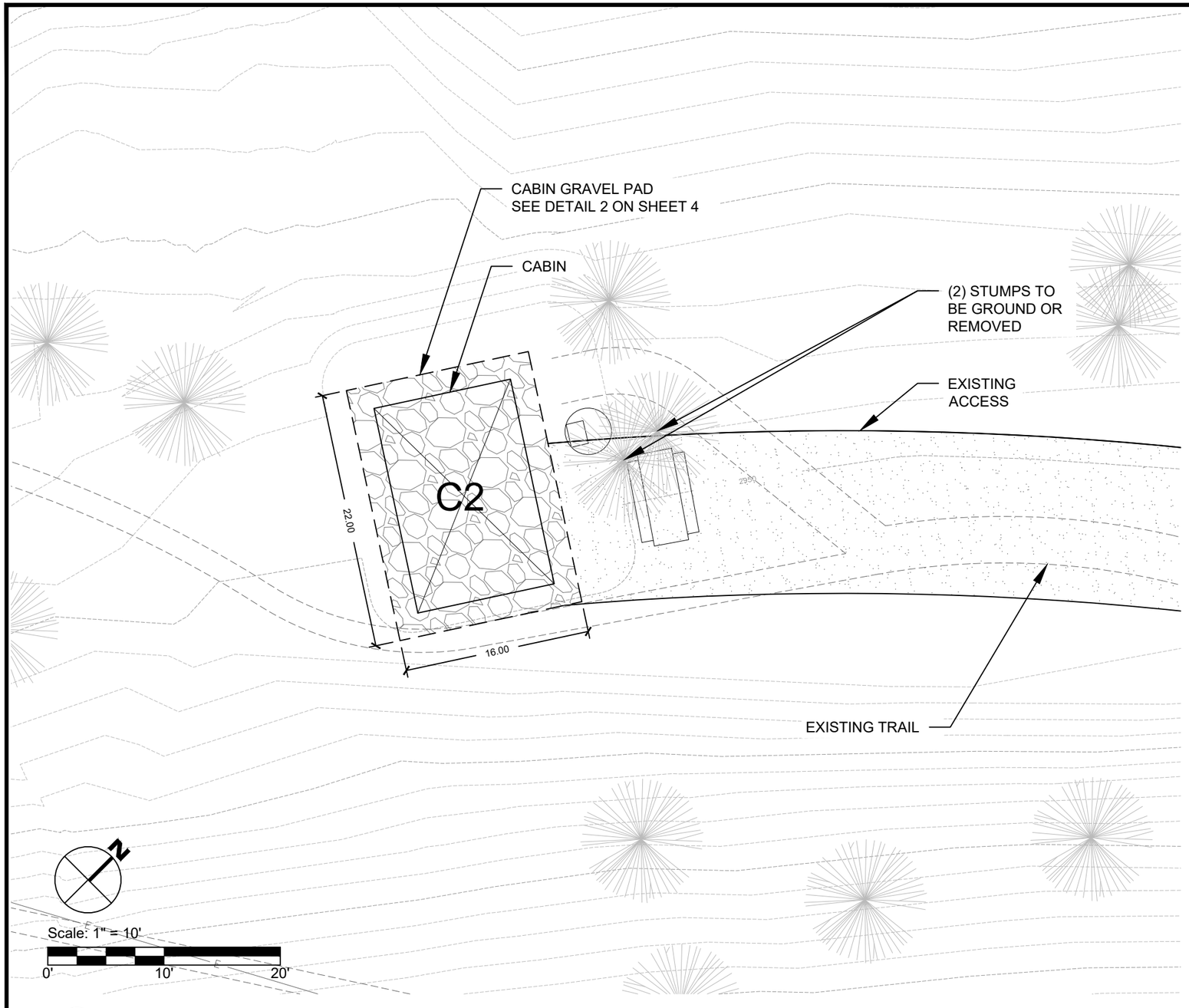


SECTION

2/4 CABIN GRAVEL PAD

SCALE: 1/4"=1'

K. Gill DRAWN BY: Feb. 17, 2022 DATE:	APPROVED BY: DATE:	APPROVED BY: DATE:	MONTANA FISH, WILDLIFE & PARKS	Finley Point State Park Diversified Lodging Project Cabin C1 Enlargement	SHEET: 4 of 8
CHECKED BY: DATE:	APPROVED BY: DATE:	APPROVED BY: DATE:			



1/5 CABIN C2 SITE PLAN

SCALE: 1"=10'

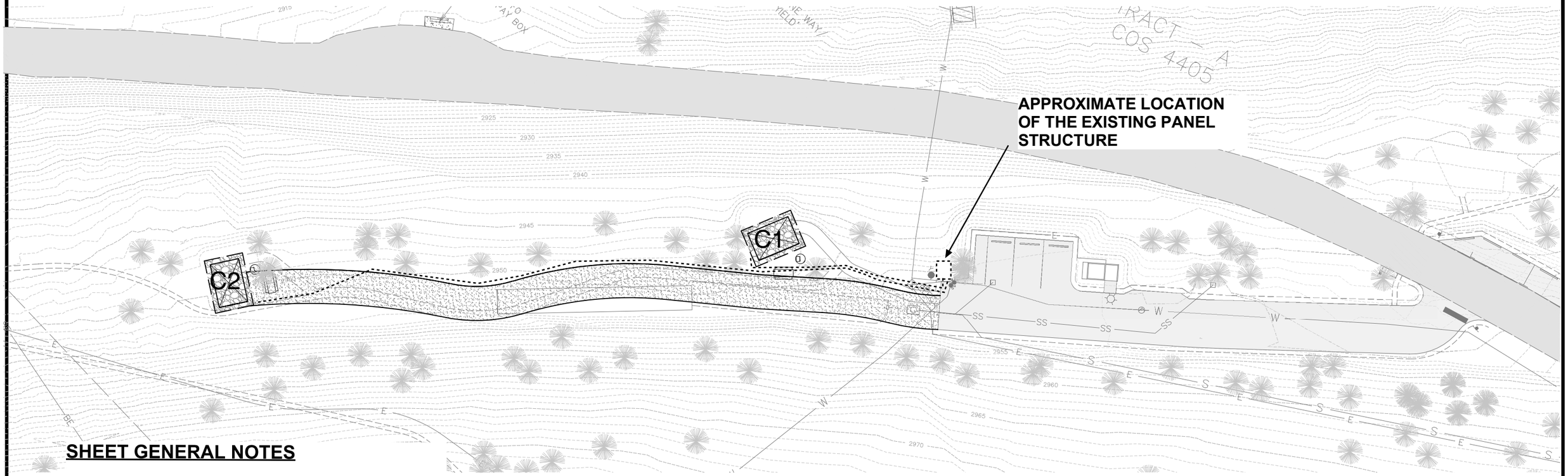
NOTES:

1. C2 = CAMPSITE T9
2. CONTRACTOR TO REMOVE EXISTING WOOD FRAME AROUND TENT PAD
3. NEW PAD SHALL BE CONSTRUCTED IN ACCORDANCE WITH CABIN MANUFACTURER'S REQUIREMENTS
4. CABIN GRAVEL PADS MUST BE PLACED ON SMOOTH, UNDISTURBED SUBGRADE OR BASEMENT SOIL. BLADE SUBGRADE 2% TO DRAIN TO THE WEST (FRONT OF CABIN).
5. CABIN GRAVEL PADS MUST BE CONSTRUCTED TO MINIMUM DIMENSIONS SHOWN AND TO A DEPTH OF 8". USE 3/4" MINUS CRUSHED, WASHED GRAVEL AS DESCRIBED IN PROJECT SPECIFICATIONS.
6. CABIN GRAVEL PAD TO BE COMPACTED WITH PLATE COMPACTOR AND FINISHED LEVEL WITH NO SLOPE.

K. Gill Feb. 17, 2022 DRAWN BY: DATE: CHECKED BY: DATE:	APPROVED BY: DATE: APPROVED BY: DATE:	APPROVED BY: DATE: APPROVED BY: DATE:	MONTANA FISH, WILDLIFE & PARKS 129

Finley Point State Park Diversified Lodging Project
Cabin C2 Enlargement

SHEET: 5 of 8



SHEET GENERAL NOTES

1.FW called Prairie Kraft Specialties and asked about the cabin panels. They said There is an electrical panel on the exterior of the cabin. They are located on the right side toward the back. The panel is a 100 amp panel rated 120 VAC (no 240) with 8 spaces (16 circuits) surface mounted outside on the cabin.

2. REVIEW THE TRENCHING DETAILS FOR DIRECT BURY CABLES AND/OR CONDUCTORS.

3. USE SCHEDULE 40 PVC CONDUIT WITH SWEEP ELBOW(S) FROM THE TRENCH BOTTOM UP TO THE NEW PANEL.

4. USE IN-THE-GROUND JUNCTION BOXES WITH WATER PROOF SPLICES TO MAKE CONNECTIONS, IF ANY.

5. VERIFY TRENCH ROUTE WITH FWP.

Scale: 1" = 40' Printed @ 100%

0' 40' 80'

North

Overall Site ELECTRICAL

CONSULTING AND DESIGN
FUSSELL ENGINEERING
2435 DIXON STREET MISSOULA, MT 59801
(406) 721-6996 fus@aol.com

MONTANA MICHAEL T. FUSSELL 7966 E REGISTERED PROFESSIONAL ENGINEER

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CHECKED BY: DATE:	APPROVED BY: DATE:	APPROVED BY: DATE:

MONTANA FISH, WILDLIFE & PARKS

Finley Point State Park Diversified Housing Project
Electrical Plan

SHEET: 6 of 8

T30

012022

PHOTO 1 EXISTING PANEI.

PHOTO 2 EXISTING PANEI.

1.THE CONTRACTOR SHALL FURNISH AND INSTALL A 100 AMP BRANCH CIRCUIT TO EACH PANEL ON THE OUTSIDE OF EACH CABIN.

2.THE BRANCH CIRCUIT CABLES SHALL BE ALUMINUM TRIPLEX, (HOT, NEUTRAL, AND GROUND) DIRECT BURY URD CABLE. THERE SHALL BE A BRANCH CIRCUIT FOR EACH CABIN. (COPPER IS ACCEPTABLE)

3.THE CABLES SHALL BE INSTALLED IN ACCORDANCE WITH THE TRENCHING DETAIL THIS SHEET. THE TWO BRANCH CABLES CAN BE INSTALLED IN A COMMON TRENCH AS INDICATED ON THE TRENCHING DETAIL.

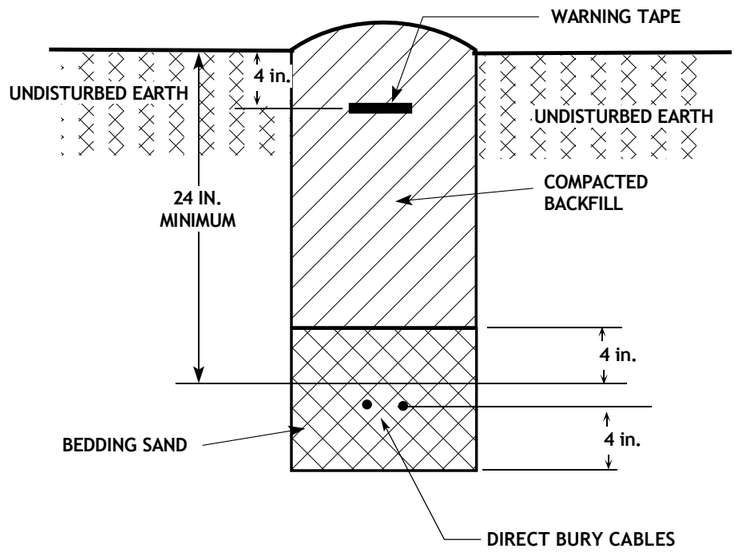
4. THE CONTRACTR MAY ELECT TO USE COPPER INSTEAD OF ALUMINUM.

5. THE CONTRACTOR SHALL FURNISH AND INSTALL THE BRANCH CIRCUIT CABLES IN A SCHEDULE 40 PVC CONDUIT UP FROM THE TRENCH BOTTOM UP TO ABOVE GRADE, SURFACE MOUNTED ON THE CABIN, TO THE PANEL. USE A SWEEP ELBOW CONDUIT IN THE TRENCH FOR CABLE INSTALLATION.

6. FURNISH AND INSTALL A SINGLE POLE 100 AMP BREAKER FOR EACH BRANCH CIRCUIT IN THE EXISTING 200 AMP PANEL. EACH BRANCH CIRCUIT IS A FEEDER.

7. EACH BRANCH CIRCUIT IS DESIGNATED AS A FEEDER.

7. THE CABIN PANEL ON THE OUTSIDE OF EACH CABIN IS SUPPLIED BY A CORRESPONDING FEEDER AND THUS THE NEUTRAL OF THIS FEEDER SHALL BE ISOLATED FROM THE GROUND CONDUCTOR. A 5/8 INCH BY 8 FOOT COPPER CLAD GROUND ROD SHALL BE INSTALLED AT THE CABIN PANEL AND BONDED TO THE CABIN PANEL ENCLOSURE.



NOTES:
1. SINGLE CABLE SHOWN. MULTIPLE CABLES CAN BE USED.
2. BURIAL DEPTH 24 INCHES MINIMUM
3. IF MORE THAN ONE CABLE OF THE SAME FACILITY IS INSTALLED IN A TRENCH, THE CABLES SHALL BE SEPARATED BY 9 INCHES MINIMUM.
4. INSTALL CABLES 24 INCHES (UNLESS OTHERWISE NOTED) BELOW FOOTING FOUNDATION OR PAVEMENT BASE FILL AS REQUIRED.
5. CABLES SHALL NOT BE LOCATED ANY CLOSER THAN 3 INCHES FROM TRENCH SIDE WALL.

TRENCHING AND BEDDING DETAIL

NOT TO SCALE

ELECTRICAL DETAILS

CONSULTING AND DESIGN
FUSSELL ENGINEERING
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MONTANA MICHAEL T. FUSSELL 7956 E REGISTERED PROFESSIONAL ENGINEER

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CHECKED BY: DATE:	APPROVED BY: DATE:	APPROVED BY: DATE:

MONTANA FISH, WILDLIFE & PARKS

Finley Point State Park Diversified Housing Project
Electrical Details

SHEET: 7 of 8

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BASIC ELECTRICAL REQUIREMENTS

1.1 GENERAL
A. The intent of the drawings is to indicate the general extent of work required for the project. The drawings for electrical work are diagrammatic, showing the location, type devices and equipment required. the drawings shall not be scaled for exact measurements. Provide all fixtures, lamps, devices, accessories, offsets and materials necessary to facilitate the system's functioning as indicated by the design and the equipment indicated.

1.2 ELECTRICAL INSTALLATIONS
A. Coordinate electrical equipment and materials installation with other building components.
B. Verify all dimensions by field measurements.
C. Arrange for chases, slots, and openings in other building components to allow for electrical installations.
D. Coordinate the installation of required supporting devices and sleeves to be set in poured-in-place concrete and other structural components, as they are constructed.
E. Sequence, coordinate, and integrate installations of electrical materials and equipment for efficient flow of the Work. Give particular attention to large equipment requiring positioning prior to closing-in the building.
F. Where mounting heights are not detailed or dimensioned, install electrical services and overhead equipment to provide the maximum headroom possible.

1.3 NAMEPLATE DATA
A. Provide permanent operational data nameplate on each item of power operated equipment, indicating manufacturer, product name, model number, serial number, capacity, operating and power characteristics, labels of tested compliances, and similar essential data.

1.4 DELIVERY, STORAGE, AND HANDLING
A. Deliver products to project properly identified with names, model numbers, types, grades, compliance labels, and similar information needed for distinct identifications; adequately packaged and protected to prevent damage during shipment, storage and handling.
B. Store equipment and materials at the site, Protect stored equipment and materials from damage.

1.5 ENVIRONMENTAL PROTECTION
A. The contractor shall not release any hazardous materials to the environment during the course of this work. If materials are encountered during demolition which are suspected to be hazardous, the contractor shall cease work and inform the Engineer for action by the Owner. If the contractor disturbs hazardous materials without consultation with the Engineer, abatement, mitigation, and restoration of the environment shall be the contractor's responsibility.
B. The contractor shall, in general, take all reasonable precautions and measures during the course of this work to protect and safeguard the natural and human environment. This shall be interpreted as a primary, rather than subordinate, requirement of the project.

1.6 CLEANING
A. Clean all light fixtures, lamps and lenses prior to final acceptance. Replace all inoperative lamps.
B. Clean up all waste or trash from the electrical work.

CODES AND STANDARDS

1.1 CODES AND STANDARDS
A. Comply with these specifications, project drawings, and all applicable local, State, and National laws, codes, standards, and regulations. In the event of differing requirements, the most stringent applies. Applicable portions of the following shall apply:
1. Building, other structures, and all facilities or systems with electrical installations within the scope of the National Electrical Code (NEC) published by the National Fire Protection Association (NFPA 70).
B. INSPECTIONS AND FEES
1. Inspection and approval by the State or local Electrical Inspector will be required prior to acceptance by the Owner.
2. The contractor is responsible for obtaining and paying for all necessary State or local permits and inspections.

1.2 SPECIAL REQUIREMENTS
The following are special requirements which may be more restrictive than the code:
1. All connections must be torqued to specifications using a torque wrench.

ELECTRICAL SYSTEM

1.1 QUALITY ASSURANCE
A. Installer's Qualifications: Firm with at least 3 years of successful installation experience on projects with electrical work similar to that required for this project.
B. UL Standards:
1. Comply with applicable requirements of U.L. safety standards pertaining to electrical systems. Provide electrical equipment, products, and components which have been UL-listed and labeled.
2. Comply with UL Standard 486A, "Wire Connectors and Soldering lugs for Use With Copper Conductors" including, but not limited to, tightening of electrical connectors to torque values indicated.
3. Comply with applicable requirements of UL Standards Nos.467 and 869 pertaining to electrical grounding and bonding.
4. NEC Compliance: Comply with applicable requirements of NEC (NFPA 70) pertaining to construction and installation of electrical systems.
C. ANSI Compliance: Comply with applicable requirements of ANSI/NEMA and ANSI/EIA standards pertaining to products and installation of electrical electrical systems and equipment.

2.1 NONMETALLIC CONDUIT
A. Electrical Plastic Conduit: Schedule 40 or 80 as indicated on the drawings, UL-rated, construct of polyvinyl chloride compound C-200 PVC, and UL-listed in accordance with NEC Article 347 for direct burial, or above ground use.
B. PVC Conduit and Tubing Fittings: NEMA TC 3, mate and match to conduit and tubing type material.

INSTALLATION

3.1 INSPECTION
A. Examine areas and conditions under which raceways are to be installed, and substrate which will support raceways. Notify the Owner in writing of conditions detrimental to proper completion of the work. Do not proceed with work until unsatisfactory conditions have been corrected in manner acceptable to Installer.

3.2 INSTALLATION
A. General: Install raceways as indicated; in accordance with manufacturer's written installation instructions, and in compliance with NEC, and NECA's "Standards of Installation."

3.3 INSTALLATION OF ELECTRICAL CONNECTIONS
A. Coordinate with other work, including wires/cables, raceway and equipment installation, as necessary to properly interface installation of electrical connections for equipment with other work.
B. Connect electrical power supply conductors to equipment conductors in accordance with equipment manufacturer's written instructions and wiring diagrams.
1. Mate and match conductors of electrical connections for proper interface between electrical power supplies and installed equipment.
C. Cover splices with electrical insulating material equivalent to, or of greater insulation resistivity rating, than electrical insulation rating of those conductors being spliced.
D. Prepare cables and wires, by cutting and stripping covering armor, jacket, and insulation properly to ensure uniform and neat appearance where cables and wires are terminated.
E. Tighten connectors and terminals, including screws and bolts, in accordance with equipment manufacturers published torque tightening values for equipment connectors.
1. Accomplish tightening by utilizing proper torquing tools, including torque screwdriver, beam-type torque wrench, and ratchet wrench with adjustable torque settings.
2. Where manufacturer's torquing requirements are not available, tighten connectors and terminals to comply with torquing values contained in UL's Standard 486A.

3.4 BOXES, OUTLETS, AND SUPPORTS
A. Provide boxes in the wiring or raceway systems wherever required for pulling of wires, making connections, and mounting of devices or fixtures.
1. Each box shall have the volume required by NFPA 70 for the number of conductors enclosed in the box.
2. Support boxes and pendants for surface-mounted fixtures on suspended ceilings independently of the ceiling supports or make adequate provisions for distributing the load over the ceiling support members in an approved manner.

3.5 MOUNTING HEIGHTS
A. General: Install electrical grounding systems where shown, in accordance with applicable portions of NEC, with NECA's "Standard of Installation," and in accordance with recognized industry practices to ensure that products comply with requirements and serve intended functions. Grounding includes but is not limited to:

GROUND ALL EQUIPMENT
GROUND TO GROUND ROD
GROUND TO BUILDING STRUCTURE
GROUND TO OTHER UTILITIES

B. Ground all exposed non-current-carrying metallic parts of electrical equipment, metallic raceway systems, grounding conductor in nonmetallic raceways, grounding conductor of nonmetallic sheathed cables, and neutral conductor of wiring systems.
C. Make ground connection to driven ground rods on the exterior of the building. Weld grounding conductors to underground grounding rods or electrodes or use ground clamps approved for underground connections.
D. Install clamp-on connectors only on thoroughly cleaned metal contact surfaces, to ensure electrical conductivity and circuit integrity.

3.6 GROUNDING CONDUCTOR
A. Provide an insulated, green-colored equipment ground consisting of the same size and type conductor as the circuit hot conductor for all feeder and branch circuits.
B. This conductor shall be separate from the electrical system neutral conductor.
C. Run a separate ground wire for each circuit even if several circuits share the same conduit or trench. In no case shall the ground conductor be used in common for several circuits.

3.7 TESTS
A. Carry out all normal testing and operational checks to assure a complete, safe, and reliable system
B. Devices Subject to Manual Operation: Each device subject to manual operation shall be operated at least five times, demonstrating satisfactory operation each time.
C. Circuit all branch circuits as shown, connect to phase and circuit number indicated. Circuit changes shall have prior approval of the Owner.
D. Correct any discrepancies found as a result of the above tests including replacement of conductors, splices, re-connecting loads, changing phases, installing additional ground rods, etc.

3.8 SUBMITTALS
A. General contractor is responsible to coordinate project requirements involving more than one trade, is responsible to coordinate between trades and equipment suppliers, is responsible for performance of subcontractors to verify that equipment delivered to the project site for installation is in compliance with project plans and specifications, and must verify that such equipment will properly interface with equipment specified by other trades for installation and use on the project.
B. For the purpose of meeting those responsibilities, General contractor:
C. Shall review all submittals from sub contractors;
D. Shall verify compliance of those submittals with project plans and specifications; and
E. Shall verify coordination of equipment identified in those submittals with equipment and/or work of other trades
before forwarding submittals to project engineer for review. Evidence of the General contractor's review and verification of the above requirements will be provided with submittals forwarded for review.

ELECTRICAL SPECIFICATIONS

CONSULTING AND DESIGN
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MONTANA
MICHAEL T. FUSSELL
7986 E
REGISTERED PROFESSIONAL ENGINEER

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CHECKED BY: DATE:	APPROVED BY: DATE:	APPROVED BY: DATE:	

Finley Point State Park Diversified Housing Project
Electrical Specifications

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