REQUEST FOR PROPOSAL (RFP)

Chesapeake Conservancy and the Centre County Conservation District are soliciting proposals for a roofed heavy use area/manure storage facility, pasture watering system, grassed waterway and stream crossings for a beef operation in Warriors Mark, PA. Services include the following:

- Excavation
- Concrete
- Building

Contractors may bid on one or more services.

RFP OVERVIEW

RFP Release Date: June 13, 2024

Landowner: Barron Stine

Project Location: 4735 Halfmoon Valley Road
Warriors Mark, PA 16877
Centre County

Issuing Office: Chesapeake Conservancy
Contact Email: paprograms@chesapeakeconservancy.org
Contact Phone: 570-372-4065
The issuing office is the sole point of contact for this proposal.

Partner Agency: Natural Resources Conservation Service (NRCS)

Site Showing and Pre-Bid Meeting: **A mandatory site showing and pre-bid meeting will be held at the project location on:**
June 25, 2024 at 10:00 am EDT.
Proposals will not be accepted from bidders who do not attend the pre-bid meeting.

Registration for the Site Showing and Pre-Bid Meeting is required:
Registration Deadline: June 20, 2024
Registration By Phone: 570-372-4075
Registration By Email: paprograms@chesapeakeconservancy.org
Include "Stine Registration" in the subject line.

RFP Due Date: **All proposals must be submitted by:**
July 16, 2024 at 4:00 pm EDT.
Proposals will not be accepted after this date and time.

RFP Submission: **All proposals must be submitted electronically, or hand-delivered in person**
DO NOT MAIL BIDS – BIDS WILL NOT BE ACCEPTED THROUGH U.S. MAIL.

Email: paprograms@chesapeakeconservancy.org
Include "Stine RFP Submission" in the subject line.

In-Person: Chesapeake Conservancy
Attention: Kathy Rohrer/Stine RFP
Susquehanna University, Freshwater Research Institute Building
1250 West Sassafras Street, Selinsgrove, PA 17870
A drop box is located inside the main entrance and is accessible at any time.

RFP Award Notification: Notification of award will be made no later than: July 23, 2024

Questions: All questions should be submitted electronically to:
Email: paprograms@chesapeakeconservancy.org
Phone: Kathy Rohrer, 570-372-4075

Project Description:

Roofed Heavy Use Area/Manure Storage Facility for Beef Operation

The successful contractors will be responsible for the excavation and building of a heavy use area/manure storage facility and all associated Best Management Practices (BMP)s. BMPs include but are not limited to waste storage facility, heavy use area, roofs and covers, access road, animal trail and walkway, roof runoff structures, livestock pipeline, underground outlets, subsurface drain and diversion. Project includes installation of 1" waterline and connecting it to nearby existing spring fed waterline. Waterline must be dug, placed and properly backfilled to supply water to the new animal housing facility. A two-bowl frost free fountain must be installed in the heavy use area structure where indicated on the design drawings.

Pasture Watering System

The successful contractor will be responsible for installation of a two-bowl frost-free waterer and 1" waterline and connecting it to nearby existing spring fed waterline. Waterline must be dug, placed and properly backfilled to supply water to the new waterer.

Grassed Waterway

The successful contractor will be responsible for the installation of a grassed waterway, subsurface drain and outlet.

Stream Crossings

The successful contractor will be responsible for the installation of two stream crossings.

NRCS Design/Drawings and Specifications

NRCS design/drawings and specifications for the heavy use area/manure storage facility are included as Attachment A. Copies will also be made available at the site showing.

Please note – the design/drawings for the grassed waterway and stream crossings are not included with Attachment A. The NRCS design/drawings for these practices will be provided at the site showing. Electronic copies will be emailed as soon as they are available.

All installed practices must meet NRCS specifications.

RFP TERMS AND CONDITIONS

Selected contractors will be working with Chesapeake Conservancy, Centre County Conservation District and NRCS on the implementation of this project.

CONSTRUCTION SCHEDULE:

Contractors shall include with their response a proposed construction schedule. At a minimum the construction schedule should include the proposed start date, how long it will take to complete the critical tasks of the project and the estimated completion date. Target construction is Summer/Fall 2024.

If the project is not completed within the designated time period (contract end date), the contract can be extended if agreed to in writing by Chesapeake Conservancy and the contractor.

PA ONE CALL:

Contractor shall follow all laws and regulations relating to the Pennsylvania One-Call System. Before beginning the project, the contractor shall submit a Locate Request to the Pennsylvania One-Call System to assist with the prevention of accidental damage to underground public utilities. If designing the project, the contractor shall also submit a Final Design Notification to the Pennsylvania One-Call System.

PA One Call:	***1-800-242-1776 or 811***
Project Final Design Serial #:	***20241161126***

EROSION AND SEDIMENT POLLUTION CONTROL PLAN:

Contractor is responsible for implementing the E&S plan that is included as part of the NRCS design/drawings and specifications in Attachment A.

COMMUNICATION AND CRITICAL TASKS:

Communication between the contractor, NRCS, Centre County Conservation District and Chesapeake Conservancy is crucial to a successful project. Each contractor shall notify NRCS and Centre County Conservation District when they will be working onsite. Notification to NRCS is required for "Critical Tasks". The contractor must contact NRCS at least 24 hours before the start of work on that task. Work must be done Monday through Friday between the hours of 7:00 am and 5:00 pm unless approved by NRCS. Failure to notify NRCS may result in inadequate inspection of construction and the inability to certify that the installation meets the NRCS standards and specification. Payment cannot be made on practices that have not been certified to NRCS standards. Below are the Critical Tasks requiring notification:

- Starting Construction
- Placement and backfilling of any pipes
- Installing any stone bedding for concrete
- Placement of any concrete (flatwork, walls, curbs)
- Delivery and setting of trusses
- Placement of access road and animal walkways

PAYMENT TERMS:

This project is being funded by **multiple grant sources** including an NRCS Regional Conservation Partnership Program (RCPP) grant. The remaining project funding is through the Centre County Conservation District's Countywide Action Plan (CAP) resources and Chesapeake Conservancy grants. Selected contractors will receive payments from the Operator, the District and the Conservancy. To determine the amount that the District and Conservancy will pay the contractor, NRCS cost share amounts need to be calculated first. Once the District's and Conservancy's portion of the payment is calculated, BMP(s) have been certified by NRCS and all required documentation has been received by the contractor (invoice, Prevailing Wage Weekly Payroll Certification forms), the District and Conservancy will issue payment. Conservancy payments are typically made within thirty (30) days after all these requirements have been met.

PREVAILING WAGE REQUIREMENTS:

Prevailing Wage Rates apply to all *construction labor* for this RFP and any resulting contracts. The awarded contractor and any subcontractors shall comply with the provisions of the Act of August 15, 1961 (P.L. 9 87), as amended known as the "Pennsylvania Prevailing Wage Act" and the Regulations issued pursuant thereto by the Department of Labor and Industry. The awarded contractor shall include these requirements in all subcontracts for the project.

The project is registered with the Pennsylvania Department of Labor and Industry as follows:

Project Name	Serial Number	Classification
Stine Farm Improvement Project	24-05461	Building/Heavy/Highway

Refer to this project when determining the correct project wage rates. Copies of the Bureau of Labor Law Compliance Prevailing Wage Rates and note definitions are included with Attachment B along with other important prevailing wage information.

The awarded contractor(s) and any subcontractors shall submit "Weekly Payroll Certification For Public Works Projects" forms and any other required documentation to Conservancy on a weekly basis and the first and last "Weekly Payroll Certification For Public Works Projects" forms are required to be notarized. Failure to do so will put contractor in non-compliance with the PA Department of Labor.

The awarded contractor and any subcontractors shall post the prevailing wage poster and a list of prevailing wage rates at the project location and where paychecks are distributed (typically the contractor's office).

Contractors shall include the Prevailing Wage Rate Compliance Form (Attachment C) with their RFP response.

EQUAL EMPLOYMENT OPPORTUNITY:

Chesapeake Conservancy is an equal opportunity employer. The successful bidder shall comply with all federal, state, and local equal employment opportunity requirements. Additional information can be found at https://www.ecfr.gov and searching 41 CFR 60-1.4(b).

SMALL BUSINESS AND SMALL DIVERSE BUSINESS:

Chesapeake Conservancy encourages the use of small and small diverse businesses when soliciting Requests for Proposals. Contractors are encouraged to register with the federal government at www.sam.gov and with the Pennsylvania Department of General Services at www.dgs.pa.gov (search Small Diverse Business Verification).

Contractors and any subcontractors who register on Sam.gov and with the PA Dept of General Services and who qualify as a small and/or small diverse business should check the applicable boxes on the Contractor Response Form.

SAFETY PERFORMANCE:

Contractors shall provide safety performance information including OSHA records and EMR on their company and any subcontractors.

OSHA Records:

- OSHA reportable incidents for the past three (3) years. If there were no OSHA reportable incidents, indicate "none". See https://www.osha.gov/recordkeeping/ for additional information.
- TRIR (Total Recordable Incident Rate) which is the number of incidents x 200,000 / total number of employee hours worked in a year.
- DART (Days Away, Restricted or Transferred Rate). See https://data.bls.gov/iirc/ to determine the value.

Contractors whose business is not required to keep OSHA records because they have 10 employees or less should check the applicable box on the Contractor Response Form.

Experience Modifier Rate (EMR):

- EMR provided by the insurance company.

DEBARMENT AND TAX LIABILITY:

Contractors are required to certify that they and any subcontractors are not listed on the Debarment and Suspension List maintained by the Pennsylvania Department of General Services (https://www.dgs.internet.state.pa.us/debarmentsearch/debarment/index) and the General Services Administration's List of Parties Excluded from Federal Procurement or Nonprocurement Programs (https://www.sam.gov/search/) in accordance with Executive Orders 12549 and 12689, "Debarment and Suspension" and have no outstanding tax liabilities. Contractor will also be required to certify that they and any subcontractors are not in default of a loan or funding agreement administered by any Commonwealth agency.

INSURANCE REQUIREMENTS:

Bidders shall include a copy of their current Certificate of Insurance that reflects their existing levels of liability insurance coverage. Chesapeake Conservancy will work with the successful bidder to ensure adequate levels of insurance are in place for the project prior to finalizing a contract.

Preferred levels of coverage include the following:

Type of Insurance Coverage	***Limit Required***
Workers Compensation and Employer's Liability -	Statutory
Bodily Injury, Each Accident:	State Minimum
Bodily Injury By Disease, Each Employee:	State Minimum
Bodily Injury/Disease, Policy Limit:	State Minimum
General Liability -	
Each Occurrence (Bodily Injury and Property Damage):	$1,000,000
General Aggregate:	$1,000,000
Excess or Umbrella Liability -	
Per Occurrence:	$1,000,000
General Aggregate:	$2,000,000
Automobile Liability -	
Combined Single Limit (Bodily Injury and Property Damage):	$1,000,000

Once Chesapeake Conservancy and the successful bidder have reached an agreement pertaining to the levels of insurance needed for the project, the successful bidder and any subcontractor shall add "**Chesapeake Conservancy"** and "**National Fish and Wildlife Foundation**" as additional insured on their policy and shall provide Chesapeake Conservancy with a certificate of insurance documenting this coverage certified as current by a licensed insurance broker.

Note: Bidders do not need to add the additional insured to their policy when responding to the RFP. Only the successful bidder will be required to name the additional insured on their policy after the bid is awarded. The Certificate Holder should be as follows: Chesapeake Conservancy, 1212 West Street, Annapolis, MD 21401.

GRANTS:

The terms and conditions of the Conservancy's National Fish and Wildlife Foundation Small Watershed Grant and the District's Countywide Action Plan (CAP) program apply to the contracts that result from this RFP.

SUBMISSION OF BIDS AND SELECTION CRITERIA

SUBMISSION OF BIDS

A. Bids are requested for the items described in the project description and NRCS Design/Drawings and specification, in accordance with the Terms and Conditions included in this RFP. The contractor is responsible for determining the quantities needed to complete the project based on the provided bid documents.

   Contractors may bid on one or more of the services. Separate contracts may be issued.

   At a minimum each bid response must include:

   - Contractor Response Form
     - Price
     - Three References
     - List of subcontractors used (if applicable)
     - Proposed start date
     - Proposed completion date
     - Safety Performance
     - Debarment and Tax Liability Certification
     - Signed by Authorized Representative
   - Construction Schedule
   - Current Certificate of Liability Insurance
   - Prevailing Wage Rate Compliance Form

B. All proposals must be submitted electronically, or hand-delivered to Chesapeake Conservancy by the RFP due date specified on Page 1 of the RFP.

   It is the responsibility of each Contractor to ensure that the bid is received prior to the due date and time for submission of bids. No bid shall be considered if it was sent or received after this date and time.

C. Bids must be firm. If a bid is submitted with conditions or exceptions or not in conformance with these terms and conditions, it shall be rejected. The bid shall also be rejected if the items offered by the contractor are not in conformance with the specifications as determined by the Issuing Office.

CONTRACTOR SELECTION CRITERIA:

A. Contractors will be evaluated on the criteria listed in Attachment D.

B. Bids will be awarded to the most qualified economical bidder, as determined by the Issuing Office. The bids and bidders will be scored against a criteria that balances price and perceived risk.

C. The Issuing Office reserves the right to reject any and all bids and/or cancel the bid for any reason and to waive any technical defects, if it determines that it is in the best interest of the Landowner or the Issuing Office.

CONTRACTOR BID FORM
Page 1 of 2

Contractor Name: _____

Project Name: Barron Stine / Roofed Heavy Use Area and Manure Storage Facility
Project Location: 4735 Halfmoon Valley Road, Warriors Mark, PA 16877 (Centre County)

The following bid is submitted in response to the RFP for the project identified above. The price is based on my knowledge of information contained within the RFP and provided at the site showing/pre-bid meeting. This bid will remain valid for 90 days after submission. If awarded the RFP, I agree to sign a contract with the Chesapeake Conservancy and Centre County Conservation District.

1. Total price to supply materials, labor, and equipment for performing the work as outlined in the RFP Project Description and NRCS Design/Drawings and Specifications that were provided. Contractors may bid on one or more services - ***Required***:

   Heavy Use Area/Manure Storage Facility for Beef Operation

   Excavation $_____

   Concrete $_____

   Building $_____

   Pasture Watering System $_____

   Grassed Waterway $_____

   Stream Crossing $_____

2. We plan to use the following subcontractors in order to perform parts of this project (include Tax ID):

   Name: _____ EIN: _____

   Name: _____ EIN: _____

3. The following three references are provided with telephone numbers of projects completed of similar scope and size - ***Required:***

   Name: _____ Telephone: _____

   Name: _____ Telephone: _____

   Name: _____ Telephone: _____

4. Date on which construction can be started - ***Required***: _____

5. Proposed completion Date - ***Required***: _____

6. Construction Schedule (See Terms and Conditions for details) - ***Required***
   ☐ I have included a proposed construction schedule with my response.

7. Prevailing Wage Rate Compliance (See Terms and Conditions for details) - ***Required***
   ☐ I agree to comply with the provisions of the Pennsylvania Prevailing Wage Act and have included the Prevailing Wage Rate Compliance Form (Attachment C) with my response

CONTRACTOR BID FORM
Page 2 of 2

8. Small Business and Small Diverse Business (See Terms and Conditions for details) - *Check if applicable*

   I/We have registered with Sam.gov and my business (or any subcontractors listed above) qualifies as a ☐ Small Business and/or ☐ Small Diverse Business

   I/We have registered with the PA Dept of General Services and my business (or any subcontractors listed above) has been certified as a ☐ Small Business and/or ☐ Small Diverse Business.

9. Safety Performance (See Terms and Conditions for details) – ***Required***

   OSHA Records

   ☐ I certify that my business does not need to keep OSHA records because we have 10 employees or less.

   _____OSHA reportable incidents for the past three years (attach documentation if applicable)

   _____TRIR (Total Recordable Incident Rate) (show calculation, if none, write 0)

   _____DART (Days Away, Restricted or Transferred Rate) (attach documentation/screen printout, if applicable)

   Experience Modifier Rate

   _____EMR (attach documentation from insurance company, write N/A if not applicable)

10. Debarment and Tax Liability Status (See Terms and Conditions for details) - ***Required***
    ☐ I certify that my business, and any subcontractors, are not debarred by the State of Pennsylvania or the federal government.
    ☐ I certify that my business, and any subcontractors, have no tax liabilities and are not in default of a loan or funding agreement administered by the state of Pennsylvania.

11. Certificate of Insurance (See Terms and Conditions for details) - ***Required***
    ☐ I have included a copy of my current Certificate of Insurance with my response.

Company Name:_____ Company Tax ID # (EIN):_____

Company Address:_____

Representative's Name:_____ Telephone:_____

Email Address:_____

Signature:_____ Title:_____ Date:_____

ATTACHMENTS:

The following attachments are included with the RFP for your reference:

- Attachment A – NRCS design/drawings and specifications
- Attachment B – Prevailing wage rates, notes definitions and other important information
- Attachment C – Prevailing wage compliance form
- Attachment D – RFP scoring sheet

ATTACHMENT A
NRCS Design/Drawings and Specifications

ROOFED DEEP BEDPACK / MANURE STORAGE

NATURAL RESOURCES CONSERVATION SERVICE
U. S. DEPARTMENT OF AGRICULTURE

Barron & Greg Stine

CENTRE COUNTY, PENNSYLVANIA

FARM ADDRESS: 4735 Halfmoon Valley Road
Warriors Mark, PA 16877

NRCS TAKES SAFETY VERY SERIOUSLY, HOWEVER, THE SAFETY COMMITMENT AND THE JOB SITE PRACTICES OF THE CONTRACTOR ARE BEYOND CONTROL OF NRCS. IT IS STRONGLY RECOMMENDED THAT SAFE WORKING CONDITIONS AND ACCIDENT PREVENTION PRACTICES BE THE TOP PRIORITY OF ANY JOB SITE. LOCAL, STATE, AND FEDERAL SAFETY AND HEALTH STANDARDS SHOULD ALWAYS BE FOLLOWED TO HELP INSURE WORKER SAFETY. MAKE CERTAIN ALL EMPLOYEES KNOW THE SAFEST AND MOST PRODUCTIVE WAY OF CONSTRUCTING THE DESIGNED PRACTICES. EMERGENCY PROCEDURES SHOULD BE KNOWN BY ALL EMPLOYEES. DAILY MEETINGS HIGHLIGHTING SAFETY PROCEDURES ARE ALSO RECOMMENDED. IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE A SAFE WORK ENVIRONMENT FOR THEIR EMPLOYEES.

PROJECT LOCATION:

AS-BUILT/ DESIGN INFORMATION							
QUALITY ASSURANCE STATEMENT					ENGINEER STATEMENT		
To the best of my knowledge, I certify that the practices have been installed as per the attached drawings and specifications, based on the information provided to me and/or observations I have made.					*In my professional opinion, I certify that the practices have been installed as per the attached drawings and specifications, based on the information provided to me and/or observations I have made.*		
Practice Code	*CIN*	*Description*	*Planned Amount*	*Inspector (Initials)*	*As-Built Amount (by Inspector)*	*Certification (Engineer/JAA Signature)*	*Date Certified*

NOTE: Stream crossing(s), pipeline, and trough to be designed by the Field Office

GENERAL NOTES

1. *FAILURE TO CONSTRUCT THIS FACILITY IN ACCORDANCE WITH THE NRCS DESIGN OR AUTHORIZED MODIFICATIONS WILL RESULT IN WITHDRAWAL OF NRCS TECHNICAL AND FINANCIAL ASSISTANCE.*
2. *ALL FEDERAL, STATE, AND LOCAL LAWS, RULES, AND REGULATIONS GOVERNING THE CONSTRUCTION OF THIS FACILITY SHALL BE STRICTLY FOLLOWED. THE OWNER OR OPERATOR IS RESPONSIBLE FOR OBTAINING ALL CONSTRUCTION PERMITS.*
3. *IT IS THE RESPONSIBILITY OF THE EXCAVATING CONTRACTOR TO COMPLY WITH PA ACT 187 (1996) AND ALL ITS REVISIONS BEFORE PERFORMING ANY EXCAVATION. THE PA ONE-CALL PHONE NUMBER IS 1-(800)-242-1776. THE SERIAL NUMBER FOR DESIGN IS 20241161126 DATED 4/25/24.*
4. *A MEETING BETWEEN THE LANDOWNER, CONTRACTOR, AND NRCS REPRESENTATIVE SHALL BE REQUIRED PRIOR TO ANY EXCAVATION OR CONSTRUCTION WORK.*
5. *A COPY OF THE NRCS SPECIFICATIONS AND DRAWINGS SHALL BE ONSITE DURING ALL PHASES OF CONSTRUCTION. A COPY OF THE DRAWINGS SHALL BE PROVIDED TO THE TRUSS MANUFACTURER.*
6. *OSHA REGULATIONS SHALL BE FOLLOWED AT ALL TIMES.*
7. *CERTIFICATION OF CONFORMANCE SHALL CERTIFY THAT ALL WORK WAS PERFORMED TO THE NRCS SPECIFICATIONS.*

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3. *E&S DETAILS*
4. *GENERAL CONSTRUCTION NOTES*
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33. *SAFETY FENCE*
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Designed BTO STD DWG Date 1/2023
Drawn
Checked RBS 5/24
Approved

COVER SHEET
Barron & Greg Stine
Centre County

United States Department of Agriculture
Natural Resources Conservation Service

File No.
Drawing No.
Sheet 1 of

General Site Permitting Information

1) Proposed area of disturbance is 0.8 acre
(Includes excavation, spoil pile, footer drain, etc...)
Anytime the disturbed area is greater than 1 acre, an NPDES permit may be required. The disturbed area for several practices does not need to be included in the measured footprint, for NPDES permitting, as per DEP. Such practices for this project are: Heavy Use Area and Animal Trail and Walkway. The disturbed area for NPDES permitting consideration is .64 ac.

2) Name of Receiving Water Body:
Tributary to Warrior's Mark Run

Distance from Work Area to stream: Greater than 100'

3) Are there any apparent wet lands within the project work area and/or receiving runoff from the area of disturbance? No but stream is downslope

4) Soil type(s) in area of disturbance: MuB and HuB

5) Are there any General Permits required for this project? Y
General Construction if applicable and Possible Outfall Permit IF outletting diversion and/or underground outlet(s) within 50' of the stream.

* Note: There is no 100 year flood plain map for this stream so the required minimum setback is 50' and the structure is well beyond that

Rehab 800' of Existing Animal Trail / Walkway

Waterbar

Animal Trail/Walkway to cross diversion into small pasture behind structure

BM #3 Rebar at Fence Post with Vines Elevation 1239.7

New Access Road

Rehab 365' of Existing Access Road

Area of Disturbance Border

Diversion

Backfill Line

Deep Bed Pack Area

Bale Feeder & Waterer

Conc Apron

Swale

12'

8' Feed table

Manure Storage

Backfill Line

Conc Apron

Planned Fence

Stream

50' Wide riparian area

Diversion to outlet into riparian area

190' of Silt Fence/ Sock

SF

A

B

C

D

E

BM #2 Rebar at Large Fence Post Elevation 1237.63

Area of Disturbance Border

Rehab of Existing Access Road

The access road and at&ww to the East of the structure should be tapered to the East for a short distance to prevent surface water from flowing towards the structure

A 12' wide X 5" deep swale to be installed in access road to direct surface water away from the entrance and feed table

BM #1 Top of Well Cap Elevation 1247.91

1241 1240 1239 1238 1237 1236 1235 1234 1233 1232 1231 1230 1228 1229

DESIGNED SL DATE 4/24
DRAWN SL CHECKED APPROVED

Barron & Greg Stine
E&S Plan View
50 Scale

CENTRE COUNTY, PA

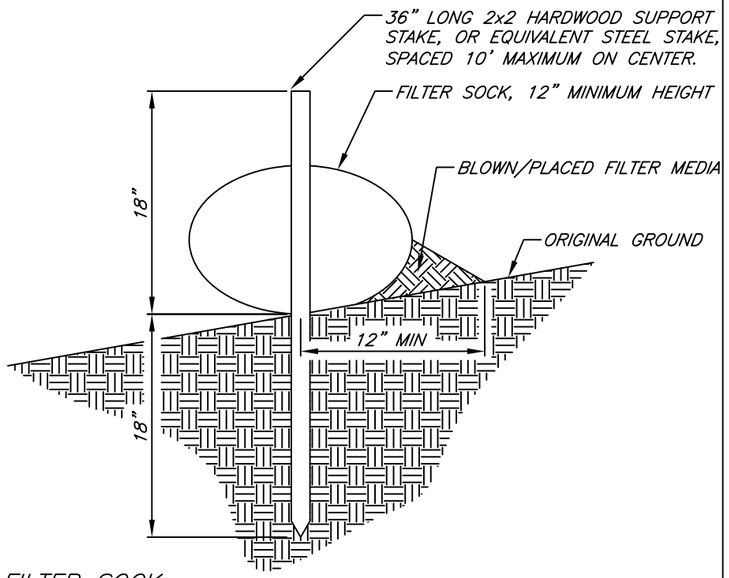
United States Department of Agriculture
Natural Resources Conservation Service

FILE NO. GREG STINE DESIGN.DWG

DRAWING NO.

SHEET OF

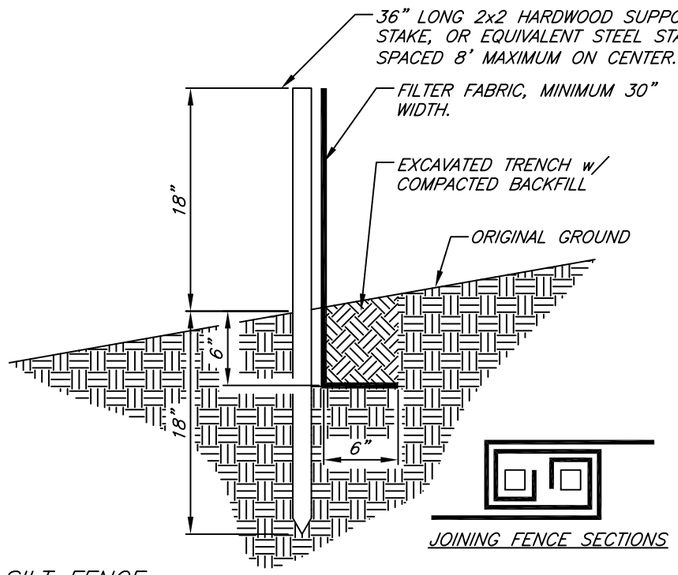
E&S POLLUTION CONTROL PLAN AND FINAL SEEDING RECOMMENDATIONS



FILTER SOCK

NOTES:

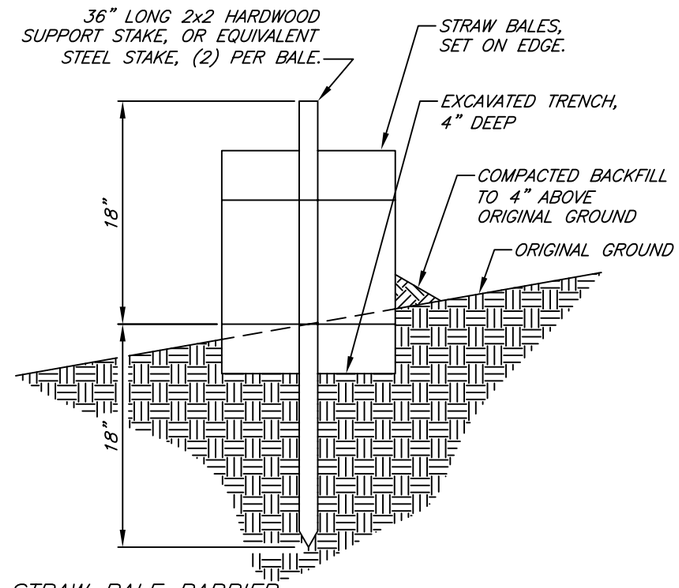
1. FILTER SOCK SHALL BE INSTALLED DOWN SLOPE OF THE DISTURBED AREAS OF THE CONSTRUCTION SITE.
2. TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.
3. FILTER SOCK SHALL BE PLACED AT LEVEL EXISTING GRADE. BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST 8' UP SLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT.
4. STAKES MAY BE INSTALLED IMMEDIATELY DOWN SLOPE OF THE SOCK IF SO SPECIFIED BY THE MANUFACTURER.
5. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE ABOVE GROUND HEIGHT OF THE SOCK.
6. SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.
7. BIODEGRADABLE FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
8. UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.
9. ANY SECTION OF SILT FENCE WHICH HAS BEEN UNDERMINED OR TOPPED SHALL BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET.



SILT FENCE

NOTES:

1. SILT FENCE SHALL BE INSTALLED DOWN SLOPE OF THE DISTURBED AREAS OF THE CONSTRUCTION SITE.
2. SILT FENCE SHALL BE PLACED AT LEVEL EXISTING GRADE. BOTH ENDS OF THE FENCE SHALL BE EXTENDED AT LEAST 8' UP SLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT.
3. FENCE SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED FENCE SHALL BE REPAIRED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS AND REPLACED WITHIN 24 HOURS OF INSPECTION.
4. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH HALF THE ABOVE GROUND HEIGHT OF THE FENCE.
5. ANY SECTION OF SILT FENCE WHICH HAS BEEN UNDERMINED OR TOPPED SHALL BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET.
6. FENCE SHALL BE REMOVED AND PROPERLY DISPOSED OF WHEN TRIBUTARY AREA IS PERMANENTLY STABILIZED.



STRAW BALE BARRIER

NOTES:

1. STRAW BALES SHALL BE INSTALLED ACROSS SWALES, WATERWAYS, AND DIVERSIONS WHERE SEDIMENT LADEN RUNOFF COULD LEAVE THE CONSTRUCTION SITE.
2. STRAW BALE BARRIERS SHALL NOT BE USED FOR PROJECTS EXTENDING MORE THAN 3 MONTHS.
3. STRAW BALE BARRIERS SHALL BE PLACED AT EXISTING LEVEL GRADE WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES. THE FIRST STAKE OF EACH BALE SHALL BE ANGLED TOWARD THE ADJACENT BALE TO DRAW THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE TOP OF THE BALE. BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 8' UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT.
4. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH ONE THIRD THE ABOVE GROUND HEIGHT OF THE BALE. DAMAGED OR DETERIORATED BALES SHALL BE REPLACED IMMEDIATELY UPON INSPECTION.
5. ANY SECTION OF THE STRAW BALE BARRIER WHICH HAS BEEN UNDERMINED OR TOPPED SHALL BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET.
6. BALES SHALL BE REMOVED WHEN THE TRIBUTARY AREA HAS BEEN PERMANENTLY STABILIZED.

THIS EROSION AND SEDIMENTATION PLAN IS BASED ON THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL, TECHNICAL GUIDANCE NUMBER 363-2134-008, MARCH 2012.

1. When grading is finished, apply lime and fertilizer in accordance with soil test recommendations.
2. If soil test results are not available, apply 4 ton per acre of agricultural grade limestone and fertilize at the rate of 1,000 lbs. Of 10-20-20 or equivalent per acre.
3. Lime and one-half (1/2) the amount of the fertilizer shall be incorporated 4 to 6 inches into the soil.
4. Work area with chisel plow or similar type equipment, making sure lime and fertilizer are worked well into the soil.
5. Follow with the balance of fertilizer and seed.

Seeding Recommendation

6. The seed mixture shall be the following or similar if approved by the NRCS representative.

Nurse Crop (required with every permanent seed application):

Oats	64	lbs/acre PLS
Wheat	90	lbs/acre PLS
Annual Rye	40	lbs/acre PLS

Permanent Stabilization:

Perennial Rye	40	lbs/acre PLS
PLUS		
Tall Fescue	80	lbs/acre PLS

NOTE: This mixture is suitable for frequent mowing. Do not cut shorter than 4".

PLS means pure, live, seed. PLS is the product of the percentage of pure seed times percentage germination divided by 100. For example, to secure the actual planting rate for switchgrass, divide 12 lbs PLS by the PLS percentage shown on the seed tag. Thus, if the PLS content of a given seed lot is 35%, divide by .35 to obtain 34.4 lbs of seed, the amount of seed required to plant 1 acre.

If partial completion of any part of the project is accomplished, and this area will be disturbed again BUT not for a period of 20 days or more, those areas must be seeded with a TEMPORARY cover-seeding.

Temporary Seed and mulch will be applied at the following fates:

Annual Ryegrass	40 lbs/Acre
Winter Rye	3 Bu/Acre
Winter Wheat	3 Bu/Acre
Spring Oats	3 Bu/Acre

Planting Recommendation

Seed can be applied with a drill or broadcast seeder.
Band seeding is not permitted.
If broadcast, harrow or disk lightly to cover seed. Roll with cultipacker or similar roller in same direction as seeding. (Double drilling gives better distribution of seeding and helps to spread the water while plants are small. Drill first lengthwise and then crosswise (in a zig-zag pattern). Optimum planting time is early spring or mid summer.

7. As soon as seeding is finished, mulch with 3 Tons/Acre of hay or straw, making a layer 1 to 1.5 inches deep. Set disk straight and go over mulch to press straw into the soil.
Tackifiers can also be used for anchoring mulch.

Date 1/2023
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E&S DETAILS

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Sheet x of x

OWNER RESPONSIBILITIES

ACCESS

1. The owner is responsible for ensuring that all livestock are removed from the work site and that livestock will remain excluded from the work site until the project has received final certification and is approved for use.
2. The owner is to provide reasonable access to the work site.

EXCAVATION NOTES

GENERAL

1. No excavation shall begin until the excavator has complied with all PA One-Call requirements and any utility company responses.
2. All erosion and sedimentation practices shall be installed prior to beginning excavation.
3. OSHA standards shall be followed for all excavation.
4. Topsoil shall be stripped and stockpiled to be re-distributed when the project is complete.
5. All manure-laden soil shall be removed and spread according to the landowner's nutrient management plan.
6. The site shall be excavated until good, stable soil is encountered.
7. In the event Rock, Unstable soils, or seeps are encountered during excavation, work shall be stopped and the NRCS shall determine how to proceed.
8. For Liquid Storage Structures: When hard material is encountered, over-excavate design subgrade by 1.0' and replace with a compacted impermeable layer (i.e. CL/ML) before installing bedding stone; consult with design engineer before doing so.
9. Excess material shall be disposed of as directed by the landowner and the NRCS inspector.
10. A uniform layer of 2B-stone (AASHTO #57), 4" thick shall be placed above subgrade to bed ALL concrete. Stone depth to be measure after compaction. Stone shall not be placed until earthen subgrade elevation and compaction is approved by NRCS inspector.
11. The contractor is responsible for verifying actual field measurements shown on the plan drawings.
12. The contractor is responsible for implementing all measures necessary to protect work in progress from environmental conditions such as temperature extremes, surface, and ground water.
13. The contractor is responsible for protecting the construction site until the work has been completed and certified by the design engineer. This includes dewatering the site as necessary, as well as preventing upslope runoff from entering the work area. It is strongly recommended that all planned diversions or swales be installed first and all perimeter drain outlets be installed before stone or concrete is placed, if possible.
14. Final grading shall provide positive drainage away from all structures. Swales shall be shaped as necessary along the heavy use area and manure storage to direct stormwater away from the structures.

EARTHFILL

1. Earthen 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 the structure shall be increased at the same rate on all sides of the structure.
2. Backfill shall be placed in even, horizontal layers. If necessary, over-excavate to an approximately level surface and build subgrade in evenly compacted, horizontal lifts of specified thickness.
3. Backfill shall be placed at optimum moisture content. Backfilled material shall have enough moisture so that when formed into a ball, it will not break if struck sharply with a pencil. Backfilling newly poured walls may not begin until 14-days after the final concrete placement. Compact using the following equipment and lift thickness:

   FOOTINGS AND STRUCTURE FLOOR:

   -(3) passes of sheepsfoot or vibratory roller in 6-inch lifts

   WITHIN 3 FEET OF WALLS:

   -(3) passes by hand compactor or small, manually directed plate vibrator in 6-inch lifts

   BEYOND 3 FEET OF WALLS:

   * Do not use a vibratory roller, weighing more than two tons, within distance equal to the wall height. A roller can be used beyond 3' of the wall without the vibratory function on.

   -(3) passes by track equipment (>4,000 lbs) in 6-inch lifts

   -(4) passes by rubber tired equipment in 6-inch lifts

   -(3) passes of vibratory roller in 6-inch lifts
4. Avoid backfill containing rocks or clods greater than 3" diameter, debris, roots, frozen soil, or other unsuitable material as determined by the NRCS inspector.
5. If seeps are encountered during excavation; provide clean AASHTO #57 stone 1' above that elevation and extend the stone a minimum of 4' left and right of the seep location.
6. Six inches of topsoil shall be incorporated into the final surface of the earthfill.
7. All areas top-dressed with topsoil and disturbed during construction will be seeded according to NRCS Critical Area Planting Specification and the E&S drawing provided in the drawings.

PIPES

1. All pipes shall meet minimum material specifications:
   - 1.1. SCH 40 PVC shall meet ASTM-D1785
   - 1.2. SDR-35 shall meet ASTM-D3034
   - 1.3. Corrugated polyethylene tubing shall meet ASTM-F667 or AASHTO-M252 as detailed below.
     - 1.3.1 ASTM-F667 pipe and fittings may be used when the maximum cover over the pipe does not exceed 9.8'.
     - 1.3.2 AASTHO-M252 pipe and fittings shall be used when the cover over the pipe exceeds 9.8'.
     - 1.3.3 All corrugated polyethylene tubing shall be installed so bedding material is worked in and around the pipe by hand and "knifed" in with a shovel. Haunching and intitial backfill material shall be placed with a high level of effort to ensure that the pipe is adequately supported. Compaction tests are not necessary for pipe installation.
2. All fittings for SCH 40 and SDR-35 pipe shall be watertight, and meet the minimum material specifications of the pipe. When pressure flow is necessary; applicable fittings will be defined in the NRCS supplied construction specifications.
3. Fittings for the corrugated polyethylene pipe do not need to be pressure-rated or watertight but must meet the minimum material specifications of the pipe. If fittings need to be pressure-rated or watertight; applicable fittings will be defined in the NRCS supplied construction specifications.
4. All fittings and connections for pipe shall be made with manufacturer-supplied components made for the intended purpose.
5. Pipes shall be installed to specified depth and to minimum design grade.
6. Trenches for pipelines shall be free of rocks and sharp-edged materials. A supply of AASHTO #57 bedding stone, or other suitable granular material, shall be available to bed pipelines in unstable soils or as directed by NRCS inspectors.
7. Pipes shall be backfilled as shown on design details. Any pipe to be placed in a traffic area is to be bedded as per design details and backfilled to the surface with 2A modified or 2RC aggregate. Any pipe not specifically detailed may be backfilled with moist earth, free of large clods or rocks, and hand compacted in 6-inch lifts. DO NOT drive machinery over recently backfilled pipes. Mound backfill 10% of trench depth to allow for settlement.

GEOTEXTILE

ACCESS ROAD USE:

1. Geotextile for roads with normal farm machinery use shall be WOVEN or NON-WOVEN with a minimum tensile strength of 200 pounds.
2. Geotextile for roads with heavy equipment shall be WOVEN or NON-WOVEN with a minimum tensile strength of 315 pounds.

ANIMAL WALKWAY USE:

3. Geotextile shall be WOVEN or NON-WOVEN with a minimum tensile strength of 160 pounds.

PLACED BELOW CONCRETE & ON TOP OF BEDDING STONE USE:

4. Geotextile shall be WOVEN with an Apparent Opening Size (AOS) between 20 and 100, inclusive.

ALL USES:

5. Geotextile installed on slopes greater than 8% shall be NON-WOVEN.
6. Geotextile installed where a wet subgrade is an issue shall be WOVEN or NON-WOVEN. The inspector shall have a discussion with the contractor to see which geotextile type the contractor recommends for the wet subgrade issues. The inspector shall then discuss with the design engineer.
7. Allow 1' overlap between adjacent panels of geotextile where applicable.

Date 8/2023
Designed BTO STANDARD DWG
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GENERAL CONSTRUCTION NOTES

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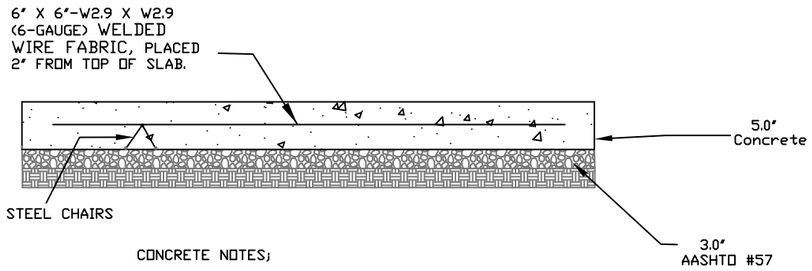
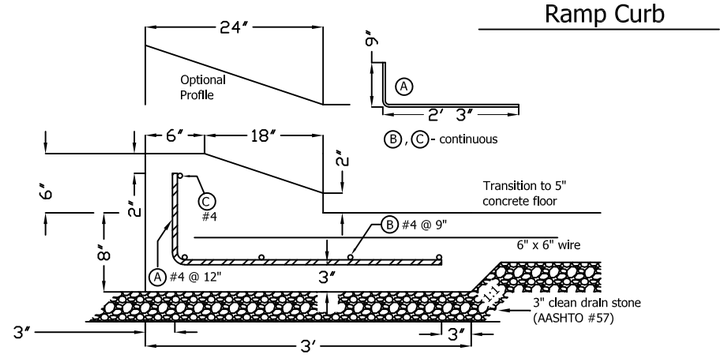
REINFORCED CONCRETE DETAIL



CONCRETE NOTES;

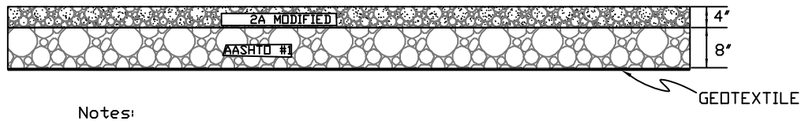
1. CONCRETE SHALL BE 4000 PSI.
2. STEEL SHALL BE GRADE 60.

6" H x 24" W Ramp Curb



NOTES:
- use all #4 reinforcing steel, Grade 60
- all 4,000 psi concrete
- minimum 15" splice on all #4 bars
- support footer steel on 3" chairs
- install during floor/footer concrete placement

Access Road Detail
(Typical)

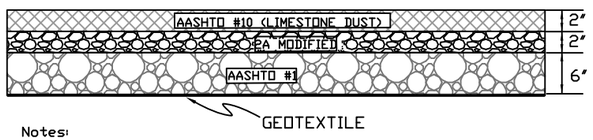


Notes:

1. Geotextile shall be installed as state on the General Construction Notes
2. Provide a one-foot (1') overlap between adjacent panels.
3. Stone depth shall be measured after compaction.
4. All stone shall be compacted with a smooth drum, vibratory roller.
5. Install water bars or conveyor belt diversions as needed

* Note: Access Road Rehab use stone only. If needed only install a layer of AASHTO #1s for construction entrance then install top layer once construction is completed

Walkway Detail

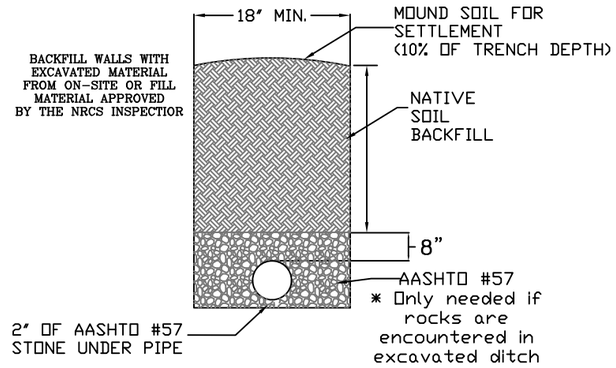


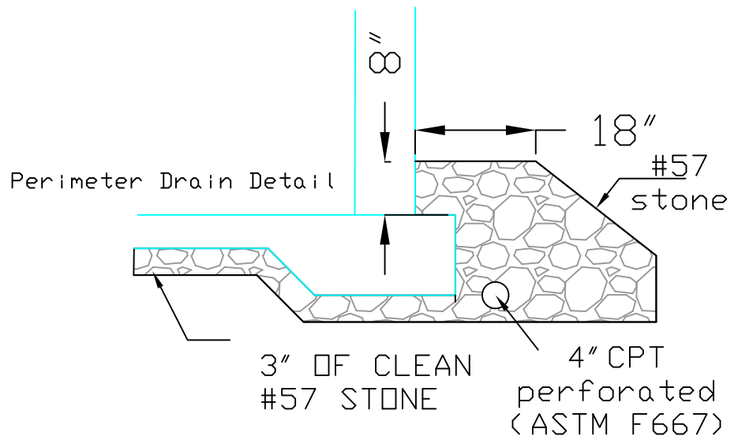
Notes:

1. Geotextile shall be installed as stated on the General Construction Notes
2. Provide a one-foot (1') overlap between adjacent panels.
3. Stone depth shall be measured after compaction.
4. All stone shall be compacted with a smooth drum, vibratory roller.
5. Surface may be crowned or pitched at 1% in the direction of the existing surface slope.
6. Top layer can be 4" of 2A Modified if desired
7. Install water bars or conveyor belt diversions as needed

Note: Animal Trail and Walkway Rehab use stone only

PIPE INSTALLATION DETAIL





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DESIGN DETAILS

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Note: Stream Crossing(s) NOT SHOWN, water trough, and associated livestock pipeline to be designed by the Field Office

1240
1239
1238
1237
1236
1235
1234
1233
1232
1231
1230

Rehab 800' of Existing Animal Trail / Walkway

Waterbar

Animal Trail/Walkway to cross diversion into small pasture behind structure

Diversion

BM #3 Rebar at Fence Post with Vines Elevation 1239.7

New Access Road

12'

Swale

Rehab 365' of Existing Access Road

Deep Bed Pack Area

Bale Feeder & Waterer

Conc Apron

Manure Storage

8' Feed table

Conc Apron

Planned Fence

Stream

50' Wide riparian area

Diversion to outlet into riparian area

BM #2 Rebar at Large Fence Post Elevation 1237.63

A
B
C
D
E
F

The access road and at&ww to the East of the structure should be tapered to the East for a short distance to prevent surface water from flowing towards the structure

A 12' wide X 5" deep swale to be installed in access road to direct surface water away from the entrance and feed table

DESIGNED	SL	DATE 4/24
DRAWN	SL	
CHECKED		
APPROVED		

Barron & Greg Stine
Plan View
1" = 30' Scale
CENTRE COUNTY, PA

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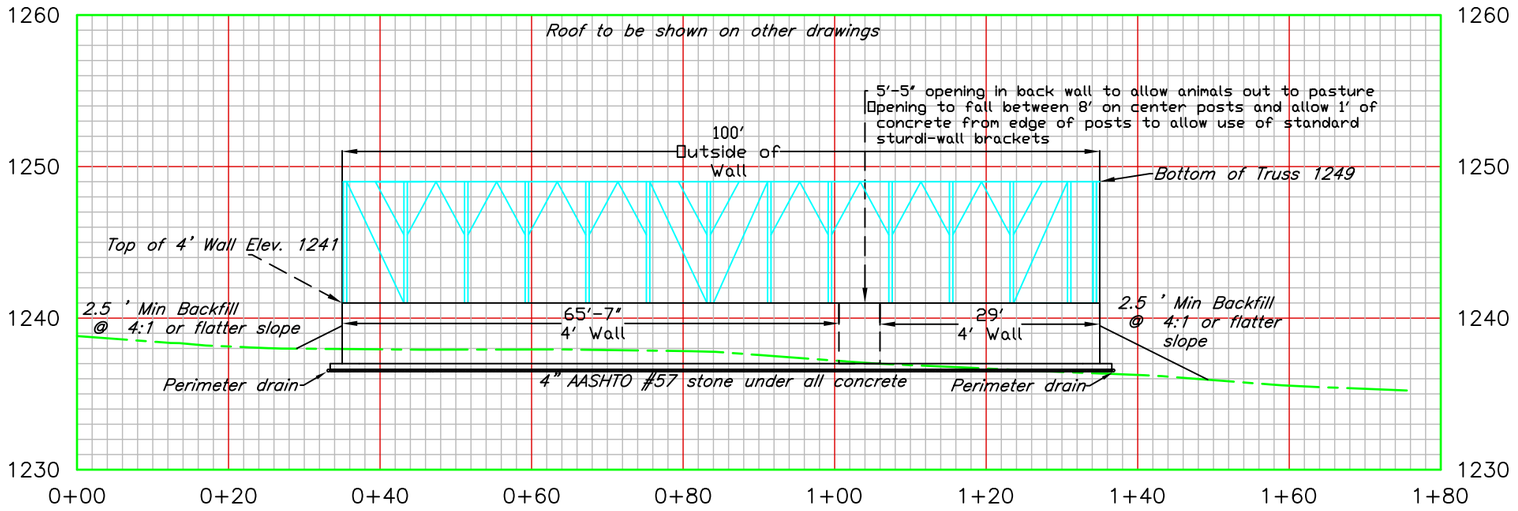
FILE NO. GREG STINE DESIGN.DWG

DRAWING NO.

SHEET OF



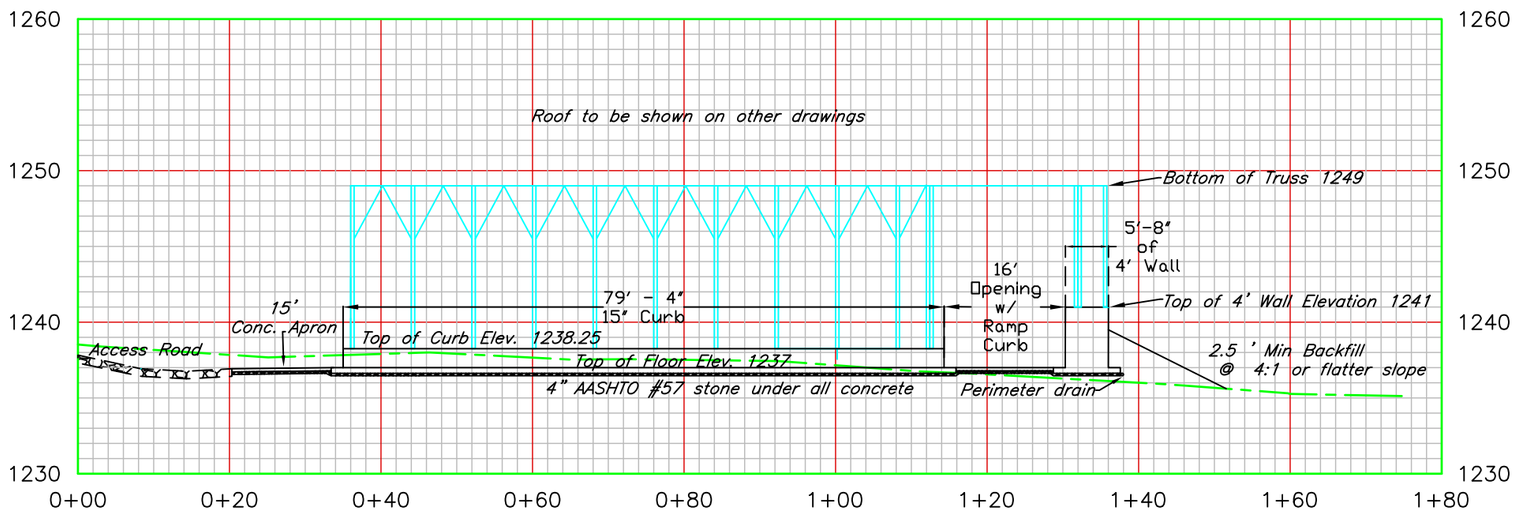
East

West

Alignment – A–A (1) PROFILE

Profiles run from East to West on this drawing

No driving within 4' of the walls except for a lawnmower



Alignment – B–B PROFILE

All surface water must be diverted so it does not come in through entrance of the structure

The Concrete apron is to grade away from the structure at a 1% slope and to the South to direct any potential surface water from entering the structure

Access Road to have a small swale to direct surface water away from the structure and sloped to the South

Roll curb to also be installed at entrance

15" curb to be extended on East end by 1' to allow use of a standard sturdi-wall bracket

DATE 4/24

DESIGNED SL

DRAWN SL

CHECKED

APPROVED

Barron & Greg Stine
Profiles A–A & B–B
1" = 20' Scale

CENTRE COUNTY, PA

United States Department of Agriculture

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FILE NO.
GREG STINE DESIGN.DWG

DRAWING NO.

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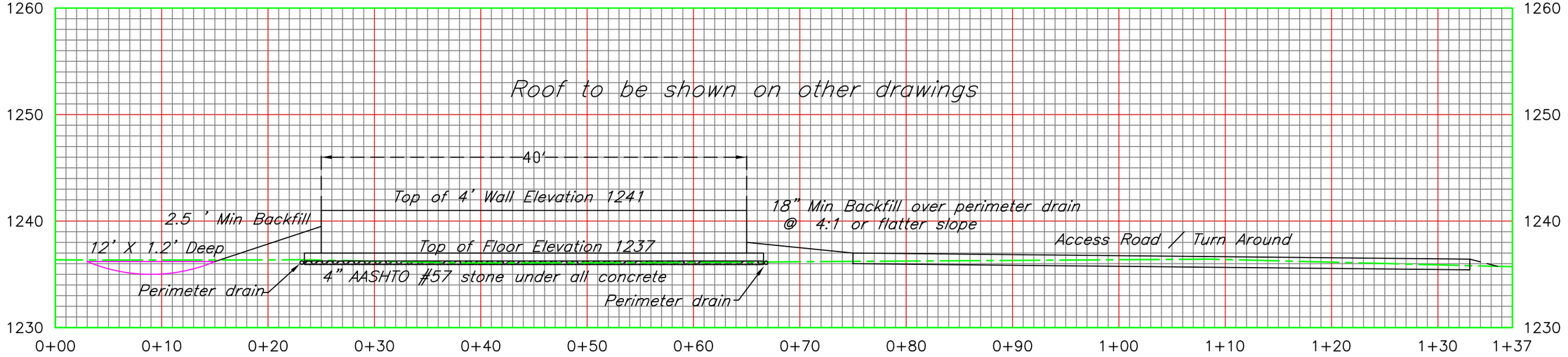


Alignment – C–C PROFILE

Access Road to Slope Away From Structure at a 1% Slope

No driving within 4' of walls except a lawnmower

DESIGNED SL
DRAWN SL
CHECKED
APPROVED
DATE 4/24

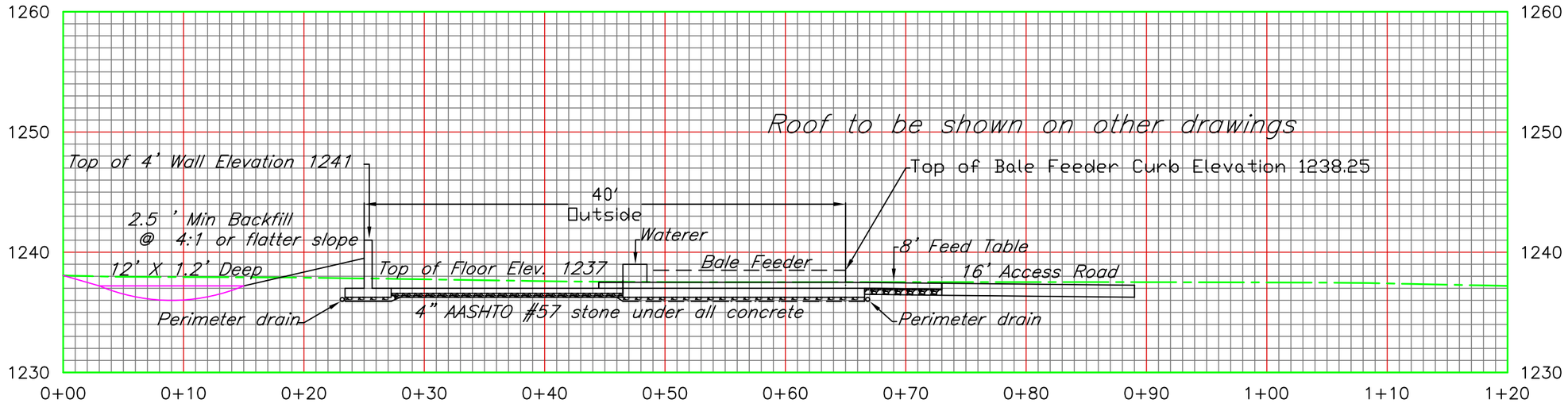
Barron & Greg Stine
Cross Section C–C
1" = 10' Scale
CENTRE COUNTY, PA

United States Department of Agriculture
Natural Resources Conservation Service

FILE NO. GREG STINE DESIGN.DWG

DRAWING NO.

SHEET OF



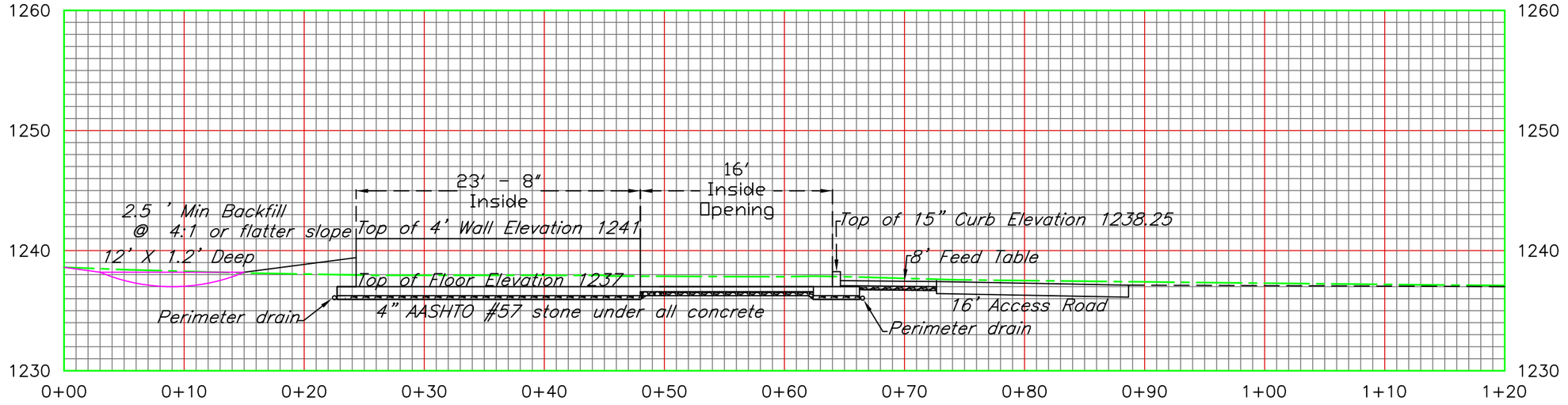
Alignment – D–D PROFILE

Floor of Bale Feeder and Feed Table To Be 6" Above Inside Floor Elevation (1237.5)

See Bale Feeder Drawing For More Details

Waterer To Be Set 6" Off The Floor On A Raised Slab

Feed Table And Access Road to Slope Away From Structure at a 1% Slope



Alignment – E–E PROFILE

DESIGNED SL
DRAWN SL
CHECKED
APPROVED
DATE 4/24

Barron & Greg Stine
Cross Sections D–D & E–E
1" = 10' Scale
CENTRE COUNTY, PA

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DRAWING NO.

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CONCRETE CONSTRUCTION NOTES

REINFORCEMENT

1. Reinforcing steel is to be Grade 60. Where 6"x6" w2.9xw2.9 (6 gage) is specified; the fabric shall be mats, not rolls, supported on steel chairs. NO CINDER OR CONCRETE BRICKS ARE PERMITTED. Support shall be often enough so reinforcement stays at the required location within the slab or footing. A 5' (MAX) chair spacing is required.
2. Form oil shall not be sprayed on any rebar, waterstops, or concrete.

CONCRETE

1. 4,000 psi 28-day compressive strength
2. MAXIMUM water-cement ratio 0.50
3. Air-content 5 to 7%, with air-entrainment
4. Max concrete temperature is 90°
5. Slump shall be 2 to 4 inches prior to addition of superplasticizing admixtures being added, 3 to 6 inches without use of superplasticizers.
6. Slump can be 7.5 inches MAX with the addition of superplasticizing admixtures.
7. Concrete admixtures shall met ASTM-C260 for air entrainment, and ASTM C494 Type A, D, F or G for water-reduction and set-retardation and Types C or E for non-corrosive accelerators.
8. Admixtures shall be included in the design mix. Follow dosages and recommendations of manufacturer.
9. The contractor(s) shall provide a design mix to the NRCS for approval prior to ordering concrete. All load tickets shall be provided to and approved by the inspector on site and shall reflect all materials and quantities including admixtures, amount of water (metered water and free moisture in the aggregate), and total size of the batch. The batch ticket must indicate the amount of water that may be added on-site while maintaining the design requirements or no water may be added.
10. The concrete mix design may contain slag: Not to exceed 20% of the cementitious material.

PLACEMENT

1. Concrete shall only be placed in the presence of an NRCS inspector.
2. Placement during hot or cold weather will require a written plan in advance detailing concrete conditions, placement provisions, and a curing plan.
3. Concrete shall not be placed until the subgrade, forms, and steel reinforcements have been inspected and approved by the NRCS. Notification shall be given far enough in advance to provide time for inspection.
4. No water may be added after a superplasticizer.
5. Concrete shall be conveyed from the mixer to the forms as rapidly as practical by methods that will prevent segregation of the aggregates or loss of mortar. Concrete shall be placed within 1.5 hours after the introduction of cement to the aggregate unless an approved set-retarding admixture is used in the mix; during periods of hot weather, it may be necessary to reduce this time.
6. Concrete shall not be dropped more than 5 feet vertically. Superplasticized concrete shall not be dropped more than 12 feet vertically.
7. Formed walls shall be placed in 2' layers unless superplasticizer is used, in which case the maximum layer shall be 5'. Each layer shall be consolidated to ensure a good bond with the preceding layer.
8. Concrete shall be consolidated by vibrating immediately after placement and extend a minimum of 6" into the previously consolidated layer.
9. Concrete shall be worked into corners, angles, and all around reinforcement and embedded items in a manner that prevents segregation or the formation of "honeycombing".
10. Vibration shall not be used to make concrete flow.
11. If the surface of a previously placed layer of concrete has taken a set to the degree that it will not mix with the preceding layer when vibrated, the contractor shall discontinue placing concrete and form a construction joint to avoid a "cold joint". Vinyl waterstop and form material shall be on site prior to starting the placement of any concrete.
12. The landowner has the option of having grooves floated or cut into the structure floor(s) for added traction for animals and equipment. This decision will be conveyed to the contractor(s) during price solicitation.

CURING

1. Concrete shall be allowed to cure at least 24 hours prior to beginning form or reinforcement placement for adjacent construction.
2. No equipment shall be allowed on concrete slabs or floors until the concrete has cured for a minimum of 7 days. This includes any motorized material handling equipment, pallets of forms, etc. Skid loaders used for transporting concrete into forms shall not be allowed on slabs or floors for a minimum of 14 days.
3. Forms for walls shall not be removed for at least 24 hours after placing the concrete. If forms are removed in less than 7 days, the exposed concrete shall be sprayed with curing compound.
4. Curing compound shall be applied in a uniform layer over all surfaces requiring protection at a rate as designated by the manufacturer. Curing compound shall be reapplied if disturbed within 3 hours after being applied.
5. Walls shall be allowed to cure for a minimum of 7 days before installing "Drill set" post bracket anchors. Walls shall be allowed to cure for a minimum of 3 days before installing posts in/on "Wet set" brackets.
6. All wall ties, honey-combing, and air holes >$\frac{3}{4}$" shall be parged with non-shrink grout.
7. Random cracking in the walls and floor shall be evaluated and determined if the concrete needs to be removed or repaired. Removal and repair shall be the responsibility of the contractor and at no increase in cost.
8. If major repairs are required, the contractor shall prepare a written repair plan with all materials and methods clearly stated and shall be approved by the NRCS engineer of authority before proceeding with the repair.

JOINTS

1. Before new concrete is placed on or against concrete that has set, the surface of construction joints shall be cleaned of all laitance and debris by high-pressure water cutting, washing and wire-brushing, or as approved by the engineer. The surface of the in-place concrete shall be cut to expose clean, sound aggregate, but not so deep to undercut the edges of the large aggregate. All construction joints shall be wetted for at least 1-hour prior to new placement and standing water shall be removed.
2. Slab control joints shall be saw-cut as soon as possible, but no later than 24 hours after placement of the concrete, at the intervals indicated on the drawings. All joints shall be water tight and as shown on the detail drawings. The saw-cuts shall be thoroughly cleaned and dried so the sealant and primer will bond to the concrete.
3. For the joints in the drawings that call for an elastomeric sealant, the sealant shall meet the requirements stated in the Construction Specification, included in this design package, and shall also meet the following: The sealant shall be Type S (Single Componenet), Class 25, and meet the requirement for Type I (Able to be immersed in liquid). Some sealants require a primer to be used before the sealant is applied; primers shall be used no matter if the joint is located in a "submerged" condition or not. It is recommended that the primer is supplied by the same manufacturer as the sealant, this will ensure that the sealant and primer are compatible.

TESTING REQUIREMENTS

1. The contractor is responsible for obtaining a 3rd party ACI Certified Technician for field testing of concrete. The concrete plant cannot test their own concrete. Slump, air entrainment, and concrete temperature shall be taken to ensure the concrete meets NRCS requirements.
   - -(4) concrete test cylinders shall be taken every 50 cu.yds.
   - -(3) cylinders to be broken at 28 days and (1) cylinder to be saved for a 56 day break, if necessary. This shall be done for every 50 cu.yds sampled.
   - -Slump, air entrainment, and concrete temperature shall be recorded for every 50 cu.yds as well.
   - -All concrete for testing or making cylinders shall be taken from the discharge end of the pump truck.
   - -All test results shall be provided to the inspector. The ACI technician shall be present from start of concrete placement until the last concrete truck leaves the site.
2. The contractor is responsible for ensuring that the concrete meets the design requirements. The contractor shall test the concrete as needed; slump, air entrainment, concrete temperature, and cylinders. All concrete for testing or making cylinders shall be taken from the discharge end of the pump truck. The NRCS, PACD, or Conservation District inspector may test the concrete as they feel the need to do so. The contractor is not to rely on the inspector to provide the testing service.

Date 8/2023
Designed BTO SID DWG
Drawn
Checked
Approved RGD 8/2023

CONCRETE CONSTRUCTION NOTES

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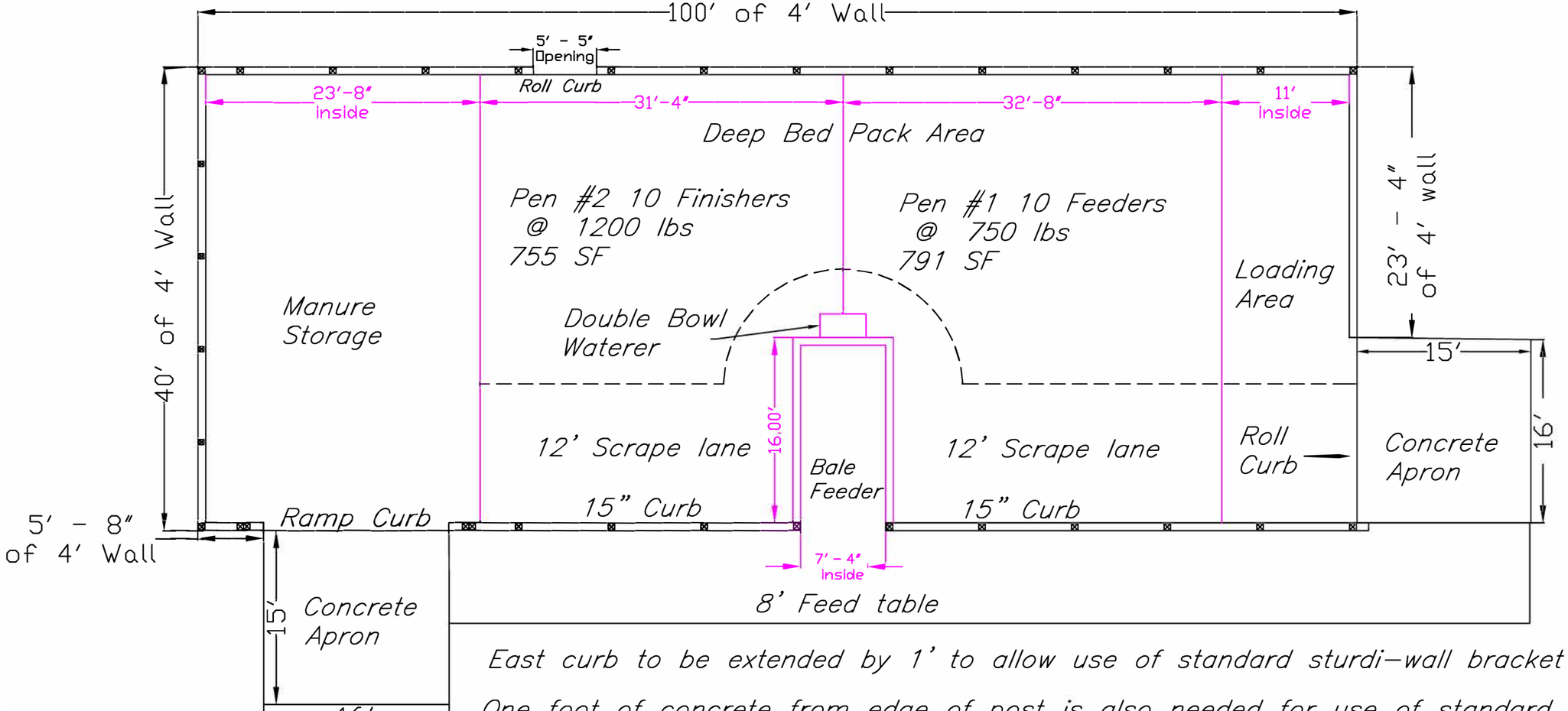
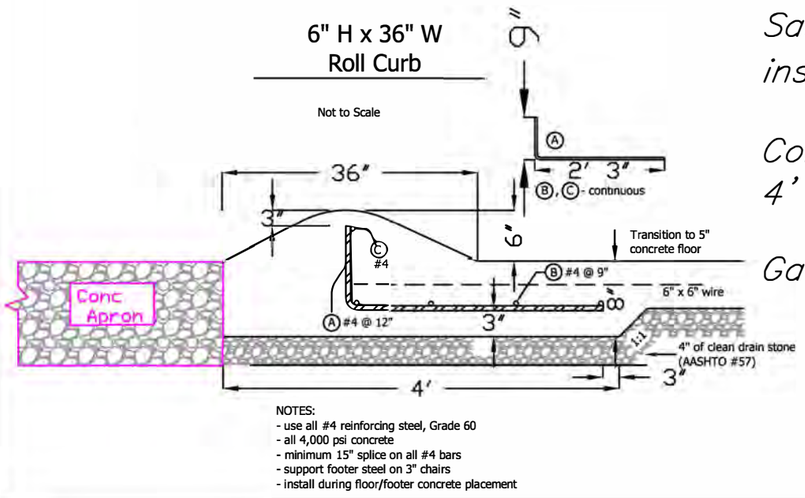


East curb to be extended by 1' to allow use of standard sturdi-wall bracket

One foot of concrete from edge of post is also needed for use of standard sturdi-wall brackets at back opening



Safety fence needed above West and North 4' walls which may need to be installed on the inside of the posts to not interfere with the installation of the curtains

Confinement fence needed along feed table and 4' wall to the South and the 4' wall to the East

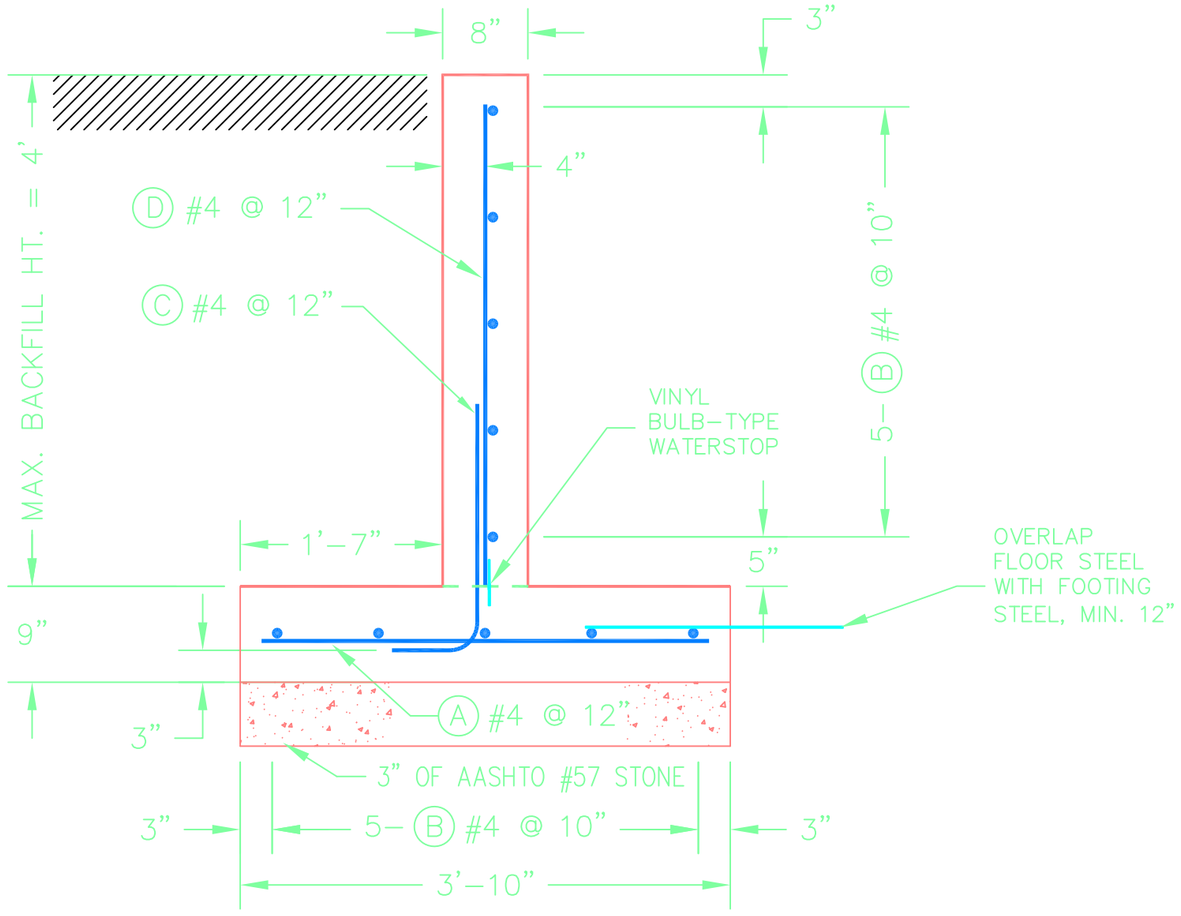
Gates needed at all openings

DATE 4/24
DESIGNED SL
DRAWN SL
CHECKED
APPROVED

Barron and Greg Stine
Concrete Plan
1" = 10' Scale
CENTRE COUNTY, PA

United States Department of Agriculture
Natural Resources Conservation Service

FILE NO. GREG STINE DESIGN.DWG
DRAWING NO.
SHEET OF



GENERAL DESIGN NOTES:

- DRAINAGE SHALL BE AWAY FROM THE WALL.
- THE MINIMUM TOP WIDTH OF THE BACKFILL AGAINST THE WALL SHALL BE EQUAL TO OR GREATER THAN THE BACKFILL HEIGHT.
- MAXIMUM FOOTING CONTACT PRESSURE IS 900 psf/ft.

DESIGN STRENGTHS: WORKING STRESS DESIGN

CONCRETE f_c = 4,000 psi STEEL f_s = 24,000 psi (GRADE 60)

WALL DESIGN LOADING: 313 STANDARD – LATERAL EARTH PRESSURE VALUES, SEE SECTION IV OF THE FIELD OFFICE TECHNICAL GUIDE.

- MANURE LOAD INSIDE = 65 psf/ft.
- SOIL BACKFILL LOAD OUTSIDE = 60 psf/ft. AND 85 psf/ft.
- NO HORIZONTAL SURCHARGE ADDED.
- SOIL BACKFILL DENSITY = 110 pcf.
- WATER TABLE MUST BE BELOW THE FOOTING ELEVATION

TYPE 2 BAR

STEEL SCHEDULE

MARK	SIZE	TYPE	R	S	LENGTH
A	4	STR	---	---	3'–6"
B	4	STR	---	---	
*C	4	2	2'–0"	9"	2'–9"
*D	4	STR	---	---	3'–9"
L	4	2	2'–0"	9"	2'–9"
L1	4	STR	---	---	3'–9"

* MARK C & D BARS MAY BE COMBINED TO AVOID SPLICE. THEN MARK C BAR IS 4'–3" x 9".

ESTIMATED QUANTITIES

CONCRETE	(0.21 CU.YDS./LIN.FT.) _____	CU. YDS.
STEEL	(20.67 FT./LIN. FT.) _____	FT.
STEEL	(35.0 FT./CORNER) _____	FT.

- CONCRETE SHALL MEET PA 313 OR 561 SPECIFICATION REQUIREMENTS.
- MINIMUM SPLICE LENGTH FOR ALL #4 BARS IS 16".
- STEEL QUANTITY DOES NOT INCLUDE SPLICE LENGTHS.
- REBAR SHALL BE GRADE 60.

NOTES:

1. FOR FROST PROTECTION, A 2–FOOT BACKFILL IS REQUIRED.
2. DIMENSIONS ARE TO THE REINFORCING BAR SURFACE.

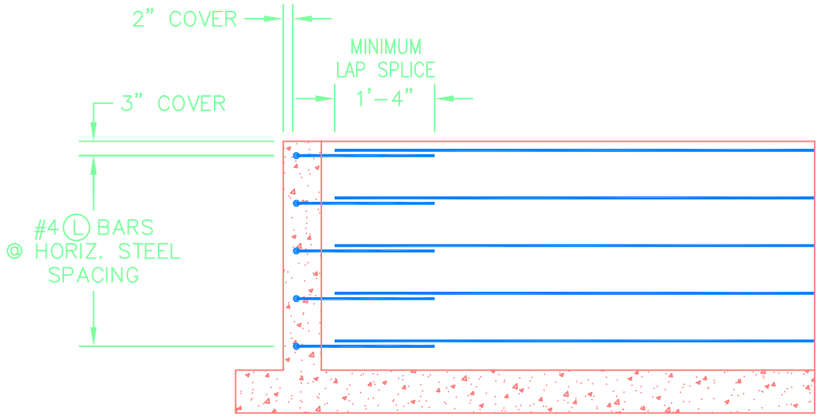
ADAPTED AND MODIFIED FROM STANDARD DRAWING # PA–020D

Date 11/2018
Designed
Drawn BTO
Checked
Approved by

4' HIGH, T–WALL (W/O SURCHARGE)

NRCS
Natural Resources Conservation Service
United States Department of Agriculture

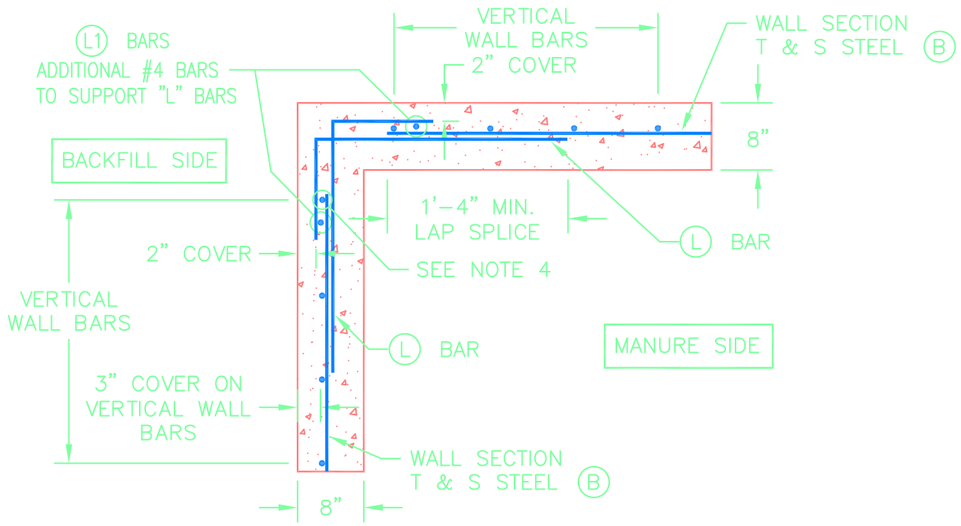
File No.
Drawing No.
Sheet: _____ of _____



NOTES:

1. TIE LONG LEG OF MARK (L) CORNER BAR TO WALL SECTION T&S MARK (B) BAR AS SHOWN.
2. SHORT LEG OF MARK (L) BARS SHALL BE SUPPORTED WITH VERTICAL WALL SUPPORT BAR (L1).
3. 10 MARK (L) BARS PER CORNER. SEE APPROPRIATE WALL DRAWING FOR BAR DIMENSIONS AND QUANTITIES.
4. PLACE FIRST VERTICAL BAR (SEE PLAN VIEW) AT WALL CORNER, OR NO FARTHER THAN ONE-HALF THE VERTICAL BAR SPACING FROM THE CORNER.

ADAPTED AND MODIFIED FROM STANDARD DRAWING # PA-025



PLAN VIEW
WALL CORNER DETAIL

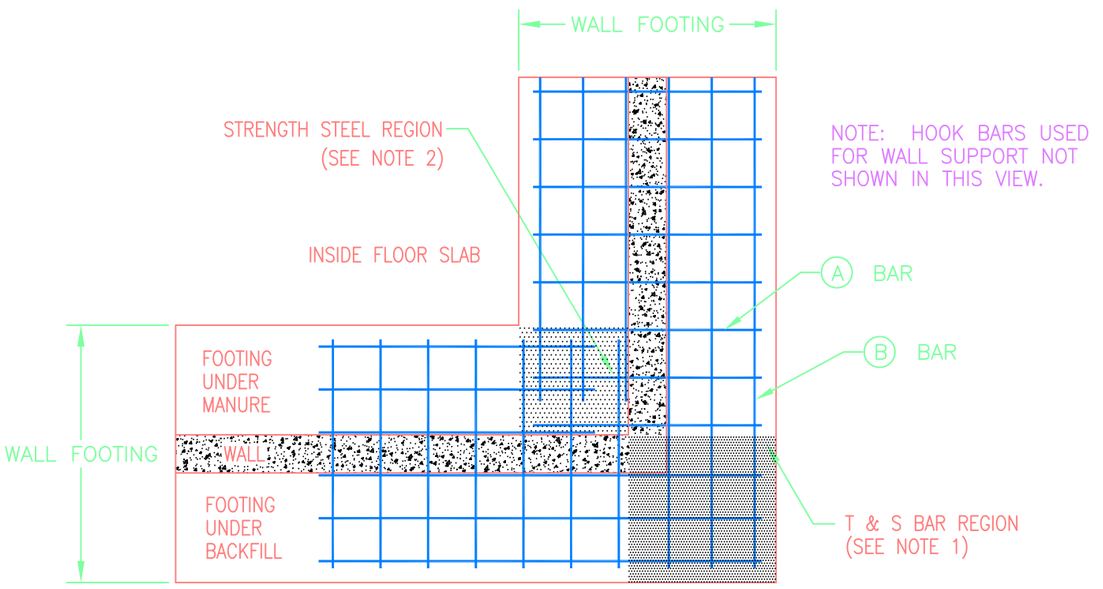
ADAPTED AND MODIFIED FROM STANDARD DRAWING # PA-023

NOTES FOR FOOTING STEEL PLACEMENT

1.) FOOTING TEMPERATURE AND SHRINKAGE STEEL (T&S) TO BE EXTENDED INTO THIS REGION FROM BOTH SIDES OF CORNER. REGION IS OUTSIDE EXTENSION OF WALLS INCLUDING WALL THICKNESS.

2.) STRENGTH STEEL IS EXTENDED INTO THIS REGION FROM BOTH SIDES OF CORNER. REGION IS INSIDE EXTENSION OF THE WALLS. FOOTING SLAB T&S STEEL OUTSIDE THE CORNER REGION TO LAP SPLICE WITH THE STRENGTH STEEL 16 INCHES.

3.) IN BOTH CORNER REGIONS, STRENGTH STEEL AND T&S STEEL WILL REQUIRE SWITCHING POSITIONS FROM TOP TO BOTTOM AND VICE VERSA.



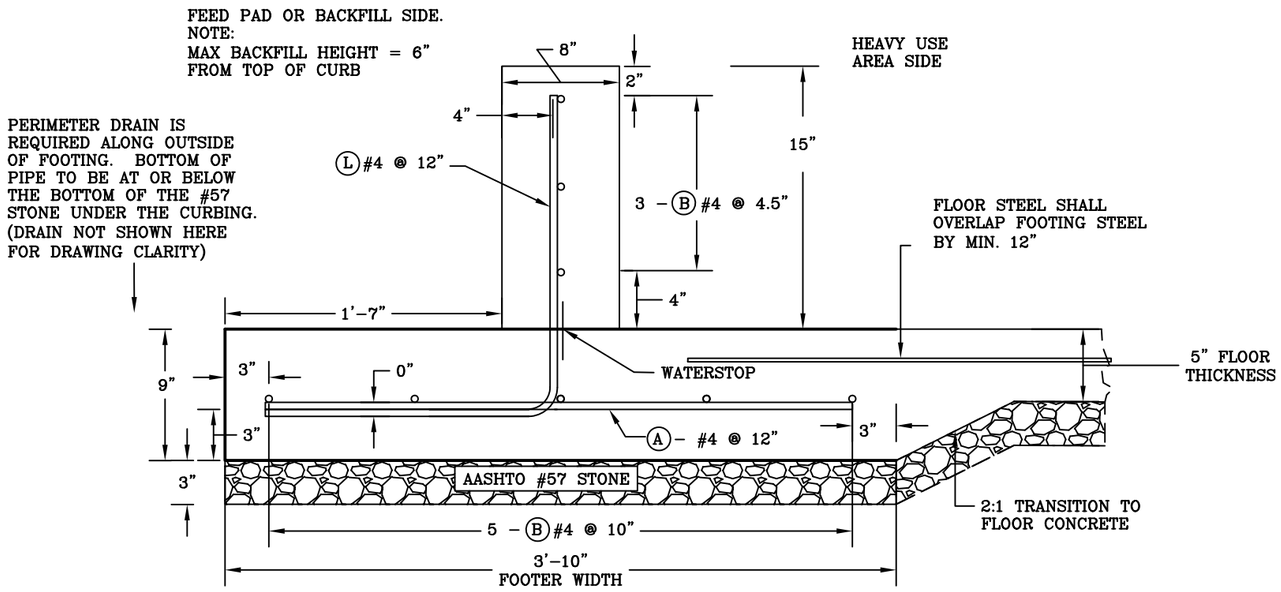
SLAB FOOTING CORNER DETAIL

Date 11/2018
Designed
Drawn RTO
Checked
Approved by

4' WALL CORNER AND WALL FOOTING CORNER DETAILS

NRCS
Natural Resources Conservation Service
United States Department of Agriculture

File No.
Drawing No.
Sheet: ____ of ____



C.J. = CONSTRUCTION JOINT

LIQUID TIGHT JOINT X YES __ NO

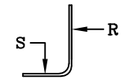
LIQUID–TIGHT JOINT OPTIONS
= PVC 4" VINYL WATERSTOP

CONSTRUCTION JOINT OPTIONS

1. IF SLAB AND WALL ARE POURED SEPARATELY, THE SLAB SURFACE MUST BE THOROUGHLY CLEANED WITH WATER AND A WIRE BRUSH. THE SURFACE OF THE JOINT SHALL BE KEPT MOIST FOR AT LEAST 1 HOUR PRIOR TO PLACEMENT OF NEW CONCRETE.

2. THE SLAB AND WALL MAY BE POURED AT THE SAME TIME ELIMINATING THE NEED FOR A CONSTRUCTION JOINT.

STEEL SCHEDULE				
MARK	SIZE	R	S	LENGTH
A	#4	–	–	3' 4"
B	#4	–	–	
C	#4	2'	2'	4'
L	#4	1'–7"	1'–8"	3'–3"
MIN. SPLICE LENGTH FOR ALL #4 BARS IS 16" UNLESS OTHERWISE NOTED LENGTHS SHOWN DO NOT INCLUDE BEND RADIUS				

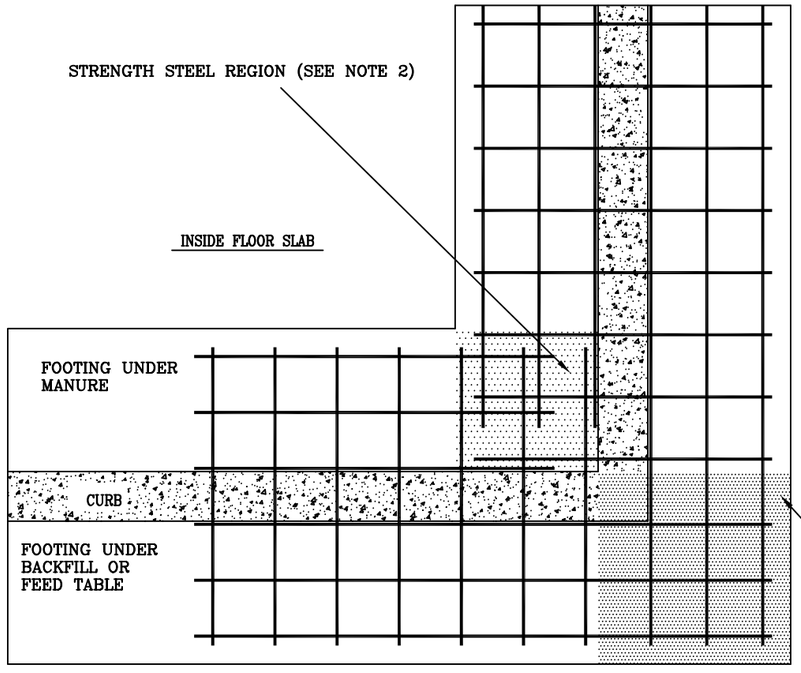


GENERAL DESIGN NOTES:
DRAINAGE SHALL BE AWAY FROM THE CURB.

DESIGN STRENGTHS:
CONCRETE = 4000 psi STEEL = GRADE 60

WATER TABLE MUST BE BELOW THE FOOTING ELEVATION

MIN. 4" AASHTO #57 (CLEAN STONE) REQUIRED UNDER FOOTING



NOTE:
HOOK BARS USED FOR WALL SUPPORT NOT SHOWN IN THIS VIEW.

NOTES FOR FOOTING STEEL PLACEMENT

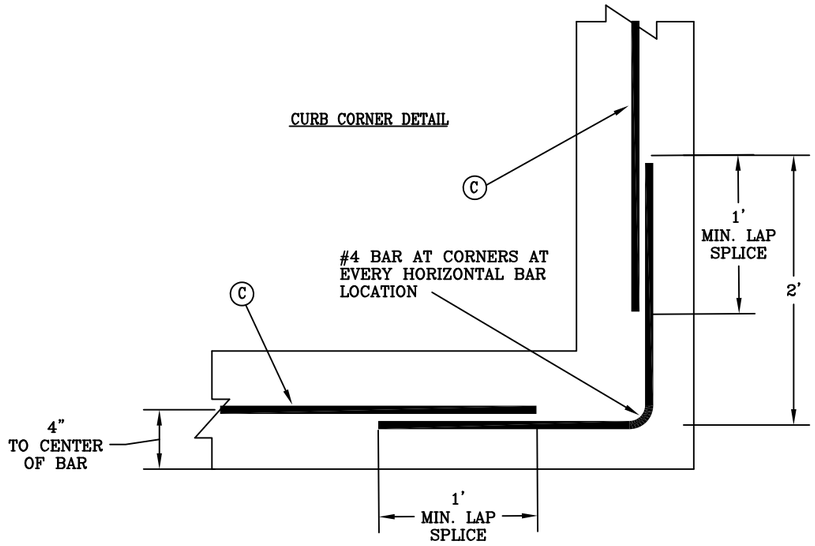
1.) FOOTING TEMPERATURE AND SHRINKAGE STEEL (T&S) TO BE EXTENDED INTO THIS REGION FROM BOTH SIDES OF CORNER. REGION IS OUTSIDE EXTENSION OF WALLS INCLUDING WALL THICKNESS.

2.) STRENGTH STEEL IS EXTENDED INTO THIS REGION FROM BOTH SIDES OF CORNER. REGION IS INSIDE EXTENSION OF THE WALLS. MIN. LAP SPLICE OF REBAR IS 16".

3.) IN BOTH CORNER REGIONS, STRENGTH STEEL AND T&S STEEL WILL REQUIRE SWITCHING POSITIONS FROM TOP TO BOTTOM AND VICE VERSA.

SLAB FOOTING CORNER DETAIL

CURB CORNER DETAIL



DRAWING ADAPTED FROM PA STANDARD DRAWINGS# 018D, 020D, & 023 FOR POSTS ON CURB DESIGN

DATE
DESIGNED
DRAWN
CHECKED
APPROVED

POST ON 15" CURB DETAIL

United States Department of Agriculture
Natural Resources Conservation Service

FILE NO.

DRAWING NO.

SHEET OF

LIQUID TIGHT SLAB JOINTS
(NOT TO SCALE)

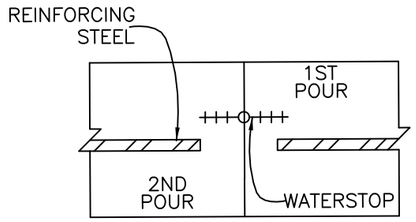
LIQUID TIGHT SLAB/FLOOR JOINTS

GENERAL NOTES:

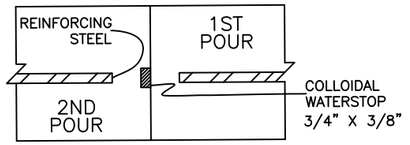
1. BACKER ROD SHALL BE A LARGER WIDTH THAN THE WIDTH OF THE SAW CUT.
2. SAW CUT OR JOINT FORMER IS ACCEPTABLE FOR JOINT 2.
3. SEALANT DEPTH SHALL BE 1/4" OR SLIGHTLY LESS THAN JOINT WIDTH, WHICHEVER IS LESS.
4. CUT 50% OF THE REINFORCING STEEL DIRECTLY UNDER THE JOINT.

USE JOINT 1 OR 2 FOR TWO POURS AND JOINT 3 FOR CONTINUOUS POURS.

JOINT 1

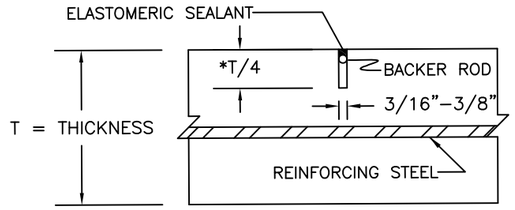


JOINT 2



CONSTRUCTION CONTROL

JOINT 3



SAW CUT JOINT

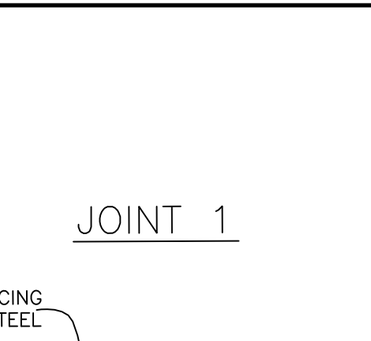
LIQUID TIGHT WALL JOINTS
(NOT TO SCALE)

LIQUID TIGHT WALL JOINTS

GENERAL NOTES:

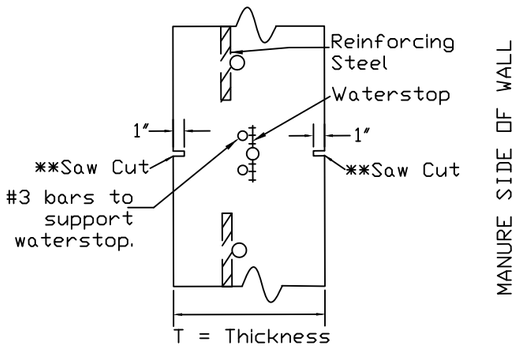
1. BE SURE TO CUT EVERY OTHER HORIZONTAL REINFORCING STEEL REBAR DIRECTLY AT THE JOINT.
2. SEALANT DEPTH SHALL BE 1/4" OR SLIGHTLY LESS THAN JOINT WIDTH, WHICHEVER IS LESS.
3. USE JOINT 4 FOR TWO POURS AND JOINTS 5 OR 6 FOR CONTINUOUS POURS.

JOINT 4

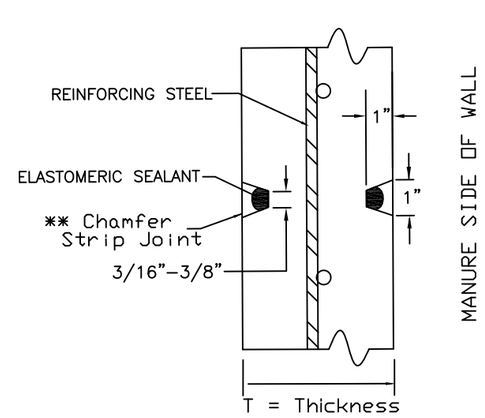


TYPICAL
WALL JOINT - Side View

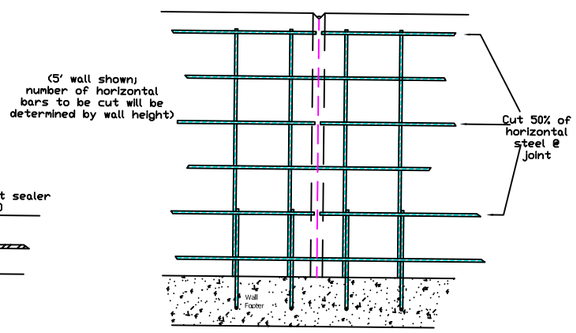
JOINT 5



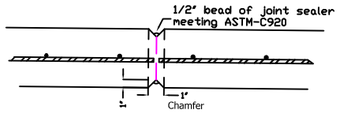
JOINT 6



WALL JOINT LOCATIONS SHOULD LINE UP WITH FLOOR JOINTS WHEN POSSIBLE BUT MUST BE OFFSET BY 2 FT FROM A POST EVEN ON GABLE ENDS



TYPICAL
WALL JOINT - Top View



* Saw cut need not be greater than 1" for walls thicker than 8".

** Joint former or chamfer strip optional, Backer Rod and Elastomeric sealant needed in a saw cut joint or if a joint former is used.. Elastomeric sealant needed if a chamfer strip is used.

Compatible primer to be used before sealant

Primer should be same brand as sealant

Cut and/or joint former or chamfer shall be on both sides of wall and across the top.

DATE 4/24
DESIGNED SL DRAWN CHECKED APPROVED

Concrete Joint Details
Barron & Greg Stine

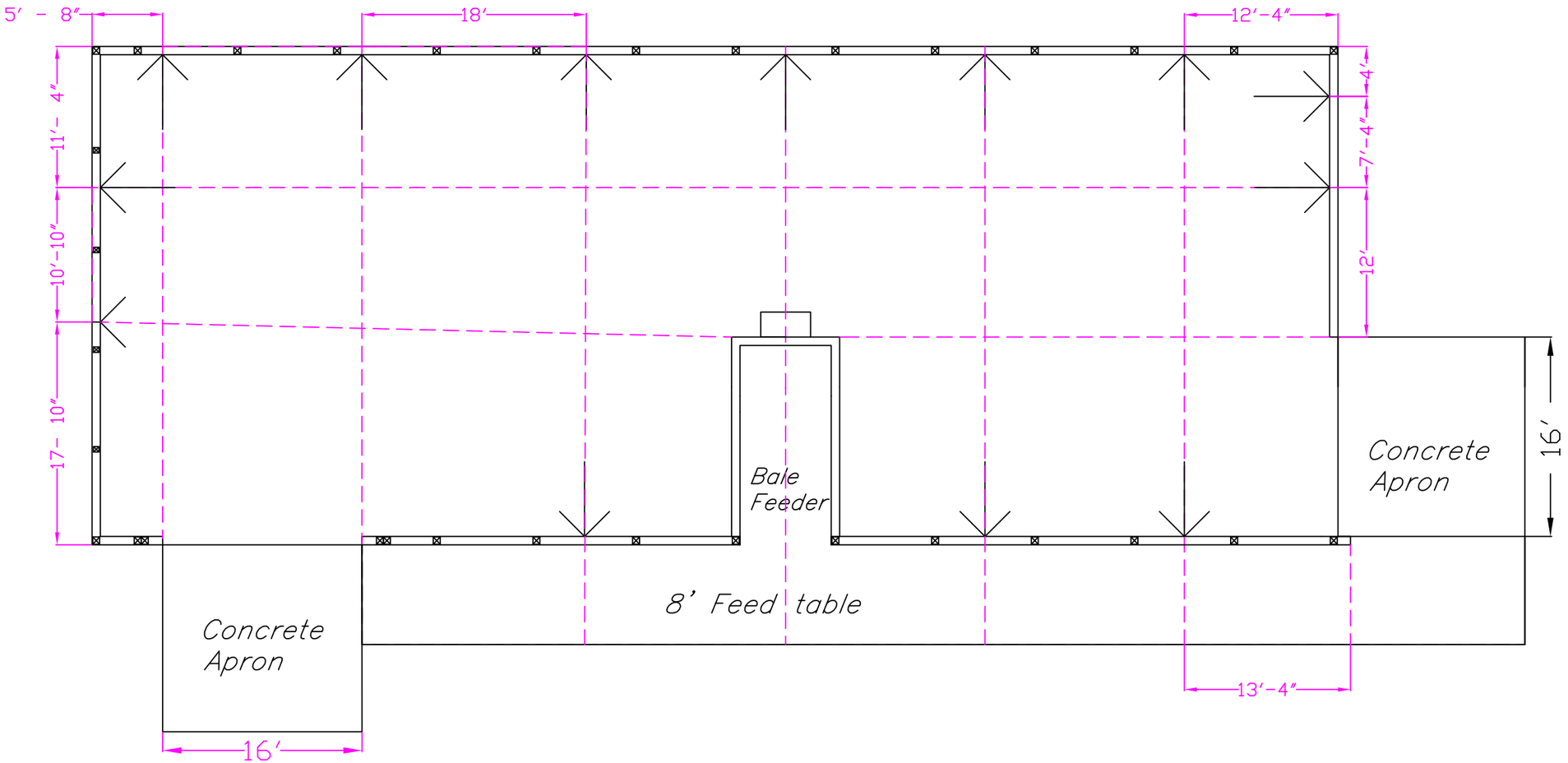
CENTRE COUNTY, PA

United States Department of Agriculture
Natural Resources Conservation Service

FILE NO. GREG STINE DESIGN.DWG

DRAWING NO.

SHEET OF



Concrete Joints are @ 16′ spacings unless otherwise shown

Floor and wall joints should match up but must be 2′ from a post location

→ *Wall Joint*

DESIGNED SL DATE 4/24
DRAWN SL
CHECKED
APPROVED

Barron & Greg Stine
Concrete Joint Locations
1" = 10' Scale
CENTRE COUNTY, PA

United States Department of Agriculture
Natural Resources Conservation Service

FILE NO. GREG STINE DESIGN.DWG

DRAWING NO.

SHEET OF

Roof Structure Design & Construction Notes

1. Trusses shall be used for this roof. Shop drawings shall be provided to the NRCS design engineer for approval prior to ordering the trusses and "PE" (Professional Engineer) sealed shop drawings shall be supplied by the Truss Plate Institute certified manufacturer at the time of truss delivery. (Truss and stringer configuration shown in the drawings is for illustration purposes only) NRCS does not design roof trusses.

* Make the truss designer aware of knee bracing being used.

2. All nails shall have full heads; Clipped heads are not acceptable.

3. All nails and bolts used with pressure treated wood shall be hot–dip galvanized nails that meet the minimum galvanized coating requirements for the most restrictive wood preservative treatment method. (i.e. CCA treated wood requires a minimum coating rating of G–90 however ACQ treated wood requires a coating rating of G–185. When the wood types are mixed, use the G–185 connectors. Consult with individual fastener, hardware manufacturer for recommendations)

   CAUTION: New wood preservative treatment methods require special fasteners and connectors. All plates and fasteners used with ACQ, CBA or CA treatment formulas must conform to ASTM standards; ASTM A153 for Hot–dip fasteners, and A653 for Hot–dip connector and sheet products. This change increases the galvanized coating requirements to a designation of G–185. Stainless steel fasteners and connections may be used in place of Hot–dip galvanized products. Electro Galvanized fasteners/connectors are not permitted for use.

4. Nails for structural connections shall be galvanized or stainless steel, and ring shank. Nails for general framing can be common, full head size 16d or larger, smooth nails. General framing includes purlins, diagonal braces, lateral braces, etc.

5. Bolts, screws, or metal plate connectors may be used instead of nails. Such substitutions shall provide a connection of equal or greater strength and durability, according to the National Forest Products Association's (NFPA) National Design Specification. Alternate connectors must be approved by the design engineer.

6. All wood in contact with the ground or manure shall be pressure treated as per American Wood Preserver's Association Standard (posts shall be treated to 0.6 #/cu.ft. and all other wood shall be treated to 0.4 #/cu.ft.)

7. All structural members which includes; All posts, wye and knee bracing, bearing blocks, truss support blocks, and girders/headers; (excluding microllam girders/headers) shall be SouthernYellow Pine No. 2 Grade (Surface dry, used at 19% maximum moisture content). All secondary members such as permanent or continuous bracing shall be (SYP) Southern Pine No. 3, (SPF) Spruce–Pine–Fir No. 2 or better.

   Purlins shall be SYP No. 2, SPF No. 2, or better if spaced at 2' centers
   Purlins shall be SYP No. 3 or better if spaced at 1.5' centers

8a. Posts are to be 4 ply 2X8 glu–lams on the back (4') wall and 4 ply 2X8 glu–lams on the feed table. Post are to be Southern Yellow Pine. Posts on gable ends to be 4 ply 2X6 glu–lam posts. Posts are to be fully pressure treated the entire height.

8b. Girders are to 1.75'X9.25" LVLs having the following minimum properties:
Moment: 6271 lbs, Bending (Fb): 2900 psi, Shear (Fv): (320 PSI), Modulus of Elasticity (E)2.0X10(6)psi

8c. Header above 16' opening to be a 7X16 PSL with the following properties
Moment: 69905 ft lbs, bending (Fb) 2900 psi, Shear (Fv): (290 PSI), Modulus of Elasticity (E) 2.0X10(6)psi

9. Galvanized angle iron (1/4" thick x 3" wide both ways) can be installed on the corners of the posts at entrance locations. Other means of post protection may be used if approved by the design engineer.

10. Knee and Wye bracing are required for the posts and girders as shown. Wye bracing shall be installed AFTER all roof framing is complete. No Wye bracing shall be installed on the "inside" of the entrance locations.

11. Permanent continuous lateral bracing is required, according to the truss MFG drawings. Continuous lateral bracing must be installed with staggered side by side overlap connections (no butt to butt connections). The ends of the braces must extend fully past the truss and allow a 2–nail connection without using toenails.

12. Permanent diagonal bracing is required at each end of the building and at intervals not to exceed what is shown in the drawings. All bracing shall be installed as Per the Truss Plate Institute BCSI–B3 and the detailed drawing.

13. Roofing material shall be steel or aluminum. Steel shall be; galvanized steel, painted galvanized steel, or painted steel. Type of roofing to be discussed with landowner prior to bid solicitation. Steel roofing material shall be 29 gauge minimum. Aluminum roofing material shall have a minimum nominal thickness of .018 inches. Galvalume roofing is not permitted for use.

14. Roof fasteners shall be a combination of zinc coated steel and neoprene washer. Double stitch the seams of the roof edges. Typical steel roof shall have fasteners on a 9" spacing on the purlins 24" on center.

15. End trusses shall be faced with roofing material, as specified above. This shall be discussed with the landowner prior to bid solicitation.

16. Ventilation shall be provided at the ridge or through the openings in the end trusses. Ventilation shall be provided to offer at least 2" of opening per 10' of building width.

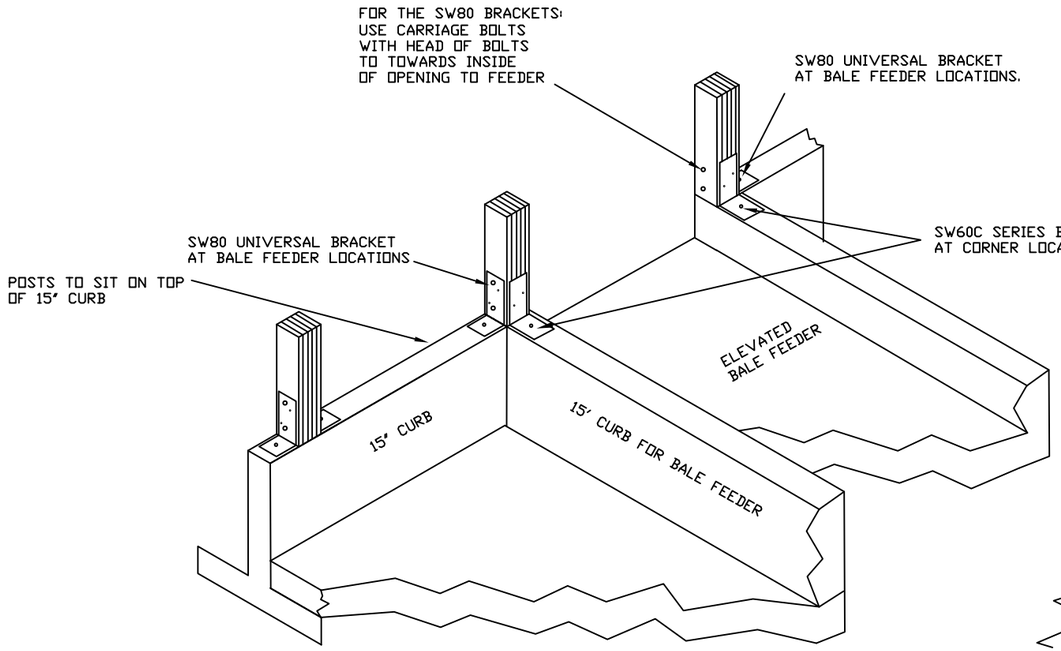
17. The roof was designed to carry a combined loading of 40 psf, according to ASCE–7 (Most Conservative Combined Load Formula), on the entire roof surface. The roof was also designed for a uniform uplift of 16 psf under the entire roof. This roof is designed for "partially enclosed" sides; major structural changes may be needed if any additional sides are to be enclosed. Consult with the design engineer if siding is being considered rather than curtains or if the building is to be all open.

Date 1/2023
Designed BTO STANDARD DTG
Drawn RGD 1/2023
Checked RGD 1/2023
Approved by

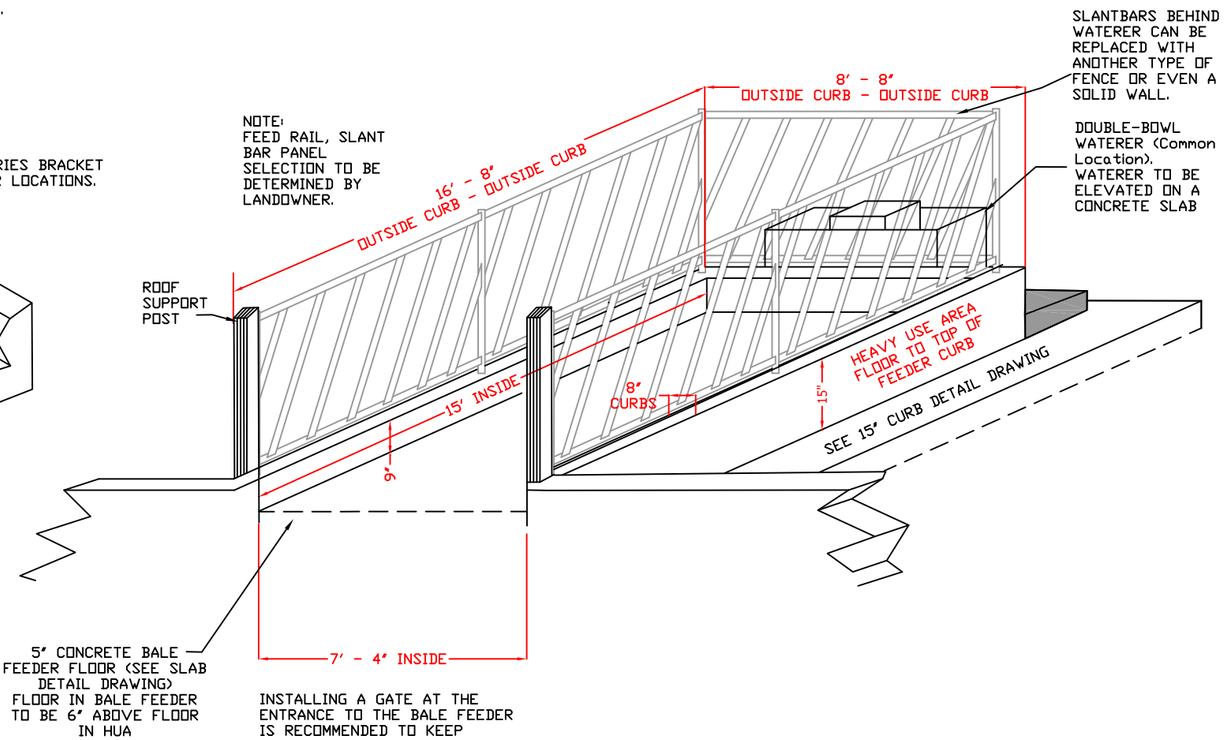
ROOF STRUCTURE DESIGN AND CONSTRUCTION NOTES

NRCS
Natural Resources Conservation Service
United States Department of Agriculture

File No.
Drawing No.
Sheet ____ of ____



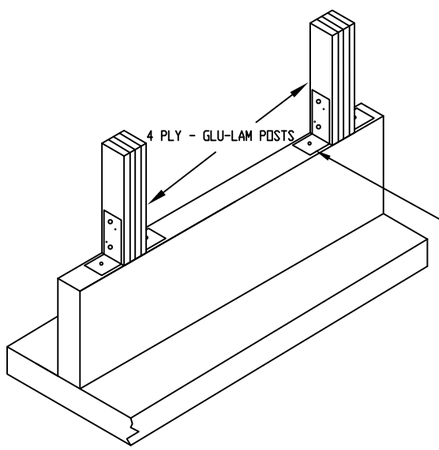
RAISED BALE FEEDER DETAIL



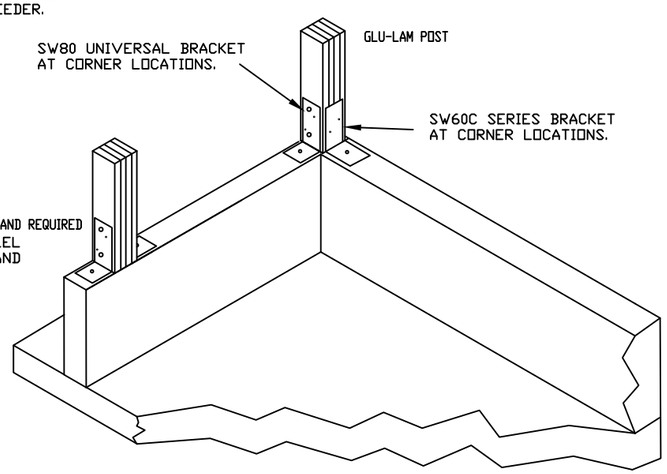
INSTALLING A GATE AT THE ENTRANCE TO THE BALE FEEDER IS RECOMMENDED TO KEEP YOUNG-STOCK FROM ESCAPING. YOUNG-STOCK SOMETIMES GET THROUGH THE SLANTBARS AND LAY INSIDE OF THE FEEDER.

POST ON WALL INSTALLATION

ALL BRACKETS TO BE STURDI-WALL MODELS
SKETCHES ARE NOT TO SCALE



STURDI-WALL SW84GL DRY SET BRACKETS ARE REQUIRED. 5/8" EPOXY OR SCREW TYPE ANCHORS REQUIRED FOR DRY SET INSTALLATION. ANCHORS TO HAVE A MIN. EMBEDMENT DEPTH OF 5.75" INTO CONCRETE WALL. EXPANSION TYPE ANCHORS ARE NOT ALLOWED.



4-PLY 2x8 GLU-LAM POSTS SHOWN AND REQUIRED
POST PLYS TO RUN PARALLEL WITH TRUSSES ON NORTH AND SOUTH WALLS

GABLE END POSTS TO BE 4-PLY 2x6 GLU-LAMS

POSTS ARE TO EXTEND TO TOP CHORD OF TRUSS

GABLE END POST PLYS TO RUN PERPENDICULAR TO TRUSSES

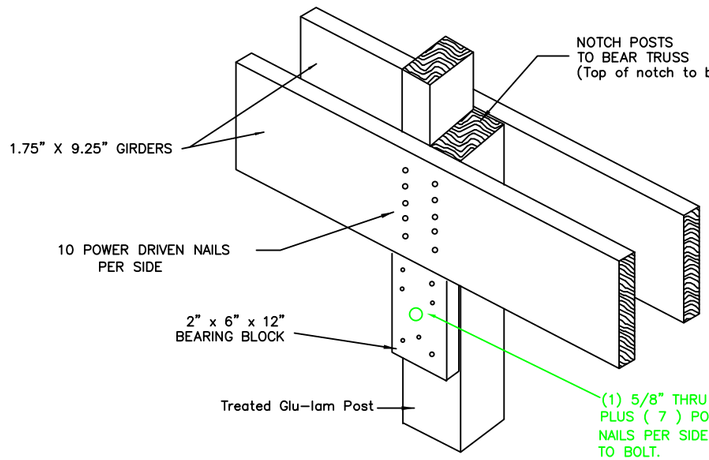
Date 3/2023
Designed S GESSNER / RGD
Drawn S GESSNER / RGD 3/2023
Checked
Approved

POST TO WALL CONNECTION & BALE FEEDER DETAILS

United States Department of Agriculture
Natural Resources Conservation Service

File No.
Drawing No.
5/9/24 3:25 PM
Sheet of

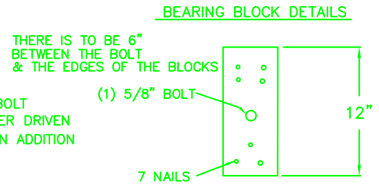
FASTENER REQUIREMENTS AT GIRDER & POST CONNECTIONS

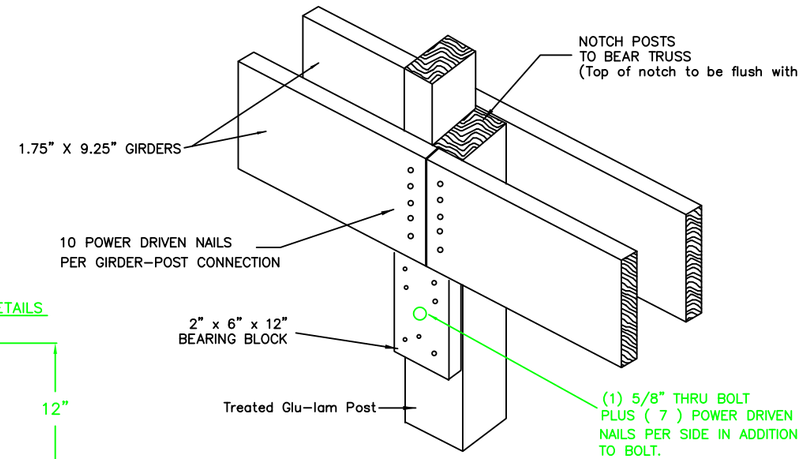


CONTINUOUS SPAN

* NO POST SHALL HAVE A GIRDER
BUTT JOINT ON BOTH SIDES

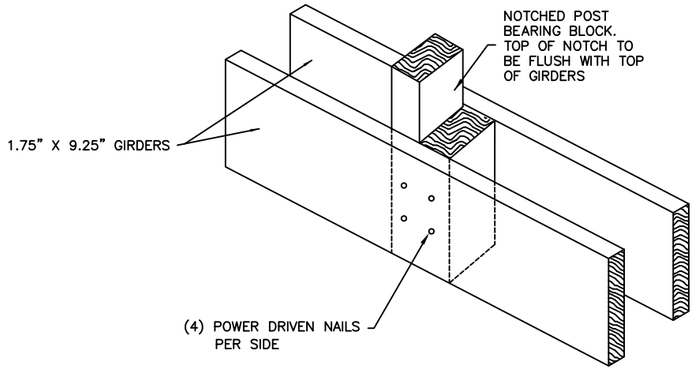
BEARING BLOCK DETAILS

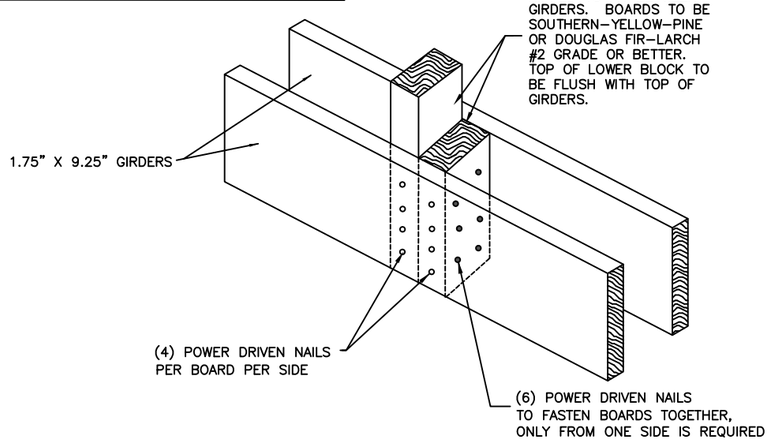




NON-CONTINUOUS SPAN

OPTIONS FOR TRUSS CONNECTION BETWEEN POSTS





CONSTRUCTION NOTES

1. Bolts shall be installed in the middle of the girder and support block.
2. All nails shall be .131" Diameter x 3.25" Long (Min.), galvanized, and ring shank.
3. LVL's need to be supported every 2' as per the LVL Manufacturer;
   A single block, ripped to fit, between the LVL's will suffice.
   Install (4) power driven nails per side from LVL into the blocking.

Date 1-2023
Designed BTO STANDARD DWG
Drawn
Checked
Approved by

FASTENER REQUIREMENTS AT GIRDER & POST CONNECTION

Barron & Greg Stine

NRCS
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United States Department of Agriculture

File No.
Drawing No.
Sheet: ____ of ____

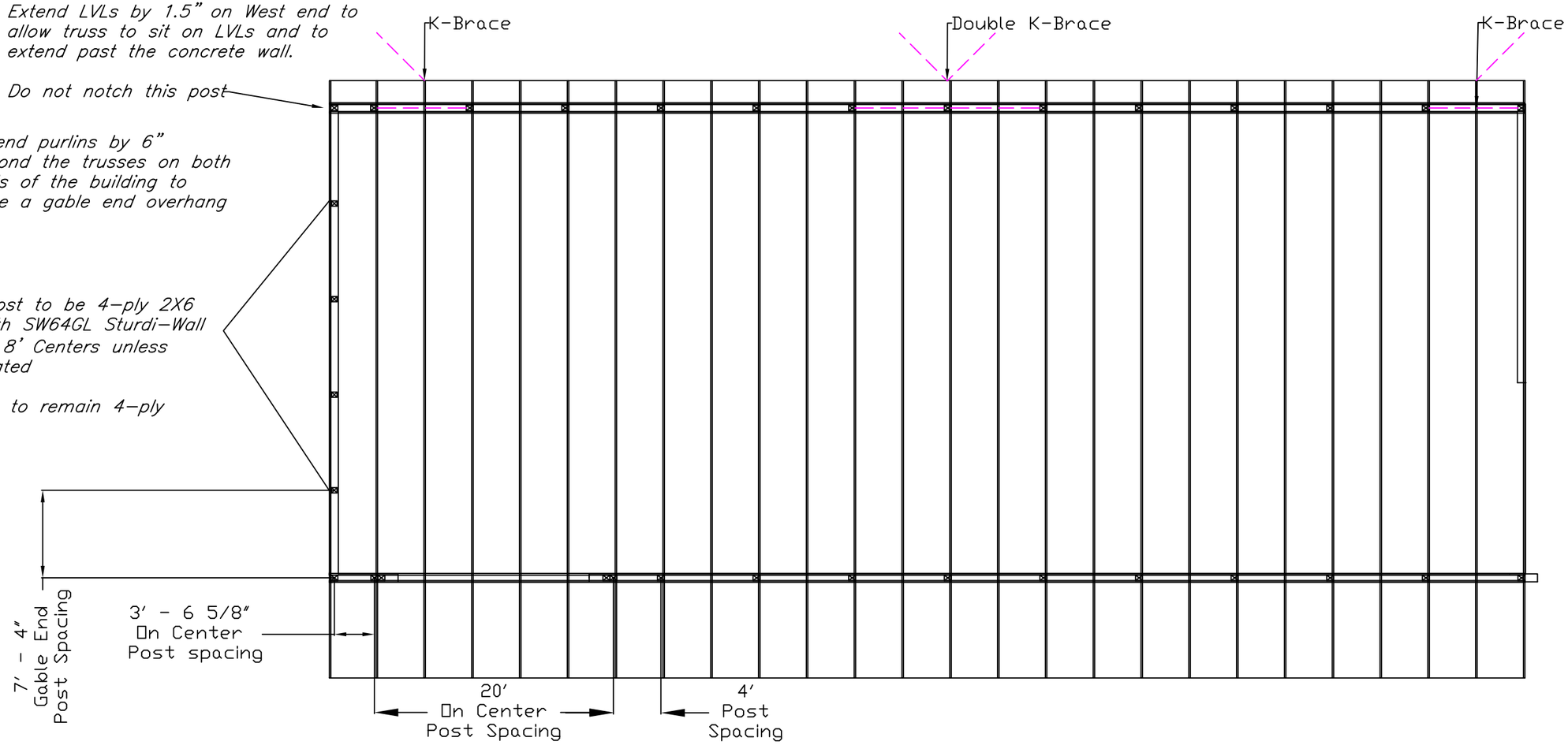
Extend LVLs by 1.5" on West end to allow truss to sit on LVLs and to extend past the concrete wall.

Do not notch this post

Extend purlins by 6" beyond the trusses on both ends of the building to have a gable end overhang

Gable end post to be 4-ply 2X6 Glu-lams with SW64GL Sturdi-Wall Brackets on 8' Centers unless otherwise stated

Corner posts to remain 4-ply 2X8s



Posts to be 4-ply 2X8 glu-lam posts on 8' centers on front and back walls with SW-84GL Sturdi-wall Brackets

Posts to be installed centered on the walls

West and North walls to be enclosed with curtains

Double posts needed on both sides of 16' opening with outside posts to be 20' on center

DATE 4/24
DESIGNED SL
DRAWN SL
CHECKED
APPROVED

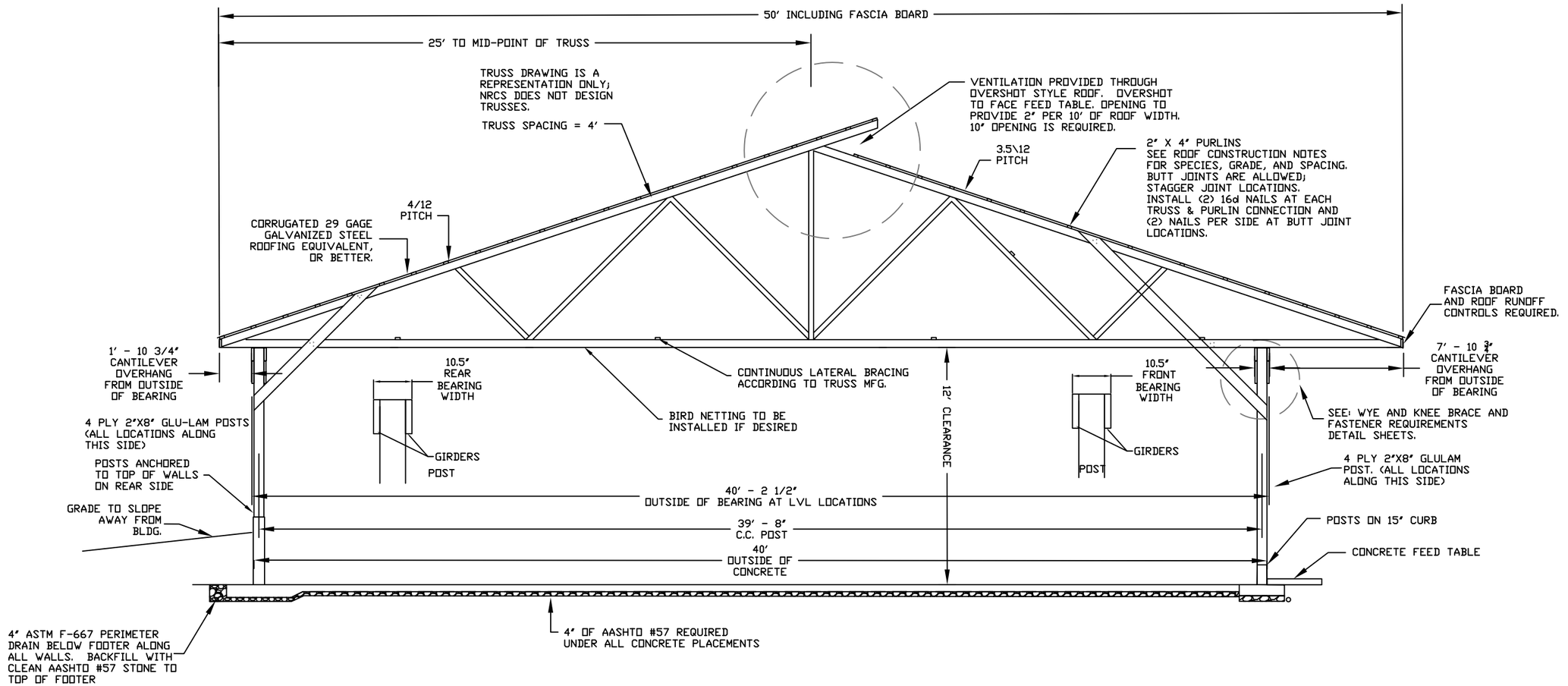
Barron & Greg Stine
Truss and Post Layout
1" = 10' Scale
CENTRE COUNTY, PA

United States Department of Agriculture
Natural Resources Conservation Service

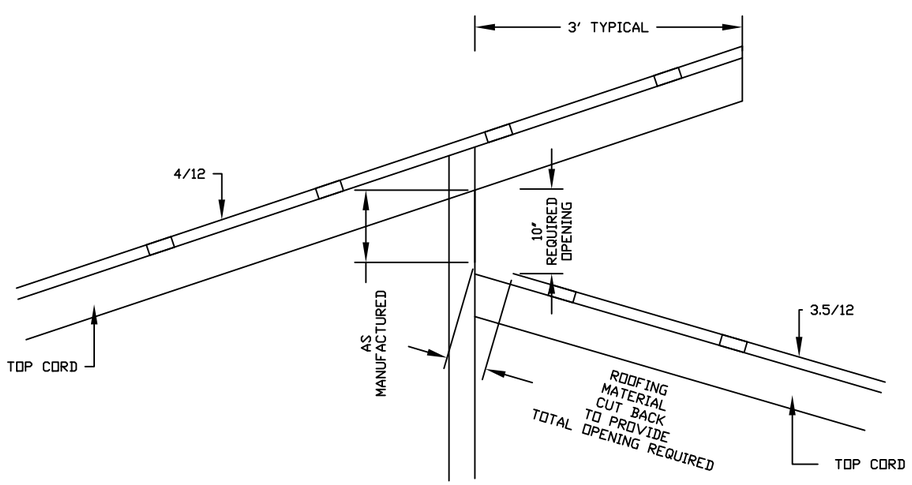
FILE NO. GREG STINE DESIGN.DWG

DRAWING NO.

SHEET OF



VENTILATION REQUIREMENTS:



GENERAL NOTES:

1. TRUSS SHOP DRAWINGS SHALL BE PROVIDED TO THE NRCS DESIGN ENGINEER FOR APPROVAL PRIOR TO THE TRUSSES BEING MADE.

2. TRUSS SHALL BE DESIGNED WITH WITH THE FOLLOWING PARAMETERS:

   A. IMPORTANCE FACTOR: CAT. II (I=1.00)
   B. BUILDING CLASSIFICATION: PARTIALLY ENCLOSED
   C. UNBALANCED SNOW LOAD SHALL BE INCLUDED
   D. THERMAL FACTOR (Ct)=1.2, EXPOSURE FACTOR (Ce)=1.0 (TERRAIN 'C', PARTIALLY EXPOSED)
   E. GRAVITY REACTIONS MUST YIELD A MINIMUM OF: 40 PSF (TCLL + TCDL + BCDL) COMBINED LOADING
   F. UPLIFT REACTIONS MUST YIELD A MINIMUM OF: 16 PSF UNIFORM UPLIFT

3. KNEE BRACES SHALL BE INSTALLED ON 45 DEGREES AND SHALL EXTEND TO THE TOP CHORD OF THE TRUSS.

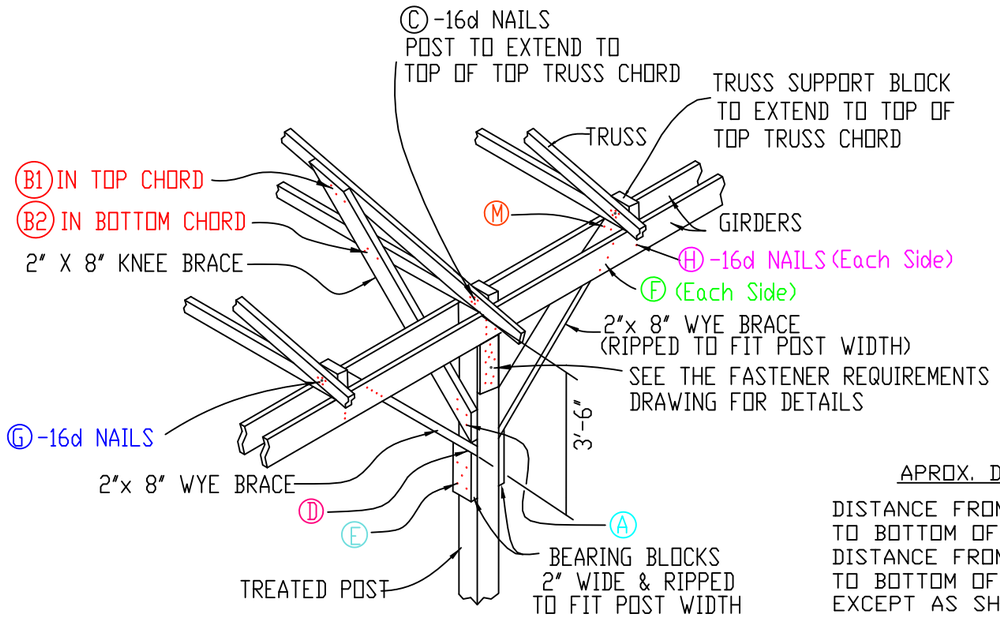
4. TRUSS SHALL HAVE 'CANTILEVERED' OVERHANGS; NO 'TAILED/SLOPING' OVERHANGS ALLOWED.

Date
Designed
Drawn
Checked
Approved

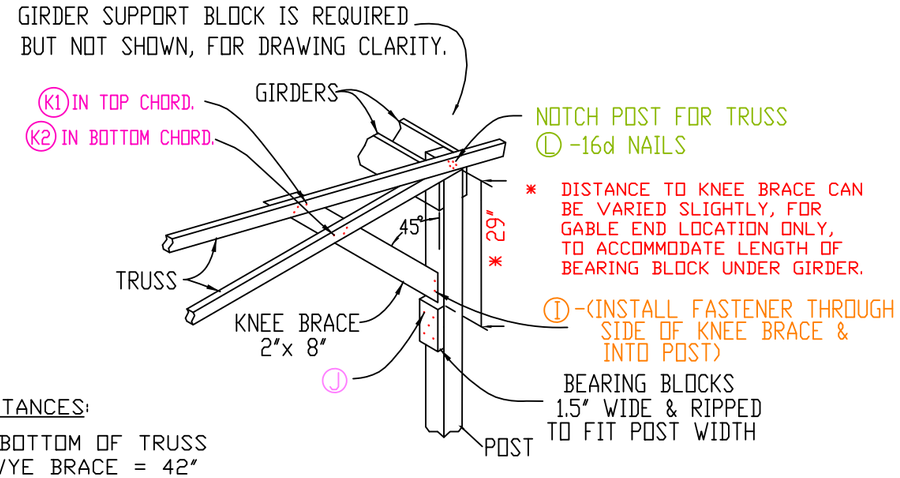
DRAWING FOR TRUSS DESIGNER
Barron & Greg Stine
CENTRE COUNTY, PENNSYLVANIA

United States Department of Agriculture
Natural Resources Conservation Service

File No.
Drawing No.
Sheet of



BRACING DETAIL



BRACING AT END OF BUILDING

* KNEE BRACE SHALL BE ATTACHED TO SIDE OF POST BUT CAN BE ATTACHED AS SHOWN ON END POST ONLY.

APROX. DISTANCES:

DISTANCE FROM BOTTOM OF TRUSS TO BOTTOM OF WYE BRACE = 42"
DISTANCE FROM BOTTOM OF TRUSS TO BOTTOM OF KNEE BRACE = 36", EXCEPT AS SHOWN ON END POSTS.

TABLE 1

		*NUMBER OF NAILS REQUIRED BASED ON THE "LENGTH" OF ROOF CONTRIBUTING TO THAT CONNECTION		
	JOINT	22.5' MAX (TRIBUTARY LENGTH)	27.5' MAX (TRIBUTARY LENGTH)	38' MAX (TRIBUTARY LENGTH)
SCREWS	A	SEE KNEE BRACE DETAILS DRAWING		
SCREWS	B1 & B2	SEE KNEE BRACE DETAILS DRAWING		
Power Driven 16d *See Note #5*	C	7	8	9
SCREWS	D	SEE WYE BRACE DETAILS DRAWING		
SCREWS	E	SEE WYE BRACE DETAILS DRAWING		
SCREWS	F	SEE WYE BRACE DETAILS DRAWING		
Power Driven 16d *See Note #5*	G	7	8	9
Power Driven 16d *See Note #3*	H	4	4	4
SCREWS	I	SEE KNEE BRACE DETAILS DRAWING		
SCREWS	J	SEE KNEE BRACE DETAILS DRAWING		
SCREWS	K1 & K2	SEE KNEE BRACE DETAILS DRAWING		
Power Driven 16d	L	6	7	7
SCREWS	M	2		

NOTES:

1. POSTS SHALL BE NOTCHED TO ACCOMMODATE TRUSSES. THE NOTCH SHALL BE CUT FLUSH WITH THE TOP OF THE GIRDER SO THE TRUSSES SIT ON THE NOTCH AND ON TOP OF BOTH GIRDERS EQUALLY. ONLY NOTCH THE POST 1.5" FOR THE TRUSS.

   NOTCH THE SIDE OF THE POST, NOT THE CENTER.
2. THE TRUSS SUPPORT BLOCKS AT LOCATIONS BETWEEN POSTS CAN BE NOTCHED SECTIONS OF POSTS OR 2X BOARDS. NOTCHES SHALL BE CUT AND THE BLOCK POSITIONED IN THE SAME FASHION AS THE NOTCHES IN THE POSTS (DESCRIBED ABOVE).
3. JOINT H; IF TWO BOARDS ARE USED INSTEAD OF A POST SECTION THEN EACH BOARD SHALL HAVE (4) NAILS PER SIDE. THE BOARDS SHALL ALSO BE NAILED TOGETHER WITH (6) NAILS.

   ALL NAILS FOR THIS CONNECTION CAN BE POWER DRIVEN 16D.

   ALL BLOCKS SHALL BE SOUTHERN YELLOW PINE #2.
4. HURRICANE (TIE DOWN) STRAPS CAN ALSO BE USED TO ANCHOR TRUSSES TO GIRDERS. THERE SHALL BE A STRAP(S) INSTALLED TO ANCHOR THE TRUSSES TO EACH GIRDER. IF THIS OPTION IS CHOSEN, DISCUSS WITH THE DESIGN ENGINEER IN ADVANCE.
5. JOINT C & G: THE AMOUNT OF NAILS LISTED CAN BE DISTRIBUTED BETWEEN BOTH TRUSS CHORDS.
6. THE WYE AND KNEE BRACES SHALL BE INSTALLED AT A 45 DEGREE ANGLE FROM THE TREATED POST. INSTALL THE WYE BRACES AFTER THE TRUSSES ARE SET.
7. DRILL PILOT HOLES AS NEEDED TO PREVENT SPLITTING. SCREWS IN SPLIT HOLES DO NOT COUNT TOWARD CONNECTION.
8. NAILS IN CONTACT WITH PRESSURE-TREATED WOOD SHALL BE GALVANIZED.

- THE 16d POWER DRIVEN NAILS ARE BASED ON 0.131 DIAMETER X 3.25" LONG (GALVANIZED OR STAINLESS STEEL & RING SHANK)
- THE SCREWS SHALL BE LEDGER-LOK LL358 WITH HEX WASHER STYLE HEAD (BY FASTEN-MASTER). OTHER SCREW TYPES CAN BE CONSIDERED IF THE DESIGN TABLES, SUPPLIED BY THE SCREW MFG, ARE SUBMITTED TO THE DESIGN ENGINEER FOR CONSIDERATION PRIOR TO CONSTRUCTION.

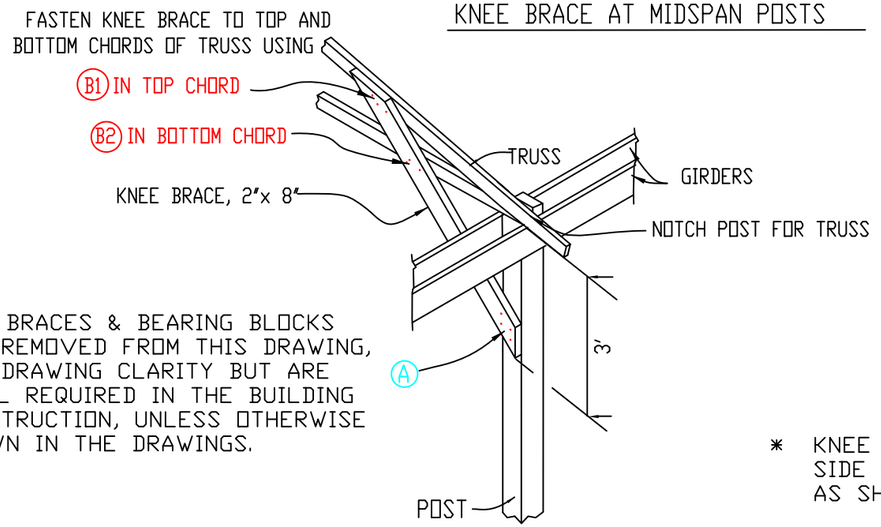
Designed BTO STD DRAWING Date 8/2023
Drawn RGD Checked 8/2023
Approved RGD 8/2023

FASTENER REQUIREMENTS
Barron & Greg Stine
CENTRE COUNTY, PENNSYLVANIA

United States Department of Agriculture
Natural Resources Conservation Service

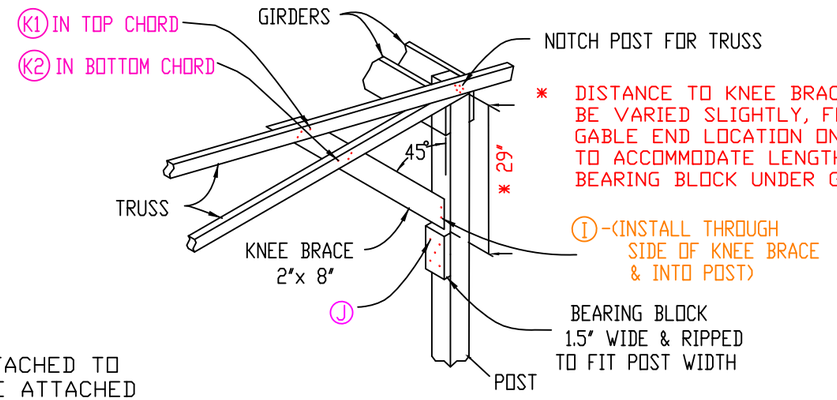
File No.
Drawing No.
Sheet of

KNEE BRACE AT MIDSPAN POSTS



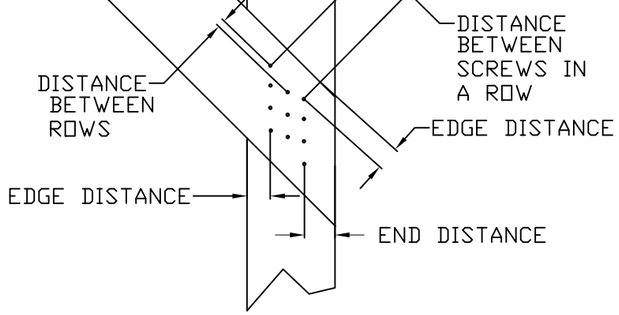
WYE BRACES & BEARING BLOCKS ARE REMOVED FROM THIS DRAWING, FOR DRAWING CLARITY BUT ARE STILL REQUIRED IN THE BUILDING CONSTRUCTION, UNLESS OTHERWISE SHOWN IN THE DRAWINGS.

KNEE BRACE AT END POSTS



* KNEE BRACE SHALL BE ATTACHED TO SIDE OF POST, BUT CAN BE ATTACHED AS SHOWN AT THE END POSTS ONLY.

SCREW SPACING DETAILS



SPACING REQUIREMENTS APPLY TO ALL KNEE BRACE & BEARING BLOCK LOCATIONS WHERE SCREWS ARE SPECIFIED FOR.

MINIMUM DISTANCE & SPACING (INCHES)

END DISTANCE = $2\frac{3}{8}$

EDGE DISTANCE = $1\frac{3}{4}$

SPACING BETWEEN SCREWS IN A ROW = $3\frac{1}{2}$

SPACING BETWEEN ROWS (STAGGER ROWS) = $\frac{5}{8}$

USE THIS FOR BACK SIDE WITH CURTAINS

JOINT	MINIMUM SCREW LENGTH	40' SPAN 8' OVERHANG (OPEN SIDE)	40' SPAN 2' OVERHANG (CLOSED SIDE)	40' SPAN 2' OVERHANG (OPEN SIDE)
A	$3\frac{5}{8}$"	8	6	7
B1/K1	$3\frac{5}{8}$"	5	4	4
B2/K2	$3\frac{5}{8}$"	5	4	4
I	$3\frac{5}{8}$"	3	3	3
J	$3\frac{5}{8}$"	4	4	4

TABLES ARE SHOWING THE NUMBER OF LEDGERLOK LL358 SERIES SCREWS REQUIRED. LEDGERLOK IS A PRODUCT OF FASTEN-MASTER. SCREWS SHALL HAVE A HEX WASHER HEAD, NOT A FLAT HEAD.
OTHER SCREW TYPES CAN BE CONSIDERED IF THE DESIGN TABLES, FROM THE SCREW MFG, ARE SUBMITTED TO THE DESIGN ENGINEER FOR CONSIDERATION PRIOR TO CONSTRUCTION.
PILOT HOLES ARE NOT REQUIRED IN MOST CONNECTIONS UNLESS SPLITTING OCCURS.
PILOT HOLES ARE REQUIRED IN JOINT J.

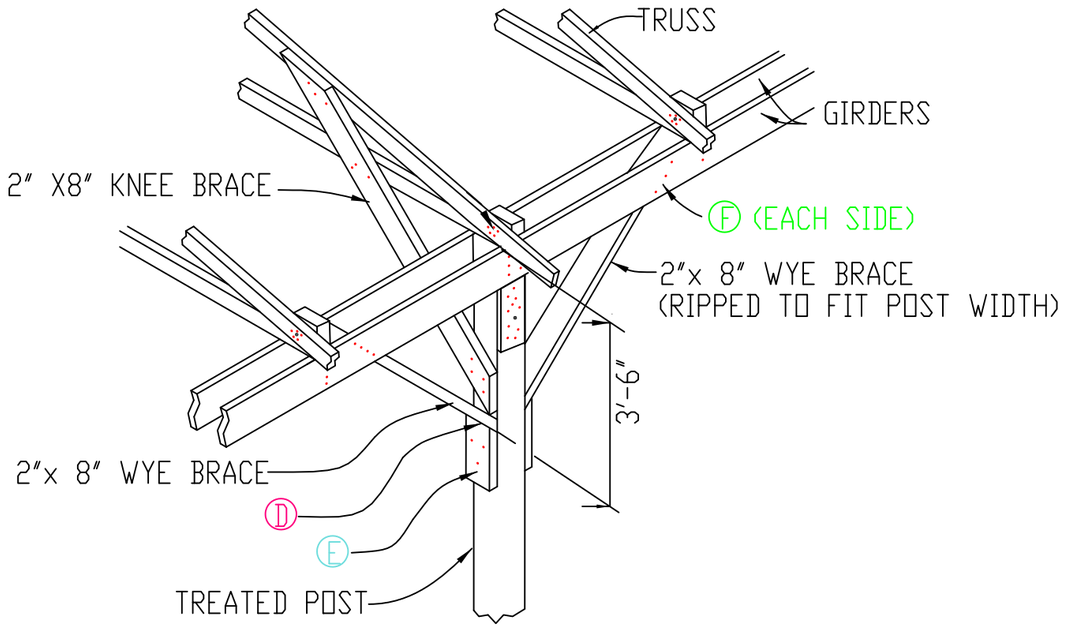
* TABLES ARE BASED ON USING DRILL SET TYPE POST TO WALL BRACKETS. WET SET BRACKETS SHALL NOT BE USED.

Date
Designed BTO STD DRAWING 1/2023
Drawn RGD 1/2023
Checked RGD 1/2023
Approved

KNEE BRACE DETAILS
Barron & Greg Stine
CENTRE COUNTY, PENNSYLVANIA

United States Department of Agriculture
Natural Resources Conservation Service

File No.
Drawing No.
Sheet of



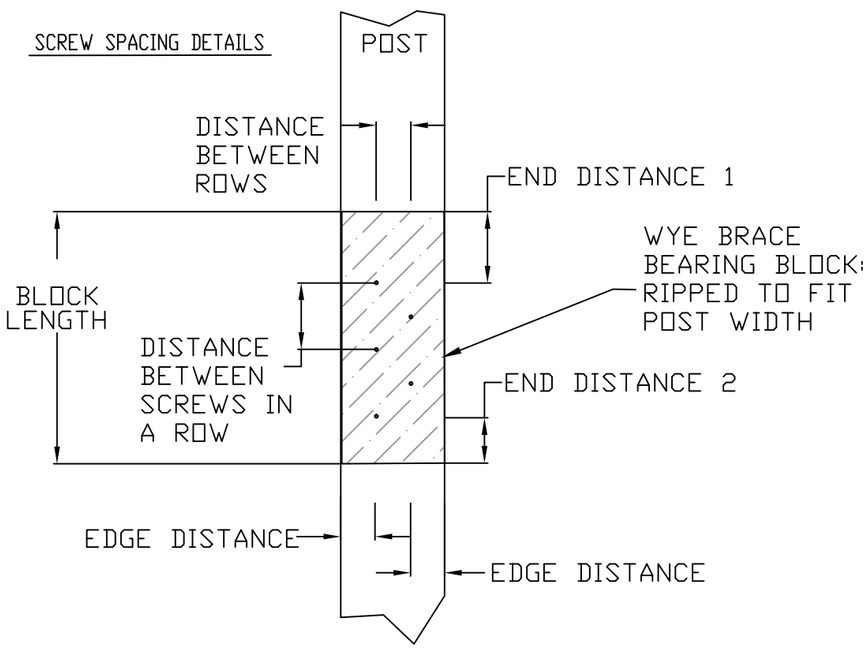
EACH END OF WYE BRACE IS TO BE MITERED & BEVELED SO THAT IT FITS SNUG AGAINST THE POST AND THE INTERMEDIATE TRUSS SUPPORT BLOCK.

TABLES BELOW ARE SHOWING THE NUMBER OF LEDGERLOK LL358 SERIES SCREWS REQUIRED. LEDGERLOK IS A PRODUCT OF FASTEN-MASTER.

SCREWS SHALL HAVE A HEX WASHER HEAD, NOT A FLAT HEAD. OTHER SCREW TYPES MAY BE CONSIDERED FOR USE: SCREW MFG DESIGN TABLES SHALL BE SUBMITTED TO THE DESIGN ENGINEER FOR CONSIDERATION.
PILOT HOLES ARE REQUIRED IN JOINT D AND F.
PILOT HOLES MAY BE REQUIRED IN JOINT E IF SPLITTING OCCURS.

"NO WYE" IS ONLY FOR SIDES ENCLOSED WITH STEEL SIDING. IF A SIDE IS ENCLOSED WITH CURTAINS; WYE BRACES ARE NEEDED.

JOINT	MINIMUM SCREW LENGTH	ALL SPANS 8' OVERHANG (OPEN SIDE)	ALL SPANS 2' OVERHANG (CLOSED SIDE)	ALL SPANS 2' OVERHANG (OPEN SIDE)
D	$3\frac{5}{8}$"	2	NO WYE	2
E	$3\frac{5}{8}$"	3	NO WYE	3
F	$3\frac{5}{8}$"	3	NO WYE	3



MINIMUM DISTANCE & SPACING (INCHES)

END DISTANCE 1 =	$3\frac{3}{4}$
END DISTANCE 2 =	$2\frac{3}{8}$
EDGE DISTANCE =	$1\frac{3}{4}$
SPACING BETWEEN SCREWS IN A ROW =	$3\frac{1}{2}$
SPACING BETWEEN ROWS (STAGGER ROWS) =	$1\frac{1}{4}$
BEARING BLOCK LENGTH =	14

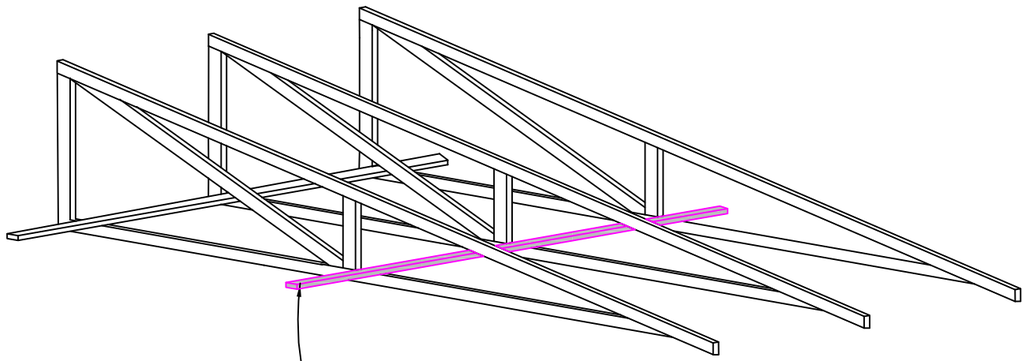
Designed BTO STD DRAWING Date 1/2024
Drawn Date
Checked RGD Date 1/2024
Approved RGD Date 1/2024

WYE BRACE DETAILS
Barron and Greg Stine
CENTRE COUNTY, PENNSYLVANIA

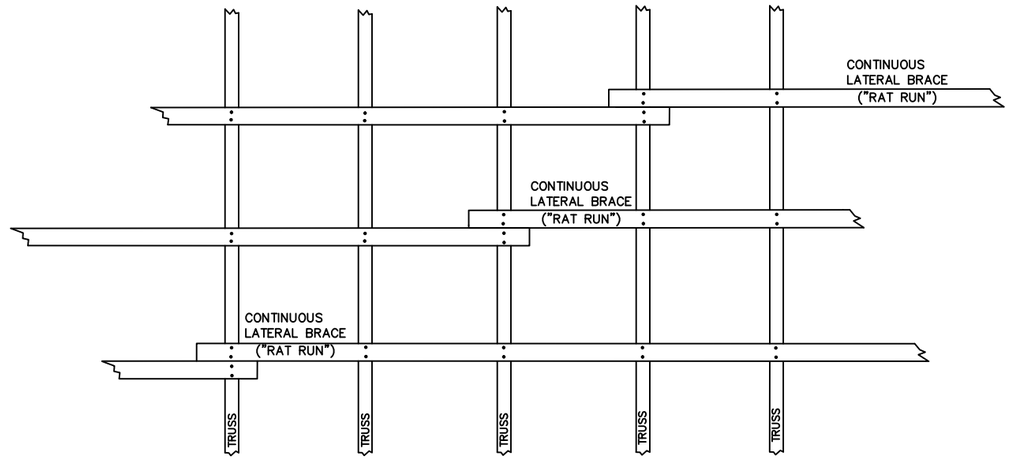
United States Department of Agriculture
Natural Resources Conservation Service

File No.
Drawing No.
Sheet of

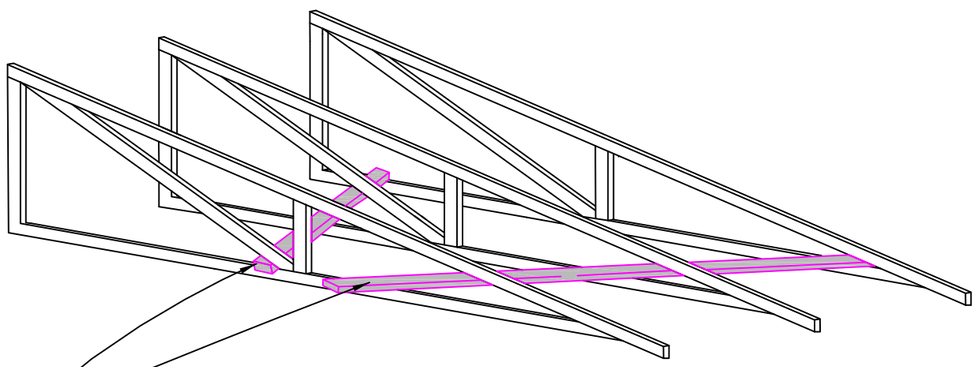
CHORD AND DIAGONAL BRACING



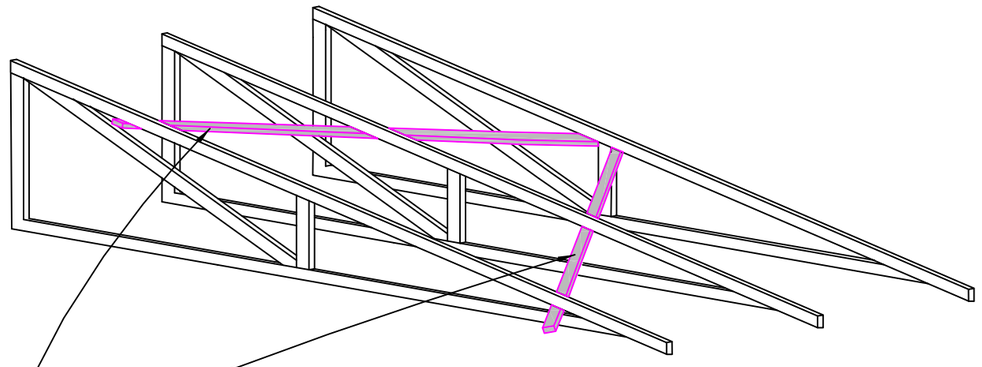
CONTINUOUS LATERAL BRACING ("RAT RUNS")
(2–16d NAILS @ EACH BRACE / TRUSS CONNECTION)



JOINTS IN CONTINUOUS LATERAL BRACES SHALL BE STAGGERED,
SO THEY DO NOT LINE UP WITH THE NEXT TRUSS.
AT A JOINT, EACH BOARD SHALL EXTEND FULLY PAST THE TRUSS,
TO ALLOW FOR A TWO NAIL CONNECTION.
THESE BRACES ARE AS PER TRUSS MFG. REQUIREMENTS,
SHOWN ON THE TRUSS DESIGN.



DIAGONAL BRACING ON TOP SIDE OF BOTTOM CHORD
AT LOCATIONS SHOWN IN DRAWINGS
(2–16d NAILS @ EACH BRACE TRUSS CONNECTION)



DIAGONAL BRACING ON BOTTOM SIDE OF TOP CHORD
AT LOCATIONS SHOWN IN DRAWINGS
(2–16d NAILS @ EACH BRACE TRUSS CONNECTION)

Date 4/22
Designed BTO STD. DWG
Drawn
Checked RGD 4/22
Approved by

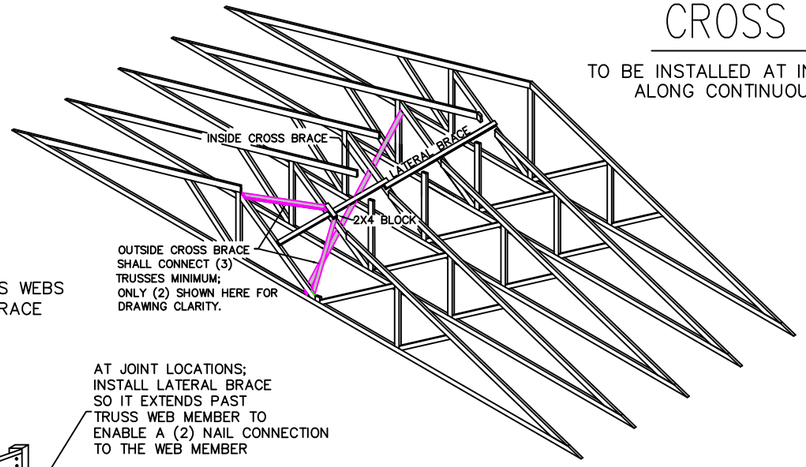
CHORD AND DIAGONAL BRACING

NRCS
Natural Resources Conservation Service
United States Department of Agriculture

File No.
Drawing No.
Sheet ____ of ____

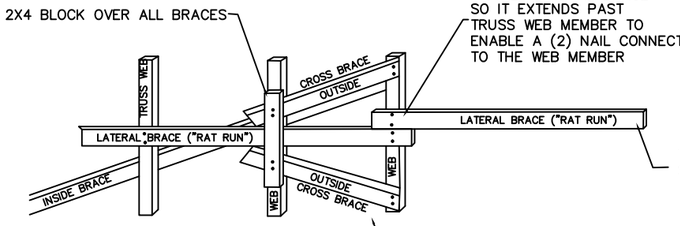
CROSS BRACING

TO BE INSTALLED AT INTERVALS NOT TO EXCEED 20'
ALONG CONTINUOUS LATERAL BRACING



CROSS BRACING IS REQUIRED ON TRUSS WEBS
THAT HAVE A CONTINUOUS LATERAL BRACE

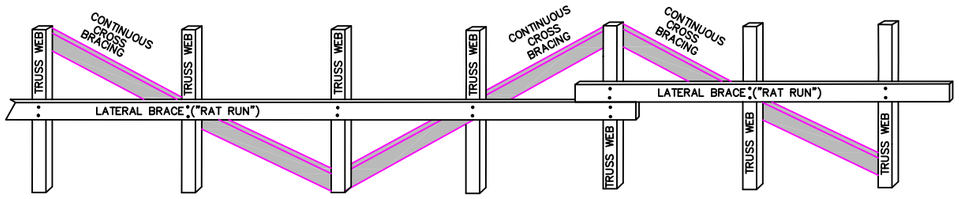
OPTION #1



* ALL CROSS BRACES SHALL BE
INSTALLED AT LESS THAN OR
EQUAL TO 45 DEGREE ANGLES

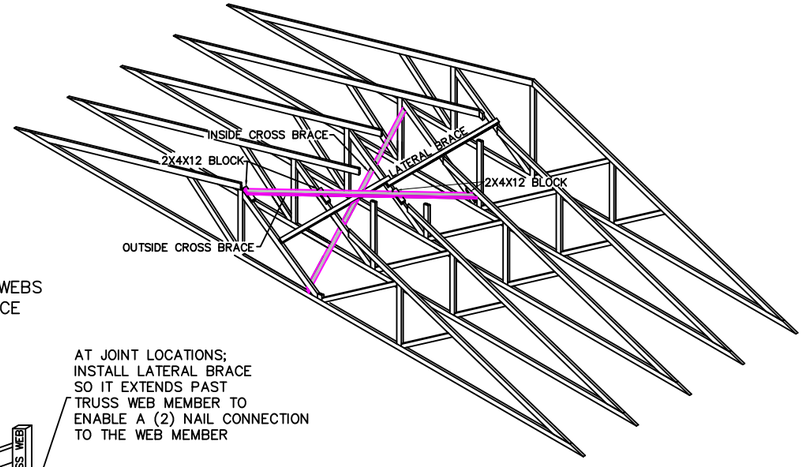
CROSS BRACING IS REQUIRED ON TRUSS WEBS
THAT HAVE A CONTIINUOUS LATERAL BRACE

OPTION #3



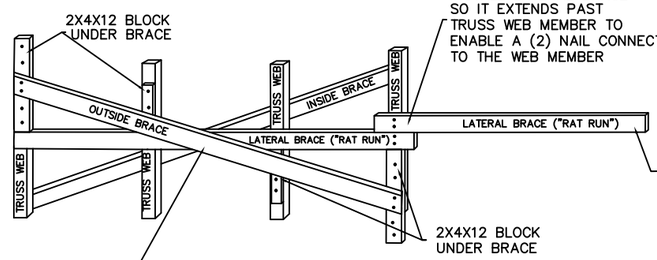
INSTALL "CONTINUOUS" CROSS BRACING
ON THE OPPOSITE SIDE OF THE TRUSS
WEB MEMBER AS THE LATERAL BRACE.
THE CROSS BRACING MUST RUN THE
ENTIRE LENGTH OF THE BUILDING
ON THOSE WEB MEMBERS WITH LATERAL
BRACING SPECIFIED IN THE TRUSS DESIGN
AND AT OTHER LOCATIONS DICTATED BY
THE BUILDING DESIGN ENGINEER.
(2-16d NAILS @ EACH MEMBER)

* ALL CROSS BRACES SHALL BE
INSTALLED AT LESS THAN OR
EQUAL TO 45 DEGREE ANGLES



CROSS BRACING IS REQUIRED ON TRUSS WEBS
THAT HAVE A CONTINUOUS LATERAL BRACE

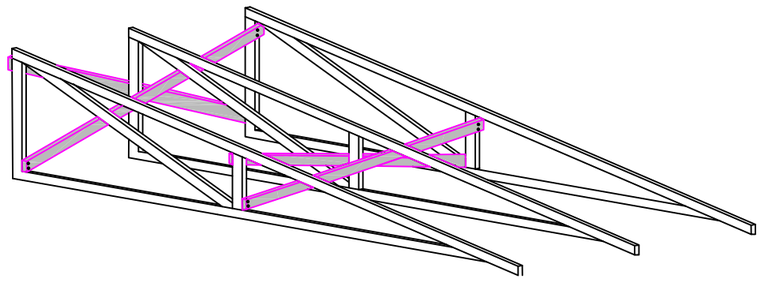
OPTION #2



* ALL CROSS BRACES SHALL BE
INSTALLED AT LESS THAN OR
EQUAL TO 45 DEGREE ANGLES

WHEN THE TRUSS DESIGN DOES NOT SHOW ANY CONTINUOUS
LATERAL BRACES (RAT RUNS) WITHIN THE TRUSS WEBS,
THIS OPTION OF CROSS BRACING SHALL BE USED.

OPTION #4



CROSS BRACING SHALL BE LOCATED ON BOTH SIDES OF ALL
VERTICAL WEB MEMBERS AS WELL AS ADDITIONAL LOCATIONS
AS DETERMINED BY THE BUILDING DESIGN ENGINEER.

THE CROSS BRACE SHALL CONNECT
AT LEAST (3) TRUSSES,
(2-16d NAILS @ EACH MEMBER/BLOCK)

* ALL CROSS BRACES SHALL BE
INSTALLED AT LESS THAN OR
EQUAL TO 45 DEGREE ANGLES

Date 5/20
Designed BTO STD. DWG
Drawn
Checked RGD 5/20
Approved by

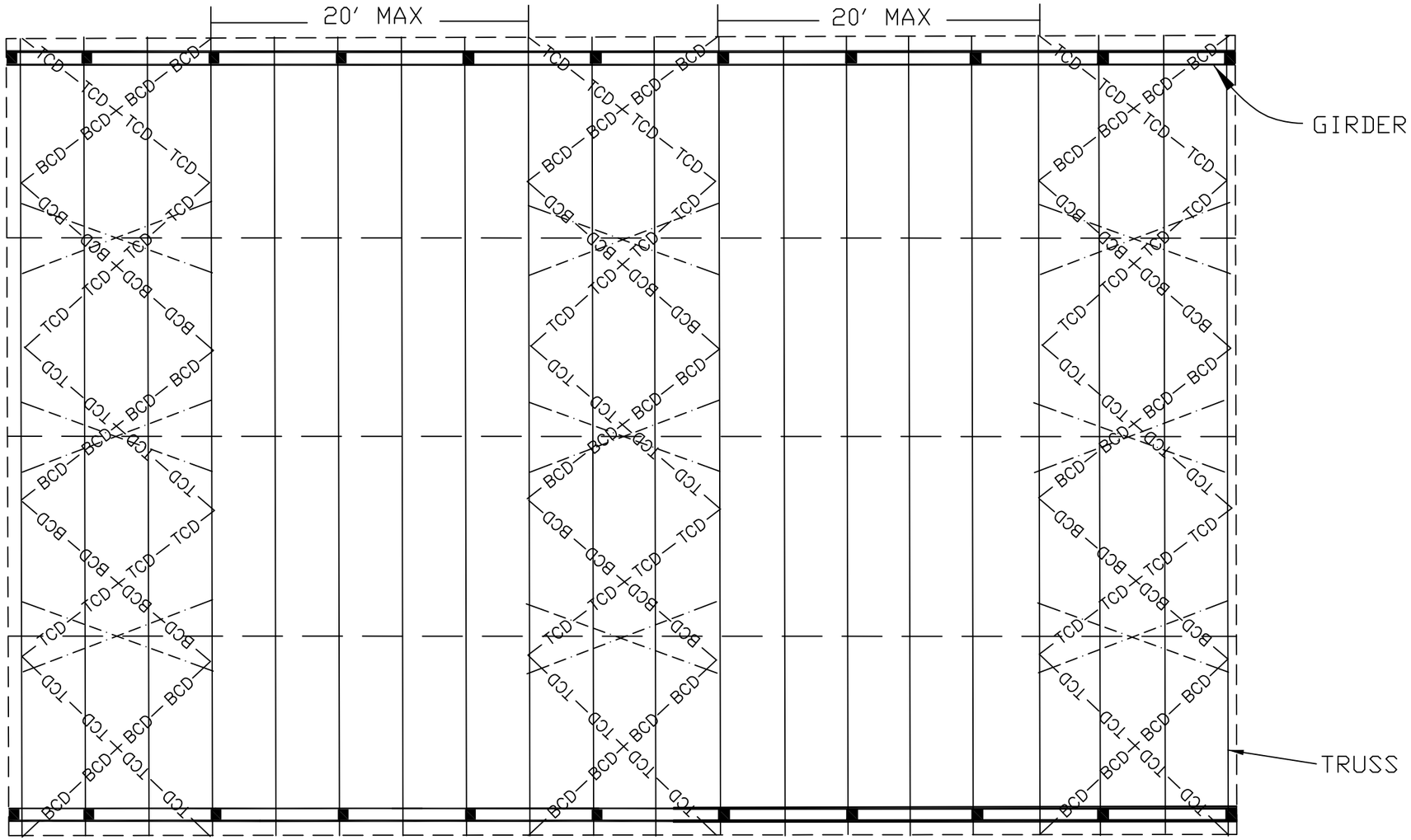
CROSS BRACING

NRCS
Natural Resources Conservation Service
United States Department of Agriculture

File No.

Drawing No.

Sheet____ of ____



— — — CONTINUOUS LATERAL BRACING AS PER TRUSS MFG. RECOMMENDATIONS

— TCD — TCD — TCD — TOP CHORD DIAGONAL BRACING

— BCD — BCD — BCD — BOTTOM CHORD DIAGONAL BRACING

WEB MEMBER CROSS BRACING

NOTES:

1. CONTINUOUS LATERAL BRACING SHOWN IS FOR A VISUAL REPRESENTATION ONLY; CONTINUOUS LATERAL BRACING LOCATIONS & SPACING ARE REQUIRED BY THE TRUSS MFG & SHOWN ON THE TRUSS DESIGN DRAWING.
2. ALL BRACING IS 2" X 4" GRADE MARKED LUMBER.
3. ALL CONNECTIONS SHOULD BE MADE WITH 2 - 16d NAILS. 2-16d NAILS. NO BUTT JOINTS.

"DRAWING IS NOT TO SCALE"

Date 7/10
Designed RCD
Drawn RCD
Checked
Approved by

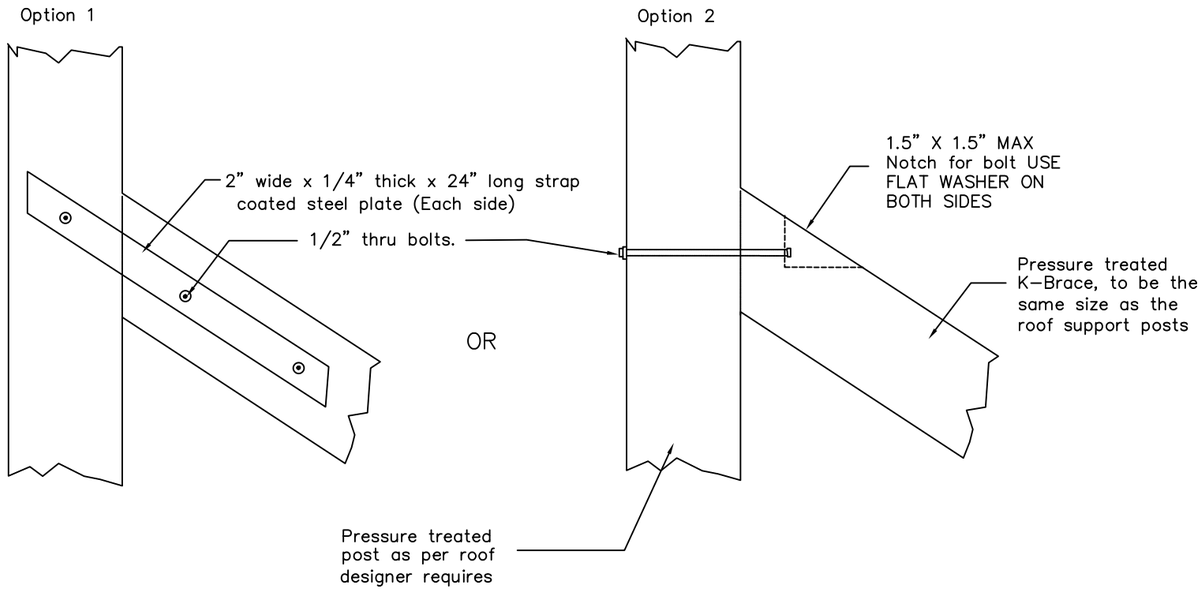
ADDITIONAL BRACING REQUIREMENTS

NRCS
Natural Resources Conservation Service
United States Department of Agriculture

File No.
Drawing No.
Sheet: ____ of ____

"K" BRACING DETAIL

(FOR POSTS ON TOP OF CONCRETE WALL)



NOTES:

1). "K" braceing is needed when posts are anchored to top of walls.

2). Will need a "K" brace at the corners of the building.
A "K" brace should also be considered on both sides of openings.

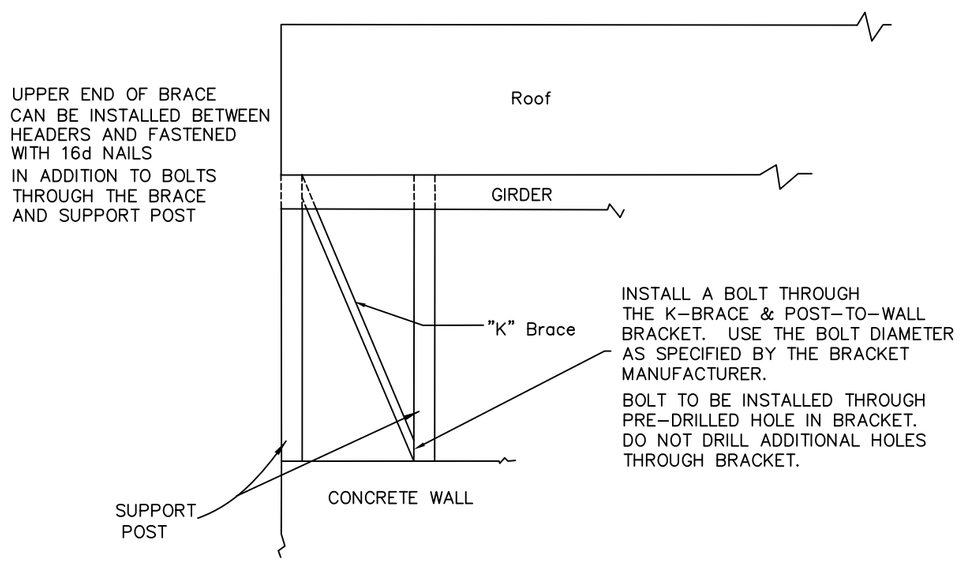
3). Other "K" brace configurations may be used if approved by the designer.

** IF THE ENCLOSED SIDES ARE ENCLOSED WITH STEEL PANELS THEN "K" BRACES ARE NOT REQUIRED.
IF THE ENCLOSED SIDES ARE ENCLOSED WITH CURTAINS THEN "K" BRACES ARE REQUIRED.
IF ALL SIDES ARE LEFT OPEN THEN "K" BRACES ARE REQUIRED.

K-BRACE SHALL BE THE SAME SIZE AS THE SUPPORT POSTS. ORDER ENOUGH POSTS FOR K-BRACING.

"Not To Scale"

TYPICAL "K" BRACE LOCATION



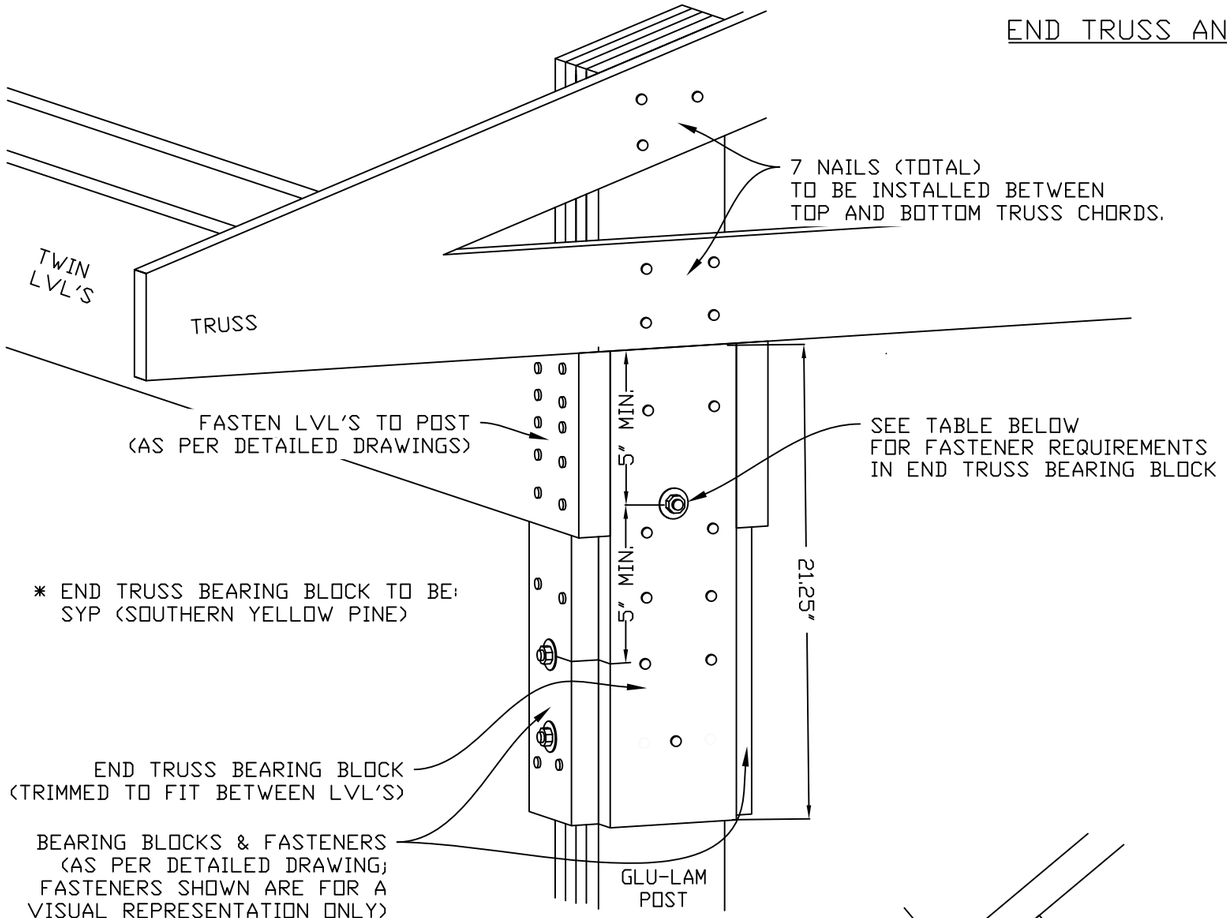
Date 7/10 1/19
Designed RGD
Drawn RGD (REVISED)
Checked
Approved by

K-BRACE DETAIL

NRCS Natural Resources Conservation Service United States Department of Agriculture

File No.
Drawing No.
Sheet ____ of ____

END TRUSS ANCHORING DETAIL

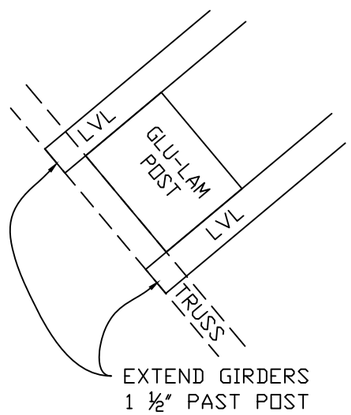


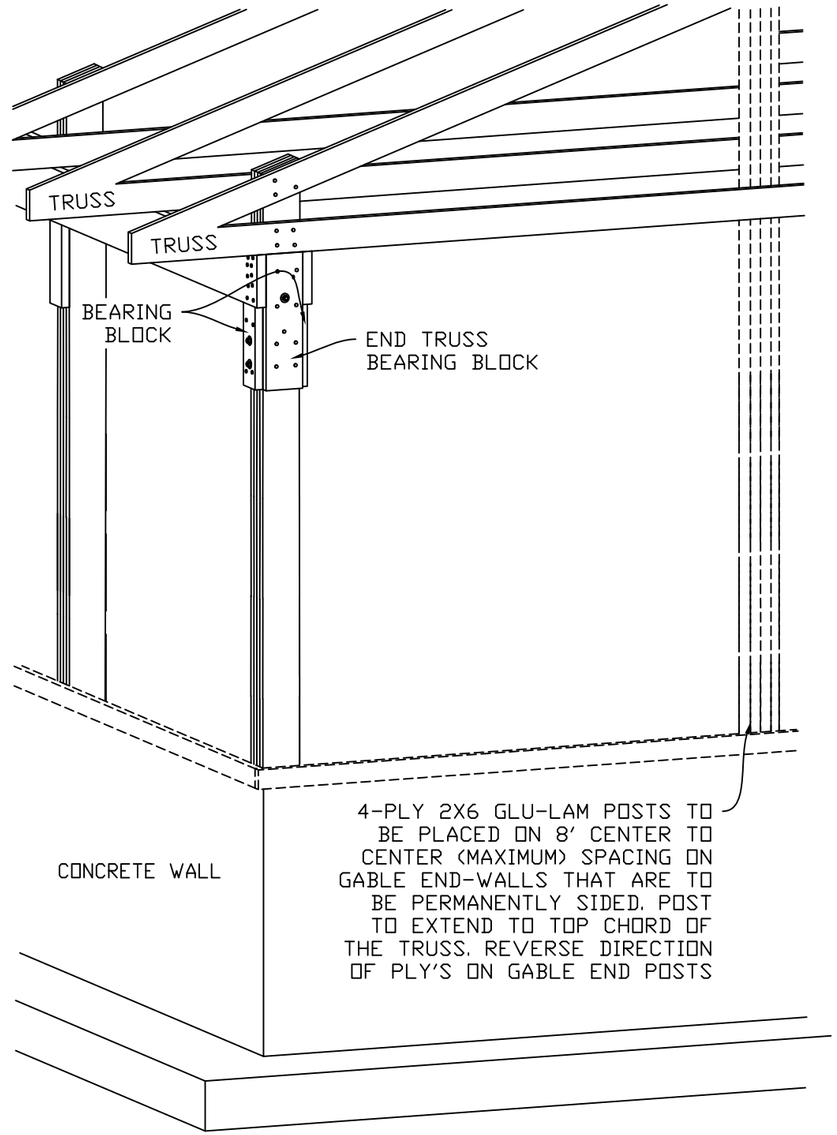
* END TRUSS BEARING BLOCK TO BE: SYP (SOUTHERN YELLOW PINE)

* ALL NAILS TO BE .131" DIAMETER X 3.25" LONG (MIN.) POWER DRIVEN, GALVANIZED, AND RING SHANK.

* THROUGH BOLT SHALL BE GALVANIZED.

END TRUSS BEARING BLOCK FASTENERS REQUIREMENTS				
BASED ON THE "LENGTH" OF ROOF CONTRIBUTING TO THAT CONNECTION				
FASTENER TYPE	24' MAX (TRIBUTARY LENGTH)	27.5' MAX (TRIBUTARY LENGTH)	33' MAX (TRIBUTARY LENGTH)	38' MAX (TRIBUTARY LENGTH)
5/8" THROUGH BOLT	0	0	1	1
NAILS	9	12	9	12





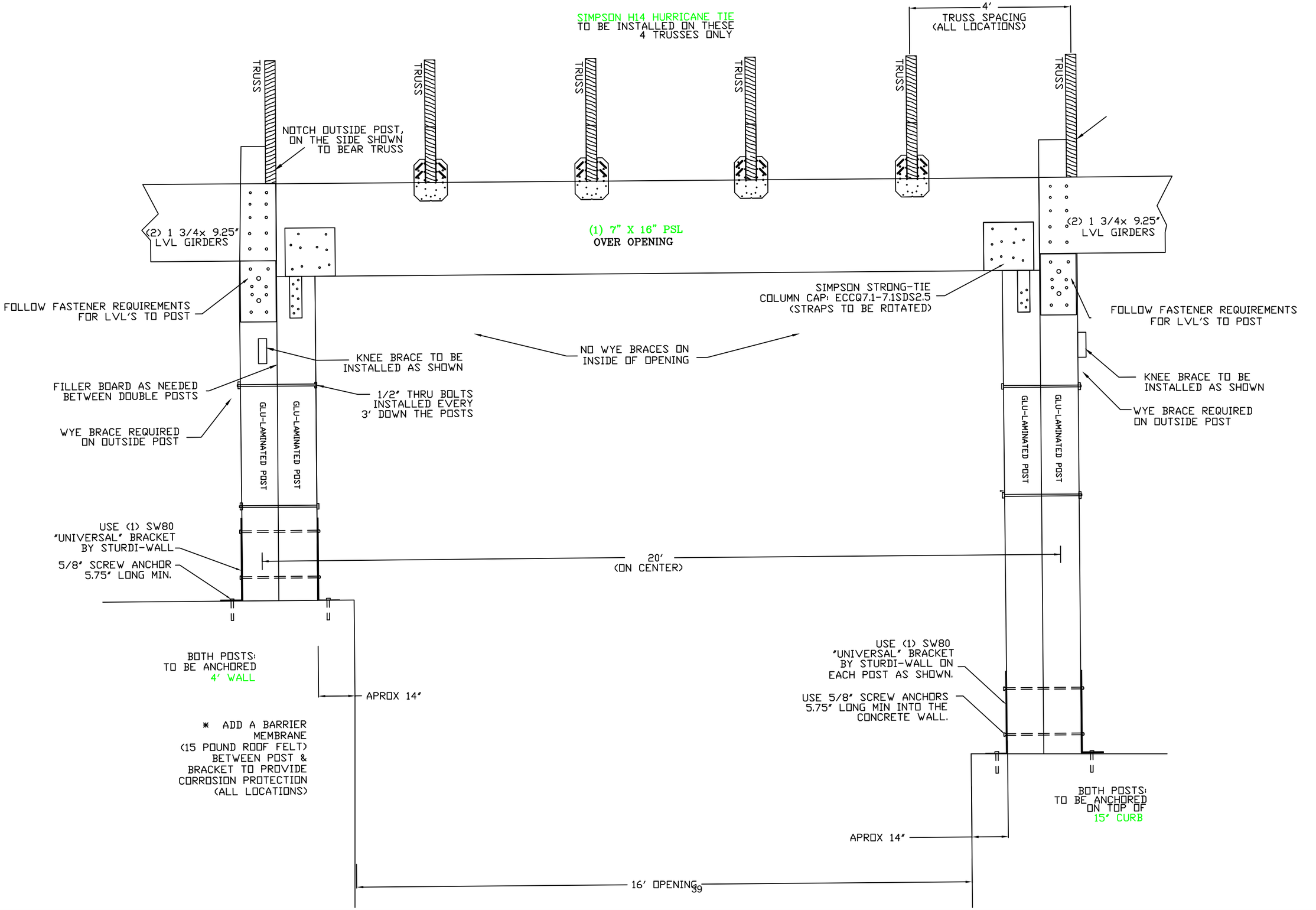
* IF ENCLOSING WITH CURTAINS, SOME MANUFACTURERS MAY REQUIRE GIRTS. IF THIS IS THE CASE FOLLOW THE MANUFACTURERS RECOMMENDATIONS

DESIGNED — BTD STANDARD DWG — DATE
DRAWN — MQF — 4/22
CHECKED — RGD — 4/22
APPROVED — RGD — 4/22

END TRUSS ANCHORING DETAILS
Barron & Greg Stine
CENTRE COUNTY, PENNSYLVANIA

United States Department of Agriculture
Natural Resources Conservation Service

FILE NO.
DRAWING NO.
SHEET OF



DATE 2/2023

BTD STANDARD DWG

DESIGNED

DRAWN

CHECKED

APPROVED

ENTRANCE DETAILS

Barron & Greg Stine

CENTRE COUNTY, PENNSYLVANIA

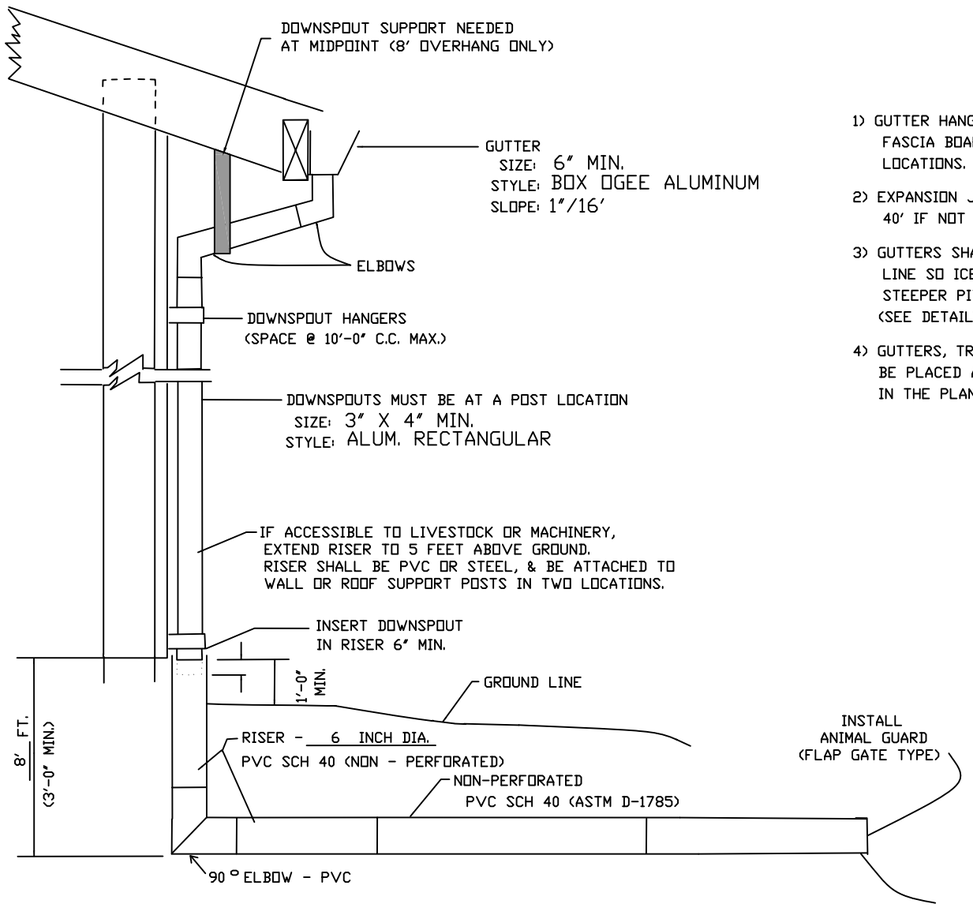
United States Department of Agriculture

Natural Resources Conservation Service

FILE NO.

DRAWING NO.

SHEET OF

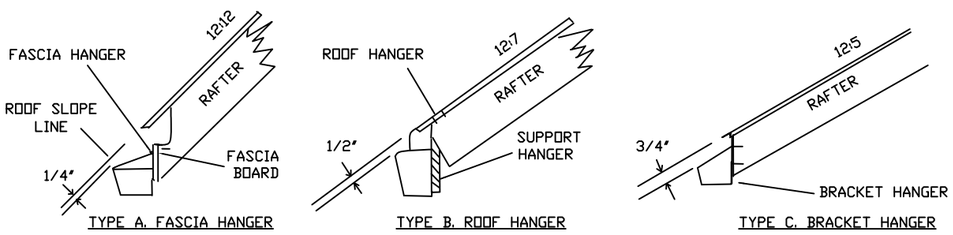


1) GUTTER HANGERS SHALL BE NAILED TO FASCIA BOARD OR ROOF SHEATHING AT RAFTER LOCATIONS.

2) EXPANSION JOINTS SHALL BE INSTALLED EVERY 40' IF NOT FREE-FLOATING.

3) GUTTERS SHALL BE PLACED BELOW ROOF SLOPE LINE SO ICE AND SNOW CAN SLIDE CLEAR. STEEPER PITCH REQUIRES LESS CLEARANCE. (SEE DETAIL)

4) GUTTERS, TRANSFER LINES, AND OUTLETS SHALL BE PLACED AT THE MINIMUM SLOPES INDICATED IN THE PLAN VIEW.



GUTTER HANGING DETAILS

(Clearances shown are guides for typical roof slopes,)
(regardless of hanger type.)

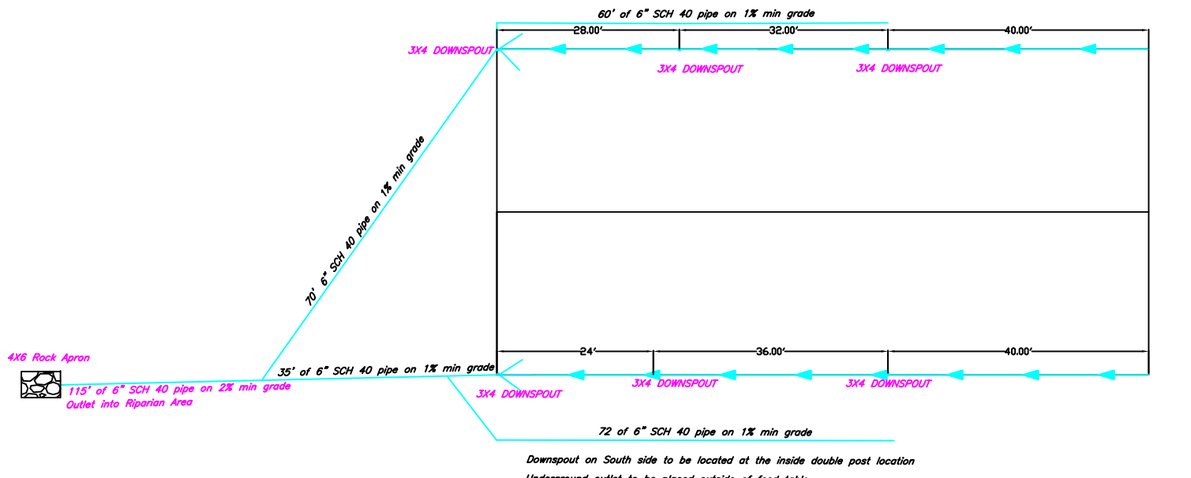
RUN UNDERGROUND OUTLETS TO OUTLET INTO RIPARIAN AREA. STAY BACK FROM STREAM 50 FT TO NOT HAVE DIRECT DISCHARGE UNLESS OUTFALL PERMIT IS OBTAINED

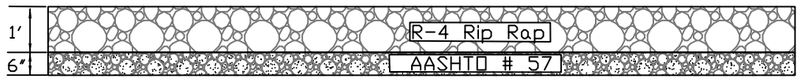
INSTALL A 4X6 R-4 RIP RAP APRON WITH 6 INCHES OF AASHTO 57 BEDDING STONE AT THE PIPE OUTLET

PVC downspouts should be installed before pouring feed table

Perimeter drain should be kept separate but can be in the same trench as the underground outlets for the roof downspouts if applicable.

Animal guard and PVC Schedule 40 pipe should be used at outlet of perimeter drain





Rip Rap Apron Detail

DATE 3/24
DESIGNED SL
DRAWN SL
CHECKED
APPROVED

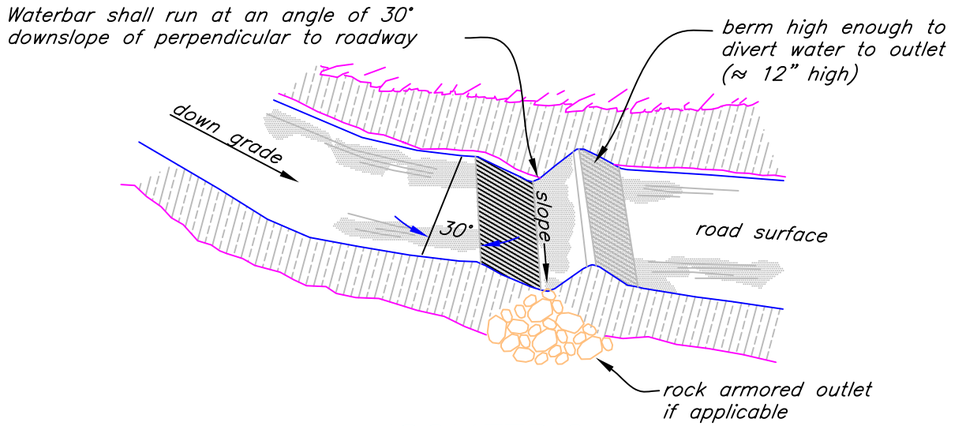
Barron & Greg Stine
Roof Runoff Details
Sketch Not to Scale
CENTRE COUNTY COUNTY, PA

United States Department of Agriculture
Natural Resources Conservation Service

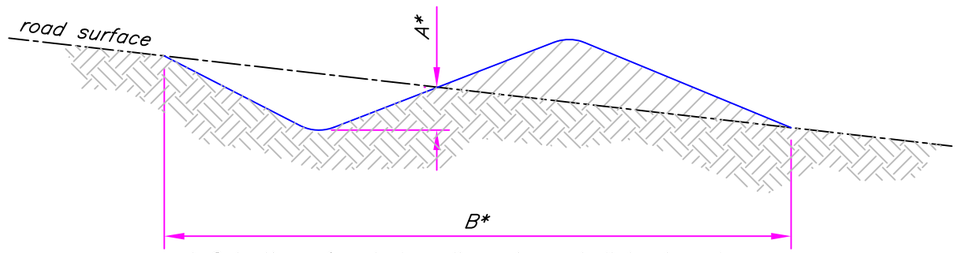
FILE NO.
GREG STINE DESIGN.DWG

DRAWING NO.

SHEET OF



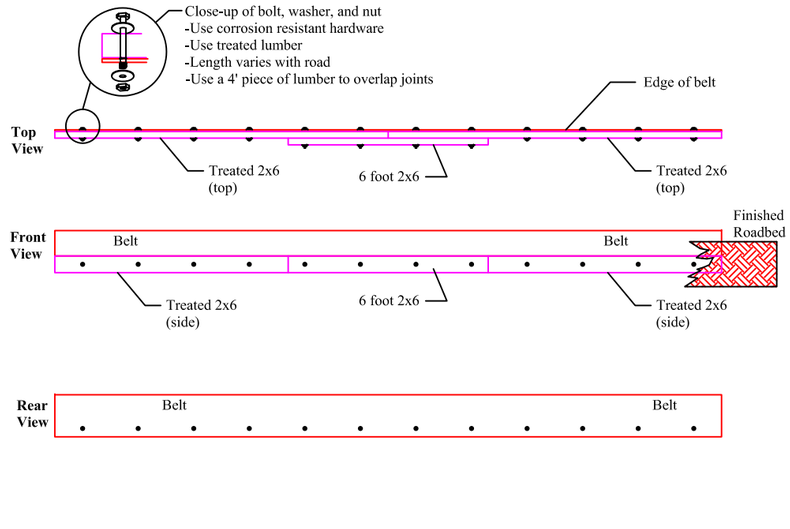
ISOMETRIC



* Selection of waterbar dimensions shall be based on minimum vehicle clearance requirements for road users and volume of water that needs to flow through. Confirm that the chosen waterbar dimensions will be satisfactory for the landowner and handle the 10 year storm

PROFILE

Conveyer Belt Diversion Option



NOTES:

1. Waterbars are for light use roads and walkways only.
2. If road has drainage ditch, extend waterbar to intercept the runoff.
3. Protect outlet area of waterbar with riprap, stone, or appropriate vegetative cover.
4. All waterbars shall begin at the intersection of the roadbed and cut slope and shall extend the entire width of the roadbed. They shall be installed at an angle of 30° downslope of perpendicular to direction of road.

Drawing has been adapted from Oregon NRCS and the Forest Service

DATE
DESIGNED
DRAWN
CHECKED
APPROVED

Waterbar Options

United States Department of Agriculture
Natural Resources Conservation Service

FILE NO.
WATERBAR OPTIONS.DWG

DRAWING NO.

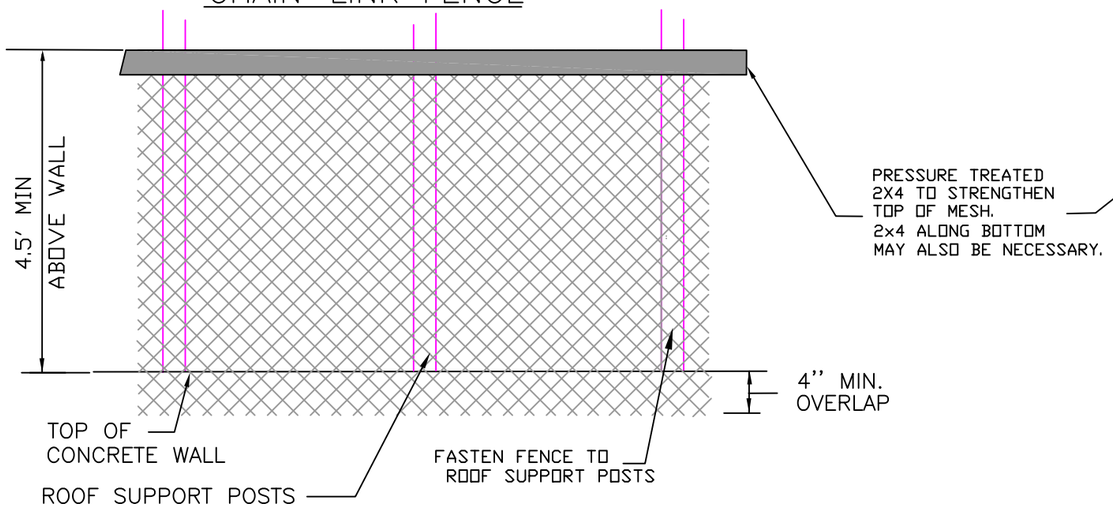
SHEET OF

SAFETY FENCE OPTIONS

ALONG TOP OF HEAVY USE AREA OR STACKING STRUCTURE WALLS WITH DROPS EXCEEDING 3.5'
THESE DETAILS DO NOT APPLY FOR LIQUID STORAGES

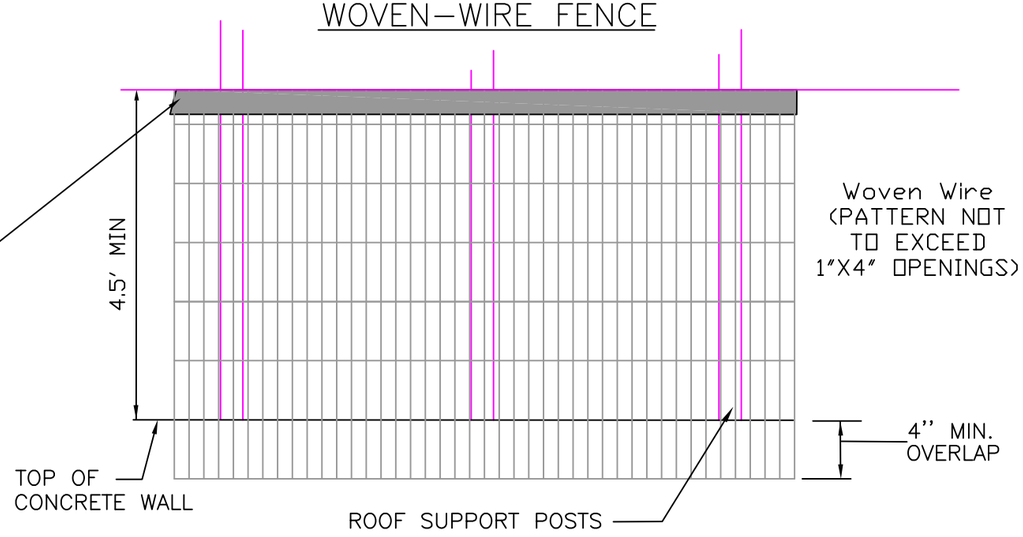
SAFETY FENCE OPTION #1

CHAIN–LINK FENCE



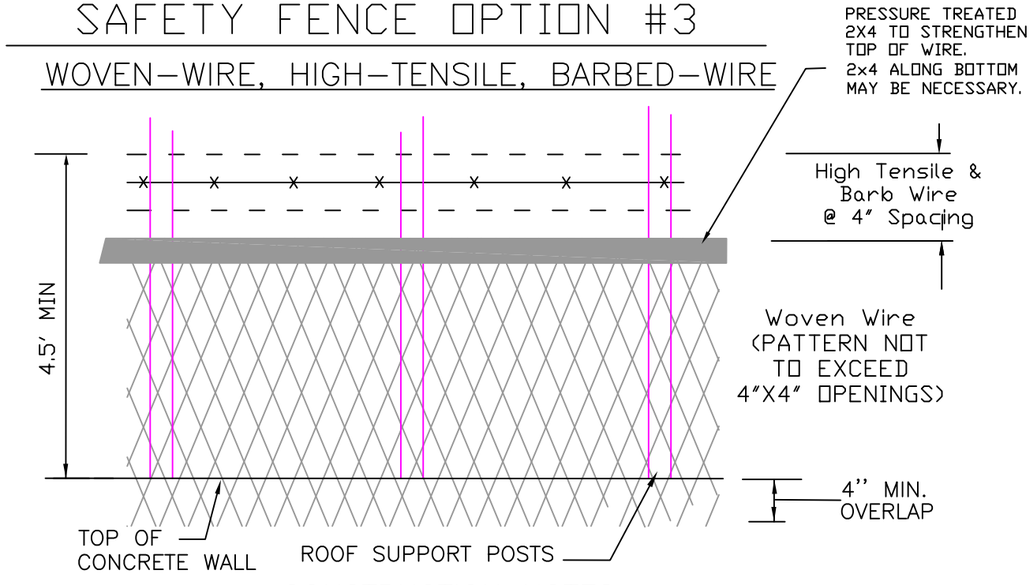
SAFETY FENCE OPTION #2

WOVEN–WIRE FENCE



SAFETY FENCE OPTION #3

WOVEN–WIRE, HIGH–TENSILE, BARBED–WIRE



CONSTRUCTION NOTES

1. THE FENCE IS ONLY INTENDED TO EXCLUDE HUMANS FROM FALLING OFF OF THE WALL.
2. ATTACH FABRIC TO OUTSIDE FACE OF ROOF SUPPORT POSTS AND CONCRETE WALLS.
3. A TOP AND BOTTOM RAIL MAY BE REQUIRED TO TIGHTEN FENCE ADEQUATELY.
4. FENCE SHALL BE FASTENED TO RAILS EVERY 24" (MAXIMUM SPACING).
5. FOR ALL OPTIONS; THE FENCE MUST BE TIGHT ENOUGH SO THAT IT CAN NOT BE PULLED AWAY FROM THE SUPPORTS MORE THAN 4".
6. ALL FASTENERS, CLAMPS, ETC. SHALL BE GALVANIZED OR STAINLESS STEEL.
7. WARNING SIGNS FOR ELECTRIC FENCE SHALL BE INSTALLED IN SEVERAL LOCATIONS ON THE STRUCTURE.

OPTION #1:

1. TOP "STIFFENER" BOARD CAN BE REPLACED WITH A GALVANIZED RAIL. IF THE GALVANIZED RAIL IS CHOSEN, IT SHALL BE 1⅝" MIN. DIAMETER AND 16 GAUGE MIN.
2. TOP/BOTTOM RAIL TO BE GALVANIZED WITH ZINC COATING INSIDE AND OUT, SCH-40 COMBINED COATING 1.8oz./SF MEETING ASTM A123 OR MT-40, 90% ZINC INTERIOR. 1 oz. ZINC EXTERIOR PLUS CHROMATE AND CLEAR ACRYLIC OR MIN. 50,000 PSI.
3. CHAIN-LINK FABRIC SHALL BE 9 GAUGE GALVANIZED STEEL WITH ZINC COATING (ASTM A392 CLASS II) (2oz. per SF), 2" WIRE MESH WITH A MIN. TENSILE STRENGTH OF 1290 LBS.
4. REPAIR GALVANIZED COATING WITH MATERIALS MEETING ASTM A-780

OPTION #2 & #3:

1. THE MINIMUM FENCE HEIGHT SHALL BE 4.5' ABOVE TOP OF CONCRETE WALL. BARBED WIRE OR HIGH TENSILE WIRE CAN BE USED ABOVE THE WOVEN WIRE FABRIC AS LONG AS THE SPACING DOES NOT EXCEED 4" BETWEEN ADDITIONAL WIRES AND 4" FROM TOP OF WOVEN WIRE FABRIC TO FIRST ADDITIONAL WIRE.
   2a. IF ONLY ONE ADDITIONAL WIRE IS NEEDED ON TOP OF THE WOVEN WIRE FABRIC THEN IT SHALL BE BARBED WIRE.
   2b. IF (2) ADDITIONAL WIRES ARE REQUIRED AND HIGH TENSILE WIRES (ONLY) ARE USED, THEN AT LEAST ONE STRAND MUST BE ELECTRIFIED
   2c. IF MORE THAN 2 ADDITIONAL WIRES ARE USED AND THEY ARE HIGH TENSILE THEN EVERY OTHER STRAND MUST BE ELECTRIFIED.
   2d. IF USING 3 ADDITIONAL WIRES, AS SHOWN IN OPTION #3, THEN THE MIDDLE STRAND MUST BE BARBED WIRE.
   2e. OTHER OPTIONS SHALL BE DISCUSSED WITH THE DESIGN ENGINEER.
3. WOVEN WIRE TO BE 12.5 GAUGE MIN, AND GALVANIZED. WELDED WIRE IS NOT ALLOWED.
4. REPAIR GALVANIZED COATING WITH MATERIALS MEETING ASTM A-780
5. HIGH TENSILE OR BARBED WIRE SHALL BE 12.5 GAUGE MIN., 180,000 PSI FOR ELECTRIFIED WIRE (MIN.). AND 200,000 PSI FOR NON-ELECTRIFIED WIRE.
6. FENCE MUST BE GROUNDED ACCORDINGLY.

Date 1-2023
Designed BTO STANDARD DWG
Drawn
Checked
Approved

SAFETY FENCE OPTIONS–NON LIQUID PRACTICES
Barron and Greg Stine
CENTRE COUNTY, PENNSYLVANIA

United States Department of Agriculture
Natural Resources Conservation Service

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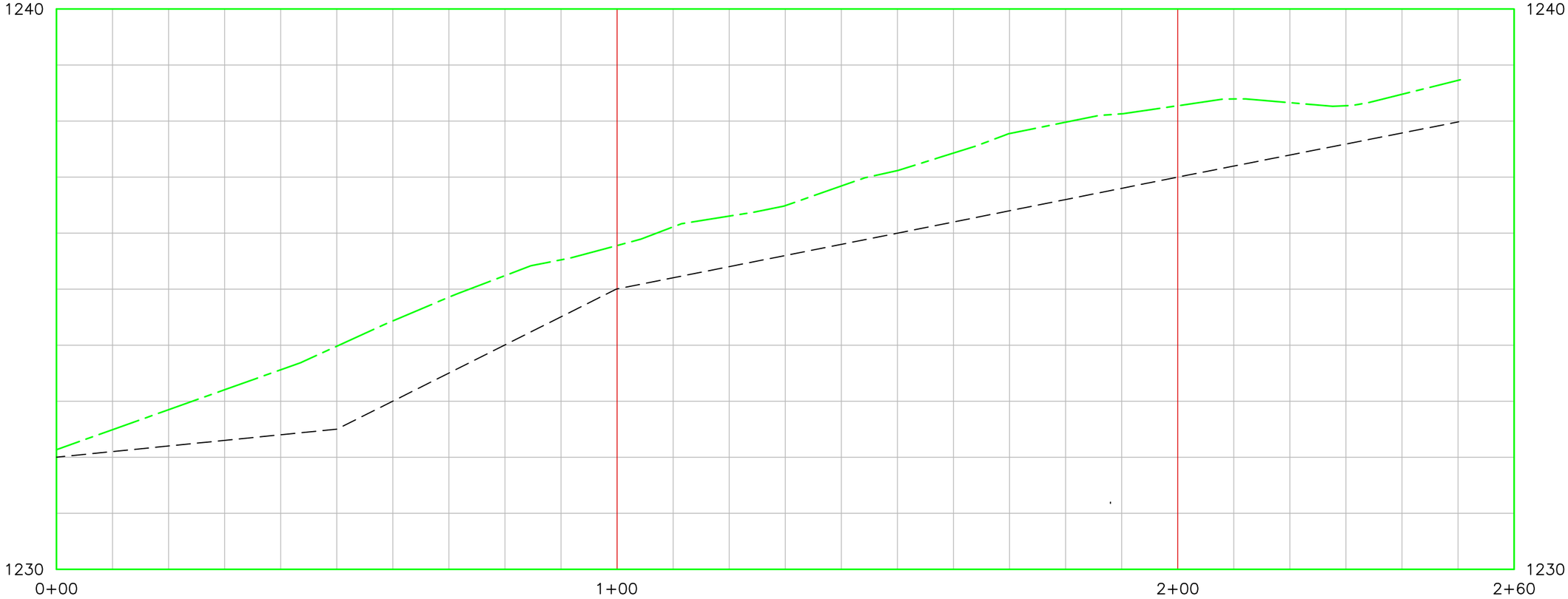
Sheet of



Alignment –Diversion PROFILE

0 – 50' 1% slope 12X1.15' Deep
50–100' 5% slope 12X1' Deep
100'–250' 2% slope 12X1.2' Deep
Diversion to outlet into riparian area
Stay a minimum of 50' back from stream

DESIGNED SL
DRAWN SL
CHECKED
APPROVED
DATE 4/24

Greg Stine
Diversion Profile
1" = 20' Scale
CENTRE COUNTY, PA

United States Department of Agriculture
Natural Resources Conservation Service

FILE NO. GREG STINE DESIGN.DWG

DRAWING NO.

SHEET OF

Greg and Barron Stine
Roofed Deep Bed Pack Area, Manure Stacking Structure & Supporting Practices
Quality Assurance Plan

Landowner/Operator: Greg Stine (Beef Project)
Location: Centre County, Pa

Estimated Performance Time: 38.5 work days

Critical Items of Work and Timing of Inspection

Work	Estimated Work Days	Inspection Requirements
Pre-Construction meeting	0.5	**full time**
E&S measures installation	1	daily as needed
Excavation	4	daily as needed
Perimeter Drain	2	daily as needed
Concrete Prep-Floor (Stone/Steel/Forms)	4	daily as needed
Concrete Flatwork Placement	2	**full time**
Concrete Prep-Walls/Curbing	3	**full time**
Concrete Wall/Curbing Placement	2	**full time**
Construct Roof	8	daily as needed
Reinforced Gravel and Access Road	4	daily as needed
Reinforced Gravel Walkway	1	daily as needed
Diversion if needed	1	**full time**
Roof Runoff Items	1	daily as needed
All Outlet Pipes	2	daily as needed
Complete Final Grading	1	daily as needed
Seed all disturbed areas	1	daily as needed
	1	once when done

General Items

1. The site will be checked at least once a day during the construction period when the contractor is working, expected to work, or could work. These visits should be unannounced and at random times.
2. Materials should match the specifications or values referenced within the construction package. A substitution should not be made without prior approval by the design engineer. If the contractor expects that a different product will be used, they will need to provide pertinent material information in order to provide adequate comparison.
3. All visits must be documented on SCS-CPA-6 or job diary. It is required that a continuous record of construction assistance be kept from the pre-construction conference to the final inspection. OSHA standards for trenches and other excavation must be followed. If safety violations are observed, notify the contractor and contact the NRCS supervisor or engineer assigned to the job.
4. **If the primary inspector can't meet the inspection responsibilities day to day or otherwise, they should contact the backup inspector and be sure the site is adequately inspected. It is the responsibility of the primary inspector to be sure there is adequate and continuous inspection throughout the project.** If a backup inspector agrees to inspect a project during a period of time when the primary inspector will be absent, it is then the backup's responsibility to find an inspector if they can't inspect the site.

Specific Items Needed:

1) Preliminary Information
   a) Document contractor names and associated work items
   b) Ensure that a PA-One Call Construction request has been submitted and that all lines are marked prior to beginning excavation

2) Erosion and Sedimentation Controls
   a) Document these practices

3) Timber Structures
   a) Document post size, material and brackets. Report inadequate materials to the design engineer.
   b) Materials to be checked – lumber quality and dimensions, post spacing, required bracing, nail and bolt sizes and patterns
   c) Trusses should be PE approved and should be approved by the design engineer prior to ordering.

4) Footer Drain and Outlet
   a) Document diameter, ASTM, elevations and length
   b) Verify animal guard is installed

5) Diversion
   a) Document dimensions and slopes
   b) Document outlet conditions
   c) Make sure the correct erosion matting is used and it is installed correctly.

6) Reinforced Gravel Placement
   a) Verify dimensions and grades of reinforced gravel areas
   b) Document material types and amounts for each area
   c) Verify surface water controls if needed

7) Concrete Placement
   a) Document foundation.
   b) Obtain concrete design mix prior to contractor ordering concrete and placement; approve the concrete design once it is adequate; work with the contractor/concrete supplier to make sure revisions are made to the concrete design, if found not adequate.
   c) Verify subgrade, steel, and forms before concrete arrives.
   d) Obtain batch tickets with pertinent information for concrete delivered.
   e) Document any on-site testing of concrete materials.
   f) Ensure that weather precautions and curing procedures are followed.
   g) Make sure contractor has enough of waterstop on-site prior to concrete placement
   h) If cold weather concreting is necessary; consult with the design engineer.

8) Seeding
   a) Document materials and locations

9) Final Documentation
   a) Make daily inspection documentation.
   b) Sufficient information should be taken to document against the original construction drawings.
   c) Final documentation of the completed project must be shown in red on the construction drawings.
   d) Take photos and include in the asbuilt plans, as needed, to show installation prcedures or materials used.
   e) Make notes of verifications and/or any changes in red as well.

This inspection plan was developed to insure the designer's objectives are met and quality workmanship is performed. This plan sets forth the minimum, but not necessarily all the inspection items and time needed. If additional inspection is needed, the assigned inspector shall inform the supervisor and note it on the SCS-CPA-6.

The inspector concurs in the content of this plan, inspection requirements, and obligations:

Inspector _____ Date _____

Pre-Construction Checklist

A pre-construction meeting between the farmer, contractors, suppliers, and inspection personnel recommended. The following checklist may be used to insure critical items are addressed.

_____Nutrient Management Plan is available to landowner and approved by certified planner.

_____Design reviewed and approved by the Natural Resources Conservation Service.

_____Farmer and contractors have a copy of:

_____Design Drawings

_____Construction specifications.

_____Other pertinent plans and designs.

_____Reviewed construction plans with contractor and farmer.

_____Went over site and problem areas with contractor and farmer.

The contractor and the farmer agree with the above checklist. Construction will start on _____
(Date)

Farmer's Signature _____

Contractor's Signature _____

Technician's Signature _____

CONTRACTOR'S NOTIFICATION LIST

The following is a list of key steps in construction of the practices involved with this project and when you must notify the NRCS Field Office at least 24 hours before proceeding with each step. Failure to do so may result in NRCS being unable to adequately check construction and certify that the installation meets NRCS standards. **Work must be done Monday through Friday between the hours of 7:00 am and 5:00 pm unless approved by the NRCS representative.**

NOTIFY NRCS 24 HOURS BEFORE:

1. Starting construction.
2. Placement & Backfilling of any pipes.
3. Installing any stone bedding for concrete.
4. Placement of any concrete (Flatwork or Walls or Curbs).
5. Delivery & setting of trusses.
6. Placement of Access Road & Animal Walkways.

CERTIFICATION OF CONFORMANCE

The undersigned primary manufacturer/supplier has furnished to:

Farmer's Name: _____

Address: _____

City/State/Zip: _____

Type of Structure: **CONCRETE WORKS**

and hereby states that the quality of work and materials meets the requirements as set forth on NRCS contract drawings and Specification No. 313 and 561 and as approved by the Natural Resources Conservation Service.

Name of Contractor/Supplier: _____

Signature/Title/Date: _____

Description of items completed:_____
_____
_____

In addition, the landowner and/or the following subcontractors were also involved in the installation and they hereby certify their work meets the requirements of the drawings and/or specifications as stated previously.

Landowner Signature/Date: _____

Description of items completed:_____

Subcontractor Signature/Date: _____

Description of items completed:_____

****

Received By: _____ _____

Signature Title Date

Note: It is the primary contractor/supplier's responsibility to obtain and furnish all required signatures.

CERTIFICATION OF CONFORMANCE

The undersigned primary manufacturer/supplier has furnished to:

Farmer's Name: _____

Address: _____

City/State/Zip: _____

Type of Structure: **TIMBER WORKS**

and hereby states that the quality of work and materials meets the requirements as set forth on NRCS contract drawings and Specification No. 367, 313, 561 and as approved by the Natural Resources Conservation Service.

Name of Contractor/Supplier: _____

Signature/Title/Date: _____

Description of items completed:_____
_____
_____

In addition, the landowner and/or the following subcontractors were also involved in the installation and they hereby certify their work meets the requirements of the drawings and/or specifications as stated previously.

Landowner Signature/Date: _____

Description of items completed:_____

Subcontractor Signature/Date: _____

Description of items completed:_____

****

Received By: _____ _____

Signature Title Date

Note: It is the primary contractor/supplier's responsibility to obtain and furnish all required signatures.

Fact Sheet

SOIL CAVE IN-A FATAL SLIP

United States Department of Agriculture

Natural Resources Conservation Service

Cause of Cave Ins

Cave ins in pits and ditches cause the death of construction workers every year. Most deaths have occurred in trenches dug for utility lines. However, soil slippage can occur anywhere soil is excavated. Landslides in clay soils kill more people each year than those in sandy soils.

Most workers are careful around sand because they know it moves easily. However, many believe a thick, tough clay soil will not slip. Yet, most clay soils shrink and crack open when dry and swell when wet. This shrinkage and swelling cause slick areas to develop beneath the surface.

Some clay soils contain water-tight layers called fragipans. Water accumulating on the impervious layer lubricates the soil, increasing the probability of slippage. When a ditch or pit is dug in a soil with a fragipan or in a soil with a high shrink-swell potential, the soil will often slip, resulting in a dangerous cave in. This becomes even more likely WHEN THE SOIL IS WET.

Prevention

Occupational Safety and Health Administration (OSHA) regulations require protective action on all worker-occupied excavations unless the cut is made in stable rock, or the cut is less than five feet deep and there is no potential for a cave in to occur. Protection can be accomplished with sloping and benching, support systems, or shield systems which conform to OSHA regulations.

Sloping the sides of the excavation is the simplest protection against a cave in. If soil properties in the excavation are unknown, the excavation slopes should be no steeper than 1-1/2 horizontal to 1 vertical. If the soil can be classified as a Type A or Type B material according to the OSHA classification system (see back side), you can use a steeper slope, as shown in Figures 1 through 5.

Consult OSHA regulations when more than one soil type is exposed in an excavated slope, or when benched slopes are used. The regulations also provide details on support and shield requirements. Complete requirements are found in OSHA's safety and health standards (29 CFR 1926, Subpart P).

Soils Information

Soil survey publications are available for most counties. This information is useful to engineers, builders, contractors and others interested in construction hazards. The publication identifies soils with fragipans and high shrink-swell potential. Other potential construction problems, such as water table, bedrock and corrosiveness, are also contained in the reports as well as information on engineering properties of soils.

Copies of soil survey reports and other soils information are available from the local office of the USDA, Natural Resources Conservation Service, or write Soils, USDA, Natural Resources Conservation Service, Suite 340, One Credit Union Place, Harrisburg, PA 17110-2993.

The United States Department of Agriculutre (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political beliefs and marital or familial status. (Not all prohibited bases apply to all programs). Persons with disabilities who require alternative means for communication of program information (braile, large print, audiotape, etc.) should contact the USDA Office of Communications at (202) 720-5881 (voice) or (202) 720-7808 (TDD).

To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, D.C. 20250, or call (202) 720-7327 (voice) or (202) 720-1127 (TDD). USDA is an equal opportunity employer.

OSHA Soils Classification for Excavated Slopes

Type A means cohesive soils with an unconfined compressive strength of 1.5 ton per square foot (tsf) or greater. Examples of cohesive soils are: clay, silty clay, sandy clay, clay loam and, in some cases, silty clay loam and sandy clay loam. Cemented soils such as hardpan are also considered Type A. However, no soil is Type A if:

(i) The soil is fissured; or
(ii) The soil is subject to vibration from heavy traffic, pile driving, or similar effects; or
(iii) The soil has been previously disturbed; or
(iv) The soil is part of a sloped, layered system where the layers dip into the excavation on a slope of 4H:1V or greater; or
(v) The material is subject to other factors that would require it to be classified as a less stable material.

Type B means:

(i) Cohesive soil with an unconfined compressive strength greater than 0.5 tsf but less than 1.5 tsf; or
(ii) Granular, cohesionless soils including: angular gravel (similar to crushed rock), silt, silt loam, sandy loam and, in some cases, silty clay loam and sandy clay loam; or
(iii) Previously disturbed soils except those which would otherwise be classed as Type C soil; or
(iv) Soil that meets the unconfined compressive strength or cementation requirements for Type A, but is fissured or subject to vibration; or
(v) Dry rock that is not stable; or
(vi) Material that is part of a sloped, layered system where the layers dip into the excavation on a slope less steep than 4H:1V, but only if the material would otherwise be classified as Type B.

Type C means:

(i) Cohesive soil with an unconfined compressive strength of 0.5 tsf or less; or
(ii) Granular soils including gravel, sand, and loamy sand; or
(iii) Submerged soil or soil from which water is freely seeping; or
(iv) Submerged rock that is not stable; or
(v) Material in a sloped, layered system where the layers dip into the excavation ona slope of four 4H:1V or steeper.

MAXIMUM ALLOWABLE SLOPES

Figure 1. Type A Soil
Simple Slope, General

Figure 2. Type A Soil
Simple Slope, Short Term

Figure 3. Type A Soil
Unsupported, Vertically Sided Lower Portion, Maximum 8 Feet in Depth

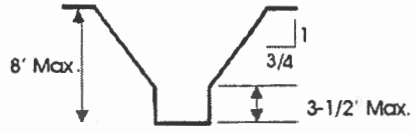
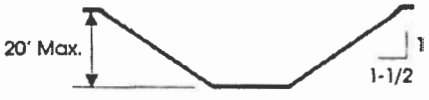


Figure 4. Type A Soil
Unsupported, Vertically Sided Lower Portion, Maximum 12 Feet

Figure 5. Type B Soil
Simple Slope

Figure 6. Type C Soil
Simple Slope



GUIDELINES FOR HOT WEATHER CONCRETING
(FOR ALL CONCRETE)

This document is intended to provide general information and guidance, for hot weather concreting procedures, in the Northeast Counties that receive engineering direction from the NRCS Bloomsburg Technical Office. Thoroughly discuss hot weather concreting during site showings so accurate bid prices can be achieved for the project. Hot weather concreting is discouraged and shall be discussed with the NRCS engineering staff in Bloomsburg in detail prior to planning construction.

If there is a chance of encountering hot weather conditions during construction; Hot Weather Concreting shall be discussed at the preconstruction meeting and discussed again 2 weeks prior to concrete placement. The landowner shall be involved in these conversations to help make a decision if it is worth the extra expense and effort to provide the added level of protection during hot weather concrete procedures or wait until more favorable weather. Proper measures need to be in place for the placement and curing of the concrete.

Definition & Concerns:

As per ACI 305R; Hot weather is any combination of the following conditions that tends to impair the quality of freshly mixed or hardened concrete by accelerating the rate of moisture loss and rate of cement hydration, or otherwise causing detrimental results:

- High ambient temperature
- High concrete temperature
- Low relative humidity
- Wind speed
- Solar radiation

Hot weather concreting is any period of high temperature in which special precautions need to be taken to ensure proper handling, placing, finishing, and curing of concrete. The exact temperature where special precautions should be taken varies. Advanced planning is required for concrete placed in ambient conditions that are at or above 75°F (Portland Concrete Association). This is generally the temperature that starts to affect the efficiency of the cementitious system. Evaporation rate is a more accurate indicator of hot weather conditions for concrete.

Hot weather can cause an increased water demand, an increased rate of slump loss and tendency to add water at the job site, faster set-up time, difficulty in maintaining air entrainment, and more shrinkage cracking. All of these can reduce long term strength, reduce durability, and increase permeability.

Roles & Responsibilities:

If there is a chance of encountering hot weather conditions during construction; It is the contractor's responsibility to submit a "Hot Weather Concrete Plan" to the assigned primary inspector for the given project. This plan shall be provided to the inspector at least 2 weeks prior to the concrete placement. The concrete mix design shall also be submitted to the inspector at this time. The primary inspector shall review the submitted Hot Weather Concrete Plan and the concrete mix design. If revisions to the Hot Weather Plan are required, then the contractor will do so. If changes to the mix design are required, the contractor shall work with the concrete plant to make the needed changes. The revised documents shall be resubmitted to the inspector for further review. Concrete cannot be ordered, and construction cannot begin until the inspector approves all submitted documents. The inspector shall work with the design engineer in making these decisions. The design engineer shall approve all concrete mix designs that have portland cement replacements, as described later in this document.

The inspection staff shall provide timely inspections. Inspect steel, forms, and foundation the day before the actual placement, so the contractor has time to remedy any oversights well in advance of concrete placement. Avoid work delays caused by untimely inspections. The inspector shall get proper approval for working during early or late concrete placements. If the assigned inspector cannot be available for a concrete placement, they are responsible for finding a qualified back-up inspector. Allowing early or late starts without inspection shall not be allowed.

The inspection staff shall have a concrete thermometer and slump equipment ready in case any issues develop. The inspector shall check the delivery tickets and compare the ticket information with the mix design that has already been approved. The batch ticket shall indicate how much free water can be added; if this is not shown on the batch ticket then no water can be added on-site.

Possibilities for Avoiding or Preventing Issues:

The contractors have a lot of flexibility on how they plan to address concerns about hot weather and its effect on the final product. Some typical options include:

- Delay placement to a cooler day, especially when high winds and low relative humidity are anticipated
- Move placement start time to early morning or late evening
- Pre-wet sub-base, to reduce moisture loss
- Wet forms and steel to cool materials
- Make sure excess water drains away; concrete shall not be placed on standing water
- Have extra crew members to reduce placement time
- Schedule more equipment; have multiple pump trucks to accelerate delivery schedule
- Erect sunshades and wind barriers to protect the fresh concrete

Precautionary measures required on a windy, sunny day will be stricter than those required on a calm, humid day, even if the air temperatures are identical.

Mix Design & Placement:

Aggregates are the greatest part of the concrete mixture. Keeping the aggregates shaded and moist when being stored can be an effective means to achieving lower concrete temperature. The temperature of the water used in the concrete mixture will also play a major part in the overall concrete temperature; store water in tanks away from the sun or cool the water with ice or liquid nitrogen. If ice is used; the ice must be completely melted by the time mixing is complete.

Using slower hydrating cements will help with controlling heat development in the concrete and should result in lower peak temperatures; there will be less thermal expansion, and the risk of thermal cracking will be reduced. Concrete mixtures that obtain high strength at an early age will develop high concrete temperature during initial curing. These concrete mixtures should be provided thermal protection to ensure gradual cooling at a rate that will not cause them to crack.

Using partial replacements for the portland cement like fly ash and other pozzolans, and ground granulated blast-furnace slag is allowed. These portland cement substitutes are known for having both a slower setting rate and early strength gain to the concrete, which is desirable in hot weather concreting. Concrete containing the slower setting cements will be less likely to have plastic-shrinkage cracking. The design engineer must approve any concrete designs having portland cement replacements.

Various types of chemical admixtures have been found beneficial in offsetting some of the undesirable characteristics of concrete placed during periods of high ambient temperatures. The benefits may include lower mixing water demand or extended periods of use. Admixture effectiveness depends on the chemical reactions of the cement being used. Set retardation and water reducing admixtures can be used to reduce set time or increase slump and workability. Shrinkage reducing admixtures are also allowed. Consider adding the air entrainment admixture at the site and holding back some water to aid in the mixing of the air entrainment once in the truck. All admixtures shall be included in the mix design and have been approved by the inspector prior to placement. The concrete company shall provide a history report showing satisfactory performance, at the expected hot weather conditions, before a certain admixture can be used.

Adding water and remixing of concrete which has lost enough workability to become unplaceable, known as “retempering” is prohibited. Water additions, in excess of the mix design water cement ratio, to compensate for loss of workability is prohibited.

Discharge the concrete as soon as the concrete truck arrives at the job site. Prolonged mixing in hot weather increases the temperature of the concrete, which makes it set faster and shortens the placing and finishing time. Concrete shall also be conveyed from the mixer to the forms as rapidly as practical by methods that will prevent segregation of the aggregates or loss of mortar. In hot weather or under conditions contributing to quick stiffening of the concrete or when the temperature of the concrete is 85°F or above as delivered at the job site; the time between the introduction of the cement to the aggregates and completion of truck discharge shall not exceed 45 minutes. If these conditions are encountered, the concrete plant shall be notified to take the necessary precautions.

The supplier shall maintain the temperature of concrete below 90°F during transportation, mixing, and conveying. Concrete with a temperature above 90°F at the job site shall not be placed. The inspector shall have an immediate conversation with the contractor and landowner about not accepting a load of concrete and the ramifications that can take place if the concrete is placed and later found to not be acceptable for the intended purpose. The contractor and landowner need to be involved in the final decision before the load of concrete is rejected.

In hot weather, it is usually necessary to place formed concrete in shallower layers than usual, to assure vibration well into the layer below and that the elapsed time between layers be minimized to avoid cold joints.

Curing and Protection:

Proper curing of concrete, during hot weather, is critical. Early curing is critical and lack of it is increasingly detrimental as temperatures rise.

All concrete (Footings, Slabs, and Walls) shall be protected for no less than 7-days for proper curing purposes. This 7-day curing time is the same for concrete with and without pozzolans and chemical admixtures. A 7-day minimum duration of curing will often be sufficient to attain approximately 70% of the specified compressive strength. If a change in curing method is made during this period, it should be done only after the concrete is 3 days old. (ACI 305R & ACI 308R-18). At the end of the curing period (7 days), any covering that is used should be left in place without wetting for several days (4 days is suggested) so that the concrete surface will dry slowly and be less subject to surface shrinkage cracking. The effects of drying can also be minimized by applying a sprayable curing compound at the end of the moist-curing period. Strategies for achieving this shall be discussed with the contractor prior to placement.

Some options for curing include:

- Spray with curing compound as soon as possible upon final finish. Consider applying a second coat of curing compound if it is windy. Curing compounds shall contain a heat reflecting white pigmented compound. Curing compound shall be applied heavier than manufacture's recommendations to ensure uniform coverage and proper curing.
- Wet curing is the most preferred method for curing concrete during hot weather.
- Exposed surfaces shall be continuously moistened by means of fog spray or otherwise protected from drying immediately prior to placement and during curing.

Curing of flatwork concrete; Of the different curing procedures, wet-curing is the best method for developing the strength of concrete and minimizing early drying shrinkage. This can be provided by ponding, covering with clean sand kept continuously wet, or continuous sprinkling. A more practical method of wet-curing is covering the prewetted concrete with impervious sheeting or absorptive mats or fabric kept continuously wet with a soaker hose or similar means. These materials shall be kept in contact with the concrete surface at all times. The temperature of water used for curing must be as close as possible to that of the concrete to avoid thermal shock.

Curing of concrete in forms; ACI 305R suggests that forms should be covered and kept continuously moist during the early curing period (first 3-days). If this idea is found to be impractical by the contractor; the contractor can cure with curing compound or shall come up with another acceptable means of curing concrete in forms. Ideas shall be discussed with the inspector.

If the curing compound option is chosen for formed concrete, the form tie holes shall be parged and curing compound applied, within 1 hour of stripping forms. Sufficient staff need to be available to be able to achieve this timeframe or strip forms in the early morning or late day, so the concrete is not exposed to the sun and hot temperatures; then parge tie holes and apply the curing compound as soon as possible.

Leaving forms on for 7-days, as a means of curing, may not be a good idea during hot weather, as forms may generate an excessive amount of heat and negatively affect the curing process. It is best to strip the forms after 24-hrs of placement and provide curing by other means.

The concrete shall also be protected against thermal shrinkage-cracking from rapid temperature drops, particularly during the first 24 hours. Early cracking due to the thermal shrinkage is generally more severe in the spring and fall. This is because the temperature differential for each 24-hour period is greater during these times of year. This is a concern when there is a wide day and night temperature difference. The contractor shall come up with a means of protecting the concrete in these circumstances.

No equipment shall be allowed on concrete slabs or floors until the concrete has cured for a minimum of 7 days. This includes any motorized material handling equipment, pallets of forms, etc. Skid loaders used for transporting concrete into forms shall not be allowed on slabs or floors for a minimum of 14 days. 5

GUIDELINES FOR COLD WEATHER CONCRETING

The conditions of cold weather concreting exist when air temperature has fallen to, or is expected to fall below, 40 degrees F during the protection period. This document provides guidance on implementing protection of concrete during cold weather conditions. This document is to be used in place of the current PA Fact Sheet #2—Cold Weather Concreting—ACI 306R-16. This document is intended to provide additional guidance, for cold weather concreting procedures, in the Northeast Counties that receive engineering guidance from the NRCS Bloomsburg Technical Office. This document is only to be used for Heavy Use Area and Stacking Structure type of construction. This document does not apply to "liquid" storage structures (Tanks or Paint Tray Style Storages). Cold weather concreting on "liquid" structures is discouraged and shall be discussed with the NRCS engineering staff in Bloomsburg in detail prior to planning construction.

Cold Weather Concreting shall be discussed at the preconstruction meeting, no matter what time of year the meeting is held and discussed again 2 weeks prior to concrete placement. The landowner shall be involved in these conversations to help make a decision if it is worth the extra expense and effort to provide the added level of protection during cold weather concrete procedures or wait until milder weather.

Roles & Responsibilities:

It is the contractor's responsibility to submit a "Cold Weather Concrete Plan" to the assigned primary inspector for the given project. This plan shall be provided to the inspector at least 2 weeks prior to the concrete placement. The concrete mix design shall also be submitted to the inspector at this time. The primary inspector shall review the submitted Cold Weather Concrete Plan and also the Concrete Design Mix. The inspector shall consult with the design engineer if needed. If revisions to the Cold Weather Plan are required, then the contractor will do so. If changes to the design mix are required, the contractor shall work with the concrete plant to make the needed changes. The revised documents shall be resubmitted to the inspector for further review. Concrete cannot be ordered and construction cannot begin until the inspector or design engineer approves all submitted documents.

Design Mix:

Concrete with a slump lower than normal (less than 4") is particularly desirable in cold weather for flatwork; bleeding of water is minimized and set occurs earlier. Bleed water, during cold weather, could affect the concrete surface strength. It is assumed that concrete with at least 600 #/cu.yd of cement content is being used for cold weather placement.

Conditions of Subgrade & Reinforcement:

Concrete shall not be placed on "frosty" or frozen subgrade material or reinforcement. The subgrade and reinforcement shall be covered with insulating material for a few days before the concrete placement. In some cases, external heat must be applied. Steel forms for walls, especially, shall be heated by some means prior to concrete placement. There shall not be any snow or ice on the forms prior to placement of concrete. Tops of wall forms shall be covered to prohibit snow and ice from occupying space intended for concrete. Snow and ice at the bottom of the forms will also expose the freshly placed concrete to low temperatures.

Concrete Temperature:

The "minimum" concrete temperature at time of placement shall be 55 degrees F. The concrete temperature shall be maintained at 55 degrees F. The "maximum" placement temperature is 75 degrees F. The rate of heat loss increases as the temperature differential between the concrete and air temperature increases. Therefore, using concrete with a temperature greater 55 degrees F does not improve the protection against freezing. Higher temperatures require more mixing water, increase the rate of slump loss, can cause quick setting, and increase thermal contraction.

Protecting Concrete During Cold Weather:

TABLE 1 shall be used to determine if the Contractor's Cold Weather Concrete Plan is sufficient for the forecasted weather conditions. The table shows what thermal resistance value (R-Value) is required at expected low air temperatures, for any of the first 3 days of the curing period; However, Concrete shall be protected for a minimum of 7 days. It is assumed that the ground (subgrade) temperature is well above freezing.

TABLE 1A -5" SLAB THICKNESS

EXPECTED LOW TEMP FOR 1ST 3 DAYS OF CURING (DEGREES)	REQUIRED R-VALUE (hr-sqft-F/Btu)	REQUIRED SAWDUST (INCHES)	REQUIRED STRAW (INCHES)
40	4	2	3
35	7	3	4.5
30	8	4	5.5
25	9	4.5	6.5
20	11	5	7
<20	ADDITIONAL HEAT REQUIRED ENCLOSURE REQUIRED CONSULT WITH DESIGN ENGINEER		

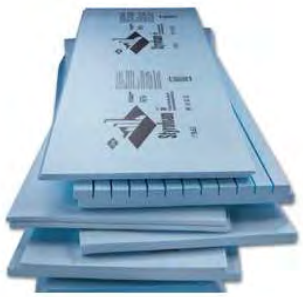
TABLE 1B -8" WALL THICKNESS

EXPECTED LOW TEMP FOR 1ST 3 DAYS OF CURING (DEGREES)	REQUIRED R-VALUE (hr-sqft-F/Btu)
40	3
35	4
30	5
25	6
20	7
<20	ADDITIONAL HEAT REQUIRED ENCLOSURE REQUIRED CONSULT WITH DESIGN ENGINEER

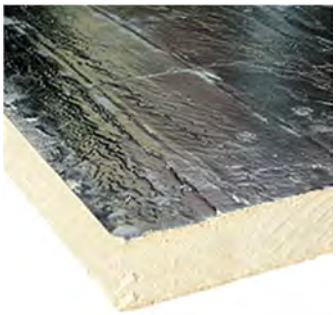
Insulating Materials:

A. Blankets: Concrete "Blankets" typically have an R-Value between 2 & 8; R value of blankets need confirmed prior to use.
B. Polystyrene foam or Polyurethane sheets; R value needs verified according to manufacturer data sheets.

EXPANDED POLYSTYRENE FOAM (EPS)
(Similar to the foam used for
for packing "peanuts")
R=3.6 to 4.0 per inch of thickness



EXTRUDED POLYSTYRENE FOAM (XPS)
(Blue board or pink board)
R=4.5-5.0 per inch of thickness



POLYISOCYANURATE /
POLYURETHANE BOARD
(Foil Faced)
R=7.0-8.0 per inch of thickness

C. Sawdust: Typical R-Value is 2.22 per 1" thickness
D. Straw or Hay: Typical R-Value is 1.5 per 1" thickness.

Straw, Hay, and Sawdust (Materials) need to be dry. Any moisture in the materials beyond normal may result in it freezing and providing a lesser degree of protection. If using these materials for flatwork protection; a layer of plastic shall be installed on the concrete surface prior to the material. After the required thickness of the material is placed, it needs covered with another layer of plastic or a tarp and weighted down to prevent it from blowing off. Do not install the initial layer of plastic until the concrete has set enough; otherwise the plastic will stick to the concrete.

Corners and edges are particularly vulnerable during cold weather. Therefore, the thickness of insulation for these parts shall be about 3X the thickness that is required for slabs or walls. It is recommended to extend the protection a minimum of 2' beyond the edges of footings and slabs.

Concrete placed for footings or slabs shall be covered, with the needed protection, as soon as the concrete can be walked on. Concrete placed in wall forms shall be covered, with the needed protection, immediately after concrete placement. Insulation shall be kept in close contact with the concrete form surface to be effective.

Protection Period:

All concrete (Footings, Slabs, and Walls) shall be protected for no less than 7 days for proper curing purposes. Wall forms shall remain in place for a minimum of 7 days as well. Curing compound does not need to be used during cold weather concreting, due to the insulating material being left on for a minimum of 7 days. Many curing compound manufacturers do not recommend that this product be used at cold temperatures. The use of non-chloride "accelerators" are welcome as an added measure of early set and strength gain. The use of accelerators will not decrease the protection period; 7 days is still the minimum protection period.

At the end of the protection period, concrete should be cooled gradually to reduce the risk of "thermal shock". Gradual cooling reduces the risk of cracking. This can be accomplished by allowing the insulating material to remain in place until the concrete has essentially reached equilibrium with the outside air temperature. The maximum allowable gradual temperature drop in the first 24 hours after the end of the protection period is 50 degrees F. If this can not be achieved at the end of the protection period, then the concrete shall be protected for a longer period of time.

Consult with the design engineer for the allowable time of "loading" the concrete structures. Depending on the weather conditions; the curing time before backfilling, driving on slabs with skid steers, or allowing animal traffic may vary.

Practice Specification
Waste Storage Facility (Code 313)
Structure

1. SCOPE

The work shall consist of furnishing materials and installing all components of the waste storage structure as outlined in this specification and the drawings.

Construction work covered by this specification shall not be performed between December 1 and the following March 15 unless the site conditions and/or the construction methods to be used have been reviewed and approved by the Engineer or his/her designated Representative.

2. MATERIALS

All materials used shall conform to the quality and grade noted on the drawings, set forth in Section 9, or as otherwise listed below:

PORTLAND CEMENT shall be Type I, IA, IL, II or IIA and conform to ASTM-C150, unless otherwise set forth in Section 9. Type IS Portland blast-furnace slag cement, Type IP Portland-pozzolan cement, or Type IL Portland-limestone cement shall conform to the requirements of ASTM C595 and may be used unless prohibited by the specifications. If Type I, IL, or II is used, an air-entrainment agent shall be used.

CONCRETE AGGREGATE shall meet the requirements and gradation specified in ASTM-C33. Coarse aggregate shall meet the gradation for size numbers 57 or 67.

WATER used in mixing or curing concrete shall be clean and free from injurious amounts of oil, acid, salt, organic matter or other deleterious substances.

REINFORCEMENT BARS shall be grade 40 or higher, and shall conform to ASTM- A615, A616, or A617. Welded wire fabric reinforcement shall conform to ASTM-A185 or A497. Reinforcement shall be free from loose rust, oil, grease, curing compound, paint or other deleterious coatings.

CONCRETE ADMIXTURES shall conform to ASTM-C260 for air-entrainment, and ASTM- C494, type A, D, F or G, for water- reduction and set-retardation, and type C or E for non- corrosive accelerators.

POZZOLAN shall conform to ASTM-C618, Class F, except loss of ignition shall not exceed 3.0 percent.

CURING COMPOUND shall meet the requirements of ASTM-C309, Type 2, Class A or B or as otherwise required in Section 9.

MASONRY COMPONENTS shall meet the requirements of ASTM-C90 & C270 and placed in accordance with ACI-530.

PRECAST CONCRETE units shall comply with ACI-525 and 533.

PREFORMED EXPANSION JOINT FILLER shall conform to the requirements of ASTM- D1752, Type I, II, or III, unless bituminous type is specified, in which case it shall conform to ASTM-D994 or D1751.

JOINT SEALERS shall conform to the requirements for ASTM-C920, Federal Specification SS-S-210A, or Federal Specification TT-S-227, as appropriate for the specific application. WATERSTOPS. Vinyl-chloride polymer types shall be tested in accordance with Federal Test Method Standard No. 601 and shall show no sign of web failure due to brittleness at a temperature of -35 degrees Fahrenheit. Colloidal (bentonite) waterstops shall be at least 75 percent bentonite in accordance with Federal Specification SS- S-210A. Non-colloidal waterstops shall only be used if approved by the Engineer.

METALS shall conform to the following standards:

Structural steel - ASTM-A36

Carbon steel - ASTM-A283, grade C or D; or A611, grade D; or A570, grade C or D

Aluminum alloy - ASTM-B308, B429, B221, B210, B211, or B209

Bolts - ASTM-A307; zinc coating shall conform to ASTM-A153, B633 (cond. SC3), A165 (type TS).

Screws - wrought iron or medium steel Split or tooth-ring connectors - hot-rolled, low carbon steel conforming to ASTM- A711, grade 1015

WOOD shall be graded and stamped by an agency accredited by the American Lumber Standards Committee as meeting the required species, grade, and moisture content. In the absence of such a stamp, the Contractor or material supplier shall provide written certification that the wood products meet the designated quality criteria.

MANUFACTURED TRUSSES shall be certified as having been designed and built to Truss Plate Institute standards.

PRESSURE TREATED WOOD PRODUCTS shall be Douglas Fir, Southern Yellow Pine, or as otherwise specified on the drawings or in Section 9. They shall be treated with preservatives in accordance with the American Wood Preservers Association (AWPA) Standard C16, “Wood Used on Farms, Pressure Treatment.” Each piece shall bear the AWPA stamp of quality. In the absence of such a stamp, the Contractor or material supplier shall provide written certification that the pressure treated wood meets the designated quality criteria.

FASTENERS for wood structures shall be stainless steel, galvanized, or otherwise protected from corrosion due to contact with moisture, manure and associated gasses.

3. FOUNDATION PREPARATION AND CONDITIONS

All trees, brush, fences, and rubbish shall be cleared within the area of the structure, including any appurtenances, and borrow areas. All material removed by clearing and excavation operations shall be disposed of as directed by the Owner or his/her Representative. Sufficient topsoil shall be stockpiled in a convenient location for spreading on disturbed areas. All structures shall be set on undisturbed soil or non-yielding compacted material. Over excavation must be corrected as noted on the drawings or as directed by the Engineer or his/her designated Representative.

In addition to uniformity, the existing subgrade material must have sufficient strength to support the structure and its associated loads. Organic soils shall be removed. A base course (a layer of granular material placed on the subgrade prior to placement of concrete) may be used to improve the stability of the foundation. In addition, geosynthetics may be used, if approved by the Engineer, to further separate and/or stabilize the foundation.

Surface and subsurface drainage systems shall be installed and operating adequately to remove water from the foundation to allow for proper structure placement.

Drainfill upon which concrete is to be placed shall be covered with a geosynthetic that has an AOS between 20 and 100, inclusive.

Concrete shall not be placed until the subgrade, forms and steel reinforcements have been inspected and approved by the Engineer or his/her designated Representative. Notification shall be given far enough in advance to provide time for the inspection.

Prior to placement of concrete, the forms and subgrade shall be free of chips, sawdust, debris, standing water, ice, snow, extraneous oil, mortar or other harmful substances or coatings.

Earth surfaces against which concrete is to be placed shall be firm and damp. Placement of concrete on mud, dried earth or uncompacted fill or frozen subgrade will not be permitted.

4. CAST-IN-PLACE CONCRETE STRUCTURES

a. Concrete Forms

Forms shall be of wood, plywood, steel, or other approved material and shall be mortar tight. The forms and associated falsework shall be substantial and unyielding and shall be constructed so that the finished concrete will conform to the specified dimensions and contours.

Form surfaces shall be smooth and essentially free of holes, dents, sags, or other irregularities. Forms shall be coated with form oil before being set into place.

Care shall be taken to prevent form oil from coming in contact with steel reinforcement.

b. Concrete Mix

Concrete for structures shall have a 28-day compressive strength of at least 4000 psi, unless otherwise specified on the drawings or in Section 9. The Contractor shall be responsible for the design of the mix and certification of the necessary compressive strength. Current certification of the design mix by Penn DOT may be accepted in lieu of additional testing.

The slump shall be 3 to 6 inches (without superplasticizers, if any); the air content by volume shall be five to seven percent of the volume of the concrete. Admixtures such as superplasticizers, water-reducers and set-retarders may be used provided they are approved by the Engineer prior to concrete placement and are used in accordance with the manufacturer's recommendations. Superplasticizers (ASTM C494, Type F or G) may be added to concrete that has a 2 to 4-inch slump before the addition, and that is not warmer than 95° F. The slump shall not exceed 7½ inches with the addition of superplasticizer.

c. Mixing and Handling Concrete

In general, concrete shall be transported, placed, and consolidated in accordance with ACI- 304, of which some specific interpretations are set forth below.

The supplier shall provide a batch ticket to the Owner or Technician with each load of concrete delivered to the site. The batch ticket shall state the class of concrete, any admixtures used, time out, and the amount of water that can be added at the site and still be within the design mix limits.

Concrete shall be uniform and thoroughly mixed when delivered to the job site. The Contractor shall test slump and air entrainment as necessary to ensure that the concrete meets the requirements of this specification. Variations in slump of more than one inch within a batch will be considered evidence of inadequate mixing and shall be corrected or rejected. No water in excess of the amount called for by the job design mix shall be added to the concrete.

For concrete mixed at the site, the mixing time after all cement, aggregates and water are in the mixer drum shall be at least 1-1/2 minutes.

Concrete shall be conveyed from the mixer to the forms as rapidly as practical by methods that will prevent segregation of the aggregates or loss of mortar. Concrete shall be placed in the forms within 1-1/2 hours after the introduction of cement to the aggregate unless an approved set-retarding admixture is used in the mix. In hot weather or under conditions contributing to quick stiffening of the concrete, or when temperatures of the concrete is 85oF or above, the time between the introduction of the cement to the aggregates and completion of truck discharge shall not exceed 45 minutes.

Concrete shall not be dropped more than 5 feet vertically unless special equipment is used to prevent segregation.

Superplasticized concrete shall not be dropped more than 12 feet unless special equipment is used to prevent segregation.

Slab concrete shall be placed at the design thickness in one layer. Formed walls shall be placed in layers not more than 24-inches high, unless superplasticizer is used, in which case the maximum layer shall be 5 feet. Each layer shall be consolidated to insure a good bond with the preceding layer.

Immediately after placement, concrete shall be consolidated by spading and vibrating, or by spading and hand tamping. It shall be worked into corners and angles of the forms and around all reinforcement and embedded items in a manner that prevents segregation or in the formation of "honeycomb." Excessive vibration that results in segregation of materials will not be allowed. Vibration must not be used to make concrete flow in forms, slabs, or conveying equipment.

If the surface of a layer in place will develop its initial set, i.e., will not flow and merge with the succeeding layer when vibrated, a construction joint shall be made. Construction joints shall be made by cleaning the

hardened concrete surface to exposed aggregate by sandblasting, air/water jetting, or hand scrubbing with wire brush, and keeping the concrete surface moist for at least one hour prior to placement of new concrete.

Concrete surfaces do not require extensive finishing work; however, the surface shall be smooth and even with concrete paste worked to the surface to fill all voids. The concrete surface must be watertight. Careful screeding (striking-off) and/or wood float finishing shall be required, unless otherwise shown on the drawings. Exposed edges shall be chamfered, either with form molding or molding tools.

The addition of dry cement or water to the surface of screeded concrete to expedite finishing is not allowed.

d. Reinforcing Steel Placement

Reinforcement shall be accurately placed and secured in position in a manner that will prevent its displacement during the placement of concrete. In forms, this shall be accomplished by tying temperature and shrinkage steel or special tie bars (not stress steel) to the form “snap ties” or by other methods of tying. In slabs, steel or wire shall be supported by precast concrete bricks (not clay bricks), or metal or plastic chairs. Concrete bricks supporting steel and wire must be full and not broken (unless bricks are manufactured with creases or indentations meant to be broken). Except for dowel rods, placing steel reinforcement into concrete already in place shall not be permitted.

The following tolerances will be allowed in the placement of reinforcing bars shown on the drawings:

1. Maximum reduction in cover: from formed and exposed surfaces – ¼ inch from earth surfaces - ½ inch
2. Maximum variation from indicated spacing: 1/12th of indicated spacing

Splices of reinforcing bars shall be made only at the locations shown on the drawings, unless otherwise approved by the Engineer. Unless otherwise required, welded wire fabric shall be spliced by overlapping sections at least one full mesh dimension plus two inches. All reinforcement splices shall be in accordance with ACI 318.

Reinforcing steel shall not be welded, unless approved by the Designer. The ends of all reinforcing steel shall be covered with at least 1-1/2 inches of concrete.

e. Curing

Concrete shall be prevented from drying for at least seven days after it is placed. Exposed surfaces shall be kept continuously moist during this period by covering with moistened canvas, burlap, straw, sand or other approved material unless they are sprayed with a curing compound. Wooden forms left in place during the curing period shall be kept wet.

Concrete, except at construction joints, may be coated with a curing compound in lieu of continuous application of moisture. The compound shall be sprayed on moist concrete surfaces as soon as free water has disappeared but shall not be applied to any surface until patching, repairs and finishing of that surface are completed. Concrete shall be wet cured or remain in forms until immediately before patching, repairs, or finishing is performed. Curing compound shall not be allowed on any rebars.

Curing compound shall be applied in a uniform layer over all surfaces requiring protection at a rate of not less than one gallon per 150 square feet of surface. Surfaces subjected to heavy rainfall or running water within three hours after the curing compound has been applied, or otherwise damaged, shall be resprayed.

Any construction activity which disturbs the curing material shall be avoided during the curing period. If the curing material is subsequently disturbed, it shall be reapplied immediately.

Steel tying or form construction adjacent to new concrete shall not be started until the concrete has cured at least 24 hours.

Vehicles, overlying structures, or other heavy loads shall not be placed on new concrete slabs for at least three days, unless the concrete strength can be shown to be adequate to support such loads.

f. Form Removal and Concrete Repair

Forms for walls and columns shall not be removed for at least 24 hours after placing the concrete. When forms are removed in less than seven days, the exposed concrete shall be sprayed with a curing compound or be kept wet continuously for the remainder of the curing period. Forms which support beams or covers shall not be removed for at least seven days, or 14 days if they are to support forms or shoring.

Forms shall be removed in such a way as to prevent damage to the concrete. Forms shall be removed before walls are backfilled. Columns shall be at least seven days old before any structural loads are applied.

Where minor areas of the concrete surface are “honeycombed,” damaged or otherwise defective, the area shall be cleaned, wetted and then filled with a dry-pack mortar. Dry-pack mortar shall consist of one-part Portland cement and three parts sand with just enough water to produce a workable paste.

g. Concreting in Cold Weather Concreting in cold weather shall be performed in accordance with ACI-306R-16. In addition, the contractor shall provide a written plan at least 24 hours in advance of placing concrete in cold weather and shall have the necessary equipment and materials on the job site before the placement begins.

h. Concreting in Hot Weather

Concreting in hot weather shall be performed in accordance with ACI 305, of which some specific interpretations are set forth below.

The supplier shall apply effective means to maintain the temperature of concrete below 90 degrees Fahrenheit during mixing and conveying. Exposed surfaces shall be continuously moistened by means of fog spray or otherwise protected from drying during the time between placement and finishing and during curing. Concrete with a temperature above 90 degrees Fahrenheit shall not be placed.

i. Backfilling New Concrete Walls

Backfilling and compaction of fill adjacent to new concrete walls shall not begin in less than 14 days after placement of the concrete, except that walls that can be backfilled on both sides simultaneously may be done so within seven days.

Heavy equipment shall not be allowed within three feet of a new concrete wall. Provide compaction near the wall by means of hand tamping or small, manually-directed equipment.

5. WOOD STRUCTURES

All framing shall be true and exact. Timber and lumber shall be accurately cut and assembled to a close fit and shall have even bearing over the entire contact surfaces.

Nails and spikes shall be driven with just sufficient force to set the heads flush with the wood surface. Deep hammer marks in the wood shall be considered evidence of poor workmanship and may be sufficient cause for rejection of the work.

Holes for lag screws shall be bored with a bit not larger than the body of the screw at the base of the thread. Holes for bolts shall be bored with a bit no more than 1/16” larger than the bolt diameter to achieve a snug fit without forcibly driving the bolt.

Washers shall be used in contact with all bolt heads and nuts that would otherwise be in contact with wood.

All joints shall be fastened with the number, type, and size of fasteners specified, at the locations or spacing specified.

If field cuts of pressure-treated wood expose untreated interior wood, the untreated surfaces shall be covered with two coats of a liquid preservative, as approved by the Engineer.

Roof trusses shall be handled, installed and braced according to the Truss Plate Institute's BCSI-B1-06, "Handling, Installing and Bracing MPC Wood Trusses."

Wood structures shall be backfilled within the limits shown on the drawings by placing material in uniform lifts not to exceed nine inches. Compaction within three feet of walls shall be accomplished by means of hand tamping or small manually-directed equipment.

6. STRUCTURES INSTALLED ACCORDING TO STANDARD DETAIL DRAWINGS PREPARED BY OTHERS

Commercially available structures shall be installed as shown on the drawings provided to and concurred in by NRCS. All materials furnished and installed shall conform to the quality and grade noted on the drawings. A site-specific set of construction drawings shall be at the site during construction.

Modification of the structure outside limits shown on the drawings shall not be made without prior review and approval by the Engineer with appropriate approval authority. The Supplier or Contractor who submitted the original standard detail drawings shall be responsible for making any changes. Sufficient design documentation to allow an adequate review of the proposed modification shall accompany any request for a change.

Within thirty (30) days of the completion of construction of the structure, the Contractor or Supplier shall furnish written certification to the Engineer that all aspects of the installation are in conformance with the requirements of the drawings and specifications.

7. BURIED TANKS

a. Tank Condition

Tanks, whether steel or fiberglass/plastic, shall have sufficient strength to withstand design loads, be watertight, and be protected from corrosion. New tanks shall have a manufacturer's certification to this effect.

Used tanks must be inspected for pitting, corrosion, and cracks that could impair the strength or water tightness. Tanks which originally stored leaded fuels may have tetraethyl lead deposits and scale on the inside. This material should be detached from the tank's interior, pumped out, and disposed of in a manner which will not pollute ground or surface waters. Also, if welding, handling, etc. is done, safety precautions should be taken to avoid ingesting or inhaling the lead or its fumes. (These tanks may have gasoline fumes or vapors in them and may explode from a spark, welding arc or torch.)

A tank that has been bent or dented will not be accepted unless adequate repairs have been made to restore the strength, water tightness, and corrosion protection. When inlet or outlet pipes or other type of openings are to be cut into one of these tanks, the reduced strength must be considered when the tank is put into use. The Steel Tank Institute's STI- P3 certification procedure shall be used to evaluate the structural integrity and assure the corrosion protection of steel tanks which have been repaired or modified.

b. Installation

Underground tanks shall be handled and installed according to the manufacturer's recommended procedures.

At a minimum, all tanks shall be set on a firm earth foundation or a full-length concrete slab covered with six inches of clean sand. The tank shall be surrounded by clean sand or well- tamped earth, free from stones and other debris. The use of saddles or "chock blocks" of any sort interferes with the proper distribution of the backfill loads and shall not be permitted.

The excavation shall be dewatered during installation and backfill operations. The backfill shall be well compacted, particularly under the tank, to provide adequate support.

Tanks shall be covered with a minimum of two feet of earth, or with not less than one foot of earth on which is placed a reinforced concrete slab not less than four inches thick.

Tank installations, which will be subjected to traffic, shall have adequate strength to withstand the anticipated overload. Tanks shall be protected against damage from vehicles passing over them by at least three feet of earth cover or by 18 inches of well- tamped earth plus either eight inches of asphaltic paving or six inches of reinforced concrete. The paving or concrete shall be placed to extend at least one foot horizontally in all directions beyond the outline of the tank.

Tanks shall not be filled or even partially filled during their installation and backfilling.

Unless high ground water levels are not expected, the site shall have a drain system to prevent ground water from flooding around the tank. Where a tank may become buoyant due to a rise in the level of the water table or due to location in an area subjected to flooding, applicable precautions shall be taken to anchor the tank in place or dewater the site.

Openings on all underground tanks must be properly located and maintained in place during backfilling.

8. PIPES

Excavation for pipes shall be made to the grades and lines shown on the drawings or as indicated by construction stakes. Care should be taken not to excavate below the depths specified. Excavation below grade shall be corrected by placing firmly compacted layers of moist earth to provide a good foundation. If rock or boulders are exposed in the bottom of the excavation, they shall be removed to a minimum depth of eight inches below the invert grade of the pipe and any appurtenances and replaced with firmly compacted earth to the specified grade.

Pipes shall be backfilled with horizontal lifts of moist earth not to exceed four inches in thickness, or with other material as specified in Section 9 or in the drawings.

Each lift shall be compacted by hand tampers or other compaction equipment, however at no time shall driven equipment tires or tracks be within two feet of pipes or appurtenances.

All connections between pipes and structure walls and floors shall be water tight and capable of withstanding the expected operating pressures.

9. ADDITIONAL CONDITIONS WHICH APPLY TO THIS PROJECT ARE:

Practice Specification
Roofs and Covers (Code 367)

1. SCOPE

The work shall consist of furnishing materials and installing all components of the roof or cover, as outlined in this specification and the drawings.

Construction work covered by this specification shall not be performed between December 1 and the following March 15 unless the site conditions and/or the construction methods to be used have been reviewed and approved by the Engineer or his/her designated Representative.

2. MATERIALS

All materials used shall conform to the quality and grade noted on the drawings, set forth in Section 8, or as otherwise listed below:

PORTLAND CEMENT shall be Type I, IA, II or IIA and conform to ASTM-C150, unless otherwise set forth in Section 8. If Type I or II is used, an air-entrainment agent shall be used.

CONCRETE AGGREGATE shall meet the requirements and gradation specified in ASTM-C33. Coarse aggregate shall meet the gradation for size numbers 57 or 67.

WATER used in mixing or curing concrete shall be clean and free from injurious amounts of oil, acid, salt, organic matter or other deleterious substances.

REINFORCEMENT BARS shall be grade 40 or higher, and shall conform to ASTM- A615, A616, or A617. Welded wire fabric reinforcement shall conform to ASTM-A185 or A497. Reinforcement shall be free from loose rust, oil, grease, curing compound, paint or other deleterious coatings.

CONCRETE ADMIXTURES shall conform to ASTM-C260 for air-entrainment, and ASTM-C494, type A, D, F or G, for water- reduction and set-retardation, and type C or E for non-corrosive accelerators.

POZZOLAN shall conform to ASTM-C618, Class F, except loss of ignition shall not exceed 3.0 percent.

CURING COMPOUND shall meet the requirements of ASTM-C309, Type 2, Class A or B or as otherwise required in Section 8.

MASONRY COMPONENTS shall meet the requirements of ASTM-C90 & C270, and placed in accordance with ACI-530.

PRECAST CONCRETE units shall comply with ACI-525 and 533.

PREFORMED EXPANSION JOINT FILLER shall conform to the requirements of ASTM- D1752, Type I, II, or III, unless bituminous type is specified, in which case it shall conform to ASTM-D994 or D1751.

JOINT SEALERS shall conform to the requirements for ASTM-C920, Federal Specification SS-S-210A, or Federal Specification TT-S-227, as appropriate for the specific application.

WATERSTOPS. Vinyl-chloride polymer types shall be tested in accordance with Federal Test Method Standard No. 601, and shall show no sign of web failure due to brittleness at a temperature of -35 degrees Fahrenheit. Colloidal (bentonite) waterstops shall be at least 75 percent bentonite in accordance with Federal Specification SS- S-210A. Non-colloidal waterstops shall only be used if approved by the Engineer.

METALS shall conform to the following standards:

Structural steel - ASTM-A36

Carbon steel - ASTM-A283, grade C or D; or A611, grade D; or A570, grade C or D

Aluminum alloy - ASTM-B308, B429, B221, B210, B211, or B209

Bolts - ASTM-A307; zinc coating shall conform to ASTM-A153, B633 (cond. SC3), A165 (type TS).

Screws - wrought iron or medium steel Split or tooth-ring connectors - hot-rolled, low carbon steel conforming to ASTM- A711, grade 1015

WOOD shall be graded and stamped by an agency accredited by the American Lumber Standards Committee as meeting the required species, grade, and moisture content. In the absence of such a stamp, the Contractor or material supplier shall provide written certification that the wood products meet the designated quality criteria.

MANUFACTURED TRUSSES shall be certified as having been designed and built to Truss Plate Institute standards.

PRESSURE TREATED WOOD PRODUCTS shall be Douglas Fir, Southern Yellow Pine, or as otherwise specified on the drawings or in Section 8. They shall be treated with preservatives in accordance with the American Wood Preservers Association (AWPA) Standard C16, “Wood Used on Farms, Pressure Treatment.” Each piece shall bear the AWPA stamp of quality. In the absence of such a stamp, the Contractor or material supplier shall provide written certification that the pressure treated wood meets the designated quality criteria.

FASTENERS for roofs and covers shall be stainless steel and/or galvanized in accordance with ASTM A153, and/or A653 Class G185, and Type 304 or 316, or otherwise protected from corrosion due to contact with moisture, manure and associated gasses. All fasteners, connectors, and any other metal contacting ACZA, ACQ or CA treated wood shall be stainless steel, in accordance with Supplement A below.

GEOMEMBRANES shall comply with the requirements of Construction Specification PA521A-PE/PP, as applicable.

3. FOUNDATION PREPARATION AND CONDITIONS

All trees, brush, fences, and rubbish shall be cleared within the area of the structure, including any appurtenances, and borrow areas. All material removed by clearing and excavation operations shall be disposed of as directed by the Owner or his/her Representative. Sufficient topsoil shall be stockpiled in a convenient location for spreading on disturbed areas. All structures shall be set on undisturbed soil or non-yielding compacted material. Over excavation must be corrected as noted on the drawings or as directed by the Engineer or his/her designated Representative.

In addition to uniformity, the existing subgrade material must have sufficient strength to support the structure and its associated loads. Organic soil or soils with high percentages of clays and silts shall be removed. A base course (a layer of granular material placed on the subgrade prior to placement of concrete) may be used to improve the stability of the foundation. In addition, geosynthetics may be used, if approved by the Engineer, to further separate and/or stabilize the foundation.

Surface and subsurface drainage systems shall be installed and operating adequately to remove water from the foundation to allow for proper structure placement.

Drainfill upon which concrete is to be placed shall be covered with a geosynthetic that has an AOS between 20 and 100, inclusive.

Concrete shall not be placed until the subgrade, forms and steel reinforcements have been inspected and approved by the Engineer or his/her designated Representative. Notification shall be given far enough in advance to provide time for the inspection.

Prior to placement of concrete, the forms and subgrade shall be free of chips, sawdust, debris, standing water, ice, snow, extraneous oil, mortar or other harmful substances or coatings.

Earth surfaces against which concrete is to be placed shall be firm and damp. Placement of concrete on mud, dried earth or uncompacted fill or frozen subgrade will not be permitted.

4. CAST-IN-PLACE CONCRETE STRUCTURES

a. Concrete Forms

Forms shall be of wood, plywood, steel, or other approved material and shall be mortar tight. The forms and associated falsework shall be substantial and unyielding and shall be constructed so that the finished concrete will conform to the specified dimensions and contours.

Form surfaces shall be smooth and essentially free of holes, dents, sags, or other irregularities. Forms shall be coated with form oil before being set into place. Care shall be taken to prevent form oil from coming in contact with steel reinforcement.

b. Concrete Mix

Concrete for structures shall have a 28-day compressive strength of at least 4000 psi, unless otherwise specified on the drawings or in Section 8. The Contractor shall be responsible for the design of the mix and certification of the necessary compressive strength. Current certification of the design mix by Penn DOT may be accepted in lieu of additional testing.

The slump shall be 3 to 6 inches (without superplasticizers, if any); the air content by volume shall be five to seven percent of the volume of the concrete. Admixtures such as superplasticizers, water-reducers and set-retarders may be used provided they are approved by the Engineer prior to concrete placement and are used in accordance with the manufacturer's recommendations. Superplasticizers (ASTM C494, Type F or G) may be added to concrete that has a 2 to 4 inch slump before the addition, and that is not warmer than 95°F. The slump shall not exceed 7½ inches with the addition of superplasticizer.

c. Mixing and Handling Concrete

In general, concrete shall be transported, placed, and consolidated in accordance with ACI-304, of which some specific interpretations are set forth below.

The supplier shall provide a batch ticket to the Owner or Technician with each load of concrete delivered to the site. The batch ticket shall state the class of concrete, any admixtures used, time out, and the amount of water that can be added at the site and still be within the design mix limits. Concrete shall be uniform and thoroughly mixed when delivered to the job site. The Contractor shall test slump and air entrainment as necessary to insure that the concrete meets the requirements of this specification. Variations in slump of more than one inch within a batch will be considered evidence of inadequate mixing and shall be corrected or rejected. No water in excess of the amount called for by the job design mix shall be added to the concrete.

For concrete mixed at the site, the mixing time after all cement, aggregates and water are in the mixer drum shall be at least 1-1/2 minutes.

Concrete shall be conveyed from the mixer to the forms as rapidly as practical by methods that will prevent segregation of the aggregates or loss of mortar. Concrete shall be placed in the forms within 1-1/2 hours after the introduction of cement to the aggregate unless an approved set-retarding admixture is used in the mix. During periods of hot weather, it may be necessary to reduce this time.

Concrete shall not be dropped more than 5 feet vertically unless special equipment is used to prevent segregation.

Superplasticized concrete shall not be dropped more than 12 feet unless special equipment is used to prevent segregation.

Slab concrete shall be placed at the design thickness in one layer. Formed walls shall be placed in layers not more than 24-inches high, unless superplasticizer is used, in which case the maximum layer shall be 5 feet. Each layer shall be consolidated to insure a good bond with the preceding layer.

Immediately after placement, concrete shall be consolidated by spading and vibrating, or by spading and hand tamping. It shall be worked into corners and angles of the forms and around all reinforcement and embedded items in a manner that prevents segregation or in the formation of "honeycomb." Excessive vibration that results in segregation of materials will not be allowed. Vibration must not be used to make concrete flow in forms, slabs, or conveying equipment.

If the surface of a layer in place will develop its initial set, i.e., will not flow and merge with the succeeding layer when vibrated, a construction joint shall be made. Construction joints shall be made by cleaning the hardened concrete surface to exposed aggregate by sandblasting, air/water jetting, or hand scrubbing with wire brush, and keeping the concrete surface moist for at least one hour prior to placement of new concrete. Concrete surfaces do not require extensive finishing work; however, the surface shall be smooth and even with concrete paste worked to the surface to fill all voids. The concrete surface must be watertight. Careful screeding (striking-off) and/or wood float finishing shall be required, unless otherwise shown on the drawings. Exposed edges shall be chamfered, either with form molding or molding tools.

The addition of dry cement or water to the surface of screeded concrete to expedite finishing is not allowed.

d. Reinforcing Steel Placement

Reinforcement shall be accurately placed and secured in position in a manner that will prevent its displacement during the placement of concrete. In forms, this shall be accomplished by tying temperature and shrinkage steel or special tie bars (not stress steel) to the form “snap ties” or by other methods of tying. In slabs, steel shall be supported by precast concrete bricks (not clay bricks), or metal or plastic chairs. Except for dowel rods, placing steel reinforcement into concrete already in place shall not be permitted.

The following tolerances will be allowed in the placement of reinforcing bars shown on the drawings:

1. Maximum reduction in cover:
    - from formed and exposed surfaces - 1/4 inch
    - from earth surfaces - 1/2 inch
2. Maximum variation from indicated spacing - 1/12th of indicated spacing

Splices of reinforcing bars shall be made only at the locations shown on the drawings, unless otherwise approved by the Engineer. Unless otherwise required, welded wire fabric shall be spliced by overlapping sections at least one full mesh dimension plus two inches. All reinforcement splices shall be in accordance with ACI 318.

Reinforcing steel shall not be welded, unless approved by the Designer. The ends of all reinforcing steel shall be covered with at least 1-1/2 inches of concrete.

e. Curing

Concrete shall be prevented from drying for at least seven days after it is placed. Exposed surfaces shall be kept continuously moist during this period by covering with moistened canvas, burlap, straw, sand or other approved material unless they are sprayed with a curing compound. Wooden forms left in place during the curing period shall be kept wet.

Concrete, except at construction joints, may be coated with a curing compound in lieu of continuous application of moisture. The compound shall be sprayed on moist concrete surfaces as soon as free water has disappeared but shall not be applied to any surface until patching, repairs and finishing of that surface are completed. Concrete shall be wet cured or remain in forms until immediately before patching, repairs, or finishing is performed. Curing compound shall not be allowed on any rebars.

Curing compound shall be applied in a uniform layer over all surfaces requiring protection at a rate of not less than one gallon per 150 square feet of surface. Surfaces subjected to heavy rainfall or running water within three hours after the curing compound has been applied, or otherwise damaged, shall be resprayed.

Any construction activity which disturbs the curing material shall be avoided during the curing period. If the curing material is subsequently disturbed, it shall be reapplied immediately.

Steel tying or form construction adjacent to new concrete shall not be started until the concrete has cured at least 24 hours. Vehicles, overlying structures, or other heavy loads shall not be placed on new concrete

slabs for at least three days, unless the concrete strength can be shown to be adequate to support such loads.

f. Form Removal and Concrete Repair

Forms for walls and columns shall not be removed for at least 24 hours after placing the concrete. When forms are removed in less than seven days, the exposed concrete shall be sprayed with a curing compound or be kept wet continuously for the remainder of the curing period. Forms which support beams or covers shall not be removed for at least seven days, or 14 days if they are to support forms or shoring.

Forms shall be removed in such a way as to prevent damage to the concrete. Forms shall be removed before walls are backfilled. Columns shall be at least seven days old before any structural loads are applied.

Where minor areas of the concrete surface are “honeycombed,” damaged or otherwise defective, the area shall be cleaned, wetted and then filled with a dry-pack mortar. Dry- pack mortar shall consist of one part Portland cement and three parts sand with just enough water to produce a workable paste.

g. Concreting in Cold Weather

Concreting in cold weather shall be performed in accordance with ACI-306R-88. In addition, the contractor shall provide a written plan at least 24 hours in advance of placing concrete in cold weather, and shall have the necessary equipment and materials on the job site before the placement begins.

h. Concreting in Hot Weather

Concreting in hot weather shall be performed in accordance with ACI 305, of which some specific interpretations are set forth below. The supplier shall applyeffective means to maintain the temperature of concrete below 90 degrees Fahrenheit during mixing and conveying. Exposed surfaces shall be continuously moistened by means of fog spray or otherwise protected from drying during the time between placement and finishing and during curing. Concrete with a temperature above 90 degrees Fahrenheit shall not be placed.

i. Backfilling New Concrete Walls

Backfilling and compaction of fill adjacent to new concrete walls shall not begin in less than 14 days after placement of the concrete, except that walls that can be backfilled on both sides simultaneously may be done so within seven days.

Heavy equipment shall not be allowed within three feet of a new concrete wall. Provide compaction near the wall by means of hand tamping or small, manually-directed equipment.

5. WOOD STRUCTURES

All framing shall be true and exact. Timber and lumber shall be accurately cut and assembled to a close fit and shall have even bearing over the entire contact surfaces. Nails and spikes shall be driven with just sufficient force to set the heads flush with the wood surface. Deep hammer marks in the wood shall be considered evidence of poor workmanship and may be sufficient cause for rejection of the work.

Holes for lag screws shall be bored with a bit not larger than the body of the screw at the base of the thread. Holes for bolts shall be bored with a bit no more than 1/16” larger than the bolt diameter to achieve a snug fit without forcibly driving the bolt.

Washers shall be used in contact with all bolt heads and nuts that would otherwise be in contact with wood.

All joints shall be fastened with the number, type, and size of fasteners specified, at the locations or spacing specified.

If field cuts of pressure-treated wood expose untreated interior wood, the untreated surfaces shall be covered with two coats of a liquid preservative, as approved by the Engineer.

Roof trusses shall be handled, installed and braced according to the Truss Plate Institute's HIB-91, "Handling, Installing and Bracing MPC Wood Trusses."

Wood structures shall be backfilled within the limits shown on the drawings by placing material in uniform lifts not to exceed nine inches. Compaction within three feet of walls shall be accomplished by means of hand tamping or small manually-directed equipment.

6. GEOMEMBRANE STRUCTURES

Semi-rigid and flexible covers which utilize geomembranes shall be installed as required by the manufacturer, and as otherwise set forth in Section 8 and Construction Specification PA521A-PE/PP.

7. STRUCTURES INSTALLED ACCORDING TO STANDARD DETAIL DRAWINGS PREPARED BY OTHERS

Commercially available structures shall be installed as shown on the drawings provided to and concurred in by NRCS. All materials furnished and installed shall conform to the quality and grade noted on the drawings. A site specific set of construction drawings shall be at the site during construction.

Modification of the structure outside limits shown on the drawings shall not be made without prior review and approval by the Engineer with appropriate approval authority. The Supplier or Contractor who submitted the original standard detail drawings shall be responsible for making any changes. Sufficient design documentation to allow an adequate review of the proposed modification shall accompany any request for a change.

Within thirty (30) days of the completion of construction of the structure, the Contractor or Supplier shall furnish written certification to the Engineer that all aspects of the installation are in conformance with the requirements of the drawings and specifications.

8. ADDITIONAL CONDITIONS WHICH APPLY TO THIS PROJECT ARE:

Supplement A – "Guidelines for Selecting Corrosion-Resistant Fasteners for Use with Preservative-Treated Wood"

Based on a review of technical information posted by the major U. S. preservative manufacturers and selected fastener and connector manufacturers, the following guidelines summarize the current state-of-practice regarding the selection of metal fasteners and connectors for use with ACQ and copper azole (CA) preservative-treated wood:

AWPA Use Category and Description	**Appropriate Fastener/Connector Types**
UC 3A or B – Exterior Construction, Above Ground UC 4A – Ground Contact or Fresh Water, Non-critical components	Fasteners Hot-Dipped (HD) Galvanized per ASTM A153 or Stainless Steel (SS), Type 304 or 316 Connectors HD Galvanized per ASTM A653, Class G185 or Stainless steel, Type 304 or 316
UC 4B - Ground Contact or Fresh Water, Critical components or difficult to replace	Stainless steel, Type 304 or 316

Other Preservatives:

1. For CCA-treated wood, HD galvanized fasteners and connectors as specified above are recommended. CCA is less corrosive than ACQ and CA.
2. For ACZA-treated wood, SS fasteners and connectors as specified above are recommended. ACZA contains ammonia and is significantly more corrosive than ACQ and CA.
3. For other preservatives, the more stringent of the preservative manufacturer's recommendations and the fastener/connector manufacturer's recommendations should be followed.

Notes regarding NRCS-type structures:

1. Use Category UC 3A and B include railings, decking, bracing, and slats on composter bins.
2. Use Category UC 4A includes posts such as those used in composter bins.
3. Use Category UC 4B includes structural building poles and permanent wood foundations.

Practice Specification
Heavy Use Area Protection (Code 561)

1. SCOPE

The work shall consist of furnishing materials and installing all components of the paved surface treatment areas for heavy use area protection as outlined in this specification and the drawings.

2. MATERIALS

All materials used shall conform to the quality and grade noted on the plans, set forth in Section 6, or as otherwise listed below:

PORTLAND CEMENT shall be Type I, IA, II, or IIA and conform to ASTM-C150, unless otherwise set forth in Section 6. If Type I or II is used, an air-entrainment agent shall be used.

CONCRETE AGGREGATE shall meet the requirements and gradation specified in ASTM-C33. Coarse aggregate shall meet the gradation for size numbers 57 or 67.

WATER used in mixing or curing concrete shall be clean and free from injurious amounts of oil, acid, salt, organic matter or other deleterious substances.

REINFORCEMENT BARS shall be grade 40 or higher, and shall conform to ASTM-A615, A616, or A617. Welded wire fabric reinforcement shall conform to ASTM-A185 or A497. Reinforcement shall be free from loose rust, oil, grease, curing compound, paint or other deleterious coatings.

CONCRETE ADMIXTURES shall conform to ASTM-C260 for air-entrainment, and ASTM- C494, type A, D, F or G, for water-reduction and set-retardation, and type C or E for non- corrosive accelerators.

POZZOLAN shall conform to ASTM-C618.

COAL COMBUSTION BYPRODUCTS (CCB) shall have a chemical analysis that provides adequate cementing and safety (toxicity) for the purpose intended.

CURING COMPOUND shall meet the requirements of ASTM-C309, Type 2, Class A or B, or as otherwise required in Section 6.

MASONRY COMPONENTS shall meet the requirements of ASTM-C90 & C270, and be placed in accordance with ACI- 530.

PRECAST CONCRETE units shall comply with ACI-525 and 533.

PREFORMED EXPANSION JOINT FILLER shall conform to the requirements of ASTM-D1752, Type I, II, or III, unless bituminous type is specified, in which case it shall conform to ASTM-D994 or D1751.

JOINT SEALERS shall conform to the requirements for ASTM-C920, Federal Specification SS-S-210A, or Federal Specification TT-S-227, as appropriate for the specific application.

WATERSTOPS. Vinyl-chloride polymer types shall be tested in accordance with Federal Test Method Standard No. 601, and shall show no sign of web failure due to brittleness at a temperature of -35 degrees Fahrenheit. Colloidal (bentonite) waterstops shall be at least 75 percent bentonite in accordance with Federal Specification SS-S-210A. Non-colloidal waterstops shall only be used if approved by the Engineer.

AGGREGATES. Aggregates shall meet the requirements of Pennsylvania Dirt and Gravel Road Program (DSA), PennDOT Pub. 408, Section 703, for the gradations specified in the drawings or Section 6, or as otherwise set forth in Section 6.

BITUMINOUS CONCRETE. Bituminous concrete shall meet the requirements of PennDOT Pub. 408, Sections 401, 420 and 421, for the course(s) specified in the drawing or Section 6, or as otherwise set forth in Section 6.

WOOD shall be graded and stamped by an agency accredited by the American Lumber Standards Committee as meeting the required species, grade, and moisture content. In the absence of such a

stamp, the Contractor or material supplier shall provide written certification that the wood products meet the designated quality criteria.

PRESSURE TREATED WOOD PRODUCTS shall be Douglas Fir, Southern Yellow Pine, or as otherwise specified on the drawings or in Section 6. They shall be treated with preservatives in accordance with the American Wood Preservers Association (AWPA) Standard C16, “Wood Used on Farms, Pressure Treatment.” Each piece shall bear the AWPA stamp of quality. In the absence of such a stamp, the Contractor or material supplier shall provide written certification that the pressure treated wood meets the designated quality criteria.

FASTENERS for wood structures shall be stainless steel, galvanized, or otherwise protected from corrosion due to contact with moisture, manure and associated gasses. The protective coatings shall be compatible and consistent with the preservative chemicals in the pressure treated wood. Additional guidance can be found in PA367, *Roofs and Covers*.

GEOTEXTILES. Geotextiles shall meet the requirements of PennDOT Pub. 408, Sections 212 and 735, for the Type and Class specified in the drawings or Section 6, or as otherwise set forth in Section 6.

ORGANIC SURFACES. Materials such as tanbark and saw dust shall be free of contaminants and rot.

3. FOUNDATION PREPARATION

Clear all trees, brush, fences, manure, and rubbish within the area to be protected, including any appurtenances, and borrow areas. All material removed by clearing and excavation operations shall be disposed of as directed by the Owner or his/her Representative. Sufficient topsoil is to be stockpiled in a convenient location for use on disturbed areas to facilitate seeding.

Set all base course material on undisturbed soil or non-yielding compacted material. Geosynthetics may be used, if approved by the Engineer, to further separate and/or stabilize the foundation. Over-excavation must be corrected as noted on the drawings or as directed by the Engineer or his/her designated Representative.

Surface and subsurface drainage systems shall be installed and operating adequately to remove water from the foundation to allow for proper placement of base and surface materials.

Drainfill upon which concrete is to be placed shall be covered with a geosynthetic that has an AOS between 20 and 100, inclusive.

4. BASE COURSE

The base course shall be placed on the area to the grades and thicknesses shown on the plans. The base material shall be as set forth in Section 6 and/or as shown on the drawings. The material shall be wetted and compacted by rollers or other construction equipment approved by the Engineer.

5. SURFACE TREATMENTS

A. Portland Cement Concrete

CONCRETE MIX

Unless otherwise specified in Section 6, concrete shall be proportioned to provide a minimum compressive strength at 28 days of 4,000 psi. The Contractor shall be responsible for the design of the mix and certification of the necessary strength, in accordance with ACI 301. Acceptance and certification of design mixes by PennDOT within the past year may be accepted in lieu of additional testing.

REINFORCING STEEL PLACEMENT

Reinforcement shall be accurately placed and secured in position in a manner that will prevent its displacement during the placement of concrete.

Steel shall be supported by precast concrete bricks (not clay bricks), metal or plastic chairs, or hard fieldstone. Except for dowel rods, placing steel reinforcement into concrete already in place shall not be permitted.

The following tolerances will be allowed in the placement of reinforcing bars shown on the drawings:

1. Maximum reduction in cover: from exposed surfaces -1/4 inch from earth surfaces -1/2 inch
2. Maximum variation from indicated spacing: 1/12th of indicated spacing

Splices of reinforcing bars shall be made only at the locations shown on the drawings, unless otherwise approved by the Engineer. Unless otherwise required, welded wire fabric shall be spliced by overlapping sections at least one full mesh dimension plus too inches. All reinforcement splices shall be in accordance with ACI 318.

Reinforcing steel shall not be welded unless approved by the Designer.

The ends of all reinforcing steel shall be covered with at least 1-1/2 inches of concrete.

MIXING AND HANDLING CONCRETE

In general, concrete shall be transported and placed in accordance with ACI-304, of which some specific interpretations are set forth below.

For concrete mixed at the site, the mixing time after all cement, aggregates and water are in the mixer drum shall be at least 1-1/2 minutes. Concrete shall be conveyed from the mixer as rapidly as practical by methods that will prevent segregation of the aggregates or loss of mortar. Concrete shall be placed within 1- 1/2 hours after the introduction of cement to the aggregate unless an approved set- retarding admixture is used in the mix. During periods of hot weather, it may be necessary to reduce this time.

For each load of concrete delivered to the site, a batch ticket shall be provided to the Owner or Technician by the Supplier. As a minimum, this ticket shall show the design strength, time out, admixtures (if any), and amount of water that may be added (if any) on site and still be within the design mix limits.

The Contractor shall test slump and air entrainment as necessary to insure that the concrete meets the requirements of this specification. The slump shall be three to six inches (without superplasticizers) and the air content shall be five to seven percent of the volume of the concrete. Admixtures such as superplasticizers, water-reducers and set-retarders may be used provided they are approved by the Engineer prior to concrete placement and are used in accordance with the manufacturer's recommendations. Superplasticizers (ASTM C494, Type F or G) may be added to concrete that has a 2 to 4 inch slump before the addition, and that is not warmer than 95o F. The slump shall not exceed 7½ inches with the addition of superplasticizer.

Concrete shall be uniform and thoroughly mixed when delivered to the job site. Variations in slump of more than one inch within a batch will be considered evidence of inadequate mixing and shall be corrected or rejected. No water in excess of the amount called for by the job design mix shall be added to the concrete.

Immediately after placement, concrete shall be consolidated by spading and vibrating, or spading and hand tamping. It shall be worked into corners and around all reinforcement and embedded items in a manner which prevents segregation. Excessive vibration which results in segregation of materials will not be allowed. Vibration must not be used to make concrete flow in forms, slabs, or conveying equipment.

If the surface of a layer in place will develop its initial set, i.e., will not flow and merge with the succeeding layer when vibrated, a construction joint shall be made. Construction joints shall be made by cleaning the hardened concrete surface to exposed aggregate by sandblasting, air/water jetting, or hand scrubbing with wire brush, and keeping the concrete surface moist for at least one hour prior to placement of new concrete.

Concrete surfaces do not require extensive finishing work; however, the surface shall be smooth and even, with no depressions that would result in surface water ponding. Careful screeding (striking-off) and/or wood float finishing shall be required. Any additional desired finishing of the surface (such as roughening for improved traction) shall be accomplished after an initial stiffening of the concrete has taken place. These requirements will be stated in Section 6 or on the drawings. Exposed edges should be chamfered, either with form molding or molding tools.

The addition of dry cement or water to the surface of screeded concrete to expedite finishing is not allowed. If concrete placing is discontinued prior to completion of the entire structure, the unfinished end of the concrete shall be formed to create a proper construction or expansion/contraction joint.

EXPANSION/CONTRACTION JOINTS

When required in Section 6 or on the drawings, expansion/contraction joints shall contain a six-inch, Type B, vinyl waterstop with a minimum web thickness of 1/8-inch, or an approved joint sealer.

FORM REMOVAL AND CONCRETE REPAIR

Forms for walls and columns shall not be removed for at least 24 hours after placing the concrete. When forms are removed in less than seven days, the exposed concrete shall be sprayed with a curing compound or be kept wet continuously for the remainder of the curing period. Forms which support beams or covers shall not be removed for at least seven days, or 14 days if they are to support forms or shoring.

Forms shall be removed in such a way as to prevent damage to the concrete. Forms shall be removed before walls are backfilled. Columns shall be at least seven days old before any structural loads are applied.

Concrete that is damaged or otherwise defective shall be removed and replaced, or where feasible, repaired. The Engineer will determine the required extent of removal, replacement or repair. The plan for accomplishing the repair must be approved by the Engineer prior to beginning the repair work. Where minor areas of the concrete surface are “honeycombed,” damaged or otherwise defective, the area may be cleaned, wetted and then filled with a dry-pack mortar. Dry-pack mortar shall consist of one part Portland cement and three parts sand with just enough water to produce a workable paste.

CONCRETING IN COLD WEATHER

Concreting in cold weather shall be performed in accordance with ACI-306R-88. In addition, the contractor shall provide a written plan at least 24 hours in advance of placing concrete in cold weather, and shall have the necessary equipment and materials on the job site before the placement begins.

CONCRETING IN HOT WEATHER

Concreting in hot weather shall be performed in accordance with ACI 305, of which some specific interpretations are set forth below.

The supplier shall apply effective means to maintain the temperature of concrete below 90 degrees) Fahrenheit during mixing and conveying. Exposed surfaces shall be continuously moistened by means of fog spray or otherwise protected from drying during the time between placement and finishing, and during curing. Concrete with a temperature above 90 degrees Fahrenheit shall not be placed.

CURING

In general, concrete shall be cured in accordance with ACI-308. Specifically, it shall be prevented from drying for at least seven days after it is placed. Exposed surfaces shall be kept continuously moist during this period by covering with moistened canvas, burlap, straw, sand or other approved material unless they are sprayed with a curing compound.

Concrete, except at construction joints, may be coated with a curing compound in lieu of continuous application of moisture. The compound shall be sprayed on moist concrete surfaces as soon as free water has disappeared but shall not be applied to any surface until patching, repairs and finishing of that surface are completed. Curing compound shall not be allowed on any rebars.

Curing compound shall be applied in a uniform layer over all surfaces requiring protection at a rate of not less than one gallon per 150 square feet of surface. Surfaces subjected to heavy rainfall or running water within three hours after the curing compound has been applied, or otherwise damaged, shall be resprayed. Any construction activity which disturbs the curing material shall be avoided. If the curing material is subsequently disturbed, it shall be reapplied immediately.

B. Bituminous Concrete

Bituminous concrete shall be installed in accordance with PennDOT Pub. 408, Sections 305, 320, & 400, as appropriate, and/or as otherwise set forth in Section 6.

C. Compacted Stone Aggregate

Compacted stone aggregate surfaces shall consist of the material specified in the drawing or Section 6. The material shall be moist and uniformly placed on the prepared base. The loose material shall be place to an adequate thickness so that when compacted the finished thickness is as specified. The stone aggregate shall be compacted with a vibratory smooth wheeled roller or other approved equipment to form a dense, smooth surface.

D. Other Materials and Structures

Surface treatments, such as saw dust, coal combustion byproducts, soil cement, etc., shall be placed as set forth in Section 6, and to the grades and thicknesses shown on the drawings.

6. ADDITIONAL CONDITIONS WHICH APPLY TO THIS PROJECT ARE:

USDA United States Department of Agriculture

Natural Resources Conservation Service
Practice Specification
Roof Runoff Structure (Code 558)

1. SCOPE

The work shall consist of furnishing, fabricating, and installing all components of the roof runoff structure(s) as outlined in this specification and as shown on the drawings.

2. MATERIALS

GUTTERS, DOWNSPOUTS, AND SUPPORTS shall be made of aluminum, galvanized steel, wood, or plastic, and the size and type set forth in Section 4, or as shown on the drawings. Aluminum gutters and downspouts shall have a nominal thickness of at least 0.027 and 0.020 in (0.07 and 0.05 cm), respectively. Galvanized steel gutters and downspouts shall be at least 28 gauge. Wood gutters shall be redwood, cedar, cypress, or pressure-treated, and shall be clear and free of knots. Plastics shall contain ultraviolet stabilizers. Supports shall have sufficient strength to withstand anticipated water, snow, and ice loads. The type of supports for manufactured gutters and downspouts shall be determined by the manufacturer's requirements, given the type of installation and type of gutter or downspout.

DRAIN FILL for subsurface drains and driplines shall meet the size and quality requirements of PennDOT Publication 408, Section 704, Type A, Coarse Aggregate, with gradation as shown in Section 4 or in the drawings.

DRAIN PIPE for subsurface drains and drip lines shall be perforated corrugated polyethylene (PE) pipe and fittings meeting the requirements of ASTM F405 or ASTM F667.

APPURTENANCES, such as storage tanks, guard pipe, flush diverters, etc., if required, shall be of the materials set forth in Section 4 and/or the drawings.

3. INSTALLATION

Gutters and drainpipes shall be installed at the locations and grades shown on the drawings. Gutter supports shall have maximum spacing of 48 in (120 cm) for galvanized steel and 24 in (60 cm) for aluminum or plastic. Joints shall be made watertight with the use of mastics or by welding. Dissimilar metals shall not be in contact with each other. Wood gutters shall be mounted on fascia boards using furring blocks that are a maximum of 24 in (60 cm) apart.

Gutters shall be hung so that the outer edge of the gutter is below the projection of the roof line as shown on the drawings. Roof edges shall be nearly level. Replacement or repair of structure members may be necessary to provide a nearly level and uniform roof edge.

Downspouts shall be securely fastened at the top and bottom, with intermediate supports that are a maximum of 10 ft (3 m) apart.

Drain pipe shall be installed in accordance with ASTM F449.

Drain fill shall be placed in the drip drain trench in such a manner so as not to be contaminated with adjacent soil. Geotextile may be used to envelop the bottom and sides of the drain fill to accomplish this. Geotextile shall have properties equal to or exceeding the requirements of NRCS Design Note 24.

Outlets shall be located as shown on the drawings. Where downspouts empty directly onto the ground surface there shall be an elbow to direct the flow away from the building and splash blocks or other protection to prevent erosion. Downspouts shall not outlet into foundation drains.

4. ADDITIONAL CONDITIONS WHICH APPLY TO THIS PROJECT ARE:

Practice Specification
Underground Outlet (Code 620)

1. SCOPE

The specification covers the fabrication, installation, and construction of underground outlets.

2. MATERIALS

The materials required for the underground outlet shall be as shown on the drawings or as otherwise required in Section 9.

a. DRAINFILL AGGREGATE shall meet the requirements of Penn DOT, Publication 408, Section 703, fine and coarse aggregate. The size and gradation shall be as specified in the additional conditions of this specification or on the drawings.

Table 1 – Drain pipe requirements

Type	Specification
Concrete drain tile	ASTM-C-412
Concrete pipe for irrigation or drainage	ASTM-C-118
Concrete pipe or tile, determining physical properties of	ASTM-C-497
Concrete sewer, storm drain and culvert pipe	ASTM-C-14
Reinforced concrete culvert, storm drain and sewer pipe	ASTM-C-76
Perforated concrete pipe	ASTM-C-444
Portland cement	ASTM-C-150
Pipe, bituminized fiber & fitting	Fed Spec SS-P-1540
Styrene rubber (SR) plastic drain pipe & fitting	ASTM-D-2852
Polyvinyl chloride (PVC), SHD 40, 80, 120	ASTM-D-1785
Polyvinyl chloride (PVC) sewer pipe & fitting	ASTM-D-2729
Polyvinyl chloride (PVC), SDR 35, 26	ASTM-D-3034
	type PSM
Corrugated polyethylene tubing & fitting (3-6 inch)	ASTM-F-405
Corrugated polyethylene tubing & fitting (8-24 inch)	ASTM-F-667
Corrugated polyethylene tubing	ASTM F2648
Corrugated polyethylene tubing (3-10”)	AASHTO M252
Corrugated polyethylene tubing (12-60”)	AASHTO M294
Pipe, corrugated (steel, polymer coated)	ASTM-A-762
Pipe, corrugated (steel, zinc coated)	ASTM-A-760

b. PIPE shall meet the requirements of Table 1, and as set forth in Section 9 and/or on the drawings. All pipes shall be clearly marked with the appropriate specification designation. If plastic pipe is stored on site for a length of time, it should be protected from sunlight. At the time of installation, it should be kept as cool as possible to minimize elongation of the pipe during installation.

c. GEOTEXTILE shall meet the requirements as outlined in NRCS Design Note 24 and NRCS Material Specification 592.

d. CONCRETE and related materials shall meet the requirements set forth in Construction Specification PA313S, Waste Storage Facility (Structure), and/or as set forth in Section 9.

All materials shall be carefully inspected prior to installation. Clay and concrete tile shall be checked for damage by freezing. Plastic pipe and tubing shall be protected from hazards causing deformation. Any damaged or imperfect pipe or tubing shall not be installed. Any pipe or tubing which is damaged during installation shall be removed and replaced.

3. SITE PREPERATION

All trees, brush, fences and rubbish shall be cleared within the area that the subsurface drain will be installed. All material removed by the clearing and grubbing operation shall be disposed of as directed by the Owner or his/her Representative.

4. INSPECTION AND MATERIAL HANDLING

Material for underground outlets shall be carefully inspected before the drains are installed. If applicable, clay and concrete tile shall be checked for damage from freezing and thawing before it is installed. Bituminized fiber and plastic pipe and tubing shall be protected from hazard causing deformation or warping.

Plastic pipe and tubing with physical imperfections shall not be installed. Any damaged section shall be removed and replaced. All material shall be satisfactory for its intended use and shall meet applicable specifications and requirements.

5. SAFETY

All positive “design” responses from the Pennsylvania One Call System shall be noted on the plans. It is the Contractor’s or Landowner’s responsibility to notify One Call of pending construction and to contact the affected utility for marking at the time of construction.

The Contractor must comply with OSHA requirements Part 1926, subpart P, for protection of workers entering trench.

6. EXCAVATION

Construction operations shall follow the erosion and sediment control plan.

Unless otherwise specified, excavation for each underground outlet shall begin at the outlet end and progress upstream. The trench shall be excavated to the grades and cross sections shown on the drawings. The trench width above the conduit may increase as necessary for safe installation or for the convenience of the Contractor. Trench shields, shoring, or bracing are required whenever workers will be in a trench deeper than four feet, or as otherwise required be OSHA Regulations.

7. INSTALLATION

BEDDING. In stable soils, the conduit shall be firmly and uniformly bedded throughout its entire length as required on the drawings or Section 9. Where the underground outlet foundation is in unstable soils, the bedding shall be as shown on the drawings or as otherwise required by the Engineer. Where the conduit is to be laid in rock, or rock is exposed at the trench bottom, the rock shall be removed at least two inches below the invert grade to allow for compacted bedding under the conduit.

PLACEMENT. Debris inside of pipes and tubing shall be removed prior to installation. The conduit ends shall be protected during placement. Similarly, all appurtenances, including trash guards and animal guards, shall be protected during installation to avoid damage. All underground outlets shall be laid to line and grade, and immediately covered with an approved blinding, envelope, or the required depth of filter material. No reversals in grade of the conduit are permitted, and in very hot climates no more than five percent stretch is allowed. Special precautions must be taken in hot weather to observe this stretch limit.

Flexible conduits, such as plastic pipe or tubing and bituminized fiber pipe, shall be installed, according to the requirements in ASTM-F-449, “Standard Recommended Practice for Subsurface Installation of Corrugated Thermoplastic Tubing for Agricultural Drainage or Water Table Control.”

Earth backfill material shall be placed in the trench in a manner to ensure that the conduit does not become displaced and so that the filter and bedding material, after backfilling, meet the requirements of the plans and specifications.

8. BACKFILL

Initial backfill shall be of selected material that is free of rocks or other sharp-edged material that could damage the pipe. Earth backfill shall be placed in the trench in such a manner that the conduit is not displaced, and that the filter and bedding materials are not contaminated or displaced. Unless otherwise specified, where the underground outlet is laid under roads or at other designated locations, the backfill shall be placed in successive layers of not more than six inches, and each lift compacted before the subsequent layer. Backfill shall extend above the adjacent ground to allow for settlement, and be well rounded over the trench.

Work areas shall be restored to their pre- construction condition or as otherwise required in the plans or Section 9.

9. ADDITIONAL CONDITIONS WHICH APPLY TO THIS PROJECT ARE:

Natural Resources Conservation Service
Practice Specification
Access Road (Code 560)

1. SCOPE

The work shall consist of construction of the Access Road at the location, and to the dimensions and grades, shown on the drawings and as staked in the field.

2. SITE PREPARATION

All trees, stumps, roots, brush, weeds, and other objectionable material shall be removed from the work area and disposed of as directed.

All unsuitable material shall be removed from the roadbed area prior to placing fill or surfacing materials.

The roadbed shall be graded to the required elevations. All areas which require filling will be scarified prior to placement of fill. All fill shall be compacted according to the specified method with the appropriate equipment or to the specified density.

3. SURFACING

Aggregate for the subbase shall be clean and free from deleterious substances.

GEOTEXTILE shall meet the requirements as outlined in NRCS Design Note 24 and NRCS Material Specification 592 or as otherwise stated in Section 6.

Gradation shall be such that a stable base will be formed. Placement of the surface course shall be in accordance with sound highway construction practices.

4. SEEDING

All disturbed areas shall be revegetated as designated on the drawings.

5. EROSION CONTROL

Construction operations shall be carried out in such a manner that erosion and air and water pollution will be minimized. State and local laws concerning pollution abatement must be followed.

6. ADDITIONAL CONDITIONS WHICH APPLY TO THIS PROJECT ARE:

Practice Specification
Diversion (Code 362)

1. SCOPE

The work shall consist of constructing diversions in the locations and to the grades and dimensions shown on the drawings or as stated in Section 7 of this specification.

2. MATERIAL

FILL MATERIAL used in constructing the earth fill portions of the diversion shall be obtained from the excavated area of the diversion channel, or other approved sources.

PIPE AND FITTINGS shall meet the size and material requirements as specified on the drawings or in Section 7 of this specification, when applicable.

OTHER required materials shall be as shown in the drawings or in Section 7 of this specification.

3. FOUNDATION PREPARATION

The base area of the ridge sections shall be stripped of vegetation, topsoil, and unsuitable material and scarified prior to placing fill. Topsoil shall be stockpiled and spread uniformly over the finished diversion ridge and channel, unless stated otherwise in the drawings or in Section 7 of this specification.

4. PIPE

Where specified, pipe shall be installed before earth placement unless otherwise stated on the drawings. The pipe shall be placed on a firm foundation with compacted backfill placed in horizontal lifts not exceeding 4 inches, to the lines and grades shown on the drawings.

5. PLACEMENT

Earth fill shall contain no frozen material, rocks greater than 6 inches in diameter, roots or wood greater than 2 inches in diameter or 4 inches in length, sod, brush, or other objectionable material.

The earth fill shall be compacted by routing the hauling and spreading equipment over the fill in such a manner that the entire surface of the fill will be traversed by not less than one track tread of the loaded equipment. The completed diversion shall conform to the cross section shown on the drawings, and be free of irregularities that would impede flow.

When an excess of earth material results from cutting the diversion to the cross section and grade, it shall be deposited adjacent to the diversion without blocking surface runoff from reaching the diversion, or another designated area where fill is needed. All disturbed areas should be seeded according to Specification PA342, Critical Area Planting, or as otherwise specified in Section 7 of this specification.

6. LEVEL SPREADER

Where specified, a level spreader shall be constructed on zero percent grade to insure uniform spreading of sediment-free runoff (converting channel flow to sheet flow). Level spreaders shall be constructed on undisturbed soil (not on fill).

A geotextile erosion stop shall be placed vertically and at least six inches deep in a slit trench one foot back of the level lip and parallel with the lip. This erosion stop shall extend the entire length of the level lip and after backfilling with tamped soil the geotextile shall be trimmed so that the upper edge is flush with the soil surface. The entire level lip area shall be protected by placing two overlapping strips of jute or excelsior protective material.

Storm runoff converted to sheet flow shall outlet onto stabilized areas. Water shall not be concentrated immediately below the point of discharge.

7. ADDITIONAL CONDITIONS WHICH APPLY TO THIS PROJECT ARE:

Natural Resources Conservation Service
Practice Specification
Trails and Walkways (Code 575)

1. SCOPE

The work shall consist of furnishing materials and installing all components of the trails and walkways as outlined in this specification and the drawings.

2. MATERIALS

All materials used shall conform to the quality and grade noted on the plans, set forth in Section 8, or as otherwise listed below:

WEARING SURFACE, BINDER COURSE, and BASE COARSE aggregate shall meet the requirements and gradation specified in Section 8 or on the drawings.

GEOTEXTILE shall meet the requirements as outlined in NRCS Design Note 24 and NRCS Material Specification 592.

PIPE shall meet the requirements specified in Section 8 or on the drawings.

PRESSURE TREATED WOOD PRODUCTS shall be Douglas Fir, Southern Yellow Pine, or as otherwise specified on the drawings or in Section 8. They shall be treated with preservatives in accordance with the American Wood Preservers Association (AWPA) Standard C16, “Wood Used on Farms, Pressure Treatment.” Each piece shall bear the AWPA stamp of quality. In the absence of such a stamp, the Contractor or material supplier shall provide written certification that the pressure treated wood meets the designated quality criteria.

FASTENERS for wood structures shall be stainless steel, galvanized, or otherwise protected from corrosion due to contact with moisture and soil.

3. FOUNDATION PREPARATION

All trees, brush, fences, manure, and rubbish shall be cleared within the trail or walkway area, including any associated drainage control features and borrow areas. All stumps and roots larger than two-inch diameter shall be removed down to the subgrade elevation. All material removed by clearing operations shall be disposed of as directed by the Owner or his/her Representative.

Topsoil shall be stripped and stockpiled in a convenient location for use on disturbed areas to facilitate seeding.

Soil shall be excavated and if suitable can be used as fill as shown on the drawings to establish a uniform, stablesubgrade. Wet soil, mud, and topsoil shall not be used as fill. The fill material shall be compacted as specified in Section 8 or on the drawings.

Borrow material shall be taken from the designated borrow area as needed after excavation of the trail or walkway is complete. The borrow area shall be final graded to drain freely and blend into the surrounding undisturbed area.

Excess excavated material shall be disposed of in the designated spoil area, which shall be graded to blend into the surrounding undisturbed area. Geotextile or base course material shall be installed on undisturbed soil or non-yielding compacted material. Over-excavation must be corrected as noted on the drawings, or as directed by the Engineer or his/her designated Representative.

4. DRAINAGE STRUCTURES

Culverts, subsurface drains, and swales shall be installed as shown on the drawings. Surface and subsurface drainage structures shall be adequately removing water from the foundation to allow for proper placement of base and surface materials.

5. GEOTEXTILE

Where specified in Section 8 or on the drawings, geotextile shall be installed on the prepared subgrade. The geotextile shall be placed, overlapped and anchored as recommended by the manufacturer, unless otherwise specified in Section 8 or on the drawings.

Vehicles and heavy equipment shall not be operated directly on top of the geotextile. Base course or surface material shall be placed on the geotextile ahead of the construction equipment.

6. E&S CONTROL

E&S control measures shall be as set forth in the E&S Plan, and as otherwise detailed in the drawings.

Vegetation shall be established as set forth in Construction Specification PA 342, and/or as set forth in Section 8 and the drawings.

7. SURFACING

Where specified in Section 8 or on the drawings, the base and binder course shall be placed on the trail or walkway to the specified grades and thickness. The material shall be wetted and compacted by rollers or other construction equipment approved by the Engineer.

Surface material shall be placed to the grades and thicknesses set forth in Section 8 or on the drawings. The material shall be compacted by rollers or other construction equipment approved by the Engineer. The finished surface shall be smooth and free of projecting stones.

Vegetation shall be established in accordance with Construction Specification PA342.

The surface material within 3’ of surface water control devices and other structures (pipes, drop inlets, etc.) shall becompacted using manually directed tamping equipment.

8. ADDITIONAL CONDITIONS WHICH APPLY TO THIS PROJECT ARE:

ATTACHMENT B

BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES

Project Name:	Stine Farm Improvement Project
General Description:	The Stine Farm will be implementing a new roofed heavy use area with manure stacking for winter confinement of beef cows.
Project Locality	Halfmoon Township
Awarding Agency:	Centre County Conservation District
Contract Award Date:	1/1/2024
Serial Number:	24-05461
Project Classification:	Building/Heavy/Highway
Determination Date:	5/31/2024
Assigned Field Office:	Altoona
Field Office Phone Number:	(814)940-6224
Toll Free Phone Number:	
Project County:	Centre County

BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES

Project: 24-05461 - Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Asbestos & Insulation Workers	6/26/2023		$41.70	$29.11	$70.81
Asbestos & Insulation Workers	7/1/2024		$38.80	$34.06	$72.86
Boilermaker (Commercial, Institutional, and Minor Repair Work)	3/1/2024		$36.71	$19.13	$55.84
Boilermakers	1/1/2023		$51.27	$35.30	$86.57
Bricklayer	12/1/2022		$34.14	$22.38	$56.52
Bricklayers, Stone Masons, Pointers, Caulkers, Cleaners	4/30/2023		$38.43	$18.53	$56.96
Bricklayers, Stone Masons, Pointers, Caulkers, Cleaners	4/28/2024		$38.78	$20.03	$58.81
Bricklayers, Stone Masons, Pointers, Caulkers, Cleaners	5/4/2025		$40.63	$20.03	$60.66
Bricklayers, Stone Masons, Pointers, Caulkers, Cleaners	5/3/2026		$42.48	$20.03	$62.51
Carpenters - Piledriver/Welder	1/1/2023		$40.63	$21.22	$61.85
Carpenters - Piledriver/Welder	1/1/2024		$42.13	$21.97	$64.10
Carpenters - Piledriver/Welder	1/1/2025		$43.38	$22.72	$66.10
Carpenters - Piledriver/Welder	1/1/2026		$44.63	$23.47	$68.10
Carpenters, Drywall Hangers, Framers, Instrument Men, Lathers, Soft Floor Layers	6/1/2023		$33.01	$18.41	$51.42
Carpenters, Drywall Hangers, Framers, Instrument Men, Lathers, Soft Floor Layers	6/1/2024		$33.97	$18.95	$52.92
Cement Finishers & Plasterers	4/30/2023		$28.23	$22.27	$50.50
Cement Finishers & Plasterers	4/28/2024		$30.23	$22.27	$52.50
Cement Finishers & Plasterers	5/4/2025		$32.23	$22.27	$54.50
Cement Finishers & Plasterers	5/3/2026		$34.23	$22.27	$56.50
Cement Masons	1/1/2023		$30.24	$19.20	$49.44
Cement Masons	1/1/2024		$31.22	$20.22	$51.44
Drywall Finisher	6/1/2022		$32.00	$21.89	$53.89
Drywall Finisher	6/1/2023		$32.39	$23.75	$56.14
Drywall Finisher	6/1/2024		$34.01	$24.88	$58.89
Electricians & Telecommunications Installation Technician	12/26/2022		$48.31	$29.29	$77.60
Electricians & Telecommunications Installation Technician	12/22/2023		$48.61	$31.80	$80.41
Electricians & Telecommunications Installation Technician	12/27/2024		$51.76	$31.80	$83.56
Electricians & Telecommunications Installation Technician	12/26/2025		$55.06	$31.80	$86.86
Elevator Constructor	1/1/2023		$53.93	$38.34	$92.27
Elevator Constructor	1/1/2024		$60.76	$39.19	$99.95
Glazier	9/1/2022		$24.90	$24.45	$49.35
Glazier	9/1/2023		$25.40	$25.70	$51.10
Iron Workers	6/1/2022		$31.79	$32.31	$64.10
Iron Workers	6/1/2023		$32.29	$32.85	$65.14
Laborers (Class 01 - See notes)	1/1/2023		$25.31	$17.29	$42.60
Laborers (Class 01 - See notes)	1/1/2024		$26.31	$17.79	$44.10
Laborers (Class 02 - See notes)	1/1/2023		$28.06	$17.29	$45.35

BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES

Project: 24-05461 - Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Laborers (Class 02 - See notes)	1/1/2024		$29.56	$17.79	$47.35
Laborers (Class 03 - See notes)	1/1/2023		$27.66	$17.29	$44.95
Laborers (Class 03 - See notes)	1/1/2024		$28.66	$17.79	$46.45
Laborers (Class 04 - See notes)	1/1/2023		$24.31	$17.29	$41.60
Laborers (Class 04 - See notes)	1/1/2024		$25.31	$17.79	$43.10
Landscape Laborer (Skilled)	1/1/2023		$23.79	$18.28	$42.07
Landscape Laborer (Skilled)	1/1/2024		$24.79	$18.53	$43.32
Landscape Laborer (Skilled)	1/1/2025		$25.79	$18.78	$44.57
Landscape Laborer (Skilled)	1/1/2026		$26.79	$19.03	$45.82
Landscape Laborer (Tractor Operator)	1/1/2023		$24.09	$18.28	$42.37
Landscape Laborer (Tractor Operator)	1/1/2024		$25.09	$18.53	$43.62
Landscape Laborer (Tractor Operator)	1/1/2025		$26.09	$18.78	$44.87
Landscape Laborer (Tractor Operator)	1/1/2026		$27.09	$19.03	$46.12
Landscape Laborer	1/1/2023		$23.37	$18.28	$41.65
Landscape Laborer	1/1/2024		$24.37	$18.53	$42.90
Landscape Laborer	1/1/2025		$25.37	$18.78	$44.15
Landscape Laborer	1/1/2026		$26.37	$19.03	$45.40
Marble Mason	5/1/2023		$34.80	$17.74	$52.54
Marble Mason	5/1/2024		$35.25	$19.24	$54.49
Marble Mason	5/1/2025		$37.20	$19.24	$56.44
Marble Mason	5/1/2026		$39.15	$19.24	$58.39
Millwright	6/1/2020		$41.68	$20.32	$62.00
Operators (Class 01 - see notes)	7/1/2022		$34.17	$20.62	$54.79
Operators (Class 01 - see notes)	7/1/2023		$35.87	$20.92	$56.79
Operators (Class 01 - see notes)	7/1/2024		$36.87	$21.42	$58.29
Operators (Class 02 -see notes)	7/1/2022		$29.55	$20.62	$50.17
Operators (Class 02 -see notes)	7/1/2023		$31.25	$20.92	$52.17
Operators (Class 02 -see notes)	7/1/2024		$32.87	$21.42	$54.29
Operators (Class 03 - See notes)	7/1/2022		$27.00	$20.62	$47.62
Operators (Class 03 - See notes)	7/1/2023		$28.70	$20.92	$49.62
Operators (Class 03 - See notes)	7/1/2024		$29.70	$21.42	$51.12
Operators (Class 04 - Chief of Party (Surveying and Layout))	7/1/2022		$26.60	$20.62	$47.22
Operators (Class 04 - Chief of Party (Surveying and Layout))	7/1/2023		$28.30	$20.92	$49.22
Operators (Class 04 - Chief of Party (Surveying and Layout))	7/1/2024		$29.30	$21.42	$50.72
Operators (Class 04 - Instrument Person (Surveying & Layout))	7/1/2022		$25.60	$20.62	$46.22
Operators (Class 04 - Instrument Person (Surveying & Layout))	7/1/2023		$27.30	$20.92	$48.22
Operators (Class 04 - Instrument Person (Surveying & Layout))	7/1/2024		$28.30	$21.42	$49.72
Operators (Class 04 - Rodman/Chainman (Surveying and Layout))	7/1/2022		$25.15	$20.62	$45.77
Operators (Class 04 - Rodman/Chainman (Surveying and Layout))	7/1/2023		$26.85	$20.92	$47.77

BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES

Project: 24-05461 - Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Operators (Class 04 - Rodman/Chainman (Surveying and Layout))	7/1/2024		$27.85	$21.42	$49.27
Painters Class 6 (see notes)	6/1/2023		$30.56	$24.01	$54.57
Painters Class 6 (see notes)	6/1/2024		$32.14	$24.93	$57.07
Painters Class 6 (see notes)	6/1/2025		$34.16	$25.81	$59.97
Pile Driver Divers (Building, Heavy, Highway)	1/1/2023		$58.70	$21.22	$79.92
Pile Driver Divers (Building, Heavy, Highway)	1/1/2024		$60.95	$21.97	$82.92
Pile Driver Divers (Building, Heavy, Highway)	1/1/2025		$62.82	$22.72	$85.54
Pile Driver Divers (Building, Heavy, Highway)	1/1/2026		$64.70	$23.47	$88.17
Piledrivers	1/1/2023		$39.13	$21.22	$60.35
Piledrivers	1/1/2024		$40.63	$21.97	$62.60
Piledrivers	1/1/2025		$41.88	$22.72	$64.60
Piledrivers	1/1/2026		$43.13	$23.47	$66.60
Plasterers	6/1/2022		$29.95	$13.61	$43.56
Plasterers	6/1/2023		$32.14	$20.54	$52.68
Plumber/Pipefitter	5/1/2023		$41.36	$29.72	$71.08
Roofers (Composition)	5/1/2023		$42.63	$34.62	$77.25
Roofers (Shingle)	5/1/2023		$32.85	$22.10	$54.95
Roofers (Slate & Tile)	5/1/2023		$35.85	$22.10	$57.95
Sheet Metal Workers	6/1/2022		$40.22	$41.01	$81.23
Sheet Metal Workers	6/1/2023		$41.41	$42.32	$83.73
Sheet Metal Workers	6/1/2024		$43.09	$43.14	$86.23
Sign Makers and Hangars	7/15/2022		$30.54	$24.35	$54.89
Sign Makers and Hangars	7/15/2023		$31.76	$24.63	$56.39
Sprinklerfitters	4/1/2023		$44.33	$28.04	$72.37
Sprinklerfitters	4/1/2024		$46.45	$28.62	$75.07
Terrazzo Finisher	5/1/2023		$35.79	$19.25	$55.04
Terrazzo Finisher	5/1/2024		$35.66	$20.76	$56.42
Terrazzo Grinder	5/1/2023		$36.54	$19.25	$55.79
Terrazzo Grinder	5/1/2024		$36.42	$20.76	$57.18
Terrazzo Mechanics	5/1/2023		$36.51	$21.00	$57.51
Terrazzo Mechanics	5/1/2024		$36.44	$22.51	$58.95
Terrazzo Setter	5/1/2019		$31.81	$19.67	$51.48
Tile & Marble Finisher	5/1/2023		$32.91	$15.49	$48.40
Tile & Marble Finisher	5/1/2024		$33.36	$16.99	$50.35
Tile & Marble Finisher	5/1/2025		$35.31	$16.99	$52.30
Tile & Marble Finisher	5/1/2026		$37.26	$16.99	$54.25
Tile Setter	5/1/2023		$34.80	$17.74	$52.54
Tile Setter	5/1/2024		$35.25	$19.24	$54.49
Tile Setter	5/1/2025		$37.20	$19.24	$56.44
Tile Setter	5/1/2026		$39.15	$19.24	$58.39
Truckdriver class 1(see notes)	1/1/2023		$33.18	$22.21	$55.39
Truckdriver class 1(see notes)	1/1/2024		$34.93	$22.71	$57.64
Truckdriver class 1(see notes)	1/1/2025		$36.43	$23.21	$59.64
Truckdriver class 1(see notes)	1/1/2026		$37.93	$23.71	$61.64

BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES

Project: 24-05461 - Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Truckdriver class 2 (see notes)	1/1/2023		$33.64	$22.52	$56.16
Truckdriver class 2 (see notes)	1/1/2024		$35.39	$23.02	$58.41
Truckdriver class 2 (see notes)	1/1/2025		$36.89	$23.52	$60.41
Truckdriver class 2 (see notes)	1/1/2026		$38.39	$24.02	$62.41
Truckdriver class 3 (see notes)	1/1/2016		$28.23	$16.98	$45.21
Window Film / Tint Installer	10/1/2019		$25.00	$2.63	$27.63

BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES

Project: 24-05461 - Heavy/Highway	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Carpenter	1/1/2023		$38.35	$20.59	$58.94
Carpenter	1/1/2024		$39.85	$21.34	$61.19
Carpenter	1/1/2025		$41.10	$22.09	$63.19
Carpenter	1/1/2026		$42.35	$22.84	$65.19
Carpenter Welder	1/1/2023		$39.85	$20.59	$60.44
Carpenter Welder	1/1/2024		$41.35	$21.34	$62.69
Carpenter Welder	1/1/2025		$42.60	$22.09	$64.69
Carpenter Welder	1/1/2026		$43.85	$22.84	$66.69
Carpenters - Piledriver/Welder	1/1/2023		$40.63	$21.22	$61.85
Carpenters - Piledriver/Welder	1/1/2024		$42.13	$21.97	$64.10
Carpenters - Piledriver/Welder	1/1/2025		$43.38	$22.72	$66.10
Carpenters - Piledriver/Welder	1/1/2026		$44.63	$23.47	$68.10
Cement Finishers	1/1/2023		$34.14	$25.05	$59.19
Cement Finishers	1/1/2024		$35.14	$26.30	$61.44
Cement Finishers	1/1/2025		$35.94	$27.50	$63.44
Cement Masons	1/1/2020		$32.84	$21.10	$53.94
Electric Lineman	5/30/2022		$51.42	$28.85	$80.27
Electric Lineman	5/29/2023		$52.56	$29.99	$82.55
Electric Lineman	6/3/2024		$53.97	$31.05	$85.02
Iron Workers (Bridge, Structural Steel, Ornamental, Precast, Reinforcing)	6/1/2022		$31.79	$32.31	$64.10
Iron Workers (Bridge, Structural Steel, Ornamental, Precast, Reinforcing)	6/1/2023		$32.29	$32.85	$65.14
Laborers (Class 01 - See notes)	1/1/2023		$29.85	$25.50	$55.35
Laborers (Class 01 - See notes)	1/1/2024		$32.10	$25.50	$57.60
Laborers (Class 01 - See notes)	1/1/2025		$33.60	$26.00	$59.60
Laborers (Class 01 - See notes)	1/1/2026		$34.60	$27.00	$61.60
Laborers (Class 02 - See notes)	1/1/2023		$30.01	$25.50	$55.51
Laborers (Class 02 - See notes)	1/1/2024		$32.26	$25.50	$57.76
Laborers (Class 02 - See notes)	1/1/2025		$33.76	$26.00	$59.76
Laborers (Class 02 - See notes)	1/1/2026		$34.76	$27.00	$61.76
Laborers (Class 03 - See notes)	1/1/2023		$30.50	$25.50	$56.00
Laborers (Class 03 - See notes)	1/1/2024		$32.75	$25.50	$58.25
Laborers (Class 03 - See notes)	1/1/2025		$34.25	$26.00	$60.25
Laborers (Class 03 - See notes)	1/1/2026		$35.25	$27.00	$62.25
Laborers (Class 04 - See notes)	1/1/2023		$30.95	$25.50	$56.45
Laborers (Class 04 - See notes)	1/1/2024		$33.20	$25.50	$58.70
Laborers (Class 04 - See notes)	1/1/2025		$34.70	$26.00	$60.70
Laborers (Class 04 - See notes)	1/1/2026		$35.70	$27.00	$62.70
Laborers (Class 05 - See notes)	1/1/2023		$31.36	$25.50	$56.86
Laborers (Class 05 - See notes)	1/1/2024		$33.61	$25.50	$59.11
Laborers (Class 05 - See notes)	1/1/2025		$35.11	$26.00	$61.11
Laborers (Class 05 - See notes)	1/1/2026		$36.11	$27.00	$63.11
Laborers (Class 06 - See notes)	1/1/2023		$28.20	$25.50	$53.70
Laborers (Class 06 - See notes)	1/1/2024		$30.45	$25.50	$55.95

BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES

Project: 24-05461 - Heavy/Highway	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Laborers (Class 06 - See notes)	1/1/2025		$31.95	$26.00	$57.95
Laborers (Class 06 - See notes)	1/1/2026		$32.95	$27.00	$59.95
Laborers (Class 07 - See notes)	1/1/2023		$30.85	$25.50	$56.35
Laborers (Class 07 - See notes)	1/1/2024		$33.10	$25.50	$58.60
Laborers (Class 07 - See notes)	1/1/2025		$34.60	$26.00	$60.60
Laborers (Class 07 - See notes)	1/1/2026		$35.60	$27.00	$62.60
Laborers (Class 08 - See notes)	1/1/2023		$32.35	$25.50	$57.85
Laborers (Class 08 - See notes)	1/1/2024		$34.60	$25.50	$60.10
Laborers (Class 08 - See notes)	1/1/2025		$36.10	$26.00	$62.10
Laborers (Class 08 - See notes)	1/1/2026		$37.10	$27.00	$64.10
Millwright	6/1/2023		$45.50	$23.72	$69.22
Millwright	6/1/2024		$47.59	$23.72	$71.31
Millwright	6/1/2025		$49.72	$23.72	$73.44
Operators (Class 01 - see notes)	1/1/2023		$36.79	$23.58	$60.37
Operators (Class 01 - see notes)	1/1/2024		$38.59	$24.03	$62.62
Operators (Class 01 - see notes)	1/1/2025		$40.39	$24.23	$64.62
Operators (Class 02 -see notes)	1/1/2023		$36.53	$23.58	$60.11
Operators (Class 02 -see notes)	1/1/2024		$38.33	$24.03	$62.36
Operators (Class 02 -see notes)	1/1/2025		$40.13	$24.23	$64.36
Operators (Class 03 - See notes)	1/1/2023		$32.88	$23.58	$56.46
Operators (Class 03 - See notes)	1/1/2024		$34.68	$24.03	$58.71
Operators (Class 03 - See notes)	1/1/2025		$36.48	$24.23	$60.71
Operators (Class 04 - See notes)	1/1/2023		$32.42	$23.58	$56.00
Operators (Class 04 - See notes)	1/1/2024		$34.22	$24.03	$58.25
Operators (Class 04 - See notes)	1/1/2025		$36.02	$24.23	$60.25
Operators (Class 05 - See notes)	1/1/2023		$32.17	$23.58	$55.75
Operators (Class 05 - See notes)	1/1/2024		$33.97	$24.03	$58.00
Operators (Class 05 - See notes)	1/1/2025		$35.77	$24.23	$60.00
Operators Class 1-A	1/1/2023		$39.79	$23.58	$63.37
Operators Class 1-A	1/1/2024		$41.59	$24.03	$65.62
Operators Class 1-A	1/1/2025		$43.39	$24.23	$67.62
Operators Class 1-B	1/1/2023		$38.79	$23.58	$62.37
Operators Class 1-B	1/1/2024		$40.59	$24.03	$64.62
Operators Class 1-B	1/1/2025		$42.39	$24.23	$66.62
Painters Class 1 (see notes)	6/1/2022		$34.45	$22.82	$57.27
Painters Class 2 (see notes)	6/1/2019		$35.25	$20.06	$55.31
Painters Class 2 (see notes)	6/1/2023		$36.01	$24.01	$60.02
Painters Class 2 (see notes)	6/1/2024		$38.09	$24.93	$63.02
Painters Class 2 (see notes)	6/1/2025		$40.36	$25.81	$66.17
Painters Class 3 (see notes)	6/1/2022		$36.77	$22.82	$59.59
Painters Class 3 (see notes)	6/1/2023		$38.33	$24.01	$62.34
Painters Class 3 (see notes)	6/1/2024		$40.66	$24.93	$65.59
Painters Class 3 (see notes)	6/1/2025		$43.69	$25.81	$69.50
Painters Class 4 (see notes)	6/1/2019		$28.20	$20.06	$48.26

BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES

Project: 24-05461 - Heavy/Highway	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Painters Class 5 (see notes)	6/1/2019		$22.91	$20.06	$42.97
Pile Driver Divers (Building, Heavy, Highway)	1/1/2023		$58.70	$21.22	$79.92
Pile Driver Divers (Building, Heavy, Highway)	1/1/2024		$60.95	$21.97	$82.92
Pile Driver Divers (Building, Heavy, Highway)	1/1/2025		$62.82	$22.72	$85.54
Pile Driver Divers (Building, Heavy, Highway)	1/1/2026		$64.70	$23.47	$88.17
Piledrivers	1/1/2023		$39.13	$21.22	$60.35
Piledrivers	1/1/2024		$40.63	$21.97	$62.60
Piledrivers	1/1/2025		$41.88	$22.72	$64.60
Piledrivers	1/1/2026		$43.13	$23.47	$66.60
Steamfitters (Heavy and Highway - Gas Distribution)	5/1/2022		$48.43	$40.28	$88.71
Truckdriver class 1(see notes)	1/1/2023		$33.18	$22.21	$55.39
Truckdriver class 1(see notes)	1/1/2024		$34.93	$22.71	$57.64
Truckdriver class 1(see notes)	1/1/2025		$36.43	$23.21	$59.64
Truckdriver class 1(see notes)	1/1/2026		$37.93	$23.71	$61.64
Truckdriver class 2 (see notes)	1/1/2023		$33.64	$22.52	$56.16
Truckdriver class 2 (see notes)	1/1/2024		$35.39	$23.02	$58.41
Truckdriver class 2 (see notes)	1/1/2025		$36.89	$23.52	$60.41
Truckdriver class 2 (see notes)	1/1/2026		$38.39	$24.02	$62.41
Truckdriver class 3 (see notes)	1/1/2019		$29.59	$19.82	$49.41

Prevailing Wage Projects

Please contact the Bureau at 1-800-932-0665 or email at ra-li-slmr-llc@pa.gov if you have any questions about a particular project.

The Bureau of Labor Law Compliance updated its Pennsylvania Building Journeyperson Laborer Notes to clarify existing tasks performed throughout the Commonwealth. The "Building Laborer Notes" link on the Bureau's website provides a list of those tasks that should be read in conformity with custom and usage of the construction industry in the geographic region in which they are utilized.

The Department of Labor and Industry, through the **Bureau of Labor Law Compliance**, determines prevailing wage rates for the construction industry and enforces the rates and classifications under the heavy highway and building construction projects of $25,000 or more when public funds are involved.

The Department also determines the prevailing minimum wage rates and employee benefits for specific localities and classifications. The Prevailing Wage Regulations allow the Secretary of Labor and Industry to consider collective bargaining agreements and other data types to determine the wage rates.

The Bureau of Labor Law Compliance is responsible for administering, educating, and enforcing labor laws. As such, it provides employers and employees with educational outreach seminars, conducts investigations, and resolves disputes when complaints are received.

Please direct your questions regarding Prevailing Wage to the Bureau of Labor Law Compliance, with offices in Harrisburg, Philadelphia, Pittsburgh, and Scranton.

Notes for Building, Heavy, Highway Truckdriver

Truckdriver Class 1

Single Axle

Truckdrivers Class 2

Tandem
Tri-Axle
Semi-Trailer (Combination)

Truckdrivers Class 3

Speciality Vehicles

Notes for 33 County Heavy and Highway Laborers * (See below)

Allegheny, Armstrong, Beaver, Bedford, Blair, Butler, Cambria, Cameron, Centre, Clarion, Clearfield, Clinton, Crawford, Elk, Erie, Fayette, Forest, Franklin, Fulton, Greene, Huntingdon, Indiana, Jefferson, Lawrence, McKean, Mercer, Mifflin, Potter, Somerset, Venango, Warren, Washington & Westmoreland

HEAVY AND HIGHWAY

CLASS 1 - COMMON LABORER

Asphalt Curb Sealer
Batcher Man (Weight)
Boatman
Coffer Dam
Drill Runner's Assistant
Fence Construction (Including Fence Machine Operator)
GABION (Erectors and Placers)
Landscape Laborers
Radio Actuated Traffic Control Operator
RIP RAP Work
Sheeters and Shorers (Includes Lagging)
Water Boy
Wood Chipper
Asphald Tamper
Blaster's Assistant
Brakeman
Concrete Curing Pitman, Puddler
Electric Bursh and/or Ginder
Form Stripper and Mover
Hydro Jet Blaster Nozzle Man
Manually Moved Emulsion Sprayer
(Bending, Aligning & Securing)
Scaffolds and Runways
Structural Concrete Top Surfacer
Walk Behind Street Sweeper
Welder's Assistant (Pipeline)

CLASS 2 – SEMI-SKILLED LABORER

Air Tool Operator (All Types)
Railroad Track Work
Burner

Carryable Pumps
Cribbing (Concrete or Steel)
Diamond Head Core Driller
Drill Runner's Assistant (Tunnel)
Highway Slab Reinforcement
Placers (Including Joint and Backer Setters)
Mechanical Joint Sealer; Dope Pot & Tar Kettle
Pipe Layers/Fusion Welders (Regardless of Materials)
Post Hole Auger (2 or 4 Cycle-Hand Operated)
Forklift (Walk Behind)
Asphalt, Batch and Concrete Plant
Operator (Manually Operated)
Caisson Men (Open Air)
Chain Saw Operator (Including Attachments)
Curb Machine Operator (Asphalt or Concrete-Walk Behind)
Form Setter (Road Forms Line Man)
Hydraulic Pipe Pusher
Liner Plates (Tile and Vitrified Clay)
Mechanical Compacting Equipment Operators
Mortar Mixer (Hand or Machine)
Muckers, Brakeman and All Other Labor (Includes Installation of Utility Lines)
Portable Single Unit Conveyor
Power Wheel Barrows and Buggies
Aid Porter or Similar
Sand Blaster
Vibrator Operator
All Railroad Track Work
Signal Man

CLASS 3 - SKILLED LABORER HEAVY AND HIGHWAY

Asphalt Luteman/Raker
Blacksmith
Cement Mortar Lining Car Pusher
Cement Mortar Mixer (Pipe Relining)
Concrete Saw Operator (Walk Behind)
Crown Screed Adjuster
Elevated Roadway Drainage Construction
Erector of Overhead Signs
Miners and Drillers (Including Lining M Supporting and Form Workman, Setting of Shields, Miscellaneous Equipment and Jumbos)
Walk Behind Ditching Machine (Trencher Or Similar)
Blaster
Brick, Stone & Block Pavers and Block Cutters (Wood-Belgian-Asphalt)
Cement Mortar Pipe Reliners

Curb Cutters and Setters
Form Setter (Road Forms-Lead Man)
Gunite or Dry Pack Gun-Nozzle and Machine Man
Grout Machine Operator
Multi-Plate Pipe (Aligning and Securing)
Manhole or Catch Basin Builder
Placing Wire Mesh on Gunnite Projects
Wagon Drill Operator (Air Track or Similar)
Welder

CLASS 4

Reinforcing Steel Placers (Bending, Aligning and Securing - Caldweld)

CLASS 5

High Burner (Any Burning Not Done From Deck)
Elder (Pipeline)

CLASS 6

Uniformed Flag Person/Signal Person (As per PENN DOT Specifications on Hardhats and Vests)
Watchman

CLASS 7

Toxic/Hazardous Waste Removal Laborer – Level C and D

CLASS 8

Toxic/Hazardous Waste Removal Laborer Levels A and B

These notes pertain to projects whose rates were determined subsequent to March 23, 2009. Questions regarding rates prior to that date should be directed to the Bureau of Labor Law Compliance at 1-800-932-0665.

Definitions for Heavy & Highway Operators in the 33 County Area

Allegheny, Armstrong, Beaver, Bedford, Blair, Butler, Cambria, Cameron, Centre, Clarion, Clearfield, Clinton, Crawford, Elk, Erie, Fayette, Forest, Franklin, Fulton, Greene, Huntingdon, Indiana, Jefferson, Lawrence, McKean, Mercer, Mifflin, Potter, Somerset, Venango, Warren, Washington, & Westmoreland

CLASS I-A
Backhoes – 360° swing (above 120,000 lbs. gross weight)
Cranes (over 100 ton) *
Cranes – Rough Terrain (over 100 ton) *
*Requires an Oiler on Standard Agreement

CLASS I-B
Backhoes – 360° swing (above 70,000 lbs. to 120,000 lbs. gross weight)
Cranes (up to 100 ton) *
Cranes – Rough Terrain (65 ton - 100 ton) *
Tower Crane *
*Requires an Oiler on Standard Agreement

CLASS I
Asphalt Paving Machine (Spreader)
Autograder/Trimmer
Backfiller
Backhoe -360° swing (up to 70,000 lbs. gross weight)
Backhoe (Rear pivotal swing -180° swing)
Bidwell Concrete Finishing Machine (or similar)
*Caisson Drill (similar to Hugh Williams)
*Cooling Plant
Compactor with blade
Concrete Batch Plant (Electronically Synchronized)
Concrete Crusher
Concrete Paving Mixer
Concrete Pump (Self-propelled)
Derrick
*Derrick Boat
Dozer (with a gross weight of 25,000 lbs. and over)
*Dragline
*Dredge
Dredge Hydraulic (1 Leverman - 1 Oiler - 1 Apprentice)
Elevating Grader
*Gradall (Remote control or otherwise)

Grader (Power-Fine Grade)
Grease Unit Operator (Head)
Hilift (4 cy. and over)
Hoist 2 Drums or more (in one unit)
Hydraulic Boom Truck (with pivotal cab) (single motor – Pitman or similar)
*Locomotive (Std. Gauge)
*Metro-chip Harvester or similar
Mechanic
Milling Machine (Roto Mill or Similar)
*Mix Mobile
**Mix Mobile (with Self Loading Attachment)
Mucking Machine (Tunnel)
*Pile Driver Machine
Pipe Bursting Machine
Pipe Extrusion Machine
Presplitter Drill (Self-contained)
**Refrigeration Plant (Soil stabilization)
*Rough Terrain Crane (under 65 ton)
Scrapers
*Shovel-Power
Shuttle Buggy (Asphalt)
Slip Form Paver/Curb Machine
Slip Lining Machine
Soil Stabilizer Machine
*Trenching Machine (30,000 lb. and over)
Trenching Machine (under 30,000 lb.)
*Tunnel Machine (Mark XXI Jarva or similar)
Vermeer Saw
Working Mechanical Foreman (plus $0.35 per hour over Class I Rate)

_____

*Apprentice Engineer or Oiler required
**Two Engineers required

CLASS II
Asphalt Plant Operator
Auger (Tractor Mtd.)
Auger (Truck Mtd.)
Belt Loader (Euclid or Similar)
Boring Machine
Cable Placer or Layer
Concrete Placer and Spreader
Concrete Mixer (over 1 cy.)

Concrete Pump (Stationary)
*Core Drill (Truck or Skid Mtd. - similar to Penn Drill)
Directional Drills over 3,000 lbs. thrust
Dozer (with a gross weight under 25,000 lbs.)
Ditch Witch - Saw
Force Feed Loader
Fork Lift (Lull or similar)
Grader - Power
Guard Rail Post Driver (Truck Mounted)
Guard Rail Post Driver (Skid Type)
Hilift (under 4 cy.)
Hydraulic Boom Truck (Non-pivotal cab)
Job Work Boat (Powered) (When assistance is required it shall be a Deckhand)
Jumbo Operator
Locomotive (Narrow Gauge)
Minor Equipment Operator
Mucking Machine
Multi-head Saw (Groover)
Over-head Crane
Roller-power-asphalt
Ross Carrier
Side Boom or tractor mounted boom
Skid Steer Loader
Stone Crusher (Screening-Washing Plants)
Stone Spreader (Self-propelled)
*Truck Mounted Drill (Davey or similar)
Welder and Repairman
Well Point Pump Operator

_____

*Apprentice Engineer or Oiler required
Pile driving operations: On truck cranes and crawler rigs the Company will employ an apprentice who will oil on the rig and also cover the minor machines regardless of size related to his operation, not to exceed four (4) units.

CLASS III
Concrete Texture/Cure Machine
Compactors/Rollers (Static or Vibratory) (Self-propelled)
Curb Builder
Multi-head Tie Tamper
Pavement Breaker (Self-propelled or ridden)
Tire Repairman (as per agreement with Teamsters)
Tractor (Snaking and hauling)

Well Driller and Horizontal
Winch or “A” Frame Truck (when hoisting and lowering)

CLASS IV
Ballast Regulator
Concrete Mixer (1 cy. and under with skip)
Concrete Saw (Ridden or self-propelled)
Conveyor
Elevator (Material hauling only)
Fork-lift (Ridden or self-propelled)
Generator
Grout Pump
Heater (Mechanical)
Hoist (single drum)
Ladavator
Light Plant
Mulching Machine
Personnel Boat (Powered)
Pulverizer
Pumps
Seeding Machine
Tie Puller
Tugger
Welding Machine (Gas or Diesel)

CLASS V
Deck Hand
Farm Tractor
Fireman on Boiler
Mechanic’s Helper
Oiler
Power Broom
Side Delivery Shoulder Spreader (Attachment)

Notes for 33 County Building Common Journeyperson Laborer

Allegheny, Armstrong, Beaver, Bedford, Blair, Butler, Cambria, Cameron, Centre, Clarion, Clearfield, Clinton, Crawford, Elk, Erie, Fayette, Forest, Franklin, Fulton, Greene, Huntingdon, Indiana, Jefferson, Lawrence, McKean, Mercer, Mifflin, Potter, Somerset, Venango, Warren, Washington & Westmoreland

The following updates to the Bureau of Labor Law Compliance's Pennsylvania Building Journeyperson Laborer Notes are meant to provide a reference point for uniformity and clarity throughout the Commonwealth. The Notes may not be comprehensive, and should be read in conformity with the custom and usage of the construction industry in the geographic region in which they are utilized.

THE COMMON JOURNEYPERSON LABORER CATEGORY CONTAINS CLASS 1 AND 2. CLASS 2 JOURNEYPERSONS WILL BE DENOTED BY **.

COMMON JOURNEYPERSON

1. Cleaning, scrubbing, washing and polishing floors, furniture and windows (including through the use of bonding or flying cranes); For marble, granite, and terrazzo, cleaning, scrubbing, washing, and polishing after final acceptance.
2. Demolition of interiors and removal of all debris;
3. Grading stone and dirt by hand;
4. Form pinning
5. Pouring handling, and placing of all concrete and related materials and all cure applications;
6. Sheathing, lagging, and mining;
7. Cleaning up debris;
8. Stripping, dismantling, oiling and moving of concrete forms;
9. Loading, unloading and carrying of reinforced steel;
10. Handling and distributing lumber and all other building materials, including final strip, and including materials used or installed by mechanical trades (e.g., electrician, plumber, sheet metal worker, insulator);
11. Unloading, carrying, distributing and laying of pre-cast concrete slabs and planks;
12. Wrecking, moving and demolishing underpinning and shoring of all structures;
13. Using flags and other signaling devices;
14. Performing landscaping and nursery work;
15. Serving as a Toolroom Person, hanging tools, delivering tools;
16. Cleaning precipitators;
17. Watching for fires;
18. Operating conveyors;
19. Using vacuum cleaners of all types (ride or walk-along);
20. Digging and filling holes and trenches using hand tools;
21. Driving stakes;
22. Ripping out material which is to be discarded;
23. Cleaning roof removal materials on the ground. Performs roof removal work for demolition (Roof removal work for roof replacement is performed by roofers);
24. Operating a pressure washer;

25. Unloading, stockpiling and moving materials for carpenters.
26. Operating power buggies and pumps;**
27. Operating walk along compacting and vibrating equipment;**
28. Operating guniting machines (including potman);**
29. Operating steam jennies;**
30. Using pumps of 2" and under;**
31. Operating burning torches or burners for demolition;**
32. Blasting or assisting with blasting;**
33. Grading and building scaffolds;**
34. Using or assisting with air and hydraulic wagon drills, on or off tracks;**
35. Using walk-along or walk behind lifts and similar machines;**
36. Serving as a drill runner or drill runner's assistant;**
37. Operating a chipping hammer or similar;**
38. Mixing mortar or operating a mortar mixing machine (regardless of power used, including starting and stopping);
39. Feeding grout machines and operating grout pumps;**
40. Operating concrete saws;**
41. Operating air tracks or assisting;**
42. Laying on nonmetallic (clay, ironstone, terra cotta, vitrified concrete and plastic) pipe and the making of joints for the same within five feet outside a building, or to the first joint beyond five feet from a building;**
43. Operating jackhammers or concrete busters;**
44. Operating concrete drills and cutting equipment for trenches, flatwork, and wall coring of multi-use (common) holes;**
45. Operating walk behind rollers and similar machines**
46. Using a cutting torch for demolition work on steel or other metal structures;**
47. Operating salamanders, smudge pots, propane and kerosene burners and all other heating methods;**
48. Operating drills and all other pneumatic and electric hand tools for demolition;**
49. Using concrete mixers, vibrators and pumps;**
50. Operating walk along tamping equipment;**
51. Sandblasting (filling the pot, cleaning up of sand, use of the nozzle) pumps 2" or under for demolition;**
52. Using welding torches;**
53. Working on swing scaffold, sling and Bosun chairs.**

CLASS 3

Asbestos Removal or Abatement Laborer

CLASS 4

Watchman and Flagman

Definitions for Building Operators in the 33 County Area

Allegheny, Armstrong, Beaver, Bedford, Blair, Butler, Cambria, Cameron, Centre, Clarion, Clearfield, Clinton, Crawford, Elk, Erie, Fayette, Forest, Franklin, Fulton, Greene, Huntingdon, Indiana, Jefferson, Lawrence, McKean, Mercer, Mifflin, Potter, Somerset, Venango, Warren, Washington & Westmoreland

GROUP I OPERATORS
BUILDING CONSTRUCTION

CLASS I

Asphalt Paver, Asphalt Roller, Asphalt Plant Operator, Athey Loader, Auger (Truck or Tractor Mounted), Auto Grader (C.M.I. and similar), Backhoe (180º and 360º swing), Back-Filling Machine, Batch Plant, Bulldozer, Cable Layer, Cableway, Caisson Drill, Central Mix Plant, Compactor with Blade, Concrete Pump (all types), Over-Head Crane, Crane (Crawler or Truck Mounted)*, Tower Crane (Stationary or Climbing Type), Rough Terrain Crane**, Wagon Crane, Crushing and/or Screening Plant, Derrick Traveler, Derrick (all types)(when assistance is needed it will be an oiler or apprentice), Derrick Boats, Dragline, Drill (Davey or similar), Dredge, Drill (Well and Core)(Truck or Skid Mounted), Elevator, Excavating Equipment (all other), Fork Lift (Lull or similar), Franki Pile Machine (or similar), Guard Post Driver, Gradall (all types), Grader, Elevating Grader, Equipment Greaser, Helicopter, Helicopter Hoist Operators, Front End Loader, Skid Steer Loader (or similar), Hoist, Hydraulic Boom Truck, Jumbo Operator, Kocal, Koehring Scooper, Locomotive, Metro Chip Harvester (or similar), Mix Mobile, Mixer – Paver, Mucking Machine, Multiple Bowl Machines, Pile Driver (Sonic or similar), Scrapers, Shovels (powered), Slip Form Paver (C.M.I. and similar), Spreader (Concrete, Asphalt, or Stone), Tire Repairman (when assigned to a jobsite), Tower Mobile, Tractors (all types), Trencher, Tug Boat, Vermeer Saw, Welder (repairman), Whirley

* Cranes with Boom or Mast length (including jib) 100 ft or over shall be paid an additional $.25 per hour for each 50-foot increment of additional boom and/or jib length)

** An Additional $.25 per hour shall be paid when a jib is attached to the basic boom

Note: An additional $.25 per hour shall be paid when any crane rated over 15 ton is placed on any building structure

CLASS II

Ballast Regulator, Boat (material or personnel)(powered), Boiler, Boring Machine, Compressor (combined with Air Tugger, Air Pump, Gunite Machine, or Sand Blaster), Concrete Belt Placer, Concrete Saw, Conveyor, Carry Crane, Crushing/Screening Plants, Curb Builder (self-propelled), Forklifts (ridden or self-propelled), Form Line Machine, Generator (over 5KW), Grout Pump, Heaters, Hoist (monorail, roof, one drum-regardless of power used), Huck Machine

(or similar), Hydraulic Jack (single or multiple)(power driven), Ladavator, Mortar Mixer, Mulching Machine, Pavement Breaker (self-propelled or ridden), Pin Puller (powered), Pipe Cleaning Machine, Pipe Dream, Power Broom (except push type), Pulverizer, Pumps (regardless of power used), Roller/Compactor, Refrigeration Plant, Ross Carrier (or similar), Seeding Machine, Slab Lifting Machine (hydraulic), Spray Cure Machine (power driven), Side Delivery Shoulder Spreader (attachment), Steam Jenny (or similar), Stone Crusher, Stone Spreader (self-propelled), Siphon (steam or air), Tie Tamper (multiple heads), Tractor (when used for landscaping, snaking, or hauling), Truck (Winch)(when hoisting and placing), Tube Finisher (C.M.I. and similar), Tugger, Water Blaster, Welding Machine, Well Point System

CLASS III

Brakeman, Deck Hand, Helicopter Signalman, Oiler*, Elevator (Alterations & Remodeling Commercial Buildings), Mechanic's Assistant

* Oiler on Truck Cranes: Under 50 ton rated capacity shall be paid an additional $.10 per hour over the Class III base rate, 50 ton up to100 ton shall be paid an additional $.25 per hour over the Class III base rate, and 100 ton or over shall be paid an additional $1.00 per hour over the Class III base rate

pennsylvania
DEPARTMENT OF LABOR & INDUSTRY
BUREAU OF LABOR LAW COMPLIANCE

Independent Labor

The Prevailing Wage Act requires **all contractors** to complete certified payroll records, and to comply with the regulations, for the Act.

Independent labor and sole proprietors are no exception to this rule.

Any person or persons who contract with a public body, or utilize public dollars, will be required to fill out certified payroll forms.

As mentioned above, a sole proprietor, such as an independent truck driver, laborer, craftsman or other contracted employee, must adhere to this rule.

Proper classification and complete records, as called for, are imperative and required.

Terry E. Peck, Director

Terry E. Peck | Director Labor Law Compliance
Safety & Labor Management Relations
Executive Office
PA Department of Labor & Industry
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Auxiliary aids and services are available upon request to individuals with disabilities.
Equal Opportunity Employer/Program

WEEKLY PAYROLL CERTIFICATION FOR PUBLIC WORKS PROJECTS

☐ Contractor or ☐ Subcontractor (Please check one) **ALL INFORMATION MUST BE COMPLETED**

CONTRACTOR ADDRESS	SUBCONTRACTOR ADDRESS	DEPARTMENT OF LABOR & INDUSTRY COMMONWEALTH OF PENNSYLVANIA BUREAU OF LABOR LAW COMPLIANCE PREVAILING WAGE DIVISION 7TH & FORSTER STREETS HARRISBURG, PA 17120 1-800-932-0665

PAYROLL NUMBER	WEEK ENDING DATE	PROJECT AND LOCATION PROJECT SERIAL # PROJECT #

EMPLOYEE NAME	APPR. RATE (%)	WORK CLASSIFICATION	DAY AND DATE HOURS WORKED EACH DAY	S-TIME 0-TIME	BASE HOURLY RATE	TOTAL FRINGE BENEFITS (C=Cash) (FB=Contributions)*	TOTAL DEDUCTIONS	GROSS PAY FOR PREVAILING RATE JOB(S)	CHECK #
						C: FB:			
						C: FB:			
						C: FB:			
						C: FB:			
						C: FB:			

*SEE REVERSE SIDE

PAGE NUMBER _____ OF _____

THE NOTARIZATION MUST BE COMPLETED ON FIRST AND LAST SUBMISSIONS ONLY. ALL OTHER INFORMATION MUST BE COMPLETED WEEKLY.

*FRINGE BENEFITS EXPLANATION (FB): Bona fide benefits contribution, except those required by Federal or State Law (unemployment tax, workers' compensation, income taxes, etc.)

Please specify the type of benefits provided and contributions per hour:

1) Medical or hospital care _____
2) Pension or retirement _____
3) Life insurance _____
4) Disability _____
5) Vacation, holiday _____
6) Other (please specify) _____

CERTIFIED STATEMENT OF COMPLIANCE

1. The undersigned, having executed a contract with _____
(AWARDING AGENCY, CONTRACTOR OR SUBCONTRACTOR)

_____ for the construction of the above-identified project, acknowledges that:

(a) The prevailing wage requirements and the predetermined rates are included in the aforesaid contract.

(b) Correction of any infractions of the aforesaid conditions is the contractor's or subcontractor's responsibility.

(c) It is the contractor's responsibility to include the Prevailing Wage requirements and the predetermined rates in any subcontract or lower tier subcontract for this project.

2. The undersigned certifies that:
   (a) Neither he nor his firm, nor any firm, corporation or partnership in which he or his firm has an interest is debarred by the Secretary of Labor and Industry pursuant to Section 11(e) of the PA Prevailing Wage Act, Act of August 15, 1961, P.L. 987 as amended, 43 P.S.§ 165-11(e).

   (b) No part of this contract has been or will be subcontracted to any subcontractor if such subcontractor or any firm, corporation or partnership in which such subcontractor has an interest is debarred pursuant to the aforementioned statute.

3. The undersigned certifies that:
   (a) the legal name and the business address of the contractor or subcontractor are: _____

   _____

   (b) The undersigned is: ☐ a single proprietorship ☐ a corporation organized in the state of _____
   ☐ a partnership ☐ other organization (describe) _____

   (c) The name, title and address of the owner, partners or officers of the contractor/subcontractor are:

NAME	TITLE	ADDRESS

The willful falsification of any of the above statements may subject the contractor to civil or criminal prosecution, provided in the PA Prevailing Wage Act of August 15, 1961, P.L. 987, as amended, August 9, 1963, 43 P.S. § 165.1 through 165.17.

_____
(DATE)

_____
(SIGNATURE)

_____
(TITLE)

_____
SEAL

Taken, sworn and subscribed before me this _____Day

of _____ A.D., _____

REGULATIONS
FOR
PENNSYLVANIA
PREVAILING WAGE ACT

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF LABOR AND INDUSTRY
BUREAU OF LABOR LAW COMPLIANCE

1997 EDITION

Subchapter E. PREVAILING REGULATIONS

Sec.

9.101. Purpose and scope.
9.102. Definitions.
9.103. Required provisions.
9.104. Duty of the public body.
9.105. Determination of classification and general prevailing minimum wage rates.
9.106. Payment of general prevailing minimum wage rates.
9.107. Petition for review of rates and hearing.
9.108. Posting of wage rates.
9.109. Records and inspection.
9.110. Certification of rate of wage and payment by contractor or subcontractor.
9.111. Remedies and penalties.
9.112. Workmen's rights.

Authority

The provisions of this Subchapter E issued under act of August 15, 1961 (P.L. 987) (43 P.S. § 165-14), unless otherwise noted.

Source

The provisions of this Subchapter E adopted May 23, 1975, 5 Pa.B. 1347, unless otherwise noted.

Notes of Decisions

The Secretary of Labor and Industry's definition of workers as "electricians" on a public works project, and therefore subjecting their employer to payment of the wages not paid in violation of the Pennsylvania Prevailing Wage Act (43 P.S. §§ 165-1 — 165-17) would not be disturbed as the determination was neither erroneous nor inconsistent with the statute. *Henkels & McCoy, Inc. v. Department of Labor and Industry*, 598 A.2d 1065 (Pa. Cmwlth. 1991).

§ 9.101. Purpose and scope.

(a) Every contract to which the Commonwealth, its political subdivisions, an authority created by the General Assembly of the Commonwealth including authorities created under the Municipality Authorities Act of 1945 (53 P. S. §§ 301–401) and instrumentalities or agencies of the Commonwealth is a party, for construction, reconstruction, demolition, alteration or repair work other than maintenance work where the estimated cost of the total project is in excess of $25,000, which requires or involves the employment by a contractor or subcontractor of laborers, mechanics, skilled and semi-skilled laborers and apprentices in the performance of services directly upon the public work project shall include in its specifications a provision stating the general prevailing minimum wage rates as determined by the Secretary which shall be paid for each craft or classification of workmen needed to perform the contract during the anticipated term thereof in the locality in which the public work is performed.

(b) Every person paid by a contractor or a subcontractor in any manner for his labor in the construction, reconstruction, demolition, alteration or repair work other than maintenance work done under contract and paid for in whole or in part out of the funds of a public body except work performed under a rehabilitation program or manpower training programs is "employed" and "receiving wages."

(c) These regulations do not apply to a public works contracts subject to the Walsh-Healey Act (41 U.S.C.A. §§ 35–45) or section 1 of the Davis-Bacon Act (40 U.S.C.A. § 276(a)).

(d) Work performed under a rehabilitation program arranged by and at a State institution primarily for teaching and up-grading the skills and employment opportunities of the inmates of the institution is not to be considered public work performed by a public body as defined in the act and this Subchapter.

Notes of Decisions

The court declared the Pennsylvania Prevailing Wage Act (Act) (43 P. S. §§ 165-1–165-17) and its accompanying regulations invalid and unenforceable because they were preempted by ERISA where the Act related to ERISA plans regarding fringe benefits. *Keystone Chapter, Assoc. Builders and Contractors, Ind. v. Foley*, 837 F.Supp. 654 (M. D. PA. 1993).

§ 9.102. Definitions.

The following words and terms, when used in this subchapter, have the following meanings, unless the context clearly indicates otherwise:

Act–The Pennsylvania Prevailing Wage Act (43 P. S. §§ 165-1–165-17).

Apprentice–A person employed and working under a bona fide apprenticeship program, directly related to the particular craft involved in the construction industry and registered with an approved by the Pennsylvania Apprenticeship and Training Council and whose training and employment are in full compliance with the provisions of The Apprenticeship and Training Act (43 P. S. §§ 90.1–90.10), approved July 14, 1961.

Authorized deduction–Those deductions which are authorized by the Wage Payment and Collection Law (43 P. S. §§ 260.1–260.45), approved July 14, 1961 and the Regulations of the Department of Labor and Industry issued pursuant thereto.

Bona fide collective bargaining agreement–The agreement negotiated between the historically established and recognized bargaining representatives for the employers and of the workmen for the particular crafts or classifications involved providing for applicable wage rates, hours of work, working conditions and contributions for employe benefits as defined in "contributions for employe benefits" in this section.

Classification–Specific categories of jobs which are performed within a "craft" as defined in this section. The term includes those specific categories of jobs which are performed by a "workman," as defined in section 2(7) of the act (43 P. S. § 165-2(17)) and this section, and "apprentice," as defined in this section.

Contributions for employe benefits–"Fringe benefits" paid or to be paid, including payment made whether directly or indirectly, to the workmen for sick, disability, death, other than Workmen's Compensation, medical, surgical, hospital, vacation, travel expense, retirement and pension benefits.

Craft–Special skills and trades which are recognized as such by custom and usage in the building and construction industry.

Department–The Department of Labor and Industry of the Commonwealth.

General prevailing minimum wage rates, prevailing wage rates, minimum wage rates and *wage rates*–Rates as determined by the Secretary, as payable in the locality in which the public work is to be performed, for the respective crafts and classifications, including the amount of contributions for employe benefits as required by the act.

Locality–A political subdivision, or combination of the same, within the county in which the public work is to be performed. When no workmen for which a prevailing minimum wage is to be determined hereunder are employed in the locality, the locality may be extended to include adjoining

political subdivisions where the workmen are employed in those crafts or trades for which there are no workmen employed in the locality as otherwise herein defined.

Maintenance work–The repair of existing facilities when the size, type or extent of the facilities is not thereby changed or increased.

Public body–The Commonwealth of Pennsylvania, its political subdivisions, authorities created by the General Assembly of the Commonwealth and instrumentalities or agencies of the Commonwealth.

Public work–Construction, reconstruction, demolition, alteration or repair work other than maintenance work, done under contract and paid for in whole or in part out of the funds of a public body where the estimated cost of the total project is in excess of $25,000. The term does not include work performed under a rehabilitation or manpower training program.

Secretary–The Secretary of Labor and Industry or his authorized deputy or representative.

Workman–Includes laborer, mechanic, skilled and semiskilled laborer and apprentices employed by a contractor or subcontractor and engaged in the performance of services directly upon the public work project, regardless of whether their work becomes a component part thereof. The term does not include material suppliers or their employes who do not perform services at the job site.

Notes of Decisions

Preemption

The union fund correctly argued that its suit under the Public Works Contractors' Bond Law (8 P. S. § 191 et seq.) was not preempted by Employee Retirement and Income Security Act (ERISA), 29 U.S.C.A. § 1001 et seq., because the Bond Law made no reference to ERISA plans and was not related to employee benefit plans or the enforcement of those plans. Thus, the Union Fund's cause of action against the bond insuring company can survive the company's motion for summary judgment. *Carpenters v. National Union Fire Insurance of Pittsburgh*, 686 A.2d 1373 (Pa. Cmwlth. 1996).

Cross References

This section cited in 34 Pa. Code § 9.105 (relating to determination of classification and general prevailing minimum wage rates).

§ 9.103. Required provisions.

The specifications for every contract for a public work as defined herein shall contain at least the following conditions, provisions and requirements:

(1) The general prevailing minimum wage rates including contributions for employe benefits as determined by the Secretary which shall be paid to the workmen employed in the performance of the contract. The contract shall specifically provide that the contractor shall pay at least the wage rates as determined in the decision of the Secretary of Labor and Industry and shall comply with the conditions of the act approved August 15, 1961, and the regulations issued thereto, to assure the full and proper payment of the rates.

(2) The contract shall contain the stipulation that workmen shall be paid at least the general prevailing minimum wage rates and other provisions to assure payment thereof as set forth in this section.

(3) The contract provisions apply to work performed on the contract by the contractor and to work performed on the contract by subcontractors.

(4) The contractor shall insert in each of his subcontracts the stipulations contained in these required provisions and other stipulations as may be required.

(5) The contract shall provide that no workmen may be employed on the public work except in accordance with the classifications in the decision of the Secretary. If additional or different classifications are necessary the procedure in § 9.107 (relating to petition for review of rates and hearings) shall be followed.

(6) The contract shall provide that workmen employed or working on the public work shall be paid unconditionally, regardless of whether a contractual relationship exists or the nature of a contractual relationship which may be alleged to exist between a contractor, subcontractor and workmen, at least once a week, without deduction or rebate, on any account, either directly or indirectly except authorized deductions, the full amounts due at the time of payment, computed at the rates applicable to the time worked in the appropriate classification. Nothing in the contract, the act or this title prohibits the payment of more than the general prevailing minimum wage rates as determined by the Secretary to a workman on public work.

(7) The contract shall provide that the contractor and each subcontractor shall post for the entire period of construction the wage determination decisions of the Secretary, including the effective date of changes thereof, in a prominent and easily accessible place or places at the site of the work and at the places used by them to pay workmen their wages. The posted notice of wage rates shall contain the following information:

(i) The name of project.

(ii) The name of the public body for which it is being constructed.

(iii) The crafts and classifications of workmen listed in the Secretary's general prevailing minimum wage rate determination for the particular project.

(iv) The general prevailing minimum wage rates determined for each craft and classification and the effective date of changes.

(v) A statement advising workmen that if they have been paid less than the general prevailing minimum wage rate for their job classification or that the contractor or subcontractor are not complying with the act or this title, they may file a protest in writing with the Secretary within 3 months of the date of the occurrence, objecting to the payment to a contractor to the extent of the amount due or to become due to them as wages for work performed on the public work project. A workmen paid less than the rate specified in the contract shall have a civil right of action for the difference between the wage paid and the wages stipulated in the contract, which right of action shall be exercised within 6 months from the occurrence of the event creating the right.

(8) The contract shall provide that the contractor and subcontractors shall keep an accurate record showing the name, craft or classification, number of hours worked per day and the actual hourly rate of wage paid, including employe benefits, to each workman employed by him in connection with the public work. The record shall include deductions from each workman. The record shall be preserved for 2 years from the date of payment and shall be open at reasonable hours to the inspection of the public body awarding the contract and to the Secretary or his authorized representatives.

(9) The contract shall provide that apprentices shall be limited to numbers in accordance with a bona fide apprenticeship program registered with and approved by The Pennsylvania Apprenticeship and Training Council and only apprentices whose training and employment are in full compliance with The Apprenticeship and Training Act (43 P. S. §§ 90.1–90.10), approved July 14, 1961, and the regulations issued thereto shall be employed on the public work project. A workman using the tools of a craft who does not qualify as an apprentice within this subsection shall be paid the rate predetermined for journeymen in that particular craft or classification.

(10) Wages shall be paid without deductions except authorized deductions. Employers not parties to a contract requiring contributions for employe benefits which the Secretary has determined to be included in the general prevailing minimum wage rate shall pay the monetary equivalent thereof directly to the workmen.

(11) Payment of compensation to workmen for work performed on public work on a lump sum basis, or a piece work system, or a price certain for the completion of a certain amount of work, or the production of a certain result shall be deemed a violation of the act and this subchapter, regardless of the average hourly earnings resulting therefrom.

(12) The contract shall also provide that each contractor and each subcontractor shall file a statement each week and a final statement at the conclusion of the work on the contract with the contracting agency, under oath, and in form satisfactory to the Secretary, certifying that workmen have been paid wages in strict conformity with the provisions of the contract as prescribed by this section or if wages remain unpaid to set forth the amount of wages due and owing to each workman respectively.

(13) The provisions of the act and this subchapter shall be incorporated by reference in the contract.

Cross References

This section cited in 34 Pa. Code § 9.108 (relating to posting of wage rates); and 34 Pa. Code § 9.110 (relating to certification of rate of wage and payment by contractor or subcontractor).

§ 9.104. Duty of the public body.

(a) It is the duty of the public body awarding a contract for public work to request the Secretary for determination of the general prevailing minimum wage rates to be paid workmen on the public work project. The request shall be made on forms issued for the purpose by the Department. A new request for predetermination shall be made if the contract is not awarded within 120 days from the determination date.

(b) It is the duty of the public body to enforce the posting of wage rate determinations in accordance with the provisions of section 9 of the act (43 P. S. § 165-9) and § 9.108 (relating to posting of wage rates). The fiscal officer of the public body, the treasurer or other officer of the public body, charged with the custody and disbursement of the funds of the public body, shall ascertain that the wage rates as determined by the Secretary are paid and that the job classifications are maintained, otherwise it is his duty to hold up final payment and to inform the Secretary of the failure by the contractor or a subcontractor to comply with the act.

Notes of Decisions

Time Limitations

Although the borough awarded the company the contract more than 120 days after the determination of the prevailing minimum wage and although the borough never made a new request for a predetermination, the company waived its right to protest the predetermination by failing to adhere to the 120 day time period. *Linde Enter., Inc. v. Prevailing Wage Appeals Board*, 676 A.2d 310 (Pa. Cmwlth. 1996).

§ 9.105. Determination of classification and general prevailing minimum wage rates.

(a) For the purpose of making a determination of the general prevailing minimum wage rates in the locality in which the public work is to be performed for each craft or classification during the anticipated term of the contract, the Secretary may ascertain and consider the wage rates and employe benefits established by collective bargaining agreements.

(b) If a bona fide collective bargaining agreement has expired by the terms thereof, the Secretary

may ascertain and consider the wage rates and employe benefits established thereby until a new bona fide collective bargaining agreement, as defined in § 9.102 (relating to definitions), has been executed.

(c) The Secretary may also consider the following:

(1) Information obtained from Federal agencies charged with the administration of labor standards provisions of Federal acts applicable to contracts covering contractors and subcontractors on public building and public work and on building and work financed in whole or in part by loans and grants of the United States, within the locality.

(2) The number of skilled, competent and experienced workmen within the locality who are generally available for employment on public work.

(3) Statements signed and certified by contractors and subcontractors and union representatives showing wage rates paid on projects, within the locality. These statements to be relevant to a wage determination shall indicate the names and addresses of the contractors, including the subcontractors, the locations, approximate cost, dates of construction and type of projects, the number of workmen employed and the number of man hours worked in each craft or classification on each project and the respective wage rates paid the workmen, which wage rates shall consist only of rates paid for services performed solely within the classification for which it is submitted.

(4) Other information pertinent to the determination of prevailing minimum wage rates.

(d) The Secretary will conduct a continuing program for obtaining and compiling of wage rate information and shall encourage the voluntary submission of wage rate data by contractors, contractors' associations, labor organizations, public officials and other interested parties, reflecting wage rates paid to workmen in the various types of construction in the locality. Rates shall be determined for varying types of projects within the entire range of work performed by the building and construction industry. Information submitted shall reflect not only the specified wage rate or rates paid to a particular craft in the locality but also the type or types of construction on which the wage rate or rates have been paid. If the Secretary deems that the data at hand is insufficient to make a determination with respect to the crafts or classifications necessary to perform the proposed public work, he may have a field survey conducted by his staff representative for the purpose of obtaining additional information upon which to make a determination of the wage rates, and also the customs, usages and practices as to the type of work to which the wage rates apply and the size of available force of qualified workmen within the locality in which the public work is to be performed.

Notes of Decisions

Granting authority to the Secretary to consider fringe benefits determined by collective bargaining when he is making prevailing wage determinations is not an unconstitutional denial of equal protection to nonunion contractors and employes, since he is not required to make his determination solely on the basis of rates in collective bargaining. *Keystone Chapter of Associated Builders and Contractors, Inc. v. Department of Labor and Industry*, 414 A.2d 1129 (Pa. Cmwlth. 1980).

If the parties introduce exhibits which in some way do not comply with the standards of 34 Pa. Code § 9.105(c)(3), the Secretary may give more weight to evidence which includes fringe benefits and projects of every nature and which clearly demonstrates prevailing wage rates for the year in question rather to evidence which does not include fringe benefits, excludes public works projects and some major private projects, and lumps together wage rates from previous years to establish current wage rates. *Keystone Chapter of Associated Builders and Contractors, Inc. v. Department of Labor and Industry*, 414 A.2d 1129 (Pa. Cmwlth. 1980).

§ 9.106. Payment of general prevailing minimum wage rates.

(a) Not less than the general prevailing minimum wage rates determined by the Secretary under the

act and this subchapter may be paid unconditionally, by contractors and subcontractors to workmen in their respective crafts and classifications on public work and the workmen can not be required to refund, directly or indirectly, part of the wages. It is no defense that workmen accepted or agreed to accept less than the required rate of wages or voluntarily made refunds, in any form or manner.

(b) Wages shall be paid without deductions except authorized deductions. Employers not parties to a contract requiring contributions for employe benefits which the Secretary has determined to be included in the general prevailing minimum wage rate shall pay the monetary equivalent thereof directly to the workmen.

(c) Payment of compensation to workmen for work performed on public work on a lump sum basis or a piece work system or a price certain for the completion of certain amount of work or the production of a certain result shall be deemed a violation of the act and this subchapter, regardless of the average hourly earnings resulting therefrom.

§ 9.107. Petition for review of rates and hearings.

(a) A prospective bidder or his representative, a representative of a group of employers engaged in the particular type of construction, reconstruction, demolition, alteration or repair work, a representative of a craft or classification of workmen or the public body affected by the determination made by the Secretary, may on verified petition request a review of this determination in accordance with the procedures required by section 8 of the act (43 P. S. § 165-8).

(b) The Secretary will, after notice and hearing as prescribed by section 8 of the act, make a final determination of the general prevailing minimum wage rates to be paid to workmen on the public work project. The public body when notified by the Secretary that a verified petition has been filed shall extend the closing date for the submission of bids until 5 days after the Secretary's final determination. Within 10 days after hearing the Secretary will make a determination and transmit it in writing to the public body and to the interested parties. This determination shall be final unless within 10 days an appeal is filed with the Appeals Board.

(c) If, after a contract has been awarded, it is deemed advisable by the public body because of unforeseen construction development to list an additional classification and wage rate therefor the public body shall request, in writing, a determination thereof by the Secretary. A copy of this request shall be given to interested parties and shall also be posted at an appropriate place at the site of the public work project. The Secretary will thereupon give consideration to the request and if he determines that the additional classification requested is necessary, he will determine the classification and wage rate therefor and notify the interested parties of his determination, which shall be effective as of the date on which it is made. Additional classifications shall be made in conformity with this procedure.

Cross References

This section cited in 34 Pa. Code § 9.103 (relating to required provisions).

§ 9.108. Posting of wage rates.

The contractors and subcontractors on the public work project shall post a notice or notices in the manner and form prescribed by § 9.103 (relating to required provisions). This notice is to be clearly legible and placed in a prominent and easily accessible place at the site of the public work project and at places used by them to pay workmen their wages.

Cross References

This section cited in 34 Pa. Code § 9.104 (relating to duty of the public body).

§ 9.109. Records and inspection.

The accurate record of employment and wage payments required to be kept and preserved by contrac-

tors and subcontractors on public work shall include at least the following information:

(1) The name, address and social security number of each workman.

(2) The craft, if applicable, the classification within each craft, and any other classification including apprenticeship, at which the workman worked. These records shall show the number of hours in each day, specified by actual calendar date, during which each workman worked and if he worked in more than one craft or classification for which different rates were payable the records shall show the number of hours in each day as aforesaid in which he worked at the different crafts or classifications. Time cards of employes shall be kept and preserved as records required by the act and this subchapter. In addition, the original signed indentures for each apprentice and the approvals of the Pennsylvania Apprenticeship and Training Council shall be kept. The records shall be preserved for 2 years from date of payment and shall be open at all reasonable hours for inspection by the public body awarding the contract and by the Secretary, and shall be made easily accessible within this Commonwealth within a period of 7 days from the date on which the Secretary requests in writing that these records be made so available.

§ 9.110. Certification of rate of wage and payment by contractor or subcontractor.

(a) It is the duty of the treasurer or other officer charged with the custody and disbursement of public funds applicable to the public work contract under and pursuant to which payment is made, to require the contractor and subcontractor to file a statement each week and a final statement at the conclusion of the work on the contract with the contracting agency under oath in form satisfactory to the Secretary certifying that workmen have been paid wages in strict conformity with the contract as prescribed by § 9.103(7) (relating to required provisions) or if wages remain unpaid to set forth the amount of wages due and owing to each workman respectively.

(b) It is the duty of the treasurer or other officer charged with the custody and disbursement of public funds to withhold the amount of wages unpaid or not paid in accordance with § 9.103 for the benefit of the workman whose wages have not been paid by the contractor and he may pay directly to a workman the amount shown to be due him. Each contractor and subcontractor shall also certify that he is not receiving or requiring, or will not receive or require, directly or indirectly, from a workman a refund of the minimum wage.

(c) A contractor or subcontractor who shall, under oath, verify the statements required to be filed under section 10 of the act (43 P. S. § 165-10) which are known to him to be false, shall be guilty of a misdemeanor, and shall, upon conviction, be sentenced to pay a fine of not exceeding $2,500 or to undergo imprisonment not exceeding 5 years, or both.

§ 9.111. Remedies and penalties.

(a) It is the duty of the Secretary where a timely protest has been filed by a workman that he has been paid less than the general prevailing minimum wage rate, to investigate the matter and determine whether or not there has been a failure to pay the general prevailing minimum wage rate and whether this failure was intentional or otherwise. The Secretary will hold appropriate hearings upon due notice to interested parties including the workman, the employer and their respective representatives, if any. If the Secretary, after hearing, has determined that the failure to pay the general prevailing minimum wage rate was not intentional he shall afford the person or firm a reasonable opportunity to adjust the matter by making payment to the workmen or providing adequate security to insure payment. If the Secretary determines that the failure to pay the general prevailing minimum wage rates intentional, he will thereupon notify the public bodies of the names of the persons or firms and no contract may be awarded to the person or firms or to a firm, corporation or partnership in which the person or firms have an interest until 3 years have elapsed from the date of the notice to the public bodies. The Secretary may, in addition thereto, request the Attorney General to proceed to recover the penalties for the Commonwealth of Pennsylvania which are payable under section 11(f) of the act (43 P. S. 16511(f).

(b) The following constitutes substantial evidence of intentional failure to pay prevailing wage rates:

(1) Acts of omission or commission done willfully or with a knowing disregard of the rights of workmen resulting in the payment of less than prevailing wage rates.

(2) If the Secretary has made a finding that a person or firm has failed to pay the general prevailing minimum wage rate as determined by the Secretary in accordance with the act, and thereafter a person or firm continues to fail to pay the prevailing wages or a person or firm fails to comply with an opportunity to adjust differences which shall be afforded him by the Secretary.

(c) If the Secretary has determined that a person or firm has failed to pay the prevailing wages under section 11(e) and (f) of the act (43 P. S. § 165(e) and 165(f)), he may direct the public body to terminate, and the public body may terminate, the contractor's right to proceed with the public work.

Notes of Decisions

Statute of Limitations

There is no language in this regulation which provides for a statute of limitations applicable to the Department of Labor and Industry's initiation of enforcement actions for underpayment of workers. *Linde Enter., Inc. v. Prevailing Wage Appeals Board*, 676 A.2d 310 (Pa. Cmwlth. 1996).

§ 9.112. Workmen's rights.

(a) A workman who has been paid less than the general prevailing minimum wage rate for his job classification as specified in the contract or who has not been paid, may file a protest, in writing with the Secretary within 3 months of the date of the occurrence, objecting to the payment to a contractor to the extent of the amount due or to become due to him as wages for work performed on the public work project. If the formal protest is filed with the Secretary, it is the duty of the Secretary to direct the fiscal or financial officer of the public body or the person charged with the custody of the disbursement of the funds of the public body, to deduct the money so due and owing from the whole amount or of any payment due the contractor.

(b) Any workmen paid less than the rates specified in the contract shall have a right of action for the difference between the wage paid and the wages stipulated in the contract, which right of action must be exercised within 6 months from the occurrence of the event creating the right.

Notes of Decisions

Statute of Limitations

There is no language in this regulation which provides for a statute of limitations applicable to the Department of Labor and Industry's initiation of enforcement actions for underpayment of workers. *Linde Enter., Inc. v. Prevailing Wage Appeals Board*, 676 A.2d 310 (Pa. Cmwlth. 1996).

PREVAILING WAGE COMPLAINT

This form is used for filing complaints under the Pennsylvania Prevailing Wage Act of 1961. Persons returning this form should complete all parts, including the reverse side.

RETURN TO:

Bureau of Labor Law Compliance
1301 Labor & Industry Building
Seventh & Forster Streets
Harrisburg, PA 17121
Telephone: 717-705-5969 or
1-800-932-0665
FAX: 717-787-0517

PLEASE PRINT:

Name of Person Filing Complaint _____

Address _____
STREET CITY STATE ZIP CODE

Date of Birth _____

Telephone Number where you can be reached between 8:30 a.m. and 5:00 p.m. (_____) _____ — _____
(INCLUDE AREA CODE)

after 5:00 p.m. (_____) _____ — _____

Type of Work Performed _____

Location of Employment _____
STREET CITY COUNTY STATE ZIP CODE

Project Name and County Location _____

Name of Employer (against whom the Wage Claim is filed) _____

Company Name, if any _____ Telephone (_____) _____ — _____

Address _____
STREET CITY COUNTY STATE ZIP CODE

Date Hired _____ Are you still employed by the named employer? ☐ Yes ☐ No

If No, give the last date worked _____ Was your termination: ☐ Voluntary ☐ Involuntary

1. Was there a written contract of employment between you and the named employer? ☐ Yes ☐ No
   If Yes, please attach copy.
2. Were you notified by the named employer as to when and where you would be paid? ☐ Yes ☐ No
3. What was your regular payday to be? (check one) ☐ Weekly ☐ Bi-Weekly ☐ Monthly ☐ Other _____
4. Were wages paid to you in a form other than a check? ☐ Yes ☐ No ☐ Other (cash) _____
5. What was the latest rate of pay agreed upon between you and the named employer?
   Hourly $_____ Weekly $_____ Other, please explain _____
   What are the TOTAL wages claimed by you? $ _____

COMPLETE REVERSE SIDE

WEEK ENDING DATE	CLASSIFICATION	NUMBER OF HOURS WORKED THIS WEEK	NUMBER OF DAYS WORKED THIS WEEK	RATE OF PAY PER HOUR, DAY, WEEK OR OTHER	GROSS WAGES PAID TO YOU FOR THIS WEEK	SPECIFY IF VACATION PAY, SICK LEAVE OR COMMISSION

NOTE: Failure to provide detailed information in the space provided above may make it impossible to pursue this claim on your behalf.

6. Did the named employer refuse to pay these wages? ☐ Yes ☐ No

   If Yes, the named employer's reason for refusal _____

7. Do you and the named employer agree as to the amount of wages due you? ☐ Yes ☐ No

   If No, what amount does the named employer acknowledge as being due? $_____

8. Has the named employer given you written confirmation of the amount due to you? ☐ Yes ☐ No
9. Has the named employer offered to pay you the amount to be due? ☐ Yes ☐ No

   If Yes, have you accepted the amount offered? ☐ Yes ☐ No

10. Have you agreed in writing to any deductions? ☐ Yes ☐ No

    If Yes, list deductions _____

11. Have any deductions been made without your written agreement? ☐ Yes ☐ No

    If Yes, please explain_____

12. Do you owe any money to the named employer for any reason? ☐ Yes ☐ No

    If Yes, how much? $_____

13. Are you covered under a Collective Bargaining Agreement? ☐ Yes ☐ No

    If Yes, list the name and address of the union _____

You may use additional paper to summarize related information and wage computations.

NOTE: I hereby certify that to the best of my knowledge and belief, this is a true statement of facts relating to the above claim of unpaid wages.

Signature of Claimant _____ Date of Complaint _____

Signature of Parent or Guardian if Claimant is under 18 years of age _____

The Bureau will contact you for any further information. Please notify the office listed on the other side of this form in the event that you are paid before the Bureau contacts you.

Auxiliary aids and services are available upon request to individuals with disabilities.
Equal Opportunity Employer/Program

ATTACHMENT C

PREVAILING WAGE RATE COMPLIANCE FORM

Recipient Name:	Project: **Stine Farm Improvement Project** Serial Number: **24-05461**
Address:	Bid Must be Submitted by: July 16, 2024 at 4:00 pm EDT
Contact Person Name:	
Telephone:	Email:

CRAFT	TOTAL PREVAILING WAGE RATE (Hourly Rate + Fringe Benefits)	DETERMINATION DATE
		5/31/24
		5/31/24
		5/31/24
		5/31/24
		5/31/24
		5/31/24

EXAMPLE

PREVAILING WAGE RATE COMPLIANCE FORM

Recipient Name: **Name of Contractor**	Project: **Stine Farm Improvement Project** Serial Number: **24-05461**
Address: **Address of Contractor**	Bid Must be Submitted by: **July 16, 2024 at 4:00 pm EDT**
Contact Person Name: **Name of Lead Contact**	
Telephone: **Contractor's Phone Number**	Email: **Contractor's Email Address**

EXAMPLE ONLY! REFER TO PREVAILING WAGE DOCUMENTS FOR CORRECT CRAFT AND RATES!

CRAFT	TOTAL PREVAILING WAGE RATE (Hourly Rate + Fringe Benefits)	DETERMINATION DATE
Operator – Class 1	$35.87 + $20.92 = $56.79	5/31/24
Operator – Class 2	$31.25 + $20.92 = $52.17	5/31/24
Truck Driver – Class 2	$35.39 + $23.02 = $58.41	5/31/24

Obtain the craft and wage rates from the *Bureau of Labor Law Compliance Prevailing Wages Project Rates* located in your bid package.

ATTACHMENT D
RFP Scoring Sheet

Landowner/Job Name:
Project Location:
RFP Due Date:

		Bidder Name		Bidder Name		Bidder Name		Bidder Name	
Evaluation Criteria / Points	**%**	Score (1-10)	Result	Score (1-10)	Result	Score (1-10)	Result	Score (1-10)	Result
Adherence to RFP Instructions 1 (some documents filled out completely) - 10 (all documents filled out completely)	10		0		0		0		0
Bid Price 1 (highest price) - 10 (lowest price) *Bid will not be considered without a price.*	25		0		0		0		0
Insurance Coverages 1 (limited insurance) - 10 (meets preferred minimum required insurance) *Bid will not be considered without insurance.*	10		0		0		0		0
Safety Record 1 (did not provide record) - 10 (no reportables/good record)	10		0		0		0		0
Confidence in Quality of Work 1 (no references provided and unknown) - 10 (references provided and has done great work)	25		0		0		0		0
Small, local, diverse business - self identified 1 (no information provided) - 10 (registered as small or diverse business)	10		0		0		0		0
Construction Schedule Adherence 1 (no dates or schedule provided) - 10 (detailed construction schedule provided; construction can be started Summer/Fall 2024)	10		0		0		0		0
Total -- All Evaluation Points	**100**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**