St. Croix National Scenic Riverway

401 North Hamilton St., St. Croix Falls WI 54024

Replace Fence at LD Maintenance Complex and Ray's Garage
PMIS 350800
Drawing No:

PROJECT SPECIFICATIONS

NATIONAL PARK SERVICE
2026-02-16

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DIVISION 1 SHORT FORM GENERAL REQUIREMENTS

PART 1 – GENERAL

ITEM 1 - DESCRIPTION OF WORK

1.1 Background: The Lower District Shop currently has an ageing and deteriorated perimeter fence system that no longer provides adequate security or functionality. Portions of the existing fence and gates are damaged, misaligned, or at the end of their service life, resulting in unsecured areas that allow uncontrolled access to maintenance yards and stored materials. In addition, the lack of defined, secure storage areas has led to unorganized material storage, increasing the risk of material loss, safety hazards, and operational inefficiencies. The proposed improvements will replace outdated infrastructure, restore site security, and establish organized storage to support safe and efficient maintenance operations.

Rays Garage currently lacks secure, designated storage areas for equipment and materials, leaving assets exposed and contributing to inefficient site operations. The absence of fencing and defined storage areas limits the ability to control access, organize materials, and support routine maintenance activities. These conditions reduce operational efficiency and increase the potential for material loss and safety concerns. The proposed work will establish secure perimeter fencing, controlled access, and a dedicated material storage area, resulting in improved operational efficiency, asset protection, and overall functionality of the Rays Garage site.

1.2 Work Covered by the Contract Documents:

A. Project Location: Lower District Shop 1009 County Road S, Dresser Wi 54020 and Rays Garage S 1527 st. Highway 87, St. Croix Falls WI 54024

B. Work is separated by location. Work at the Lower District Shop consists of;

a. The Contractor shall furnish all labor, materials, equipment, and supervision necessary to complete the following work at the Lower District Shop.
b. Remove approximately 678 linear feet of existing 6’ Chain link fencing and three (3) slide gates. Existing fence is 6’K-Klass style chain link with 3 strands of barbed wire on the top. Terminal and corner posts are 4” diameter, line posts are 2.5” with a 1 5/8” continuous top rail.
c. Existing fence posts will be cut off 6-inches minimum below finished grade. All removed recyclable materials will be lawfully recycled, all other materials will be lawfully disposed of off NPS property. Contractor to confirm demo process with COR before work starts.
d. Back fill any holes or voids and compact with suitable soil.
e. Install approximately 432 linear feet of 7-foot-high K-Klass (KK) chain-link fence, constructed of 2-inch mesh, galvanized before weaving (GBW), 9-gauge fabric.
f. Fence system shall include:
    i. Eight (8) 3-inch terminal posts Meeting ASTM A702-22 and ASTM A392

ii. 2-1/2-inch line posts. Maximum of 10’ apart.
iii. 1-5/8-inch continuous top rail
iv. 9 Gauge chain link wire mesh

g. All posts shall be driven (pounded) into the ground, not set in concrete. At a minimum depth of 48”.
h. Install one (1) 20-foot-wide sliding gate, fully integrated with the fence system.
i. Provide and install a complete automatic gate operator system for the slide gate, including:
   i. Keypad access control
   ii. Timer functionality
   iii. Free-exit loop, provide and install a Direct Burial/ Pave Over system to manufacture specifications in the existing gravel driveway.
   iv. Install new electrical 15Amp circuit in existing panel located in the Main shed to new gate operator and keypad. Roughly 135’.
   v. Circuit must be in approved raceway. Provide duct seal on each end. Coordinate conduit path with COR.
      1. Must meet minimum cover requirements of 300.5.
      2. Any above grade conduit shall be Schedule 80.
   vi. 20’ opening from terminal post to terminal post
   vii. Minimum 2 ½” Horizontal rails, 2” vertical rails, and 1 5/8” diagonal rails made of Galvanized steel
   viii. 2 sets of heavy duty Nylon Cantilever rollers with metal covers.
   ix. 9 gauge Chain link mesh per ASTM A392
   x. Basis of Design Product: Hoover #CL-CANTILEVER-GATE or equivalent.
      1. Left Slide
      2. Galvanized Steel ASTM A702-22
      3. 24VDC Operator Lift Master INFL24UL or equivalent
      4. Battery Back up
      5. Manual Disconnect
      6. UL Listed
      7. DC motor with 120v power supply.
      8. Install concrete base as required by manufacture specifications.
j. System shall be fully operational upon completion and tested for proper function.
k. Installation of (1) 12’ steel swing gate at the south end of the complex. Refer to Appendix A and C.
   i. 12’ swing horizontal rail
   ii. All steel construction
   iii. 6” steel pipe upright posts
   iv. 6' footing depth
   v. Gate height of 42”
   vi. Must fit NPS Paddle Lock
l. Construct a “bin block” material storage area using interlocking 2’x2’x6’ and 2’x2’x3’concrete bin blocks. See Section 04 22 00 Concrete Bin Blocks PDF for detail.
   i. Contractor to level storage area before for bin placement
   ii. Structure will be 2 blocks (4’) high all around
   iii. Total of five 12’ wide x 14’ deep storage bays
m. Work shall include placement, alignment, and stacking of bin blocks to form a stable, functional containment area suitable for bulk material storage.
n. Bin block layout and configuration shall match the provided drawing under appendix C and coordinated with the COR prior to installation.

o. Finished installation shall be level, properly aligned, and capable of safely retaining stored materials.

C. Work at Rays Garage consists of;
   a. The Contractor shall furnish all labor, materials, equipment, and supervision necessary to complete the following work at Rays Garage.
   b. Perform site preparation, including delivery, grading, and compaction of estimated 120 cubic yards of imported fill.
      i. Remove all existing organic material within the project area. Material shall be stockpiled on site and used to place as final 4" backfill in areas beyond limits of new aggregate to blending with existing grade. Uniformly slope soil at 4:1 maximum fill material transitioning back to tie into existing grade.. All excess material must be blended into the surrounding project area or hauled away by the Contractor.
      ii. Grade surface to achieve a 2% surface grade away from the building.
      iii. Compact fill to provide a suitable base for fence and gate installation. See Section 31 23 00 Fill Material PDF for requirements. Soil to be placed in 8" lift(s) maximum and compacted as called out in 31 23 00.
   c. Apply a final surface, a minimum 4" in depth of 3/8 modified altered basalt, also called ½" minus trap rock or approved equivalent. Approximately 130 tons.
      i. Grade surface to achieve a 2% surface grade away from the building.
      ii. Back fill surrounding new fill to ensure no more than a 4:1 slope in any location.
   d. All fill should be weed free, and equipment should be clean and inspected before entering the site. The COR reserves the right to reject entry to the NPS site of any equipment visually in a state of disrepair (discharge of fluids or other concerning contaminants or safety hazards).
   e. Install approximately 303 linear feet of 8-foot-high K-Klass (KK) chain-link fence, constructed of 2-inch mesh, GBW, 9-gauge fabric.
   f. Fence system shall include: Eight (8) 3-inch terminal posts, 2-1/2-inch line posts a maximum of 10' apart, and continuous1-5/8-inch top rail.
   g. All posts shall be driven (pounded) a minimum of 48" in depth.
   h. Install one (1) padlock compatible 8-foot-tall by 20-foot-wide double swing gate.
      i. 8' tall x 20' wide double swing gate
      ii. 20' opening from terminal post to terminal post
      iii. Fully Welded 2" HF40 frame Galvanized Steel ASTM A702-22
      iv. 9 Gauge chain link wire mesh per ASTM A392 fitted with privacy slats
      v. 3" terminal posts Galvanized Steel ASTM A702-22
      vi. Center Drop rod
      vii. Bulldog style dual opening hinge
      viii. Hover #CL-Pre-Hung-Gate or equivalent
   i. Install privacy slats in the fence fabric. Color to be approved by the COR.

D. All work will be performed under a single contract.

E. Applicable Codes:

   a. 2026 National Electric Code
   b. 2024 International Building Code

c. 2024 International Existing Building Code
d. 2024 International Fire Code
e. 2024 International Plumbing Code
f. 2024 International Mechanical Code
g. 2024 International Wildland Urban Interface Code
h. 2024 International Fuel Gas Code
i. 2024 International Energy Conservation Code

F.

G. Period of performance: Work shall be completed within 90 Days calendar days of the start date provided on the Notice to Proceed.

a. Clarification: The Notice to Proceed will be issued with a period of performance that is all inclusive of supply lead times, material deliveries, decommissioning, installation, anticipated average weather days for location, final commissioning, and acceptance of completed work. The contractor will be expected to provide a project schedule with adequate critical path details to ensure all work is completed within the stated calendar days from issuance of the Notice to Proceed. If weather impacts project beyond typical average weather patterns, contractor shall provide documentation in request for additional days.

1.3 Existing Condition Protections:

A. Preservation of Historical and Archeological Fabric:
i. The Historic and Archeological Data Preservation Act of 1974 provides for the preservation of historical and archeological data that might otherwise be lost as the result of alterations to the terrain caused by a federal or federally licensed activity or program.
ii. IF, in connection with operations under this contract, the Contractor, subcontractors, or employees of any of them, discovers, encounters or becomes aware of any possible historical or archeological remains or data, objects or sites of cultural value on the project area, such as historical ruins, graves or grave markers, fossils, or artifacts not specifically noted within the contract. The Contractor shall immediately suspend all operations in the vicinity and continue work in other areas outside a 50 foot radius of discovery and notify the Contracting Officer immediately. When safe to do so, follow up in writing with photographs within 2 days, giving the location and nature of the findings. No objects of cultural resource value may be removed. Contracting Officer will contact other entities as required.
iii. Where appropriate by reason of discovery, the Contracting Officer may order delays in the time of performance and/or changes in the work. If such delays and/or changes are ordered, the time of performance and contract price shall be adjusted in accordance with Changes clause.
iv. The Contractor will be responsible for protecting the cultural resources within and adjacent to the project area from damage. In addition, the Contractor will be liable for all damage to the cultural resources caused by their actions or the actions of their agents or representatives. The Contractor shall immediately notify the Contracting Officer or their representative if any damage occurs to any

cultural resource and immediately suspend work in the area in which damage has occurred until authorized to proceed.

v. The Contractor agrees to include this language within all subcontracts.

B. The structure or structures involved in this project are not historic.

C. Protection of Landscaping and Surrounding Structures: All ground disturbing activities at the Lower District Shop shall be performed under the direct oversight of a National Park Service provided archaeologist or Tribal cultural specialist, due to the presence of identified cultural resources in proximity to the project area. The Contractor shall develop and maintain accurate work schedules and shall provide timely notification of any schedule changes to ensure proper coordination with required archaeological or Tribal oversight. The Contractor shall take all necessary measures to provide protection for all trees, fencing, walks and other landscape features and surrounding structures near the work site as noted with the contract. Any such surrounding features damaged, scarred or broken as a result of the Contractor's operations at the site outside of agreed upon documented extents, shall be treated, repaired or replaced in kind to the satisfaction of the Contracting Officer at no additional expense to the Government.

ITEM 2 – PROTECTING EXISTING UTILITIES

2.1 Protecting Existing Utilities: Notify Contracting Officer (CO), Contracting Officer's Representative (COR) and utility companies as required to request location services prior to and to coordinate any excavation/digging operations, and/or for demolition if within Scope of Work.

2.2 Contractor shall be responsible for locating and preventing damage to known utilities on site or indoors. If contractor damage occurs, alert CO and COR as soon as safely possible, and repair utility at no additional expense to the Government. If damage occurs to an unknown utility, contact CO and COR as soon as safely possible.

2.3 Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Government or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated below:

A. Notify CO and COR not less than two business days in advance of proposed utility interruptions.

B. Hours for Utility Shutdowns: Shutdowns shall not exceed 2 to 3 hours. Temporary provisions will be needed by the Contractor for periods longer than stated allowance or if required for critical systems as determined by COR.

ITEM 3 - CONTRACTOR'S USE OF PREMISES

3.1 Conduct of Operations: At all times the contractor shall conduct his operations in conformance with the rules and regulations promulgated by the Secretary of the Interior for the National Park Service, and applicable park rules and regulations prescribed by the Park Superintendent. https://www.nps.gov/sacn/learn/compendium.htm

A. Communications: Contractor shall provide the Contracting Officer and COR with methods of communications including land and/or cell phone numbers (note some areas of work have limited service coverage), email and in case of emergency 24-hour contact options for duration of time operations.

B. No signs or advertisements (except those specified herein and as required for safety) shall be displayed on the construction site or within the park unless approved by the Contracting Officer.

C. Smoking is not permitted within any Federal building or within 25 feet of entrances, operable windows, or outdoor air intakes.

D. Public Use of Site: Contractor shall at all times conduct operations to ensure the least inconvenience to the public.

3.2 On-site work hours: Work shall be generally performed during normal business working hours of 7am - 4pm., Monday through Friday, except when otherwise indicated. Work on Saturdays, Sundays, Federal holidays, early morning, or at night may not be performed without prior consent from the CO and COR. Submit requests for work outside of the stated normal business hours to the CO and COR for approval at least 48 hours in advance of the work.

The following Federal holidays are observed by the National Park Service:
New Year's Day
Inauguration Day
Martin Luther King, Jr's Birthday
Washington's Birthday
Memorial Day
Juneteenth National Independence Day
Independence Day
Labor Day
Columbus Day
Veterans Day
Thanksgiving Day
Christmas Day

- Note: Any of the above holidays falling on a Saturday will be observed on the preceding Friday; holidays falling on Sunday will be observed on the following Monday. The specific day that each holiday is recognized for each year can be found at the following site: Federal Holidays (opm.gov).

3.3 Contractor Use of Site:

A. General: Contractor shall have limited use of the site for construction operations. Limit use of premises to construction area as shown on site plan. Do not disturb portions of Project site beyond areas in which the Work is indicated.

B. Driveways and Entrances: Keep driveways, access roads, and entrances serving premises clear and available to Government, Government's employees, and emergency vehicles at all

times. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize use of driveways and entrances.

C. Do Not disturb site outside of noted disturbance area, including earthwork, and clearing of vegetation, to:

1. 10 feet on each side of the fence and complex buildings.
2. 40 feet outside of the perimeter of the Ray's Garage purposed fence.

Contractor shall provide appropriate matts for equipment on turf areas to reduce soil compaction. Contractor shall remediate soil compaction as directed to do so by the CO/COR.

D. Utilities

1. General: Cost or use charges for temporary facilities shall be included in the Contract Sum as required.

2. Water Service: Water from existing water system is not available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations without any additional permit costs. Use resources wisely and minimize waste of water.

3. Electric Power Service: Electric power from existing system is not available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations without any additional permit costs. Power may or may not meet your construction power tool requirements, provide generators if questionable. Use power in a resourceful manner and avoid excess power waste.

4. Sanitary Operations:

a. Toilets: Contractor must provide toilets for contractor personnel, sufficiently lighted and ventilated toilet facilities in weatherproof, sight proof, handicap accessible (if required), sturdy enclosures with privacy locks. Coordinate with COR for approved location if not shown on attached site plan.

E. Security and Protection facilities:

1. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with state and federal environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.

2. Cleaning of Equipment: The Contractor shall ensure that prior to moving on to the Project Area, all equipment, is free of soil, seeds, vegetative matter, or other debris that could contain or hold seeds. Ensure that all equipment has been pressure washed and is free of exotic species prior to start-up of operations and moving of equipment to Project Area. Equipment shall be considered free of soil, seeds, and other debris when a visual inspection does not disclose such material. Disassembly of equipment components or specialized inspection tools are not required.

3. Tree and Plant protection is not required for this project.

4. Pest Control: Follow best practices to minimize attraction and harboring of rodents, roaches, and other pests and to perform extermination and control procedures at regular intervals so Project will be free of pests and their residues at project completion. Perform control operations lawfully, using environmentally safe materials.

5. Temporary Enclosures: Provide and maintain temporary enclosures such as snow fence as required for protection of construction in progress and from access by visitors or staff, other construction operations, and similar activities.

6. Hot Work Permit: Not Required

3.4 Storage - Staging Areas:

A. Confine Storage of materials and equipment to the project staging area noted on the plans/aerial. Specific storage units shall be provided by the contractor and exact location within staging area shown in appendix A below may be discussed at the preconstruction briefing. All storage units provided by the contractor shall be in a clean and acceptable condition to the COR. Security of the materials and equipment on site is the Contractor's responsibility.

3.5 Preservation of Natural Features:

3.6 Hauling Restrictions: Contractor shall verify and be responsible for the path accessing the site and obtaining / maintaining all local, state and federal permits/licenses associated with hauling/road requirements and dumping of materials associated with the project.

3.7 Waste Removal, Recycling, and General Housekeeping:

A. Keep project site in a neat, orderly, and safe condition at all times.

1. Contractor is responsible for providing dumpsters for waste and recycling and for removing all waste created by the project. Contractor shall recycle to the highest degree possible and empty dumpsters as necessary to avoid debris on site. Coordinate with COR for approved dumpster locations prior to commencing construction.

2. Dispose of waste materials and recycling legally outside the park. The contractor shall not use park dumpsters.

3. Address Recycling: Government goal is to salvage and recycle as much nonhazardous construction waste as possible. Use sustainable methods to the extent possible during this project, recycling material as much as possible within local means. Maintain accurate documentary records for submittal of all recycled materials used including fly ash and slag cement.

4. For all waste and recycling removals offsite, contractors shall provide estimates and/or tickets to quantify material weights and report back to the park, submit to COR for review and record filing.

3.8 Occupancy Requirements for Buildings:

A. Existing Buildings:

1. N/A

B. New /Existing Buildings Unoccupied:

1. N/A

3.9 Photo Documentation:

A. Contractor must provide existing condition, progress, and completion photos. All photos shall be in focus, show maximum range of depth of field general photo and then close up detail photo as needed. Shall be in JPEG digital form and submitted preferably electronically by email or optional via CD-R Archival Gold or DVD-R Archival Gold media with printed labels and 8 mega pixels minimum within 7 days from time of taken or as approved by COR.

B. Existing Condition Images:

1. Before starting construction, take color, dated, digital images of project site and adjacent property/roads/etc. that may be impacted by construction activity/traffic. Include existing items to remain or be salvaged from different vantage points and with context for location identification.

C. Construction Progress Images:

1. Document all sub-surface work/ trenches etc. prior to backfill with photos covering enough overall field view to show location and then zoom in for details. (Locations and dimensions shall also be noted on as built drawing set.)
2. Maintain organized index for photos with date, description, etc.
3. Additional images as needed when questions or emergency situations occur. Submit within 24 hours.

D. Completion Images:

1. Document all completed work within scope of work.
2. Maintain organized index for photos with date, description, etc..
3. Additional images as needed when questions or emergency situations occur. Submit within 24 hours.

3.10 Fire and Life Safety:

A. As a minimum, conduct one weekly 15 minute "toolbox" safety meetings. These meetings shall be conducted by a foreman or supervisor and attended by all construction personnel at the worksite. Topics need to coincide with work scheduled for the following week. Document and submit meeting minutes to the CO and COR within one day after the meeting and document the meetings on the daily reports.

B. Comply with the requirements of NFPA 241 (Standard for Safeguarding Construction, Alteration, and Demolition Operations). Take all necessary precautions to prevent fire during construction. Provide adequate ventilation during use of volatile or noxious substances.

C. Store and handle hazardous materials in accordance with manufacturers and OSHA 29CFR1926 Subpart D requirements 1926 | Occupational Safety and Health Administration (osha.gov). Maintain readily available, on site, MSDS/Safety Data Sheets (SDS) for each chemical.

1. Immediately report all spills of hazardous materials to the CO, COR, and park.
2. Maintain a spill emergency response kit.
3. Train employees how to respond to a spill and use the emergency response kit.

3.11 Noise and Acoustics Management

A. Contractor shall not have personal radios or other media sources and they shall not be broadcast within NPS property.

B. Noise Control: Perform operations to minimize noise. Perform noise-producing work in less sensitive hours of the day or week as directed by the Contracting Officer or COR.

C. Repetitive and/or intermittent, high-level noise: Permitted only during Daytime.
a) Coordinate with COR prior to execution

ITEM 4 - COMMENCEMENT, PROSECUTION, AND COMPLETION

4.1 The Contractor shall commence work in accordance with the terms and conditions of the contract. Contractor shall coordinate and incorporate long lead and delivery time items within the schedule.

ITEM 5 - EXAMINATION OF THE SITE

5.1 All bidders are urged to visit the job site and examine existing conditions before submitting bids. Contractors will be accountable for understanding existing conditions. No cost changes for items visible during site visit will be allowed.

ITEM 6 - ABBREVIATIONS

6.1 The list of abbreviations, standards and organizations which may be used in/referred within the Construction Specifications or Special Provisions, may be found linked from the listed page below. On the home page, follow the link under **"Contracting and Procurement"** labeled **"NPS Reference Standards."** https://www.nps.gov/orgs/1671/do-business-with-us.htm

ITEM 7 - ACCIDENT PREVENTION

7.1 Description: The work of this section consists of establishing and implementing an effective accident prevention program (APP) and providing a safe environment for all personnel and visitors.

7.2 Submittals:

A. Accident Prevention (Safety) Plan (APP): Submit a **site-specific** accident prevention (safety) plan. The Plan shall be written to comply with OSHA and project requirements (a generic plan is not acceptable) including but not limited to the following:

1. Name and qualifications of responsible supervisor to carry out the program.
2. First aid and rescue procedures.
3. Training, both initial and continuing.
4. Outline of each phase of the work, the hazards associated with each major phase, and the methods proposed to provide for property protection and safety of the public, National Park Service personnel, and Contractor's employees. Identify the work included under each phase, with a Job Hazard Analysis (JHA)/Job Safety Analysis (JSA), etc. A sample JHA template may be provided upon request.
5. Planning for possible emergency situations, such as cave-ins, earthquake, explosions, fires, floods, power outages, slides, and windstorms. Such planning shall take into consideration the nature of construction, site conditions, and degree of exposure of persons and property.
6. Contractor to identify nearest location of medical facility for emergencies
7. Recognition that works will be performed in remote areas with limited communication or cell phone coverage if applicable.
8. Supplemental hazard specific plans may be required IAW 29 CFR 1926 or 1910.

B. Meeting and Inspection Reports: Safety Meetings: As a minimum, conduct 15 minute "toolbox" safety meetings. These meetings shall be conducted by a foreman and attended by all construction personnel at the worksite. Submit a report of safety meetings and inspections to CO and COR within one day after the meeting and document the meetings on the daily reports.

7.3 Qualification of Employees:

A. Ensure that employees are physically qualified to perform their assigned duties in a safe manner to include operators of vehicles and equipment. Provide operating instructions for all equipment.

B. Do not allow employees to work whose ability or alertness is impaired because of drugs, fatigue, illness, intoxication, or other conditions that may expose themselves or others to injury.

7.4 Accident Reporting: The Contractor shall report all accidents to the CO and COR as soon as safely possible and assist the CO and COR and other officials as required in the investigation of the accident.

7.5 First Aid Facilities: Provide access to facilities for the number of employees and appropriate to the hazards associated with the types of ongoing construction work at the site.

7.6 Emergency Instructions: Post telephone numbers and reporting instructions for ambulance, physician, hospital, fire department, and police in conspicuous locations at the work site.

7.7 Personal Protective Equipment (PPE): It is the Contractor's responsibility to require all those working on or visiting the site to wear necessary protective equipment at all times.

A. PPE must meet requirements of applicable ANSI standards. Selection shall conform to OSHA 29CFR 1926 Subpart E.

B. A hard hat use area shall be designated by the Contractor. The hard hat area shall be posted by the Contractor in a manner satisfactory to the Contracting Officer.

C. All PPE will be serviceable at all times. At a minimum, maintain 2 sets of PPE including hard hats and all other Accident Prevention Plan required equipment.

7.8 Hazardous Materials: It shall be the responsibility of all operators and contractors, functioning within the park to properly cleanup, mitigate and remediate if necessary, all unauthorized discharges of hazardous materials or non-hazardous chemical and biological products released from fleet and/or other support vehicles or stationary sources. Response shall be consistent with guidelines established by federal, state, and local regulations, and as outlined within the operator's Safety or Hazardous Materials Business Plan.

A. If a spill, leak, or other release occurs, the operator shall as soon as possible, without impeding cleanup, notify the local 911 Emergency Response, COR and or the National Park Service Emergency Dispatch.

ITEM 8 - PRECONSTRUCTION CONFERENCE

8.1 If the Contracting Officer decides to conduct a preconstruction conference, the successful offeror will be notified and will be required to attend. The Contracting Officer’s notification will include specific details regarding the date, time, and location of the conference, any need for attendance by subcontractors, and information regarding the items to be discussed. See Item 9.1C below.

ITEM 9 - SUBMITTALS

9.1 General Contracting Submittal Procedures:

A. General: Prepare and submit submittals required by individual Technical Specification Sections. Types of submittals are indicated in individual specific sections.

1. CM-16 Transmittal Form: All submittals shall be transmitted via electronic email using National Park Service form CM-16 form. The form will be provided by the Contracting Officer. No action will be taken on a submittal item unless accompanied by the CM-16 transmittal form. Submit completed CM-16 forms to the CO and the COR

B. Submittal List: administrative required submittals are listed below in 9.1.C and does not include technical section submittal requirements included in each technical section.

C. Preconstruction Conference Submittal: Satisfactory evidence of liability insurance coverage and workman’s compensation, and any applicable bonds, must be submitted within 10 calendar days of Notice of Award. The following items are to be submitted prior to the Preconstruction Conference or as specified at the CO’s discretion. The timeline for the documents to be submitted will be addressed at the pre-construction conference for those items that were not received and approved prior. Notice to Proceed may not be issued, and

the Contracting Officer will consider other contractual remedies if not resolved as directed. Work shall not commence until written Notice to Proceed has been issued. Contracting Officer will notify Contractor of tentative date for the Pre-Construction Conference:

1. Letter designating Project Superintendent.
2. Construction Schedule. (Must include shop drawings, procurement time including long lead time items, mobilization, trade work progression and completion at minimum.)
3. A comprehensive breakdown of the Schedule of Values.
4. Accident Prevention (Safety) Plan (see section 7 of this document).
5. A list of Subcontractors for this project.
6. Written statements from subcontractors certifying compliance with applicable labor standard clauses (SF1413).
7. Quality Control Plan.
8. Demolition plan
9. Cultural Resources

N/A

9.2 Project Submittal Process (Shop Drawings, Product Data, and Samples): Contracting Officer will provide sample cover sheet and a list of required submittals is included in each technical specification or attached at the end of this document.

A. Shop Drawings: Indicate all coordinating materials and work impacting the installation coordination, connection details, anchorage requirements, hardware locations, and installation details and locations.

1. Submit Shop Drawings according to Part 9.1 of this section to include one digital file (.PDF or .TIF) and two full size hardcopy documents to COR.

B. Product Data: Provide component construction and specification data sheets, anchorage requirements and any other product specific data.

1. Submit Product Data according to Part 9.1 of this section to include one digital file (.PDF or .TIF) to COR.

C. For submittals specified above, forward submittals to Contracting Officer and COR at least 15 days before need for approval (depends on length of project).

D. After approving submittals, Contracting Officer and/or COR will return one copy to the Contractor. If submittals are not approved, Contracting Officer will return all copies to Contractor with reasons for rejection. Resubmit, identifying changes. Any work done before approval shall be at Contractor's own risk.

9.3 Approved Equals: All brand names noted are subject to ‘or equal’ products. If an item in this solicitation is identified as “brand name or equal” or lists more than 1 manufacturer, the description of the proposed item must reflect the characteristics and level of quality that will satisfy the Government’s needs as demonstrated by the salient physical, functional, or performance characteristics that “equal” products must meet and/or exceed that as specified in the solicitation or relevant specification. Contractor shall incorporate and be responsible for all collateral costs due to the or equal proposed as required to provide a complete project.

A. For each item proposed as an “approved equal,” submit supporting data, including:

1. Drawings and samples as appropriate.
2. Comparison of the characteristics of the proposed item with that specified and with the salient characteristics provided.
3. Changes required in other elements of the work because of the substitution.
4. Name, address, and telephone number of vendor.
5. Manufacturer’s literature regarding installation, operation, and maintenance, including schematics for electrical and hydraulic systems, lubrication requirements, and parts lists. Describe availability of maintenance service, and state source of replacement materials.

B. A request for approval constitutes a representation that General Contractor:

1. Has investigated and shall provide documentation in request showing that the proposed item is equal or superior in all respects to the salient characteristics specified.
2. Will meet or exceed warranties for the proposed item specified.
3. Has determined that the proposed item is compatible with interfacing items.
4. Will coordinate the installation of an approved item and make all changes required in other elements of the work because of the substitution.
5. Waives all claims for additional expenses that may be incurred as a result of the substitution.

C. Approved Equals will be evaluated and approved/disapproved during the submittal process.

9.4 Schedule of Values: Submit the Schedule of Values a minimum of one week prior to the Preconstruction Conference for COR review. Schedule of Values shall include defined work line items with cost break downs including labor, material, and equipment for COR approval.

9.5 Progress Reporting: The initial Construction Schedule and Schedule of Values are required a minimum of one week prior to the Preconstruction Conference. After the Notice to Proceed is issued and after on-site work begins, progress will be documented via daily logs and by providing an updated Construction Schedule and Schedule of Values when requested, but minimally with each pay application. Submit digital copy electronically (PDF preferred) of all required documents. Construction Schedules are normally in bar chart form and indicate estimated starting and completion dates for each part of the work. For a pay application to be reviewed and processed in a timely manner, the following information must either be submitted prior to or accompany submission of the pay application:

A. Daily/weekly progress reports during construction as part of the administration process.

B. Updated Schedule of Values: Breakdown each lump-sum item into component work activities used in the schedule, for which progress payments may be requested. The Schedule of Values will form the basis for payment. The work activities broken out within the schedule of values shall be integrated into and made a logical part of the construction baseline schedule submitted under this specification. The total costs for the component work activities shall equal the contract price for that lump-sum item. The Contracting Officer may request data to verify accuracy of dollar values. A sample Schedule of Values format may be provided upon request.

ITEM 10 – TEMPORARY SERVICES

10.1 It is the Contractor's responsibility to provide temporary services, equipment, tools, and skilled labor as required for the chosen means and methods to perform the work in accomplishing this Contract.

ITEM 11 - PROJECT CLOSEOUT

11.1 Description: The work of this section consists of final cleanup, closeout submittals, final inspection procedures working toward Final Acceptance.

11.2 Cleaning: Remove all tools, equipment, surplus materials, and rubbish. Move attic stock to location coordinated with COR. At time of final inspection, project shall be thoroughly clean and ready for intended use. Inspector holds the right to reschedule if project is not ready for inspection.

11.3 Completion and Final Inspection: Contractor shall submit written certification of project completion and request a final inspection to the Contracting Officer and COR. The Contracting Officer or designee will make an inspection within 10 days of receipt of request or at a mutually agreeable time.

A. If the work is determined to be complete following the final inspection with minor comments, the COR will prepare and provide the Contractor a Punch List noting outstanding items to be addressed.
B. If the work is not determined to be complete following the final inspection, the Contracting Officer will notify Contractor in writing, stating reasons. Contractor, after completing the work according to the Contract Documents, shall resubmit completion and request a new final inspection. Re-inspection costs may be charged against the Contractor in accordance with the Inspection of Construction contract clause.

C. Contractor shall complete the Punch List within 30 calendar days, or a time directed by the CO.

D. Once Contractor completes all items of work on the Punch List and all contractually required items are accepted, Contracting Officer will issue Letter of Final Acceptance of Work and request the final pay application.

E. If the Contractor fails to complete the work within the time frame, the Contracting Officer may correct the work with an appropriate reduction in contract price or charge for re-inspection costs in accordance with the Inspection of Construction contract clause.

F. Disposition of any permits and warranties required by the specifications in this section.

11.4 Final Acceptance of the Work: After all punch list deficiencies have been corrected, a Letter of Final Acceptance will be issued. A Release of Claims document must be executed and submitted to the Contracting Officer before final payment can occur.

11.5 Warranties

A. Construction Warranty shall be based on date of final acceptance of the work and remain in effect for one year.

B. Provide all manufacturer warranty information of products installed organized by Division. All contact information, extent of coverage and conditions shall be clearly noted as well as date of overall final acceptance.

C. Information shall include operation and maintenance manuals for each warranted product.

ITEM 12 - DEFINITION OF CONTRACT LINE ITEMS

12.1 Summary

A. The intent of this section is to explain, in general, what is and what is not included in a contract line item, and the limits or cut off points where one item ends, and another begins.

B. If no contract line item exists for a portion of the work, include the costs in a related item.

12.2 List of Contract Line Items

A. Contract Line-Item No. CLIN 010 All Items, at the Lower District Shop, Removal of 680' of existing fence, installation of 432' of new chain-link fence, Steel Swing Gate, Bin Block Material storage and all associated dirt work.

1. This item consists of All Items, at the Lower District Shop, Removal of 680' of existing fence, installation of 432' of new chain-link fence, Steel Swing Gate, Bin Block Material storage and all associated dirt work..
2. Payment will be made per the contract and percentage of completion level.

B. Contract Line-Item No. CLIN 020 All items listed at Ray’s Garage, Dirt work, site preparation and installation of approximately 303’ of chain link fence.

1. This Item consists of all items at Ray’s Garage, Dirt work, site preparation and installation of approximately 303’ of chain link fence.
2. Payment Will be made per the contract and percentage of completion level.

END OF SECTION

Construction Specification 31 23 00 – Earthfill and Gravel Fill

1. Scope

The work consists of the construction of earth embankments, other earthfills, earth backfills, and gravel fills required by the drawings and specifications.

2. Material

All fill material shall be obtained from required excavations and approved borrow areas. The selection, blending, routing, and disposition of material in the various fills shall be subject to approval by the engineer.

Fill materials shall contain no frozen soil, sod, brush, roots, or other perishable material. Rock particles larger than the maximum size specified for each type of fill shall be removed prior to compaction of the fill.

Earth fill is composed of natural earth materials that can be placed and compacted by construction equipment operated in a conventional manner

Gravel Fill:

Gravel fill material shall be sand, gravel, or crushed stone, or mixtures thereof, obtained from the specified sources. The material shall be selected as necessary to avoid the inclusion of organic matter, clay balls, excessive fine particles, or other substances that would interfere with their free-draining properties. If requested, samples shall be provided to NRCS prior to construction for approval.

3. Foundation preparation

Foundations for earthfill and gravel fill shall be stripped to remove vegetation and other unsuitable material or shall be excavated as specified. All stumps and roots having a diameter of one inch or larger shall be grubbed out to a depth of at least two feet below subgrade elevation for concrete structures and one foot below the ground surface at embankment sites and other designated areas.

Except as otherwise specified, each foundation surface shall be graded to remove surface irregularities and shall be scarified parallel to the axis of the fill or otherwise acceptably scored and loosened to a minimum depth of 2 inches. The moisture content of the loosened material shall be sufficient to insure a good bond between layers or shall be controlled as specified. The surface material of the foundation shall be compacted and bonded with the first layer of earthfill as specified for subsequent layers of earthfill.

Foundations for gravel fill shall not be scarified. Unless otherwise specified, foundations shall be compacted by routing earthmoving equipment over the entire surface. Soft or weak areas shall be excavated and backfilled with suitable material to provide a firm, uniform foundation.

Earth abutment surfaces shall be free of loose, uncompacted earth in excess of 2 inches in depth normal to the slope and shall be at such a moisture content that the earthfill can be compacted against them to produce a good bond between the fill and the abutments.

Rock foundation and abutment surfaces shall be cleared of all loose material by hand or other effective means and shall be free of standing water when fill is placed upon them. Occasional rock outcrops in earth foundations for earthfill, except in dams and other structures designed to restrain the movement of water, shall not require special treatment if they do not interfere with compaction of the foundation and initial layers of the fill or the bond between the foundation and the fill.

Foundation and abutment surfaces shall be no steeper than one horizontal to one vertical unless otherwise specified. Test pits or other cavities shall be filled with compacted earthfill conforming to the specifications for the earthfill to be placed upon the foundation.

4. Placement

Earth fill or drain fill shall not be placed until the required excavation and foundation preparation have been completed and the foundation has been inspected and approved by the engineer or other qualified official. Earth fill or drain fill shall not be placed upon a frozen surface nor shall snow, ice, or frozen material be incorporated in the earthfill matrix.

Fill shall be placed in approximately horizontal layers. The thickness of each layer before compaction shall not exceed the maximum thickness specified. Materials placed by dumping in piles or windows shall be spread uniformly to not more than the specified thickness before being compacted.

Hand compacted fill shall be placed in layers whose thickness before compaction does not exceed the maximum thickness specified for layers of earth backfill compacted by manually directed power tampers.

Earth backfill shall be placed in a manner that prevents damage to the structures and allows the structures to assume the loads from the earth backfill gradually and uniformly. The height of the earth backfill adjacent to a structure shall be increased at approximately the same rate on all sides of the structure.

Earthfill and earth backfill in dams, levees, and other structures designed to restrain the movement of water shall be placed to meet the following additional requirements:

(a) The distribution of materials throughout each zone shall be essentially uniform, and the earthfill shall be free from lenses, pockets, streaks, or layers of material differing substantially in texture, moisture content, or gradation from the surrounding material. Zone earthfills shall be constructed concurrently unless otherwise specified.
(b) If the surface of any layer becomes too hard and smooth for proper bond with the succeeding layer, it shall be scarified parallel to the axis of the fill to a depth of not less than 2 inches before the next layer is placed.
(c) The top surface of embankments shall be maintained approximately level during construction with two exceptions: A crown or cross-slope of about 2 percent shall be maintained to ensure effective drainage, or as otherwise specified for drainfill or sectional zones.
(d) Dam embankments shall be constructed in continuous layers from abutment to abutment except where openings to facilitate construction or to allow the

passage of streamflow during construction are specifically described in the design.

(e) Embankments built at different levels as described under (c) or (d) above shall be constructed so that the slope of the bonding surfaces between embankment in place and embankment to be placed is not steeper than 3 feet horizontal to 1 foot vertical. The bonding surface of the embankment in place shall be stripped of all material not meeting the requirements of this specification and shall be scarified, moistened, and recompacted when the new earthfill is placed against it. This ensures a good bond with the new earthfill and obtains the specified moisture content and density at the contact of the inplace and new earthfills.

Any damage to the foundation surface or the trench sides or bottom occurring during placement of drain fill shall be repaired before drain fill placement is continued.

Drain fill over and/or around pipe or drain tile shall be placed to avoid any displacement in line or grade of the pipe or tile.

5. Control of moisture content

During placement and compaction of earth fill and earth backfill, the moisture content of the material being placed shall be maintained within the specified range. Unless otherwise specified, the fill material shall be moist enough so that material can be formed into a ball between the hands without crumbling. If the ball crumbles, the material is too dry. If the ball extrudes out of the hand when squeezed tightly, the material is too wet.

The application of water to the earthfill material shall be accomplished at the borrow areas insofar as practicable. Water may be applied by sprinkling the material after placement on the earthfill, if necessary. Uniform moisture distribution shall be obtained by disking.

Material that is too wet, when deposited on the earthfill shall either be removed or be dried to the specified moisture content prior to compaction.

If the top surface of the preceeding layer of compacted earthfill or a foundation or abutment surface in the zone of contact with the earthfill becomes too dry to permit suitable bond, it shall either be removed or scarified and moistened by sprinkling to an acceptable moisture content before placement of the next layer of earthfill.

The moisture content for gravel fill shall be adequate to insure a firm, uniform compacted layer.

6. Compaction

Earthfill – Unless otherwise specified earthfill shall be compacted according to the specified compaction method requirements shown in Table 1 or an approved equivalent method. Each method will require the following general criteria;

1) Earthfill materials shall be placed and spread in horizontal layers.
2) Equipment speed shall not exceed 5 miles per hour.

3) Each layer shall be compacted by 4 passes of the specified equipment.
4) Each pass shall consist of at least one passage of the specified equipment over the entire surface of the layer.

Table 1: Earthfill compaction method requirements.				
Compaction Method	Equipment	Pressure (psi)	Maximum layer thickness (in)	Maximum rock size (in)
C1	Tamping roller (sheepsfoot)	100	9	6
C2	Pneumatic (rubber tire) Roller	80	9	6
C3	Loaded earth moving equipment	25	8	5
C4	Wheel type tractor (100 hp)	10	6	4
C5	Track type tractor	8	6	4

The compaction method shall be: _____.

Earth fill – Earth backfill adjacent to structures shall be compacted to a density equivalent to that of the surrounding inplace earth material or adjacent required earthfill or earth backfill. Unless otherwise shown in the drawings, the fill material shall be free of rocks over 3 inches and shall be placed in 4 inch horizontal layers. Compaction shall be accomplished by hand tamping or manually directed power tampers, plate vibrators, walk-behind, miniature, or self-propelled rollers. Unless otherwise specified heavy equipment including backhoe mounted power tampers or vibrating compactors and manually directed vibrating rollers shall not be operated within 2 feet of any structure. Towed or self-propelled vibrating rollers shall not be operated within 5 feet of any structure. Compaction by means of drop weights operating from a crane or hoist is not permitted.

Compaction of earth backfill adjacent to structures shall not be started until the following time intervals have elapsed after placement of the concrete unless with permission of the engineer.

Structure	Time interval (days)
Vertical or near-vertical walls with earth loading on one side only	14
Walls backfilled on both sides simultaneously	7
Conduits and spillway risers, cast-in-place (with inside forms in place)	7
Conduits and spillway risers, cast-in-place (inside forms removed)	14
Conduits, pre-cast, cradled	2
Conduits, pre-cast, bedded	1
Slabs and curbs	2
Cantilever outlet bents (backfilled both sides simultaneously)	3

Drain fill – Drain fill shall be compacted according to the general criteria and compaction method C3 or C4 specified for earthfill unless otherwise specified.

7. Reworking or removal and replacement of defective fill

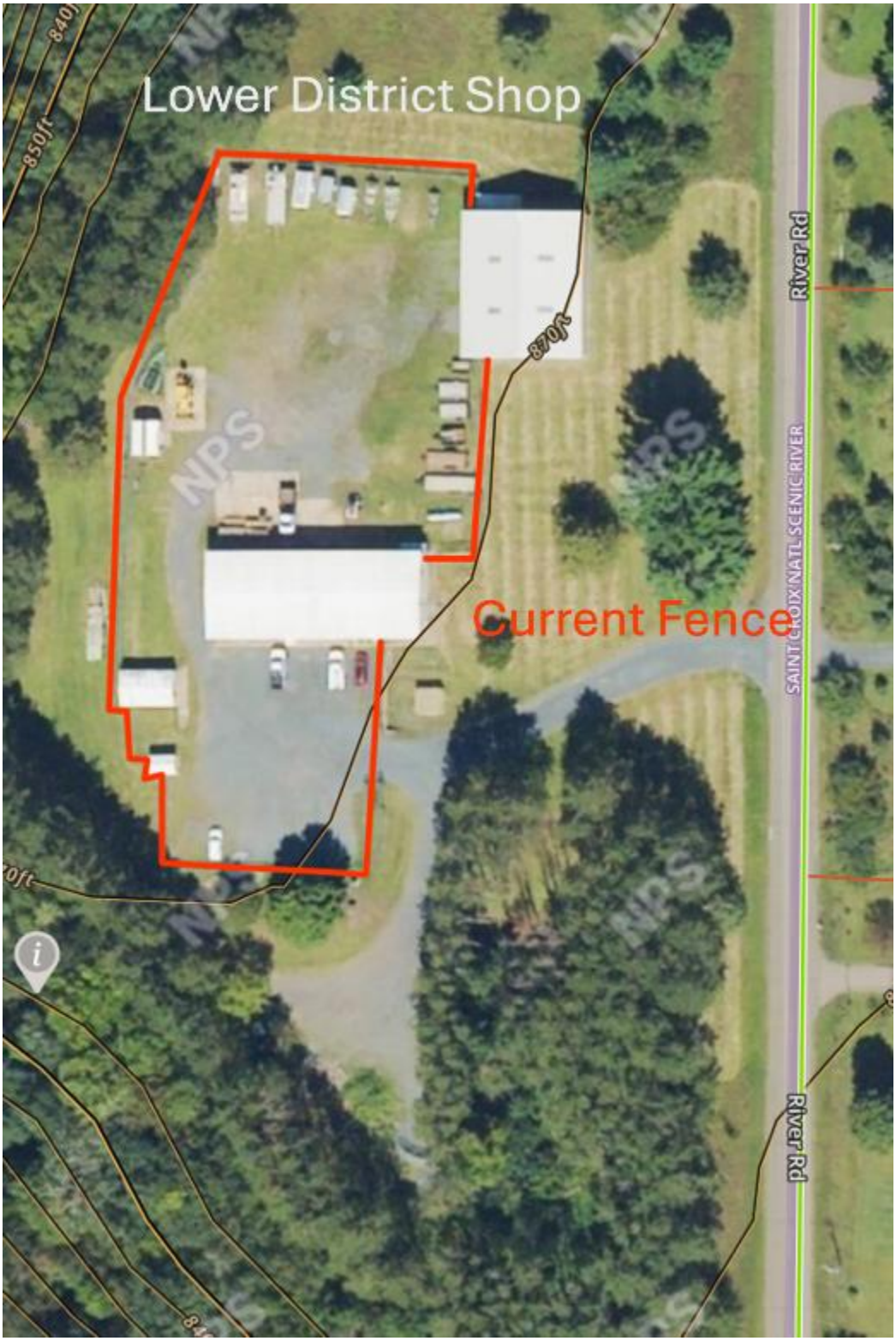
Fill placed at densities lower than the specified minimum density or at moisture contents outside the specified acceptable range of moisture content or otherwise not conforming to the requirements of the specifications shall be reworked to meet the requirements or removed and replaced by acceptable earthfill. The replacement earthfill and the foundation, abutment and earthfill surfaces upon which it is placed shall conform to all requirements of this specification for foundation preparation, approval, placement, moisture control, and compaction. Plan method of replacement shall be agreed upon with the engineer before work begins.

8. Testing

During the course of the work, the engineer or designee will perform quality assurance evaluations to determine the specified materials, moisture content, and specified compaction method requirements are being met.

9. Specific details

Appendix A Site Plan



Lower District Shop
New Fence
New SlideGate
Staging
Areas
Potential Bin
Block Locations
New Swing Gate
River Rd
SAINT CROIX NATL SCENIC RIVER
870ft
840ft
850ft
NPS

Proposed Fence
28.4yds
28.4yds
24.1yds
4.4yds
6.6yds
Staging Area
Rays Garage
Ice Age Trl
780ft
SAINT CROIX NATL SCENIC RIVER
240th St

Appendix B Project Photos

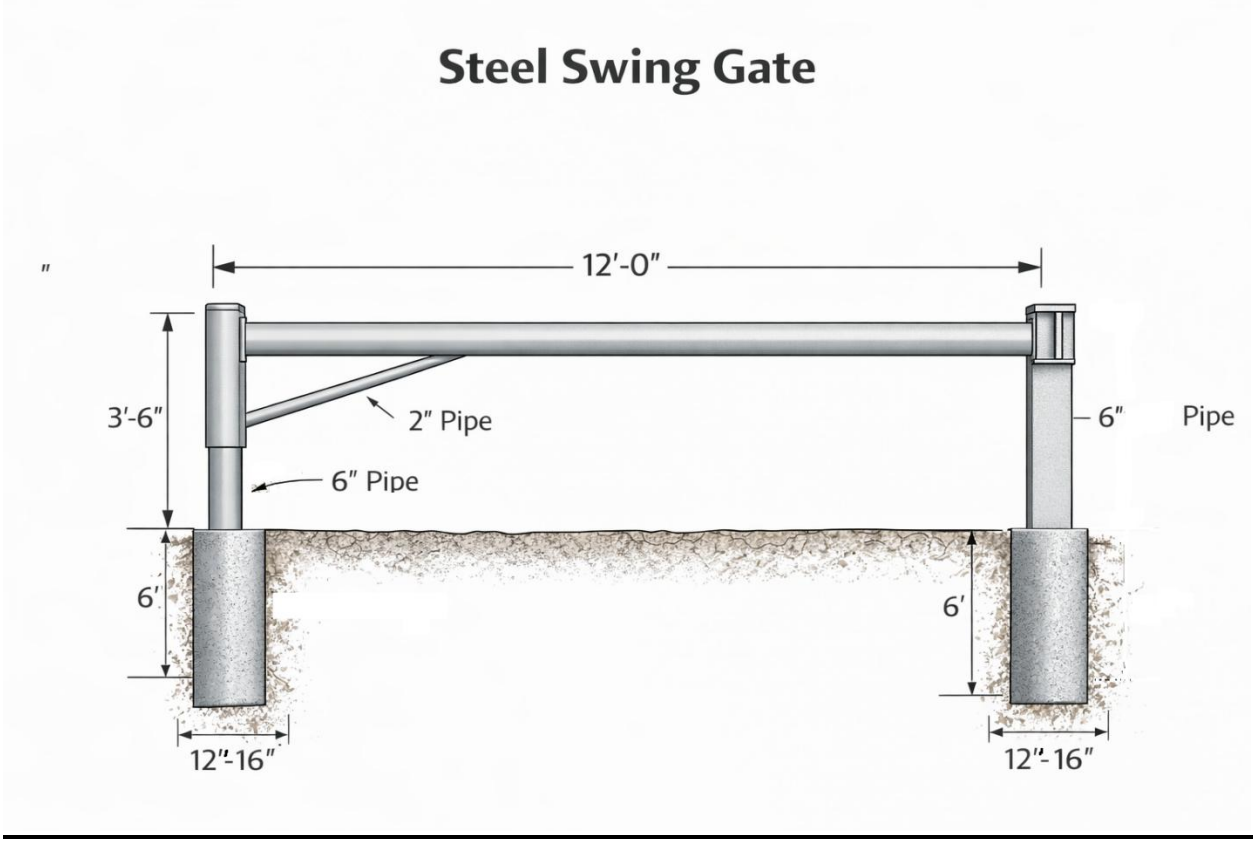
Lower District Shop

Rays Garage

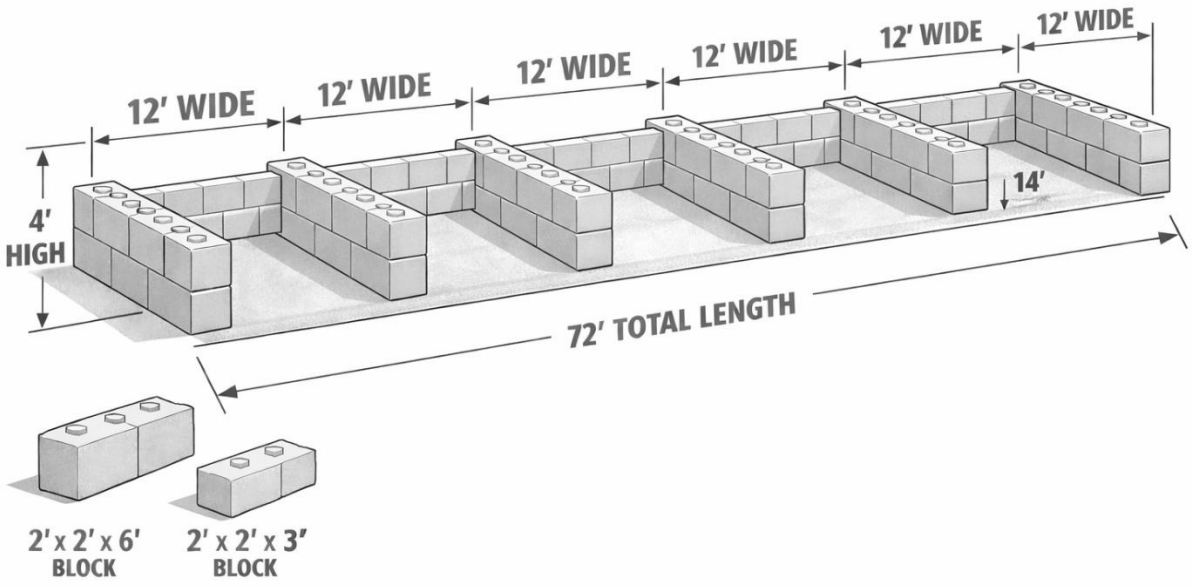
Current Material Storage

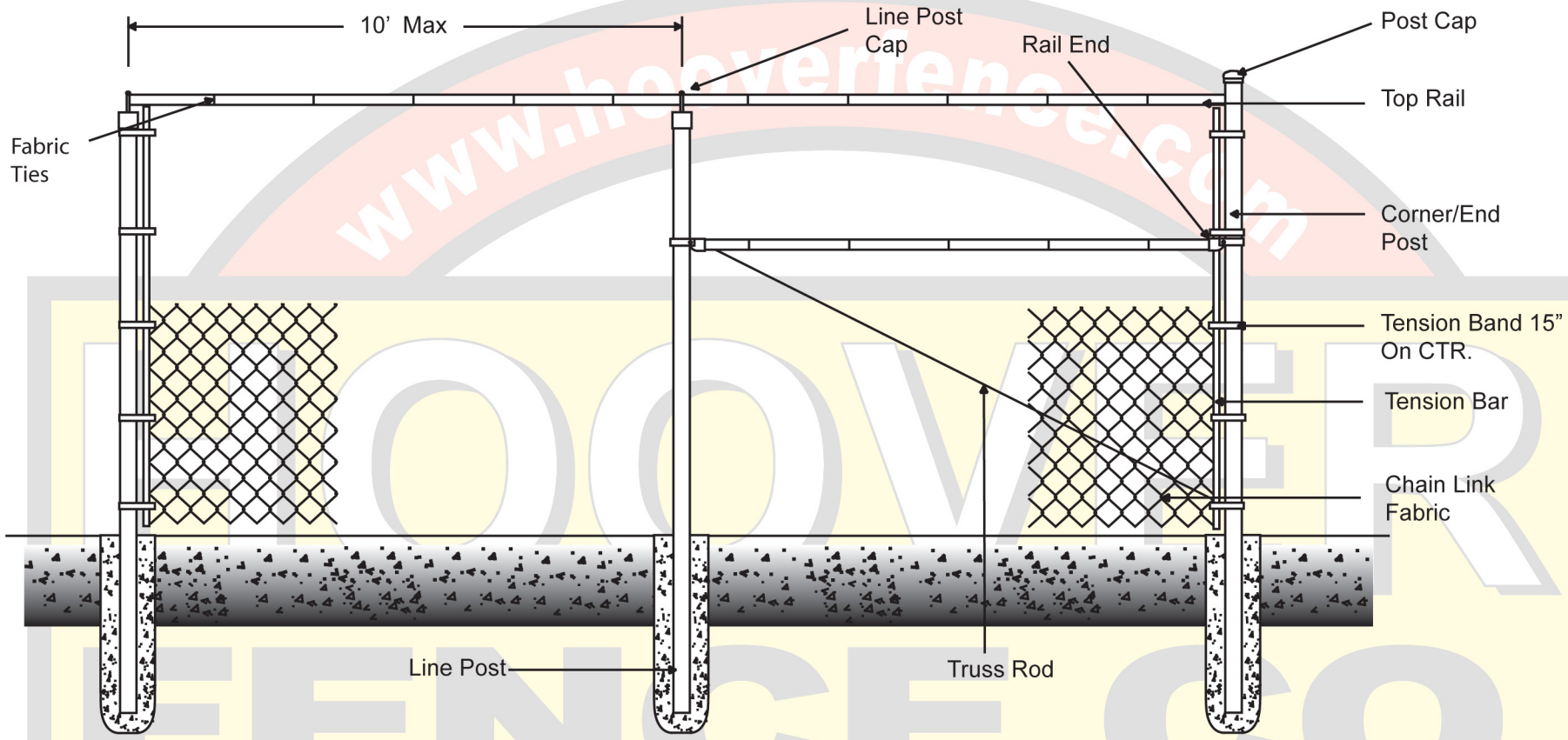
Proposed Material Storage Example

Appendix C Project Drawings



MATERIAL STORAGE BINS



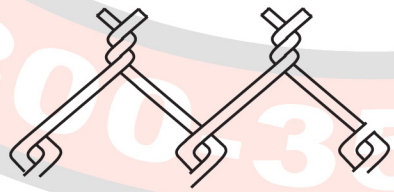


Fabric	Height	Mesh	Gage	Selvage	Finish
Framework		O.D.	Wall	Wt. per ft.	Length
End/Corner Post					
Line Post					
Rails					
Gate Frame					
Gate Post					

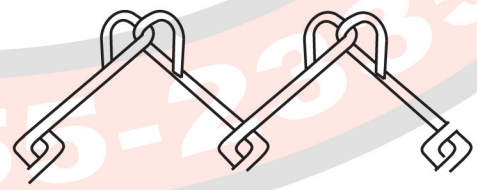
Notes

- Gate Fabric to match fence
- For more information please see www.hooverfence.com

Twist or Barb Selvage



Knuckle Selvage



Last Revised: 10-02-06

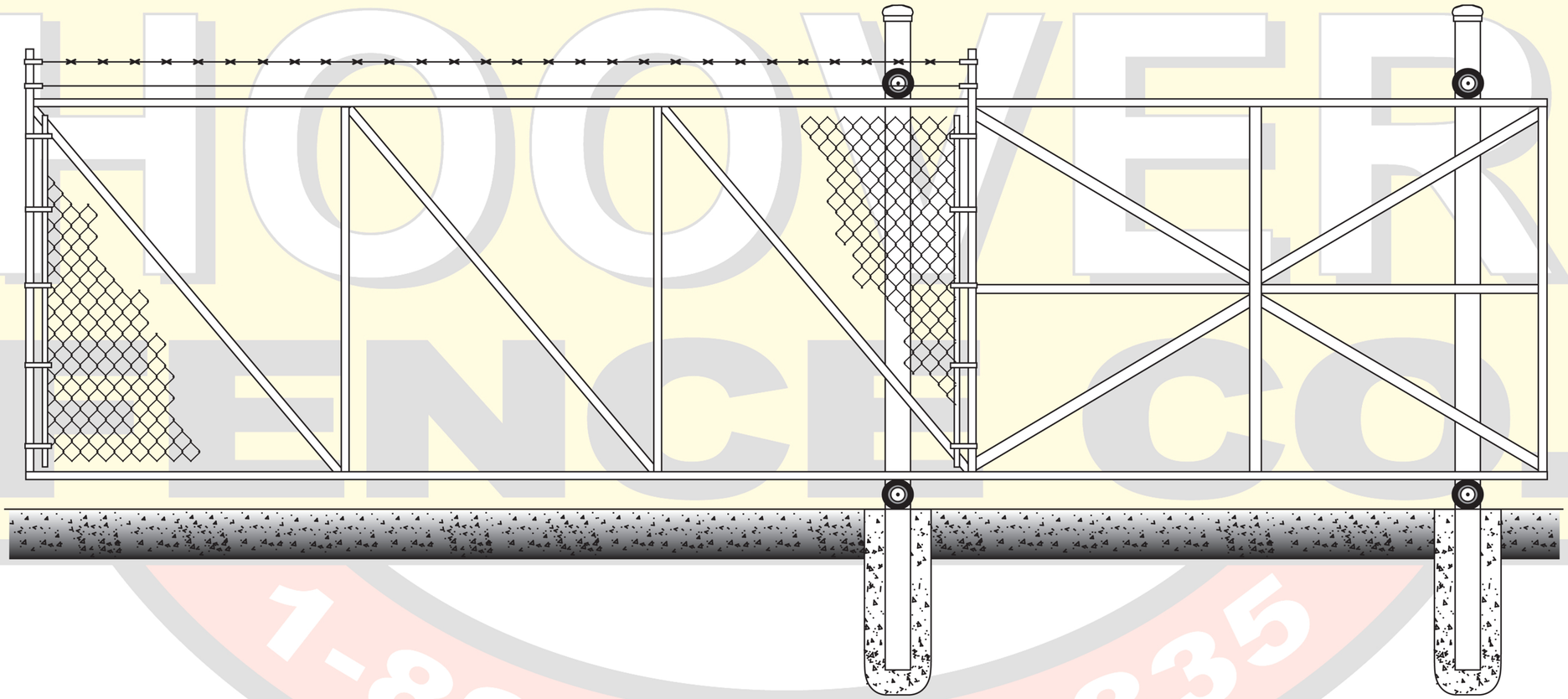
HOOVER FENCE CO. www.hooverfence.com 1-800-355-2335

Standard Chain Link Fencing

Standard ChainLink Fence W/Top Rail & Brace Assembly

Approved By/Date	Revision NO.	Drawing NO.
Drawn By	Effective Date	

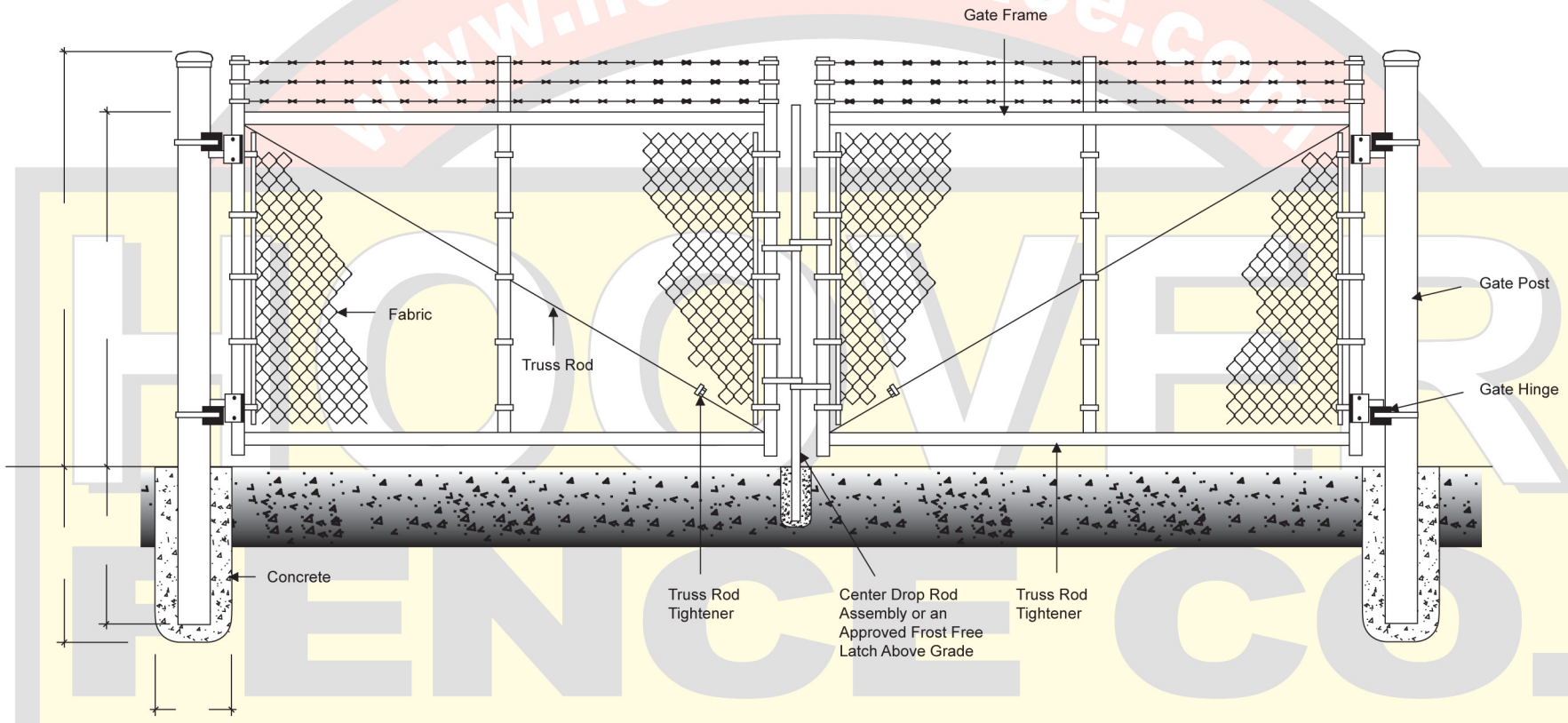
www.hooverfence.com
HOOVER FENCE CO.
1-800-355-2335



Project:

Full Cantilever Slide Gate Detail

Approved By/Date:	Revision NO:	Drawing NO:
Drawn By:	Effective Date:	



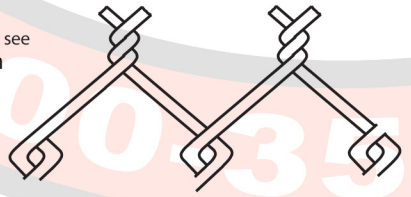
Fabric	Height	Mesh	Gage	Selvage	Finish

Framework	O.D.	Wall	Wt. per ft.	Length
End/Corner Post				
Line Post				
Rails				
Gate Frame				
Gate Post				

Notes

- Gate Fabric to match fence
- For more information please see www.hooverfence.com

Twist or Barb Selvage



Knuckle Selvage

Last Revised: 10-03-06

HOOVER FENCE CO. 1-800-355-23335

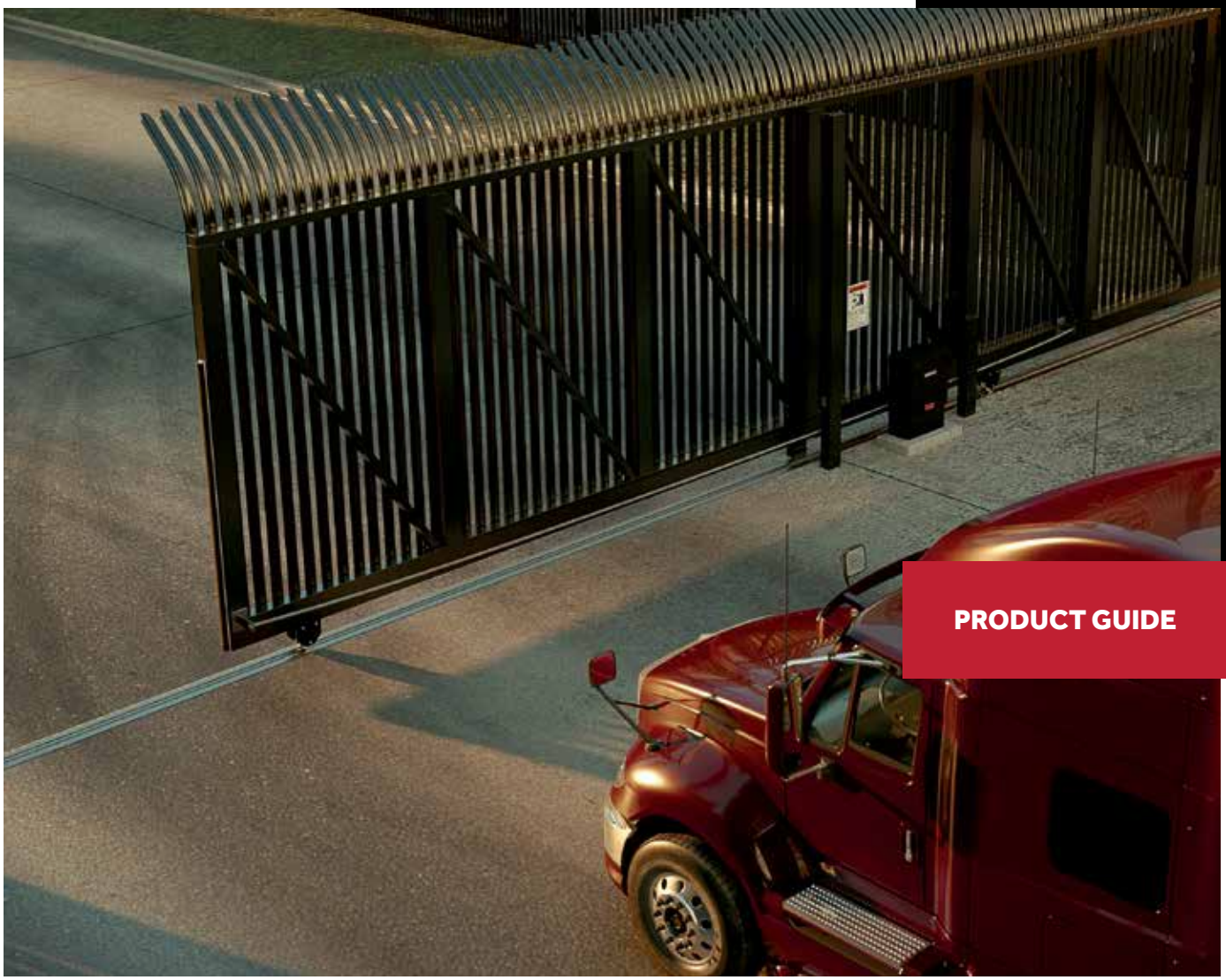
Standard Chain Link Fencing

Industrial Gate Detail

Approved By/Date	Revision NO.	Drawing NO.
Drawn By	Effective Date	

IHSL24UL / INSL24UL

24VDC Heavy-Duty Industrial Slide Gate Operator



PRODUCT GUIDE

LiftMaster

POWERED BY myQ

IHSL24UL / INSL24UL

24VDC Heavy-Duty Industrial Slide Gate Operator

The LiftMaster® Heavy-Duty Industrial Slide Gate Operator builds on the brand's legacy of reliability. With the strength to effortlessly move 5,500-pound gates, the operator allows Facility Managers to focus on everyday responsibilities without worrying about failure or frequent maintenance. Easy to install, retrofit, program, and troubleshoot, it delivers worry-free continuous-duty operation-even in extreme weather conditions. The operator consistently lives up to the tireless demands of manufacturing, transportation, municipality, utility and warehouse environments. It also works as a complete system when paired with safety devices and offers full control over access points via myQ® technology.

MRIN Mounting Accessory

Popular features

Brushless DC Technology
Continuous-duty motor is more efficient and requires less maintenance, providing reliable DC performance 24/7.

Robust, Lockable Enclosure
14 ga. steel, weatherproof (NEMA 3R rated) cabinet prevents unauthorized access into the operator and protects it from the environment.

Pad and Retrofit Mounting Options
Optional riser (MRIN) makes it easy to replace an existing operator, providing multiple mounting positions and better protection from the climate.

Smooth Start/Stop Operation
Extends the life of the operator and gate hardware.

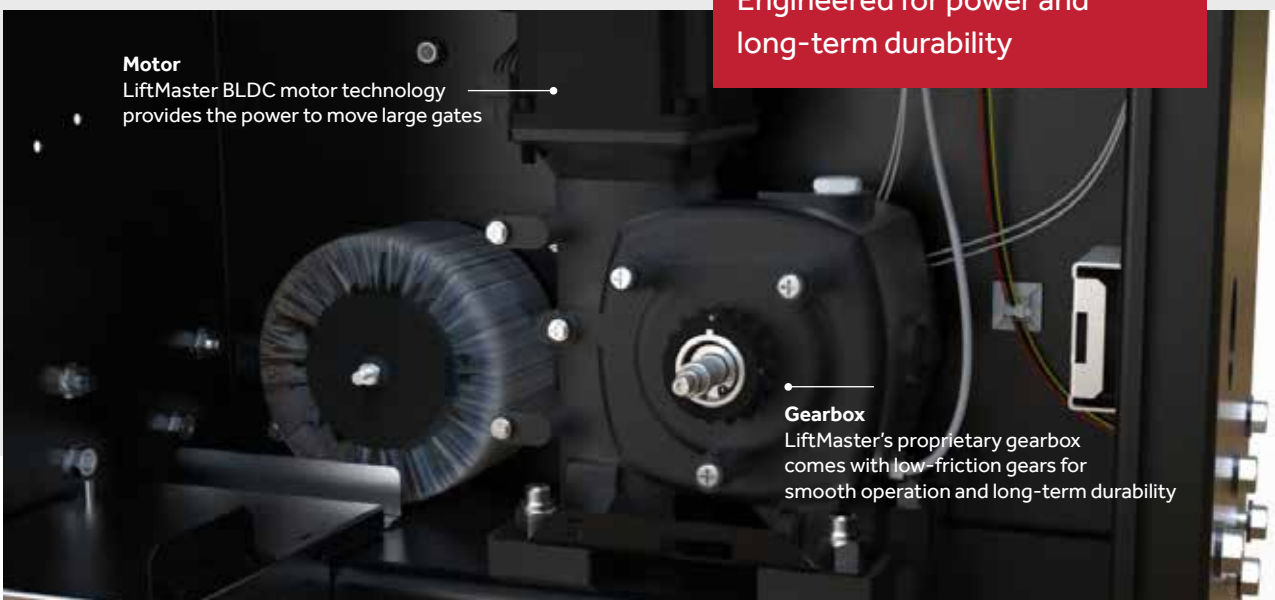
Battery Backup
Provides seamless operation by providing standby power when the power is down.

Industrial Grade Gear-Driven Transmission
Rugged and efficient performance for reliable operation, including Class III & IV applications.

Manual Disconnect
Lockable position allows gate to be opened manually when released.

UL® Listed
Gate operator and monitored safety protection devices are tested together to provide a robust, secure system.

Engineered for power and long-term durability



Connect and stay on top with myQ.

CAPAC

myQ Smart Facility Access is a cloud-based solution that keeps you up to date and in control of all of your facility's access points. This allows you to work smarter, improve efficiencies and reduce expenses.*

*When linked with an access control, Powered by myQ, cellular data or Wi-Fi® connection required. Test equipment regularly and follow safety instructions.

Included accessories

S505AL

Monitored Small Profile Resistive Edge
Provide entrapment protection using a pressure-sensitive edge to sense an obstruction in the path of a moving gate. Ideal for low-clearance applications the S505AL is compatible with hardwired or wireless gate applications, in virtually any environment.

LMRRUL

Monitored Retro-Reflective Photo Eye
Provide entrapment protection using this retro-reflective photo eye. The LMRRUL is equipped with a heater for harsh environments and is engineered with a wide beam for ease of alignment at installation; max. range: 50 ft.

Learn more about our Gate Operator Safety Devices at LiftMaster.com/GOSafety.

Recommended accessories

Photo Eyes
Provide entrapment protection with photo eyes at your gate, with your option of retro-reflective or through-beam technology (LMTBUL). LiftMaster Gate Operators come with weatherproof safety entrapment protection devices included. **See the NOTE below.**

Edges
An edge is a pressure-sensitive safety entrapment protection device that senses an obstruction in the path of a moving gate. It sends a signal to the operator. The operator will stop or reverse the gate. Add the LMWEKITU to eliminate the need for wiring between LiftMaster Monitored Resistive Edges and Gate Operators.

Loop Detectors/Loops
Loops prevent the gate from closing on a vehicle in its path by sensing a vehicle using loop wire that is installed in the ground. Add the LOOPDETLM detector, which plugs into the board for ease of installation.

MRIN Riser Mount
Supports pad mounting and retrofit to SL585UL operators.

Access
Always ensure a way in or out with access products, such as LiftMaster Remote Controls (811LMX). For full visualization of your access points in and out of your facility, connect your gate operator to myQ Facility.

Note:
It is the responsibility of the installer to install external monitored entrapment protection devices for each entrapment zone. Refer to the operator installation manual for specific requirements.

Features

Mechanics
- 24VDC Brushless DC motor drive
- Continuous-duty, high-cycle, high-temperature
- Industrial oil bath gearbox
- Chain: #50 IHSL24UL, #40 INSL24UL

Power
- 120/230V single-phase
- 3PHCONV optional kit converts an input voltage of 208/230/460/575VAC to an output voltage of 120VAC
- Accessory power: 24VDC 1.0A output; switched and unswitched power

Speed
- 0.5-1 ft. per second (variable)

Industrial-Grade Design
- Lockable steel cabinet, weatherproof (NEMA 3R rated)
- UL® usage classification: II, III and IV
- Operator weight: 129 lbs. (INSL24UL) 142 lbs. (IHSL24UL)

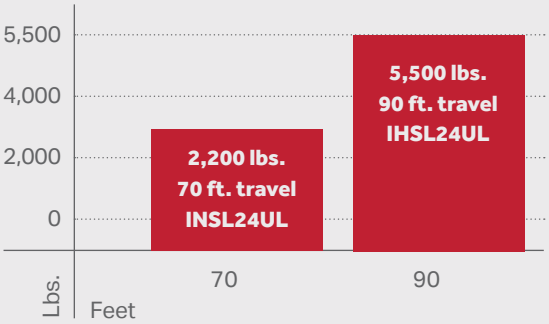
Features
- Easy to use manual disconnect
- LED diagnostic display: simplifies installation and troubleshooting
- Quick close and anti-tailgate quickly secure property, preventing unauthorized access
- Monitored safety inputs: 3 main board, 3 expansion board
- Programmable auxiliary relays: make adding additional features easy
- Security+ 2.0® on-board radio receiver: Up to 50 remote controls (unlimited with 811LMX/813LMX)
- Posilock® automatically closes the gate when it is pushed from the closed limit

Note: Not recommended for solar applications.

Business partners

For Sales | 800.282.6225
For Technical Support | 800.528.2806
For Billing | 800.323.2276
To Learn More | LiftMaster.com/UL325Gates

Maximum Capacity



Battery Backup Operation (IHSL24UL / INSL24UL)

	7Ah Battery	33Ah Battery
Cycles	20/55	60/170
Standby Time	105/105 days	180/180 days

(cycles and standby time based on stand-alone system)

Temperature

Without heater	-4°F (-20°C) – 140°F (60°C)
With heater (HTR)	-40°F (-40°C) – 140°F (60°C)

Dimensions

Chassis	24.1" W (69.2 cm)	25.3" H (64.2 cm)	17.7" D (44.9 cm)

Warranty
- 5 years commercial

Carton Contents
- Operator
- Chain – #50 IHSL24UL (25 ft.), #40 INSL24UL (30 ft.)
- S505AL ▪ LMRRUL ▪ Mounting Hardware ▪ Antenna

Scan to learn more about:

IHSL24UL Available Now

INSL24UL Coming Soon in Late Summer

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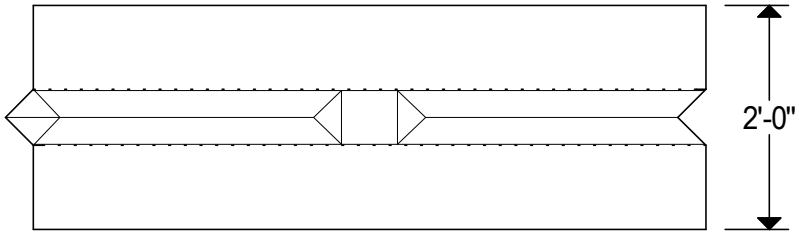
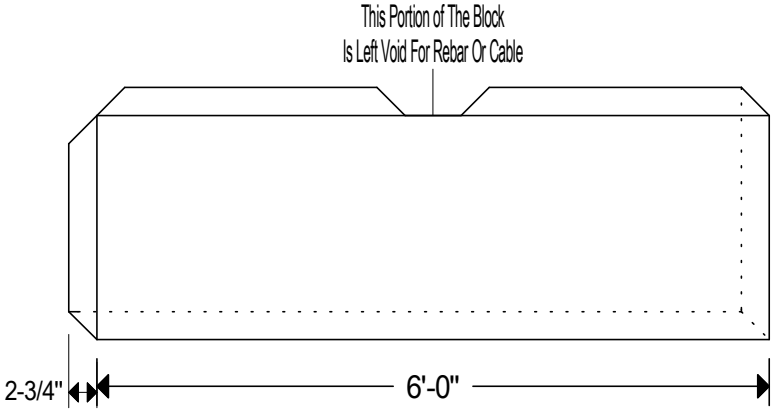
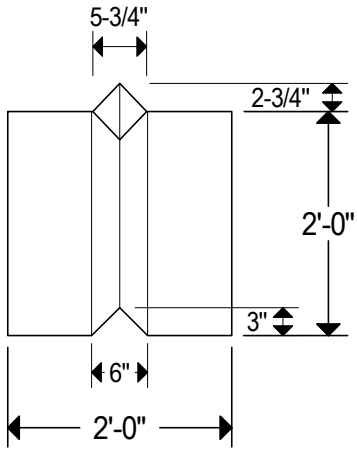
Plan



Elevation



Side View Elevation



Notes:

Lifting Plan - Use Rebar Or Cable.

Weight - 3,600 lbs.

CONCRETE BLOCK SUPPLY
833-763-1711

6.0'x 2.0'x 2.0' O.D. Full Bin Block Detail

No Scale

Dresser Trap Rock Inc.
1000 East Avenue, Dresser, WI 54009 - (715) 483-3216

Dresser Trap Rock Gradations

Gradations may be representative of products currently produced.

DRIVEWAYS

Product 816 – Class 5

Sieve Size	*% Passing*	*Production Average*
3/4”	90-100	100
3/8”	50-90	82
#4	35-80	53
#10	20-65	31
#40	10-35	14
#200	3-10	8

Product 817 – 2361 Modified

Sieve Size	*% Passing*	*Production Average*
3/8”	100	100
#4	60-90	81
#8	30-60	49
#16	20-50	30
#30	10-40	20
#50	10-30	13
#100	5-20	9
#200	0-15	7

Product 813 – Trap Rock Sand

Sieve Size	*% Passing*	*Production Average*
#4	90-100	100
#8	60-100	99
#16	30-70	67
#30	10-50	41
#50	5-30	24
#100	0-25	15
#200	0-15	11

DECORATIVE ROCK

Product 814 – 3/4” Rock

Sieve Size	*% Passing*	*Production Average*
3/4”	100	100
1/2”	60-90	73
3/8”	30-60	45
#4	0-25	4
#8	0-15	2
#30	0-10	1
#200	0-1	1