



FULLY EXECUTED

Contract Number: 4400025287

Original Contract Effective Date: 12/21/2021

Valid From: 12/01/2021 To: 11/30/2022

All using Agencies of the Commonwealth, Participating Political Subdivision, Authorities, Private Colleges and Universities

Purchasing Agent

Name: Constance Ralph

Phone: 717-703-2931

Fax: 717-783-6241

Your SAP Vendor Number with us: 397950

Supplier Name/Address:

WHITMOYER FORD INC
1001 E MAIN ST
MOUNT JOY PA 17552-9333 US

Supplier Phone Number: 717-653-7080

Supplier Fax Number: 717-653-7090

Please Deliver To:

To be determined at the time of the Purchase Order unless specified below.

Contract Name:

Crew Cab Trucks

Payment Terms

NET 30

Solicitation No.:

Issuance Date:

Supplier Bid or Proposal No. (if applicable):

Solicitation Submission Date:

This contract is comprised of: The above referenced Solicitation, the Supplier's Bid or Proposal, and any documents attached to this Contract or incorporated by reference.

| Item | Material/Service Desc | Qty | UOM | Price | Per Unit | Total |
|--|---|-------|------|------------|----------|-------|
| 2 | Lot 9 Tow Truck 19,500 GVRW 064900 | 0.000 | Each | 121,000.00 | 1 | 0.00 |
| Item Text | | | | | | |
| "Truck-Tow, 19,500 lb, Standard Cab and Chassis With Automatic Transmission per equipment code specification 064900." Chassis Make/Model: Ford Truck / Super Duty F-550 Reg Cab XL GVWR: 19,500-lbs Diesel Engine Make/Model 6.7L 4V OHV Power Stroke V8 Turbo Diesel B20 Diesel Engine HP / Torque 330 HP @ 2,600 RPM / 825 ft.-lb @ 2,000 RPM | | | | | | |
| 3 | Lot 9 Option Option : Statewide Radio: | 0.000 | Each | 395.00 | 1 | 0.00 |
| Item Text | | | | | | |
| Option : Statewide Radio: | | | | | | |
| 4 | Lot 9 Option Paint Hot lime green 46973 | 0.000 | Each | 675.00 | 1 | 0.00 |

Information:

Supplier's Signature _____

Title _____

Printed Name _____

Date _____



FULLY EXECUTED

Contract Number: 4400025287

Original Contract Effective Date: 12/21/2021

Valid From: 12/01/2021 To: 11/30/2022

Supplier Name:

WHITMOYER FORD INC

| Item | Material/Service Desc | Qty | UOM | Price | Per Unit | Total |
|--|-------------------------------------|-------|------|-----------|----------|-------|
| Item Text Option : Paint Hot lime green, Ref: PPG color 46973. | | | | | | |
| 5 | Lot 9 Option Install FLOCS system | 0.000 | Each | 495.00 | 1 | 0.00 |
| Item Text Option : Install FLOCS system as per EQN: 351A. | | | | | | |
| 6 | Lot 10 Cutaway Van Cargo Box 066200 | 0.000 | Each | 74,750.00 | 1 | 0.00 |
| Item Text 14,200# Van, Cutaway, Cargo Box, 2WD with Gas engine, automatic transmission and Dual Rear Wheels per equipment code specification 066200. Chassis Make/Model: Ford Truck / Econoline Super Duty E-450 Cutaway GVWR: 14,200-lbs Engine Make/Model 7.3L V8 Premium-Rated Engine HP / Torque 350 HP @ 3,900 RPM / 468 ft.-lb @ 3,900 RPM | | | | | | |
| 7 | Lot 10 Power Equipment Package | 0.000 | Each | 500.00 | 1 | 0.00 |
| Item Text Option : To be equipped with Power windows, Power door locks, and Power / Heated mirrors with manual extendable arms. | | | | | | |
| 8 | Lot 10 Option : Statewide Radio: | 0.000 | Each | 395.00 | 1 | 0.00 |
| Item Text Option : Statewide Radio: | | | | | | |
| 9 | Lot 10 Option Paint PennDot Yellow | 0.000 | Each | 5,000.00 | 1 | 0.00 |
| Item Text "Option : Bidder must provide option pricing for ""one"" of the following: Factory PennDot Yellow or Aftermarket PennDOT yellow " Aftermarket | | | | | | |
| 10 | Lot 10 Option Install FLOCS system | 0.000 | Each | 495.00 | 1 | 0.00 |
| Item Text Option : Install FLOCS system as per EQN: 351A. | | | | | | |

General Requirements for all Items:

Information:



FULLY EXECUTED
Contract Number: 4400025287
Original Contract Effective Date: 12/21/2021
Valid From: 12/01/2021 To: 11/30/2022

Supplier Name:
WHITMOYER FORD INC

Header Text

This contract is from IFB # 6100054134 and incorporates all terms and conditions of this IFB for Crew Cab Trucks.

Contact Information:

Ralph Constance
Commodity Specialist
555 Walnut St., 6th Floor
Harrisburg, PA 17101-1914
717.703.2931
rconstance@pa.gov

No further information for this Contract

Information:

Table of Contents

PART I - GENERAL INFORMATION 3

I.1 IFB-001.1 Purpose (Oct 2006) 3

I.2 IFB-005.1 Type of Contract (Oct. 2006)..... 3

I.3 IFB-008.1A Pre-bid Conference (Oct. 2006) 3

I.4 IFB-009.1 Questions (February 2012)..... 3

I.5 IFB-010.1 Addenda to the IFB (Oct. 2006)..... 3

I.6 IFB-011.1B Submission of Bids – Electronic Submittal (May 2011)..... 3

I.7 IFB-024.1 Bid Protest Procedure (April 2016) 4

I.8 IFB-025.1 Electronic Version of this IFB (Oct 2006)..... 4

I.9 IFB-027.1 COSTARS Program (January 2017)..... 4

I.10 IFB-029.1 Prices (Dec 6 2006)..... 7

I.11 IFB-030.1 Approved Equal (Nov 2006)..... 7

I.12 IFB-031.1 Alternates (Oct 2013)..... 7

I.13 IFB-032.1 New Equipment (Nov 2006)..... 7

I.14 I-IFB-033.1 Modification or Withdrawal of Bid (Nov 2006) 8

I.15 I-IFB-034.1 Rejection of Bids (Nov 2006) 9

I.16 Submission-001.1 Representations and Authorizations (February 2017)..... 9

PART II - REQUIREMENTS 11

II.1 IFB-006.1b COSTARS Program Election to Participate (July 2012)..... 11

II.2 II-IFB-008.1b Lobbying Certification and Disclosure – Electronic Submission. (Oct 2006). 11

II.3 IFB-010.1 License Required (Oct 2013)..... 11

II.4 IFB-011.1 Authorized Dealer/Franchiser (Oct 2006) 11

II.5 II-IFB-016.1 Post-Submission Descriptive Literature (Dec 2006) 11

II.6 II-IFB-017.1b Reciprocal Limitations Act – Electronic Submittal (February 2007)..... 12

II.7 II-IFB-018.1b Iran Free Procurement Certification and Disclosure – Electronic Submittal (November 2016). 12

PART III - SELECTION CRITERIA 13

III.1 III-IFB-001.1a Mandatory Responsiveness Requirements (Oct 2006) 13

III.2 III-IFB-006.1b Method of Award - By Lot (February 2012) 13

III.3 III-IFB-007.1 Awards (May 2011) 13

III.4 III-IFB-008.1 Tie Bids (Nov 2006) 13

III.5 III-IFB-009.1 Prompt Payment Discounts (Nov 2006) 13

III.6 III-IFB-010.1 Option for Separate Competitive Bidding Procedure (Nov 2006)..... 13

III.7 III-IFB-014.1 Rebates (Nov 2006) 13

PART IV - WORK STATEMENT 15

IV.1 IFB-001.1a Specifications (Nov 2006)..... 15

PART V - CONTRACT TERMS and CONDITIONS 16

V.1 CONTRACT-001.1b Contract Terms and Conditions (Nov 30, 2006)..... 16

V.2 CONTRACT-002.1a Term of Contract – Contract (May 2012) 16

V.3 CONTRACT-002.2b Renewal of Contract Term – Mutual (Oct 2013)..... 16

V.4 CONTRACT-002.2f Renewal of Contract Term; Adjusted Prices – Index Based (Oct 2013)..... 16

V.5 CONTRACT-002.3 Extension of Contract Term (Nov 30 2006) 16

V.6 CONTRACT-003.1a Signatures – Contract (July 2015)..... 16

V.7 CONTRACT-004.1a Definitions (Oct 2013)..... 17

V.8 CONTRACT-005.1c Purchase Orders - Vehicles (July 2015)..... 17

V.9 CONTRACT-006.1 Independent Prime Contractor (Oct 2006)..... 18

V.10 CONTRACT-007.01c Delivery – Vehicles (Oct 2013)..... 18

V.11 CONTRACT-007.02 Estimated Quantities (Nov 30 2006)..... 18

V.12 CONTRACT-008.1a Warranty. (Oct 2006) 19

V.13 CONTRACT-009.1c Patent, Copyright, and Trademark Indemnity (Oct 2013)..... 19

V.14 CONTRACT-009.1d Ownership Rights (Oct 2006) 19

V.15 CONTRACT-010.1a Acceptance (Oct 2006)..... 20

V.16 CONTRACT-010.2 Product Conformance (March 2012) 20

V.17 CONTRACT-010.3 Rejected Material Not Considered Abandoned (March 2012) 20

V.18 CONTRACT-011.1a Compliance With Law (Oct 2006) 20

V.19 CONTRACT-013.1 Environmental Provisions (Oct 2006)..... 20

V.20 CONTRACT-014.1 Post-Consumer Recycled Content (June 2016)..... 21

| | |
|--|----|
| V.21 CONTRACT-014.3 Recycled Content Enforcement (February 2012) | 21 |
| V.22 CONTRACT-015.1 Compensation (Oct 2006) | 21 |
| V.23 CONTRACT-015.2 Billing Requirements (July 2021) | 21 |
| V.24 CONTRACT-015.7 Price Adjustment – Consumer Price Index (Oct 2013) | 21 |
| V.25 CONTRACT-016.1 Payment (Oct 2006) | 22 |
| V.26 CONTRACT-016.2 Payment – Electronic Funds Transfer (February 2014) | 22 |
| V.27 CONTRACT-017.1 Taxes (Dec 5 2006) | 22 |
| V.28 CONTRACT-018.1 Assignment of Antitrust Claims (Oct 2006) | 23 |
| V.29 CONTRACT-019.1 Hold Harmless Provision (Nov 30 2006) | 23 |
| V.30 CONTRACT-020.1 Audit Provisions (Oct 2006) | 23 |
| V.31 CONTRACT-021.1 Default (Oct 2013) | 23 |
| V.32 CONTRACT-022.1 Force Majeure (Oct 2006) | 24 |
| V.33 CONTRACT-023.1a Termination Provisions (Oct 2013) | 25 |
| V.34 CONTRACT-024.1 Contract Controversies (Oct 2011) | 25 |
| V.35 CONTRACT-025.1 Assignability and Subcontracting (Oct 2013) | 26 |
| V.36 CONTRACT-026.1 Other Contractors (Oct 2006) | 26 |
| V.37 CONTRACT-027.1 Nondiscrimination/Sexual Harassment Clause (August 2018) | 27 |
| V.38 CONTRACT-028.1 Contractor Integrity Provisions (January 2015) | 28 |
| V.39 CONTRACT-029.1 Contractor Responsibility Provisions (July 2021) | 30 |
| V.40 CONTRACT-030.1 Americans with Disabilities Act (July 2021) | 31 |
| V.41 CONTRACT-031.1 Hazardous Substances (April 2017) | 31 |
| V.42 CONTRACT-032.1 Covenant Against Contingent Fees (Oct 2006) | 32 |
| V.43 CONTRACT-033.1 Applicable Law (Oct 2006) | 33 |
| V.44 CONTRACT- 034.1b Integration (Nov 30 2006) | 33 |
| V.45 CONTRACT-034.2b Order of Precedence - IFB (Dec 6 2006) | 33 |
| V.46 CONTRACT-034.3 Controlling Terms and Conditions (Aug 2011) | 33 |
| V.47 CONTRACT-035.1a Changes (Oct 2006) | 33 |
| V.48 CONTRACT-037.1a Confidentiality (Oct 2013) | 33 |
| V.49 CONTRACT-046.1 Manufacturer’s Price Reduction (Oct 2006) | 34 |
| V.50 CONTRACT-047.1 Motor Vehicles to be manufactured in North America (Oct 2006) | 35 |
| V.51 CONTRACT-047.2b General Delivery Requirements for Vehicles (Oct 2012) | 35 |
| V.52 CONTRACT-047.5 Local Public Procurement Unit Participation (March 5, 2007) | 35 |
| V.53 CONTRACT-047.6 Additional Delivery Charges (Participating Local Public Procurement Units ONLY) (Oct 2006) | 35 |
| V.54 CONTRACT-047.7 Taxes (Oct 2006) | 35 |
| V.55 CONTRACT-051.1 Notice (Dec 2006) | 35 |
| V.56 CONTRACT-052.1 Right to Know Law (Feb 2010) | 35 |

PART I - GENERAL INFORMATION

PART I - GENERAL INFORMATION

I.1 IFB-001.1 Purpose (Oct 2006)

The Commonwealth of Pennsylvania (Commonwealth) is issuing this Invitation for Bids (IFB) to meet the needs of DGS (DEPARTMENT OF GENERAL SERVICES) to satisfy a need for Crew Cab Trucks.

I.2 IFB-005.1 Type of Contract (Oct. 2006)

If the Issuing Office enters into a contract as a result of this IFB, it will be a Established Price Contract with Escalation contract containing the Contract Terms and Conditions as shown in Part V of this IFB.

I.3 IFB-008.1A Pre-bid Conference (Oct. 2006)

The Issuing Office will hold a pre-bid conference. The purpose of this conference is to provide opportunity for clarification of the IFB. Bidders should forward all questions before the pre-bid conference. Bidders may also ask questions at the conference. In view of the limited facilities available for the conference, Bidders should limit their representation to two individuals per Bidder. The pre-bid conference is for information only. Any answers furnished during the conference will not be official until they have been verified, in writing, by the Issuing Office. Attendance at the pre-bid conference is optional. The pre-bid conference will be held on DATE: OCTOBER 26, 2021 TIME: 11:00 AM TO 12:00 NOON LOCATION: MICROSOFT TEAMS PHONE NUMBER +1 267-332-8737, ID 708560854# .

I.4 IFB-009.1 Questions (February 2012)

All questions regarding the IFB must be submitted in writing to the email address of the Issuing Officer provided in the solicitation. While there is no set timeline for the submittal of questions, questions received within 48 hours prior to the bid due date and time will be answered at the discretion of the Commonwealth. All questions received will be answered, in writing, and such responses shall be posted to eMarketplace as an addendum to the IFB. The Issuing Officer shall not be bound by any verbal information nor shall it be bound by any written information that is not either contained within the IFB or formally issued as an addendum by the Issuing Office. The Issuing Office does not consider questions to be a protest of the specifications or of the solicitation.

I.5 IFB-010.1 Addenda to the IFB (Oct. 2006)

If the Issuing Office deems it necessary to revise any part of this IFB before the bid response date, the Issuing Office will post an addendum to its website at [HTTP://WWW.EMARKETPLACE.STATE.PA.US](http://WWW.EMARKETPLACE.STATE.PA.US) it is the Bidder's responsibility to periodically check the website for any new information or addenda to the IFB.

I.6 IFB-011.1B Submission of Bids – Electronic Submittal (May 2011)

- a. Bids are requested for the item(s) described in the Invitation For Bids and all the documents referenced in the form (collectively called the IFB). Bidders must submit their bids through the Commonwealth's electronic system (SRM).
- b. It is the responsibility of each bidder to ensure that its Bid is received through the electronic system prior to the date and time set for the opening of bids ("Bid Opening Time"). No Bid shall be considered if it arrives after the Bid Opening Time, regardless of reason for the late arrival.

Bids that are timely received prior to the Bid Opening Time shall be opened publicly in the presence of one or more witnesses at the time and place designated in this IFB for the Bid opening.

c. Bids must be firm. If a Bid is submitted with conditions or exceptions or not in conformance with the terms and conditions referenced in the IFB Form, it shall be rejected. The Bid shall also be rejected if the items offered by the Bidder are not in conformance with the specifications as determined by the Commonwealth.

d. The Bidder, intending to be legally bound hereby, offers and agrees, if this Bid is accepted, to provide the awarded items at the price(s) set forth in this Bid at the time(s) and place(s) specified.

I.7 IFB-024.1 Bid Protest Procedure (April 2016)

The Bid Protest Procedure is on the DGS website at

<http://www.dgs.pa.gov/Documents/Procurement%20Forms/Handbook/Pt1/Pt%20I%20Ch%2058%20Bid%20Protests.pdf>

I.8 IFB-025.1 Electronic Version of this IFB (Oct 2006)

This IFB is being made available by electronic means. If a Bidder electronically accepts the IFB, the Bidder acknowledges and accepts full responsibility to insure that no changes are made to the IFB. In the event of a conflict between a version of the IFB in the Bidder's possession and the Issuing Office's version of the IFB, the Issuing Office's version shall govern.

I.9 IFB-027.1 COSTARS Program (January 2017)

COSTARS Purchasers. Section 1902 of the Commonwealth Procurement Code, 62 Pa.C.S. § 1902 (“Section 1902”), authorizes local public procurement units and state-affiliated entities (together, “COSTARS Members”) to participate in Commonwealth procurement contracts that the Department of General Services (“DGS”) may choose to make available to COSTARS Members. DGS has identified this Contract as one which will be made available for COSTARS Members’ participation.

A. Only those entities registered with DGS are authorized to participate as COSTARS Members in this Contract. A COSTARS Member may be either a local public procurement unit or a state-affiliated entity.

1. A “local public procurement unit” is:

- Any political subdivision (local government unit), such as a municipality, school district, or commission;
- Any public authority (including authorities formed under the Municipality Authorities Act of 1955 or other authorizing legislation, such as the Public Transportation Law or the Aviation Code);
- Any tax-exempt, nonprofit educational institution or organization;
- Any tax-exempt, nonprofit public health institution or organization;
- Any nonprofit fire, rescue, or ambulance company; and
- Any other entity that spends public funds for the procurement of supplies, services, and construction (such as a council of governments, an area government, or an organization that receives public grant funds).

The Department reserves the right to review and determine eligible applicants as Local Public Procurement Units on a case-by-case basis.

2. A state-affiliated entity is a Commonwealth authority or other Commonwealth entity that is not a Commonwealth agency. The term includes:

- The Pennsylvania Turnpike Commission;
- The Pennsylvania Housing Finance Agency;
- The Pennsylvania Municipal Retirement System;

- The Pennsylvania Infrastructure Investment Authority;
- The State Public School Building Authority;
- The Pennsylvania Higher Education Facilities Authority, and
- The State System of Higher Education.

The COSTARS Program is not available for use by Executive Agencies and Independent Agencies as defined by the Commonwealth Procurement Code, or any agency or entity using funds appropriated to the Department of General Services through Capital Budget Project Itemization legislation for the procurement of furniture, fixtures, and equipment.

3. A complete list of local public procurement units and state-affiliated entities that have registered with DGS and that are authorized to procure items from the Contract can be found at <http://www.costars.state.pa.us/SearchCOMember.aspx>

B. COSTARS Members have the option to purchase from this Contract, from any DGS contract established exclusively for COSTARS Members in accordance with the requirements of Section 1902 , from any other cooperative procurement contracts, or from their own procurement contracts established in accordance with the applicable laws governing such procurements. The Contractor understands and acknowledges that there is no guarantee that a COSTARS Member will place an order under this Contract, and that the decision to procure from this Contract is within the sole discretion of each COSTARS Member.

C. DGS is acting as a facilitator for COSTARS Members who may wish to purchase under this Contract. COSTARS Members that participate in this Contract and issue purchase orders (“POs”) to Contractors are third party beneficiaries who have the right to sue and be sued for breach of this Contract without joining the Commonwealth or DGS as a party. The Commonwealth will not intervene in any action between a Contractor and a COSTARS Member unless substantial interests of the Commonwealth are involved.

D. COSTARS Members electing to participate in this Contract will order items directly from the Contractor and be responsible for payment directly to the Contractor.

E. Those Contractors electing to permit COSTARS Members to procure from this Contract shall pay the Required Administrative Fee applicable to the Contractor’s classification:

| Contractor Classification | Required Administrative Fee |
|--|------------------------------------|
| DGS-verified Small Diverse Business Bidder | \$166 |
| DGS Self-Certified Small Business Bidder | \$500 |
| All Other Bidders | \$1,500 |

1. Each bidder electing to permit COSTARS Members to participate in the Contract must submit the COSTARS Program Election to Participate form with its bid submittal and pay the applicable Administrative Fee upon Contract award in order to sell the awarded items/services to COSTARS Members. If the bidder is a Department of General Services Self-Certified Small Business or Department of General Services-verified Small Diverse Business, a copy of its active Small Business Contracting Program certificate must be included with the bid submittal.

2. At the beginning of each Contract year and upon any Contract renewal, the Contractor shall submit a check for the required amount, payable to “Commonwealth of PA”. The Contractor must pay the Administrative Fee at each contract renewal date to continue to sell the awarded items/services to COSTARS Members.

F. DGS has registered the COSTARS name and logo (together, the “COSTARS Brand”) as a trademark with the Pennsylvania Department of State. Therefore, the Contractor may use the COSTARS Brand only as permitted under in this Subsection.

1. The Contractor shall pay the Administrative Fee covering its participation in the program, including without limitation any use of the COSTARS Brand, for each year of the Contract period. The fee is payable upon Contract award and prior to the renewal date for each succeeding Contract period.
2. DGS grants the Contractor a nonexclusive license to use the COSTARS Brand, subject to the following conditions:
 - a. The Contractor agrees not to transfer to any third party, including without limitation any of its subcontractors or suppliers, any privileges it may have to use the COSTARS Brand under this Contract.
 - b. The Contractor agrees not to use the COSTARS Brand to represent or imply any Commonwealth endorsement or approval of its products or services.
 - c. The Contractor is permitted to use the COSTARS Brand in broadcast, or Internet media solely in connection with this Contract and any other Contract with the Commonwealth under which it has agreed to make sales to COSTARS Purchasers. The Contractor may use the COSTARS Brand on business cards, brochures, and other print publications so long as the purpose is to identify the Contractor as a COSTARS vendor, and only so long as the required Contract fee is kept current.
 - d. Should this Contract terminate for any reason, the Contractor agrees promptly to remove the COSTARS Brand from any and all print and electronic media and to refrain from using the COSTARS Brand for any purpose whatsoever from the date of Contract termination forward.
 - e. The Contractor agrees to defend, indemnify, and hold harmless the Commonwealth of Pennsylvania and DGS from and against all claims, demands, liabilities, obligations, costs, and expenses of any nature whatsoever arising out of or based upon the Contractor's use of the COSTARS Brand.
 - f. The Contractor agrees it has no property rights in the use of the COSTARS Brand by virtue of this nonexclusive license. The Contractor expressly waives any claims, including without limitation due process claims that may otherwise be available under the law in the event of any dispute involving these terms of use.
- G. The Contractor shall furnish to the DGS COSTARS Program Office a quarterly electronic Contract sales report detailing the previous quarter's Contract purchasing activity, using the form and in the format prescribed by DGS. The Contractor shall submit its completed quarterly report no later than the fifteenth calendar day of the succeeding Contract quarter.
 1. The Contractor shall submit the reports through the web-based COSTARS Suppliers' Gateway of the PA Supplier Portal at <https://pasupplierportal.state.pa.us/irj/portal/anonymous> , Enterprise Applications. If a Contractor does not have access to the Internet, the Contractor shall send the reports, using the form and in the format prescribed by DGS, on compact disc via US Postal Service to the DGS COSTARS Program Office, Bureau of Procurement, 6th Floor Forum Place, 555 Walnut Street, Harrisburg, PA 17101-1914.
 2. For each PO received, the Contractor shall include on the report the name and address of each COSTARS-Registered Purchaser that has used the Contract along with the sales date, and dollar volume of sales to the specific Purchaser for the reporting period.
 3. DGS may suspend the Contractor's participation in the COSTARS Program for failure to provide the Quarterly Sales Report within the specified time.
- H. Additional information regarding the COSTARS Program is available on the DGS COSTARS Website at www.costars.state.pa.us .
 1. If the Contractor is aware of any qualified entity not currently registered and wishing to

participate in the COSTARS Program, please refer the potential purchaser to the DGS COSTARS Website at www.costars.state.pa.us , where it may register by completing the online registration form and receiving DGS confirmation of its registration. To view a list of currently-registered COSTARS member entities, please visit the COSTARS website.

2. Direct all questions concerning the COSTARS Program to:

Department of General Services
COSTARS Program
555 Walnut Street, 6th Floor
Harrisburg, PA 17101
Telephone: 1-866-768-7827
E-mail GS-PACostars@pa.gov

I.10 IFB-029.1 Prices (Dec 6 2006)

The bid submitted by the successful Bidder will be incorporated into any resulting Contract and the Bidder will be required to provide the awarded item(s) at the prices quoted in its Bid.

I.11 IFB-030.1 Approved Equal (Nov 2006)

Whenever an item is defined in this IFB by trade name and catalogue number of a manufacturer or vendor, the term 'or approved equal,' if not inserted therewith shall be implied. Any reference to a particular manufacturer's product either by trade name or by limited description is solely for the purpose of more clearly indicating the minimum standard of quality desired, except where a 'no substitute' is requested. When a 'no substitute' is requested, the Issuing Office will consider Bids for the referenced product only. The term 'or approved equal' is defined as meaning any other make which, in the sole opinion of the Issuing Office, is of such character, quality, and performance equivalence as to meet the standard of quality of products specified for which it is to be used equally as well as that specified. A Bidder quoting on a product other than the referenced product shall: a) furnish complete identification in its Bid of the product it is offering by trade name, brand and/or model number; b) furnish descriptive literature and data with respect to the substitute product it proposes to furnish; and c) indicate any known specification deviations from the referenced product.

I.12 IFB-031.1 Alternates (Oct 2013)

A Bidder who wants to offer an alternate must notify the Issuing Office in writing, at least five (5) days prior to the scheduled Bid opening, that the Bidder intends to offer an alternate in its Bid. An "alternate" is a product that deviates from the requirements of the specifications in its composition, qualities, performance, size dimension, etc. The written notification from the Bidder must include a complete description of the alternate and must identify the product's deviations from the specifications. Upon receipt of the notification, the Issuing Office will determine whether the alternate is acceptable. If the Issuing Office, in its discretion, determines that the alternate is acceptable, the Issuing Office will issue a change notice to the invitation for bids that revises the specifications. If no change notice is issued revising the specification, a Bid offering the alternate will not be considered for award. If an item or items in the IFB are designated "no substitute," this provision does not apply and no alternate may be proposed by a bidder nor will any alternate be considered by the Issuing Office.

I.13 IFB-032.1 New Equipment (Nov 2006)

Unless otherwise specified in this invitation for bids, all products offered by Bidders must be new or remanufactured. A 'new' product is one that will be used first by the Commonwealth after it is manufactured or produced. A 'remanufactured' product is one which: 1) has been rebuilt, using new or used parts, to a condition which meets the original manufacturer's most recent specifications for the item; 2) does not, in the opinion of the Issuing Office, differ in appearance from a new item; and 3) has the same warranty as a new item. Unless otherwise specified in this invitation for bids, used or reconditioned products are not acceptable. This clause shall

not be construed to prohibit Bidders from offering products with recycled content, provided the product is new or remanufactured.

I.14 I-IFB-033.1 Modification or Withdrawal of Bid (Nov 2006)

- a. Bid Modification Prior to Bid Opening. Bids may be modified only by written notice or in person prior to the exact hour and date specified for Bid opening.
 - 1) If a Bidder intends to modify its Bid by written notice, the notice must specifically identify the Bid to be modified and must be signed by the Bidder. The Bidder must include evidence of authorization for the individual who signed the modification to modify the Bid on behalf of the Bidder. The Bid modification must be received in a sealed envelope. The sealed envelope must identify the assigned Collective Number and the Bid Opening Time, and should state that enclosed in the envelope is a Bid modification
 - 2) If a Bidder intends to modify its Bid in person, the individual who will modify the Bid must arrive in the Bid Opening Room prior to the Bid Opening Time, show a picture identification and provide evidence of his/her authorization to modify the Bid on behalf of the Bidder. If a Bidder intends to modify its Bid in person, the Bidder may do so only in the presence of an agency employee. (The agency employee will observe the actions taken by the individual to modify the Bid, but will not read the Bid or the modification).
- b. Bid Withdrawal Prior to Bid Opening. Bids may be withdrawn only by written notice or in person prior to the exact hour and date specified for Bid opening.
 - 1) If a Bidder intends to withdraw its Bid by written notice, the notice shall specifically identify the Bid to be withdrawn and shall be signed by the Bidder. The Bidder must include evidence of authorization for the individual who signed the bid withdrawal to withdraw the bid on behalf of the Bidder. Except as provided in Subparagraph c, below, bid withdrawals received after the exact hour and date specified for the receipt of Bids shall not be accepted.
 - 2) If a Bidder intends to withdraw its Bid in person, the individual who will withdraw the Bid must arrive in the Bid Opening Room prior to the Bid Opening Time, show a picture identification and provide evidence of his/her authorization to withdraw the Bid on behalf of the Bidder.
- c. Bid Withdrawal After Bid Opening. Bidders are permitted to withdraw erroneous Bids after Bid opening only if the following conditions are met:
 - 1) The Bidder submits a written request for withdrawal.
 - 2) The Bidder presents credible evidence with the request that the reason for the lower Bid price was a clerical mistake as opposed to a judgment mistake and was actually due to an unintentional arithmetical error or an unintentional omission of a substantial quantity of work, labor, material, or services made directly in the compilation of the Bid.
 - 3) The request for relief and supporting evidence must be received by the Issuing Office within three (3) business days after Bid opening, but before award of the contract.
 - 4) The Issuing Office shall not permit a Bid withdrawal if the Bid withdrawal would result in the award of the contract on another Bid of the same Bidder, its partner, or a corporation or business venture owned by or in which the bidder has a substantial interest.
 - 5) If a Bidder is permitted to withdraw its Bid, the Bidder cannot supply any material or labor or perform any subcontract or other work agreement for the awarded contractor, without the written approval of the Issuing Office.
- d. Firm Bid. Except as provided above, a Bid may not be modified, withdrawn, or cancelled by any Bidder for a period of sixty (60) days following the time and date designated for Bid opening, unless otherwise specified by the Bidder in its Bid. If the lowest responsible Bidder, as determined by the Issuing Office, withdraws its Bid

prior to the expiration of the award period or fails to comply with the requirements set forth in the IFB including but not limited to any requirement to submit performance or payment bonds or insurance certificates within the required time period, the Bidder shall be liable to the Commonwealth for all costs and damages associated with the re-award or re-bid including the difference between the Bidder's price and the actual cost that the Commonwealth pays for the awarded items.

- e. Clarification and Additional Information. After the receipt of Bids, the Issuing Office shall have the right to contact Bidders for the purpose of seeking:
- 1) Clarification of the Bid which confirms the Issuing Office's understanding of statements or information in the Bid or;
 - 2) Additional information on the items offered; provided the IFB does not require the rejection of the Bid for failure to include such information.

I.15 I-IFB-034.1 Rejection of Bids (Nov 2006)

The Issuing Office reserves the right to reject any and all Bids, to waive technical defects or any informality in Bids, and to accept or reject any part of any Bid if the best interests of the Commonwealth are thereby served.

I.16 Submission-001.1 Representations and Authorizations (February 2017)

By submitting its proposal, each Offeror understands, represents, and acknowledges that:

A. All of the Offeror's information and representations in the proposal are material and important, and the Issuing Office may rely upon the contents of the proposal in awarding the contract(s). The Commonwealth shall treat any misstatement, omission or misrepresentation as fraudulent concealment of the true facts relating to the Proposal submission, punishable pursuant to 18 Pa. C.S. § 4904.

B. The Offeror has arrived at the price(s) and amounts in its proposal independently and without consultation, communication, or agreement with any other Offeror or potential offeror.

C. The Offeror has not disclosed the price(s), the amount of the proposal, nor the approximate price(s) or amount(s) of its proposal to any other firm or person who is an Offeror or potential offeror for this RFP, and the Offeror shall not disclose any of these items on or before the proposal submission deadline specified in the Calendar of Events of this RFP.

D. The Offeror has not attempted, nor will it attempt, to induce any firm or person to refrain from submitting a proposal on this contract, or to submit a proposal higher than this proposal, or to submit any intentionally high or noncompetitive proposal or other form of complementary proposal.

E. The Offeror makes its proposal in good faith and not pursuant to any agreement or discussion with, or inducement from, any firm or person to submit a complementary or other noncompetitive proposal.

F. To the best knowledge of the person signing the proposal for the Offeror, the Offeror, its affiliates, subsidiaries, officers, directors, and employees are not currently under investigation by any governmental agency and have not in the last four years been convicted or found liable for any act prohibited by State or Federal law in any jurisdiction, involving conspiracy or collusion with respect to bidding or proposing on any public contract, except as the Offeror has disclosed in its proposal.

G. To the best of the knowledge of the person signing the proposal for the Offeror and except as the Offeror has otherwise disclosed in its proposal, the Offeror has no outstanding, delinquent obligations to the Commonwealth including, but not limited to, any state tax liability not being contested on appeal or other obligation of the Offeror that is owed to the Commonwealth.

H. The Offeror is not currently under suspension or debarment by the Commonwealth, any other state or the

federal government, and if the Offeror cannot so certify, then it shall submit along with its proposal a written explanation of why it cannot make such certification.

I. The Offeror has not made, under separate contract with the Issuing Office, any recommendations to the Issuing Office concerning the need for the services described in its proposal or the specifications for the services described in the proposal.

J. Each Offeror, by submitting its proposal, authorizes Commonwealth agencies to release to the Commonwealth information concerning the Offeror's Pennsylvania taxes, unemployment compensation and workers' compensation liabilities.

K. Until the selected Offeror receives a fully executed and approved written contract from the Issuing Office, there is no legal and valid contract, in law or in equity, and the Offeror shall not begin to perform.

L. The Offeror is not currently engaged, and will not during the duration of the contract engage, in a boycott of a person or an entity based in or doing business with a jurisdiction which the Commonwealth is not prohibited by Congressional statute from engaging in trade or commerce.

PART II - REQUIREMENTS

PART II - REQUIREMENTS

II.1 IFB-006.1b COSTARS Program Election to Participate (July 2012)

If the bidder is willing to sell the awarded items/services at the same prices and/or discounts, and in accordance with the contractual terms and conditions, to COSTARS members, the bidder should complete and return the COSTARS Program Election to Participate form which is an attachment to this IFB. If the bidder is asserting that it is a Department of General Services Certified Small Business, the bidder must submit its active certification with the bid response.

II.2 II-IFB-008.1b Lobbying Certification and Disclosure – Electronic Submission. (Oct 2006).

With respect to an award of a federal contract, grant, or cooperative agreement exceeding \$100,000 or an award of a federal loan or a commitment providing for the United States to insure or guarantee a loan exceeding \$150,000 all recipients must certify that they will not use federal funds for lobbying and must disclose the use of non-federal funds for lobbying by filing required documentation. Offerors must complete and return the Lobbying Certification Form and the Disclosure of Lobbying Activities Form, which are attached to and made a part of this IFB. The completed and signed Lobbying Certification Form and the Disclosure of Lobbying Activities Form should be submitted with the Bid Response. Commonwealth agencies will not contract with outside firms or individuals to perform lobbying services, regardless of the source of funds.

II.3 IFB-010.1 License Required (Oct 2013)

It is unlawful for any individual, corporation, partnership, association or other entity foreign or domestic to engage in the business of salesperson, broker, dealer, manufacturer, factory branch, distributor, distributor branch, factory or distributor representative or wholesaler within COMMONWEALTH unless he has secured a license as required by Act No. 84 of 1983, known as the Board of Vehicles Act. Before a Contract is awarded to any bidder and before a bidder sells COMMONWEALTH any vehicle covered by this requisition, he must hold or secure an appropriate license issued by the State Board of Vehicle Manufacturers, Dealers and Salespersons. Information and/or an application in regard to the license requirement can be obtained from:

Department of State
Bureau of Professional and Occupational Affairs
State Board of Motor Vehicle Manufacturers, Dealers and Salesmen
P.O. Box 2649
Harrisburg, PA 17105-2649

II.4 IFB-011.1 Authorized Dealer/Franchiser (Oct 2006)

In order to be eligible for award, an offeror must be an Authorized/Franchised dealer representing the manufacturer of Vehicles offered to the Commonwealth.

II.5 II-IFB-016.1 Post-Submission Descriptive Literature (Dec 2006)

The Commonwealth may, during its evaluation of the bids, require any bidder to submit cuts, illustrations, drawings, prints, test data sheets, specification sheets and brochures which detail construction features, design, components, materials used, applicable dimensions and any other pertinent information which the Issuing Office may require in order to evaluate the product(s) offered. The required information must be submitted within two (2) business days after notification from the Issuing Office. Failure to submit the required information prior to the expiration of the second business day after notification shall result in the rejection of the bid as non-responsive.

II.6 II-IFB-017.1b Reciprocal Limitations Act – Electronic Submittal (February 2007)

This procurement is subject to the Reciprocal Limitations Act. Bidders must complete and submit with the Bid Response the State of Manufacture Chart, which is contained in GSPUR-89 ("Reciprocal Limitations Act Requirements") which is attached to and made part of this IFB. The completed State of Manufacture Chart should be submitted as part of the Bid Reponse

II.7 II-IFB-018.1b Iran Free Procurement Certification and Disclosure – Electronic Submittal (November 2016)

Prior to entering a contract worth at least \$1,000,000 or more with a Commonwealth entity, a bidder must: a) certify it is not on the current list of persons engaged in investment activities in Iran created by the Pennsylvania Department of General Services ("DGS") pursuant to Section 3503 of the Procurement Code and is eligible to contract with the Commonwealth under Sections 3501-3506 of the Procurement Code; or b) demonstrate it has received an exception from the certification requirement for that solicitation or contract pursuant to Section 3503(e). All bidders must complete and return the Iran Free Procurement Certification form, which is attached hereto and made part of this IFB. The completed and signed Iran Free Procurement Certification form must be submitted with the Bid Response.

See the following web page for current Iran Free Procurement list:

<http://www.dgs.pa.gov/businesses/materials%20and%20services%20procurement/procurement-resources/pages/default.aspx#.WDNfJJ>

PART III - SELECTION CRITERIA

PART III - SELECTION CRITERIA

III.1 III-IFB-001.1a Mandatory Responsiveness Requirements (Oct 2006)

To be eligible for selection, a bid must be:

- a. Timely received from a Bidder;
- b. Properly signed by the Bidder.

III.2 III-IFB-006.1b Method of Award - By Lot (February 2012)

It is the intent of the Commonwealth to award by lots established in the IFB or in the pricing spreadsheets to the lowest responsive and responsible bidder per lot. The Commonwealth reserves the right to award by line item or to award all lots to a single vendor if it determines that it is in the best interest of the Commonwealth to do so.

III.3 III-IFB-007.1 Awards (May 2011)

Unless all Bids are rejected, and except as otherwise provided by law, award will be made through the issuance of a contract/purchase order in accordance with the method of award. Unless otherwise specified by the Issuing Office in the IFB form the Commonwealth reserves the right to award by item or on a total Bid basis, whichever is deemed more advantageous to the Commonwealth. In cases of discrepancies in prices, the unit price will be binding unless the unit price is obviously in error and the extended price is obviously correct, in which case the erroneous unit price will be corrected. As a condition for receipt of award of a contract/purchase order, the Bidder must be registered in the Commonwealth of Pennsylvania's Vendor Master file. In order to register, bidders must visit the Pa Supplier Portal at <https://www.pasupplierportal.state.pa.us/> or call the Customer Support Center at 877-435-7363 or 717-346-2676.

III.4 III-IFB-008.1 Tie Bids (Nov 2006)

All tie bids will be broken by the Issuing Office.

III.5 III-IFB-009.1 Prompt Payment Discounts (Nov 2006)

Prompt payment discounts will not be considered in making an award. If prompt payment discounts are offered by any Bidder, however, the Issuing Office will take advantage of such offer.

III.6 III-IFB-010.1 Option for Separate Competitive Bidding Procedure (Nov 2006)

The Commonwealth reserves the right to purchase products or services covered under this Contract through a separate competitive bidding procedure, whenever Commonwealth deems it in the best interest of the Commonwealth. The right will generally be exercised only when a specific need for a large quantity of the product or service exists or when the price offered is significantly lower than the Contract price.

III.7 III-IFB-014.1 Rebates (Nov 2006)

Any rebate applicable at the time of bid should be taken into consideration by the bidder in calculating its bid price. Bidders must specifically state in their bid proposal, when applicable, that rebates have been considered in arriving at the bid price. Following award, the Commonwealth will assign to the awarded bidder, any rebates which the bidder stated that he took into consideration. If the bidder fails to include such a statement, the Commonwealth will

receive the full benefit of the manufacturer's rebate.

PART IV - WORK STATEMENT

PART IV - WORK STATEMENT

IV.1 IFB-001.1a Specifications (Nov 2006)

The Commonwealth is seeking bids to procure the item(s) set forth in the attached document entitled "Specifications."

PART V - CONTRACT TERMS and CONDITIONS

PART V - CONTRACT TERMS and CONDITIONS

V.1 CONTRACT-001.1b Contract Terms and Conditions (Nov 30, 2006)

The Contract with the awarded bidder (who shall become the "Contractor") shall include the following terms and conditions:

V.2 CONTRACT-002.1a Term of Contract – Contract (May 2012)

The initial term of the Contract shall be 01 year(s) and 00 month(s).

The term of the Contract shall commence on the Effective Date (as defined below) and shall end on the Expiration Date identified in the Contract, subject to the other provisions of the Contract.

The Effective Date shall be: a) the Effective Date printed on the Contract after the Contract has been fully executed by the Commonwealth (signed and approved as required by the Commonwealth contracting procedures) or b) the "Valid from" date printed on the Contract, whichever is later.

V.3 CONTRACT-002.2b Renewal of Contract Term – Mutual (Oct 2013)

The Contract may be mutually renewed for a maximum of 4 additional 1 year term(s), so long as the Commonwealth provides written notice to Contractor of its intention to extend the Contract by letter dated not less than 090 days prior to the expiration of the term of the agreement, or any extension thereof, and the Contractor consents to the renewal not less than 060 days prior to the expiration of the term of the agreement or any extension thereof. The renewal may be exercised as individual or multiple year terms(s). Any renewal will be under the same terms, covenants and conditions. No further document is required to be executed to renew the term of the contract.

V.4 CONTRACT-002.2f Renewal of Contract Term; Adjusted Prices – Index Based (Oct 2013)

The Contract may be renewed for a maximum of 4 additional 1 year term(s), so long as Commonwealth provides written notice to Contractor of its intention to extend the Contract by letter prior to the expiration of the term of the agreement, or any extension thereof. The Commonwealth may exercise the renewal as individual year or multiple year term(s). Any renewal will be under the same terms, covenants and conditions, provided, however, that the rates under the contract may be adjusted to reflect inflation by applying the **(fill in month and year)** unadjusted PPI WPU14130299. The established base index is defined as the most current PPI WPU14130299 published prior to the bid due date. At the time of renewal, the current PPI WPU14130299 will be compared with the established base index and the multiplier will be determined by dividing the current Index by the established base Index. The multiplier will be used to increase or decrease the contract rates by the same amount. The Commonwealth will issue a change notice information the Contractor of such changes. After such a change, the current Index at the time of the change will become the new base and the new contract rates will become the new base rates. In the event of no change in the PPI WPU14130299, the Commonwealth will renew the contract with no price adjustment. No further document is required to be executed to renew the term of the contract.

V.5 CONTRACT-002.3 Extension of Contract Term (Nov 30 2006)

The Commonwealth reserves the right, upon notice to the Contractor, to extend any single term of the Contract for up to three (3) months upon the same terms and conditions.

V.6 CONTRACT-003.1a Signatures – Contract (July 2015)

The Contract shall not be a legally binding contract until the fully-executed Contract has been sent to the Contractor. No Commonwealth employee has the authority to verbally direct the commencement of any work or delivery of any supply under this Contract prior to the Effective Date. The Contractor hereby waives any claim or cause of action for any service or work performed prior to the Effective Date.

The Contract may be electronically signed by the Commonwealth. The electronically-printed name of the Purchasing Agent represents the signature of that individual who has the authority, on behalf of the Commonwealth,

to bind the Commonwealth to the terms of the Contract. If the Contract output form does not have "Fully Executed" at the top of the first page and does not have the name of the Purchasing Agent printed in the appropriate box, the Contract has not been fully executed.

The fully-executed Contract may be sent to the Contractor electronically or through facsimile equipment. The electronic transmission of the Contract shall require acknowledgement of receipt of the transmission by the Contractor. Receipt of the electronic or facsimile transmission of the Contract shall constitute receipt of the fully-executed Contract.

The Commonwealth and the Contractor specifically agree as follows:

- a. No handwritten signature shall be required in order for the Contract to be legally enforceable.
- b. The parties agree that no writing shall be required in order to make the Contract legally binding, notwithstanding contrary requirements in any law. The parties hereby agree not to contest the validity or enforceability of a genuine Contract or acknowledgement issued electronically under the provisions of a statute of frauds or any other applicable law relating to whether certain agreements be in writing and signed by the party bound thereby. Any genuine Contract or acknowledgement issued electronically, if introduced as evidence on paper in any judicial, arbitration, mediation, or administrative proceedings, will be admissible as between the parties to the same extent and under the same conditions as other business records originated and maintained in documentary form. Neither party shall contest the admissibility of copies of a genuine Contract or acknowledgements under either the business records exception to the hearsay rule or the best evidence rule on the basis that the Contract or acknowledgement were not in writing or signed by the parties. A Contract or acknowledgment shall be deemed to be genuine for all purposes if it is transmitted to the location designated for such documents.
- c. Each party will immediately take steps to verify any document that appears to be obviously garbled in transmission or improperly formatted to include re-transmission of any such document if necessary.

V.7 CONTRACT-004.1a Definitions (Oct 2013)

As used in this Contract, these words shall have the following meanings:

- a. Agency: The department, board, commission or other agency of the Commonwealth of Pennsylvania listed as the Purchasing Agency. If a COSTARS entity or external procurement activity has issued an order against this contract, that entity shall also be identified as "Agency".
- b. Contracting Officer: The person authorized to administer this Contract for the Commonwealth and to make written determinations with respect to the Contract.
- c. Days: Unless specifically indicated otherwise, days mean calendar days.
- d. Developed Works or Developed Materials: All documents, sketches, drawings, designs, works, papers, files, reports, computer programs, computer documentation, data, records, software, samples or any other tangible material without limitation authored or prepared by Contractor as the work product covered in the scope of work for the Project.
- e. Documentation: All materials required to support and convey information about the services required by this Contract. It includes, but is not necessarily restricted to, written reports and analyses, diagrams, maps, logical and physical designs, system designs, computer programs, flow charts, disks, and/or other machine-readable storage media.
- f. Services: All Contractor activity necessary to satisfy the Contract.

V.8 CONTRACT-005.1c Purchase Orders - Vehicles (July 2015)

Commonwealth agencies may issue Purchase Orders against the Contract. These orders constitute the Contractor's authority to make delivery. All Purchase Orders received by the Contractor up to and including the expiration date of the Contract are acceptable and must be performed in accordance with the Contract. Each Purchase Order will be deemed to incorporate the terms and conditions set forth in the Contract.

Purchase Orders may be electronically signed by the Agency. The electronically-printed name of the purchaser represents the signature of that individual who has the authority, on behalf of the Commonwealth, to authorize the Contractor to proceed.

Purchase Orders may be issued electronically or through facsimile equipment. Receipt of the electronic or facsimile transmission of the Purchase Order shall constitute receipt of an order. Orders received by the Contractor after 4:00 p.m. will be considered received the following business day. The Contractor must acknowledge receipt of an order within ten (10) days from the day the purchase order is issued to the Contractor. In order to insure timely delivery, the Commonwealth should follow up on orders if written acknowledgement is not received within ten (10) days.

The Commonwealth and the Contractor specifically agree as follows:

- a. No handwritten signature shall be required in order for the Contract or Purchase Order to be legally enforceable.
- b. Any order which is issued electronically shall not give rise to any obligation to deliver on the part of the Contractor, or any obligation to receive and pay for delivered products on the part of the Commonwealth, unless and until the Commonwealth Agency transmitting the order has properly received an acknowledgement.
- c. The parties agree that no writing shall be required in order to make the Purchase Order legally binding. The parties hereby agree not to contest the validity or enforceability of a Purchase Order or acknowledgement issued electronically under the provisions of a statute of frauds or any other applicable law relating to whether certain agreements be in writing and signed by the party bound thereby. Any Purchase Order or acknowledgement issued electronically, if introduced as evidence on paper in any judicial, arbitration, mediation, or administrative proceedings, will be admissible as between the parties to the same extent and under the same conditions as other business records originated and maintained in documentary form. Neither party shall contest the admissibility of copies of Purchase Orders or acknowledgements under either the business records exception to the hearsay rule or the best evidence rule on the basis that the Purchase Order or acknowledgement were not in writing or signed by the parties. A Purchase Order or acknowledgment shall be deemed to be genuine for all purposes if it is transmitted to the location designated for such documents.
- d. Each party will immediately take steps to verify any document that appears to be obviously garbled in transmission or improperly formatted to include re-transmission of any such document if necessary.

V.9 CONTRACT-006.1 Independent Prime Contractor (Oct 2006)

In performing its obligations under the Contract, the Contractor will act as an independent contractor and not as an employee or agent of the Commonwealth. The Contractor will be responsible for all services in this Contract whether or not Contractor provides them directly. Further, the Contractor is the sole point of contact with regard to all contractual matters, including payment of any and all charges resulting from the Contract.

V.10 CONTRACT-007.01c Delivery – Vehicles (Oct 2013)

All vehicle(s) shall be delivered F.O.B. Destination. The Contractor agrees to bear the risk of loss, injury, or destruction of the vehicle(s) ordered prior to the receipt of the vehicle(s) by the Commonwealth. Such loss, injury, or destruction shall not release the Contractor from any contractual obligations. Except as otherwise provided in this contract, all vehicle(s) must be delivered within the time period specified in the Contract. Time is of the essence and, in addition to any other remedies, the Contract is subject to termination for failure to deliver as specified.

V.11 CONTRACT-007.02 Estimated Quantities (Nov 30 2006)

It shall be understood and agreed that any quantities listed in the Contract are estimated only and may be increased or decreased in accordance with the actual requirements of the Commonwealth and that the Commonwealth in accepting any bid or portion thereof, contracts only and agrees to purchase only the materials and services in such quantities as represent the actual requirements of the Commonwealth. The Commonwealth reserves the right to purchase materials and services covered under the Contract through a separate competitive procurement procedure, whenever Commonwealth deems it to be in its best interest.

V.12 CONTRACT-008.1a Warranty. (Oct 2006)

The Contractor warrants that all items furnished and all services performed by the Contractor, its agents and subcontractors shall be free and clear of any defects in workmanship or materials. Unless otherwise stated in the Contract, all items are warranted for a period of one year following delivery by the Contractor and acceptance by the Commonwealth. The Contractor shall repair, replace or otherwise correct any problem with the delivered item. When an item is replaced, it shall be replaced with an item of equivalent or superior quality without any additional cost to the Commonwealth.

V.13 CONTRACT-009.1c Patent, Copyright, and Trademark Indemnity (Oct 2013)

The Contractor warrants that it is the sole owner or author of, or has entered into a suitable legal agreement concerning either: a) the design of any product or process provided or used in the performance of the Contract which is covered by a patent, copyright, or trademark registration or other right duly authorized by state or federal law or b) any copyrighted matter in any report, document or other material provided to the Commonwealth under the contract.

The Contractor shall defend any suit or proceeding brought against the Commonwealth on account of any alleged patent, copyright or trademark infringement in the United States of any of the products provided or used in the performance of the Contract.

This is upon condition that the Commonwealth shall provide prompt notification in writing of such suit or proceeding; full right, authorization and opportunity to conduct the defense thereof; and full information and all reasonable cooperation for the defense of same.

As principles of governmental or public law are involved, the Commonwealth may participate in or choose to conduct, in its sole discretion, the defense of any such action.

If information and assistance are furnished by the Commonwealth at the Contractor's written request, it shall be at the Contractor's expense, but the responsibility for such expense shall be only that within the Contractor's written authorization.

The Contractor shall indemnify and hold the Commonwealth harmless from all damages, costs, and expenses, including attorney's fees that the Contractor or the Commonwealth may pay or incur by reason of any infringement or violation of the rights occurring to any holder of copyright, trademark, or patent interests and rights in any products provided or used in the performance of the Contract.

If any of the products provided by the Contractor in such suit or proceeding are held to constitute infringement and the use is enjoined, the Contractor shall, at its own expense and at its option, either procure the right to continue use of such infringement products, replace them with non-infringement equal performance products or modify them so that they are no longer infringing.

If the Contractor is unable to do any of the preceding, the Contractor agrees to remove all the equipment or software which are obtained contemporaneously with the infringing product, or, at the option of the Commonwealth, only those items of equipment or software which are held to be infringing, and to pay the Commonwealth: 1) any amounts paid by the Commonwealth towards the purchase of the product, less straight line depreciation; 2) any license fee paid by the Commonwealth for the use of any software, less an amount for the period of usage; and 3) the pro rata portion of any maintenance fee representing the time remaining in any period of maintenance paid for. The obligations of the Contractor under this paragraph continue without time limit. No costs or expenses shall be incurred for the account of the Contractor without its written consent.

V.14 CONTRACT-009.1d Ownership Rights (Oct 2006)

The Commonwealth shall have unrestricted authority to reproduce, distribute, and use any submitted report, data, or material, and any software or modifications and any associated documentation that is designed or developed and

delivered to the Commonwealth as part of the performance of the Contract.

V.15 CONTRACT-010.1a Acceptance (Oct 2006)

No item(s) received by the Commonwealth shall be deemed accepted until the Commonwealth has had a reasonable opportunity to inspect the item(s). Any item(s) which is discovered to be defective or fails to conform to the specifications may be rejected upon initial inspection or at any later time if the defects contained in the item(s) or the noncompliance with the specifications were not reasonably ascertainable upon the initial inspection. It shall thereupon become the duty of the Contractor to remove rejected item(s) from the premises without expense to the Commonwealth within fifteen (15) days after notification. Rejected item(s) left longer than fifteen (15) days will be regarded as abandoned, and the Commonwealth shall have the right to dispose of them as its own property and shall retain that portion of the proceeds of any sale which represents the Commonwealth's costs and expenses in regard to the storage and sale of the item(s). Upon notice of rejection, the Contractor shall immediately replace all such rejected item(s) with others conforming to the specifications and which are not defective. If the Contractor fails, neglects or refuses to do so, the Commonwealth shall then have the right to procure a corresponding quantity of such item(s), and deduct from any monies due or that may thereafter become due to the Contractor, the difference between the price stated in the Contract and the cost thereof to the Commonwealth.

V.16 CONTRACT-010.2 Product Conformance (March 2012)

The Commonwealth reserves the right to require any and all Contractors to:

1. Provide certified data from laboratory testing performed by the Contractor, or performed by an independent laboratory, as specified by the Commonwealth.
2. Supply published manufacturer product documentation.
3. Permit a Commonwealth representative to witness testing at the Contractor's location or at an independent laboratory.
4. Complete a survey/questionnaire relating to the bid requirements and specifications.
5. Provide customer references.
6. Provide a product demonstration at a location near Harrisburg or the using agency location.

V.17 CONTRACT-010.3 Rejected Material Not Considered Abandoned (March 2012)

The Commonwealth shall have the right to not regard any rejected material as abandoned and to demand that the Contractor remove the rejected material from the premises within thirty (30) days of notification. The Contractor shall be responsible for removal of the rejected material as well as proper clean-up. If the Contractor fails or refuses to remove the rejected material as demanded by the Commonwealth, the Commonwealth may seek payment from, or set-off from any payments due to the Contractor under this or any other Contract with the Commonwealth, the costs of removal and clean-up. This is in addition to all other rights to recover costs incurred by the Commonwealth.

V.18 CONTRACT-011.1a Compliance With Law (Oct 2006)

The Contractor shall comply with all applicable federal and state laws and regulations and local ordinances in the performance of the Contract.

V.19 CONTRACT-013.1 Environmental Provisions (Oct 2006)

In the performance of the Contract, the Contractor shall minimize pollution and shall strictly comply with all

applicable environmental laws and regulations, including, but not limited to: the Clean Streams Law Act of June 22, 1937 (P.L. 1987, No. 394), as amended 35 P.S. Section 691.601 et seq.; the Pennsylvania Solid Waste Management Act, Act of July 7, 1980 (P.L. 380, No. 97), as amended, 35 P.S. Section 6018.101 et seq. ; and the Dam Safety and Encroachment Act, Act of November 26, 1978 (P.L. 1375, No. 325), as amended , 32 P.S. Section 693.1.

V.20 CONTRACT-014.1 Post-Consumer Recycled Content (June 2016)

Except as specifically waived by the Department of General Services in writing, any products which are provided to the Commonwealth as a part of the performance of the Contract must meet the minimum percentage levels for total recycled content as specified by the Environmental Protection Agency in its Comprehensive Procurement Guidelines, which can be found at <https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program> .

V.21 CONTRACT-014.3 Recycled Content Enforcement (February 2012)

The Contractor may be required, after delivery of the Contract item(s), to provide the Commonwealth with documentary evidence that the item(s) was in fact produced with the required minimum percentage of post-consumer and recovered material content.

V.22 CONTRACT-015.1 Compensation (Oct 2006)

The Contractor shall be required to furnish the awarded item(s) at the price(s) quoted in the Purchase Order. All item(s) shall be delivered within the time period(s) specified in the Purchase Order. The Contractor shall be compensated only for item(s) that are delivered and accepted by the Commonwealth.

V.23 CONTRACT-015.2 Billing Requirements (July 2021)

Unless the Contractor has been authorized by the Commonwealth for Evaluated Receipt Settlement or Vendor Self-Invoicing , the Contractor shall include in all of its invoices the following minimum information:

- Vendor name and "Remit to" address, including SAP Vendor number;
- SAP Purchase Order number;
- Delivery Address, including name of Commonwealth agency;
- Description of the supplies/services delivered in accordance with SAP Purchase Order (include purchase order line number if possible);
- Quantity provided;
- Unit price;
- Price extension;
- Total price; and
- Delivery date of supplies or services.

If an invoice does not contain the minimum information set forth in this paragraph, the Commonwealth may return the invoice as improper. If the Commonwealth returns an invoice as improper, the time for processing a payment will be suspended until the Commonwealth receives a correct invoice. The Contractor may not receive payment until the Commonwealth has received a correct invoice.

Contractors are required to establish separate billing accounts with each using agency and invoice them directly. Each invoice shall be itemized with adequate detail and match the line item on the Purchase Order. In no instance shall any payment be made for services to the Contractor that are not in accordance with the prices on the Purchase Order, the Contract, updated price lists or any discounts negotiated by the purchasing agency.

V.24 CONTRACT-015.7 Price Adjustment – Consumer Price Index (Oct 2013)

The Contractor may increase the rates to be paid by the Commonwealth under the contract by no more than the percentage increase in the Consumer Price Index (**Insert text providing greater detail**) on a/an ANNUAL basis. The Contractor shall give at least 060 days prior notice of a price increase.

V.25 CONTRACT-016.1 Payment (Oct 2006)

- a. The Commonwealth shall put forth reasonable efforts to make payment by the required payment date. The required payment date is: (a) the date on which payment is due under the terms of the Contract; (b) thirty (30) days after a proper invoice actually is received at the "Bill To" address if a date on which payment is due is not specified in the Contract (a "proper" invoice is not received until the Commonwealth accepts the service as satisfactorily performed); or (c) the payment date specified on the invoice if later than the dates established by (a) and (b) above. Payment may be delayed if the payment amount on an invoice is not based upon the price(s) as stated in the Contract. If any payment is not made within fifteen (15) days after the required payment date, the Commonwealth may pay interest as determined by the Secretary of Budget in accordance with Act No. 266 of 1982 and regulations promulgated pursuant thereto. Payment should not be construed by the Contractor as acceptance of the service performed by the Contractor. The Commonwealth reserves the right to conduct further testing and inspection after payment, but within a reasonable time after performance, and to reject the service if such post payment testing or inspection discloses a defect or a failure to meet specifications. The Contractor agrees that the Commonwealth may set off the amount of any state tax liability or other obligation of the Contractor or its subsidiaries to the Commonwealth against any payments due the Contractor under any contract with the Commonwealth.
- b. The Commonwealth shall have the option of using the Commonwealth purchasing card to make purchases under the Contract or Purchase Order. The Commonwealth's purchasing card is similar to a credit card in that there will be a small fee which the Contractor will be required to pay and the Contractor will receive payment directly from the card issuer rather than the Commonwealth. Any and all fees related to this type of payment are the responsibility of the Contractor. In no case will the Commonwealth allow increases in prices to offset credit card fees paid by the Contractor or any other charges incurred by the Contractor, unless specifically stated in the terms of the Contract or Purchase Order.

V.26 CONTRACT-016.2 Payment – Electronic Funds Transfer (February 2014)

- a. The Commonwealth will make contract payments through the Automated Clearing House (ACH). Within 10 days of award of the contract or purchase order, the contractor must submit or must have already submitted their ACH information within their user profile in the Commonwealth's procurement system (SRM).
- b. The contractor must submit a unique invoice number with each invoice submitted. The unique invoice number will be listed on the Commonwealth of Pennsylvania's ACH remittance advice to enable the contractor to properly apply the state agency's payment to the invoice submitted.
- c. It is the responsibility of the contractor to ensure that the ACH information contained in SRM is accurate and complete. Failure to maintain accurate and complete information may result in delays in payments.

V.27 CONTRACT-017.1 Taxes (Dec 5 2006)

The Commonwealth is exempt from all excise taxes imposed by the Internal Revenue Service and has accordingly registered with the Internal Revenue Service to make tax free purchases under Registration No. 23-23740001-K. With the exception of purchases of the following items, no exemption certificates are required and none will be issued: undyed diesel fuel, tires, trucks, gas guzzler emergency vehicles, and sports fishing equipment. The Commonwealth is also exempt from Pennsylvania state sales tax, local sales tax, public transportation assistance taxes and fees and vehicle rental tax. The Department of Revenue regulations provide that exemption certificates are not required for sales made to governmental entities and none will be issued. Nothing in this paragraph is meant to exempt a construction contractor from the payment of any of these taxes or fees which are required to be paid with respect to the purchase, use, rental, or lease of tangible personal property or taxable services used or transferred in connection with the performance of a construction contract.

V.28 CONTRACT-018.1 Assignment of Antitrust Claims (Oct 2006)

The Contractor and the Commonwealth recognize that in actual economic practice, overcharges by the Contractor's suppliers resulting from violations of state or federal antitrust laws are in fact borne by the Commonwealth. As part of the consideration for the award of the Contract, and intending to be legally bound, the Contractor assigns to the Commonwealth all right, title and interest in and to any claims the Contractor now has, or may acquire, under state or federal antitrust laws relating to the products and services which are the subject of this Contract.

V.29 CONTRACT-019.1 Hold Harmless Provision (Nov 30 2006)

- a. The Contractor shall hold the Commonwealth harmless from and indemnify the Commonwealth against any and all third party claims, demands and actions based upon or arising out of any activities performed by the Contractor and its employees and agents under this Contract, provided the Commonwealth gives Contractor prompt notice of any such claim of which it learns. Pursuant to the Commonwealth Attorneys Act (71 P.S. Section 732-101, *et seq.*), the Office of Attorney General (OAG) has the sole authority to represent the Commonwealth in actions brought against the Commonwealth. The OAG may, however, in its sole discretion and under such terms as it deems appropriate, delegate its right of defense. If OAG delegates the defense to the Contractor, the Commonwealth will cooperate with all reasonable requests of Contractor made in the defense of such suits.
- b. Notwithstanding the above, neither party shall enter into any settlement without the other party's written consent, which shall not be unreasonably withheld. The Commonwealth may, in its sole discretion, allow the Contractor to control the defense and any related settlement negotiations.

V.30 CONTRACT-020.1 Audit Provisions (Oct 2006)

The Commonwealth shall have the right, at reasonable times and at a site designated by the Commonwealth, to audit the books, documents and records of the Contractor to the extent that the books, documents and records relate to costs or pricing data for the Contract. The Contractor agrees to maintain records which will support the prices charged and costs incurred for the Contract. The Contractor shall preserve books, documents, and records that relate to costs or pricing data for the Contract for a period of three (3) years from date of final payment. The Contractor shall give full and free access to all records to the Commonwealth and/or their authorized representatives.

V.31 CONTRACT-021.1 Default (Oct 2013)

a. The Commonwealth may, subject to the Force Majeure provisions of this Contract, and in addition to its other rights under the Contract, declare the Contractor in default by written notice thereof to the Contractor, and terminate (as provided in the Termination Provisions of this Contract) the whole or any part of this Contract or any Purchase Order for any of the following reasons:

- 1) Failure to begin work within the time specified in the Contract or Purchase Order or as otherwise specified;
- 2) Failure to perform the work with sufficient labor, equipment, or material to ensure the completion of the specified work in accordance with the Contract or Purchase Order terms;
- 3) Unsatisfactory performance of the work;
- 4) Failure to deliver the awarded item(s) within the time specified in the Contract or Purchase Order or as otherwise specified;
- 5) Improper delivery;
- 6) Failure to provide an item(s) which is in conformance with the specifications referenced in the Contract or Purchase Order;

- 7) Delivery of a defective item;
- 8) Failure or refusal to remove material, or remove and replace any work rejected as defective or unsatisfactory;
- 9) Discontinuance of work without approval;
- 10) Failure to resume work, which has been discontinued, within a reasonable time after notice to do so;
- 11) Insolvency or bankruptcy;
- 12) Assignment made for the benefit of creditors;
- 13) Failure or refusal within 10 days after written notice by the Contracting Officer, to make payment or show cause why payment should not be made, of any amounts due for materials furnished, labor supplied or performed, for equipment rentals, or for utility services rendered;
- 14) Failure to protect, to repair, or to make good any damage or injury to property;
- 15) Breach of any provision of the Contract;
- 16) Failure to comply with representations made in the Contractor's bid/proposal; or
- 17) Failure to comply with applicable industry standards, customs, and practice.

b. In the event that the Commonwealth terminates this Contract or any Purchase Order in whole or in part as provided in Subparagraph a. above, the Commonwealth may procure, upon such terms and in such manner as it determines, items similar or identical to those so terminated, and the Contractor shall be liable to the Commonwealth for any reasonable excess costs for such similar or identical items included within the terminated part of the Contract or Purchase Order.

c. If the Contract or a Purchase Order is terminated as provided in Subparagraph a. above, the Commonwealth, in addition to any other rights provided in this paragraph, may require the Contractor to transfer title and deliver immediately to the Commonwealth in the manner and to the extent directed by the Contracting Officer, such partially completed items, including, where applicable, reports, working papers and other documentation, as the Contractor has specifically produced or specifically acquired for the performance of such part of the Contract or Purchase Order as has been terminated. Except as provided below, payment for completed work accepted by the Commonwealth shall be at the Contract price. Except as provided below, payment for partially completed items including, where applicable, reports and working papers, delivered to and accepted by the Commonwealth shall be in an amount agreed upon by the Contractor and Contracting Officer. The Commonwealth may withhold from amounts otherwise due the Contractor for such completed or partially completed works, such sum as the Contracting Officer determines to be necessary to protect the Commonwealth against loss.

d. The rights and remedies of the Commonwealth provided in this paragraph shall not be exclusive and are in addition to any other rights and remedies provided by law or under this Contract.

e. The Commonwealth's failure to exercise any rights or remedies provided in this paragraph shall not be construed to be a waiver by the Commonwealth of its rights and remedies in regard to the event of default or any succeeding event of default.

f. Following exhaustion of the Contractor's administrative remedies as set forth in the Contract Controversies Provision of the Contract, the Contractor's exclusive remedy shall be to seek damages in the Board of Claims.

V.32 CONTRACT-022.1 Force Majeure (Oct 2006)

Neither party will incur any liability to the other if its performance of any obligation under this Contract is prevented or delayed by causes beyond its control and without the fault or negligence of either party. Causes beyond a party's control may include, but aren't limited to, acts of God or war, changes in controlling law, regulations, orders or the

requirements of any governmental entity, severe weather conditions, civil disorders, natural disasters, fire, epidemics and quarantines, general strikes throughout the trade, and freight embargoes.

The Contractor shall notify the Commonwealth orally within five (5) days and in writing within ten (10) days of the date on which the Contractor becomes aware, or should have reasonably become aware, that such cause would prevent or delay its performance. Such notification shall (i) describe fully such cause(s) and its effect on performance, (ii) state whether performance under the contract is prevented or delayed and (iii) if performance is delayed, state a reasonable estimate of the duration of the delay. The Contractor shall have the burden of proving that such cause(s) delayed or prevented its performance despite its diligent efforts to perform and shall produce such supporting documentation as the Commonwealth may reasonably request. After receipt of such notification, the Commonwealth may elect to cancel the Contract, cancel the Purchase Order, or to extend the time for performance as reasonably necessary to compensate for the Contractor's delay.

In the event of a declared emergency by competent governmental authorities, the Commonwealth by notice to the Contractor, may suspend all or a portion of the Contract or Purchase Order.

V.33 CONTRACT-023.1a Termination Provisions (Oct 2013)

The Commonwealth has the right to terminate this Contract or any Purchase Order for any of the following reasons. Termination shall be effective upon written notice to the Contractor.

a. **TERMINATION FOR CONVENIENCE:** The Commonwealth shall have the right to terminate the Contract or a Purchase Order for its convenience if the Commonwealth determines termination to be in its best interest. The Contractor shall be paid for work satisfactorily completed prior to the effective date of the termination, but in no event shall the Contractor be entitled to recover loss of profits.

b. **NON-APPROPRIATION:** The Commonwealth's obligation to make payments during any Commonwealth fiscal year succeeding the current fiscal year shall be subject to availability and appropriation of funds. When funds (state and/or federal) are not appropriated or otherwise made available to support continuation of performance in a subsequent fiscal year period, the Commonwealth shall have the right to terminate the Contract or a Purchase Order. The Contractor shall be reimbursed for the reasonable value of any nonrecurring costs incurred but not amortized in the price of the supplies or services delivered under the Contract. Such reimbursement shall not include loss of profit, loss of use of money, or administrative or overhead costs. The reimbursement amount may be paid from any appropriations available for that purpose.

c. **TERMINATION FOR CAUSE:** The Commonwealth shall have the right to terminate the Contract or a Purchase Order for Contractor default under the Default Clause upon written notice to the Contractor. The Commonwealth shall also have the right, upon written notice to the Contractor, to terminate the Contract or a Purchase Order for other cause as specified in the Contract or by law. If it is later determined that the Commonwealth erred in terminating the Contract or a Purchase Order for cause, then, at the Commonwealth's discretion, the Contract or Purchase Order shall be deemed to have been terminated for convenience under the Subparagraph a.

V.34 CONTRACT-024.1 Contract Controversies (Oct 2011)

a. In the event of a controversy or claim arising from the Contract, the Contractor must, within six months after the cause of action accrues, file a written claim with the contracting officer for a determination. The claim shall state all grounds upon which the Contractor asserts a controversy exists. If the Contractor fails to file a claim or files an untimely claim, the Contractor is deemed to have waived its right to assert a claim in any forum. At the time the claim is filed, or within sixty (60) days thereafter, either party may request mediation through the Commonwealth Office of General Counsel Dispute Resolution Program.

b. If the Contractor or the contracting officer requests mediation and the other party agrees, the contracting officer shall promptly make arrangements for mediation. Mediation shall be scheduled so as to not delay the issuance of the final determination beyond the required 120 days after receipt of the claim if mediation is unsuccessful. If mediation is not agreed to or if resolution is not reached through mediation, the contracting

officer shall review timely-filed claims and issue a final determination, in writing, regarding the claim. The final determination shall be issued within 120 days of the receipt of the claim, unless extended by consent of the contracting officer and the Contractor. The contracting officer shall send his/her written determination to the Contractor. If the contracting officer fails to issue a final determination within the 120 days (unless extended by consent of the parties), the claim shall be deemed denied. The contracting officer's determination shall be the final order of the purchasing agency.

c. Within fifteen (15) days of the mailing date of the determination denying a claim or within 135 days of filing a claim if, no extension is agreed to by the parties, whichever occurs first, the Contractor may file a statement of claim with the Commonwealth Board of Claims. Pending a final judicial resolution of a controversy or claim, the Contractor shall proceed diligently with the performance of the Contract in a manner consistent with the determination of the contracting officer and the Commonwealth shall compensate the Contractor pursuant to the terms of the Contract.

V.35 CONTRACT-025.1 Assignability and Subcontracting (Oct 2013)

a. Subject to the terms and conditions of this paragraph, this Contract shall be binding upon the parties and their respective successors and assigns.

b. The Contractor shall not subcontract with any person or entity to perform all or any part of the work to be performed under this Contract without the prior written consent of the Contracting Officer, which consent may be withheld at the sole and absolute discretion of the Contracting Officer.

c. The Contractor may not assign, in whole or in part, this Contract or its rights, duties, obligations, or responsibilities hereunder without the prior written consent of the Contracting Officer, which consent may be withheld at the sole and absolute discretion of the Contracting Officer.

d. Notwithstanding the foregoing, the Contractor may, without the consent of the Contracting Officer, assign its rights to payment to be received under the Contract, provided that the Contractor provides written notice of such assignment to the Contracting Officer together with a written acknowledgement from the assignee that any such payments are subject to all of the terms and conditions of this Contract.

e. For the purposes of this Contract, the term "assign" shall include, but shall not be limited to, the sale, gift, assignment, pledge, or other transfer of any ownership interest in the Contractor provided, however, that the term shall not apply to the sale or other transfer of stock of a publicly traded company.

f. Any assignment consented to by the Contracting Officer shall be evidenced by a written assignment agreement executed by the Contractor and its assignee in which the assignee agrees to be legally bound by all of the terms and conditions of the Contract and to assume the duties, obligations, and responsibilities being assigned.

g. A change of name by the Contractor, following which the Contractor's federal identification number remains unchanged, shall not be considered to be an assignment hereunder. The Contractor shall give the Contracting Officer written notice of any such change of name.

V.36 CONTRACT-026.1 Other Contractors (Oct 2006)

The Commonwealth may undertake or award other contracts for additional or related work, and the Contractor shall fully cooperate with other contractors and Commonwealth employees, and coordinate its work with such additional work as may be required. The Contractor shall not commit or permit any act that will interfere with the performance of work by any other contractor or by Commonwealth employees. This paragraph shall be included in the Contracts of all contractors with which this Contractor will be required to cooperate. The Commonwealth shall equitably enforce this paragraph as to all contractors to prevent the imposition of unreasonable burdens on any contractor.

V.37 CONTRACT-027.1 Nondiscrimination/Sexual Harassment Clause (August 2018)

The Contractor agrees:

1. In the hiring of any employee(s) for the manufacture of supplies, performance of work, or any other activity required under the contract or any subcontract, the Contractor, each subcontractor, or any person acting on behalf of the Contractor or subcontractor shall not discriminate by reason of race, gender, creed, color, sexual orientation, gender identity or expression, or in violation of the *Pennsylvania Human Relations Act* (PHRA) and applicable federal laws, against any citizen of this Commonwealth who is qualified and available to perform the work to which the employment relates.
2. Neither the Contractor nor any subcontractor nor any person on their behalf shall in any manner discriminate by reason of race, gender, creed, color, sexual orientation, gender identity or expression, or in violation of the PHRA and applicable federal laws, against or intimidate any employee involved in the manufacture of supplies, the performance of work, or any other activity required under the contract.
3. Neither the Contractor nor any subcontractor nor any person on their behalf shall in any manner discriminate by reason of race, gender, creed, color, sexual orientation, gender identity or expression, or in violation of the PHRA and applicable federal laws, in the provision of services under the contract.
4. Neither the Contractor nor any subcontractor nor any person on their behalf shall in any manner discriminate against employees by reason of participation in or decision to refrain from participating in labor activities protected under the *Public Employee Relations Act*, *Pennsylvania Labor Relations Act* or *National Labor Relations Act*, as applicable and to the extent determined by entities charged with such Acts' enforcement, and shall comply with any provision of law establishing organizations as employees' exclusive representatives.
5. The Contractor and each subcontractor shall establish and maintain a written nondiscrimination and sexual harassment policy and shall inform their employees in writing of the policy. The policy must contain a provision that sexual harassment will not be tolerated and employees who practice it will be disciplined. Posting this Nondiscrimination/Sexual Harassment Clause conspicuously in easily-accessible and well-lighted places customarily frequented by employees and at or near where the contracted services are performed shall satisfy this requirement for employees with an established work site.
6. The Contractor and each subcontractor shall not discriminate by reason of race, gender, creed, color, sexual orientation, gender identity or expression, or in violation of PHRA and applicable federal laws, against any subcontractor or supplier who is qualified to perform the work to which the contract relates.
7. The Contractor and each subcontractor represents that it is presently in compliance with and will maintain compliance with all applicable federal, state, and local laws, regulations and policies relating to nondiscrimination and sexual harassment. The Contractor and each subcontractor further represents that it has filed a Standard Form 100 Employer Information Report ("EEO-1") with the U.S. Equal Employment Opportunity Commission ("EEOC") and shall file an annual EEO-1 report with the EEOC as required for employers' subject to *Title VII of the Civil Rights Act of 1964*, as amended, that have 100 or more employees and employers that have federal government contracts or first-tier subcontracts and have 50 or more employees. The Contractor and each subcontractor shall, upon request and within the time periods requested by the Commonwealth, furnish all necessary employment documents and records, including EEO-1 reports, and permit access to their books, records, and accounts by the contracting agency and the Bureau of Diversity, Inclusion and Small Business Opportunities for purpose of ascertaining compliance with provisions of this Nondiscrimination/Sexual Harassment Clause.
8. The Contractor shall include the provisions of this Nondiscrimination/Sexual Harassment Clause in every subcontract so that those provisions applicable to subcontractors will be binding upon each subcontractor.
9. The Contractor's and each subcontractor's obligations pursuant to these provisions are ongoing from and after the effective date of the contract through the termination date thereof. Accordingly, the Contractor and each subcontractor shall have an obligation to inform the Commonwealth if, at any time

during the term of the contract, it becomes aware of any actions or occurrences that would result in violation of these provisions.

10. The Commonwealth may cancel or terminate the contract and all money due or to become due under the contract may be forfeited for a violation of the terms and conditions of this Nondiscrimination/Sexual Harassment Clause. In addition, the agency may proceed with debarment or suspension and may place the Contractor in the Contractor Responsibility File.

V.38 CONTRACT-028.1 Contractor Integrity Provisions (January 2015)

It is essential that those who seek to contract with the Commonwealth of Pennsylvania ("Commonwealth") observe high standards of honesty and integrity. They must conduct themselves in a manner that fosters public confidence in the integrity of the Commonwealth contracting and procurement process.

1. DEFINITIONS. For purposes of these Contractor Integrity Provisions, the following terms shall have the meanings found in this Section:

a. "Affiliate" means two or more entities where (a) a parent entity owns more than fifty percent of the voting stock of each of the entities; or (b) a common shareholder or group of shareholders owns more than fifty percent of the voting stock of each of the entities; or (c) the entities have a common proprietor or general partner.

b. "Consent" means written permission signed by a duly authorized officer or employee of the Commonwealth, provided that where the material facts have been disclosed, in writing, by prequalification, bid, proposal, or contractual terms, the Commonwealth shall be deemed to have consented by virtue of the execution of this contract.

c. "Contractor" means the individual or entity, that has entered into this contract with the Commonwealth.

d. "Contractor Related Parties" means any affiliates of the Contractor and the Contractor's executive officers, Pennsylvania officers and directors, or owners of 5 percent or more interest in the Contractor.

e. "Financial Interest" means either:

(1) Ownership of more than a five percent interest in any business; or

(2) Holding a position as an officer, director, trustee, partner, employee, or holding any position of management.

f. "Gratuity" means tendering, giving, or providing anything of more than nominal monetary value including, but not limited to, cash, travel, entertainment, gifts, meals, lodging, loans, subscriptions, advances, deposits of money, services, employment, or contracts of any kind. The exceptions set forth in the *Governor's Code of Conduct, Executive Order 1980-18, the 4 Pa. Code §7.153(b)*, shall apply.

g. "Non-bid Basis" means a contract awarded or executed by the Commonwealth with Contractor without seeking bids or proposals from any other potential bidder or offeror.

2. In furtherance of this policy, Contractor agrees to the following:

a. Contractor shall maintain the highest standards of honesty and integrity during the performance of this contract and shall take no action in violation of state or federal laws or regulations or any other applicable laws or regulations, or other requirements applicable to Contractor or that govern contracting or procurement with the Commonwealth.

b. Contractor shall establish and implement a written business integrity policy, which includes, at a minimum, the requirements of these provisions as they relate to the Contractor activity with the Commonwealth and Commonwealth employees and which is made known to all Contractor employees. Posting these Contractor Integrity Provisions conspicuously in easily-accessible and well-lighted places customarily frequented by employees and at or near where the contract services are performed shall satisfy this requirement.

c. Contractor, its affiliates, agents, employees and anyone in privity with Contractor shall not accept, agree to give,

offer, confer or agree to confer or promise to confer, directly or indirectly, any gratuity or pecuniary benefit to any person, or to influence or attempt to influence any person in violation of any federal or state law, regulation, executive order of the Governor of Pennsylvania, statement of policy, management directive or any other published standard of the Commonwealth in connection with performance of work under this contract, except as provided in this contract.

d. Contractor shall not have a financial interest in any other contractor, subcontractor, or supplier providing services, labor or material under this contract, unless the financial interest is disclosed to the Commonwealth in writing and the Commonwealth consents to Contractor's financial interest prior to Commonwealth execution of the contract. Contractor shall disclose the financial interest to the Commonwealth at the time of bid or proposal submission, or if no bids or proposals are solicited, no later than the Contractor's submission of the contract signed by Contractor.

e. Contractor certifies to the best of its knowledge and belief that within the last five (5) years Contractor or Contractor Related Parties have not:

- (1) been indicted or convicted of a crime involving moral turpitude or business honesty or integrity in any jurisdiction;
- (2) been suspended, debarred or otherwise disqualified from entering into any contract with any governmental agency;
- (3) had any business license or professional license suspended or revoked;
- (4) had any sanction or finding of fact imposed as a result of a judicial or administrative proceeding related to fraud, extortion, bribery, bid rigging, embezzlement, misrepresentation or anti-trust; and
- (5) been, and is not currently, the subject of a criminal investigation by any federal, state or local prosecuting or investigative agency and/or civil anti-trust investigation by any federal, state or local prosecuting or investigative agency.

If Contractor cannot so certify to the above, then it must submit along with its bid, proposal or contract a written explanation of why such certification cannot be made and the Commonwealth will determine whether a contract may be entered into with the Contractor. The Contractor's obligation pursuant to this certification is ongoing from and after the effective date of the contract through the termination date thereof. Accordingly, the Contractor shall have an obligation to immediately notify the Commonwealth in writing if at any time during the term of the contract it becomes aware of any event which would cause the Contractor's certification or explanation to change. Contractor acknowledges that the Commonwealth may, in its sole discretion, terminate the contract for cause if it learns that any of the certifications made herein are currently false due to intervening factual circumstances or were false or should have been known to be false when entering into the contract.

f. Contractor shall comply with the requirements of the *Lobbying Disclosure Act (65 Pa.C.S. §13A01 et seq.)* regardless of the method of award. If this contract was awarded on a Non-bid Basis, Contractor must also comply with the requirements of the *Section 1641 of the Pennsylvania Election Code (25 P.S. §3260a)*.

g. When contractor has reason to believe that any breach of ethical standards as set forth in law, the Governor's Code of Conduct, or these Contractor Integrity Provisions has occurred or may occur, including but not limited to contact by a Commonwealth officer or employee which, if acted upon, would violate such ethical standards, Contractor shall immediately notify the Commonwealth contracting officer or the Office of the State Inspector General in writing.

h. Contractor, by submission of its bid or proposal and/or execution of this contract and by the submission of any bills, invoices or requests for payment pursuant to the contract, certifies and represents that is has not violated any of these Contractor Integrity Provisions in connection with the submission of the bid or proposal, during any contract negotiations or during the term of the contract, to include any extensions thereof. Contractor shall immediately notify the Commonwealth in writing of any actions for occurrences that would result in a violation of these Contractor Integrity Provisions. Contractor agrees to reimburse the Commonwealth for the reasonable costs of investigation incurred by the Office of the State Inspector General for investigations of the Contractor's compliance

with the terms of this or any other agreement between the Contractor and the Commonwealth that results in the suspension or debarment of the Contractor. Contractor shall not be responsible for investigative costs for investigations that do not result in the Contractor's suspension or debarment.

i. Contractor shall cooperate with the Office of the State Inspector General in its investigation of any alleged Commonwealth agency or employee breach of ethical standards and any alleged Contractor non-compliance with these Contractor Integrity Provisions. Contractor agrees to make identified Contractor employees available for interviews at reasonable times and places. Contractor, upon the inquiry or request of an Inspector General, shall provide, or if appropriate, make promptly available for inspection or copying, any information of any type or form deemed relevant by the Office of the State Inspector General to Contractor's integrity and compliance with these provisions. Such information may include, but shall not be limited to, Contractor's business or financial records, documents or files of any type or form that refer to or concern this contract. Contractor shall incorporate this paragraph in any agreement, contract or subcontract it enters into in the course of the performance of this contract/agreement solely for the purpose of obtaining subcontractor compliance with this provision. The incorporation of this provision in a subcontract shall not create privity of contract between the Commonwealth and any such subcontractor, and no third party beneficiaries shall be created thereby.

j. For violation of any of these Contractor Integrity Provisions, the Commonwealth may terminate this and any other contract with Contractor, claim liquidated damages in an amount equal to the value of anything received in breach of these Provisions, claim damages for all additional costs and expenses incurred in obtaining another contractor to complete performance under this contract, and debar and suspend Contractor from doing business with the Commonwealth. These rights and remedies are cumulative, and the use or non-use of any one shall not preclude the use of all or any other. These rights and remedies are in addition to those the Commonwealth may have under law, statute, regulation or otherwise.

V.39 CONTRACT-029.1 Contractor Responsibility Provisions (July 2021)

For the purpose of these provisions, the term Contractor is defined as any person, including, but not limited to, a bidder, offeror, loan recipient, grantee or lessor, who has furnished or performed or seeks to furnish or perform, goods, supplies, services, leased space, construction or other activity, under a contract, grant, lease, purchase order or reimbursement agreement with the Commonwealth of Pennsylvania (Commonwealth). The term Contractor includes a permittee, licensee, or any agency, political subdivision, instrumentality, public authority, or other public entity in the Commonwealth.

1. The Contractor certifies, in writing, for itself and its subcontractors required to be disclosed or approved by the Commonwealth, that as of the date of its execution of this Bid/Contract, that neither the Contractor, nor any such subcontractors, are under suspension or debarment by the Commonwealth or any governmental entity, instrumentality, or authority and, if the Contractor cannot so certify, then it agrees to submit, along with its Bid/Contract, a written explanation of why such certification cannot be made.

2. The Contractor also certifies, in writing, that as of the date of its execution of this Bid/Contract it has no tax liabilities or other Commonwealth obligations, or has filed a timely administrative or judicial appeal if such liabilities or obligations exist, or is subject to a duly approved deferred payment plan if such liabilities exist.

3. The Contractor's obligations pursuant to these provisions are ongoing from and after the effective date of the Contract through the termination date thereof. Accordingly, the Contractor shall have an obligation to inform the Commonwealth if, at any time during the term of the Contract, it becomes delinquent in the payment of taxes, or other Commonwealth obligations, or if it or, to the best knowledge of the Contractor, any of its subcontractors are suspended or debarred by the Commonwealth, the federal government, or any other state or governmental entity. Such notification shall be made within 15 days of the date of suspension or debarment.

4. The failure of the Contractor to notify the Commonwealth of its suspension or debarment by the Commonwealth, any other state, or the federal government shall constitute an event of default of the Contract with the Commonwealth.

5. The Contractor agrees to reimburse the Commonwealth for the reasonable costs of investigation incurred by the Office of State Inspector General for investigations of the Contractor's compliance with the terms of this or any

other agreement between the Contractor and the Commonwealth that results in the suspension or debarment of the contractor. Such costs shall include, but shall not be limited to, salaries of investigators, including overtime; travel and lodging expenses; and expert witness and documentary fees. The Contractor shall not be responsible for investigative costs for investigations that do not result in the Contractor's suspension or debarment.

6. The Contractor may search the current list of suspended and debarred Commonwealth contractors by visiting the eMarketplace website at <http://www.emarketplace.state.pa.us> and clicking the Debarment List tab.

V.40 CONTRACT-030.1 Americans with Disabilities Act (July 2021)

For the purpose of these provisions, the term contractor is defined as any person, including, but not limited to, a bidder, offeror, supplier, or grantee, who will furnish or perform or seeks to furnish or perform, goods, supplies, services, construction or other activity, under a purchase order, contract, or grant with the Commonwealth of Pennsylvania (Commonwealth).

During the term of this agreement, the contractor agrees as follows:

- 1 Pursuant to federal regulations promulgated under the authority of the Americans with Disabilities Act, 28 C. F. R. § 35.101 et seq., the contractor understands and agrees that no individual with a disability shall, on the basis of the disability, be excluded from participation in this agreement or from activities provided for under this agreement. As a condition of accepting and executing this agreement, the contractor agrees to comply with the "General Prohibitions Against Discrimination," 28 C. F. R. § 35.130, and all other regulations promulgated under Title II of the Americans with Disabilities Act which are applicable to the benefits, services, programs, and activities provided by the Commonwealth through contracts with outside contractors.
- 2 The contractor shall be responsible for and agrees to indemnify and hold harmless the Commonwealth from all losses, damages, expenses, claims, demands, suits, and actions brought by any party against the Commonwealth as a result of the contractor's failure to comply with the provisions of paragraph 1.

V.41 CONTRACT-031.1 Hazardous Substances (April 2017)

The Contractor shall provide information to the Commonwealth about the identity and hazards of hazardous substances supplied or used by the Contractor in the performance of the Contract. The Contractor must comply with Act 159 of October 5, 1984, known as the "Worker and Community Right to Know Act" (the "Act") and the regulations promulgated pursuant thereto at 34 Pa. Code Section 301.1 - 323.6.

a. Labeling. The Contractor shall ensure that each individual product (as well as the carton, container or package in which the product is shipped) of any of the following substances (as defined by the Act and the regulations) supplied by the Contractor is clearly labeled, tagged or marked with the information listed in Subparagraphs (1) through (4):

- 1) Hazardous substances:
 - a) The chemical name or common name,
 - b) A hazard warning, and
 - c) The name, address, and telephone number of the manufacturer.
- 2) Hazardous mixtures:
 - a) The common name, but if none exists, then the trade name,
 - b) The chemical or common name of special hazardous substances comprising .01% or more of the mixture,
 - c) The chemical or common name of hazardous substances consisting 1.0% or more of the mixture,

- d) A hazard warning, and
- e) The name, address, and telephone number of the manufacturer.

3) Single chemicals:

- a) The chemical name or the common name,
- b) A hazard warning, if appropriate, and
- c) The name, address, and telephone number of the manufacturer.

4) Chemical Mixtures:

- a) The common name, but if none exists, then the trade name,
- b) A hazard warning, if appropriate,
- c) The name, address, and telephone number of the manufacturer, and

d) The chemical name or common name of either the top five substances by volume or those substances consisting of 5.0% or more of the mixture.

A common name or trade name may be used only if the use of the name more easily or readily identifies the true nature of the hazardous substance, hazardous mixture, single chemical, or mixture involved.

Container labels shall provide a warning as to the specific nature of the hazard arising from the substance in the container.

The hazard warning shall be given in conformity with one of the nationally recognized and accepted systems of providing warnings, and hazard warnings shall be consistent with one or more of the recognized systems throughout the workplace. Examples are:

- NFPA 704, Identification of the Fire Hazards of Materials.
- National Paint and Coatings Association: Hazardous Materials Identification System.
- American Society for Testing and Materials, Safety Alert Pictorial Chart.
- American National Standard Institute, Inc., for the Precautionary Labeling of Hazardous Industrial Chemicals.

Labels must be legible and prominently affixed to and displayed on the product and the carton, container, or package so that employees can easily identify the substance or mixture present therein.

b. Material Safety Data Sheet. The contractor shall provide Material Safety Data Sheets (MSDS) with the information required by the Act and the regulations for each hazardous substance or hazardous mixture. The Commonwealth must be provided an appropriate MSDS with the initial shipment and with the first shipment after an MSDS is updated or product changed. For any other chemical, the contractor shall provide an appropriate MSDS, if the manufacturer, importer, or supplier produces or possesses the MSDS. The contractor shall also notify the Commonwealth when a substance or mixture is subject to the provisions of the Act. Material Safety Data Sheets may be attached to the carton, container, or package mailed to the Commonwealth at the time of shipment.

V.42 CONTRACT-032.1 Covenant Against Contingent Fees (Oct 2006)

The Contractor warrants that no person or selling agency has been employed or retained to solicit or secure the Contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, except bona fide employees or bona fide established commercial or selling agencies maintained by the Contractor for the purpose of securing business. For breach or violation of this warranty, the Commonwealth shall have the right to terminate the Contract without liability or in its discretion to deduct from the Contract price or consideration, or otherwise recover the full amount of such commission, percentage, brokerage, or contingent fee.

V.43 CONTRACT-033.1 Applicable Law (Oct 2006)

This Contract shall be governed by and interpreted and enforced in accordance with the laws of the Commonwealth of Pennsylvania (without regard to any conflict of laws provisions) and the decisions of the Pennsylvania courts. The Contractor consents to the jurisdiction of any court of the Commonwealth of Pennsylvania and any federal courts in Pennsylvania, waiving any claim or defense that such forum is not convenient or proper. The Contractor agrees that any such court shall have in personam jurisdiction over it, and consents to service of process in any manner authorized by Pennsylvania law.

V.44 CONTRACT- 034.1b Integration (Nov 30 2006)

This Contract, including the Invitation for Bids, the Contractor's bid, all referenced documents, and any Purchase Order constitutes the entire agreement between the parties. No agent, representative, employee or officer of either the Commonwealth or the Contractor has authority to make, or has made, any statement, agreement or representation, oral or written, in connection with the Contract, which in any way can be deemed to modify, add to or detract from, or otherwise change or alter its terms and conditions. No negotiations between the parties, nor any custom or usage, shall be permitted to modify or contradict any of the terms and conditions of the Contract. No modifications, alterations, changes, or waiver to the Contract or any of its terms shall be valid or binding unless accomplished by a written amendment signed by both parties.

V.45 CONTRACT-034.2b Order of Precedence - IFB (Dec 6 2006)

In the event there is a conflict among the documents comprising this Contract, the Commonwealth and the Contractor agree on the following order of precedence: the Contract; the IFB; and the Contractor's Bid in Response to the IFB.

V.46 CONTRACT-034.3 Controlling Terms and Conditions (Aug 2011)

The terms and conditions of this Contract shall be the exclusive terms of agreement between the Contractor and the Commonwealth. All quotations requested and received from the Contractor are for obtaining firm pricing only. Other terms and conditions or additional terms and conditions included or referenced in the Contractor's quotations, invoices, business forms, or other documentation shall not become part of the parties' agreement and shall be disregarded by the parties, unenforceable by the Contractor and not binding on the Commonwealth.

V.47 CONTRACT-035.1a Changes (Oct 2006)

The Commonwealth reserves the right to make changes at any time during the term of the Contract or any renewals or extensions thereof: 1) to increase or decrease the quantities resulting from variations between any estimated quantities in the Contract and actual quantities; 2) to make changes to the services within the scope of the Contract; 3) to notify the Contractor that the Commonwealth is exercising any Contract renewal or extension option; or 4) to modify the time of performance that does not alter the scope of the Contract to extend the completion date beyond the Expiration Date of the Contract or any renewals or extensions thereof. Any such change shall be made by the Contracting Officer by notifying the Contractor in writing. The change shall be effective as of the date of the change, unless the notification of change specifies a later effective date. Such increases, decreases, changes, or modifications will not invalidate the Contract, nor, if performance security is being furnished in conjunction with the Contract, release the security obligation. The Contractor agrees to provide the service in accordance with the change order. Any dispute by the Contractor in regard to the performance required by any notification of change shall be handled through Contract Controversies Provision.

V.48 CONTRACT-037.1a Confidentiality (Oct 2013)

(a) The Contractor agrees to protect the confidentiality of the Commonwealth's confidential information. The

Commonwealth agrees to protect the confidentiality of Contractor's confidential information. In order for information to be deemed confidential, the party claiming confidentiality must designate the information as "confidential" in such a way as to give notice to the other party (notice may be communicated by describing the information, and the specifications around its use or disclosure, in the SOW). Neither party may assert that information owned by the other party is such party's confidential information. The parties agree that such confidential information shall not be copied, in whole or in part, or used or disclosed except when essential for authorized activities under this Contract and, in the case of disclosure, where the recipient of the confidential information has agreed to be bound by confidentiality requirements no less restrictive than those set forth herein. Each copy of such confidential information shall be marked by the party making the copy with any notices appearing in the original. Upon termination or cancellation of this Contract or any license granted hereunder, the receiving party will return to the disclosing party all copies of the confidential information in the receiving party's possession, other than one copy, which may be maintained for archival purposes only, and which will remain subject to this Contract's security, privacy, data retention/destruction and confidentiality provisions (all of which shall survive the expiration of this Contract). Both parties agree that a material breach of these requirements may, after failure to cure within the time frame specified in this Contract, and at the discretion of the non-breaching party, result in termination for default pursuant to the DEFAULT provision of this Contract, in addition to other remedies available to the non-breaching party.

(b) Insofar as information is not otherwise protected by law or regulation, the obligations stated in this Section do not apply to information:

- (1) already known to the recipient at the time of disclosure other than through the contractual relationship;
- (2) independently generated by the recipient and not derived by the information supplied by the disclosing party.
- (3) known or available to the public, except where such knowledge or availability is the result of unauthorized disclosure by the recipient of the proprietary information;
- (4) disclosed to the recipient without a similar restriction by a third party who has the right to make such disclosure; or
- (5) required to be disclosed by law, regulation, court order, or other legal process.

There shall be no restriction with respect to the use or disclosure of any ideas, concepts, know-how, or data processing techniques developed alone or jointly with the Commonwealth in connection with services provided to the Commonwealth under this Contract.

(c) The Contractor shall use the following process when submitting information to the Commonwealth it believes to be confidential and/or proprietary information or trade secrets:

- (1) Prepare an un-redacted version of the appropriate document, and
- (2) Prepare a redacted version of the document that redacts the information that is asserted to be confidential or proprietary information or a trade secret, and
- (3) Prepare a signed written statement that states:
 - (i) the attached document contains confidential or proprietary information or trade secrets;
 - (ii) the Contractor is submitting the document in both redacted and un-redacted format in accordance with 65 P.S. § 67.707(b); and
 - (iii) the Contractor is requesting that the document be considered exempt under 65 P.S. § 67.708(b)(11) from public records requests.
- (4) Submit the two documents along with the signed written statement to the Commonwealth.

V.49 CONTRACT-046.1 Manufacturer's Price Reduction (Oct 2006)

If, prior to the delivery of the awarded item(s) by the Contractor, a price reduction is announced by the original equipment manufacturer, a comparative price reduction will be given to the Commonwealth by the Contractor.

V.50 CONTRACT-047.1 Motor Vehicles to be manufactured in North America (Oct 2006)

All motor vehicles furnished by the Contractor pursuant to the Contract must be manufactured in North America. North America is defined as the United States, Canada, and Mexico. A motor vehicle is manufactured in North America if a substantial majority of the principal components are assembled into the final products in an assembly plant in North America. The Contractor shall be prepared to prove that the motor vehicles that will be, or have been, furnished to the Commonwealth will be or are, in fact, manufactured in North America in accordance with Sections 3731-3736 of the Commonwealth Procurement Code (62 Pa. C.S. Sections 3731-3736), known as the Motor Vehicle Procurement Act. No payment shall be made to the Contractor unless the Commonwealth is satisfied that the Contractor has complied with these provisions and the Motor Vehicle Procurement Act. Any payments made to the Contractor, which should not have been made, shall be recoverable directly from the Contractor. In addition to the withholding of payments, any person who willfully violates any of the provisions of the Motor Vehicle Procurement Act may be prohibited by any public agency from participation in Contracts awarded by the public agency for a period of five years from the date of determination that a violation has occurred.

V.51 CONTRACT-047.2b General Delivery Requirements for Vehicles (Oct 2012)

The Contractor must supply the contracted vehicles that are to be delivered to the Commonwealth of Pennsylvania in accordance with the specifications attached to this IFB and any Pennsylvania Commercial Item Descriptions referenced in the specifications and attached to this IFB.

V.52 CONTRACT-047.5 Local Public Procurement Unit Participation (March 5, 2007)

Any questions or problems pertaining to acquisition of vehicles by participating Local Public Procurement Units and their use of the Contract should be accomplished in a timely manner and all contact pertaining to these questions or problems should be directed to the Bureau of Procurement, Department of General Services to the attention of the commodity specialist assigned to this contract.

V.53 CONTRACT-047.6 Additional Delivery Charges (Participating Local Public Procurement Units ONLY) (Oct 2006)

Participating Local Public Procurement Units will pick up ordered equipment at the Contractor(s)'s place of business or have the equipment delivered by the Contractor for an additional **CHARGE PER VEHICLE of \$0.00** .

V.54 CONTRACT-047.7 Taxes (Oct 2006)

All participating Local Public Procurement Units will be required to indicate on their purchase orders the Internal Revenue Service Registration Number for exemption from Federal Excise Tax, if applicable.

V.55 CONTRACT-051.1 Notice (Dec 2006)

Any written notice to any party under this Contract shall be deemed sufficient if delivered personally, or by facsimile, telecopy, electronic or digital transmission (provided such delivery is confirmed), or by a recognized overnight courier service (e.g., DHL, Federal Express, etc.) with confirmed receipt, or by certified or registered United States mail, postage prepaid, return receipt requested, and sent to following:

- a. If to the Contractor: the Contractor's address as recorded in the Commonwealth's Supplier Registration system.
- b. If to the Commonwealth: the address of the Issuing Office as set forth on the Contract.

V.56 CONTRACT-052.1 Right to Know Law (Feb 2010)

a. The Pennsylvania Right-to-Know Law, 65 P.S. §§ 67.101-3104, ("RTKL") applies to this Contract. For the purpose of these provisions, the term "the Commonwealth" shall refer to the contracting Commonwealth agency.

b. If the Commonwealth needs the Contractor's assistance in any matter arising out of the RTKL related to this Contract, it shall notify the Contractor using the legal contact information provided in this Contract. The Contractor, at any time, may designate a different contact for such purpose upon reasonable prior written notice to the Commonwealth.

c. Upon written notification from the Commonwealth that it requires the Contractor's assistance in responding to a request under the RTKL for information related to this Contract that may be in the Contractor's possession, constituting, or alleged to constitute, a public record in accordance with the RTKL ("Requested Information"), the Contractor shall:

1. Provide the Commonwealth, within ten (10) calendar days after receipt of written notification, access to, and copies of, any document or information in the Contractor's possession arising out of this Contract that the Commonwealth reasonably believes is Requested Information and may be a public record under the RTKL; and
2. Provide such other assistance as the Commonwealth may reasonably request, in order to comply with the RTKL with respect to this Contract.

d. If the Contractor considers the Requested Information to include a request for a Trade Secret or Confidential Proprietary Information, as those terms are defined by the RTKL, or other information that the Contractor considers exempt from production under the RTKL, the Contractor must notify the Commonwealth and provide, within seven (7) calendar days of receiving the written notification, a written statement signed by a representative of the Contractor explaining why the requested material is exempt from public disclosure under the RTKL.

e. The Commonwealth will rely upon the written statement from the Contractor in denying a RTKL request for the Requested Information unless the Commonwealth determines that the Requested Information is clearly not protected from disclosure under the RTKL. Should the Commonwealth determine that the Requested Information is clearly not exempt from disclosure, the Contractor shall provide the Requested Information within five (5) business days of receipt of written notification of the Commonwealth's determination.

f. If the Contractor fails to provide the Requested Information within the time period required by these provisions, the Contractor shall indemnify and hold the Commonwealth harmless for any damages, penalties, costs, detriment or harm that the Commonwealth may incur as a result of the Contractor's failure, including any statutory damages assessed against the Commonwealth.

g. The Commonwealth will reimburse the Contractor for any costs associated with complying with these provisions only to the extent allowed under the fee schedule established by the Office of Open Records or as otherwise provided by the RTKL if the fee schedule is inapplicable.

h. The Contractor may file a legal challenge to any Commonwealth decision to release a record to the public with the Office of Open Records, or in the Pennsylvania Courts, however, the Contractor shall indemnify the Commonwealth for any legal expenses incurred by the Commonwealth as a result of such a challenge and shall hold the Commonwealth harmless for any damages, penalties, costs, detriment or harm that the Commonwealth may incur as a result of the Contractor's failure, including any statutory damages assessed against the Commonwealth, regardless of the outcome of such legal challenge. As between the parties, the Contractor agrees to waive all rights or remedies that may be available to it as a result of the Commonwealth's disclosure of Requested Information pursuant to the RTKL.

i. The Contractor's duties relating to the RTKL are continuing duties that survive the expiration of this Contract and shall continue as long as the Contractor has Requested Information in its possession.

| | |
|---|--------------------|
| | Page <u>1</u> of 3 |
| SPECIFICATION | |
| 037700 - Truck, 11K, 2WD, Regular Cab & Chassis, Diesel Engine, Automatic Transmission, Dual Rear Wheels | |
| This Dual Rear Wheel Model, Chassis Only, Shall Be A Manufacturer's Standard Model Vehicle, Capable Of Carrying Two (2) Passengers. 11,000 Lb GVWR Minimum. Manufacturer's Rating Certified On Door. Chassis to accommodate A 9 Foot Minimum, Flatbed, Service, Shop, Foreman or Survey Body. | |
| Note: " Refer to PCID 1075 for <u>Delivery</u> , and <u>Warranty</u> Requirements". | |
| The following additional items shall be supplied | |
| Air Bags : Shall be equipped with manufacturers standard air bags. | |
| Air Conditioning : Shall be equipped with manufacturers standard air conditioning. | |
| Alternator : Shall be manufacturers largest / heaviest duty available. | |
| Blue Tooth: Shall be equipped with manufacturers standard Blue tooth system. | |
| Daytime Running Lights : Shall be equipped with manufacturers standard Daytime Running Lights. (Aftermarket Acceptable) | |
| Differential : Shall be equipped with manufacturers standard Limited Slip Differential. Ratio to be selected at time of order from manufacturer's standard available ratios. | |
| DEF Tank : Shall be mounted to not interfere with body installation. Any relocation shall be done in a professional manner using new materials. Fluid fill shall be labeled for product (ie. DEF Fluid) | |
| Engine : Shall be Manufacturer's highest available horsepower and torque rating, standard or optional diesel engine, to include, immersion in-block type engine heater For water cooled engines, with water-proof plug and flush mounted In front sheet metal to drivers side of vehicle, engine oil cooler , and largest available engine cooling capacity. | |
| Exhaust : Shall be capable of being extended by the body up fitter to the outer most edge of the installed body. | |
| Front Bumper : Shall be Chrome, Black, or Argent. | |
| Fuel Tank : Manufacturer's highest capacity standard tank frame mounted (Tank filler positioned to ensure that filler nozzle can be set on automatic and nozzle will support itself, with unrestricted flow.) A a label shall be affixed to the area above the filler neck describing the type of fuel the engine uses (ie. Diesel, Gasoline) | |
| Lubricants : Shall be synthetic where available, with drain plugs identified or painted red. (Engine oil excluded) | |
| Mirrors : Shall be manufacturers standard heavy duty outside mirrors with convex mirror (aftermarket convex spot mirror acceptable) and extendable arms, driver and passenger sides. Shall be equipped with manufacturers standard manual day / night rearview mirror. | |
| Paint : Manufacturer's standard safety or school bus yellow. | |
| Seats: Shall be equipped with Vinyl 40/20/40 seats with center work console, Foam Padded with Seatbelts. (Cloth is Unacceptable) | |
| Suspension : Shall be equipped with trailer and handling package, to include front stabilizer bar, heaviest available front and rear suspension, and heaviest available differential. | |
| Tires : Truck and Body Company shall ensure that proper sized tires and wheels for GVWR are supplied. Tires shall be radial, OEM's most aggressive / severe duty tire available from manufacturer. | |
| Transmission : Shall be automatic with largest available auxiliary oil cooler. | |
| Windshield : Shall be equipped with manufacturers standard tinted windshield. | |
| Windows and Locks : Shall be equipped with manufacturers standard manual windows and door locks. | |
| The following equipment shall be supplied / installed | |
| There shall be a step bar, REF: Bustin (PN# RB003) or prior approved equal, must be length of cab entry area on both sides. (Installed) REF EQN-170 drawing | |
| There shall be an ECCO Model 450 backup alarm, shock mounted. (Installed) | |
| There shall be a seven-way trailer light receptacle, "Pin Type", securely mounted near rear trailer hitch area. Wired per EQN - 80A. Connections shall be sealed and water tight and packed with dielectric grease. | |
| There shall be a 4.5" LED interior utility dome light with an on and off swith. OPTRONICS PART NUMBER#OPTILL22CB Installed centered, over the front seat, capable of operating with the Ignition off. | |
| There shall be a warning light: Whelen Model R10HDPA with Deutsch connectors. Supplied and delivered in the cab. | |
| All switches shall be permanently labeled and backlit. | |

There shall be two (2) front tow hooks, installed.

There shall be an emergency triangle warning kit in each unit, in storage box and mounted in cab. EQN - 66A

There shall be a 5 LB. minimum 3A:40:BC fire extinguisher rechargeable with vehicle mount. Securely mounted in the cab for easy and quick access. A sticker on the door closest to the extinguisher shall be applied in the lower outside corner of the door to identify the location of the extinguisher.

There shall be a trailer hitch installed, as per EQN - 202B, the upper portion of hitch shall be painted with non-skid paint if extending to or outside body perimeter and is likely to be stepped on. (Tape is not acceptable.) There shall be provisions made for a safety break away cable. Hitch and below receiver parts shall not interfere with any part of the bumper or body no matter what configuration on the mounting plate is used.

All the following shall be supplied and delivered in the cab. Buyers Products - Combo Ball Hitch W/ 2 inch Hard Chrome Ball BH8-2000, Pintle Mounting Plate PM-87, Bolt Kit 8520, Hitch Pin HP6253 WC. Or approved equal.

Safety

Unit shall be fitted with temporary mud flaps that shall remain intact.

The cab shall have conspicuity tape as Per EQN-127A.

Any area likely to be stepped on shall be covered with non-skid paint, tape is unacceptable.

All handrails, ladders, and step configurations shall be built for three points of contact.

Anti-slip paint is required on all handholds, for the entire length, (tape is unacceptable).

Options

Option : To be equipped with Four Wheel Drive.

Option : To be equipped with Snow Plow Prep package.

Option : To be equipped with Power windows, Power door locks, and Power / Heated mirrors with manual extendable arms.

Option : Road watch road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display.

Option : Vaisala road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display. Ambient sensor shall be mounted as to not receive any heat from the engine or drive train components to represent a false reading of the ambient air temperature.

Option : Install FLOCS system as per EQN: 351A.

Option : Flatbed Body upfit, Specification 046900

Option : Service Body upfit, Specification 048900

Option : Shop Body upfit, Specification 039700

Option : Foreman Body upfit, Specification 050400

Option : Foreman Body split door configuration 050401

Option : Survey Body upfit, Specification 049700

Option : **Statewide Radio:**

Vehicle electrical and electronics will conform to the Federal Communications Commission 47 C.F.R. Part 15 so as not to interfere with the operation of the PennDOT Land Mobile Radio, which is an authorized radio station under 47 C.F.R. Part 90.

Radio Antenna: There shall be a roof mount base, PCTEL model BMATM/NC25 and a VHF StiCO Roof-FT-NITI-M whip shall be cut to 18.0 inches per manufactures cut sheet. Assembly shall be mounted to the center of the cab roof (not to interfere with any cab shield), with the antenna cable routed to underneath the dash. There shall be a minimum of 4 feet of antenna cable coiled at the base of the floor to allow for connection of radio on spreader control pedestal. Antenna shall be prewired with a UHF MALE connection. (No substitute, standardization).

Power Distribution Center: There shall be a 4-way power/ground distribution center located on the underside of the dash for connection of the state radio. The lugs shall be configured in the following manner: (1) lug shall be a 30 ampere constant hot circuit, (1) lug shall be a 10 ampere ignition controlled circuit. (2) lugs shall be chassis ground. All connections shall be enclosed in a weatherproof enclosure.

Option : Bidder must provide option pricing for "one" of the following.

Factory: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. Unit shall be painted PennDOT yellow in lieu of the OEM's original color. Using the same process as with OEM paint.

Aftermarket: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. All surfaces shall be properly cleaned and prepared prior to paint. Paint shall be the same quality as factory paint. To include all areas of the unit including interior.

Drawings:

| | | | | |
|----------|---------|----------|-------------|---|
| EQN-66A | Revised | 07-13-17 | sheet 1 | TRIANGLE STORAGE BOX AND BRACKET |
| EQN-80A | Revised | 08-02-18 | sheet 1 | WIRING DIAGRAM |
| EQN-127A | Revised | 01-02-09 | sheet 1 | CONSPICUITY TAPE |
| EQN-202B | Revised | 07-27-16 | sheet 1 | HITCH: WEIGHT DISTRIBUTING |
| EQN-351A | Revised | 06-19-13 | sheet 1 & 2 | FAST LUBE OIL CHANGE SYSTEM OVERVIEW AND PARTS LIST |
| EQN-170 | | 7-19-16 | sheet 1 | STEP RUNNING BOARDS |

Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual.

Installation Practices

All lights shall meet all Federal and State regulations.

All wire splices shall be insulated with heat shrink materials or removable connectors that create a water tight connection.

All wires shall be securley fastened with no wires hanging or protruding where they are exposed to the risk of damage.

All junction boxes shall be located inside of the utility body, in a location that will not compromise storage space. For easy accessibility, junctions boxes must not be obstructed in any way.

All electrical connections shall be treated with di-electric grease. All wiring shall be secured using "P" type clamps at intervals not to exceed 12" between securment points

All wires shall be in a protective covering and protected from chaffing, rubbing and getting pulled or torn from external sources.

Any alterations / relocation to fuel fill, DEF tank, exhaust, Etc. to allow installation of body shall be made in a professional manner using new materials.

Any place steel and aluminum contact each other Mylar or an approved equal shall be used as a buffer. Laminate rubber is unacceptable.

All vertical and horizontal seams of the body sides shall utilize full penetration welds in accordance with standard welding practices as set forth by the American Welding Society and sealed water tight to create one integral body.

All corners shall be angled or rounded for safety and all weld splatters removed All mounting procedures shall be in accordance with NTEA standards.

The use of any of the following items or practices WILL NOT BE ACCEPTED.

Non-steel fittings on hydraulic pressure lines.

Excessive use of elbows on hydraulic lines.

Use of thread tape on hydraulic fittings.

Use of galvanized fittings or components on hydraulic system.

Improper hydraulic line size.

Use of high-pressure hose for hydraulic suction line.

Scotchlok-type wire splices.

Non-insulated wire splices.

Improper hose or wire routing near exhaust, over-sharp edges or through holes without grommets, or sharp edges.

Improperly prepared, primed and painted surfaces.

Non-fused electric circuits.

Hydraulic circuits without pressure relief protection.

Laminated Rubber

| | |
|---|--------------------|
| | Page <u>1</u> of 3 |
| SPECIFICATION | |
| 037710 - Truck, 11K, 2WD, Regular Cab & Chassis, Gasoline Engine, Automatic Transmission, Dual Rear Wheels | |
| This Dual Rear Wheel Model, Chassis Only, Shall Be A Manufacturer's Standard Model Vehicle, Capable Of Carrying Two (2) Passengers. 11,000 Lb GVWR Minimum. Manufacturer's Rating Certified On Door. Chassis to accommodate A 9 Foot Minimum, Flatbed, Service, Shop, Foreman or Survey Body. | |
| Note: " Refer to PCID 1075 for <u>Delivery</u> , and <u>Warranty</u> Requirements". | |
| The following additional items shall be supplied | |
| Air Bags : Shall be equipped with manufacturers standard air bags. | |
| Air Conditioning : Shall be equipped with manufacturers standard air conditioning. | |
| Alternator : Shall be manufacturers largest / heaviest duty available. | |
| Blue Tooth : Shall be equipped with manufacturers standard Blue tooth system. | |
| Daytime Running Lights : Shall be equipped with manufacturers standard Daytime Running Lights. (Aftermarket Acceptable) | |
| Differential : Shall be equipped with manufacturers standard Limited Slip Differential. Ratio to be selected at time of order from manufacturer's standard available ratios. | |
| Engine : Shall be Manufacturer's highest available horsepower and torque rating, standard or optional gasoline engine, to include, engine oil cooler , and largest available engine cooling capacity. | |
| Exhaust : Shall be capable of being extended by the body up fitter to the outer most edge of the installed body. | |
| Front Bumper : Shall be Chrome, Black, or Argent. | |
| Fuel Tank : Manufacturer's highest capacity standard tank frame mounted (Tank filler positioned to ensure that filler nozzle can be set on automatic and nozzle will support itself, with unrestricted flow.) | |
| Lubricants : Shall be synthetic where available, with drain plugs identified or painted red. (Engine oil excluded) | |
| Mirrors : Shall be manufacturers standard heavy duty outside mirrors with convex mirror (aftermarket convex spot mirror acceptable) and extendable arms, driver and passenger sides. Shall be equipped with manufacturers standard manual day / night rearview mirror. | |
| Paint : Manufacturer's standard safety or school bus yellow. | |
| Seats : Shall be equipped with Vinyl 40/20/40 seats with center work console, Foam Padded with Seatbelts. (Cloth is Unacceptable) | |
| Suspension : Shall be equipped with trailer and handling package, to include front stabilizer bar, heaviest available front and rear suspension, and heaviest available differential. | |
| Tires : Truck and Body Company shall ensure that proper sized tires and wheels for GVWR are supplied. Tires shall be radial, OEM's most aggressive / severe duty tire available from manufacturer. | |
| Transmission : Shall be automatic with largest available auxiliary oil cooler. | |
| Windshield : Shall be equipped with manufacturers standard tinted windshield. | |
| Windows and Locks : Shall be equipped with manufacturers standard manual windows and door locks. | |
| The following equipment shall be supplied / installed | |
| There shall be a step bar, REF: Bustin (PN# RB003) or prior approved equal, must be length of cab entry area on both sides. (Installed) REF: EQN-170 Drawing | |
| There shall be an ECCO Model 450 backup alarm, shock mounted. (Installed) | |
| There shall be a seven-way trailer light receptacle, "Pin Type", securely mounted near rear trailer hitch area. Wired per EQN - 80A. Connections shall be sealed and water tight and packed with dielectric grease. | |
| There shall be a 4.5" LED interior utility dome light with an on and off swith. OPTRONICS PART NUMBER#OPTILL22CB Installed centered, over the front seat, capable of operating with the Ignition off. | |
| There shall be a warning light: Whelen Model R10HDPA with Deutsch connectors. Supplied and delivered in the cab. | |
| All switches shall be permanently labeled and backlit. | |

There shall be two (2) front tow hooks, installed.

There shall be an emergency triangle warning kit in each unit, in storage box and mounted in cab. EQN - 66A

There shall be a 5 LB. minimum 3A:40:BC fire extinguisher rechargeable with vehicle mount. Securely mounted in the cab for easy and quick access. A sticker on the door closest to the extinguisher shall be applied in the lower outside corner of the door to identify the location of the extinguisher.

There shall be a trailer hitch installed, as per EQN - 202B, the upper portion of hitch shall be painted with non-skid paint if extending to or outside body perimeter and is likely to be stepped on. (Tape is not acceptable.) There shall be provisions made for a safety break away cable. Hitch and below receiver parts shall not interfere with any part of the bumper or body no matter what configuration on the mounting plate is used.

All the following shall be supplied and delivered in the cab. Buyers Products - Combo Ball Hitch W/ 2 inch Hard Chrome Ball BH8-2000, Pintle Mounting Plate PM-87, Bolt Kit 8520, Hitch Pin HP6253 WC. Or approved equal.

Safety

Unit shall be fitted with temporary mud flaps that shall remain intact.

The cab shall have conspicuity tape as Per EQN-127A.

Any area likely to be stepped on shall be covered with non-skid paint, tape is unacceptable.

All handrails, ladders, and step configurations shall be built for three points of contact.

Anti-slip paint is required on all handholds, for the entire length, (tape is unacceptable).

Options

Option : To be equipped with Four Wheel Drive.

Option : To be equipped with Snow Plow Prep package.

Option : To be equipped with Power windows, Power door locks, and Power / Heated mirrors with manual extendable arms.

Option : Road Watch road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display.

Option : Vaisala road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display. Ambient sensor shall be mounted as to not receive any heat from then engine or drive train components to represent a false reading of the ambient air temperature.

Option : Install FLOCS system as per EQN: 351A.

Option : Flatbed Body upfit, Specification 046900

Option : Service Body upfit, Specification 048900

Option : Shop Body upfit, Specification 039700

Option : Foreman Body upfit, Specification 050400

Option : Foreman Body split door configuration 050401

Option : Survey Body upfit, Specification 049700

Option : Statewide Radio:

Vehicle electrical and electronics will conform to the Federal Communications Commission 47 C.F.R. Part 15 so as not to interfere with the operation of the PennDOT Land Mobile Radio, which is an authorized radio station under 47 C.F.R. Part 90.

Radio Antenna: There shall be a roof mount base, PCTEL model BMATM/NC25 and a VHF StiCO Roof-FT-NITI-M whip shall be cut to 18.0 inches per manufactures cut sheet. Assembly shall be mounted to the center of the cab roof (not to interfere with any cab shield), with the antenna cable routed to underneath the dash. There shall be a minimum of 4 feet of antenna cable coiled at the base of the floor to allow for connection of radio on spreader control pedestal. Antenna shall be prewired with a UHF MALE connection. (No substitute, standardization).

Power Distribution Center: There shall be a 4-way power/ground distribution center located on the underside of the dash for connection of the state radio. The lugs shall be configured in the following manner: (1) lug shall be a 30 ampere constant hot circuit, (1) lug shall be a 10 ampere ignition controlled circuit. (2) lugs shall be chassis ground. All connections shall be enclosed in a weatherproof enclosure.

Option : Bidder must provide option pricing for "one" of the following.

Factory: Having unit bid painted PennDOT yellow. Reference DUPONT 6808 shade only. Unit shall be painted PennDOT yellow in lieu of the OEM's original color. Using the same process as with OEM paint.

Aftermarket: Having unit bid painted PennDOT yellow. Reference DUPONT 6808 shade only. All surfaces shall be properly cleaned and prepared prior to paint. Paint shall be the same quality as factory paint. To include all areas of the unit including interior.

Drawings:

| | | | | |
|----------|---------|----------|-------------|---|
| EQN-66A | Revised | 07-13-17 | sheet 1 | TRIANGLE STORAGE BOX AND BRACKET |
| EQN-80A | Revised | 08-02-18 | sheet 1 | WIRING DIAGRAM |
| EQN-127A | Revised | 01-02-09 | sheet 1 | CONSPICUITY TAPE |
| EQN-202B | Revised | 07-27-16 | sheet 1 | HITCH: WEIGHT DISTRIBUTING |
| EQN-351A | Revised | 06-19-13 | sheet 1 & 2 | FAST LUBE OIL CHANGE SYSTEM OVERVIEW AND PARTS LIST |
| EQN-170 | | 7-19-16 | sheet 1 | RUNNING BOARDS |

Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual.

Installation Practices

All lights shall meet all Federal and State regulations.

All wire splices shall be insulated with heat shrink materials or removable connectors that create a water tight connection.

All wires shall be securley fastened with no wires hanging or protruding where they are exposed to the risk of damage.

All junction boxes shall be located inside of the utility body, in a location that will not compromise storage space. For easy accessibility, junctions boxes must not be obstructed in any way.

All electrical connections shall be treated with di-electric grease. All wiring shall be secured using "P" type clamps at intervals not to exceed 12" between securment points

All wires shall be in a protective covering and protected from chaffing, rubbing and getting pulled or torn from external sources.

Any alterations / relocation to fuel fill, DEF tank, exhaust, Etc. to allow installation of body shall be made in a professional manner using new materials.

Any place steel and aluminum contact each other Mylar or an approved equal shall be used as a buffer. Laminate rubber is unacceptable.

All vertical and horizontal seams of the body sides shall utilize full penetration welds in accordance with standard welding practices as set forth by the American Welding Society and sealed water tight to create one integral body.

All corners shall be angled or rounded for safety and all weld splatters removed All mounting procedures shall be in accordance with NTEA standards.

The use of any of the following items or practices WILL NOT BE ACCEPTED.

Non-steel fittings on hydraulic pressure lines.

Excessive use of elbows on hydraulic lines.

Use of thread tape on hydraulic fittings.

Use of galvanized fittings or components on hydraulic system.

Improper hydraulic line size.

Use of high-pressure hose for hydraulic suction line.

Scotchlok-type wire splices.

Non-insulated wire splices.

Improper hose or wire routing near exhaust, over-sharp edges or through holes without grommets, or sharp edges.

Improperly prepared, primed and painted surfaces.

Non-fused electric circuits.

Hydraulic circuits without pressure relief protection.

Laminated Rubber

| | |
|---|---------------------------|
| | Page <u>1</u> of <u>4</u> |
| SPECIFICATION | |
| <u>038100 - Steel Dump Body Upfit For Use With a 17K Chassis</u> | |
| Reference: Heil Yardbird, Omaha Standard Eagle, Galion / Godwin 100, Crysteel E Tipper, or prior approved equal. | |
| Note: " Refer to PCID 1075 for <u>Delivery</u> and <u>Warranty</u> Requirements". | |
| Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual. | |
| Body Shall Include The Following Equipment: | |
| Body - Installation: It shall be the responsibility of the successful vendor to have the dump body mounted on the chassis(s). The installation shall be engineered and approved by the vehicle manufacturer and shall have no adverse affect upon the manufacturer's warranty. When any portion of the complete vehicle is to be installed by anybody other than the bidder or the chassis manufacturer, they shall indicate the name of the sub-contractor performing such installation and the location of their plants. The dump body dimensions shall cover the rear wheels. Any other applicable changes required to accommodate this type unit is the responsibility of the bidder. Frame rails shall be prepared by cleaning, priming and final painting. The body shall be attached to the truck chassis using four (4) U-bolts, or bolt thru, lock nuts, and appropriate shear plates as required to comply with manufacturer's standards. | |
| Body Components: Length of body shall be 9 Feet Minimum. Capacity: 2 1/4 (approximate) cubic yards water level. Side board pockets and tailgate height shall provide an additional carrying capacity. The bulkhead shall be slotted, punched or checker-boarded to allow for visibility through the rear vehicle window. There shall be a lever operated chute. Body shall be fitted with a bed prop system, manufacture standard | |
| Hoist cylinder shall have a lifting capacity of 9 tons. Minimum. Cylinder rod shall be chrome plated. Hydraulic tank shall be a minimum of 20 Gallons working capacity. It is the responsibility of the vendor to insure all hydraulic functions can operate uninterrupted to include all plow, body, and spreader functions. There shall be a check valve installed in the suction line if the pump is mounted higher than the tank to ensure pump does not loose prime. All points of movement such as lift arms, tailgate linkage, etc. shall be fitted with threaded grease fittings. Upper telescopic cylinder pin shall have a remote grease fitting. There shall be wheel chocks and holders per EQN-82B. Holders can be mounted on the driver's side splash guards. There shall be a ladder to access the dump bed on the drivers side front. Shall have grab handles to provide three points of contact when entering the bed. Steps shall be Bustin aluminum No. NST4 full size, or Bustin 628 steel, or Ohio Grating or IKG Industries serrated swage lock, with end band. The outer step edge must be serrated in lieu of plain, smooth metal edge. All edges shall be banded (skirting) on the outer perimeter. Overlay is not acceptable. Grab handles shall be covered with non-skid paint (non-skid tape is unacceptable). Tailgate shall have a height of 24 inches minimum. Shall be a double acting tailgate with offset hinges. Shall have two (2) "J" hooks welded to the tailgate for chain hangers. 1.25" diameter, greasable self-aligning top hinge pins with tapered end and with sufficient length for easy removal. Pins shall be affixed with chains to prevent loss and be non-rotating. The holding device for the tailgate shall be operated by a control lever with a safety holding chain and ring. Severe duty tailgate hardware shall be adjustable. Coal chute gate with levers and operating handle. Shall have four (4) tailgate banjo chain brackets, two (2) on each side, banjo brackets shall be a minimum of 3/8 inch thickness and be fully welded. Tailgate / spreader chains shall be 3/8 inch and covered with black expandable braided sleeving monofilament. Rear corner posts On both sides, shall be full depth construction from the top of the tailgate to the bottom of the rear bolster and free of holes. Rear bolster shall be full depth and full width. Cab shield shall cover half of the cab, continuously welded. Body structure shall have 4" rolled or extruded structural channel cross members of equal strength on 12" centers. The body and body sub-frame shall be reinforced to withstand SEVERE duty service. IE: Dump body up while spreading salt and anti-skid material, or excavation rip rap being dropped in the bed. Heavy gussets shall be furnished at all cross members on the outside. Where not possible, they will be furnished on the inside. | |
| Construction: All body parts are to be electrically full welded into one integral body. For all threaded connections at least two (2) full threads shall be visible beyond the nut. The fuel tank fill shall be positioned in such a way to ensure the filler nozzle can be set on automatic and nozzle will support itself with unrestricted flow. | |

Exhaust:

All tool boxes above any exhaust tailpipe or within close proximity of muffler, DPF, etc. shall receive a heat shield plate to the box in order to protect it. Exhaust shall be extended to the outer most edge of the installed body.

Safety:

Vendor shall supply a first aid kit in a weather proof steel case that meets requirements of ANSI Z308.1-2015 Class A. The Kit shall be placed loose in the cab with a sticker to be applied to the outside of the door at a later time stating the location of the first aid kit.
REF: Arbill Industries Inc. 215-501-8450

Mud Flaps:

Mud flaps front and rear of rear tires, unmarked, full width of tires, and gusseted.
Length shall be consistent with the unloaded rear axle height, And in accordance with the PA State Inspection Laws.
The Flaps in front of the rear tires shall extend downward 3/4 of the length of the rear splash guard/mud flap, with a 1/4 length, unmarked mud flap attached for the remaining distance.
The Flaps at the rear, of the rear tires, shall be constructed of 0.1406 in (10 gauge) steel, and include a rubber flap using 3 bolts and flat steel backed plates.

Electrical:**Whelen Light Kit Part # PADOTSY6, Kit contains the following lighting.**

1 - R10PADOT Light Bar to be mounted to the driver's side of the bulkhead. Light bar shall be mounted on swivel base as per EQN- 210B. In no case shall the light bar be mounted on the roof of the vehicle. Light Bar, rear and side warning lights shall be on the same switch.
2- IONAD Lights to be grommet mounted in the grill mounted per EQN - 115
2- IONGROM Rubber grommets for IONAD lights
2 - 50R00XRD Vertical Red stop, turn, tail lights to be mounted within the rear bolster facing rearward grommet mounted Per EQN-120U
4 - 50A02ZAD Amber warning lights,2 to be mounted one each side of dump bed and 2 facing rearward in the bolster grommet mounted as Per EQN-120U
6- 5GROMMET Rubber grommets for amber warning lights and red taillights.
1 - M6BUD Back-up light, to be mounted between frame rails where practical.
1- M6BRUSH Brush guard for backup light.
9 - W441D Harness side mating Deutsch connectors.
The above lights are supplied with male and female Deutsch connectors that shall be utilized to connect the vendor supplied harness to each light source.
Body builder to supply remaining stop / tail / turn, marker and ICC lighting, they shall be protected against damage and shall also be shock mounted. Connections shall be water tight. All Body lighting shall be LED.
The Warning lights / Light bar shall have (1) lighted, permanently labeled toggle switch located in the dash controlling all I warning lights together
Body wiring shall be Grote, Trucklite, or Prior Approved Equal.
License plate lighting shall specifically be a Truck light 36 series PN# 36140c LED lamp with light bracket PN#36710
There shall be no splices outside of a sealed box or fixture.
There shall be a seven-way trailer (Pin Type) receptacle mounted on rear and filled with dielectric grease. Per EQN - 80A
A color-coded electrical wiring chart and schematic shall accompany each body.

Paint:

Body priming and painting to ensure full coverage to all areas of the body
Color of the body, including inside and outside of compartments, and the bed, shall be cab manufacturer's standard safety or school bus yellow, or optional PennDOT yellow DuPont F9885 for shade. (Powder Coat, if available from factory.) **It will be the responsibility of the successful vendor to ensure color of the body matches the cab.**
All metal surfaces to be painted shall be cleaned and prepared by abrasive blasting to 1-1/2 mil profile in accordance with Steel Structure Painting Council Standard SSPC-SP-6.
A rust preventative treatment shall be applied.

Conspicuity tape on body as per EQN-127A. Red/white on sides of body and cab,
Alternating Red / Yellow Reflective sheeting shall be mounted diagonally (45 degree angle) on the entire tailgate as per EQN-120N.
ICC Rear Under ride Protector, hitch and ladders shall be painted black.

Hitch:

There shall be a hitch installed, Per EQN-202B, there shall be provisions made to hook up a breakaway cable. The Upper Portion Of Hitch Shall Be Painted With Non-Skid Paint If extending to or outside body perimeter and is likely to be stepped on. Below hardware shall be supplied in truck cab. Hitch and below receiver parts shall not interfere with any part of the bumper or body no matter what configuration on the mounting plate is used.

| | Buyers Products (216-974-888) | Wallace Forge Company (800-328-1203) |
|--|-------------------------------|--------------------------------------|
| Combo Ball Hitch W/ 2 inch Hard Chrome Ball: | BH8-2000 | 23071911 |
| Pintle Mounting Plate: | PM-87 | 2200170 PADOT |
| Bolt Kit: | 8520 | 2117240 |
| Hitch Pin: | HP6253 WC | HP58412 |

Hydraulic System and Console**Reference: Lancaster Truck Body - LT.B. Control Pro, Certified Cirius Technology -**

Shall be Central Hydraulic System – Dump body and spreader functions to be operated by a single transmission mounted PTO and pump shall be rated at 15GPM @ 1500 engine RPMs. All valves shall be fully proportional electric over hydraulic

Plow to operate off of self-contained electric hydraulic power unit that is mounted on plow frame.

No hydraulic lines or valves to be installed in the cab.

Control console shall include all auxiliary light functions, pump switch, beacon light, spinner spot, plow/headlights, main on/off, aux. mounted in between the drivers and passenger seat.

Spreader control system shall be provided with blast, auger reverse and pause functions with individual switches. Auger (open loop circuit) and spinner shall have automatic mode function to operate proportionally off of ground speed to start and stop with chassis.

Controller to have quick connects for ease of removal .

All hydraulic controls valves to be fully proportional, electric solenoid for body hoist and spreader controls.

There shall be 1 joy stick with interlock for body hoist up and down and 1 hand held controller for all plow functions and shall have a holder on the hydraulic control console when plow is not in use.

Drawings:

| | | | | |
|----------|---------|----------|---------|---|
| EQN-80A | Revised | 08-02-18 | sheet 1 | WIRING DIAGRAM |
| EQN-82B | Revised | 07-22-15 | sheet 1 | CHOCK AND HOLDER |
| EQN-115 | Revised | 07-03-12 | sheet 1 | GRILL MOUNTED WARNING LIGHTS |
| EQN-120N | Revised | 08-14-12 | sheet 1 | TAILGATE REFLECTIVE SHEETING / WARNING LIGHTS |
| EQN-120U | Revised | 08-14-12 | sheet 1 | 17K DUMP TAIL GATE LIGHTING |
| EQN-127A | Revised | 01-02-09 | sheet 1 | CONSPICUITY TAPE |
| EQN-202B | Revised | 07-27-16 | sheet 1 | HITCH: WEIGHT DISTRIBUTING |
| EQN-210B | Revised | 04-05-12 | sheet 3 | HIGH VOLTAGE WARNING LIGHT (BRACKET) |

Options**Spreader, Under Tailgate: (Installed) SEE ATTACHED SPECS****Snow Plow, Adjustable Angle, or Straight reversible blade with a Minimum 9 foot moldboard: (Installed)****Reference: Boss, Power V, Western MVP Plus, Western Pro Plus or prior to bid approved equal).**

Cab controls for angle and lift mechanism.

Moldboard markers (wands).

Auxiliary snow plow lights, turn signals, shall be hitch mounted and reinforced.

The snow plow shall be mounted on specified chassis with all accessories

Quick attach ends for hydraulic hoses.

Trip mechanism.

All electrical circuits shall be fused.

Front moldboard snow deflector.

Plow frame shall be furnished and installed and shall be in concurrence with the truck manufacturer's engineering approval. Factory snow plow prep package shall be supplied.

Snow plow lights shall be furnished and mounted.

Manufacturer's standard color.

Installation Practices:

All lights shall meet all Federal and State regulations.

All wire splices shall be insulated with heat shrink materials or removable connectors that create a water tight connection.

All wires shall be securely fastened with no wires hanging or protruding where they are exposed to the risk of damage.

All junction boxes shall be located inside of the utility body, in a location that will not compromise storage space. For easy accessibility, junction boxes must not be obstructed in any way.

All electrical connections shall be treated with di-electric grease. All wiring shall be secured using "P" type clamps at intervals not to exceed 12" between securing points.

All wires shall be in a protective covering and protected from chaffing, rubbing and getting pulled or torn from external sources.

Any alterations / relocation to fuel fill, DEF tank, exhaust, Etc. to allow installation of body shall be made in a professional manner using new materials.

Any place steel and aluminum contact each other Mylar or an approved equal shall be used as a buffer.

Laminate rubber is unacceptable. All vertical and horizontal seams of the body sides shall utilize full penetration welds in accordance with standard welding practices as set forth by the American Welding Society and sealed water tight to create one integral body. All corners shall be angled or rounded for safety and all weld splatter removed. All mounting procedures shall be in accordance with NTEA standards.

The use of any of the following items or practices WILL NOT BE ACCEPTED.

Non-steel fittings on hydraulic pressure lines. Excessive use of elbows on hydraulic lines.

Use of thread tape on hydraulic fittings. Use of galvanized fittings or components on hydraulic system. Improper hydraulic line size.

Use of high-pressure hose for hydraulic suction line. Scotchlok-type wire splices.

Non-insulated wire splices. Improper hose or wire routing near exhaust, over-sharp edges or through holes without grommets, or sharp edges.

Improperly prepared, primed and painted surfaces.

Non-fused electric circuits.

Hydraulic circuits without pressure relief protection.

Loose hanging wires that are not secure or are pulled tight so they are suspended with no support.

Truck-Sign, 19,500lb, 2WD, Gas, Cab and Chassis, 11 Foot body
With Automatic Transmission

Truck, Sign, Regular Cab, Gas (064300)
Truck, Sign, With Crane, Regular Cab, Gas (064400)
Truck, Sign, With Aerial Bucket, Regular Cab, Gas (064500)
Truck, Sign, Extended Cab, Gas (064520)
Truck, Sign, With Aerial Bucket, Extended Cab, Gas (064522)
Truck, Sign, With Crane, Extended Cab, Gas (064401)

This dual-rear wheel model chassis shall be a manufacturer's standard cab model, which is engineered, certified and capable of towing a trailer, without brakes. 19,500 Lb. GVWR minimum with the manufacturer's rating certified on door. Chassis shall accommodate the specific body options referenced within this specification.

NOTE: REFER TO PCID 1075 FOR DELIVERY AND WARRANTY REQUIREMENTS

Unit Shall Include The Following Optional Equipment:

Alternator: Manufacturers largest / heaviest duty available.
Air bags: Driver and passenger.
Air Conditioning: Standard.
Am/Fm Radio: Standard.
Manual Windows/Locks: Standard.
Seats: Shall be equipped with Vinyl 40/20/40 seats with center work console, Foam Padded with Seatbelts. (Cloth is Unacceptable)
Daytime Running Lights: (Aftermarket acceptable).
Blue Tooth: Standard

Electrical:

Whelen Light Kit Part # PADOTSY5, Kit contains the following lighting.

1 - R10PADOT Light Bar to be mounted to the driver's side of the bulkhead. In no case shall the light bar be mounted on the roof of the vehicle.

4 - IONAD Amber warning lights grommet mounted 2 will be grill mounted per EQN-115 and 1 on each side of the bed per EQN-120M

4 - IONGROM Grommet mounts for the IONAD light.

2 - M6AD Amber warning lights per EQN - 120M

2 - M6BTDD Stop, Tail, Turn lights per EQN - 120M

2 - M6BUD Back-up lights per EQN - 120M

2 - M6 Series 3 Lamp Black Housing, vertical

10 - W441D Harness side mating Deutsch connectors.

The above lights are supplied with male and female Deutsch connectors that shall be utilized to connect the vendor supplied harness to each light source.

1 - Pioneer Tripod pedestal flood light with coiled cord and plug to be supplied in the cab.

Work Light receptacle shall be wired and mounted in the rear of the truck and one receptacle on the left front of the body. Work light receptacles shall have a constant 12 volt power supply, circuit to be properly protected and have a chassis ground. Remote mounting location to be determined at pilot inspection.

Body builder to supply remaining marker and ICC lighting, they shall be protected against damage and shall also be shock mounted. Connections shall be water tight. All Body lighting shall be LED.

All Amber Warning lights and Light bar shall be on a single lighted, permanently labeled toggle switch located in the dash.

License plate lighting shall specifically be a Truck light 36 series PN# 36140C LED lamp with light bracket PN#36710

Body wiring shall be Grote, Trucklite, or Prior Approved Equal.

There shall be no splices outside of a sealed box or fixture.

There shall be a seven-way trailer (Pin Type) receptacle mounted on rear filled with dielectric grease. Per EQN - 80A

A color-coded electrical wiring chart and schematic shall accompany each body.

All wires shall be in a protective covering. Any loose hanging wires are unacceptable.

ENGINE

| | |
|----------------------------|---|
| Gasoline Engine: | Manufacturer's highest available horsepower and torque rating, standard or optional gasoline engine, to include, engine oil cooler, and largest available engine cooling capacity. |
| Front Bumper: | Chrome, Black, or Argent. |
| Fuel Tank: | Manufacturer's highest capacity standard tank, frame mounted (Tank filler positioned to ensure that filler nozzle can be set on automatic and nozzle will support itself, with unrestricted flow). |
| Exhaust pipe: | Exhaust pipe shall extend to outer edge of the body. |
| Limited Slip Differential: | Standard. |
| Lubricants: | Shall be synthetic where available, with drain plugs identified or painted red. (Engine oil excluded). |
| Rear Axle Ratio: | Shall be 4.88. |
| Rearview mirror: | Manual day/night. |
| Tinted Windshield: | Manufacturers standard. |
| Tires: | Truck and Body Company shall ensure that proper sized tires and wheels for GVWR are supplied. Tires shall be radial, all season mud and snow type tread. |
| Transmission: | Automatic Heavy duty with PTO provision with auxiliary oil cooler. NOTE: Electric shifted PTO and hydraulic pump shall be transmission mounted and be for use in stationary and mobile applications Trailer and Handling Package: To include rear stabilizer bar if available from the manufacturer as standard or optional equipment. |
| Exhaust: | All tool boxes above any exhaust tailpipe or within proximity of muffler, DPF, etc. shall receive a heat shield plate to the box to protect it. Exhaust shall be extended to the outer most edge of the installed body. |
| Mirrors: | Mirrors shall be manufacturer's standard heavy duty convex mirrors (aftermarket convex spot mirror acceptable) with extendable arms. |
| Paint: | Manufacturer's standard safety or school bus yellow. |

OPTION :

STATE WIDE RADIO:

Vehicle electrical and electronics will conform to the Federal Communications Commission 47 C.F.R. Part 15 so as not to interfere with the operation of the PennDOT Land Mobile Radio, which is an authorized radio station under 47 C.F.R. Part 90.

Radio Antenna: There shall be a roof mount base, PCTEL model BMATM/NC25 and a VHF StiCO Roof-FT-NITI-M whip shall be cut to 18.0 inches per manufactures cut sheet. Assembly shall be mounted to the center of the cab roof (not to interfere with any cab shield), with the antenna cable routed to underneath the dash. There shall be a minimum of 4 feet of antenna cable coiled at the base of the floor to allow for connection of radio on spreader control pedestal. Antenna shall be prewired with a UHF MALE connection. **(No substitute, standardization).**

Power Distribution Center: There shall be a 4-way power/ground distribution center located on the underside of the dash for connection of the state radio. The lugs shall be configured in the following manner: (1) lug shall be a 30 ampere constant hot circuit, (1) lug shall be a 10 ampere ignition controlled circuit. (2) lugs shall be chassis ground. All connections shall be enclosed in a weatherproof enclosure.

OPTION:

Power windows, Power Locks, Power and heated mirrors with manual extendable arms.

OPTION:

FLOCS System per EQN-351A.

OPTION:

Yellow, Ref: Dupont F9885 for shade. If aftermarket, paint shall be OEM quality, including but not limited to door jams and under hood etc. Warranty shall be the same as OEM manufactures warranty.

Unit Shall Also Include the Following Equipment:

- There shall be installed, a step bar REF: Bustin RB002 or RB003 or prior approved equal, must be length of cab entry area on both sides. REF: EQN-170 drawing
- There shall be an ECCO model 450 back-up alarm, shock mounted.
- There shall be a 4.5 inch LED dome light, with switch, installed and centered over the front seat that can operate with the ignition switch in the off position. (Ref: Optronics part number# OPTILL22CB or approved equal).
- All switches shall be permanently labeled and backlit.
- There shall be two (2) front tow hooks, installed.
- There shall be an emergency triangle warning kit, with storage box, mounted in cab.
- There shall be a minimum 5 LB. 3A:40B:C type fire extinguisher, rechargeable with vehicle mount, installed in the cab for easy and quick access. A label shall be applied to the outside of the door closest announcing its location for easy access.
- Manufacturer's standard heavy-duty rubber floor covering.
- 12 VDC to 120 VAC 1800-watt power inverter, REF: Dimensions Pure Sine Inverter (651270-1971) model 12/1800N
- Hyd Post pounder and puller (Ref: Reliable Equipment sign driver, PN# REL-SPD, puller REL-SPP) Flat face o-ring quick coupler shall be utilized compatible to hook to hydraulic lines.

HITCH:

- There shall be a hitch, as per EQN-202B. The upper portion of hitch shall be painted with non-skid paint if extending to or outside body perimeter and is likely to be stepped on. All below components shall be supplied within the cab. Hitch and below receiver parts shall not interfere with any part of the bumper or body no matter what configuration on the mounting plate is used

| | <u>Buyers Products</u> | <u>OR</u> | <u>Wallace Forge Company</u> |
|---|------------------------|-----------|------------------------------|
| Combo ball hitch with 2 inch hard chrome ball: | BH8-2000 | | 23071911 |
| Pintle mounting plate: | PM-87 | | 2200170 PADOT |
| Bolt kit: | 8520 | | 2117240 |
| Hitch pin: | HP6253 WC | | HP58412 |

(064300) & (064520): SIGN BODY: Sign body shall be furnished as per EQN-483, Type I and the specification below.

- The body and compartments shall be comparable to the Stahl model 129 or Warner S12MDWSP (dual wheel) 11 foot sign body (steel).
- The bulkhead shall be reinforced for severe duty.
- Compartment tops and rear of body shall be a minimum of 14 gauge, zinc coated.
- The load-bed floor shall be a minimum 12 gauge tread-plate floor, zinc coated, or Electra-life coating.
- Compartment doors shall be double paneled with reinforcement and automotive type rubber door seals around the entire perimeter. Hinges shall be stainless steel or have nylon bushings bolted / riveted to body. Piano type hinges are unacceptable.
- Compartments shall have paddle lock or slam latches made of stainless steel. Handles shall be in a recessed section of. All latches must be bolted on no rivets.
- All vertical doors shall have a positive locking system to ensure doors will not blow closed on the operator due to wind. All horizontal doors shall be fitted with a limiting device to ensure that the door will not contact the body when open.
 - Compartment A (front) approx. 18 x 37 x 21 with (2) adjustable material tray with dividers.

- Compartment B approx. 18 x 42 x 21 with (1) adjustable material tray with dividers.
 - Compartment C approx. 18 x 42 x 21 with (1) adjustable material tray with dividers.
 - Compartment D approx. 15 x 51 x 18.
 - Compartment A shall have 2 locking stainless steel paddle handles. Compartments B, C, D & E will have (1) each.
 - Compartment E approx. 13.50 x 20 x 14.
 - Post bin shall be approx. 129" x 21" x 8" with a reinforced front bin wall. The door shall be bottom hinged. There shall be a second post in approx. 4" x 24" x 48" located in the center of the rear body, below the cargo area.
- There shall be a grab handle extending approx. 12" above the catwalk and mounted to both sides with anti-skid paint.
 - There shall be a grip strut step bumper approx. 14" deep, two, 2" deep x 10" wide steps hung by 6" long 3/4" diameter cables shall be mounted, one under each side of bumper. Both hung 12" in from edge of bumper, step shall be Bustin steel grip grating. Receiver (2" square) mounted in or under bumper, in either case; it shall be a Class III hitch. There shall be "D" rings (2) for safety chain connection.
 - There shall be two grip strut steps on each side of the rear body to allow access to the grip strut catwalk that extends the width and length of the lower rear right side compartment top. A positive locking system shall be incorporated to ensure platform cannot over extend or accidentally extend while traveling. Lock shall be able to be operated from ground level only. When the platform is extended out there should also be a locking system that will not allow the platform to go in. Lock shall also be operated from ground level.
- Compartment G approx. 33 x 55.75 door opening and be 35" deep with (1) front hinged door. There shall be vertical sign holders on 2" centers to fit the entire width and height throughout the compartment.
 - Compartment H approx. 15" x 45" door opening, approx. 35" deep, minimum. There shall be a shelf mounted 16" from the top
 - Compartment J approx. 26" x 49" door opening, 35" deep. There shall be three (3) pull-out material trays mounted in the rear half of compartment. Trays shall be evenly spaced. The forward half of the compartment shall have vertical sign holders on 4" centers covering the entire height and depth of compartment.
 - Compartment K approx. 20" x 42" door opening, 35" deep. Shall house the two 50' hydraulic tool hose reels, the 1600 watt inverter and the Whelen portable work light.

OR

- Compartment A (front) approx. 18.88 x 48.50 x 21 with (2) adjustable material tray with dividers
 - Compartment C1 approx. 18.88 x 25.18 x 21 with (1) adjustable material tray with dividers
 - Compartment C2 approx. 18.88 x 25.18 x 21 with (1) adjustable material tray with dividers
 - Compartment D approx. 15.38 x 27 x 18
 - Compartment A shall have 2 locking stainless steel paddle handles. Compartments C1, C2, D & E will have (1) each.
 - Compartment E approx. 13.50 x 20 x 14
 - Post bin shall be approx. 100" x 21" x 8" with a reinforced front bin wall. The door shall be bottom hinged. There shall be a second post in approx. 4" x 24" x 48" located in the center of the rear body, below the cargo area.
- There shall be a grab handle extending approx. 12" above the body and mounted to both sides with anti-skid paint.
 - There shall be a grip strut step bumper (not installed) approx. 14" deep. Receiver (2" square) mounted in or under bumper, in either case it shall be a Class III hitch. There shall be "D" rings (2) for safety chain connection.

- There shall be two grip strut steps on each side of the rear body to allow access to the grip strut catwalk that extends the width and length of the lower rear right side compartment top. Cat walk shall be extendable over the side of the body by use of a release lever that is accessible from the ground. A positive locking system shall be incorporated to ensure platform cannot over extend or accidentally extend while traveling. Lock shall be able to be operated from ground level only. When the platform is extended out there should also be a locking system that will not allow the platform to go in. Lock shall also be operated from ground level.
- Compartment G approx. 26 x 55.75 door opening and be 37" deep with (1) front hinged door. There shall be vertical sign holders on 2" centers to fit the entire width and height throughout the compartment.
- Compartment J approx. 26.88" x 49" door opening, 37" deep. There shall be three (3) pull-out material trays mounted in the rear half of compartment. Trays shall be evenly spaced. The forward half of the compartment shall have vertical sign holders on 4" centers covering the entire height and depth of compartment.
- Compartment K approx. 20" x 42" door opening, 35" deep. Shall house the two 50' hydraulic tool hose reels, the 1600 watt inverter and the Whelen portable work light.

(064400) & (064401) : SIGN BODY WITH CRANE: Sign body shall be furnished as per EQN-483, Type II and the specification below.

- Same as Type I except unit shall be fitted with a minimum 3,200 lb crane, mounted on a reinforced compartment on the load bed front. Autocrane 3203PRX or IMT 1015 or equal. Manual pull out and crank down out riggers shall be provided along with a boom rest.

(064500) & (064522) : SIGN BODY WITH AERIAL BUCKET: Sign body shall be furnished as per EQN-483, Type III and the specification below.

- Same as Type I except unit shall be fitted with a telescopic fiberglass upper boom hydraulic aerial lift.
- Height shall be a minimum of 30 feet ground to bottom of bucket.
- Reach from centerline of rotation shall be a minimum of 20 feet. Rotation shall be 370 degrees (non-continuous).
- Platform bucket capacity shall be a minimum of 300 LBS.
- Platform bucket shall be fiberglass with a minimum of one step.
- Bucket shall be minimum 24 inch x 24 inch x 42 inch high.
- There shall be a bucket platform cover for inclement weather.
- There shall be hydraulic feather able controls located in/on the bucket to allow 1) up/down, 2) rotate, 3) extend/retract, 4) tilt, 5) engine speed control for hydraulic tool circuit, 6) engine start/stop.
- There shall be override protection provided at the lower control station.
- Platform bucket shall have a tool tray and safety harness.
- There shall be a hydraulic power tool outlet at the bucket platform. The hydraulic power tool circuit shall be capable of operating tools rated at 7 to 9 GPM. Flat face o-ring snap couplings shall be utilized compatible with tools.
- The hydraulic tank and circuits shall be properly sized to allow the hydraulic tools to be operated with the telescoping boom at full extension.
- There shall be an emergency electric operating system with DC pump and motor and all necessary hardware and fittings.
- Hydraulic system shall be a transmission driven PTO pump. Regardless of design, hydraulics shall be on demand live hydraulics always stationary or mobile.
- The pedestal/mainframe, turntable/turret and lower boom shall be steel weldment or tube/s formed into box structures. All pins and fasteners used in conjunction with the lift shall be plated. Only graded bolts are acceptable.
- All necessary structural adaptability shall be material and labor with the truck chassis made to ensure a compatible system capable of severe duty service.
- The unit shall be fitted with a system to eliminate boom creep and to lock cylinder in case of line failure.

- The unit shall be an Altec Model AT30G arm lift AF-TEL34FB/PT or HiRanger T292 or UTEM or prior to bid approved equal. (There shall be an internal, within boom, tool circuit. External reel is unacceptable.)
- 180° platform rotator is acceptable if supplied with no loss in bucket lift capacity.

SAFETY:

- The cab shall have conspicuity tape as Per EQN-127A.
- Alternating Red / Yellow Reflective sheeting shall be mounted diagonally (45 degree angle) on the rear of body as per EQN-120K.
- The body shall have conspicuity tape as Per EQN-483, sheet 4, and 5.
- Any area likely to be stepped on shall be covered with non-skid paint, tape is unacceptable.
- Vendor shall supply a first aid kit, that meets requirements of ANSI Z308.1-2015 Class A. The Kit shall in a weather proof steel case and placed in the front compartment on the drivers side with a sticker applied to the outside of the door stating the location of the first aid kit. There shall be a bracket designed to fit underneath the first shelf that the first aid kit will slide into to allow quick access to it. There will also be a first aid sticker placed on the shelf. REF: EQN-171 Drawing REF: Arbill Industries Inc. 215-501-8450

DRAWINGS:

| | | | | |
|----------|---------|----------|--------------|-----------------------------|
| EQN-170 | | 07-19-16 | sheet 1 | RUNNING BOARDS |
| EQN-80A | Revised | 08-02-18 | sheet 1 of 1 | WIRING DIAGRAM |
| EQN-115 | Revised | 07-03-12 | sheet 1 of 1 | GRILL WARNING LIGHTING |
| EQN-120K | Revised | 06-10-14 | sheet 1 of 1 | TYPICAL REFLECTIVE SHEETING |
| EQN-120M | Revised | 09-28-11 | sheet 1 of 1 | CREW CAB BODY LIGHTING |
| EQN-127A | Revised | 01-02-09 | sheet 1 of 1 | CONSPICUITY TAPE |
| EQN-202B | Revised | 07-27-16 | sheet 1 of 1 | HITCH: WEIGHT DISTRIBUTING |
| EQN-351A | Revised | 06-19-13 | sheet 1 & 2 | FAST LUBE OIL CHANGE SYSTEM |
| EQN-483 | Revised | 08-29-14 | sheet 1 – 8 | SIGN TRUCK-STANDARD CAB |
| EQN-171 | | 07-21-16 | sheet 1 | FIRST AID KIT LOCATION |

8/20/2021 JAH

| | |
|--|---------------------------|
| | Page <u>1</u> of <u>4</u> |
| SPECIFICATION | |
| <u>038110 - Aluminum Dump Body Upfit For Use With a 17K Chassis</u> | |
| Reference: Heil Yardbird, Omaha Standard Eagle, Galion / Godwin 100, Crysteel E Tipper, or prior approved equal. | |
| Note: " Refer to PCID 1075 for <u>Delivery</u> and <u>Warranty</u> Requirements". | |
| Note: Complete Aluminum Dump body and components including crossmembers, long sills, ladder and fenders. | |
| Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual. | |
| Body Shall Include The Following Equipment: | |
| <p>Body - Installation: It shall be the responsibility of the successful vendor to have the dump body mounted on the chassis(s). The installation shall be engineered and approved by the vehicle manufacturer and shall have no adverse affect upon the manufacturer's warranty. When any portion of the complete vehicle is to be installed by anybody other than the bidder or the chassis manufacturer, they shall indicate the name of the sub-contractor performing such installation and the location of their plants. The dump body dimensions shall cover the rear wheels. Any other applicable changes required to accommodate this type unit is the responsibility of the bidder. Frame rails shall be prepared by cleaning, priming and final painting. The body shall be attached to the truck chassis using four (4) U-bolts, or bolt thru, lock nuts, and appropriate shear plates as required to comply with manufacturer's standards.</p> | |
| <p>Body Components: Length of body shall be 9 Feet Minimum. Floor Thickness shall be 0.1875" thick, minimum, abrasion-resistant aluminum 5454H32. Continuously welded to all cross members, side panels and longitudinal members. Area reinforcements where necessary. Capacity: 2 1/4 (approximate) cubic yards water level. Side board pockets and tailgate height shall provide an additional carrying capacity. The bulkhead shall be slotted, punched or checker-boarded to allow for visibility through the rear vehicle window. There shall be a lever operated chute. Body shall be fitted with a bed prop system, manufacture standard.</p> | |
| <p>Hoist cylinder shall have a lifting capacity of 9 tons. Minimum. Cylinder rod shall be chrome plated. Hydraulic tank shall be a minimum of 20 Gallons working capacity. It is the responsibility of the vendor to insure all hydraulic functions can operate uninterrupted to include all plow, body, and spreader functions. There shall be a check valve installed in the suction line if the pump is mounted higher than the tank to ensure pump does not loose prime. All points of movement such as lift arms, tailgate linkage, etc. shall be fitted with threaded grease fittings. Upper telescopic cylinder pin shall have a remote grease fitting. There shall be wheel chocks and holders per EQN-82B. Holders can be mounted on the driver's side splash guards. There shall be a ladder to access the dump bed on the drivers side. Shall have grab handles to provide three points of contact when entering the bed. Steps shall be Bustin aluminum No. NST4 full size, or Bustin 628 steel, or Ohio Grating or IKG Industries serrated swage lock, with end band. The outer step edge must be serrated in lieu of plain, smooth metal edge. All edges shall be banded (skirting) on the outer perimeter. Overlay is not acceptable. Grab handles shall be covered with non-skid paint (non-skid tape is unacceptable). Tailgate shall have a height of 24 inches minimum. Shall be a double acting tailgate with offset hinges. Shall have two (2) "J" hooks welded to the tailgate for chain hangers. 1.25" diameter, greasable self-aligning top hinge pins with tapered end and with sufficient length for easy removal. Pins shall be affixed with chains to prevent loss and be non-rotating. The holding device for the tailgate shall be operated by a control lever with a safety holding chain and ring. Severe duty tailgate hardware shall be adjustable. Coal chute gate with levers and operating handle, Door to be 304 Stainless steel. Shall have four (4) tailgate banjo chain brackets, two (2) on each side, banjo brackets shall be a minimum of 1/2 inch thickness and be fully welded. Tailgate / spreader chains shall be 3/8 inch and covered with black expandable braided sleeving monofilament. Rear corner posts On both sides, shall be full depth construction from the top of the tailgate to the bottom of the rear bolster and free of holes. Rear bolster shall be full depth and full width. Cab shield shall cover half of the cab, continuously welded. Body structure shall have 4" extruded structural channel cross members of equal strength on 12" centers. The body and body sub-frame shall be reinforced to withstand SEVERE duty service. IE: Dump body up while spreading salt and anti-skid material, or excavation rip rap being dropped in the bed. Heavy gussets shall be furnished at all cross members on the outside. Where not possible, they will be furnished on the inside.</p> | |
| <p>Construction: All body parts are to be electrically full welded into one integral body. For all threaded connections at least two (2) full threads shall be visible beyond the nut. The fuel tank fill shall be positioned in such a way to ensure the filler nozzle can be set on automatic and nozzle will support itself with unrestricted flow.</p> | |

Exhaust:

All tool boxes above any exhaust tailpipe or within close proximity of muffler, DPF, etc. shall receive a heat shield plate to the box in order to protect it. Exhaust shall be extended to the outer most edge of the installed body.

Safety:

Vendor shall supply a first aid kit in a weather proof steel case that meets requirements of ANSI Z308.1-2015 Class A. The Kit shall be placed loose in the cab with a sticker to be applied to the outside of the door at a later time stating the location of the first aid kit.
REF: Arbill Industries Inc. 215-501-8450

Mud Flaps:

Mud flaps front and rear of rear tires, unmarked, full width of tires, and gusseted.
Length shall be consistent with the unloaded rear axle height, And in accordance with the PA State Inspection Laws.
The Flaps in front of the rear tires shall extend downward 3/4 of the length of the rear splash guard/mud flap, with a 1/4 length, unmarked mud flap attached for the remaining distance.
The Flaps at the rear, of the rear tires, shall be constructed of 0.1406 in (10 gauge) steel, and include a rubber flap using 3 bolts and flat steel backed plates.

Electrical:**Whelen Light Kit Part # PADOTSY6, Kit contains the following lighting.**

- 1 - R10PADOT Light Bar to be mounted to the driver's side of the bulkhead. Light bar shall be mounted on swivel base as per EQN- 210B. In no case shall the light bar be mounted on the roof of the vehicle. Light Bar, rear and side warning lights shall be on the same switch.
- 2- IONAD Lights to be grommet mounted in the grill mounted per EQN - 115
- 2- IONGROM Rubber grommets for IONAD lights
- 2 - 50R00XRD Vertical Red stop, turn, tail lights to be mounted within the rear bolster facing rearward grommet mounted Per EQN-120U
- 4 - 50A02ZAD Amber warning lights,2 to be mounted one each side of dump bed and 2 facing rearward in the bolster grommet mounted as Per EQN-120U
- 6- 5GROMMET Rubber grommets for amber warning lights and red taillights.
- 1 - M6BUD Back-up light, to be mounted between frame rails where practical.
- 1- M6BRUSH Brush guard for backup light.
- 9 - W441D Harness side mating Deutsch connectors.

The above lights are supplied with male and female Deutsch connectors that shall be utilized to connect the vendor supplied harness to each light source.

Body builder to supply remaining stop / tail / turn, marker and ICC lighting, they shall be protected against damage and shall also be shock mounted. Connections shall be water tight. All Body lighting shall be LED.

The Warning lights / Light bar shall have (1) lighted, permanently labeled toggle switch located in the dash controlling all I warning lights together

Body wiring shall be Grote, Trucklite, or Prior Approved Equal.

License plate lighting shall specifically be a Truck light 36 series PN# 36140c LED lamp with light bracket PN#36710

There shall be no splices outside of a sealed box or fixture.

There shall be a seven-way trailer (Pin Type) receptacle mounted on rear and filled with dielectric grease. Per EQN - 80A

A color-coded electrical wiring chart and schematic shall accompany each body.

Paint:

Body priming and painting to ensure full coverage to all areas of the body

Color of the body, including inside and outside of compartments, and the bed, shall be cab manufacturer's standard safety or school bus yellow, or optional PennDOT yellow DuPont F9885 for shade. (Powder Coat, if available from factory.) **It will be the responsibility of the successful vendor to ensure color of the body matches the cab.**

All metal surfaces to be painted shall be cleaned and prepared by abrasive blasting to 1-1/2 mil profile in accordance with Steel Structure Painting Council Standard SSPC-SP-6.

A rust preventative treatment shall be applied.

Conspicuity tape on body as per EQN-127A. Red/white on sides of body and cab,

Alternating Red / Yellow Reflective sheeting shall be mounted diagonally (45 degree angle) on the entire tailgate as per EQN-120N.

ICC Rear Under ride Protector, hitch and ladders shall be painted black.

Hitch:

There shall be a hitch installed, Per EQN-202B, there shall be provisions made to hook up a breakaway cable. The Upper Portion Of Hitch Shall Be Painted With Non-Skid Paint If extending to or outside body perimeter and is likely to be stepped on. Below hardware shall be supplied in truck cab. Hitch and below receiver parts shall not interfere with any part of the bumper or body no matter what configuration on the mounting plate is used.

| | Buyers Products (216-974-888) | Wallace Forge Company (800-328-1203) |
|--|-------------------------------|--------------------------------------|
| Combo Ball Hitch W/ 2 inch Hard Chrome Ball: | BH8-2000 | 23071911 |
| Pintle Mounting Plate: | PM-87 | 2200170 PADOT |
| Bolt Kit: | 8520 | 2117240 |
| Hitch Pin: | HP6253 WC | HP58412 |

Hydraulic System and Console**Reference: Lancaster Truck Body - LT.B. Control Pro, Certified Cirius Technology -**

Shall be Central Hydraulic System – Dump body and spreader functions to be operated by a single transmission mounted PTO and pump shall be rated at 15GPM @ 1500 engine RPMs. All valves shall be fully proportional electric over hydraulic Plow to operate off of self-contained electric hydraulic power unit that is mounted on plow frame.

No hydraulic lines or valves to be installed in the cab.

Control console shall include all auxiliary light functions, pump switch, beacon light, spinner spot, plow/headlights, main on/off, aux. mounted in between the drivers and passenger seat.

Spreader control system shall be provided with blast, auger reverse and pause functions with individual switches. Auger (open loop circuit) and spinner shall have automatic mode function to operate proportionally off of ground speed to start and stop with chassis.

Controller to have quick connects for ease of removal .

All hydraulic controls valves to be fully proportional, electric solenoid for body hoist and spreader controls.

There shall be 1 joy stick with interlock for body hoist up and down and 1 hand held controller for all plow functions and shall have a holder on the hydraulic control console when plow is not in use.

Drawings

| | | | | |
|----------|---------|----------|---------|---|
| EQN-80A | Revised | 08-02-18 | sheet 1 | WIRING DIAGRAM |
| EQN-82B | Revised | 07-22-15 | sheet 1 | CHOCK AND HOLDER |
| EQN-115 | Revised | 07-03-12 | sheet 1 | GRILL MOUNTED WARNING LIGHTS |
| EQN-120N | Revised | 08-14-12 | sheet 1 | TAILGATE REFLECTIVE SHEETING / WARNING LIGHTS |
| EQN-120U | Revised | 08-14-12 | sheet 1 | 17K DUMP TAIL GATE LIGHTING |
| EQN-127A | Revised | 01-02-09 | sheet 1 | CONSPICUITY TAPE |
| EQN-202B | Revised | 07-27-16 | sheet 1 | HITCH: WEIGHT DISTRIBUTING |
| EQN-210B | Revised | 04-05-12 | sheet 3 | HIGH VOLTAGE WARNING LIGHT (BRACKET) |

Options**Spreader, Under Tailgate: (Installed) SEE ATTACHED SPREADER SPEC****Snow Plow, Adjustable Angle, or Straight reversible blade with a Minimum 9 foot moldboard: (Installed)****Reference: Boss, Power V, Western MVP Plus, Western Pro Plus or prior to bid approved equal).**

Cab controls for angle and lift mechanism.

Moldboard markers (wands).

Auxiliary snow plow lights, turn signals, shall be hitch mounted and reinforced.

The snow plow shall be mounted on specified chassis with all accessories

Quick attach ends for hydraulic hoses.

Trip mechanism.

All electrical circuits shall be fused.

Front moldboard snow deflector.

Plow frame shall be furnished and installed and shall be in concurrence with the truck manufacturer's engineering approval. Factory snow plow prep package shall be supplied.

Snow plow lights shall be furnished and mounted.

Manufacturer's standard color.

Installation Practices

All lights shall meet all Federal and State regulations.

All wire splices shall be insulated with heat shrink materials or removable connectors that create a water tight connection.

All wires shall be securely fastened with no wires hanging or protruding where they are exposed to the risk of damage.

All junction boxes shall be located inside of the utility body, in a location that will not compromise storage space. For easy accessibility, junction boxes must not be obstructed in any way.

All electrical connections shall be treated with di-electric grease. All wiring shall be secured using "P" type clamps at intervals not to exceed 12" between securing points.

All wires shall be in a protective covering and protected from chaffing, rubbing and getting pulled or torn from external sources.

Any alterations / relocation to fuel fill, DEF tank, exhaust, Etc. to allow installation of body shall be made in a professional manner using new materials.

Any place steel and aluminum contact each other Mylar or an approved equal shall be used as a buffer.

Laminate rubber is unacceptable. All vertical and horizontal seams of the body sides shall utilize full penetration welds in accordance

with standard welding practices as set forth by the American Welding Society and sealed water tight to create one integral body. All

corners shall be angled or rounded for safety and all weld splatter removed. All mounting procedures shall be in accordance with NTEA standards.

The use of any of the following items or practices WILL NOT BE ACCEPTED.

- Non-steel fittings on hydraulic pressure lines.
- Excessive use of elbows on hydraulic lines.
- Use of thread tape on hydraulic fittings.
- Use of galvanized fittings or components on hydraulic system.
- Improper hydraulic line size.
- Use of high-pressure hose for hydraulic suction line.
- Scotchlok-type wire splices.
- Non-insulated wire splices.
- Improper hose or wire routing near exhaust, over-sharp edges or through holes without grommets, or sharp edges.
- Improperly prepared, primed and painted surfaces.
- Non-fused electric circuits.
- Hydraulic circuits without pressure relief protection.

SPECIFICATION

038120 - Stainless Steel Dump Body Upfit For Use With a 17K Chassis

Reference: Heil Yardbird, Omaha Standard Eagle, Galion / Godwin 100, Crysteel E Tipper, Henderson Mark III or prior approved equal.

Note: " Refer to PCID 1075 for Delivery and Warranty Requirements".

Note: " Stainless Steel shall be 304 grade" Includes all components, crossmembers, long sills, ladder and fenders.

Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual.

Body Shall Include The Following Equipment:**Body - Installation:**

It shall be the responsibility of the successful vendor to have the dump body mounted on the chassis(s). The installation shall be engineered and approved by the vehicle manufacturer and shall have no adverse affect upon the manufacturer's warranty. When any portion of the complete vehicle is to be installed by anybody other than the bidder or the chassis manufacturer, they shall indicate the name of the sub-contractor performing such installation and the location of their plants. The dump body dimensions shall cover the rear wheels.

Any other applicable changes required to accommodate this type unit is the responsibility of the bidder.

Frame rails shall be prepared by cleaning, priming and final painting.

The body shall be attached to the truck chassis using four (4) U-bolts, or bolt thru, lock nuts, and appropriate shear plates as required to comply with manufacturer's standards.

Body Components:

Length of body shall be 9 Feet Minimum.

Floor Thickness shall be 3/16 of an inch minimum.

Capacity: 2 (approximate) cubic yards water level.

Side board pockets and tailgate height shall provide an additional carrying capacity.

The bulkhead shall be slotted, punched or checker-boarded to allow for visibility through the rear vehicle window.

There shall be a lever operated chute.

Body shall be fitted with a bed prop system, manufacture standard

Hoist cylinder shall have a lifting capacity of 9 tons. Minimum. Cylinder rod shall be chrome plated.

Hydraulic tank shall be a minimum of 20 Gallons working capacity. It is the responsibility of the vendor to insure all hydraulic functions can operate uninterrupted to include all plow, body, and spreader functions.

There shall be a check valve installed in the suction line if the pump is mounted higher than the tank to ensure pump does not loose prime.

All points of movement such as lift arms, tailgate linkage, etc. shall be fitted with threaded grease fittings.

Upper telescopic cylinder pin shall have a remote grease fitting.

There shall be wheel chocks and holders per EQN-82B. Holders can be mounted on the driver's side splash guards.

There shall be a ladder to access the dump bed on the drivers side front. Shall have grab handles to provide three points of contact when entering the bed. Steps shall be Bustin aluminum No. NST4 full size, or Bustin 628 steel, or Ohio Grating or IKG Industries serrated swage lock, with end band. The outer step edge must be serrated in lieu of plain, smooth metal edge. All edges shall be banded (skirting) on the outer perimeter. Overlay is not acceptable. Grab handles shall be covered with non-skid paint (non-skid tape is unacceptable).

Tailgate shall have a height of 24 inches minimum. Shall be a double acting tailgate with offset hinges. Shall have two (2) "J" hooks welded to the tailgate for chain hangers. 1.25" diameter, greasable self-aligning top hinge pins with tapered end and with sufficient length for easy removal. Pins shall be affixed with chains to prevent loss and be non-rotating. The holding device for the tailgate shall be operated by a control lever with a safety holding chain and ring. Severe duty tailgate hardware shall be adjustable. Coal chute gate with levers and operating handle. Shall have four (4) tailgate banjo chain brackets, two (2) on each side, banjo brackets shall be a minimum of 3/8 inch thickness and be fully welded. Tailgate / spreader chains shall be 3/8 inch and covered with black expandable braided sleeving monofilament.

Rear corner posts On both sides, shall be full depth construction from the top of the tailgate to the bottom of the rear bolster and free of holes. Rear bolster shall be full depth and full width.

Cab shield shall cover half of the cab, continuously welded.

Body structure shall have 4" rolled or extruded structural channel cross members of equal strength on 12" centers. The body and body sub-frame shall be reinforced to withstand SEVERE duty service. IE: Dump body up while spreading salt and anti-skid material, or excavation rip rap being dropped in the bed. Heavy gussets shall be furnished at all cross members on the outside. Where not possible, they will be furnished on the inside.

Cross-memberless style bed will be accepted with prior approval.

Construction:

All body parts are to be electrically full welded into one integral body.

For all threaded connections at least two (2) full threads shall be visible beyond the nut.

The fuel tank fill shall be positioned in such a way to ensure the filler nozzle can be set on automatic and nozzle will support itself with unrestricted flow.

Exhaust:

All tool boxes above any exhaust tailpipe or within close proximity of muffler, DPF, etc. shall receive a heat shield plate to the box in order to protect it. Exhaust shall be extended to the outer most edge of the installed body.

Safety:

Vendor shall supply a first aid kit in a weather proof steel case that meets requirements of ANSI Z308.1-2015 Class A. The Kit shall be placed loose in the cab with a sticker to be applied to the outside of the door at a later time stating the location of the first aid kit.
REF: Arbill Industries Inc. 215-501-8450

Mud Flaps:

Mud flaps front and rear of rear tires, unmarked, full width of tires, and gusseted.
Length shall be consistent with the unloaded rear axle height, And in accordance with the PA State Inspection Laws.
The Flaps in front of the rear tires shall extend downward 3/4 of the length of the rear splash guard/mud flap, with a 1/4 length, unmarked mud flap attached for the remaining distance.
The Flaps at the rear, of the rear tires, shall be constructed of 0.1406 in (10 gauge) steel, and include a rubber flap using 3 bolts and flat steel backed plates.

Electrical:**Whelen Light Kit Part # PADOTSY6, Kit contains the following lighting.**

1 - R10PADOT Light Bar to be mounted to the driver's side of the bulkhead. Light bar shall be mounted on swivel base as per EQN- 210B. In no case shall the light bar be mounted on the roof of the vehicle. Light Bar, rear and side warning lights shall be on the same switch.
2- IONAD Lights to be grommet mounted in the grill mounted per EQN - 115
2- IONGROM Rubber grommets for IONAD lights
2 - 50R00XRD Vertical Red stop, turn, tail lights to be mounted within the rear bolster facing rearward grommet mounted Per EQN-120U
4 - 50A02ZAD Amber warning lights,2 to be mounted one each side of dump bed and 2 facing rearward in the bolster grommet mounted as Per EQN-120U
6- 5GROMMET Rubber grommets for amber warning lights and red taillights.
1 - M6BUD Back-up light, to be mounted between frame rails where practical.
1- M6BRUSH Brush guard for backup light.
9 - W441D Harness side mating Deutch connectors.
The above lights are supplied with male and female Deutsch connectors that shall be utilized to connect the vendor supplied harness to each light source.
Body builder to supply remaining stop / tail / turn, marker and ICC lighting, they shall be protected against damage and shall also be shock mounted. Connections shall be water tight. All Body lighting shall be LED.
The Warning lights / Light bar shall have (1) lighted, permanently labeled toggle switch located in the dash controlling all I warning lights together
Body wiring shall be Grote, Trucklite, or Prior Approved Equal.
License plate lighting shall specifically be a Truck light 36 series PN# 36140c LED lamp with light bracket PN#36710
There shall be no splices outside of a sealed box or fixture.
There shall be a seven-way trailer (Pin Type) receptacle mounted on rear and filled with dielectric grease. Per EQN - 80A
A color-coded electrical wiring chart and schematic shall accompany each body.

Paint:

Body priming and painting to ensure full coverage to all areas of the body
Color of the body, including inside and outside of compartments, and the bed, shall be cab manufacturer's standard safety or school bus yellow, or optional PennDOT yellow DuPont F9885 for shade. (Powder Coat, if available from factory.) **It will be the responsibility of the successful vendor to ensure color of the body matches the cab.**
All metal surfaces to be painted shall be cleaned and prepared by abrasive blasting to 1-1/2 mil profile in accordance with Steel Structure Painting Council Standard SSPC-SP-6.
A rust preventative treatment shall be applied.

Conspicuity tape on body as per EQN-127A. Red/white on sides of body and cab,
Alternating Red / Yellow Reflective sheeting shall be mounted diagonally (45 degree angle) on the entire tailgate as per EQN-120N.
ICC Rear Under ride Protector, hitch and ladders shall be painted black.

Hitch:

There shall be a hitch installed, Per EQN-202B, there shall be provisions made to hook up a breakaway cable. The Upper Portion Of Hitch Shall Be Painted With Non-Skid Paint If extending to or outside body perimeter and is likely to be stepped on. Below hardware shall be supplied in truck cab. Hitch and below receiver parts shall not interfere with any part of the bumper or body no matter what configuration on the mounting plate is used.

Buyers Products (216-974-888)

Wallace Forge Company (800-328-1203)

| | | |
|---|-----------|---------------|
| Combo Ball Hitch W/ 2 inch Hard Chrome Ball: | BH8-2000 | 23071911 |
| Pintle Mounting Plate: | PM-87 | 2200170 PADOT |
| Bolt Kit: | 8520 | 2117240 |
| Hitch Pin: | HP6253 WC | HP58412 |

Hydraulic System and Console**Reference: Lancaster Truck Body - LT.B. Control Pro, Certified Cirius Technology -**

Shall be Central Hydraulic System – Dump body and spreader functions to be operated by a single transmission mounted PTO and pump shall be rated at 15GPM @ 1500 engine RPMs. All valves shall be fully proportional electric over hydraulic
Plow to operate off of self-contained electric hydraulic power unit that is mounted on plow frame.

No hydraulic lines or valves to be installed in the cab.

Control console shall include all auxiliary light functions, pump switch, beacon light, spinner spot, plow/headlights, main on/off, aux. mounted in between the drivers and passenger seat.

Spreader control system shall be provided with blast, auger reverse and pause functions with individual switches. Auger (open loop circuit) and spinner shall have automatic mode function to operate proportionally off of ground speed to start and stop with chassis.

Controller to have quick connects for ease of removal .

All hydraulic controls valves to be fully proportional, electric solenoid for body hoist and spreader controls.

There shall be 1 joy stick with interlock for body hoist up and down and 1 hand held controller for all plow functions and shall have a holder on the hydraulic control console when plow is not in use.

Drawings:

| | | | | |
|----------|---------|----------|---------|---|
| EQN-80A | Revised | 08-02-18 | sheet 1 | WIRING DIAGRAM |
| EQN-82B | Revised | 07-22-15 | sheet 1 | CHOCK AND HOLDER |
| EQN-115 | Revised | 07-03-12 | sheet 1 | GRILL MOUNTED WARNING LIGHTS |
| EQN-120N | Revised | 08-14-12 | sheet 1 | TAILGATE REFLECTIVE SHEETING / WARNING LIGHTS |
| EQN-120U | Revised | 08-14-12 | sheet 1 | 17K DUMP TAIL GATE LIGHTING |
| EQN-127A | Revised | 01-02-09 | sheet 1 | CONSPICUITY TAPE |
| EQN-202B | Revised | 07-27-16 | sheet 1 | HITCH: WEIGHT DISTRIBUTING |
| EQN-210B | Revised | 04-05-12 | sheet 3 | HIGH VOLTAGE WARNING LIGHT (BRACKET) |

Options**Spreader, Under Tailgate: (Installed) SEE ATTACHED SPREADER SPECS****Snow Plow, Adjustable Angle, or Straight reversible blade with a Minimum 9 foot moldboard: (Installed)****Reference: Boss, Power V, Western MVP Plus, Western Pro Plus or prior to bid approved equal).**

Cab controls for angle and lift mechanism.

Moldboard markers (wands).

Auxiliary snow plow lights, turn signals, shall be hitch mounted and reinforced.

The snow plow shall be mounted on specified chassis with all accessories

Quick attach ends for hydraulic hoses.

Trip mechanism.

All electrical circuits shall be fused.

Front moldboard snow deflector.

Plow frame shall be furnished and installed and shall be in concurrence with the truck manufacturer's engineering approval. Factory snow plow prep package shall be supplied.

Snow plow lights shall be furnished and mounted.

Manufacturer's standard color.

Installation Practices

All lights shall meet all Federal and State regulations.

All wire splices shall be insulated with heat shrink materials or removable connectors that create a water tight connection.

All wires shall be securely fastened with no wires hanging or protruding where they are exposed to the risk of damage.

All junction boxes shall be located inside of the utility body, in a location that will not compromise storage space. For easy accessibility, junction boxes must not be obstructed in any way.

All electrical connections shall be treated with di-electric grease. All wiring shall be secured using "P" type clamps at intervals not to exceed 12" between securing points.

All wires shall be in a protective covering and protected from chaffing, rubbing and getting pulled or torn from external sources.

Any alterations / relocation to fuel fill, DEF tank, exhaust, Etc. to allow installation of body shall be made in a professional manner using new materials.

Any place steel and aluminum contact each other Mylar or an approved equal shall be used as a buffer.

Laminate rubber is unacceptable. All vertical and horizontal seams of the body sides shall utilize full penetration welds in accordance

with standard welding practices as set forth by the American Welding Society and sealed water tight to create one integral body. All

corners shall be angled or rounded for safety and all weld splatter removed. All mounting procedures shall be in accordance with NTEA standards.

The use of any of the following items or practices WILL NOT BE ACCEPTED.

Non-steel fittings on hydraulic pressure lines. Excessive use of elbows on hydraulic lines.

Use of thread tape on hydraulic fittings. Use of galvanized fittings or components on hydraulic system. Improper hydraulic line size.

Use of high-pressure hose for hydraulic suction line. Scotchlok-type wire splices.

Non-insulated wire splices. Improper hose or wire routing near exhaust, over-sharp edges or through holes without grommets, or sharp edges.

Improperly prepared, primed and painted surfaces.

Non-fused electric circuits.

Hydraulic circuits without pressure relief protection.

Loose hanging wires that are not secure or are pulled tight so they are suspended with no support.

SPECIFICATION

039700 - 9FT Shop Body Upfit With Under hood Air Compressor and Crane For Use With 11K and 17K Chassis

Reference: Stahl, Warner, Omaha Standard, or Knapheide, meeting these specifications.

Note: " Refer to PCID 1075 for Delivery and Warranty Requirements".

Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual.

Body Shall Include The Following Equipment:**Body - Installation:**

It shall be the responsibility of the successful vendor to have the foreman body mounted on the chassis(s). The installation shall be engineered and approved by the vehicle manufacturer and shall have no adverse affect upon the manufacturer's warranty. When any portion of the complete vehicle is to be installed by anybody other than the bidder or the chassis manufacturer, they shall indicate the name of the sub-contractor performing such installation and the location of their plants. The foreman body dimensions shall cover the rear wheels.

Any other applicable changes required to accommodate this type unit is the responsibility of the bidder.

The body shall have a front mounted bulkhead and shall be a minimum 14 gauge steel with punched or expandable metal area in alignment with the cab rear window. It shall be constructed of sufficient strength to eliminate damage to the rear of the cab. The bulkhead shall not interfere with the visibility of the third brake light.

Proposed bulkhead shall be reviewed for acceptance prior to pilot model inspection by the Fleet Management Division. The bulkhead shall have a forward extension mounted to the driver's side, of sufficient size to support the base of the warning light and this extension shall have a gusset.

Frame rails shall be prepared by cleaning, priming and final painting.

The body shall be attached to the truck chassis using four (4) U-bolts, or bolt thru, lock nuts, and appropriate shear plates as required to comply with manufacturer's standards.

Body Components:

There shall be 3 compartments on each side Overall compartment depth shall be 24 in. minimum.

The front right cabinet shall be large enough to accommodate an acetylene tank and oxygen tank using 9.5 inch diameter bottles, minimum width 24 inches, with provisions to hang torch hose.

Cabinet shall be properly vented and all bottle-securing hardware included.

One (1) curbside compartment shall be 70" long x 18" high or 76" long or 18" high minimum.

Piano hinge is unacceptable.

All door and compartment hinges shall be rod and nylon bushing or stainless steel heavy duty strap hinge with nylon or Teflon bushings and rubber door seals. Vertical compartment doors shall have a limiting device, shock type or steel lock strap type. Chain or cable is acceptable on horizontal doors only.

All compartments shall be keyed alike, with no two individual completed units having the same keys.

The top left and right area's of the service body shall be covered with aluminum diamond deck (unpainted), and sealed all around.

Vertical compartment doors shall have a limiting device, shock type or steel lock strap type. Chain or cable straps on horizontal doors is unacceptable. Solid stock with a removable pin shall be utilized on all horizontal opening doors.

All compartments shall be equipped with one Stainless steel bolt on slam latch (rivits on latches are unacceptable). It is the vendors responsibility to make sure all compartment doors seal so if deemed necessary 2 slam latches will be accepted on the long horizontal tool box.

All compartments shall be keyed alike, with no two individual completed units having the same keys.

The heavy-duty rear bumper shall be constructed with a minimum of 1/8 inch reinforced steel. The size and strength shall be in accordance with the truck manufacturer's step design. The platform on top of the bumper shall be Bustin aluminum No. NST4 full size, or Bustin 628 steel, or Ohio Grating or IKG Industries serrated swage lock, with end band. The outer step edge must be serrated in lieu of plain, smooth metal edge. All edges shall be banded (skirting) on the outer perimeter. Overlay is not acceptable.

Two, 2" deep x 10" wide steps hung by 6" long 3/4" diameter cables shall be mounted, one under each side of bumper. Both hung 12" in from edge of bumper, step shall be Bustin steel grip grating.

There shall be a stainless steel grab handle on each rear side of the utility body to assist the operator in entering and exiting the bed area, Non-skid paint or rubber shall be utilized, (non-skid tape is unacceptable). Ref: Non skid paint, Gamma Laboratories (Tel. 304-489-2828.)

All compartment floors shall be covered with yellow DriDek (Tel: 800-348-2398).

Any area likely to be stepped on shall be covered with non-skid paint.

There shall be a total of six galvanized non rusting metal recessed D-ring style swiveling hold downs on the floor of body. One tie down in each corner of the body and the remaining two spaced evenly in the center of the body against the outer edge close to the walls each tied into a crossmember. REF EQN-1083

Hazardous or Flammable Materials Storage:

All cabinets or compartments shall be capable of storing flammable or hazardous materials such as (gas cans, aerosal cans, chainsaws, oil containers, compressed gas cylinders, paint cans etc.)

There shall aslo be a sticker placed inside the right front compartment door explaining the vented tool boxes. REF: EQN-1089B

Construction:

All body parts are to be electrically full welded into one integral body.

For all threaded connections at least two (2) full threads shall be visible beyond the nut.

The fuel tank fill shall be positioned in such a way to ensure the filler nozzle can be set on automatic and nozzle will support itself with unrestricted flow.

Compartment lighting:

Each compartment shall have the Vista Compartment lighting System (Tel: 219-264-0711). The 3/8" LED rope lighting sections shall be mounted on the inside of each compartment door and shall occupy space on the left, top, and right of each compartment. Rope sections shall extend full lenght of compartment on left and right sides. All compartments lighting shall be controlled by a single illuminated rocker switch mounted within easy reach of the driver. All wiring shall be secured using "P" type clamps 12" maximum between securment points.

Exhaust:

All tool boxes above any exhaust tailpipe or within close proximity of muffler, DPF, etc. shall receive a heat shield plate to the box in order to protect it. Exhaust shall be extended to the outer most edge of the installed body.

Mud Flaps:

Mud flaps front and rear of rear tires, unmarked, full width of tires, and gusseted.
 Length shall be consistent with the unloaded rear axle height, And in accordance with the PA State Inspection Laws.
 The Flaps in front of the rear tires shall be constructed of 0.1406 in (10 gauge) steel.
 The Flaps at the rear, of the rear tires, shall be constructed of 0.1406 in (10 gauge) steel, and include a rubber flap using 3 bolts and flat steel backed plates.

Electrical:

Whelen Light Kit Part # PADOTSY5, Kit contains the following lighting.

1 - R10PADOT Light Bar to be mounted to the driver's side of the bulkhead. In no case shall the light bar be mounted on the roof of the vehicle.
 4- IONAD Amber warning, 2 will be grommet mounted to outer edges of the front grill and 1 will be grommet mounted on each side of bed per EQN-115 & EQN-120M
 4- IONGROM Rubber grommets for IONAD
 2 - M6AD Amber warning lights
 2 - M6BTTD Stop, Tail, Turn lights
 2 - M6BUD Back-up lights
 2 - Vertical 3 light flange black housing assembly. Above warning, STT, and back up lights shall be mounted in housing per EQN - 120M.
 10 - W441D Harness side mating Deutsch connectors.
 1 - Pioneer Tripod pedestal flood light with coiled cord, remote mount and plug to be supplied in the cab. A work Light receptacle shall be wired and mounted in the rear of the truck and one receptacle on the left front side of the body both filled with dielectric grease. Work light receptacles shall have a constant 12 volt power supply, circuit to be properly protected and have a chassis ground. Portable light retainer mounting location will be determined at pilot inspection.
 Side warning lights are to be wired in conjunction with above light bar. The above lights are supplied with male and female Deutsch connectors that shall be utilized to connect the vendor supplied harness to each light source.
 Body builder to supply remaining marker and ICC lighting, they shall be protected against damage and shall also be shock mounted. Connections shall be water tight. All Body lighting shall be LED.
 The Warning lights / Light bar shall have a lighted, permanently labeled toggle switch located in the dash. Body wiring shall be Grote, Trucklite, or Prior Approved Equal.
 License plate lighting shall specifically be a Truck light 36 series PN# 36140C LED lamp with light bracket PN#36710
 There shall be no splices outside of a sealed box or fixture. Box SHALL NOT be obstructed and location shall be determined at pilot inspection
 There shall be a seven-way trailer (Pin Type) receptacle mounted on rear filled with dielectric grease. Per EQN - 80A
 A color-coded electrical wiring chart and schematic shall accompany each body.
 All wires shall be in a protective covering. Any loose hanging wires are unexceptable.

HITCH:

There shall be a hitch installed, Per EQN-202B, there shall be provisions made to hook up a breakaway cable. The Upper Portion Of Hitch Shall Be Painted With Non-Skid Paint If extending to or outside body perimeter and is likely to be stepped on. Below hardware shall be supplied in truck cab. Hitch and below receiver parts shall not interfere with any part of the bumper or body no matter what configuration on the mounting plate is used.

| | Buyers Products (216-974-888) | Wallace Forge Company (800-328-1203) |
|--|-------------------------------|--------------------------------------|
| Combo Ball Hitch W/ 2 inch Hard Chrome Ball: | BH8-2000 | 23071911 |
| Pintle Mounting Plate: | PM-87 | 2200170 PADOT |
| Bolt Kit: | 8520 | 2117240 |
| Hitch Pin: | HP6253 WC | HP58412 |
| American Van (1800-526-4743) | | |
| 5" Hitch vise: | HDV-5 | |
| Hitch Vise Mount | HVM-10 | |

Auxiliary Air System:

VMAC VR70 AIR COMPRESSOR SYSTEM, (there shall be a switch that only allows compressor to run when the vehicle is placed in park/neutral).
 The installation of the compressor, tank and control console shall be properly mounted and bracketed.
 The installation shall include compressor, tank, control console, all necessary hardware and brackets, and complete accessories.
 There shall be two (2) 50 ft hoses, one with 0.250 in quick couplers complete and one on a housed (out of the weather, on the road side) reel (one only), spare 50 ft hose shall be shipped in the utility body.
 Filter moisture separator, Chicago Pneumatic #CA-048360.
 Line lubricator Chicago Pneumatic #CA-048361.
 Pressure regulator Chicago Pneumatic #CA-048362 to adjust to OSHA approved levels of 30 psi.
 Two (2) connectors Chicago Pneumatic #CA-048363.
 The before-mentioned unit shall be assembled, mounted on a convenient service panel and shall incorporate a master gate valve.
 The service end shall have a service 'T' with (0.50 in) female and (0.250 in) female connectors.
 Tank vibration mounts.
 If the compressor requires the batteries for the truck to be relocated from underhood. They shall be moved to the street side front cabinet and properly secured. The cabinet shall be properly vented to allow circulation of air.

Crane:

Per EQN-120J, Ref: Autocrane 3203PRX-HW or equivalent. Original crane manufacturer's color is acceptable. A boom rest with tie down strap shall be used to store the unit when not in use. Body manufacture is responsible for engineering body to incorporate mounting and use of the crane with out damage to the body. Manual pull out with crank down jack stabilizer system shall be installed to support the stability of the vehicle while loaded crane is in operation. There shall be a stabilizer for both left and right side of the truck. Installer shall be responsible to ensure the vehicle sits on a level plane when the jacks and crane are in the stowed position so the truck does not appear to "lean" towards the crane side of the vehicle. Leveling shall be accomplished by modifying the suspension appropriately as needed.

Paint:

Body priming and painting to ensure full coverage to all areas of the body

Color of the body, including inside and outside of compartments, and the bed, shall be cab manufacturer's standard safety or school bus yellow, or optional PennDOT yellow DuPont F9885 for shade. (Powder Coat, if available from factory.) It will be the responsibility of the successful vendor to ensure color of the body matches the cab.

All metal surfaces to be painted shall be cleaned and prepared by abrasive blasting to 1-1/2 mil profile in accordance with Steel Structure Painting Council Standard SSPC-SP-6.

A rust preventative treatment shall be applied.

Conspicuity tape on body as per EQN-127A. Red/white on sides of body and cab,

Alternating Red / Yellow Reflective sheeting shall be mounted diagonally (45 degree angle) on the rear of body as per EQN-120K.

ICC Rear Under ride Protector, hitch and grip strut ladders shall be painted black.

Front lower leading edge of cabinets shall have a minimum 12 inch high aluminum diamond plate for chip resistance.

Safety:

Vendor shall supply a first aid kit, that meets requirements of ANSI Z308.1-2015 Class A. The Kit shall in a weather proof steel case and placed in the front compartment on the drivers side with a sticker applied to the outside of the door stating the location of the first aid kit.

There shall be a bracket designed to fit underneath the first shelf that the first aid kit will slide into to allow quick access to it. There will also be a first aid sticker placed on the shelf. REF: EQN-171 Drawing. REF: Arbill Industries Inc. 215-501-8450

Bed Liner:

Center Cargo Area shall have a Linex brand sprayed bed liner no substitutes. Shall cover floor and all sides including tailgate interior. Shall be a minimum of 150 Mils. Thickness. Material shall have No VOCS and be applied utilizing a high pressure spray. D-ring hold downs shall not be sprayed.

Drawings:

| | | | | |
|-----------|---------|----------|---------|------------------------------|
| EQN-80A | Revised | 08-02-18 | sheet 1 | WIRING DIAGRAM |
| EQN-115 | Revised | 07-03-12 | sheet 1 | GRILL MOUNTED WARNING LIGHTS |
| EQN-120J | Revised | 08-14-12 | sheet 1 | 9' SERVICE BODY |
| EQN-120K | Revised | 06-10-14 | sheet 1 | TYPICAL REFLECTIVE SHEETING |
| EQN-120M | Revised | 09-28-11 | sheet 1 | CREW CAB BODY LIGHTING |
| EQN-127A | Revised | 01-02-09 | sheet 1 | CONSPICUITY TAPE |
| EQN-202B | Revised | 07-27-16 | sheet 1 | HITCH: WEIGHT DISTRIBUTING |
| EQN-171 | | 07-21-16 | sheet 1 | FIRST AID KIT PLACEMENT |
| EQN-1089B | | 06-18-18 | sheet 1 | HAZARD WARNING STICKER |
| EQN-1083 | | 05-24-18 | sheet 1 | D-RINGS |

Installation Practices

All lights shall meet all Federal and State regulations.

All wire splices shall be insulated with heat shrink materials or removable connectors that create a water tight connection.

All wires shall be securely fastened with no wires hanging or protruding where they are exposed to the risk of damage.

All junction boxes shall be located inside of the utility body, in a location that will not compromise storage space. For easy accessibility, junction boxes must not be obstructed in any way.

All electrical connections shall be treated with di-electric grease. All wiring shall be secured using "P" type clamps at intervals not to exceed 12" between securement points.

All wires shall be in a protective covering and protected from chaffing, rubbing and getting pulled or torn from external sources.

Any alterations / relocation to fuel fill, DEF tank, exhaust, Etc. to allow installation of body shall be made in a professional manner using new materials.

Any place steel and aluminum contact each other Mylar or an approved equal shall be used as a buffer.

Laminate rubber is unacceptable. All vertical and horizontal seams of the body sides shall utilize full penetration welds in accordance with standard welding practices as set forth by the American Welding Society and sealed water tight to create one integral body. All corners shall be angled or rounded for safety and all weld splatter removed. All mounting procedures shall be in accordance with NTEA standards.

The use of any of the following items or practices WILL NOT BE ACCEPTED.

Non-steel fittings on hydraulic pressure lines. Excessive use of elbows on hydraulic lines.

Use of thread tape on hydraulic fittings. Use of galvanized fittings or components on hydraulic system. Improper hydraulic line size.

Use of high-pressure hose for hydraulic suction line. Scotchlok-type wire splices.

Non-insulated wire splices. Improper hose or wire routing near exhaust, over-sharp edges or through holes without grommets, or sharp edges.

Improperly prepared, primed and painted surfaces.

Non-fused electric circuits.

Hydraulic circuits without pressure relief protection.

Loose hanging wires that are not secure or are pulled tight so they are suspended with no support.

| | |
|---|--------------------|
| | Page <u>1</u> of 3 |
| SPECIFICATION | |
| <u>045660 - Truck, 17K, 2WD, Crew Cab & Chassis, Diesel Engine, Automatic Transmission, Dual Rear Wheels</u> | |
| This Dual Rear Wheel Model, Chassis Only, Shall Be A Manufacturer's Standard Model Vehicle, Capable Of Carrying Five (5) Passengers. 17,000 Lb GVWR Minimum. Manufacturer's Rating Certified On Door. Chassis to accommodate A 9 Foot Minimum, Flatbed, Service, Shop, Foreman, Weld, Dump Body or Survey Body. | |
| Note: " Refer to PCID 1075 for <u>Delivery</u> , and <u>Warranty</u> Requirements". | |
| The following additional items shall be supplied | |
| Air Bags : Shall be equipped with manufacturers standard air bags. | |
| Air Conditioning : Shall be equipped with manufacturers standard air conditioning. | |
| Alternator : Shall be manufacturers largest / heaviest duty available. | |
| Blue Tooth: Shall be equipped with manufacturers standard Blue tooth system. | |
| Daytime Running Lights : Shall be equipped with manufacturers standard Daytime Running Lights. (Aftermarket Acceptable) | |
| Differential : Shall be equipped with manufacturers standard Limited Slip Differential. Rear Axle Ratio Shall be 4.88. | |
| DEF Tank : Shall be mounted to not interfere with body installation. Any relocation shall be done in a professional manner using new materials. | |
| Engine : Shall be Manufacturer's highest available horsepower and torque rating, standard or optional diesel engine, to include, immersion in-block type engine heater For water cooled engines, with water-proof plug and flush mounted In drivers side front sheet metal, engine oil cooler , and largest available engine cooling capacity. | |
| Exhaust : Shall be capable of being extended by the body up fitter to the outer most edge of the installed body. | |
| Front Bumper : Shall be Chrome, Black, or Argent. | |
| Fuel Tank : Manufacturer's highest capacity standard tank frame mounted (Tank filler positioned to ensure that filler nozzle can be set on automatic and nozzle will support itself, with unrestricted flow.) | |
| Lubricants : Shall be synthetic where available, with drain plugs identified or painted red. (Engine oil excluded) | |
| Mirrors : Shall be manufacturers standard heavy duty outside mirrors with convex mirror (aftermarket convex spot mirror acceptable) and extendable arms, driver and passenger sides. Shall be equipped with manufacturers standard manual day / night rearview mirror. | |
| Paint : Manufacturer's standard safety or school bus yellow. | |
| Seats: Shall be equipped with Vinyl 40/20/40 seats with center work console, Foam Padded with Seatbelts. (Cloth is Unacceptable) | |
| Suspension : Shall be equipped with trailer and handling package, to include front and rear stabilizer bars, heaviest available front and rear suspension, and heaviest available differential. | |
| Tires : Truck and Body Company shall ensure that proper sized tires and wheels for GVWR are supplied. Tires shall be radial, OEM's most aggressive / severe duty tire available from manufacturer. | |
| Transmission : Shall be automatic with largest available auxiliary oil cooler. (NOTE THERE SHALL BE PTO PROVISIONS MADE ON ECN#038100, 038110 AND 038120 DUMP BODIES. IT SHALL BE A ELECTRIC SHIFTED PTO AND HYDRAULIC PUMP SHALL BE TRANSMISSION MOUNTED AND BE FOR USE STATIONARY AND MOBILE APPLICATIONS). | |
| Windshield : Shall be equipped with manufacturers standard tinted windshield. | |
| Windows and Locks : Shall be equipped with manufacturers standard manual windows and door locks. | |
| The following equipment shall be supplied / installed | |
| There shall be a step bar REF: Bustin (PN# RB001) or prior approved equal, must be length of cab entry area on both sides. (Installed) REF: EQN-170 drawing | |
| There shall be an ECCO Model 450 backup alarm, shock mounted. (Installed) | |
| There shall be a seven-way trailer light receptacle, "Pin Type", securely mounted near rear trailer hitch area. Wired per EQN - 80A. Connections shall be sealed and water tight and packed with dielectric grease. | |
| There shall be a 4.5" LED interior utility dome light with an on and off swith. OPTRONICS PART NUMBER#OPTILL22CB Installed centered, over the front seat, capable of operating with the Ignition off. | |
| There shall be a warning light: Whelen Model R10HDPA with Deutsch connectors. Supplied and delivered in the cab. | |
| All switches shall be permanently labeled and backlit. | |

| | |
|---|--------------------|
| | Page 2 of 3 |
| There shall be two (2) front tow hooks, installed. | |
| There shall be an emergency triangle warning kit in each unit, in storage box and mounted in cab. EQN - 66A | |
| There shall be a 5 LB. minimum 3A:40:BC fire extinguisher rechargeable with vehicle mount. Securely mounted in the cab for easy and quick access. A sticker on the door closest to the extinguisher shall be applied in the outside lower corner of the door to identify the location of the extinguisher. | |
| There shall be a trailer hitch installed, as per EQN - 202B, the upper portion of hitch shall be painted with non-skid paint if extending to or outside body perimeter and is likely to be stepped on. (Tape is not acceptable.) There shall be provisions made for a safety break away cable. Hitch and below receiver parts shall not interfere with any part of the bumper or body no matter what configuration on the mounting plate is used. | |
| All the following shall be supplied and delivered in the cab. Buyers Products - Combo Ball Hitch W/ 2 inch Hard Chrome Ball BH8-2000, Pintle Mounting Plate PM-87, Bolt Kit 8520, Hitch Pin HP6253 WC. Or approved equal. | |
| <u>Safety</u> | |
| Unit shall be fitted with temporary mud flaps that shall remain intact. | |
| The cab shall have conspicuity tape as Per EQN-127A. | |
| Any area likely to be stepped on shall be covered with non-skid paint, tape is unacceptable. | |
| All handrails, ladders, and step configurations shall be built for three points of contact. | |
| Anti-slip paint is required on all handholds, for the entire length, (tape is unacceptable). | |
| <u>Options</u> | |
| <u>Option</u> : To be equipped with Four Wheel Drive. | |
| <u>Option</u> : To be equipped with Snow Plow Prep package. | |
| <u>Option</u> : To be equipped with Power windows, Power door locks, and Power / Heated mirrors with manual extendable arms. | |
| <u>Option</u> : Road Watch road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display. | |
| <u>Option</u> : Vaisala road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display. Ambient sensor shall be mounted as to not receive any heat from then engine or drive train components to represent a false reading of the ambient air temperature. | |
| <u>Option</u> : Install FLOCS system as per EQN: 351A. | |
| <u>Option</u> : Flatbed Body upfit, Specification 046900 | |
| <u>Option</u> : Service Body upfit, Specification 048900 | |
| <u>Option</u> : Shop 9' Body upfit, Specification 039700 | |
| <u>Option</u> : Foreman Body upfit, Specification 050400 | |
| <u>Option</u> : Forman Body upfit, Split door option Specification 050401 | |
| <u>Option</u> : Survey Body upfit, Specification 049700 | |
| <u>Option</u> : Weld Body upfit, Specification 045860 | |
| <u>Option</u> : Steel Dump Body upfit, Specification 038100 | |
| <u>Option</u> : Aluminum Dump Body upfit, Specification 038110 | |
| <u>Option</u> : Stainless Steel Dump Body upfit, Specification 038120 | |
| <u>Option</u> : Snow Plow upfit, Specification 038100, 038110, or 038120 | |
| <u>Option</u> : Spreader upfit, Specification 038100, 038110, or 038120 | |

Option : Statewide Radio:

Vehicle electrical and electronics will conform to the Federal Communications Commission 47 C.F.R. Part 15 so as not to interfere with the operation of the PennDOT Land Mobile Radio, which is an authorized radio station under 47 C.F.R. Part 90.

Radio Antenna: There shall be a roof mount base, PCTEL model BMATM/NC25 and a VHF StiCO Roof-FT-NITI-M whip shall be cut to 18.0 inches per manufactures cut sheet. Assembly shall be mounted to the center of the cab roof (not to interfere with any cab shield), with the antenna cable routed to underneath the dash. There shall be a minimum of 4 feet of antenna cable coiled at the base of the floor to allow for connection of radio on spreader control pedestal. Antenna shall be prewired with a UHF MALE connection. (No substitute, standardization).

Power Distribution Center: There shall be a 4-way power/ground distribution center located on the underside of the dash for connection of the state radio. The lugs shall be configured in the following manner: (1) lug shall be a 30 ampere constant hot circuit, (1) lug shall be a 10 ampere ignition controlled circuit. (2) lugs shall be chassis ground. All connections shall be enclosed in a weatherproof enclosure.

Option : Bidder must provide option pricing for "one" of the following.

Factory: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. Unit shall be painted PennDOT yellow in lieu of the OEM's original color. Using the same process as with OEM paint.

Aftermarket: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. All surfaces shall be properly cleaned and prepared prior to paint. Paint shall be the same quality as factory paint. To include all areas of the unit including interior.

Drawings:

| | | | | |
|----------|---------|----------|-------------|---|
| EQN-66A | Revised | 07-13-17 | sheet 1 | TRIANGLE STORAGE BOX AND BRACKET |
| EQN-80A | Revised | 08-02-18 | sheet 1 | WIRING DIAGRAM |
| EQN-127A | Revised | 01-02-09 | sheet 1 | CONSPICUITY TAPE |
| EQN-202B | Revised | 07-27-16 | sheet 1 | HITCH: WEIGHT DISTRIBUTING |
| EQN-351A | Revised | 06-19-13 | sheet 1 & 2 | FAST LUBE OIL CHANGE SYSTEM OVERVIEW AND PARTS LIST |
| EQN-170 | | 7-19-16 | sheet 1 | RUNNING BOARDS |

Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual.

Installation Practices

All lights shall meet all Federal and State regulations.

All wire splices shall be insulated with heat shrink materials or removable connectors that create a water tight connection.

All wires shall be securley fastened with no wires hanging or protruding where they are exposed to the risk of damage.

All junction boxes shall be located inside of the utility body, in a location that will not compromise storage space. For easy accessibility, junctions boxes must not be obstructed in any way.

All electrical connections shall be treated with di-electric grease. All wiring shall be secured using "P" type clamps at intervals not to exceed 12" between securment points

All wires shall be in a protective covering and protected from chaffing, rubbing and getting pulled or torn from external sources.

Any alterations / relocation to fuel fill, DEF tank, exhaust, Etc. to allow installation of body shall be made in a professional manner using new materials.

Any place steel and aluminum contact each other Mylar or an approved equal shall be used as a buffer. Laminate rubber is unacceptable.

All vertical and horizontal seams of the body sides shall utilize full penetration welds in accordance with standard welding practices as set forth by the American Welding Society and sealed water tight to create one integral body.

All corners shall be angled or rounded for safety and all weld splatters removed. All mounting procedures shall be in accordance with NTEA standards.

The use of any of the following items or practices WILL NOT BE ACCEPTED.

Non-steel fittings on hydraulic pressure lines.

Excessive use of elbows on hydraulic lines.

Use of thread tape on hydraulic fittings.

Use of galvanized fittings or components on hydraulic system.

Improper hydraulic line size.

Use of high-pressure hose for hydraulic suction line.

Scotchlok-type wire splices.

Non-insulated wire splices.

Improper or not secured hose or wire routing near exhaust, over-sharp edges or through holes without grommets, or sharp edges.

Improperly prepared, primed and painted surfaces.

Non-fused electric circuits.

Hydraulic circuits without pressure relief protection.

Laminated Rubber

| | |
|---|-------------|
| | Page 1 of 3 |
| SPECIFICATION | |
| 045661 - Truck, 17K, 2WD, Crew Cab & Chassis, Gas Engine, Automatic Transmission, Dual Rear Wheels | |
| This Dual Rear Wheel Model, Chassis Only, Shall Be A Manufacturer's Standard Model Vehicle, Capable Of Carrying Five (5) Passengers. 17,000 Lb GVWR Minimum. Manufacturer's Rating Certified On Door. Chassis to accommodate A 9 Foot Minimum, Flatbed, Service, Shop, Foreman, Weld, Dump Body or Survey Body. | |
| Note: " Refer to PCID 1075 for <u>Delivery</u>, and <u>Warranty</u> Requirements". | |
| The following additional items shall be supplied | |
| Air Bags : Shall be equipped with manufacturers standard air bags. | |
| Air Conditioning : Shall be equipped with manufacturers standard air conditioning. | |
| Alternator : Shall be manufacturers largest / heaviest duty available. | |
| Blue Tooth: Shall be equipped with manufacturers standard Blue tooth system. | |
| Daytime Running Lights : Shall be equipped with manufacturers standard Daytime Running Lights. (Aftermarket Acceptable) | |
| Differential : Shall be equipped with manufacturers standard Limited Slip Differential. Rear Axle Ratio Shall be 4.88. | |
| Engine : Shall be Manufacturer's highest available horsepower and torque rating, standard or optional gas engine, to include, engine oil cooler , and largest available engine cooling capacity. | |
| Exhaust : Shall be capable of being extended by the body up fitter to the outer most edge of the installed body. | |
| Front Bumper : Shall be Chrome, Black, or Argent. | |
| Fuel Tank : Manufacturer's highest capacity standard tank frame mounted (Tank filler positioned to ensure that filler nozzle can be set on automatic and nozzle will support itself, with unrestricted flow.) | |
| Lubricants : Shall be synthetic where available, with drain plugs identified or painted red. (Engine oil excluded) | |
| Mirrors : Shall be manufacturers standard heavy duty outside mirrors with convex mirror (aftermarket convex spot mirror acceptable) and extendable arms, driver and passenger sides. Shall be equipped with manufacturers standard manual day / night rearview mirror. | |
| Paint : Manufacturer's standard safety or school bus yellow. | |
| Seats: Shall be equipped with Vinyl 40/20/40 seats with center work console, Foam Padded with Seatbelts. (Cloth is Unacceptable) | |
| Suspension : Shall be equipped with trailer and handling package, to include front and rear stabilizer bars, heaviest available front and rear suspension, and heaviest available differential. | |
| Tires : Truck and Body Company shall ensure that proper sized tires and wheels for GVWR are supplied. Tires shall be radial, OEM's most aggressive / severe duty tire available from manufacturer. | |
| Transmission : Shall be automatic with largest available auxiliary oil cooler. (NOTE THERE SHALL BE PTO PROVISIONS MADE ON ECN#038100, 038110 AND 038120 DUMP BODIES. IT SHALL BE A ELECTRIC SHIFTED PTO AND HYDRAULIC PUMP SHALL BE TRANSMISSION MOUNTED AND BE FOR USE STATIONARY AND MOBILE APPLICATIONS). | |
| Windshield : Shall be equipped with manufacturers standard tinted windshield. | |
| Windows and Locks : Shall be equipped with manufacturers standard manual windows and door locks. | |
| The following equipment shall be supplied / installed | |
| There shall be a step bar REF: Bustin (PN# RB001) or prior approved equal must be length of cab entry area on both sides. (Installed) REF: EQN-170 Drawing | |
| There shall be an ECCO Model 450 backup alarm, shock mounted. (Installed) | |
| There shall be a seven-way trailer light receptacle, "Pin Type", securely mounted near rear trailer hitch area. Wired per EQN - 80A. Connections shall be sealed and water tight and packed with dielectric grease. | |
| There shall be a 4.5" LED interior utility dome light with an on and off swith. OPTRONICS PART NUMBER#OPTILL22CB Installed centered, over the front seat, capable of operating with the Ignition off. | |
| There shall be a warning light: Whelen Model R10HDPA with Deutsch connectors. Supplied and delivered in the cab. | |
| All switches shall be permanently labeled and backlit. | |

There shall be two (2) front tow hooks, installed.

There shall be an emergency triangle warning kit in each unit, in storage box and mounted in cab. EQN - 66A

There shall be a 5 LB. minimum 3A:40:BC fire extinguisher rechargeable with vehicle mount. Securely mounted in the cab for easy and quick access. A sticker on the door closest to the extinguisher shall be applied in the lower outside corner of the door to identify the location of the extinguisher.

There shall be a trailer hitch installed, as per EQN - 202B, the upper portion of hitch shall be painted with non-skid paint if extending to or outside body perimeter and is likely to be stepped on. (Tape is not acceptable.) There shall be provisions made for a safety break away cable. Hitch and below receiver parts shall not interfere with any part of the bumper or body no matter what configuration on the mounting plate is used.

All the following shall be supplied and delivered in the cab. Buyers Products - Combo Ball Hitch W/ 2 inch Hard Chrome Ball BH8-2000, Pintle Mounting Plate PM-87, Bolt Kit 8520, Hitch Pin HP6253 WC. Or approved equal.

Safety

Unit shall be fitted with temporary mud flaps that shall remain intact.

The cab shall have conspicuity tape as Per EQN-127A.

Any area likely to be stepped on shall be covered with non-skid paint, tape is unacceptable.

All handrails, ladders, and step configurations shall be built for three points of contact.

Anti-slip paint is required on all handholds, for the entire length, (tape is unacceptable).

Options

Option : To be equipped with Four Wheel Drive.

Option : To be equipped with Snow Plow Prep package.

Option : To be equipped with Power windows, Power door locks, and Power / Heated mirrors with manual extendable arms.

Option : Road Watch road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display.

Option : Vaisala road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display. Ambient sensor shall be mounted as to not receive any heat from then engine or drive train components to represent a false reading of the ambient air temperature.

Option : Install FLOCS system as per EQN: 351A.

Option : Flatbed Body upfit, Specification 046900

Option : Service Body upfit, Specification 048900

Option : Shop 9' Body upfit, Specification 039700

Option : Foreman Body upfit, Specification 050400

Option : Foreman Body upfit, Split Door option 050401

Option : Survey Body upfit, Specification 049700

Option : Weld Body upfit, Specification 045860

Option : Steel Dump Body upfit, Specification 038100

Option : Aluminum Dump Body upfit, Specification 038110

Option : Stainless Steel Dump Body upfit, Specification 038120

Option : Snow Plow upfit, Specification 038100, 038110, or 038120

Option : Spreader upfit, Specification 038100, 038110, or 038120

Option : Statewide Radio:

Vehicle electrical and electronics will conform to the Federal Communications Commission 47 C.F.R. Part 15 so as not to interfere with the operation of the PennDOT Land Mobile Radio, which is an authorized radio station under 47 C.F.R. Part 90.

Radio Antenna: There shall be a roof mount base, PCTEL model BMATM/NC25 and a VHF StiCO Roof-FT-NITI-M whip shall be cut to 18.0 inches per manufactures cut sheet. Assembly shall be mounted to the center of the cab roof (not to interfere with any cab shield), with the antenna cable routed to underneath the dash. There shall be a minimum of 4 feet of antenna cable coiled at the base of the floor to allow for connection of radio on spreader control pedestal. Antenna shall be prewired with a UHF MALE connection. (No substitute, standardization).

Power Distribution Center: There shall be a 4-way power/ground distribution center located on the underside of the dash for connection of the state radio. The lugs shall be configured in the following manner: (1) lug shall be a 30 ampere constant hot circuit, (1) lug shall be a 10 ampere ignition controlled circuit. (2) lugs shall be chassis ground. All connections shall be enclosed in a weatherproof enclosure.

Option : Bidder must provide option pricing for "one" of the following.

Factory: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. Unit shall be painted PennDOT yellow in lieu of the OEM's original color. Using the same process as with OEM paint.

Aftermarket: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. All surfaces shall be properly cleaned and prepared prior to paint. Paint shall be the same quality as factory paint. To include all areas of the unit including interior.

Drawings:

| | | | | |
|----------|---------|----------|-------------|---|
| EQN-66A | Revised | 07-13-17 | sheet 1 | TRIANGLE STORAGE BOX AND BRACKET |
| EQN-80A | Revised | 08-02-18 | sheet 1 | WIRING DIAGRAM |
| EQN-127A | Revised | 01-02-09 | sheet 1 | CONSPICUITY TAPE |
| EQN-202B | Revised | 07-27-16 | sheet 1 | HITCH: WEIGHT DISTRIBUTING |
| EQN-351A | Revised | 06-19-13 | sheet 1 & 2 | FAST LUBE OIL CHANGE SYSTEM OVERVIEW AND PARTS LIST |
| EQN-170 | | 07-19-16 | sheet 1 | RUNNING BOARDS |

Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual.

Installation Practices

All lights shall meet all Federal and State regulations.

All wire splices shall be insulated with heat shrink materials or removable connectors that create a water tight connection.

All wires shall be securely fastened with no wires hanging or protruding where they are exposed to the risk of damage.

All junction boxes shall be located inside of the utility body, in a location that will not compromise storage space. For easy accessibility, junctions boxes must not be obstructed in any way.

All electrical connections shall be treated with di-electric grease. All wiring shall be secured using "P" type clamps at intervals not to exceed 12" between securment points

All wires shall be in a protective covering and protected from chaffing, rubbing and getting pulled or torn from external sources.

Any alterations / relocation to fuel fill, DEF tank, exhaust, Etc. to allow installation of body shall be made in a professional manner using new materials.

Any place steel and aluminum contact each other Mylar or an approved equal shall be used as a buffer. Laminate rubber is unacceptable.

All vertical and horizontal seams of the body sides shall utilize full penetration welds in accordance with standard welding practices as set forth by the American Welding Society and sealed water tight to create one integral body.

All corners shall be angled or rounded for safety and all weld splatters removed. All mounting procedures shall be in accordance with NTEA standards.

The use of any of the following items or practices WILL NOT BE ACCEPTED.

Non-steel fittings on hydraulic pressure lines.

Excessive use of elbows on hydraulic lines.

Use of thread tape on hydraulic fittings.

Use of galvanized fittings or components on hydraulic system.

Improper hydraulic line size.

Use of high-pressure hose for hydraulic suction line.

Scotchlok-type wire splices.

Non-insulated wire splices.

Improper hose or wire routing near exhaust, over-sharp edges or through holes without grommets, or sharp edges.

Improperly prepared, primed and painted surfaces.

Non-fused electric circuits.

Hydraulic circuits without pressure relief protection.

Laminated Rubber

| | |
|--|--------------------|
| | Page <u>1 of 3</u> |
| SPECIFICATION | |
| <u>045800 - Truck, 17K, 2WD, Regular Cab & Chassis, Diesel Engine, Automatic Transmission, Dual Rear Wheels</u> | |
| This Dual Rear Wheel Model, Chassis Only, Shall Be A Manufacturer's Standard Model Vehicle, Capable Of Carrying Two (2) Passengers. 17,000 Lb GVWR Minimum. Manufacturer's Rating Certified On Door. Chassis to accommodate A 9 Foot Minimum, Flatbed, Service, Shop, Foreman, Weld, Dump Body or Survey Body. | |
| Note: " Refer to PCID 1075 for <u>Delivery</u> , and <u>Warranty Requirements</u> ". | |
| The following additional items shall be supplied | |
| Air Bags : Shall be equipped with manufacturers standard air bags. | |
| Air Conditioning : Shall be equipped with manufacturers standard air conditioning. | |
| Alternator : Shall be manufacturers largest / heaviest duty available. | |
| Blue Tooth : Shall be equipped with manufacturers standard Blue tooth system. | |
| Daytime Running Lights : Shall be equipped with manufacturers standard Daytime Running Lights. (Aftermarket Acceptable) | |
| Differential : Shall be equipped with manufacturers standard Limited Slip Differential. Rear Axle Ratio Shall be 4.88. | |
| DEF Tank : Shall be mounted to not interfere with body installation. Any relocation shall be done in a professional manner using new materials. | |
| Engine : Shall be Manufacturer's highest available horsepower and torque rating, standard or optional diesel engine, to include, immersion in-block type engine heater For water cooled engines, with water-proof plug and flush mounted In driver's side front sheet metal, engine oil cooler , and largest available engine cooling capacity. | |
| Exhaust : Shall be capable of being extended by the body up fitter to the outer most edge of the installed body. | |
| Front Bumper : Shall be Chrome, Black, or Argent. | |
| Fuel Tank : Manufacturer's highest capacity standard tank frame mounted (Tank filler positioned to ensure that filler nozzle can be set on automatic and nozzle will support itself, with unrestricted flow.) | |
| Lubricants : Shall be synthetic where available, with drain plugs identified or painted red. (Engine oil excluded) | |
| Mirrors : Shall be manufacturers standard heavy duty outside mirrors with convex mirror (aftermarket convex spot mirror acceptable) and extendable arms, driver and passenger sides. Shall be equipped with manufacturers standard manual day / night rearview mirror. | |
| Paint : Manufacturer's standard safety or school bus yellow. | |
| Seats : Shall be equipped with Vinyl 40/20/40 seats with center work console, Foam Padded with Seatbelts. (Cloth is Unacceptable) | |
| Suspension : Shall be equipped with trailer and handling package, to include front and rear stabilizer bars, heaviest available front and rear suspension, and heaviest available differential. | |
| Tires : Truck and Body Company shall ensure that proper sized tires and wheels for GVWR are supplied. Tires shall be radial, OEM's most aggressive / severe duty tire available from manufacturer. | |
| Transmission : Shall be automatic with largest available auxiliary oil cooler. (NOTE THERE SHALL BE PTO PROVISIONS MADE ON ECN#038100, 038110 AND 038120 DUMP BODIES. IT SHALL BE A ELECTRIC SHIFTED PTO AND HYDRAULIC PUMP SHALL BE TRANSMISSION MOUNTED AND BE FOR USE STATIONARY AND MOBILE APPLICATIONS). | |
| Windshield : Shall be equipped with manufacturers standard tinted windshield. | |
| Windows and Locks : Shall be equipped with manufacturers standard manual windows and door locks. | |
| The following equipment shall be supplied / installed | |
| There shall be a step bar REF: Bustin (PN# RB003) or prior approved equal, must be length of cab entry area on both sides. (Installed) REF: EQN-170 Drawing. | |
| There shall be an ECCO Model 450 backup alarm, shock mounted. (Installed) | |
| There shall be a seven-way trailer light receptacle, "Pin Type", securely mounted near rear trailer hitch area. Wired per EQN - 80A. Connections shall be sealed and water tight and packed with dielectric grease. | |
| There shall be a 4.5" LED interior utility dome light with an on and off swith. OPTRONICS PART NUMBER#OPTILL22CB Installed centered, over the front seat, capable of operating with the Ignition off. | |
| There shall be a warning light: Whelen Model R10HDPA with Deutsch connectors. Supplied and delivered in the cab. | |
| All switches shall be permanently labeled and backlit. | |

| |
|---|
| There shall be two (2) front tow hooks, installed. |
| There shall be an emergency triangle warning kit in each unit, in storage box and mounted in cab. EQN - 66A |
| There shall be a 5 LB. minimum 3A:40:BC fire extinguisher rechargeable with vehicle mount. Securely mounted in the cab for easy and quick access. A sticker on the door closest to the extinguisher shall be applied in the outside lower corner of the door to identify the location of the extinguisher. |
| There shall be a trailer hitch installed, as per EQN - 202B, the upper portion of hitch shall be painted with non-skid paint if extending to or outside body perimeter and is likely to be stepped on. (Tape is not acceptable.) There shall be provisions made for a safety break away cable. Hitch and below receiver parts shall not interfere with any part of the bumper or body no matter what configuration on the mounting plate is used. |
| All the following shall be supplied and delivered in the cab. Buyers Products - Combo Ball Hitch W/ 2 inch Hard Chrome Ball BH8-2000, Pintle Mounting Plate PM-87, Bolt Kit 8520, Hitch Pin HP6253 WC. Or approved equal. |
| <u>Safety</u> |
| Unit shall be fitted with temporary mud flaps that shall remain intact. |
| The cab shall have conspicuity tape as Per EQN-127A. |
| Any area likely to be stepped on shall be covered with non-skid paint, tape is unacceptable. |
| All handrails, ladders, and step configurations shall be built for three points of contact. |
| Anti-slip paint is required on all handholds, for the entire length, (tape is unacceptable). |
| <u>Options</u> |
| <u>Option</u> : To be equipped with Four Wheel Drive. |
| <u>Option</u> : To be equipped with Snow Plow Prep package. |
| <u>Option</u> : To be equipped with Power windows, Power door locks, and Power / Heated mirrors with manual extendable arms. |
| <u>Option</u> : Road Watch road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display. Ambient sensor shall be mounted as to not receive any heat from then engine or drive train components to represent a false reading of the ambient air temperature. |
| <u>Option</u> : Vaisala road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display. Ambient sensor shall be mounted as to not receive any heat from then engine or drive train components to represent a false reading of the ambient air temperature. |
| <u>Option</u> : Install FLOCS system as per EQN: 351A. |
| <u>Option</u> : Flatbed Body upfit, Specification 046900 |
| <u>Option</u> : Service Body upfit, Specification 048900 |
| <u>Option</u> : Shop 9' Body upfit, Specification 039700 |
| <u>Option</u> : Shop 11' Body upfit, Specification 045874 |
| <u>Option</u> : Foreman Body upfit, Specification 050400 |
| <u>Option</u> : Foreman Body upfit, Split Door configuration, Specification 050401 |
| <u>Option</u> : Survey Body upfit, Specification 049700 |
| <u>Option</u> : Weld Body upfit, Specification 045860 |
| <u>Option</u> : Steel Dump Body upfit, Specification 038100 |
| <u>Option</u> : Aluminum Dump Body upfit, Specification 038110 |
| <u>Option</u> : Stainless Steel Dump Body upfit, Specification 038120 |
| <u>Option</u> : Snow Plow upfit, Specification 038100, 038110, or 038120 |
| <u>Option</u> : Spreader upfit, Specification 038100, 038110, or 038120 |

Option : Statewide Radio:

Vehicle electrical and electronics will conform to the Federal Communications Commission 47 C.F.R. Part 15 so as not to interfere with the operation of the PennDOT Land Mobile Radio, which is an authorized radio station under 47 C.F.R. Part 90.

Radio Antenna: There shall be a roof mount base, PCTEL model BMATM/NC25 and a VHF StiCO Roof-FT-NITI-M whip shall be cut to 18.0 inches per manufactures cut sheet. Assembly shall be mounted to the center of the cab roof (not to interfere with any cab shield), with the antenna cable routed to underneath the dash. There shall be a minimum of 4 feet of antenna cable coiled at the base of the floor to allow for connection of radio on spreader control pedestal. Antenna shall be prewired with a UHF MALE connection. (No substitute, standardization).

Power Distribution Center: There shall be a 4-way power/ground distribution center located on the underside of the dash for connection of the state radio. The lugs shall be configured in the following manner: (1) lug shall be a 30 ampere constant hot circuit, (1) lug shall be a 10 ampere ignition controlled circuit. (2) lugs shall be chassis ground. All connections shall be enclosed in a weatherproof enclosure.

Option : Bidder must provide option pricing for "one" of the following.

Factory: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. Unit shall be painted PennDOT yellow in lieu of the OEM's original color. Using the same process as with OEM paint.

Aftermarket: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. All surfaces shall be properly cleaned and prepared prior to paint. Paint shall be the same quality as factory paint. To include all areas of the unit including interior.

Drawings:

| | | | | |
|----------|---------|----------|-------------|---|
| EQN-66A | Revised | 07-13-17 | sheet 1 | TRIANGLE STORAGE BOX AND BRACKET |
| EQN-80A | Revised | 08-02-18 | sheet 1 | WIRING DIAGRAM |
| EQN-127A | Revised | 01-02-09 | sheet 1 | CONSPICUITY TAPE |
| EQN-202B | Revised | 07-27-16 | sheet 1 | HITCH: WEIGHT DISTRIBUTING |
| EQN-351A | Revised | 06-19-13 | sheet 1 & 2 | FAST LUBE OIL CHANGE SYSTEM OVERVIEW AND PARTS LIST |
| EQN-170 | | 07-19-16 | sheet 1 | RUNNING BOARDS |

Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual.

Installation Practices

All lights shall meet all Federal and State regulations.

All wire splices shall be insulated with heat shrink materials or removable connectors that create a water tight connection.

All wires shall be securley fastened with no wires hanging or protruding where they are exposed to the risk of damage.

All junction boxes shall be located inside of the utility body, in a location that will not compromise storage space. For easy accessibility, junctions boxes must not be obstructed in any way.

All electrical connections shall be treated with di-electric grease. All wiring shall be secured using "P" type clamps at intervals not to exceed 12" between securment points

All wires shall be in a protective covering and protected from chaffing, rubbing and getting pulled or torn from external sources.

Any alterations / relocation to fuel fill, DEF tank, exhaust, Etc. to allow installation of body shall be made in a professional manner using new materials.

Any place steel and aluminum contact each other Mylar or an approved equal shall be used as a buffer. Laminate rubber is unacceptable.

All vertical and horizontal seams of the body sides shall utilize full penetration welds in accordance with standard welding practices as set forth by the American Welding Society and sealed water tight to create one integral body.

All corners shall be angled or rounded for safety and all weld splatters removed. All mounting procedures shall be in accordance with NTEA standards.

The use of any of the following items or practices WILL NOT BE ACCEPTED.

Non-steel fittings on hydraulic pressure lines.

Excessive use of elbows on hydraulic lines.

Use of thread tape on hydraulic fittings.

Use of galvanized fittings or components on hydraulic system.

Improper hydraulic line size.

Use of high-pressure hose for hydraulic suction line.

Scotchlok-type wire splices.

Non-insulated wire splices.

Improper hose or wire routing near exhaust, over-sharp edges or through holes without grommets, or sharp edges.

Improperly prepared, primed and painted surfaces.

Non-fused electric circuits.

Hydraulic circuits without pressure relief protection.

Laminated Rubber

| | |
|---|-------------|
| | Page 1 of 3 |
| SPECIFICATION | |
| 045801 - Truck, 17K, 2WD, Regular Cab & Chassis, Gas Engine, Automatic Transmission, Dual Rear Wheels | |
| This Dual Rear Wheel Model, Chassis Only, Shall Be A Manufacturer's Standard Model Vehicle, Capable Of Carrying Two (2) Passengers. 17,000 Lb GVWR Minimum. Manufacturer's Rating Certified On Door. Chassis to accommodate A 9 Foot Minimum, Flatbed, Service, Shop, Foreman, Weld, Dump Body or Survey Body. | |
| Note: " Refer to PCID 1075 for <u>Delivery</u> , and <u>Warranty</u> Requirements". | |
| The following additional items shall be supplied | |
| Air Bags : Shall be equipped with manufacturers standard air bags. | |
| Air Conditioning : Shall be equipped with manufacturers standard air conditioning. | |
| Alternator : Shall be manufacturers largest / heaviest duty available. | |
| Blue Tooth: Shall be equipped with manufacturers standard Blue tooth system. | |
| Daytime Running Lights : Shall be equipped with manufacturers standard Daytime Running Lights. (Aftermarket Acceptable) | |
| Differential : Shall be equipped with manufacturers standard Limited Slip Differential. Rear Axle Ratio Shall be 4.88. | |
| Engine : Shall be Manufacturer's highest available horsepower and torque rating, standard or optional gas engine, to include, engine oil cooler , and largest available engine cooling capacity. | |
| Exhaust : Shall be capable of being extended by the body up fitter to the outer most edge of the installed body. | |
| Front Bumper : Shall be Chrome, Black, or Argent. | |
| Fuel Tank : Manufacturer's highest capacity standard tank frame mounted (Tank filler positioned to ensure that filler nozzle can be set on automatic and nozzle will support itself, with unrestricted flow.) | |
| Lubricants : Shall be synthetic where available, with drain plugs identified or painted red. (Engine oil excluded) | |
| Mirrors : Shall be manufacturers standard heavy duty outside mirrors with convex mirror (aftermarket convex spot mirror acceptable) and extendable arms, driver and passenger sides. Shall be equipped with manufacturers standard manual day / night rearview mirror. | |
| Paint : Manufacturer's standard safety or school bus yellow. | |
| Seats: Shall be equipped with Vinyl 40/20/40 seats with center work console, Foam Padded with Seatbelts. (Cloth is Unacceptable) | |
| Suspension : Shall be equipped with trailer and handling package, to include front and rear stabilizer bars, heaviest available front and rear suspension, and heaviest available differential. | |
| Tires : Truck and Body Company shall ensure that proper sized tires and wheels for GVWR are supplied. Tires shall be radial, OEM's most aggressive / severe duty tire available from manufacturer. | |
| Transmission : Shall be automatic with largest available auxiliary oil cooler. (NOTE THERE SHALL BE PTO PROVISIONS MADE ON ECN#038100, 038110 AND 038120 DUMP BODIES. IT SHALL BE A ELECTRIC SHIFTED PTO AND HYDRAULIC PUMP SHALL BE TRANSMISSION MOUNTED AND BE FOR USE STATIONARY AND MOBILE APPLICATIONS). | |
| Windshield : Shall be equipped with manufacturers standard tinted windshield. | |
| Windows and Locks : Shall be equipped with manufacturers standard manual windows and door locks. | |
| The following equipment shall be supplied / installed | |
| There shall be a step bar REF: Bustin (PN# RB003) or prior approved equal, must be length of cab entry area on both sides. (Installed) REF: EQN-170 drawing | |
| There shall be an ECCO Model 450 backup alarm, shock mounted. (Installed) | |
| There shall be a seven-way trailer light receptacle, "Pin Type", securely mounted near rear trailer hitch area. Wired per EQN - 80A. Connections shall be sealed and water tight and packed with dielectric grease. | |
| There shall be a 4.5" LED interior utility dome light with an on and off swith. OPTRONICS PART NUMBER#OPTILL22CB Installed centered, over the front seat, capable of operating with the Ignition off. | |
| There shall be a warning light: Whelen Model R10HDPA with Deutsch connectors. Supplied and delivered in the cab. | |
| All switches shall be permanently labeled and backlit. | |

| | |
|---|--------------------|
| | Page 2 of 3 |
| There shall be two (2) front tow hooks, installed. | |
| There shall be an emergency triangle warning kit in each unit, in storage box and mounted in cab. EQN - 66A | |
| There shall be a 5 LB. minimum 3A:40:BC fire extinguisher rechargeable with vehicle mount. Securely mounted in the cab for easy and quick access. A sticker on the door closest to the extinguisher shall be applied in the outside lower corner of the door to identify the location of the extinguisher. | |
| There shall be a trailer hitch installed, as per EQN - 202B, the upper portion of hitch shall be painted with non-skid paint if extending to or outside body perimeter and is likely to be stepped on. (Tape is not acceptable.) There shall be provisions made for a safety break away cable. Hitch and below receiver parts shall not interfere with any part of the bumper or body no matter what configuration on the mounting plate is used. | |
| All the following shall be supplied and delivered in the cab. Buyers Products - Combo Ball Hitch W/ 2 inch Hard Chrome Ball BH8-2000, Pintle Mounting Plate PM-87, Bolt Kit 8520, Hitch Pin HP6253 WC. Or approved equal. | |
| <u>Safety</u> | |
| Unit shall be fitted with temporary mud flaps that shall remain intact. | |
| The cab shall have conspicuity tape as Per EQN-127A. | |
| Any area likely to be stepped on shall be covered with non-skid paint, tape is unacceptable. | |
| All handrails, ladders, and step configurations shall be built for three points of contact. | |
| Anti-slip paint is required on all handholds, for the entire length, (tape is unacceptable). | |
| <u>Options</u> | |
| <u>Option</u> : To be equipped with Four Wheel Drive. | |
| <u>Option</u> : To be equipped with Snow Plow Prep package. | |
| <u>Option</u> : To be equipped with Power windows, Power door locks, and Power / Heated mirrors with manual extendable arms. | |
| <u>Option</u> : Road Watch road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display. | |
| <u>Option</u> : Vaisala road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display. Ambient sensor shall be mounted as to not receive any heat from then engine or drive train components to represent a false reading of the ambient air temperature. | |
| <u>Option</u> : Install FLOCS system as per EQN: 351A. | |
| <u>Option</u> : Flatbed Body upfit, Specification 046900 | |
| <u>Option</u> : Service Body upfit, Specification 048900 | |
| <u>Option</u> : Shop 9' Body upfit, Specification 039700 | |
| <u>Option</u> : Shop 11' Body upfit, Specification 045874 | |
| <u>Option</u> : Foreman Body upfit, Specification 050400 | |
| <u>Option</u> : Forman Body upfit, Split Door Configuration 050401 | |
| <u>Option</u> : Survey Body upfit, Specification 049700 | |
| <u>Option</u> : Weld Body upfit, Specification 045860 | |
| <u>Option</u> : Steel Dump Body upfit, Specification 038100 | |
| <u>Option</u> : Aluminum Dump Body upfit, Specification 038110 | |
| <u>Option</u> : Stainless Steel Dump Body upfit, Specification 038120 | |
| <u>Option</u> : Snow Plow upfit, Specification 038100, 038110, or 038120 | |
| <u>Option</u> : Spreader upfit, Specification 038100, 038110, or 038120 | |

Option : Statewide Radio:

Vehicle electrical and electronics will conform to the Federal Communications Commission 47 C.F.R. Part 15 so as not to interfere with the operation of the PennDOT Land Mobile Radio, which is an authorized radio station under 47 C.F.R. Part 90.

Radio Antenna: There shall be a roof mount base, PCTEL model BMATM/NC25 and a VHF StiCO Roof-FT-NITI-M whip shall be cut to 18.0 inches per manufactures cut sheet. Assembly shall be mounted to the center of the cab roof (not to interfere with any cab shield), with the antenna cable routed to underneath the dash. There shall be a minimum of 4 feet of antenna cable coiled at the base of the floor to allow for connection of radio on spreader control pedestal. Antenna shall be prewired with a UHF MALE connection. (No substitute, standardization).

Power Distribution Center: There shall be a 4-way power/ground distribution center located on the underside of the dash for connection of the state radio. The lugs shall be configured in the following manner: (1) lug shall be a 30 ampere constant hot circuit, (1) lug shall be a 10 ampere ignition controlled circuit. (2) lugs shall be chassis ground. All connections shall be enclosed in a weatherproof enclosure.

Option : Bidder must provide option pricing for "one" of the following.

Factory: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. Unit shall be painted PennDOT yellow in lieu of the OEM's original color. Using the same process as with OEM paint.

Aftermarket: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. All surfaces shall be properly cleaned and prepared prior to paint. Paint shall be the same quality as factory paint. To include all areas of the unit including interior.

Drawings:

| | | | | |
|----------|---------|----------|-------------|---|
| EQN-66A | Revised | 07-13-17 | sheet 1 | TRIANGLE STORAGE BOX AND BRACKET |
| EQN-80A | Revised | 08-02-18 | sheet 1 | WIRING DIAGRAM |
| EQN-127A | Revised | 01-02-09 | sheet 1 | CONSPICUITY TAPE |
| EQN-202B | Revised | 07-27-16 | sheet 1 | HITCH: WEIGHT DISTRIBUTING |
| EQN-351A | Revised | 06-19-13 | sheet 1 & 2 | FAST LUBE OIL CHANGE SYSTEM OVERVIEW AND PARTS LIST |
| EQN-170 | | 07-19-16 | sheet 1 | RUNNING BOARDS |

Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual.

Installation Practices

All lights shall meet all Federal and State regulations.

All wire splices shall be insulated with heat shrink materials or removable connectors that create a water tight connection.

All wires shall be securley fastened with no wires hanging or protruding where they are exposed to the risk of damage.

All junction boxes shall be located inside of the utility body, in a location that will not compromise storage space. For easy accessibility, junctions boxes must not be obstructed in any way.

All electrical connections shall be treated with di-electric grease. All wiring shall be secured using "P" type clamps at intervals not to exceed 12" between securment points

All wires shall be in a protective covering and protected from chaffing, rubbing and getting pulled or torn from external sources.

Any alterations / relocation to fuel fill, DEF tank, exhaust, Etc. to allow installation of body shall be made in a professional manner using new materials.

Any place steel and aluminum contact each other Mylar or an approved equal shall be used as a buffer. Laminate rubber is unacceptable.

All vertical and horizontal seams of the body sides shall utilize full penetration welds in accordance with standard welding practices as set forth by the American Welding Society and sealed water tight to create one integral body.

All corners shall be angled or rounded for safety and all weld splatters removed. All mounting procedures shall be in accordance with NTEA standards.

The use of any of the following items or practices WILL NOT BE ACCEPTED.

Non-steel fittings on hydraulic pressure lines.

Excessive use of elbows on hydraulic lines.

Use of thread tape on hydraulic fittings.

Use of galvanized fittings or components on hydraulic system.

Improper hydraulic line size.

Use of high-pressure hose for hydraulic suction line.

Scotchlok-type wire splices.

Non-insulated wire splices.

Improper hose or wire routing near exhaust, over-sharp edges or through holes without grommets, or sharp edges.

Improperly prepared, primed and painted surfaces.

Non-fused electric circuits.

Hydraulic circuits without pressure relief protection.

Laminated Rubber

| | |
|---|--------------------|
| | Page <u>1</u> of 3 |
| SPECIFICATION | |
| <u>045802 - Truck, 17K, 2WD, Extended Cab & Chassis, Diesel Engine, Automatic Transmission, Dual Rear Wheels</u> | |
| This Dual Rear Wheel Model, Chassis Only, Shall Be A Manufacturer's Standard Model Vehicle, Capable Of Carrying Two (2) Passengers. 17,000 Lb GVWR Minimum. Manufacturer's Rating Certified On Door. Chassis to accommodate A 9 Foot Minimum, Flatbed, Service, Shop, Foreman, Weld, Dump Body or Survey Body. | |
| Note: " Refer to PCID 1075 for <u>Delivery</u>, and <u>Warranty</u> Requirements". | |
| The following additional items shall be supplied | |
| Air Bags : Shall be equipped with manufacturers standard air bags. | |
| Air Conditioning : Shall be equipped with manufacturers standard air conditioning. | |
| Alternator : Shall be manufacturers largest / heaviest duty available. | |
| Blue Tooth: Shall be equipped with manufacturers standard Blue tooth system. | |
| Daytime Running Lights : Shall be equipped with manufacturers standard Daytime Running Lights. (Aftermarket Acceptable) | |
| Differential : Shall be equipped with manufacturers standard Limited Slip Differential. Rear Axle Ratio Shall be 4.88. | |
| DEF Tank : Shall be mounted to not interfere with body installation. Any relocation shall be done in a professional manner using new materials. | |
| Engine : Shall be Manufacturer's highest available horsepower and torque rating, standard or optional diesel engine, to include, immersion in-block type engine heater For water cooled engines, with water-proof plug and flush mounted In drivers side front sheet metal, engine oil cooler , and largest available engine cooling capacity. | |
| Exhaust : Shall be capable of being extended by the body up fitter to the outer most edge of the installed body. | |
| Front Bumper : Shall be Chrome, Black, or Argent. | |
| Fuel Tank : Manufacturer's highest capacity standard tank frame mounted (Tank filler positioned to ensure that filler nozzle can be set on automatic and nozzle will support itself, with unrestricted flow.) | |
| Lubricants : Shall be synthetic where available, with drain plugs identified or painted red. (Engine oil excluded) | |
| Mirrors : Shall be manufacturers standard heavy duty outside mirrors with convex mirror (aftermarket convex spot mirror acceptable) and extendable arms, driver and passenger sides. Shall be equipped with manufacturers standard manual day / night rearview mirror. | |
| Paint : Manufacturer's standard safety or school bus yellow. | |
| Seats: Shall be equipped with Vinyl 40/20/40 seats with center work console, Foam Padded with Seatbelts. (Cloth is Unacceptable) | |
| Suspension : Shall be equipped with trailer and handling package, to include front and rear stabilizer bars, heaviest available front and rear suspension, and heaviest available differential. | |
| Tires : Truck and Body Company shall ensure that proper sized tires and wheels for GVWR are supplied. Tires shall be radial, OEM's most aggressive / severe duty tire available from manufacturer. | |
| Transmission : Shall be automatic with largest available auxiliary oil cooler. (NOTE THERE SHALL BE PTO PROVISIONS MADE ON ECN#038100, 038110 AND 038120 DUMP BODIES. IT SHALL BE A ELECTRIC SHIFTED PTO AND HYDRAULIC PUMP SHALL BE TRANSMISSION MOUNTED AND BE FOR USE STATIONARY AND MOBILE APPLICATIONS). | |
| Windshield : Shall be equipped with manufacturers standard tinted windshield. | |
| Windows and Locks : Shall be equipped with manufacturers standard manual windows and door locks. | |
| The following equipment shall be supplied / installed | |
| There shall be a step bar REF:Bustin (PN# RB002) or prior approved equal, must be length of cab entry area on both sides. (Installed) REF: EQN-170 drawing | |
| There shall be an ECCO Model 450 backup alarm, shock mounted. (Installed) | |
| There shall be a seven-way trailer light receptacle, "Pin Type", securely mounted near rear trailer hitch area. Wired per EQN - 80A. Connections shall be sealed and water tight and packed with dielectric grease. | |
| There shall be a 4.5" LED interior utility dome light with an on and off swith. OPTRONICS PART NUMBER#OPTILL22CB Installed centered, over the front seat, capable of operating with the Ignition off. | |
| There shall be a warning light: Whelen Model R10HDPA with Deutsch connectors. Supplied and delivered in the cab. | |
| All switches shall be permanently labeled and backlit. | |

| | |
|---|--------------------|
| | Page 2 of 3 |
| There shall be two (2) front tow hooks, installed. | |
| There shall be an emergency triangle warning kit in each unit, in storage box and mounted in cab. EQN - 66A | |
| There shall be a 5 LB. minimum 3A:40:BC fire extinguisher rechargeable with vehicle mount. Securely mounted in the cab for easy and quick access. A sticker on the door closest to the extinguisher shall be applied in the outside lower corner of the door to identify the location of the extinguisher. | |
| There shall be a trailer hitch installed, as per EQN - 202B, the upper portion of hitch shall be painted with non-skid paint if extending to or outside body perimeter and is likely to be stepped on. (Tape is not acceptable.) There shall be provisions made for a safety break away cable. Hitch and below receiver parts shall not interfere with any part of the bumper or body no matter what configuration on the mounting plate is used. | |
| All the following shall be supplied and delivered in the cab. Buyers Products - Combo Ball Hitch W/ 2 inch Hard Chrome Ball BH8-2000, Pintle Mounting Plate PM-87, Bolt Kit 8520, Hitch Pin HP6253 WC. Or approved equal. | |
| <u>Safety</u> | |
| Unit shall be fitted with temporary mud flaps that shall remain intact. | |
| The cab shall have conspicuity tape as Per EQN-127A. | |
| Any area likely to be stepped on shall be covered with non-skid paint, tape is unacceptable. | |
| All handrails, ladders, and step configurations shall be built for three points of contact. | |
| Anti-slip paint is required on all handholds, for the entire length, (tape is unacceptable). | |
| <u>Options</u> | |
| <u>Option</u> : To be equipped with Four Wheel Drive. | |
| <u>Option</u> : To be equipped with Snow Plow Prep package. | |
| <u>Option</u> : To be equipped with Power windows, Power door locks, and Power / Heated mirrors with manual extendable arms. | |
| <u>Option</u> : Road Watch road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display. | |
| <u>Option</u> : Vaisala road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display. Ambient sensor shall be mounted as to not receive any heat from then engine or drive train components to represent a false reading of the ambient air temperature. | |
| <u>Option</u> : Install FLOCS system as per EQN: 351A. | |
| <u>Option</u> : Flatbed Body upfit, Specification 046900 | |
| <u>Option</u> : Service Body upfit, Specification 048900 | |
| <u>Option</u> : Shop 9' Body upfit, Specification 039700 | |
| <u>Option</u> : Shop 11' Body upfit, Specification 045874 | |
| <u>Option</u> : Foreman Body upfit, Specification 050400 | |
| <u>Option</u> : Foreman Body upfit, Split Door Configuration 050401 | |
| <u>Option</u> : Survey Body upfit, Specification 049700 | |
| <u>Option</u> : Weld Body upfit, Specification 045860 | |
| <u>Option</u> : Steel Dump Body upfit, Specification 038100 | |
| <u>Option</u> : Aluminum Dump Body upfit, Specification 038110 | |
| <u>Option</u> : Stainless Steel Dump Body upfit, Specification 038120 | |
| <u>Option</u> : Snow Plow upfit, Specification 038100, 038110, or 038120 | |
| <u>Option</u> : Spreader upfit, Specification 038100, 038110, or 038120 | |

Option : Statewide Radio:

Vehicle electrical and electronics will conform to the Federal Communications Commission 47 C.F.R. Part 15 so as not to interfere with the operation of the PennDOT Land Mobile Radio, which is an authorized radio station under 47 C.F.R. Part 90.

Radio Antenna: There shall be a roof mount base, PCTEL model BMATM/NC25 and a VHF StiCO Roof-FT-NITI-M whip shall be cut to 18.0 inches per manufactures cut sheet. Assembly shall be mounted to the center of the cab roof (not to interfere with any cab shield), with the antenna cable routed to underneath the dash. There shall be a minimum of 4 feet of antenna cable coiled at the base of the floor to allow for connection of radio on spreader control pedestal. Antenna shall be prewired with a UHF MALE connection. (No substitute, standardization).

Power Distribution Center: There shall be a 4-way power/ground distribution center located on the underside of the dash for connection of the state radio. The lugs shall be configured in the following manner: (1) lug shall be a 30 ampere constant hot circuit, (1) lug shall be a 10 ampere ignition controlled circuit. (2) lugs shall be chassis ground. All connections shall be enclosed in a weatherproof enclosure.

Option : Bidder must provide option pricing for "one" of the following.

Factory: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. Unit shall be painted PennDOT yellow in lieu of the OEM's original color. Using the same process as with OEM paint.

Aftermarket: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. All surfaces shall be properly cleaned and prepared prior to paint. Paint shall be the same quality as factory paint. To include all areas of the unit including interior.

Drawings:

| | | | | |
|----------|---------|----------|-------------|---|
| EQN-66A | Revised | 07-13-17 | sheet 1 | TRIANGLE STORAGE BOX AND BRACKET |
| EQN-80A | Revised | 08-02-18 | sheet 1 | WIRING DIAGRAM |
| EQN-127A | Revised | 01-02-09 | sheet 1 | CONSPICUITY TAPE |
| EQN-202B | Revised | 07-27-16 | sheet 1 | HITCH: WEIGHT DISTRIBUTING |
| EQN-351A | Revised | 06-19-13 | sheet 1 & 2 | FAST LUBE OIL CHANGE SYSTEM OVERVIEW AND PARTS LIST |
| EQN-170 | | 7-19-16 | sheet 1 | RUNNING BOARDS |

Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual.

Installation Practices

All lights shall meet all Federal and State regulations.

All wire splices shall be insulated with heat shrink materials or removable connectors that create a water tight connection.

All wires shall be securley fastened with no wires hanging or protruding where they are exposed to the risk of damage.

All junction boxes shall be located inside of the utility body, in a location that will not compromise storage space. For easy accessibility, junctions boxes must not be obstructed in any way.

All electrical connections shall be treated with di-electric grease. All wiring shall be secured using "P" type clamps at intervals not to exceed 12" between securment points

All wires shall be in a protective covering and protected from chaffing, rubbing and getting pulled or torn from external sources.

Any alterations / relocation to fuel fill, DEF tank, exhaust, Etc. to allow installation of body shall be made in a professional manner using new materials.

Any place steel and aluminum contact each other Mylar or an approved equal shall be used as a buffer. Laminate rubber is unacceptable.

All vertical and horizontal seams of the body sides shall utilize full penetration welds in accordance with standard welding practices as set forth by the American Welding Society and sealed water tight to create one integral body.

All corners shall be angled or rounded for safety and all weld splatters removed. All mounting procedures shall be in accordance with NTEA standards.

The use of any of the following items or practices WILL NOT BE ACCEPTED.

Non-steel fittings on hydraulic pressure lines.

Excessive use of elbows on hydraulic lines.

Use of thread tape on hydraulic fittings.

Use of galvanized fittings or components on hydraulic system.

Improper hydraulic line size.

Use of high-pressure hose for hydraulic suction line.

Scotchlok-type wire splices.

Non-insulated wire splices.

Improper hose or wire routing near exhaust, over-sharp edges or through holes without grommets, or sharp edges.

Improperly prepared, primed and painted surfaces.

Non-fused electric circuits.

Hydraulic circuits without pressure relief protection.

Laminated Rubber

SPECIFICATION

045803 - Truck, 17K, 2WD, Extended Cab & Chassis, Gas Engine, Automatic Transmission, Dual Rear Wheels

This Dual Rear Wheel Model, Chassis Only, Shall Be A Manufacturer's Standard Model Vehicle, Capable Of Carrying Two (2) Passengers. 17,000 Lb GVWR Minimum. Manufacturer's Rating Certified On Door. Chassis to accommodate A 9 Foot Minimum, Flatbed, Service, Shop, Foreman, Weld, Dump Body or Survey Body.

Note: " Refer to PCID 1075 for Delivery, and Warranty Requirements".

The following additional items shall be supplied

Air Bags : Shall be equipped with manufacturers standard air bags.

Air Conditioning : Shall be equipped with manufacturers standard air conditioning.

Alternator : Shall be manufacturers largest / heaviest duty available.

Blue Tooth: Shall be equipped with manufacturers standard Blue tooth system.

Daytime Running Lights : Shall be equipped with manufacturers standard Daytime Running Lights. (Aftermarket Acceptable)

Differential : Shall be equipped with manufacturers standard Limited Slip Differential. Rear Axle Ratio Shall be 4.88.

Engine : Shall be Manufacturer's highest available horsepower and torque rating, standard or optional gas engine, to include, engine oil cooler , and largest available engine cooling capacity.

Exhaust : Shall be capable of being extended by the body up fitter to the outer most edge of the installed body.

Front Bumper : Shall be Chrome, Black, or Argent.

Fuel Tank : Manufacturer's highest capacity standard tank frame mounted (Tank filler positioned to ensure that filler nozzle can be set on automatic and nozzle will support itself, with unrestricted flow.)

Lubricants : Shall be synthetic where available, with drain plugs identified or painted red. (Engine oil excluded)

Mirrors : Shall be manufacturers standard heavy duty outside mirrors with convex mirror (aftermarket convex spot mirror acceptable) and extendable arms, driver and passenger sides. Shall be equipped with manufacturers standard manual day / night rearview mirror.

Paint : Manufacturer's standard safety or school bus yellow.

Seats: Shall be equipped with Vinyl 40/20/40 seats with center work console, Foam Padded with Seatbelts. (Cloth is Unacceptable)

Suspension : Shall be equipped with trailer and handling package, to include front and rear stabilizer bars, heaviest available front and rear suspension, and heaviest available differential.

Tires : Truck and Body Company shall ensure that proper sized tires and wheels for GVWR are supplied. Tires shall be radial, OEM's most aggressive / severe duty tire available from manufacturer.

Transmission : Shall be automatic with largest available auxiliary oil cooler. **(NOTE THERE SHALL BE PTO PROVISIONS MADE ON ECN#038100, 038110 AND 038120 DUMP BODIES. IT SHALL BE A ELECTRIC SHIFTED PTO AND HYDRAULIC PUMP SHALL BE TRANSMISSION MOUNTED AND BE FOR USE STATIONARY AND MOBILE APPLICATIONS).**

Windshield : Shall be equipped with manufacturers standard tinted windshield.

Windows and Locks : Shall be equipped with manufacturers standard manual windows and door locks.

The following equipment shall be supplied / installed

There shall be a step bar REF: Bustin (PN# RB002) or prior approved equal, must be length of cab entry area on both sides. (Installed)
REF: EQN-170 drawing

There shall be an ECCO Model 450 backup alarm, shock mounted. (Installed)

There shall be a seven-way trailer light receptacle, "Pin Type", securely mounted near rear trailer hitch area. Wired per EQN - 80A. Connections shall be sealed and water tight and packed with dielectric grease.

There shall be a 4.5" LED interior utility dome light with an on and off swith. OPTRONICS PART NUMBER#OPTILL22CB Installed centered, over the front seat, capable of operating with the Ignition off.

There shall be a warning light: Whelen Model R10HDPA with Deutsch connectors. Supplied and delivered in the cab.

All switches shall be permanently labeled and backlit.

| | |
|---|--------------------|
| | Page 2 of 3 |
| There shall be two (2) front tow hooks, installed. | |
| There shall be an emergency triangle warning kit in each unit, in storage box and mounted in cab. EQN - 66A | |
| There shall be a 5 LB. minimum 3A:40:BC fire extinguisher rechargeable with vehicle mount. Securely mounted in the cab for easy and quick access. A sticker on the door closest to the extinguisher shall be applied in the outside lower corner of the door to identify the location of the extinguisher. | |
| There shall be a trailer hitch installed, as per EQN - 202B, the upper portion of hitch shall be painted with non-skid paint if extending to or outside body perimeter and is likely to be stepped on. (Tape is not acceptable.) There shall be provisions made for a safety break away cable. Hitch and below receiver parts shall not interfere with any part of the bumper or body no matter what configuration on the mounting plate is used. | |
| All the following shall be supplied and delivered in the cab. Buyers Products - Combo Ball Hitch W/ 2 inch Hard Chrome Ball BH8-2000, Pintle Mounting Plate PM-87, Bolt Kit 8520, Hitch Pin HP6253 WC. Or approved equal. | |
| <u>Safety</u> | |
| Unit shall be fitted with temporary mud flaps that shall remain intact. | |
| The cab shall have conspicuity tape as Per EQN-127A. | |
| Any area likely to be stepped on shall be covered with non-skid paint, tape is unacceptable. | |
| All handrails, ladders, and step configurations shall be built for three points of contact. | |
| Anti-slip paint is required on all handholds, for the entire length, (tape is unacceptable). | |
| <u>Options</u> | |
| <u>Option</u> : To be equipped with Four Wheel Drive. | |
| <u>Option</u> : To be equipped with Snow Plow Prep package. | |
| <u>Option</u> : To be equipped with Power windows, Power door locks, and Power / Heated mirrors with manual extendable arms. | |
| <u>Option</u> : Road Watch road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display. | |
| <u>Option</u> : Vaisala road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display. Ambient sensor shall be mounted as to not receive any heat from then engine or drive train components to represent a false reading of the ambient air temperature. | |
| <u>Option</u> : Install FLOCS system as per EQN: 351A. | |
| <u>Option</u> : Flatbed Body upfit, Specification 046900 | |
| <u>Option</u> : Service Body upfit, Specification 048900 | |
| <u>Option</u> : Shop 9' Body upfit, Specification 039700 | |
| <u>Option</u> : Shop 11' Body upfit, Specification 045874 | |
| <u>Option</u> : Foreman Body upfit, Specification 050400 | |
| <u>Option</u> : Foreman Body upfit, Split Door Configuration, Specification 050401 | |
| <u>Option</u> : Survey Body upfit, Specification 049700 | |
| <u>Option</u> : Weld Body upfit, Specification 045860 | |
| <u>Option</u> : Steel Dump Body upfit, Specification 038100 | |
| <u>Option</u> : Aluminum Dump Body upfit, Specification 038110 | |
| <u>Option</u> : Stainless Steel Dump Body upfit, Specification 038120 | |
| <u>Option</u> : Snow Plow upfit, Specification 038100, 038110, or 038120 | |
| <u>Option</u> : Spreader upfit, Specification 038100, 038110, or 038120 | |

Option : Statewide Radio:

Vehicle electrical and electronics will conform to the Federal Communications Commission 47 C.F.R. Part 15 so as not to interfere with the operation of the PennDOT Land Mobile Radio, which is an authorized radio station under 47 C.F.R. Part 90.

Radio Antenna: There shall be a roof mount base, PCTEL model BMATM/NC25 and a VHF StiCO Roof-FT-NITI-M whip shall be cut to 18.0 inches per manufactures cut sheet. Assembly shall be mounted to the center of the cab roof (not to interfere with any cab shield), with the antenna cable routed to underneath the dash. There shall be a minimum of 4 feet of antenna cable coiled at the base of the floor to allow for connection of radio on spreader control pedestal. Antenna shall be prewired with a UHF MALE connection. (No substitute, standardization).

Power Distribution Center: There shall be a 4-way power/ground distribution center located on the underside of the dash for connection of the state radio. The lugs shall be configured in the following manner: (1) lug shall be a 30 ampere constant hot circuit, (1) lug shall be a 10 ampere ignition controlled circuit. (2) lugs shall be chassis ground. All connections shall be enclosed in a weatherproof enclosure.

Option : Bidder must provide option pricing for "one" of the following.

Factory: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. Unit shall be painted PennDOT yellow in lieu of the OEM's original color. Using the same process as with OEM paint.

Aftermarket: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. All surfaces shall be properly cleaned and prepared prior to paint. Paint shall be the same quality as factory paint. To include all areas of the unit including interior.

Drawings:

| | | | | |
|----------|---------|----------|-------------|---|
| EQN-66A | Revised | 07-13-17 | sheet 1 | TRIANGLE STORAGE BOX AND BRACKET |
| EQN-80A | Revised | 08-02-18 | sheet 1 | WIRING DIAGRAM |
| EQN-127A | Revised | 01-02-09 | sheet 1 | CONSPICUITY TAPE |
| EQN-202B | Revised | 07-27-16 | sheet 1 | HITCH: WEIGHT DISTRIBUTING |
| EQN-351A | Revised | 06-19-13 | sheet 1 & 2 | FAST LUBE OIL CHANGE SYSTEM OVERVIEW AND PARTS LIST |
| EQN-170 | | 7-19-16 | sheet 1 | STEP RUNNING BOARDS |

Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual.

Installation Practices

All lights shall meet all Federal and State regulations.

All wire splices shall be insulated with heat shrink materials or removable connectors that create a water tight connection.

All wires shall be securley fastened with no wires hanging or protruding where they are exposed to the risk of damage.

All junction boxes shall be located inside of the utility body, in a location that will not compromise storage space. For easy accessibility, junctions boxes must not be obstructed in any way.

All electrical connections shall be treated with di-electric grease. All wiring shall be secured using "P" type clamps at intervals not to exceed 12" between securment points

All wires shall be in a protective covering and protected from chaffing, rubbing and getting pulled or torn from external sources.

Any alterations / relocation to fuel fill, DEF tank, exhaust, Etc. to allow installation of body shall be made in a professional manner using new materials.

Any place steel and aluminum contact each other Mylar or an approved equal shall be used as a buffer. Laminate rubber is unacceptable.

All vertical and horizontal seams of the body sides shall utilize full penetration welds in accordance with standard welding practices as set forth by the American Welding Society and sealed water tight to create one integral body.

All corners shall be angled or rounded for safety and all weld splatters removed. All mounting procedures shall be in accordance with NTEA standards.

The use of any of the following items or practices WILL NOT BE ACCEPTED.

Non-steel fittings on hydraulic pressure lines.

Excessive use of elbows on hydraulic lines.

Use of thread tape on hydraulic fittings.

Use of galvanized fittings or components on hydraulic system.

Improper hydraulic line size.

Use of high-pressure hose for hydraulic suction line.

Scotchlok-type wire splices.

Non-insulated wire splices.

Improper hose or wire routing near exhaust, over-sharp edges or through holes without grommets, or sharp edges.

Improperly prepared, primed and painted surfaces.

Non-fused electric circuits.

Hydraulic circuits without pressure relief protection.

Laminated Rubber

SPECIFICATION

045847 - 11 FT Shop Body Upfit With Under hood Air Compressor and Crane For Use With 17K Chassis

Reference: Stahl, Warner, Omaha Standard, or Knapheide, meeting these specifications.

Note: " Refer to PCID 1075 for Delivery and Warranty Requirements".

Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual.

Body Shall Include The Following Equipment:**Body - Installation:**

It shall be the responsibility of the successful vendor to have the shop body mounted on the chassis(s). The installation shall be engineered and approved by the vehicle manufacturer and shall have no adverse affect upon the manufacturer's warranty. When any portion of the complete vehicle is to be installed by anybody other than the bidder or the chassis manufacturer, they shall indicate the name of the sub-contractor performing such installation and the location of their plants. The foreman body dimensions shall cover the rear wheels.

Any other applicable changes required to accommodate this type unit is the responsibility of the bidder.

The body shall have a front mounted bulkhead and shall be a minimum 14 gauge steel with punched or expandable metal area in alignment with the cab rear window. It shall be constructed of sufficient strength to eliminate damage to the rear of the cab. The bulkhead shall not interfere with the visibility of the third brake light.

Proposed bulkhead shall be reviewed for acceptance prior to pilot model inspection by the Fleet Management Division. The bulkhead shall have a forward extension mounted to the driver's side, of sufficient size to support the base of the warning light and this extension shall have a gusset.

Frame rails shall be prepared by cleaning, priming and final painting.

The body shall be attached to the truck chassis using four (4) U-bolts, or bolt thru, lock nuts, and appropriate shear plates as required to comply with manufacturer's standards.

Body Components:

The front right cabinet shall be large enough to accommodate an acetylene tank and oxygen tank using 9.5 inch diameter bottles, minimum width 24 inches, with provisions to hang torch hose.

Cabinet shall be properly vented and all bottle-securing hardware included.

There shall be 4 compartments on each side Overall compartment depth shall be 24 in. minimum.

One (1) Roadside compartment shall be 70" long x 18" high or 76" long or 18" high minimum.

Piano hinge is unacceptable.

All door and compartment hinges shall be rod and nylon bushing or stainless steel heavy duty strap hinge with nylon or Teflon bushings and rubber door seals.

Vertical compartment doors shall have a limiting device, shock type or steel lock strap type. Chain or cable is acceptable on horizontal doors only.

All compartments shall be keyed alike, with no two individual completed units having the same keys.

The top left and right area's of the service body shall be covered with aluminum diamond deck (unpainted), and sealed all around.

Vertical compartment doors shall have a limiting device, shock type or steel lock strap type. Chain or cable straps on horizontal doors is unacceptable. Solid stock with a removable pin shall be utilized on all horizontal opening doors.

All compartments shall be equipped with one Stainless steel bolt on slam latch (rivets on latches are unacceptable). It is the vendors responsibility to make sure all compartment doors seal so if deemed necessary 2 slam latches will be accepted on the long horizontal tool boxe. All compartments shall be keyed alike, with no two individual completed units having the same keys.

The heavy-duty rear bumper shall be constructed with a minimum of 1/8 inch reinforced steel. The size and strength shall be in accordance with the truck manufacturer's step design. The platform on top of the bumper shall be Bustin aluminum No. NST4 full size, or Bustin 628 steel, or Ohio Grating or IKG Industries serrated swage lock, with end band. The outer step edge must be serrated in lieu of plain, smooth metal edge. All edges shall be banded (skirting) on the outer perimeter. Overlay is not acceptable.

Two, 2" deep x 10" wide steps hung by 6" long 3/4" diameter cables shall be mounted, one under each side of bumper. Both hung 12" in from edge of bumper, step shall be Bustin steel grip grating.

There shall be a stainless steel grab handle on each rear side of the utility body to assist the operator in entering and exiting the bed area, Non-skid paint or rubber shall be utilized, (non-skid tape is unacceptable). Ref: Non skid paint, Gamma Laboratories (Tel. 304-489-2828.)

All compartment floors shall be covered with yellow DriDek (Tel: 800-348-2398).

Any area likely to be stepped on shall be covered with non-skid paint.

There shall be a total of six galvanized non rusting metal recessed D-ring style swiveling hold downs on the floor of body. One tie down in each corner of the body and the remaining two spaced evenly in the center of the body against the outer edge close to the walls each tied into a crossmember. REF EQN-1083

Construction:

All body parts are to be electrically full welded into one integral body.

For all threaded connections at least two (2) full threads shall be visible beyond the nut.

The fuel tank fill shall be positioned in such a way to ensure the filler nozzle can be set on automatic and nozzle will support itself with unrestricted flow.

Hazardous or Flammable Materials Storage:

All cabinets or compartments shall be capable of storing flammable or hazardous materials such as (gas cans, aerosal cans, oil containers, chainsaws, compressed gas cylinders, paint cans etc.) There shall aslo be a sticker placed inside the right front compartment door explaining the vented tool boxes. REF: EQN-1089B

Compartment lighting:

Each compartment shall have the Vista Compartment lighting System (Tel: 219-264-0711). The 3/8" LED rope lighting sections shall be mounted on the inside of each compartment door and shall occupy space on the left, top, and right of each compartment. Rope sections shall extend full lenght of compartment on left and right sides. All compartments lighting shall be controlled by a single illuminated rocker switch mounted within easy reach of the driver. All wiring shall be secured using "P" type clamps 12" maximum between securment points.

Exhaust:

All tool boxes above any exhaust tailpipe or within close proximity of muffler, DPF, etc. shall receive a heat shield plate to the box in order to protect it. Exhaust shall be extended to the outer most edge of the installed body.

Mud Flaps:

Mud flaps front and rear of rear tires, unmarked, full width of tires, and gusseted.

Length shall be consistent with the unloaded rear axle height, And in accordance with the PA State Inspection Laws.

The Flaps in front of the rear tires shall be constructed of 0.1406 in (10 gauge) steel.

The Flaps at the rear, of the rear tires, shall be constructed of 0.1406 in (10 gauge) steel, and include a rubber flap using 3 bolts and flat steel backed plates.

Electrical:**Whelen Light Kit Part # PADOTSY5, Kit Contains the following lighting.**

1 - R10PADOT Light Bar to be mounted to the driver's side of the bulkhead. In no case shall the light bar be mounted on the roof of the vehicle.

4 - IONAD Amber warning lights grommet mounted 2 will be grill mounted per EQN-115 and 1 on each side of the bed per EQN-120M

4 - IONGROM Grommet mounts for the IONAD light.

2 - M6AD Amber warning lights per EQN - 120M

2 - M6BTDD Stop, Tail, Turn lights per EQN - 120M

2 - M6BUD Back-up lights per EQN - 120M

2 - M6 Series 3 Lamp Black Housing, vertical

10 - W441D Harness side mating Deutsch connectors.

The above lights are supplied with male and female Deutsch connectors that shall be utilized to connect the vendor supplied harness to each light source.

1 - Pioneer Tripod pedestal flood light with coiled cord and plug to be supplied in the cab. Work Light receptacle shall be wired and mounted in the rear of the truck and one receptacle on the left front of the body. Work light receptacles shall have a constant 12 volt power supply, circuit to be properly protected and have a chassis ground. Remote mounting location to be determined at pilot inspection.

Body builder to supply remaining marker and ICC lighting, they shall be protected against damage and shall also be shock mounted.

Connections shall be water tight. All Body lighting shall be LED.

All Amber Warning lights and Light bar shall be on a single lighted, permanently labeled toggle switch located in the dash.

License plate lighting shall specifically be a Truck light 36 series PN# 36140C LED lamp with light bracket PN#36710

Body wiring shall be Grote, Trucklite, or Prior Approved Equal.

There shall be no splices outside of a sealed box or fixture.

There shall be a seven-way trailer (Pin Type) receptacle mounted on rear filled with dielectric grease. Per EQN - 80A

A color-coded electrical wiring chart and schematic shall accompany each body.

All wires shall be in a protective covering. Any loose hanging wires are unacceptable.

HITCH:

There shall be a hitch installed, Per EQN-202B, there shall be provisions made to hook up a breakaway cable. The Upper Portion Of Hitch Shall Be Painted With Non-Skid Paint If extending to or outside body perimeter and is likely to be stepped on. Below hardware shall be supplied in truck cab. Hitch and below receiver parts shall not interfere with any part of the bumper or body no matter what configuration on the mounting plate is used.

| | Buyers Products (216-974-888) | Wallace Forge Company (800-328-1203) |
|--|-------------------------------|--------------------------------------|
| Combo Ball Hitch W/ 2 inch Hard Chrome Ball: | BH8-2000 | 23071911 |
| Pintle Mounting Plate: | PM-87 | 2200170 PADOT |
| Bolt Kit: | 8520 | 2117240 |
| Hitch Pin: | HP6253 WC | HP58412 |
| American Van (1800-526-4743) | | |
| 5" Hitch vise: | HDV-5 | |
| Hitch Vise Mount | HVM-10 | |

Safety:

Vendor shall supply a first aid kit, that meets requirements of ANSI Z308.1-2015 Class A. The Kit shall in a weather proof steel case and placed in the front compartment on the drivers side with a sticker applied to the outside of the door stating the location of the first aid kit. There shall be a bracket designed to fit underneath the first shelf that the first aid kit will slide into to allow quick access to it. There will also be a first aid sticker placed on the shelf. REF: EQN-171 Drawing. REF: Arbill Industries Inc. 215-501-8450

Bed Liner:

Center Cargo Area shall have a Linex brand sprayed bed liner no substitutes. Shall cover floor and all sides including tailgate interior. Shall be a minimum of 150 Mils. Thickness. Material shall have No VOCS and be applied utilizing a high pressure spray. D-ring hold downs shall not be sprayed.

Paint:

Body priming and painting to ensure full coverage to all areas of the body

Color of the body, including inside and outside of compartments, and the bed, shall be cab manufacturer's standard safety or school bus yellow, or optional PennDOT yellow DuPont F9885 for shade. (Powder Coat, if available from factory.) It will be the responsibility of the successful vendor to ensure color of the body matches the cab.

All metal surfaces to be painted shall be cleaned and prepared by abrasive blasting to 1-1/2 mil profile in accordance with Steel Structure Painting Council Standard SSPC-SP-6.

A rust preventative treatment shall be applied.

Conspicuity tape on body as per EQN-127A. Red/white on sides of body and cab,

Alternating Red / Yellow Reflective sheeting shall be mounted diagonally (45 degree angle) on the rear of body as per EQN-120K.

ICC Rear Under ride Protector, hitch and grip strut ladders shall be painted black.

Front lower leading edge of cabinets shall have a minimum 12 inch high aluminum diamond plate for chip resistance.

Auxiliary Air System:

VMAC VR70 AIR COMPRESSOR SYSTEM, (there shall be a switch that only allows compressor to run when the vehicle is placed in park/neutral).

The installation of the compressor, tank and control console shall be properly mounted and bracketed.

The installation shall include compressor, tank, control console, all necessary hardware and brackets, and complete accessories.

There shall be two (2) 50 ft hoses, one with 0.250 in quick couplers complete and one on a housed (out of the weather, on the road side) reel (one only), spare 50 ft hose shall be shipped in the utility body.

Filter moisture separator, Chicago Pneumatic #CA-048360.

Line lubricator Chicago Pneumatic #CA-048361.

Pressure regulator Chicago Pneumatic #CA-048362 to adjust to OSHA approved levels of 30 psi.

Two (2) connectors Chicago Pneumatic #CA-048363.

The before-mentioned unit shall be assembled, mounted on a convenient service panel and shall incorporate a master gate valve.

The service end shall have a service "T" with (0.50 in) female and (0.250 in) female connectors.

Tank vibration mounts.

If the compressor requires the batteries for the truck to be relocated from underhood. They shall be moved to the street side front cabinet and properly secured. The cabinet shall be properly vented to allow circulation of air.

Crane:

Per EQN-120J, Ref: Autocrane 3203PRX-HW or equivalent. Original crane manufacturer's color is acceptable. A boom rest with tie down strap shall be used to store the unit when not in use. Body manufacture is responsible for engineering body to incorporate mounting and use of the crane with out damage to the body. Manual pull out with crank down jack stabilizer system shall be installed to support the stability of the vehicle while loaded crane is in operation. There shall be a stabilizer for both left and right side of the truck. Installer shall be responsible to ensure the vehicle sits on a level plane when the jacks and crane are in the stowed position so the truck does not appear to "lean" towards the crane side of the vehicle. Leveling shall be accomplished by modifying the suspension appropriately as needed. If the crane manufacturer

Drawings:

| | | | | |
|-----------|---------|----------|---------|------------------------------|
| EQN-80A | Revised | 08-02-18 | sheet 1 | WIRING DIAGRAM |
| EQN-115 | Revised | 07-03-12 | sheet 1 | GRILL MOUNTED WARNING LIGHTS |
| EQN-120Y | Revised | 08-28-14 | sheet 1 | 11' SHOP BODY |
| EQN-120K | Revised | 06-10-14 | sheet 1 | TYPICAL REFLECTIVE SHEETING |
| EQN-120M | Revised | 09-28-11 | sheet 1 | CREW CAB BODY LIGHTING |
| EQN-127A | Revised | 01-02-09 | sheet 1 | CONSPICUITY TAPE |
| EQN-202B | Revised | 07-27-16 | sheet 1 | HITCH: WEIGHT DISTRIBUTING |
| EQN-171 | | 07-21-16 | sheet 1 | FIRST AID KIT LOCATION |
| EQN-1083 | | 05-24-18 | sheet 1 | D-RINGS |
| EQN-1089B | | 06-18-18 | sheet 1 | HAZARD WARNING STICKER |

Installation Practices

All lights shall meet all Federal and State regulations.

All wire splices shall be insulated with heat shrink materials or removable connectors that create a water tight connection.

All wires shall be securely fastened with no wires hanging or protruding where they are exposed to the risk of damage.

All junction boxes shall be located inside of the utility body, in a location that will not compromise storage space. For easy accessibility, junction boxes must not be obstructed in any way.

All electrical connections shall be treated with di-electric grease. All wiring shall be secured using "P" type clamps at intervals not to exceed 12" between securing points.

All wires shall be in a protective covering and protected from chaffing, rubbing and getting pulled or torn from external sources.

Any alterations / relocation to fuel fill, DEF tank, exhaust, Etc. to allow installation of body shall be made in a professional manner using new materials.

Any place steel and aluminum contact each other Mylar or an approved equal shall be used as a buffer.

Laminate rubber is unacceptable. All vertical and horizontal seams of the body sides shall utilize full penetration welds in accordance with standard welding practices as set forth by the American Welding Society and sealed water tight to create one integral body. All corners shall be angled or rounded for safety and all weld splatter removed. All mounting procedures shall be in accordance with NTEA standards.

The use of any of the following items or practices WILL NOT BE ACCEPTED.

Non-steel fittings on hydraulic pressure lines. Excessive use of elbows on hydraulic lines.

Use of thread tape on hydraulic fittings. Use of galvanized fittings or components on hydraulic system. Improper hydraulic line size.

Use of high-pressure hose for hydraulic suction line. Scotchlok-type wire splices.

Non-insulated wire splices. Improper hose or wire routing near exhaust, over-sharp edges or through holes without grommets, or sharp edges.

Improperly prepared, primed and painted surfaces.

Non-fused electric circuits.

Hydraulic circuits without pressure relief protection.

Loose hanging wires that are not secure or are pulled tight so they are suspended with no support.

SPECIFICATION

045860 - Weld Body Upfit For Use With a 17K Chassis

Reference: Crest, PA weld truck arrangement (9/13/93) or prior to bid approved equal. Per EQN-120F

Note: " Refer to PCID 1075 for Delivery and Warranty Requirements".

Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual.

Body Shall Include The Following Equipment:**Body - Installation:**

It shall be the responsibility of the successful vendor to have the body mounted on the chassis(s). The installation shall be engineered and approved by the vehicle manufacturer and shall have no adverse affect upon the manufacturer's warranty. When any portion of the complete vehicle is to be installed by anybody other than the bidder or the chassis manufacturer, they shall indicate the name of the sub-contractor performing such installation and the location of their plants. The body dimensions shall cover the rear wheels.

Any other applicable changes required to accommodate this type of unit is the responsibility of the bidder.

The body shall have a front mounted bulkhead and shall be a minimum 14 gauge steel with punched or expandable metal area in alignment with the cab rear window. It shall be constructed of sufficient strength to eliminate damage to the rear of the cab. The bulkhead shall not interfere with the visibility of the third brake light.

Proposed bulkhead shall be reviewed for acceptance prior to pilot model inspection by the Fleet Management Division. The bulkhead shall have a forward extension mounted to the driver's side, of sufficient size to support the base of the warning light and this extension shall have a gusset.

Frame rails shall be prepared by cleaning, priming and final painting.

The body shall be attached to the truck chassis using four (4) U-bolts, or bolt thru, lock nuts, and appropriate shear plates as required to comply with manufacturer's standards.

Body Components:

Forward right cabinet shall be large enough to accommodate an acetylene tank and oxygen tank, minimum height 55 inches, minimum width 24 inches, with hose rack on the inside door.

Cabinet shall be properly vented and all bottle-securing hardware included.

Dimension "A" shall accommodate the larger dimension of a Big Blue 50D or a Hobart Mega Arc 4030D.

The body shall be designed and shall include everything shown in EQN-120F, except the arc welder assembly, and acetylene rig.

The left rear cabinet shall have a pull out drawer for welding rod, minimum 6 inch high x width and depth of cabinet.

There shall be a drip rail above all doors.

Piano hinge is unacceptable.

All door and compartment hinges shall be rod and nylon bushing or stainless steel heavy duty strap hinge with nylon or Teflon bushings and rubber door seals.

Vertical compartment doors shall have a limiting device, shock type or steel lock strap type. Chain or cable is acceptable on horizontal doors only.

All compartments shall be equipped with one Stainless steel bolt on slam latch (rivets on latches are unacceptable). It is the vendors responsibility to make sure all compartment doors seal so if deemed necessary 2 slam latches will be accepted on the long horizontal tool box.

All compartments shall be keyed alike, with no two individual completed units having the same keys.

The top left and right area's of the service body shall be covered with aluminum diamond deck (unpainted), and sealed all around.

Vertical compartment doors shall have a limiting device, shock type or steel lock strap type.

All compartments shall be keyed alike, with no two individual completed units having the same keys.

The heavy-duty rear bumper shall be constructed with a minimum of 1/8 inch reinforced steel. The size and strength shall be in accordance with the truck manufacturer's step design. The platform on top of the bumper shall be Bustin aluminum No. NST4 full size, or Bustin 628 steel, or Ohio Grating or IKG Industries serrated swage lock, with end band. The outer step edge must be serrated in lieu of plain, smooth metal edge. All edges shall be banded (skirting) on the outer perimeter. Overlay is not acceptable.

Two, 2" deep x 10" wide steps hung by 6" long 3/4" diameter cables shall be mounted, one under each side of bumper. Both hung 12" in from edge of bumper, step shall be Bustin steel grip grating.

There shall be a stainless steel grab handle on each rear side of the utility body to assist the operator in entering and exiting the bed area, Non-skid paint or rubber shall be utilized, (non-skid tape is unacceptable). Ref: Non skid paint, Gamma Laboratories (Tel. 304-489-2828.)

All compartment floors shall be covered with yellow DriDek (Tel: 800-348-2398).Any area likely to be stepped on shall be covered with non-skid paint.

There shall be a total of six galvanized non rusting metal recessed D-ring style swiveling hold downs on the floor of body. One tie down in each corner of the body and the remaining two spaced evenly in the center of the body against the outer edge close to the walls. REF EQN-1083

Construction:

All body parts are to be electrically full welded into one integral body.

For all threaded connections at least two (2) full threads shall be visible beyond the nut.

The fuel tank fill shall be positioned in such a way to ensure the filler nozzle can be set on automatic and nozzle will support itself with unrestricted flow.

Bed Liner:

Center Cargo Area shall have a Linex brand sprayed bed liner no substitutes. Shall cover floor and all sides including tailgate interior. Shall be a minimum of 150 Mils. Thickness. Material shall have No VOCS and be applied utilizing a high pressure spray. D-ring hold downs shall not be sprayed.

Exhaust:

All tool boxes above any exhaust tailpipe or within close proximity of muffler, DPF, etc. shall receive a heat shield plate to the box in order to protect it. Exhaust shall be extended to the outer most edge of the installed body.

Compartment lighting:

Each compartment shall have the Vista Compartment lighting System (Tel: 219-264-0711). The 3/8" LED rope lighting sections shall be mounted on the inside of each compartment door and shall occupy space on the left, top, and right of each compartment. Rope sections shall extend full length of compartment on left and right sides. All compartments lighting shall be controlled by a single illuminated rocker switch mounted within easy reach of the driver. All wiring shall be secured using "P" type clamps 12" maximum between securment points.

Mud Flaps:

Mud flaps front and rear of rear tires, unmarked, full width of tires, and gusseted.
Length shall be consistent with the unloaded rear axle height, And in accordance with the PA State Inspection Laws.
The Flaps in front of the rear tires shall be constructed of 0.1406 in (10 gauge) steel.
The Flaps at the rear, of the rear tires, shall be constructed of 0.1406 in (10 gauge) steel, and include a rubber flap using 3 bolts and flat steel backed plates.

Safety:

Vendor shall supply a first aid kit, that meets requirements of ANSI Z308.1-2015 Class A. The Kit shall in a weather proof steel case and placed in the front compartment on the drivers side with a sticker applied to the outside of the door stating the location of the first aid kit. There shall be a bracket designed to fit underneath the first shelf that the first aid kit will slide into to allow quick access to it. There will also be a first aid sticker placed on the shelf. REF: EQN-171 Drawing. REF: Arbill Industries 215-501-8450

Electrical:**Whelen Light Kit Part # PADOTSY5, Kit contains the following lighting.**

1 - R10PADOT Light Bar to be mounted to the driver's side of the bulkhead. In no case shall the light bar be mounted on the roof of the vehicle.
4- IONAD Amber warning, 2 will be grommet mounted to outer edges of the front grill and 1 will be grommet mounted on each side of bed per EQN-115 & EQN-120M
4- IONGROM Rubber grommets for IONAD
2 - M6AD Amber warning lights
2 - M6BTDD Stop, Tail, Turn lights
2 - M6BUD Back-up lights
2 - Vertical 3 light flange black housing assembly. Above warning, STT, and back up lights shall be mounted in housing per EQN - 120M.
10 - W441D Harness side mating Deutch connectors.
1 - Pioneer Tripod pedestal flood light with coiled cord, remote mount and plug to be supplied in the cab. A work Light receptacle shall be wired and mounted in the rear of the truck and one receptacle on the left front side of the body both filled with dielectric grease. Work light receptacles shall have a constant 12 volt power supply, circuit to be properly protected and have a chassis ground. Portable light retainer mounting location will be determined at pilot inspection.
Side warning lights are to be wired in conjunction with above light bar. The above lights are supplied with male and female Deutsch connectors that shall be utilized to connect the vendor supplied harness to each light source.
Body builder to supply remaining marker and ICC lighting, they shall be protected against damage and shall also be shock mounted. Connections shall be water tight. All Body lighting shall be LED.
The Warning lights / Light bar shall have a lighted, permanently labeled toggle switch located in the dash. Body wiring shall be Grote, Trucklite, or Prior Approved Equal.
License plate lighting shall specifically be a Truck light 36 series PN# 36140C LED lamp with light bracket PN#36710
There shall be no splices outside of a sealed box or fixture. Box SHALL NOT be obstructed and location shall be determined at pilot inspection
There shall be a seven-way trailer (Pin Type) receptacle mounted on rear filled with dielectric grease. Per EQN - 80A
A color-coded electrical wiring chart and schematic shall accompany each body.
All wires shall be in a protective covering. Any loose hanging wires are unexceptable.

Paint:

Body priming and painting to ensure full coverage to all areas of the body
Color of the body, including inside and outside of compartments, and the bed, shall be cab manufacturer's standard safety or school bus yellow, or optional PennDOT yellow DuPont 6808 for shade. (Powder Coat, if available from factory.) **It will be the responsibility of the successful vendor to ensure color of the body matches the cab.**
All metal surfaces to be painted shall be cleaned and prepared by abrasive blasting to 1-1/2 mil profile in accordance with Steel Structure Painting Council Standard SSPC-SP-6.
A rust preventative treatment shall be applied.

Conspicuity tape on body as per EQN-127A. Red/white on sides of body and cab,
Alternating Red / Yellow Reflective sheeting shall be mounted diagonally (45 degree angle) on the rear of body as per EQN-120K.
ICC Rear Under ride Protector, hitch and grip strut ladders shall be painted black.
Front lower leading edge of cabinets shall have a minimum 12 inch high aluminum diamond plate for chip resistance.

Hitch:

There shall be a hitch installed, Per EQN-202B, there shall be provisions made to hook up a breakaway cable. The Upper Portion Of Hitch Shall Be Painted With Non-Skid Paint If extending to or outside body perimeter and is likely to be stepped on. Below hardware shall be supplied in truck cab. Hitch and below receiver parts shall not interfere with any part of the bumper or body no matter what configuration on the mounting plate is used.

| | Buyers Products (216-974-888) | Wallace Forge Company (800-328-1203) |
|--|-------------------------------|--------------------------------------|
| Combo Ball Hitch W/ 2 inch Hard Chrome Ball: | BH8-2000 | 23071911 |
| Pintle Mounting Plate: | PM-87 | 2200170 PADOT |
| Bolt Kit: | 8520 | 2117240 |
| Hitch Pin: | HP6253 WC | HP58412 |

Hazardous or Flammable Materials Storage:

All cabinets or compartments shall be capable of storing flammable or hazardous materials such as (gas cans, aerosol cans, chainsaws, oil containers, compressed gas cylinders, paint cans etc.)

There shall also be a sticker placed inside the right front compartment door explaining the vented tool boxes. REF: EQN-1089B

Auxiliary Air System:

VMAC VR70 AIR COMPRESSOR SYSTEM, (there shall be a switch that only allows compressor to run when the vehicle is placed in park/neutral).

The installation of the compressor, tank and control console shall be properly mounted and bracketed.

The installation shall include compressor, tank, control console, all necessary hardware and brackets, and complete accessories.

There shall be two (2) 50 ft hoses, one with 0.250 in quick couplers complete and one on a housed (out of the weather, on the road side) reel (one only), spare 50 ft hose shall be shipped in the utility body.

Filter moisture separator, Chicago Pneumatic #CA-048360.

Line lubricator Chicago Pneumatic #CA-048361.

Pressure regulator Chicago Pneumatic #CA-048362 to adjust to OSHA approved levels of 30 psi.

Two (2) connectors Chicago Pneumatic #CA-048363.

The before-mentioned unit shall be assembled, mounted on a convenient service panel and shall incorporate a master gate valve.

The service end shall have a service 'T' with (0.50 in) female and (0.250 in) female connectors.

Tank vibration mounts.

If the compressor requires the batteries for the truck to be relocated from underhood. They shall be moved to the street side front cabinet and properly secured. The cabinet shall be properly vented to allow circulation of air.

Crane:

Per EQN-120J, Ref: Autocrane 3203PRX-HW or equivalent. Original crane manufacturer's color is acceptable. A boom rest with tie down strap shall be used to store the unit when not in use. Body manufacture is responsible for engineering body to incorporate mounting and use of the crane with out damage to the body. Manual pull out with crank down jack stabilizer system shall be installed to support the stability of the vehicle while loaded crane is in operation. There shall be a stabilizer for both left and right side of the truck. Installer shall be responsible to ensure the vehicle sits on a level plane when the jacks and crane are in the stowed position so the truck does not appear to "lean" towards the crane side of the vehicle. Leveling shall be accomplished by modifying the suspension appropriately as needed.

Drawings:

| | | | | |
|-----------|---------|----------|-------------|------------------------------|
| EQN-80A | Revised | 08-02-18 | sheet 1 | WIRING DIAGRAM |
| EQN-115 | Revised | 07-03-12 | sheet 1 | GRILL MOUNTED WARNING LIGHTS |
| EQN-120F | Revised | 09-28-11 | sheet 1 & 2 | WELD BODY STEEL |
| EQN-120K | Revised | 06-10-14 | sheet 1 | TYPICAL REFLECTIVE SHEETING |
| EQN-120M | Revised | 09-28-11 | sheet 1 | CREW CAB BODY LIGHTING |
| EQN-127A | Revised | 01-02-09 | sheet 1 | CONSPICUITY TAPE |
| EQN-202B | Revised | 07-27-16 | sheet 1 | HITCH: WEIGHT DISTRIBUTING |
| EQN-171 | | 07-21-16 | sheet 1 | FIRST AID KIT PLACEMENT |
| EQN-1083 | | 5-24-18 | sheet 1 | D-RINGS |
| EQN-1089B | | 06-18-18 | sheet 1 | HAZARD WARNING STICKER |

Installation Practices

All lights shall meet all Federal and State regulations.
All wire splices shall be insulated with heat shrink materials or removable connectors that create a water tight connection.
All wires shall be securley fastened with no wires hanging or protruding where they are exposed to the risk of damage.
All junction boxes shall be located inside of the utility body, in a location that will not compromise storage space. For easy accessibility, junctions boxes must not be obstructed in any way.
All electrical connections shall be treated with di-electric grease.All wiring shall be secured using "P" type clamps at intervals not to exceed 12" between securment points.
All wires shall be in a protective covering and protected from chaffing, rubbing and getting pulled or torn from external sources.
Any alterations / relocation to fuel fill, DEF tank, exhaust, Etc. to allow installation of body shall be made in a professional manner using new materials.
Any place steel and aluminum contact each other Mylar or an approved equal shall be used as a buffer.
Laminate rubber is unacceptable. All vertical and horizontal seams of the body sides shall utilize full penetration welds in accordance with standard welding practices as set forth by the American Welding Society and sealed water tight to create one integral body. All corners shall be angled or rounded for safety and all weld splatter removed.
All mounting procedures shall be in accordance with NTEA standards.

The use of any of the following items or practices WILL NOT BE ACCEPTED.

Non-steel fittings on hydraulic pressure lines.
Excessive use of elbows on hydraulic lines.
Use of thread tape on hydraulic fittings.
Use of galvanized fittings or components on hydraulic system.
Improper hydraulic line size.
Use of high-pressure hose for hydraulic suction line.
Scotchlok-type wire splices.
Non-insulated wire splices.
Improper hose or wire routing near exhaust, over-sharp edges or through holes without grommets, or sharp edges.
Improperly prepared, primed and painted surfaces.
Non-fused electric circuits.
Hydraulic circuits without pressure relief protection.

| Page 1 of 3 | |
|---|--|
| SPECIFICATION | |
| <u>046000 - Truck, 11K, 2WD, Extended Cab & Chassis, Diesel Engine, Automatic Transmission, Dual Rear Wheels</u> | |
| This Dual Rear Wheel Model, Chassis Only, Shall Be A Manufacturer's Standard Model Vehicle, Capable Of Carrying Two (2) Passengers. 11,000 Lb GVWR Minimum. Manufacturer's Rating Certified On Door. Chassis to accommodate A 9 Foot Minimum, Flatbed, Service, Shop, Foreman or Survey Body. | |
| Note: " Refer to PCID 1075 for <u>Delivery</u>, and <u>Warranty</u> Requirements". | |
| The following additional items shall be supplied | |
| Air Bags : Shall be equipped with manufacturers standard air bags. | |
| Air Conditioning : Shall be equipped with manufacturers standard air conditioning. | |
| Alternator : Shall be manufacturers largest / heaviest duty available. | |
| Blue Tooth: Shall be equipped with manufacturers standard Blue tooth system. | |
| Daytime Running Lights : Shall be equipped with manufacturers standard Daytime Running Lights. (Aftermarket Acceptable) | |
| Differential : Shall be equipped with manufacturers standard Limited Slip Differential. Ratio to be selected at time of order from manufacturer's standard available ratios. | |
| DEF Tank : Shall be mounted to not interfere with body installation. Any relocation shall be done in a professional manner using new materials. | |
| Engine : Shall be Manufacturer's highest available horsepower and torque rating, standard or optional diesel engine, to include, immersion in-block type engine heater For water cooled engines, with water-proof plug and flush mounted In drivers side front sheet metal, engine oil cooler , and largest available engine cooling capacity. | |
| Exhaust : Shall be capable of being extended by the body up fitter to the outer most edge of the installed body. | |
| Front Bumper : Shall be Chrome, Black, or Argent. | |
| Fuel Tank : Manufacturer's highest capacity standard tank frame mounted (Tank filler positioned to ensure that filler nozzle can be set on automatic and nozzle will support itself, with unrestricted flow.) | |
| Lubricants : Shall be synthetic where available, with drain plugs identified or painted red. (Engine oil excluded) | |
| Mirrors : Shall be manufacturers standard heavy duty outside mirrors with convex mirror (aftermarket convex spot mirror acceptable) and extendable arms, driver and passenger sides. Shall be equipped with manufacturers standard manual day / night rearview mirror. | |
| Paint : Manufacturer's standard safety or school bus yellow. | |
| Seats: Shall be equipped with Vinyl 40/20/40 seats with center work console, Foam Padded with Seatbelts. (Cloth is Unacceptable) | |
| Suspension: Shall be equipped with trailer and handling package, to include front stabilizer bar, heaviest available front and rear suspension, and heaviest available differential. | |
| Tires : Truck and Body Company shall ensure that proper sized tires and wheels for GVWR are supplied. Tires shall be radial, OEM's most aggressive / severe duty tire available from manufacturer. | |
| Transmission : Shall be automatic with largest available auxiliary oil cooler. | |
| Windshield : Shall be equipped with manufacturers standard tinted windshield. | |
| Windows and Locks : Shall be equipped with manufacturers standard manual windows and door locks. | |
| The following equipment shall be supplied / installed | |
| There shall be a step bar REF: Bustin (PN# RB002) or prior approved equal, must be the length of cab entry area on both sides. (Installed) REF: EQN-170 drawing | |
| There shall be an ECCO Model 450 backup alarm, shock mounted. (Installed) | |
| There shall be a seven-way trailer light receptacle, "Pin Type", securely mounted near rear trailer hitch area. Wired per EQN - 80A. Connections shall be sealed and water tight and packed with dielectric grease | |
| There shall be a 4.5" LED interior utility dome light with an on and off swith. OPTRONICS PART NUMBER#OPTILL22CB Installed centered, over the front seat, capable of operating with the Ignition off. | |
| There shall be a warning light: Whelen Model R10HDPA with Deutsch connectors. Supplied and delivered in the cab. | |
| All switches shall be permanently labeled and backlit. | |

| | |
|--|--------------------|
| | Page 2 of 3 |
| There shall be two (2) front tow hooks, installed. | |
| There shall be an emergency triangle warning kit in each unit, in storage box and mounted in cab. EQN - 66A | |
| There shall be a 5 LB. minimum 3A:40:BC fire extinguisher rechargeable with vehicle mount. Securely mounted in the cab for easy and quick access. A sticker on the door closest to the extinguisher shall be applied in the outside lower corner of the door to identify the location of the extinguisher. | |
| There shall be a trailer hitch installed, as per EQN - 202B, the upper portion of hitch shall be painted with non-skid paint if extending to or outside body perimeter and is likely to be stepped on. (Tape is not acceptable.) There shall be provisions made for a safety break away cable. Hitch and below receiver parts shall not interfere with any part of the bumper or body no matter what configuration on the mounting plate is used. | |
| All the following shall be supplied and delivered in the cab. Buyers Products - Combo Ball Hitch W/ 2 inch Hard Chrome Ball BH8-2000, Pintle Mounting Plate PM-87, Bolt Kit 8520, Hitch Pin HP6253 WC. Or approved equal. | |
| <u>Safety</u> | |
| Unit shall be fitted with temporary mud flaps that shall remain intact. | |
| The cab shall have conspicuity tape as Per EQN-127A. | |
| Any area likely to be stepped on shall be covered with non-skid paint, tape is unacceptable. | |
| All handrails, ladders, and step configurations shall be built for three points of contact. | |
| Anti-slip paint is required on all handholds, for the entire length, (tape is unacceptable). | |
| <u>Options</u> | |
| <u>Option</u> : To be equipped with Four Wheel Drive. | |
| <u>Option</u> : To be equipped with Snow Plow Prep package. | |
| <u>Option</u> : To be equipped with Power windows, Power door locks, and Power / Heated mirrors with manual extendable arms. | |
| <u>Option</u> : Road Watch road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display. | |
| <u>Option</u> : Vaisala road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display. Ambient sensor shall be mounted as to not receive any heat from the engine or drive train components to represent a false reading of the ambient air temperature. | |
| <u>Option</u> : Install FLOCS system as per EQN: 351A. | |
| <u>Option</u> : Flatbed Body upfit, Specification 046900 | |
| <u>Option</u> : Service Body upfit, Specification 048900 | |
| <u>Option</u> : Shop Body upfit, Specification 039700 | |
| <u>Option</u> : Foreman Body upfit, Specification 050400 | |
| <u>Option</u> : Foreman Body upfit, Split door option, Specification 050401 | |
| <u>Option</u> : Survey Body upfit, Specification 049700 | |
| <u>Option</u> : Statewide Radio: Vehicle electrical and electronics will conform to the Federal Communications Commission 47 C.F.R. Part 15 so as not to interfere with the operation of the PennDOT Land Mobile Radio, which is an authorized radio station under 47 C.F.R. Part 90. | |
| Radio Antenna: There shall be a roof mount base, PCTEL model BMATM/NC25 and a VHF StiCO Roof-FT-NITI-M whip shall be cut to 18.0 inches per manufactures cut sheet. Assembly shall be mounted to the center of the cab roof (not to interfere with any cab shield), with the antenna cable routed to underneath the dash. There shall be a minimum of 4 feet of antenna cable coiled at the base of the floor to allow for connection of radio on spreader control pedestal. Antenna shall be prewired with a UHF MALE connection. (No substitute, standardization). | |
| Power Distribution Center: There shall be a 4-way power/ground distribution center located on the underside of the dash for connection of the state radio. The lugs shall be configured in the following manner: (1) lug shall be a 30 ampere constant hot circuit, (1) lug shall be a 10 ampere ignition controlled circuit. (2) lugs shall be chassis ground. All connections shall be enclosed in a weatherproof enclosure. | |
| <u>Option</u> : Bidder must provide option pricing for "one" of the following. Factory: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. Unit shall be painted PennDOT yellow in lieu of the OEM's original color. Using the same process as with OEM paint. Aftermarket: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. All surfaces shall be properly cleaned and prepared prior to paint. Paint shall be the same quality as factory paint. To include all areas of the unit including interior. | |

| | | | | |
|------------------|---------|----------|-------------|---|
| Drawings: | | | | |
| EQN-66A | Revised | 07-13-17 | sheet 1 | TRIANGLE STORAGE BOX AND BRACKET |
| EQN-80A | Revised | 08-02-18 | sheet 1 | WIRING DIAGRAM |
| EQN-127A | Revised | 01-02-09 | sheet 1 | CONSPICUITY TAPE |
| EQN-202B | Revised | 07-27-16 | sheet 1 | HITCH: WEIGHT DISTRIBUTING |
| EQN-351A | Revised | 06-09-13 | sheet 1 & 2 | FAST LUBE OIL CHANGE SYSTEM OVERVIEW AND PARTS LIST |
| EQN-170 | | 7-19-16 | sheet 1 | STEP RUNNING BOARDS |

Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual.

Installation Practices
 All lights shall meet all Federal and State regulations.
 All wire splices shall be insulated with heat shrink materials or removable connectors that create a water tight connection.
 All wires shall be securley fastened with no wires hanging or protruding where they are exposed to the risk of damage.
 All junction boxes shall be located inside of the utility body, in a location that will not compromise storage space. For easy accessibility, junctions boxes must not be obstructed in any way.
 All electrical connections shall be treated with di-electric grease.All wiring shall be secured using "P" type clamps at intervels not to exceed 12" between securment points
 All wires shall be in a protective covering and protected from chaffing, rubbing and getting pulled or torn from external sources.
 Any alterations / relocation to fuel fill, DEF tank, exhaust, Etc. to allow installation of body shall be made in a professional manner using new materials.
 Any place steel and aluminum contact each other Mylar or an approved equal shall be used as a buffer. Laminate rubber is unacceptable.
 All vertical and horizontal seams of the body sides shall utilize full penetration welds in accordance with standard welding practices as set forth by the American Welding Society and sealed water tight to create one integral body.
 All corners shall be angled or rounded for safety and all weld splatters removed. All mounting procedures shall be in accordance with NTEA standards.

The use of any of the following items or practices WILL NOT BE ACCEPTED.
 Non-steel fittings on hydraulic pressure lines.
 Excessive use of elbows on hydraulic lines.
 Use of thread tape on hydraulic fittings.
 Use of galvanized fittings or components on hydraulic system.
 Improper hydraulic line size.
 Use of high-pressure hose for hydraulic suction line.
 Scotchlok-type wire splices.
 Non-insulated wire splices.
 Improper hose or wire routing near exhaust, over-sharp edges or through holes without grommets, or sharp edges.
 Improperly prepared, primed and painted surfaces.
 Non-fused electric circuits.
 Hydraulic circuits without pressure relief protection.
 Laminated Rubber

| | |
|--|--------------------|
| | Page <u>1 of 3</u> |
| SPECIFICATION | |
| <u>046010 - Truck, 11K, 2WD, Extended Cab & Chassis, Gasoline Engine, Automatic Transmission, Dual Rear Wheels</u> | |
| This Dual Rear Wheel Model, Chassis Only, Shall Be A Manufacturer's Standard Model Vehicle, Capable Of Carrying Five (5) Passengers. 11,000 Lb GVWR Minimum. Manufacturer's Rating Certified On Door. Chassis to accommodate A 9 Foot Minimum, Flatbed, Service, Shop, Foreman or Survey Body. | |
| Note: " Refer to PCID 1075 for <u>Delivery</u> , and <u>Warranty</u> Requirements". | |
| The following additional items shall be supplied | |
| Air Bags : Shall be equipped with manufacturers standard air bags. | |
| Air Conditioning : Shall be equipped with manufacturers standard air conditioning. | |
| Alternator : Shall be manufacturers largest / heaviest duty available. | |
| Blue Tooth: Shall be equipped with manufacturers standard Blue tooth system. | |
| Daytime Running Lights : Shall be equipped with manufacturers standard Daytime Running Lights. (Aftermarket Acceptable) | |
| Differential : Shall be equipped with manufacturers standard Limited Slip Differential. Ratio to be selected at time of order from manufacturer's standard available ratios. | |
| Engine : Shall be Manufacturer's highest available horsepower and torque rating, standard or optional diesel engine, to include, immersion in-block type engine heater For water cooled engines, with water-proof plug and flush mounted In driver's side front sheet metal, engine oil cooler , and largest available engine cooling capacity. | |
| Exhaust : Shall be capable of being extended by the body up fitter to the outer most edge of the installed body. | |
| Front Bumper : Shall be Chrome, Black, or Argent. | |
| Fuel Tank : Manufacturer's highest capacity standard tank frame mounted (Tank filler positioned to ensure that filler nozzle can be set on automatic and nozzle will support itself, with unrestricted flow.) | |
| Lubricants : Shall be synthetic where available, with drain plugs identified or painted red. (Engine oil excluded) | |
| Mirrors : Shall be manufacturers standard heavy duty outside mirrors with convex mirror (aftermarket convex spot mirror acceptable) and extendable arms, driver and passenger sides. Shall be equipped with manufacturers standard manual day / night rearview mirror. | |
| Paint : Manufacturer's standard safety or school bus yellow. | |
| Seats: Shall be equipped with Vinyl 40/20/40 seats with center work console, Foam Padded with Seatbelts. (Cloth is Unacceptable) | |
| Suspension : Shall be equipped with trailer and handling package, to include front stabilizer bar, heaviest available front and rear suspension, and heaviest available differential. | |
| Tires : Truck and Body Company shall ensure that proper sized tires and wheels for GVWR are supplied. Tires shall be radial, OEM's most aggressive / severe duty tire available from manufacturer. | |
| Transmission : Shall be automatic with largest available auxiliary oil cooler. | |
| Windshield : Shall be equipped with manufacturers standard tinted windshield. | |
| Windows and Locks : Shall be equipped with manufacturers standard manual windows and door locks. | |
| The following equipment shall be supplied / installed | |
| There shall be a Step bar REF: Bustin (PN# RB002) or prior approved equal, must be length of cab entry area on both sides. (Installed) REF: EQN-170 drawing. | |
| There shall be an ECCO Model 450 backup alarm, shock mounted. (Installed) | |
| There shall be a seven-way trailer light receptacle, "Pin Type", securely mounted near rear trailer hitch area. Wired per EQN - 80A. Connections shall be sealed and water tight and packed with dielectric grease. | |
| There shall be a 4.5" LED interior utility dome light with an on and off swith. OPTRONICS PART NUMBER#OPTILL22CB Installed centered, over the front seat, capable of operating with the Ignition off. | |
| There shall be a warning light: Whelen Model R10HDPA with Deutsch connectors. Supplied and delivered in the cab. | |
| All switches shall be permanently labeled and backlit. | |

There shall be two (2) front tow hooks, installed.

There shall be an emergency triangle warning kit in each unit, in storage box and mounted in cab. EQN - 66A

There shall be a 5 LB. minimum 3A:40:BC fire extinguisher rechargeable with vehicle mount. Securely mounted in the cab for easy and quick access. A sticker on the door closest to the extinguisher shall be applied in the outside lower corner of the door to identify the location of the extinguisher.

There shall be a trailer hitch installed, as per EQN - 202B, the upper portion of hitch shall be painted with non-skid paint if extending to or outside body perimeter and is likely to be stepped on. (Tape is not acceptable.) There shall be provisions made for a safety break away cable. Hitch and below receiver parts shall not interfere with any part of the bumper or body no matter what configuration on the mounting plate is used.

All the following shall be supplied and delivered in the cab. Buyers Products - Combo Ball Hitch W/ 2 inch Hard Chrome Ball BH8-2000, Pintle Mounting Plate PM-87, Bolt Kit 8520, Hitch Pin HP6253 WC. Or approved equal.

Safety

Unit shall be fitted with temporary mud flaps that shall remain intact.

The cab shall have conspicuity tape as Per EQN-127A.

Any area likely to be stepped on shall be covered with non-skid paint, tape is unacceptable.

All handrails, ladders, and step configurations shall be built for three points of contact.

Anti-slip paint is required on all handholds, for the entire length, (tape is unacceptable).

Options

Option : To be equipped with Four Wheel Drive.

Option : To be equipped with Snow Plow Prep package.

Option : To be equipped with Power windows, Power door locks, and Power / Heated mirrors with manual extendable arms.

Option : Road Watch road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display.

Option : Vaisala road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display. Ambient sensor shall be mounted as to not receive any heat from then engine or drive train components to represent a false reading of the ambient air temperature.

Option : Install FLOCS system as per EQN: 351A.

Option : Flatbed Body upfit, Specification 046900

Option : Service Body upfit, Specification 048900

Option : Shop Body upfit, Specification 039700

Option : Foreman Body upfit, Specification 050400

Option : Foreman Body upfit, Split door configuration, Specification 050401

Option : Survey Body upfit, Specification 049700

Option : Statewide Radio:

Vehicle electrical and electronics will conform to the Federal Communications Commission 47 C.F.R. Part 15 so as not to interfere with the operation of the PennDOT Land Mobile Radio, which is an authorized radio station under 47 C.F.R. Part 90.

Radio Antenna: There shall be a roof mount base, PCTEL model BMATM/NC25 and a VHF StiCO Roof-FT-NITI-M whip shall be cut to 18.0 inches per manufactures cut sheet. Assembly shall be mounted to the center of the cab roof (not to interfere with any cab shield), with the antenna cable routed to underneath the dash. There shall be a minimum of 4 feet of antenna cable coiled at the base of the floor to allow for connection of radio on spreader control pedestal. Antenna shall be prewired with a UHF MALE connection. (No substitute, standardization).

Power Distribution Center: There shall be a 4-way power/ground distribution center located on the underside of the dash for connection of the state radio. The lugs shall be configured in the following manner: (1) lug shall be a 30 ampere constant hot circuit, (1) lug shall be a 10 ampere ignition controlled circuit. (2) lugs shall be chassis ground. All connections shall be enclosed in a weatherproof enclosure.

Option : Bidder must provide option pricing for "one" of the following.

Factory: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. Unit shall be painted PennDOT yellow in lieu of the OEM's original color. Using the same process as with OEM paint.

Aftermarket: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. All surfaces shall be properly cleaned and prepared prior to paint. Paint shall be the same quality as factory paint. To include all areas of the unit including interior.

Drawings:

| | | | | |
|----------|---------|----------|-------------|---|
| EQN-66A | Revised | 07-13-17 | sheet 1 | TRIANGLE STORAGE BOX AND BRACKET |
| EQN-80A | Revised | 08-02-18 | sheet 1 | WIRING DIAGRAM |
| EQN-127A | Revised | 01-02-09 | sheet 1 | CONSPICUITY TAPE |
| EQN-202B | Revised | 07-27-16 | sheet 1 | HITCH: WEIGHT DISTRIBUTING |
| EQN-351A | Revised | 06-19-13 | sheet 1 & 2 | FAST LUBE OIL CHANGE SYSTEM OVERVIEW AND PARTS LIST |
| EQN-170 | | 7-19-16 | sheet 1 | STEP RUNNING BOARDS |

Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual.

Installation Practices

All lights shall meet all Federal and State regulations.

All wire splices shall be insulated with heat shrink materials or removable connectors that create a water tight connection.

All wires shall be securley fastened with no wires hanging or protruding where they are exposed to the risk of damage.

All junction boxes shall be located inside of the utility body, in a location that will not compromise storage space. For easy accessibility, junctions boxes must not be obstructed in any way.

All electrical connections shall be treated with di-electric grease. All wiring shall be secured using "P" type clamps at intervals not to exceed 12" between securment points

All wires shall be in a protective covering and protected from chaffing, rubbing and getting pulled or torn from external sources.

Any alterations / relocation to fuel fill, DEF tank, exhaust, Etc. to allow installation of body shall be made in a professional manner using new materials.

Any place steel and aluminum contact each other Mylar or an approved equal shall be used as a buffer. Laminate rubber is unacceptable.

All vertical and horizontal seams of the body sides shall utilize full penetration welds in accordance with standard welding practices as set forth by the American Welding Society and sealed water tight to create one integral body.

All corners shall be angled or rounded for safety and all weld splatters removed. All mounting procedures shall be in accordance with NTEA standards.

The use of any of the following items or practices WILL NOT BE ACCEPTED.

Non-steel fittings on hydraulic pressure lines.

Excessive use of elbows on hydraulic lines.

Use of thread tape on hydraulic fittings.

Use of galvanized fittings or components on hydraulic system.

Improper hydraulic line size.

Use of high-pressure hose for hydraulic suction line.

Scotchlok-type wire splices.

Non-insulated wire splices.

Improper hose or wire routing near exhaust, over-sharp edges or through holes without grommets, or sharp edges.

Improperly prepared, primed and painted surfaces.

Non-fused electric circuits.

Hydraulic circuits without pressure relief protection.

Laminated Rubber

| | |
|--|--------------------|
| | Page <u>1</u> of 3 |
| SPECIFICATION | |
| <u>046100 - Truck, 11K, 2WD, Crew Cab & Chassis, Diesel Engine, Automatic Transmission, Dual Rear Wheels</u> | |
| This Dual Rear Wheel Model, Chassis Only, Shall Be A Manufacturer's Standard Model Vehicle, Capable Of Carrying Five (5) Passengers. 11,000 Lb GVWR Minimum. Manufacturer's Rating Certified On Door. Chassis to accommodate A 9 Foot Minimum, Flatbed, Service, Shop, Foreman or Survey Body. | |
| Note: " Refer to PCID 1075 for <u>Delivery</u>, and <u>Warranty</u> Requirements". | |
| The following additional items shall be supplied | |
| Air Bags : Shall be equipped with manufacturers standard air bags. | |
| Air Conditioning : Shall be equipped with manufacturers standard air conditioning. | |
| Alternator : Shall be manufacturers largest / heaviest duty available. | |
| Blue Tooth: Shall be equipped with manufacturers standard Blue tooth system. | |
| Daytime Running Lights : Shall be equipped with manufacturers standard Daytime Running Lights. (Aftermarket Acceptable) | |
| Differential : Shall be equipped with manufacturers standard Limited Slip Differential. Ratio to be selected at time of order from manufacturer's standard available ratios. | |
| DEF Tank : Shall be mounted to not interfere with body installation. Any relocation shall be done in a professional manner using new materials. | |
| Engine : Shall be Manufacturer's highest available horsepower and torque rating, standard or optional diesel engine, to include, immersion in-block type engine heater For water cooled engines, with water-proof plug and flush mounted In driver's side front sheet metal, engine oil cooler , and largest available engine cooling capacity. | |
| Exhaust : Shall be capable of being extended by the body up fitter to the outer most edge of the installed body. | |
| Front Bumper : Shall be Chrome, Black, or Argent. | |
| Fuel Tank : Manufacturer's highest capacity standard tank frame mounted (Tank filler positioned to ensure that filler nozzle can be set on automatic and nozzle will support itself, with unrestricted flow.) | |
| Lubricants : Shall be synthetic where available, with drain plugs identified or painted red. (Engine oil excluded) | |
| Mirrors : Shall be manufacturers standard heavy duty outside mirrors with convex mirror (aftermarket convex spot mirror acceptable) and extendable arms, driver and passenger sides. Shall be equipped with manufacturers standard manual day / night rearview mirror. | |
| Paint : Manufacturer's standard safety or school bus yellow. | |
| Seats: Shall be equipped with Vinyl 40/20/40 seats with center work console, Foam Padded with Seatbelts. (Cloth is Unacceptable) | |
| Suspension : Shall be equipped with trailer and handling package, to include front stabilizer bar, heaviest available front and rear suspension, and heaviest available differential. | |
| Tires : Truck and Body Company shall ensure that proper sized tires and wheels for GVWR are supplied. Tires shall be radial, OEM's most aggressive / severe duty tire available from manufacturer. | |
| Transmission : Shall be automatic with largest available auxiliary oil cooler. | |
| Windshield : Shall be equipped with manufacturers standard tinted windshield. | |
| Windows and Locks : Shall be equipped with manufacturers standard manual windows and door locks. | |
| The following equipment shall be supplied / installed | |
| There shall be a step bar REF: Bustin (PN# RB001) or prior approved equal, must be length of cab entry area on both sides. (Installed) REF: EQN-170 drawing | |
| There shall be an ECCO Model 450 backup alarm, shock mounted. (Installed) | |
| There shall be a seven-way trailer light receptacle, "Pin Type", securely mounted near rear trailer hitch area. Wired per EQN - 80A. Connections shall be sealed and water tight and packed with dielectric grease. | |
| There shall be a 4.5" LED interior utility dome light with an on and off swith. OPTRONICS PART NUMBER#OPTILL22CB Installed centered, over the front seat, capable of operating with the Ignition off. | |
| There shall be a warning light: Whelen Model R10HDPA with Deutsch connectors. Supplied and delivered in the cab. | |
| All switches shall be permanently labeled and backlit. | |

There shall be two (2) front tow hooks, installed.

There shall be an emergency triangle warning kit in each unit, in storage box and mounted in cab. EQN - 66A

There shall be a 5 LB. minimum 3A:40:BC fire extinguisher rechargeable with vehicle mount. Securely mounted in the cab for easy and quick access. A sticker on the door closest to the extinguisher shall be applied in the outside lower corner of the door to identify the location of the extinguisher.

There shall be a trailer hitch installed, as per EQN - 202B, the upper portion of hitch shall be painted with non-skid paint if extending to or outside body perimeter and is likely to be stepped on. (Tape is not acceptable.) There shall be provisions made for a safety break away cable. Hitch and below receiver parts shall not interfere with any part of the bumper or body no matter what configuration on the mounting plate is used.

All the following shall be supplied and delivered in the cab. Buyers Products - Combo Ball Hitch W/ 2 inch Hard Chrome Ball BH8-2000, Pintle Mounting Plate PM-87, Bolt Kit 8520, Hitch Pin HP6253 WC. Or approved equal.

Safety

Unit shall be fitted with temporary mud flaps that shall remain intact.

The cab shall have conspicuity tape as Per EQN-127A.

Any area likely to be stepped on shall be covered with non-skid paint, tape is unacceptable.

All handrails, ladders, and step configurations shall be built for three points of contact.

Anti-slip paint is required on all handholds, for the entire length, (tape is unacceptable).

Options

Option : To be equipped with Four Wheel Drive.

Option : To be equipped with Snow Plow Prep package.

Option : To be equipped with Power windows, Power door locks, and Power / Heated mirrors with manual extendable arms.

Option : Road Watch road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display.

Option : Vaisala road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display. Ambient sensor shall be mounted as to not receive any heat from the engine or drive train components to represent a false reading of the ambient air temperature.

Option : Install FLOCS system as per EQN: 351A.

Option : Flatbed Body upfit, Specification 046900

Option : Service Body upfit, Specification 048900

Option : Shop Body upfit, Specification 039700

Option : Foreman Body upfit, Specification 050400

Option : Foreman Body upfit, Split door configuration, Specification 050401

Option : Survey Body upfit, Specification 049700

Option : Statewide Radio:

Vehicle electrical and electronics will conform to the Federal Communications Commission 47 C.F.R. Part 15 so as not to interfere with the operation of the PennDOT Land Mobile Radio, which is an authorized radio station under 47 C.F.R. Part 90.

Radio Antenna: There shall be a roof mount base, PCTEL model BMATM/NC25 and a VHF StiCO Roof-FT-NITI-M whip shall be cut to 18.0 inches per manufactures cut sheet. Assembly shall be mounted to the center of the cab roof (not to interfere with any cab shield), with the antenna cable routed to underneath the dash. There shall be a minimum of 4 feet of antenna cable coiled at the base of the floor to allow for connection of radio on spreader control pedestal. Antenna shall be prewired with a UHF MALE connection. (No substitute, standardization).

Power Distribution Center: There shall be a 4-way power/ground distribution center located on the underside of the dash for connection of the state radio. The lugs shall be configured in the following manner: (1) lug shall be a 30 ampere constant hot circuit, (1) lug shall be a 10 ampere ignition controlled circuit. (2) lugs shall be chassis ground. All connections shall be enclosed in a weatherproof enclosure.

Option : Bidder must provide option pricing for "one" of the following.

Factory: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. Unit shall be painted PennDOT yellow in lieu of the OEM's original color. Using the same process as with OEM paint.

Aftermarket: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. All surfaces shall be properly cleaned and prepared prior to paint. Paint shall be the same quality as factory paint. To include all areas of the unit including interior.

Drawings:

| | | | | |
|----------|---------|----------|-------------|---|
| EQN-66A | Revised | 07-13-17 | sheet 1 | TRIANGLE STORAGE BOX AND BRACKET |
| EQN-80A | Revised | 08-02-18 | sheet 1 | WIRING DIAGRAM |
| EQN-127A | Revised | 01-02-09 | sheet 1 | CONSPICUITY TAPE |
| EQN-202B | Revised | 07-27-16 | sheet 1 | HITCH: WEIGHT DISTRIBUTING |
| EQN-351A | Revised | 06-19-13 | sheet 1 & 2 | FAST LUBE OIL CHANGE SYSTEM OVERVIEW AND PARTS LIST |
| EQN-170 | | 7-19-16 | sheet 1 | STEP RUNNING BOARDS |

Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual.

Installation Practices

All lights shall meet all Federal and State regulations.

All wire splices shall be insulated with heat shrink materials or removable connectors that create a water tight connection.

All wires shall be securely fastened with no wires hanging or protruding where they are exposed to the risk of damage.

All junction boxes shall be located inside of the utility body, in a location that will not compromise storage space. For easy accessibility, junction boxes must not be obstructed in any way.

All electrical connections shall be treated with di-electric grease. All wiring shall be secured using "P" type clamps at intervals not to exceed 12" between securing points

All wires shall be in a protective covering and protected from chaffing, rubbing and getting pulled or torn from external sources.

Any alterations / relocation to fuel fill, DEF tank, exhaust, Etc. to allow installation of body shall be made in a professional manner using new materials.

Any place steel and aluminum contact each other Mylar or an approved equal shall be used as a buffer. Laminate rubber is unacceptable.

All vertical and horizontal seams of the body sides shall utilize full penetration welds in accordance with standard welding practices as set forth by the American Welding Society and sealed water tight to create one integral body.

All corners shall be angled or rounded for safety and all weld splatters removed. All mounting procedures shall be in accordance with NTEA standards.

The use of any of the following items or practices WILL NOT BE ACCEPTED.

Non-steel fittings on hydraulic pressure lines.

Excessive use of elbows on hydraulic lines.

Use of thread tape on hydraulic fittings.

Use of galvanized fittings or components on hydraulic system.

Improper hydraulic line size.

Use of high-pressure hose for hydraulic suction line.

Scotchlok-type wire splices.

Non-insulated wire splices.

Improper hose or wire routing near exhaust, over-sharp edges or through holes without grommets, or sharp edges.

Improperly prepared, primed and painted surfaces.

Non-fused electric circuits.

Hydraulic circuits without pressure relief protection.

Laminated Rubber

| | |
|---|--------------------|
| | Page <u>1</u> of 3 |
| SPECIFICATION | |
| <u>046110 - Truck, 11K, 2WD, Crew Cab & Chassis, Gasoline Engine, Automatic Transmission, Dual Rear Wheels</u> | |
| This Dual Rear Wheel Model, Chassis Only, Shall Be A Manufacturer's Standard Model Vehicle, Capable Of Carrying Five (5) Passengers. 11,000 Lb GVWR Minimum. Manufacturer's Rating Certified On Door. Chassis to accommodate A 9 Foot Minimum, Flatbed, Service, Shop, Foreman or Survey Body. | |
| Note: " Refer to PCID 1075 for <u>Delivery</u>, and <u>Warranty</u> Requirements". | |
| The following additional items shall be supplied | |
| Air Bags : Shall be equipped with manufacturers standard air bags. | |
| Air Conditioning : Shall be equipped with manufacturers standard air conditioning. | |
| Alternator : Shall be manufacturers largest / heaviest duty available. | |
| Blue Tooth: Shall be equipped with manufacturers standard Blue tooth system. | |
| Daytime Running Lights : Shall be equipped with manufacturers standard Daytime Running Lights. (Aftermarket Acceptable) | |
| Differential : Shall be equipped with manufacturers standard Limited Slip Differential. Ratio to be selected at time of order from manufacturer's standard available ratios. | |
| Engine : Shall be Manufacturer's highest available horsepower and torque rating, standard or optional gasoline engine, to include, engine oil cooler , and largest available engine cooling capacity. | |
| Exhaust : Shall be capable of being extended by the body up fitter to the outer most edge of the installed body. | |
| Front Bumper : Shall be Chrome, Black, or Argent. | |
| Fuel Tank : Manufacturer's highest capacity standard tank frame mounted (Tank filler positioned to ensure that filler nozzle can be set on automatic and nozzle will support itself, with unrestricted flow.) | |
| Lubricants : Shall be synthetic where available, with drain plugs identified or painted red. (Engine oil excluded) | |
| Mirrors : Shall be manufacturers standard heavy duty outside mirrors with convex mirror (aftermarket convex spot mirror acceptable) and extendable arms, driver and passenger sides. Shall be equipped with manufacturers standard manual day / night rearview mirror. | |
| Paint : Manufacturer's standard safety or school bus yellow. | |
| Seats: Shall be equipped with Vinyl 40/20/40 seats with center work console, Foam Padded with Seatbelts. (Cloth is Unacceptable) | |
| Suspension : Shall be equipped with trailer and handling package, to include front stabilizer bar, heaviest available front and rear suspension, and heaviest available differential. | |
| Tires : Truck and Body Company shall ensure that proper sized tires and wheels for GVWR are supplied. Tires shall be radial, OEM's most aggressive / severe duty tire available from manufacturer. | |
| Transmission : Shall be automatic with largest available auxiliary oil cooler. | |
| Windshield : Shall be equipped with manufacturers standard tinted windshield. | |
| Windows and Locks : Shall be equipped with manufacturers standard manual windows and door locks. | |
| The following equipment shall be supplied / installed | |
| There shall be a step bar REF: Bustin (PN# RB001) or prior approved equal, must be length of cab entry area on both sides. (Installed) REF: EQN-170 drawing | |
| There shall be an ECCO Model 450 backup alarm, shock mounted. (Installed) | |
| There shall be a seven-way trailer light receptacle, "Pin Type", securely mounted near rear trailer hitch area. Wired per EQN - 80A. Connections shall be sealed and water tight and packed with dielectric grease | |
| There shall be a 4.5" LED interior utility dome light with an on and off swith. OPTRONICS PART NUMBER#OPTILL22CB Installed centered, over the front seat, capable of operating with the Ignition off. | |
| There shall be a warning light: Whelen Model R10HDPA with Deutsch connectors. Supplied and delivered in the cab. | |
| All switches shall be permanently labeled and backlit. | |

| | |
|--|--------------------|
| | Page 2 of 3 |
| There shall be two (2) front tow hooks, installed. | |
| There shall be an emergency triangle warning kit in each unit, in storage box and mounted in cab. EQN - 66A | |
| There shall be a 5 LB. minimum 3A:40:BC fire extinguisher rechargeable with vehicle mount. Securely mounted in the cab for easy and quick access. A sticker on the door closest to the extinguisher shall be applied in the outside lower corner of the door to identify the location of the extinguisher. | |
| There shall be a trailer hitch installed, as per EQN - 202B, the upper portion of hitch shall be painted with non-skid paint if extending to or outside body perimeter and is likely to be stepped on. (Tape is not acceptable.) There shall be provisions made for a safety break away cable. Hitch and below receiver parts shall not interfere with any part of the bumper or body no matter what configuration on the mounting plate is used. | |
| All the following shall be supplied and delivered in the cab. Buyers Products - Combo Ball Hitch W/ 2 inch Hard Chrome Ball BH8-2000, Pintle Mounting Plate PM-87, Bolt Kit 8520, Hitch Pin HP6253 WC. Or approved equal. | |
| <u>Safety</u> | |
| Unit shall be fitted with temporary mud flaps that shall remain intact. | |
| The cab shall have conspicuity tape as Per EQN-127A. | |
| Any area likely to be stepped on shall be covered with non-skid paint, tape is unacceptable. | |
| All handrails, ladders, and step configurations shall be built for three points of contact. | |
| Anti-slip paint is required on all handholds, for the entire length, (tape is unacceptable). | |
| <u>Options</u> | |
| <u>Option</u> : To be equipped with Four Wheel Drive. | |
| <u>Option</u> : To be equipped with Snow Plow Prep package. | |
| <u>Option</u> : To be equipped with Power windows, Power door locks, and Power / Heated mirrors with manual extendable arms. | |
| <u>Option</u> : Road Watch road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display. | |
| <u>Option</u> : Vaisala road/air temperature system. Located on the left front fender. Gauge to be neatly mounted in the dash within the drivers view or installed with control system integrated temperature display. Ambient sensor shall be mounted as to not receive any heat from then engine or drive train components to represent a false reading of the ambient air temperature. | |
| <u>Option</u> : Install FLOCS system as per EQN: 351A. | |
| <u>Option</u> : Flatbed Body upfit, Specification 046900 | |
| <u>Option</u> : Service Body upfit, Specification 048900 | |
| <u>Option</u> : Shop Body upfit, Specification 039700 | |
| <u>Option</u> : Foreman Body upfit, Specification 050400 | |
| <u>Option</u> : Foreman Body upfit, Split door configuration, Specification 050401 | |
| <u>Option</u> : Survey Body upfit, Specification 049700 | |
| <u>Option</u> : Statewide Radio: Vehicle electrical and electronics will conform to the Federal Communications Commission 47 C.F.R. Part 15 so as not to interfere with the operation of the PennDOT Land Mobile Radio, which is an authorized radio station under 47 C.F.R. Part 90. | |
| Radio Antenna: There shall be a roof mount base, PCTEL model BMATM/NC25 and a VHF StiCO Roof-FT-NITI-M whip shall be cut to 18.0 inches per manufactures cut sheet. Assembly shall be mounted to the center of the cab roof (not to interfere with any cab shield), with the antenna cable routed to underneath the dash. There shall be a minimum of 4 feet of antenna cable coiled at the base of the floor to allow for connection of radio on spreader control pedestal. Antenna shall be prewired with a UHF MALE connection. (No substitute, standardization). | |
| Power Distribution Center: There shall be a 4-way power/ground distribution center located on the underside of the dash for connection of the state radio. The lugs shall be configured in the following manner: (1) lug shall be a 30 ampere constant hot circuit, (1) lug shall be a 10 ampere ignition controlled circuit. (2) lugs shall be chassis ground. All connections shall be enclosed in a weatherproof enclosure. | |
| <u>Option</u> : Bidder must provide option pricing for "one" of the following. Factory: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. Unit shall be painted PennDOT yellow in lieu of the OEM's original color. Using the same process as with OEM paint. Aftermarket: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. All surfaces shall be properly cleaned and prepared prior to paint. Paint shall be the same quality as factory paint. To include all areas of the unit including interior. | |

Drawings:

| | | | | |
|----------|---------|----------|-------------|---|
| EQN-66A | Revised | 07-13-17 | sheet 1 | TRIANGLE STORAGE BOX AND BRACKET |
| EQN-80A | Revised | 08-02-18 | sheet 1 | WIRING DIAGRAM |
| EQN-127A | Revised | 01-02-09 | sheet 1 | CONSPICUITY TAPE |
| EQN-202B | Revised | 07-27-16 | sheet 1 | HITCH: WEIGHT DISTRIBUTING |
| EQN-351A | Revised | 06-19-13 | sheet 1 & 2 | FAST LUBE OIL CHANGE SYSTEM OVERVIEW AND PARTS LIST |
| EQN-170 | | 7-19-16 | sheet 1 | STEP RUNNING BOARDS |

Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual.

Installation Practices

All lights shall meet all Federal and State regulations.

All wire splices shall be insulated with heat shrink materials or removable connectors that create a water tight connection.

All wires shall be securley fastened with no wires hanging or protruding where they are exposed to the risk of damage.

All junction boxes shall be located inside of the utility body, in a location that will not compromise storage space. For easy accessibility, junctions boxes must not be obstructed in any way.

All electrical connections shall be treated with di-electric grease. All wiring shall be secured using "P" type clamps at intervals not to exceed 12" between securment points

All wires shall be in a protective covering and protected from chaffing, rubbing and getting pulled or torn from external sources.

Any alterations / relocation to fuel fill, DEF tank, exhaust, Etc. to allow installation of body shall be made in a professional manner using new materials.

Any place steel and aluminum contact each other Mylar or an approved equal shall be used as a buffer. Laminate rubber is unacceptable.

All vertical and horizontal seams of the body sides shall utilize full penetration welds in accordance with standard welding practices as set forth by the American Welding Society and sealed water tight to create one integral body.

All corners shall be angled or rounded for safety and all weld splatters removed. All mounting procedures shall be in accordance with NTEA standards.

The use of any of the following items or practices WILL NOT BE ACCEPTED.

Non-steel fittings on hydraulic pressure lines.

Excessive use of elbows on hydraulic lines.

Use of thread tape on hydraulic fittings.

Use of galvanized fittings or components on hydraulic system.

Improper hydraulic line size.

Use of high-pressure hose for hydraulic suction line.

Scotchlok-type wire splices.

Non-insulated wire splices.

Improper hose or wire routing near exhaust, over-sharp edges or through holes without grommets, or sharp edges.

Improperly prepared, primed and painted surfaces.

Non-fused electric circuits.

Hydraulic circuits without pressure relief protection.

Laminated Rubber

| | |
|---|--------------------|
| | Page <u>1</u> of 3 |
| SPECIFICATION | |
| <u>046900 - Heavy Duty Flat Bed Body Upfit For Use With 11K and 17K Chassis</u> | |
| Reference: Hostettler Truck Body 9 FT. Flatbed made for PENNDOT or, Approved Equal. | |
| Note: " Refer to PCID 1075 for <u>Delivery</u> and <u>Warranty</u> Requirements". | |
| Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual. | |
| Body Shall Include The Following Equipment: | |
| <p>The flatbed body dimensions shall cover the rear wheels. Any other applicable changes required to accommodate this type unit is the responsibility of the bidder. The body shall be designed to accommodate stake body sides There shall be a front mounted bulkhead.</p> | |
| Body - Installation: | |
| <p>It shall be the responsibility of the successful vendor to have this flatbed mounted on the chassis(s). The installation shall be engineered and approved by the vehicle manufacturer and shall have no adverse affect upon the manufacturer's warranty. When any portion of the complete vehicle is to be installed by anybody other than the bidder or the chassis manufacturer, they shall indicate the name of the sub-contractor performing such installation and the location of their plants. The bulkhead shall be a min14 gauge steel with punched or expandable metal area in alignment with the cab rear window. It shall be constructed of sufficient strength to eliminate damage to the rear of the cab. The bulkhead shall not interfere with the visibility of the third brake light. Proposed bulkhead shall be reviewed for acceptance prior to pilot model inspection by the Fleet Management Division. The bulkhead shall have a forward extension mounted to driver's side, of sufficient size to support the base of the warning light and this extension shall have a gusset.</p> | |
| Floor - Wood: | |
| <p>Reference for pine floor: Southern Pine Inspection Bureau (SPIB). Pre-dried lumber. Vacuum process or kiln dried). Pressure Treated (AWPA). Tongue and groove male and female groove same size, minimum 2 in thick, nominal.</p> | |
| LUMBER (PRESSURE TREATED) SPECIFICATIONS: | |
| <p>Pressure treated lumber shall be No. 1 stress rated Southern Pine.</p> | |
| Construction: | |
| <p>All body parts are to be electrically full welded into one integral body. No welding inside the stake pockets. Gusset plates shall be welded on both the sides. For all threaded connections at least two (2) full threads shall be visible beyond the nut. The fuel tank fill shall be positioned in such a way to ensure the filler nozzle can be set on automatic and nozzle will support itself with unrestricted flow.</p> | |
| Step Bumper: | |
| <p>The heavy-duty rear bumper shall be constructed with a minimum of 1/8 inch reinforced steel. The size and strength shall be in accordance with the truck manufacturer's step design. The platform on top of the bumper shall be Bustin aluminum No. NST4 full size, or Bustin 628 steel, or Ohio Grating or IKG Industries serrated swage lock, with end band. The outer step edge must be serrated in lieu of plain, smooth metal edge. All edges shall be banded (skirting) on the outer perimeter. Overlay is not acceptable. Two, 2" deep x 10" wide steps hung by 6" long 3/4" diameter cables shall be mounted, one under each side of bumper. Both hung 12" in from edge of bumper, step shall be Bustin steel grip grating.</p> | |
| Mud Flaps: | |
| <p>Mud flaps front and rear of rear tires, unmarked, full width of tires, and gusseted. Length shall be consistent with the unloaded rear axle height, And in accordance with the PA State Inspection Laws. The Flaps in front of the rear tires shall be constructed of 0.1406 in (10 gauge) steel. The Flaps at the rear, of the rear tires, shall be constructed of 0.1406 in (10 gauge) steel, and include a rubber flap using 3 bolts and flat steel backed plates.</p> | |

Electrical:**Whelen Light Kit Part # PADOTSY7, Kit contains the following lighting.**

1 - R10PADOT Light Bar to be mounted to the driver's side of the bulkhead. In no case shall the light bar be mounted on the roof of the vehicle.

4 - IONAD Amber warning lights grommet mounted 2 will be grill mounted per EQN - 115 and 1 on each side of flat bed per EQN-120L

4 - IONGROM Grommet mounts for the IONAD light.

2 - M6AD Amber warning lights with brush guard mounted to the rear of bed per EQN - 120L

2 - M6BTTD Stop, Tail, Turn lights with brush guard per EQN - 120L

2 - M6BUD Back-up lights with brush guards per EQN - 120L

8 - W441D Harness side mating Deutsch connectors.

The above lights are supplied with male and female Deutsch connectors that shall be utilized to connect the vendor supplied harness to each light source.

1 - Pioneer Tripod pedestal flood light with coiled cord and plug to be supplied in the cab. Work Light receptacle shall be wired and mounted in the rear of the truck and one receptacle on the left front of the body. Work light receptacles shall have a constant 12 volt power supply, circuit to be properly protected and have a chassis ground. Remote mounting location to be determined at pilot inspection. Body builder to supply remaining marker and ICC lighting, they shall be protected against damage and shall also be shock mounted. Connections shall be water tight. All Body lighting shall be LED.

All Amber Warning lights and Light bar shall be on a single lighted, permanently labeled toggle switch located in the dash.

License plate lighting shall specifically be a Truck light 36 series PN# 36140C LED lamp with light bracket PN#36710

Body wiring shall be Grote, Trucklite, or Prior Approved Equal.

There shall be no splices outside of a sealed box or fixture.

There shall be a seven-way trailer (Pin Type) receptacle mounted on rear filled with dielectric grease. Per EQN - 80A

A color-coded electrical wiring chart and schematic shall accompany each body.

Paint:

Body priming and painting to ensure full coverage to all areas of the body

Color of the body, including inside and outside of compartments, and the bed, shall be cab manufacturer's standard safety or school bus yellow, or optional PennDOT yellow DuPont F9885 for shade. (Powder Coat, if available from factory.) It will be the responsibility of the successful vendor to ensure color of the body matches the cab.

All metal surfaces to be painted shall be cleaned and prepared by abrasive blasting to 1-1/2 mil profile in accordance with Steel Structure Painting Council Standard SSPC-SP-6.

A rust preventative treatment shall be applied.

Wood surface shall be unpainted.

Body rail shall have conspicuity tape per EQN-127A.

Safety:

Vendor shall supply a first aid kit in a weather proof steel case that meets requirements of ANSI Z308.1-2015 Class A. The Kit shall be placed loose in the cab with a sticker to be applied to the outside of the door at a later time stating the location of the first aid kit.

REF: Arbill Industries Inc. 215-501-8450

HITCH:

There shall be a hitch installed, Per EQN-202B, there shall be provisions made to hook up a breakaway cable. The Upper Portion Of Hitch Shall Be Painted With Non-Skid Paint If extending to or outside body perimeter and is likely to be stepped on. Below hardware shall be supplied in truck cab. Hitch and below receiver parts shall not interfere with any part of the bumper or body no matter what configuration on the mounting plate is used.

| | Buyers Products (216-974-888) | Wallace Forge Company (800-328-1203) |
|--|-------------------------------|--------------------------------------|
| Combo Ball Hitch W/ 2 inch Hard Chrome Ball: | BH8-2000 | 23071911 |
| Pintle Mounting Plate: | PM-87 | 2200170 PADOT |
| Bolt Kit: | 8520 | 2117240 |
| Hitch Pin: | HP6253 WC | HP58412 |

DRAWINGS:

| | | | | |
|----------|---------|----------|-----------|------------------------------|
| EQN-2C | Revised | 08-01-08 | sheet 1-4 | TYPICAL FLAT BED BODY |
| EQN-80A | Revised | 08-02-18 | sheet 1 | WIRING DIAGRAM |
| EQN-115 | Revised | 07-03-12 | sheet 1 | GRILL MOUNTED WARNING LIGHTS |
| EQN-120L | | 09-28-11 | sheet 1 | FLAT BED BODY LIGHTING |
| EQN-127A | Revised | 01-02-09 | sheet 1 | CONSPICUITY TAPE |
| EQN-202B | Revised | 07-27-16 | sheet 1 | HITCH: WEIGHT DISTRIBUTING |

Installation Practices

All lights shall meet all Federal and State regulations.

All wire splices shall be insulated with heat shrink materials or removable connectors that create a water tight connection.

All wires shall be securely fastened with no wires hanging or protruding where they are exposed to the risk of damage.

All junction boxes shall be located inside of the utility body, in a location that will not compromise storage space. For easy accessibility, junction boxes must not be obstructed in any way.

All electrical connections shall be treated with dielectric grease. All wiring shall be secured using "P" type clamps at intervals not to exceed 12" between securement points.

All wires shall be in a protective covering and protected from chaffing, rubbing and getting pulled or torn from external sources.

Any alterations / relocation to fuel fill, DEF tank, exhaust, Etc. to allow installation of body shall be made in a professional manner using new materials.

Any place steel and aluminum contact each other Mylar or an approved equal shall be used as a buffer.

Laminate rubber is unacceptable. All vertical and horizontal seams of the body sides shall utilize full penetration welds in accordance with standard welding practices as set forth by the American Welding Society and sealed water tight to create one integral body. All corners shall be angled or rounded for safety and all weld splatter removed. All mounting procedures shall be in accordance with NTEA standards.

The use of any of the following items or practices WILL NOT BE ACCEPTED.

Non-steel fittings on hydraulic pressure lines.

Excessive use of elbows on hydraulic lines.

Use of thread tape on hydraulic fittings.

Use of galvanized fittings or components on hydraulic system.

Improper hydraulic line size.

Use of high-pressure hose for hydraulic suction line.

Scotchlok-type wire splices.

Non-insulated wire splices.

Improper hose or wire routing near exhaust, over-sharp edges or through holes without grommets, or sharp edges.

Improperly prepared, primed and painted surfaces.

Non-fused electric circuits.

Hydraulic circuits without pressure relief protection.

| | |
|---|--------------------|
| | Page 1 of 3 |
| SPECIFICATION | |
| 048900 - Service Body Upfit For Use With 11K and 17K Chassis | |
| Reference: Stahl, Warner, Omaha Standard, or Knapheide, meeting these specifications. | |
| Note: " Refer to PCID 1075 for <u>Delivery</u>, and <u>Warranty Requirements</u>". | |
| Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual. | |
| Body Shall Include The Following Equipment: | |
| <p>Body - Installation: It shall be the responsibility of the successful vendor to have the service body mounted on the chassis(s). The installation shall be engineered and approved by the vehicle manufacturer and shall have no adverse affect upon the manufacturer's warranty. When any portion of the complete vehicle is to be installed by anybody other than the bidder or the chassis manufacturer, they shall indicate the name of the sub-contractor performing such installation and the location of their plants. The service body dimensions shall cover the rear wheels. Any other applicable changes required to accommodate this type unit is the responsibility of the bidder. The body shall have a front mounted bulkhead and shall be a minimum 14 gauge steel with punched or expandable metal area in alignment with the cab rear window. It shall be constructed of sufficient strength to eliminate damage to the rear of the cab. The bulkhead shall not interfere with the visibility of the third brake light. Proposed bulkhead shall be reviewed for acceptance prior to pilot model inspection by the Fleet Management Division. The bulkhead shall have a forward extension mounted to the driver's side, of sufficient size to support the base of the warning light and this extension shall have a gusset. Frame rails shall be prepared by cleaning, priming and final painting. The body shall be attached to the truck chassis using four (4) U-bolts, or bolt thru, lock nuts, and appropriate shear plates as required to comply with manufacturer's standards.</p> | |
| <p>Body Components: There shall be 3 compartments on each side. Overall compartment depth shall be 24 in. minimum. One (1) curbside compartment shall be 70" long x 18" high or 76" long or 18" high minimum. The top center road side compartment shall have one (1) adjustable shelf each. There shall be a drip rail above all doors. Piano hinge is unacceptable. All door and compartment hinges shall be rod and nylon bushing or stainless steel heavy duty strap hinge with nylon or Teflon bushings and rubber door seals. The top left and right area's of the service body shall be covered with aluminum diamond deck (unpainted), and sealed all around. Vertical compartment doors shall have a limiting device, shock type or steel lock strap type. If steel lock straps are used for a limiting device, they shall be detachable by use of a hitch pin or other easily removeable device to allow door to open fully. Rubber stops shall be installed on body under all horizontal doors opening down to keep them from contacting the sides of the body. Vertical compartment doors shall have a limiting device, shock type or steel lock strap type. Horizontal compartment doors shall have a removable limiting device, steel lock strap type. All compartments shall be equipped with one stainless steel bolt on slam latch (rivets on latches are unacceptable). It is the vendors responsibility to make sure all compartment doors seal so if deemed necessary 2 slam latches will be accepted on the long horizontal tool box. All compartments shall be keyed alike, with no two individual completed units having the same keys. The heavy-duty rear bumper shall be constructed with a minimum of 1/8 inch reinforced steel. The size and strength shall be in accordance with the truck manufacturer's step design. The platform on top of the bumper shall be Bustin aluminum No. NST4 full size, or Bustin 628 steel, or Ohio Grating or IKG Industries serrated swage lock, with end band. The outer step edge must be serrated in lieu of plain, smooth metal edge. All edges shall be banded (skirting) on the outer perimeter. Overlay is not acceptable. A 12" non-slip grab handle on top of each cabinet at rear shall also be provided to assist operators when climbing into rear of body. (anti-slip tape is unacceptable) There shall be a stainless steel grab handle on each rear side of the utility body to assist the operator in entering and exiting the bed area, Non-skid paint or rubber shall be utilized, (non-skid tape is unacceptable). Ref: Non skid paint, Gamma Laboratories (Tel. 304-489-2828.) Two, 2" deep x 10" wide steps hung by 6" long 3/4" diameter cables shall be mounted, one under each side of bumper. Both hung 12" in from edge of bumper, step shall be Bustin steel grip grating. All compartment floors shall be covered with yellow DriDek (Tel: 800-348-2398). Any area likely to be stepped on shall be covered with non-skid paint. There shall be a total of six galvanized non rusting metal recessed D-ring style swiveling hold downs on the floor of body. One tie down in each corner of the body and the remaining two spaced evenly in the center of the body against the outer edge close to the walls each tied into a crossmember. REF EQN-1083</p> | |
| <p>Construction: All body parts are to be electrically full welded into one integral body. For all threaded connections at least two (2) full threads shall be visible beyond the nut. The fuel tank fill shall be positioned in such a way to ensure the filler nozzle can be set on automatic and nozzle will support itself with unrestricted flow.</p> | |
| <p>Hazardous or Flammable Materials Storage: There shall be 2 curbside cabinets 1 right front and 1 top center capable of storing flammable or hazardous materials such as (gas cans, aerosol cans, chainsaws, oil containers, compressed gas cylinders, paint cans etc.) Also on each of these 2 cabinets a sticker needs placed on the outside of the door referencing that they are capable of storing flammables. REF: EQN-1089B.</p> | |
| <p>Compartment lighting: Each compartment shall have the Vista Compartment lighting System (Tel: 219-264-0711). The 3/8" LED rope lighting sections shall be mounted on the inside of each compartment door and shall occupy space on the left, top, and right of each compartment. Rope sections shall extend full length of compartment on left and right sides. All compartments lighting shall be controlled by a single illuminated rocker switch mounted within easy reach of the driver. All wiring shall be secured using "P" type clamps 12" maximum between securment points.</p> | |
| <p>Construction; All body parts are to be electrically full welded into one integral body. For all threaded connections at least two (2) full threads shall be visible beyond the nut. The fuel tank fill shall be positioned in such a way to ensure the filler nozzle can be set on automatic and nozzle will support itself with unrestricted flow.</p> | |

Exhaust:

All tool boxes above any exhaust tailpipe or within close proximity of muffler, DPF, etc. shall receive a heat shield plate to the box in order to protect it. Exhaust shall be extended to the outer most edge of the installed body.

Mud Flaps:

Mud flaps front and rear of rear tires, unmarked, full width of tires, and gusseted.
Length shall be consistent with the unloaded rear axle height, And in accordance with the PA State Inspection Laws.
The Flaps in front of the rear tires shall be constructed of 0.1406 in (10 gauge) steel.
The Flaps at the rear, of the rear tires, shall be constructed of 0.1406 in (10 gauge) steel, and include a rubber flap using 3 bolts and flat steel backed plates.

Electrical:**Whelen Light Kit Part # PADOTSY5, Kit contains the following lighting.**

- 1 - R10PADOT Light Bar to be mounted to the driver's side of the bulkhead. In no case shall the light bar be mounted on the roof of the vehicle.
- 4 - IONAD Amber warning lights grommet mounted 2 will be grill mounted per EQN-115 and 1 on each side of the bed per EQN-120M
- 4 - IONGROM Grommet mounts for the IONAD light.
- 2 - M6AD Amber warning lights per EQN - 120M
- 2 - M6BTDD Stop,Tail, Turn lights per EQN - 120M
- 2 - M6BUD Back-up lights per EQN - 120M
- 2 - M6 Series 3 Lamp Black Housing, vertical
- 10 - W441D Harness side mating Deutch connectors.

The above lights are supplied with male and female Deutsch connectors that shall be utilized to connect the vendor supplied harness to each light source.

1 - Pioneer Tripod pedestal flood light with coiled cord and plug to be supplied in the cab. Work Light receptacle shall be wired and mounted in the rear of the truck and one receptacle on the left front of the body. Work light receptacles shall have a constant 12 volt power supply, circuit to be properly protected and have a chassis ground. Remote mounting location to be determined at pilot inspection.

Body builder to supply remaining marker and ICC lighting, they shall be protected against damage and shall also be shock mounted.

Connections shall be water tight. All Body lighting shall be LED.

All Amber Warning lights and Light bar shall be on a single lighted, permanently labeled toggle switch located in the dash.

License plate lighting shall specifically be a Truck light 36 series PN# 36140C LED lamp with light bracket PN#36710

Body wiring shall be Grote, Trucklite, or Prior Approved Equal.

There shall be no splices outside of a sealed box or fixture.

There shall be a seven-way trailer (Pin Type) receptacle mounted on rear filled with dielectric grease. Per EQN - 80A

A color-coded electrical wiring chart and schematic shall accompany each body.

All wires shall be in a protective covering. Any loose hanging wires are unacceptable.

Front bulk head mounted LED Arrow board: A Traffcon Bulkhead power tilt Rack shall be used to support a Trafcon MB3-15 PLWA wireless remote, power tilt arrow board. Rack and board shall be mounted high enough to ensure the beacon light is not hidden or its view is obstructed in any way. Beacon light mounting shall be moved to the center of the bulk head verses the drivers side when mounted with out an arrow board. REF EQN-120W. It shall be the awarded vendor's responsibility to ensure that electrical "draws" do not exceed manufacturer's specifications in order to avoid excessive battery drain when the unit is parked.

Bed Liner:

Center Cargo Area shall have a Linex brand sprayed bed liner no substitutes. Shall cover floor and all sides including tailgate interior. Shall be a minimum of 150 Mils. Thickness. Material shall have No VOCs and be applied utilizing a high pressure spray. D-ring hold downs shall not be sprayed.

Safety:

Vendor shall supply a first aid kit, that meets requirements of ANSI Z308.1-2015 Class A. The Kit shall in a weather proof steel case and placed in the front compartment on the drivers side with a sticker applied to the outside of the door stating the location of the first aid kit. There shall be a bracket designed to fit underneath the first shelf that the first aid kit will slide into to allow quick access to it. There will also be a first aid sticker placed on the shelf. REF: EQN-171 Drawing. REF: Arbill Industries Inc. 215-501-8450

Paint:

Body priming and painting to ensure full coverage to all areas of the body

Color of the body, including inside and outside of compartments, and the bed, shall be cab manufacturer's standard safety or school bus yellow, or optional PennDOT yellow DuPont F9885 for shade. (Powder Coat, if available from factory.) **It will be the responsibility of the successful vendor to ensure color of the body matches the cab.**

All metal surfaces to be painted shall be cleaned and prepared by abrasive blasting to 1-1/2 mil profile in accordance with Steel Structure Painting Council Standard SSPC-SP-6.

A rust preventative treatment shall be applied.

Conspicuity tape on body as per EQN-127A. Red/white on sides of body and cab,

Alternating Red / Yellow Reflective sheeting shall be mounted diagonally (45 degree angle) on the rear of body as per EQN-120K.

ICC Rear Under ride Protector, hitch and grip strut ladders shall be painted black.

Front lower leading edge of cabinets shall have a minimum 12 inch high aluminum diamond plate for chip resistance.

HITCH:

There shall be a hitch installed, Per EQN-202B, there shall be provisions made to hook up a breakaway cable. The Upper Portion Of Hitch Shall Be Painted With Non-Skid Paint If extending to or outside body perimeter and is likely to be stepped on. Below hardware shall be supplied in truck cab. Hitch and below receiver parts shall not interfere with any part of the bumper or body no matter what configuration on the mounting plate is used.

| | Buyers Products (216-974-888) | Wallace Forge Company (800-328-1203) |
|--|--------------------------------------|---|
| Combo Ball Hitch W/ 2 inch Hard Chrome Ball: | BH8-2000 | 23071911 |
| Pintle Mounting Plate: | PM-87 | 2200170 PADOT |
| Bolt Kit: | 8520 | 2117240 |
| Hitch Pin: | HP6253 WC | HP58412 |

Shovel Storage Basket:

Shovel basket to be constructed with minimum .100 in aluminum pre-punched pan, all edges to have hem and minimum three (3) exterior cross supports for added strength.

Storage basket to be 10 in high x 20 in wide x 96 in long and mounted on top of street side compartment, per attached drawing. REF: EQN - 134

Drawings:

| | | | | |
|-----------|---------|----------|---------|----------------------------------|
| EQN-80A | Revised | 08-02-18 | sheet 1 | WIRING DIAGRAM |
| EQN-115 | Revised | 07-03-12 | sheet 1 | GRILL MOUNTED WARNING LIGHTS |
| EQN-120K | Revised | 06-10-14 | sheet 1 | TYPICAL REFLECTIVE SHEETING |
| EQN-120M | | 09-28-11 | sheet 1 | CREW CAB BODY LIGHTING |
| EQN-120W | Revised | 06-23-14 | sheet 1 | 9' SERVICE BODY WITH ARROW BOARD |
| EQN-127A | Revised | 01-02-09 | sheet 1 | CONSPICUITY TAPE |
| EQN-134 | Revised | 01-11-06 | sheet 1 | SHOVEL BASKET |
| EQN-202B | Revised | 07-27-16 | sheet 1 | HITCH: WEIGHT DISTRIBUTING |
| EQN-171 | | 07-21-16 | sheet 1 | FIRTS AID KIT LOCATION |
| EQN-1083 | | 05-24-18 | sheet 1 | D-RINGS |
| EQN-1089B | | 06-18-18 | sheet 1 | HAZARD WARNING STICKER |

Installation Practices

All lights shall meet all Federal and State regulations.

All wire splices shall be insulated with heat shrink materials or removable connectors that create a water tight connection.

All wires shall be securley fastened with no wires hanging or protruding where they are exposed to the risk of damage.

All junction boxes shall be located inside of the utility body, in a location that will not compromise storage space. For easy accessibility, junctions boxes must not be obstructed in any way.

All electrical connections shall be treated with di-electric grease. All wiring shall be secured using "P" type clamps at intervals not to exceed 12" between securment points.

All wires shall be in a protective covering and protected from chaffing, rubbing and getting pulled or torn from external sources.

Any alterations / relocation to fuel fill, DEF tank, exhaust, Etc. to allow installation of body shall be made in a professional manner using new materials.

Any place steel and aluminum contact each other Mylar or an approved equal shall be used as a buffer.

Laminate rubber is unacceptable. All vertical and horizontal seams of the body sides shall utilize full penetration welds in accordance with standard welding practices as set forth by the American Welding Society and sealed water tight to create one integral body. All corners shall be angled or rounded for safety and all weld splatter removed. All mounting procedures shall be in accordance with NTEA standards.

The use of any of the following items or practices WILL NOT BE ACCEPTED.

Non-steel fittings on hydraulic pressure lines. Excessive use of elbows on hydraulic lines.

Use of thread tape on hydraulic fittings. Use of galvanized fittings or components on hydraulic system. Improper hydraulic line size.

Use of high-pressure hose for hydraulic suction line. Scotchlok-type wire splices.

Non-insulated wire splices. Improper hose or wire routing near exhaust, over-sharp edges or through holes without grommets, or sharp edges.

Improperly prepared, primed and painted surfaces.

Non-fused electric circuits.

Hydraulic circuits without pressure relief protection.

Loose hanging wires that are not secure or are pulled tight so they are suspended with no support.

SPECIFICATION

049700 - Steel Survey Body Upfit For Use With 11K and 17K Chassis

Reference: Stahl, Omaha Standard, or Knapheide, meeting these specifications.

Note: " Refer to PCID 1075 for Delivery and Warranty Requirements".

Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual.

Body Shall Include The Following Equipment:**Body - Installation:**

It shall be the responsibility of the successful vendor to have the survey body mounted on the chassis(s). The installation shall be engineered and approved by the vehicle manufacturer and shall have no adverse affect upon the manufacturer's warranty. When any portion of the complete vehicle is to be installed by anybody other than the bidder or the chassis manufacturer, they shall indicate the name of the sub-contractor performing such installation and the location of their plants. The survey body dimensions shall cover the rear wheels.

Any other applicable changes required to accommodate this type unit is the responsibility of the bidder.

Frame rails shall be prepared by cleaning, priming and final painting.

The body shall be attached to the truck chassis using four (4) U-bolts, or bolt thru, lock nuts, and appropriate shear plates as required to comply with manufacturer's standards.

Body Components:

Minimum height for inside of canopy 60 inches

There shall be a Betts M77V-10-0066, 7 in dome light with switch or Truck-Lite 80354 dome light with switch, mounted in the center inside roof with a Betts 56V-10-0066 switch and boot assembly mounted on the right inside within arms reach.

There shall be glass panels in the rear doors.

Lower glass panels shall be protected with steel mesh or expandable metal.

All doors shall have rubber seals that contact them around their entire perimeter.

There shall be a drip rail above all doors.

Piano hinge is unacceptable.

All door and compartment hinges shall be rod and nylon bushing or stainless steel heavy duty strap hinge with nylon or Teflon bushings and rubber door seals.

All compartments shall be equipped with one Stainless steel bolt on slam latch (rivets on latches are unexceptable). It is the vendors responsibility to make sure all compartment doors seal so if deemed necessary 2 slam latches will be accepted on the long horizontal tool box. All compartments shall be keyed alike, with no two individual completed units having the same keys.

Vertical compartment doors shall have a limiting device, shock type or steel lock strap type. Chain or cable is acceptable on horizontal doors only.

All compartments shall be keyed alike, with no two individual completed units having the same keys.

The heavy-duty rear bumper shall be constructed with a minimum of 1/8 inch reinforced steel. The size and strength shall be in accordance with the truck manufacturer's step design. The platform on top of the bumper shall be Bustin aluminum No. NST4 full size, or Bustin 628 steel, or Ohio Grating or IKG Industries serrated swage lock, with end band. The outer step edge must be serrated in lieu of plain, smooth metal edge. All edges shall be banded (skirting) on the outer perimeter. Overlay is not acceptable.

Two, 2" deep x 10" wide steps hung by 6" long 3/4" diameter cables shall be mounted, one under each side of bumper. Both hung 12" in from edge of bumper, step shall be Bustin steel grip grating.

There shall be a stainless steel grab handle on each rear side of the utility body to assist the operator in entering and exiting the bed area, Non-skid paint or rubber shall be utilized, (non-skid tape is unacceptable). Ref: Non skid paint, Gamma Laboratories (Tel. 304-489-2828.)

All compartment floors shall be covered with yellow DriDek (Tel: 800-348-2398).

Any area likely to be stepped on shall be covered with non-skid paint.

There shall be a total of six galvanized non rusting metal recessed D-ring style swiveling hold downs on the floor of body. One tie down in each corner of the body and the remaining two spaced evenly in the center of the body against the outer edge close to the walls each tied into a crossmember. REF EQN-1083

Construction:

All body parts are to be electrically full welded into one integral body.

For all threaded connections at least two (2) full threads shall be visible beyond the nut.

The fuel tank fill shall be positioned in such a way to ensure the filler nozzle can be set on automatic and nozzle will support itself with unrestricted flow.

Hazardous or Flammable Materials Storage:

There shall be 2 cabinets 1 right front curb side and 1 left front street side capable of storing flammable or hazardous materials such as (gas cans, aerosal cans, chainsaws, oil containers, compressed gas cylinders, paint cans etc.) Also on each of these 2 cabinets a sticker needs placed on the outside of the door referencing that they are capable of storing flammables. REF: EQN-1089B.

Bed Liner:

Center Cargo Area shall have a Linex brand sprayed bed liner no substitutes. Shall cover floor and all sides including door interior. Shall be a minimum of 150 Mils. Thickness. Material shall have No VOCS and be applied utilizing a high pressure spray. D-ring hold downs shall not be sprayed.

Compartment lighting:

Each compartment shall have the Vista Compartment lighting System (Tel: 219-264-0711). The 3/8" LED rope lighting sections shall be mounted on the inside of each compartment door and shall occupy space on the left, top, and right of each compartment. Rope sections shall extend full length of compartment on left and right sides. All compartments lighting shall be controlled by a single illuminated rocker switch mounted within easy reach of the driver.

All wiring shall be secured using "P" type clamps 12" maximum between securment points.

Safety:

Vendor shall supply a first aid kit, that meets requirements of ANSI Z308.1-2015 Class A. The Kit shall in a weather proof steel case and placed in the front compartment on the drivers side with a sticker applied to the outside of the door stating the location of the first aid kit. There shall be a bracket designed to fit underneath the first shelf that the first aid kit will slide into to allow quick access to it. There will also be a first aid sticker placed on the shelf. REF: EQN-171 Drawing. REF: Arbill Industries Inc. 215-501-8450

Exhaust:

All tool boxes above any exhaust tailpipe or within close proximity of muffler, DPF, etc. shall receive a heat shield plate to the box in order to protect it. Exhaust shall be extended to the outer most edge of the installed body.

Mud Flaps:

Mud flaps at rear of rear tires, unmarked, full width of tires, and gusseted.

Length shall be consistent with the unloaded rear axle height, And in accordance with the PA State Inspection Laws.

The Flaps at the rear, of the rear tires, shall be constructed of 0.1406 in (10 gauge) steel, and include a rubber flap using 3 bolts and flat steel backed plates.

Electrical:**Whelen Light Kit Part # PADOTSY5, Kit contains the following lighting.**

1 - R10PADOT Light Bar to be mounted to the driver's side of the bulkhead. In no case shall the light bar be mounted on the roof of the vehicle.

4 - IONAD Amber warning lights grommet mounted 2 will be grill mounted per EQN-115 and 1 on each side of the bed per EQN-120M

4 - IONGROM Grommet mounts for the IONAD light.

2 - M6AD Amber warning lights per EQN - 120M

2 - M6BTTD Stop,Tail, Turn lights per EQN - 120M

2 - M6BUD Back-up lights per EQN - 120M

2 - M6 Series 3 Lamp Black Housing, vertical

10 - W441D Harness side mating Deutsch connectors.

The above lights are supplied with male and female Deutsch connectors that shall be utilized to connect the vendor supplied harness to each light source.

1 - Pioneer Tripod pedestal flood light with coiled cord and plug to be supplied in the cab. Work Light receptacle shall be wired and mounted in the rear of the truck and one receptacle on the left front of the body. Work light receptacles shall have a constant 12 volt power supply, circuit to be properly protected and have a chassis ground. Remote mounting location to be determined at pilot inspection.

Body builder to supply remaining marker and ICC lighting, they shall be protected against damage and shall also be shock mounted.

Connections shall be water tight. All Body lighting shall be LED.

All Amber Warning lights and Light bar shall be on a single lighted, permanently labeled toggle switch located in the dash.

License plate lighting shall specifically be a Truck light 36 series PN# 36140C LED lamp with light bracket PN#36710

Body wiring shall be Grote, Trucklite, or Prior Approved Equal.

There shall be no splices outside of a sealed box or fixture.

There shall be a seven-way trailer (Pin Type) receptacle mounted on rear filled with dielectric grease. Per EQN - 80A

A color-coded electrical wiring chart and schematic shall accompany each body.

All wires shall be in a protective covering. Any loose hanging wires are unacceptable.

Paint:

Body priming and painting to ensure full coverage to all areas of the body

Color of the body, including inside and outside of compartments, and the bed, shall be cab manufacturer's standard safety or school bus yellow, or optional PennDOT yellow DuPont 6808 for shade. (Powder Coat, if available from factory.) **It will be the responsibility of the successful vendor to ensure color of the body matches the cab.**

All metal surfaces to be painted shall be cleaned and prepared by abrasive blasting to 1-1/2 mil profile in accordance with Steel Structure Painting Council Standard SSPC-SP-6.

A rust preventative treatment shall be applied.

Conspicuity tape on body as per EQN-127A. Red/white on sides of body and cab,

Alternating Red / Yellow Reflective sheeting shall be mounted diagonally (45 degree angle) on the rear of body as per EQN-120K.

ICC Rear Under ride Protector, hitch and grip strut ladders shall be painted black.

Front lower leading edge of cabinets shall have a minimum 12 inch high aluminum diamond plate for chip resistance.

Hitch:

There shall be a hitch installed, Per EQN-202B, there shall be provisions made to hook up a breakaway cable. The Upper Portion Of Hitch Shall Be Painted With Non-Skid Paint If extending to or outside body perimeter and is likely to be stepped on. Below hardware shall be supplied in truck cab. Hitch and below receiver parts shall not interfere with any part of the bumper or body no matter what configuration on the mounting plate is used.

| | Buyers Products (216-974-888) | Wallace Forge Company (800-328-1203) |
|--|--------------------------------------|---|
| Combo Ball Hitch W/ 2 inch Hard Chrome Ball: | BH8-2000 | 23071911 |
| Pintle Mounting Plate: | PM-87 | 2200170 PADOT |
| Bolt Kit: | 8520 | 2117240 |
| Hitch Pin: | HP6253 WC | HP58412 |

Drawings:

| | | | | |
|-----------|---------|----------|---------|-----------------------------|
| EQN-80A | Revised | 08-02-18 | sheet 1 | WIRING DIAGRAM |
| EQN-120K | Revised | 06-10-14 | sheet 1 | TYPICAL REFLECTIVE SHEETING |
| EQN-120M | | 09-28-11 | sheet 1 | CREW CAB BODY LIGHTING |
| EQN-127A | Revised | 01-02-09 | sheet 1 | CONSPICUITY TAPE |
| EQN-1096 | | 07-16-18 | sheet 1 | SURVEY BODY DRAWING |
| EQN-202B | Revised | 07-27-16 | sheet 1 | HITCH: WEIGHT DISTRIBUTING |
| EQN-171 | | 07-21-16 | sheet 1 | FIRST AID KIT LOCATION |
| EQN-1083 | | 05-24-18 | sheet 1 | D-RINGS |
| EQN-1089B | | 06-18-18 | sheet 1 | HAZARD WARNING STICKER |

Installation Practices

All lights shall meet all Federal and State regulations.

All wire splices shall be insulated with heat shrink materials or removable connectors that create a water tight connection.

All wires shall be securely fastened with no wires hanging or protruding where they are exposed to the risk of damage.

All junction boxes shall be located inside of the utility body, in a location that will not compromise storage space. For easy accessibility, junction boxes must not be obstructed in any way.

All electrical connections shall be treated with di-electric grease. All wiring shall be secured using "P" type clamps at intervals not to exceed 12" between securement points.

All wires shall be in a protective covering and protected from chaffing, rubbing and getting pulled or torn from external sources.

Any alterations / relocation to fuel fill, DEF tank, exhaust, Etc. to allow installation of body shall be made in a professional manner using new materials.

Any place steel and aluminum contact each other Mylar or an approved equal shall be used as a buffer.

Laminate rubber is unacceptable. All vertical and horizontal seams of the body sides shall utilize full penetration welds in accordance with standard welding practices as set forth by the American Welding Society and sealed water tight to create one integral body. All corners shall be angled or rounded for safety and all weld splatter removed. All mounting procedures shall be in accordance with NTEA standards.

The use of any of the following items or practices WILL NOT BE ACCEPTED.

Non-steel fittings on hydraulic pressure lines.

Excessive use of elbows on hydraulic lines.

Use of thread tape on hydraulic fittings.

Use of galvanized fittings or components on hydraulic system.

Improper hydraulic line size.

Use of high-pressure hose for hydraulic suction line.

Scotchlok-type wire splices.

Non-insulated wire splices.

Improper hose or wire routing near exhaust, over-sharp edges or through holes without grommets, or sharp edges.

Improperly prepared, primed and painted surfaces.

Non-fused electric circuits.

Hydraulic circuits without pressure relief protection.

| | |
|---|-------------|
| | Page 1 of 3 |
| SPECIFICATION | |
| <u>050400 - Foreman Body Upfit For Use With 11K and 17K Chassis, Full Standard Doors</u> | |
| Reference: Crest FBP9D, Warner, Stahl HD96T-09, Knapheide PVMXT-93C or Approved Equal. | |
| Note: " Refer to PCID 1075 for <u>Delivery</u> and <u>Warranty</u> Requirements". | |
| Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual. | |
| Body Shall Include The Following Equipment: | |
| <p>Body - Installation: It shall be the responsibility of the successful vendor to have the foreman body mounted on the chassis(s). The installation shall be engineered and approved by the vehicle manufacturer and shall have no adverse affect upon the manufacturer's warranty. When any portion of the complete vehicle is to be installed by anybody other than the bidder or the chassis manufacturer, they shall indicate the name of the sub-contractor performing such installation and the location of their plants. The foreman body dimensions shall cover the rear wheels. Any other applicable changes required to accommodate this type unit is the responsibility of the bidder. The body shall have a front mounted bulkhead and shall be a minimum 14 gauge steel with punched or expandable metal area in alignment with the cab rear window. It shall be constructed of sufficient strength to eliminate damage to the rear of the cab. The bulkhead shall not interfere with the visibility of the third brake light. Proposed bulkhead shall be reviewed for acceptance prior to pilot model inspection by the Equipment Division. The bulkhead shall have a forward extension mounted to the driver's side, of sufficient size to support the base of the warning light and this extension shall have a gusset. Frame rails shall be prepared by cleaning, priming and final painting. The body shall be attached to the truck chassis using four (4) U-bolts, or bolt thru, lock nuts, and appropriate shear plates as required to comply with manufacturer's standards.</p> | |
| <p>Body Components: Shall have three (3) compartments on curb side and (4) compartments on road side. COMPARTMENTS SHALL BE 15" DEEP. The front curbside compartment shall have two (2) adjustable shelves. The top road side compartments shall have one (1) adjustable shelf each. There shall be a drip rail above all doors. The top left and right area's of the forman's body shall be covered with aluminum diamond deck (unpainted), and sealed all around. Piano hinge is unacceptable. All door and compartment hinges shall be cadium plated rod with zinc cast hinge block and nylon bushing or stainless steel heavy duty strap hinge with nylon or Teflon bushings and automotive type rubber door seals. Vertical compartment doors shall have a limiting device, shock type or steel lock strap type. Horizontal compartment doors shall have a removable limiting device, steel lock strap type. Horizontal compartment doors shall open down with hinge on bottom of the door and one latch at the top of the door. Rubber bumpers shall be placed on the body to hit all horizontally opening doors that open downward to keep them from damage. All compartments shall be equipped with one Stainless steel bolt on slam latch (rivits on latches are unacceptable). It is the vendors responsibility to make sure all compartment doors seal so if deemed necessary 2 slam latches will be accepted on the long horizontal tool box. All compartments shall be keyed alike, with no two individual completed units having the same keys. The heavy-duty rear bumper shall be constructed with a minimum of 1/8 inch reinforced steel. The size and strength shall be in accordance with the truck manufacturer's step design. The platform on top of the bumper shall be Bustin aluminum No. NST4 full size, or Bustin 628 steel, or Ohio Grating or IKG Industries serrated swage lock, with end band. The outer step edge must be serrated in lieu of plain, smooth metal edge. All edges shall be banded (skirting) on the outer perimeter. Overlay is not acceptable. Two, 2" deep x 10" wide steps hung by 6" long 3/4" diameter cables shall be mounted, one under each side of bumper. Both hung 12" in from edge of bumper, step shall be Bustin steel grip grating. A 12" non-slip grab handle on top of each cabinet at rear shall also be provided to assist operators when climbing into rear of body. (anti-slip tape is unacceptable) There shall be a stainless steel grab handle on each rear side of the utility body to assist the operator in entering and exiting the bed area, Non-skid paint or rubber shall be utilized, (non-skid tape is unacceptable). Ref: Non skid paint, Gamma Laboratories (Tel. 304-489-2828.) All compartment floors shall be covered with yellow DriDek (Tel: 800-348-2398) Any area likely to be stepped on shall be covered with non-skid paint. There shall be a total of six galvanized non rusting metal recessed D-ring style swiveling hold downs on the floor of body. One tie down in each corner of the body and the remaining two spaced evenly in the center of the body against the outer edge close to the walls each tied into a crossmember. REF EQN-1083</p> | |
| <p>Hazardous or Flammable Materials Storage: There shall be 2 curbside cabinets 1 right front and 1 top center capable of storing flammable or hazardous materials such as (gas cans, aerosal cans, chainsaws, oil containers, compressed gas cylinders, paint cans etc.) Also on each of these 2 cabinets a sticker needs placed on the outside of the door referencing that they are capable of storing flammables. REF: EQN-1089B</p> | |
| <p>Compartment lighting: Each compartment shall have the Vista Compartment lighting System (Tel: 219-264-0711). The 3/8" LED rope lighting sections shall be mounted on the inside of each compartment door and shall occupy space on the left, top, and right of each compartment. Rope sections shall extend full lenght of compartment on left and right sides. All compartments lighting shall be controlled by a single illuminated rocker switch mounted within easy reach of the driver. All wiring shall be secured using "P" type clamps 12" maximum between securment.</p> | |
| <p>Construction: All body parts are to be electrically full welded into one integral body. For all threaded connections at least two (2) full threads shall be visible beyond the nut. The fuel tank fill shall be positioned in such a way to ensure the filler nozzle can be set on automatic and nozzle will support itself with unrestricted flow.</p> | |
| <p>Exhaust: All tool boxes above any exhaust tailpipe or within close proximity of muffler, DPF, etc. shall receive a heat shield plate to the box in order to protect it. Exhaust shall be extended to the outer most edge of the installed body.</p> | |

Mud Flaps:

Mud flaps front and rear of rear tires, unmarked, full width of tires, and gusseted.
 Length shall be consistent with the unloaded rear axle height, And in accordance with the PA State Inspection Laws.
 The Flaps in front of the rear tires shall be constructed of 0.1406 in (10 gauge) steel.
 The Flaps at the rear, of the rear tires, shall be constructed of 0.1406 in (10 gauge) steel, and include a rubber flap using 3 bolts and flat steel backed plates.

Electrical:**Whelen Light Kit Part # PADOTSY5, Kit contains the following lighting.**

1 - R10PADOT Light Bar to be mounted to the driver's side of the bulkhead. In no case shall the light bar be mounted on the roof of the vehicle.
 4 - IONAD Amber warning lights grommet mounted 2 will be grill mounted per EQN-115 and 1 on each side of the bed per EQN-120M
 4 - IONGROM Grommet mounts for the IONAD light.
 2 - M6AD Amber warning lights per EQN - 120M
 2 - M6BTDD Stop,Tail, Turn lights per EQN - 120M
 2 - M6BUD Back-up lights per EQN - 120M
 2 - M6 Series 3 Lamp Black Housing, vertical
 10 - W441D Harness side mating Deutch connectors.
 The above lights are supplied with male and female Deutsch connectors that shall be utilized to connect the vendor supplied harness to each light source.
 1 - Pioneer Tripod pedestal flood light with coiled cord and plug to be supplied in the cab. Work Light receptacle shall be wired and mounted in the rear of the truck and one receptacle on the left front of the body. Work light receptacles shall have a constant 12 volt power supply, circuit to be properly protected and have a chassis ground. Remote mounting location to be determined at pilot inspection.
 Body builder to supply remaining marker and ICC lighting, they shall be protected against damage and shall also be shock mounted.
 Connections shall be water tight. All Body lighting shall be LED.
 All Amber Warning lights and Light bar shall be on a single lighted, permanently labeled toggle switch located in the dash.
 License plate lighting shall specifically be a Truck light 36 series PN# 36140C LED lamp with light bracket PN#36710
 Body wiring shall be Grote, Trucklite, or Prior Approved Equal.
 There shall be no splices outside of a sealed box or fixture.
 There shall be a seven-way trailer (Pin Type) receptacle mounted on rear filled with dielectric grease. Per EQN - 80A
 A color-coded electrical wiring chart and schematic shall accompany each body.
 All wires shall be in a protective covering. Any loose hanging wires are unacceptable.

Front bulk head mounted LED Arrow board: A Traffcon Bulkhead power tilt Rack shall be used to support a Trafcon MB3-15 PLWA wireless remote, power tilt arrow board. Rack and board shall be mounted high enough to ensure the beacon light is not hidden or its view is obstructed in any way. Beacon light mounting shall be moved to the center of the bulk head verses the drivers side when mounted with out an arrow board. REF EQN-120W. It shall be the awarded vendor's responsibility to ensure that electrical "draws" do not exceed manufacturer's specifications in order to avoid excessive battery drain when the unit is parked.

Bed Liner:

Center Cargo Area shall have a Linex brand sprayed bed liner no substitutes. Shall cover floor and all sides including tailgate interior. Shall be a minimum of 150 Mils. Thickness. Material shall have No VOCS and be applied utilizing a high pressure spray. D-ring hold downs shall not be sprayed.

Safety:

Vendor shall supply a first aid kit, that meets requirements of ANSI Z308.1-2015 Class A. The Kit shall in a weather proof steel case and placed in the front compartment on the drivers side with a sticker applied to the outside of the door stating the location of the first aid kit. There shall be a bracket designed to fit underneath the first shelf that the first aid kit will slide into to allow quick access to it. There will also be a first aid sticker placed on the shelf. REF: EQN-171 Drawing. REF: Arbill Industries Inc 215-501-8450

Paint:

Body priming and painting to ensure full coverage to all areas of the body
 Color of the body, including inside and outside of compartments, and the bed, shall be cab manufacturer's standard safety or school bus yellow, or optional PennDOT yellow DuPont F9885 for shade. (Powder Coat, if available from factory.) **It will be the responsibility of the successful vendor to ensure color of the body matches the cab.**
 All metal surfaces to be painted shall be cleaned and prepared by abrasive blasting to 1-1/2 mil profile in accordance with Steel Structure Painting Council Standard SSPC-SP-6.
 A rust preventative treatment shall be applied.
 Conspicuity tape on body as per EQN-127A. Red/white on sides of body and cab,
Alternating Red / Yellow Reflective sheeting shall be mounted diagonally (45 degree angle) on the rear of body as per EQN-120K.
 ICC Rear Under ride Protector, hitch and grip strut ladders shall be painted black.
 Front lower leading edge of cabinets shall have a minimum 12 inch high aluminum diamond plate for chip resistance.

HITCH:

There shall be a hitch installed, Per EQN-202B, there shall be provisions made to hook up a breakaway cable. The Upper Portion Of Hitch Shall Be Painted With Non-Skid Paint If extending to or outside body perimeter and is likely to be stepped on. Below hardware shall be supplied in truck cab. Hitch and below receiver parts shall not interfere with any part of the bumper or body no matter what configuration on the mounting plate is used.

| | Buyers Products (216-974-888) | Wallace Forge Company (800-328-1203) |
|--|--------------------------------------|---|
| Combo Ball Hitch W/ 2 inch Hard Chrome Ball: | BH8-2000 | 23071911 |
| Pintle Mounting Plate: | PM-87 | 2200170 PADOT |
| Bolt Kit: | 8520 | 2117240 |
| Hitch Pin: | HP6253 WC | HP58412 |

Body Specifications:

| | |
|--------------------------------|---|
| Length (O.D.): | 112.4" |
| Length (I.D.): | 110" |
| Width (O.D.): | 95" |
| Cargo area floor width (I.D.): | 64" |
| Floor Construction: | 12 Gauge steel deck-plate floor |
| Side and end rails: | 5 3/4" Formed steel side and end rails with square corners |
| Long sills: | 6", 8.2# structural steel channel long sills gusseted to every cross member |
| Cross members: | 5 3/4" high formed steel cross members on 18" centers |
| Tailgate: | 15" hinged steel tailgate with rubber coated chain retainers |
| Toolbox construction: | 14-gauge 2-sided; A40 galvanized steel with rotary slam action latches with keyed alike lock cylinders and compartment weather-proofing (Piano hinge is NOT ACCEPTABLE) |
| Curbside toolboxes: | 80.38" L x 23" H x 15.25" D (CSR) 32" L x 46" H x 15 1/4" D (CSF) |
| Roadside toolboxes: | 32" L x 18" H x 15.25 D (CSRU) 55.97" L x 23" H x 15.25" D (RSR) 56.41" L x 23" H x 15.25 D (RSM) 32" L x 18" H x 15.25 D (RSFU) 32" L x 18" H x 15.25 D (RSRU) |
| Bulkhead: | Special tapered bulkhead 10 gauge punched. Bottom half on bulkhead 18" high full width of cargo area bulkhead. Top half shall be 19" high with tapered sides. |
| Possum belly compartment: | Full length possum belly located between long sills to include lockable-hinged access door. |
| Splash shields: | Steel splash shields in front of rear wheels. |

Shovel Storage Basket:

Shovel basket to be constructed with minimum .100 in aluminum pre-punched pan, all edges to have hem and minimum three (3) exterior cross supports for added strength.
Storage basket to be 10 in high x 20 in wide x 96 in long and mounted on top of street side compartment, per attached drawing. REF: EQN - 134

Drawings:

| | | | | |
|-----------|---------|----------|---------|----------------------------------|
| EQN-80A | Revised | 08-02-18 | sheet 1 | WIRING DIAGRAM |
| EQN-115 | Revised | 07-03-12 | sheet 1 | GRILL MOUNTED WARNING LIGHTS |
| EQN-120K | Revised | 06-10-14 | sheet 1 | TYPICAL REFLECTIVE SHEETING |
| EQN-120M | | 09-28-11 | sheet 1 | CREW CAB BODY LIGHTING |
| EQN-120H | Revised | 08-26-14 | sheet 1 | 9' FORMANS BODY WITH ARROW BOARD |
| EQN-127A | Revised | 01-02-09 | sheet 1 | CONSPICUITY TAPE |
| EQN-134 | Revised | 01-11-06 | sheet 1 | SHOVEL BASKET |
| EQN-202B | Revised | 07-27-16 | sheet 1 | HITCH: WEIGHT DISTRIBUTING |
| EQN-171 | | 07-21-16 | sheet 1 | FIRST AID KIT LOCATION |
| EQN-1083 | | 05-24-18 | sheet 1 | D-RINGS |
| EQN-1089B | | 06-18-18 | sheet 1 | HAZARD WARNING STICKER |

Installation Practices

All lights shall meet all Federal and State regulations.
All wire splices shall be insulated with heat shrink materials or removable connectors that create a water tight connection.
All wires shall be securely fastened with no wires hanging or protruding where they are exposed to the risk of damage.
All junction boxes shall be located inside of the utility body, in a location that will not compromise storage space. For easy accessibility, junction boxes must not be obstructed in any way.
All electrical connections shall be treated with di-electric grease. All wiring shall be secured using "P" type clamps at intervals not to exceed 12" between securment points.
All wires shall be in a protective covering and protected from chaffing, rubbing and getting pulled or torn from external sources.
Any alterations / relocation to fuel fill, DEF tank, exhaust, Etc. to allow installation of body shall be made in a professional manner using new materials.
Any place steel and aluminum contact each other Mylar or an approved equal shall be used as a buffer.
Laminate rubber is unacceptable. All vertical and horizontal seams of the body sides shall utilize full penetration welds in accordance with standard welding practices as set forth by the American Welding Society and sealed water tight to create one integral body. All corners shall be angled or rounded for safety and all weld splatter removed. All mounting procedures shall be in accordance with NTEA standards.

The use of any of the following items or practices WILL NOT BE ACCEPTED.

Non-steel fittings on hydraulic pressure lines.
Excessive use of elbows on hydraulic lines.
Use of thread tape on hydraulic fittings.
Use of galvanized fittings or components on hydraulic system.
Improper hydraulic line size.
Use of high-pressure hose for hydraulic suction line.
Scotchlok-type wire splices.
Non-insulated wire splices.
Improper hose or wire routing near exhaust, over-sharp edges or through holes without grommets, or sharp edges.
Improperly prepared, primed and painted surfaces.
Non-fused electric circuits.
Hydraulic circuits without pressure relief protection.
Loose hanging wires that are not secure or are pulled tight so they are suspended with no support.

SPECIFICATION

050401 - Foreman Body Upfit For Use With 11K and 17K Chassis Split horizontal door configuration

Reference: Warner, Knapheide or Approved Equal.

Note: " Refer to PCID 1075 for Delivery and Warranty Requirements".

Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual.

Body Shall Include The Following Equipment:

Body - Installation:

It shall be the responsibility of the successful vendor to have the foreman body mounted on the chassis(s). The installation shall be engineered and approved by the vehicle manufacturer and shall have no adverse affect upon the manufacturer's warranty. When any portion of the complete vehicle is to be installed by anybody other than the bidder or the chassis manufacturer, they shall indicate the name of the sub-contractor performing such installation and the location of their plants. The foreman body dimensions shall cover the rear wheels.

Any other applicable changes required to accommodate this type unit is the responsibility of the bidder.

The body shall have a front mounted bulkhead and shall be a minimum 14 gauge steel with punched or expandable metal area in alignment with the cab rear window. It shall be constructed of sufficient strength to eliminate damage to the rear of the cab. The bulkhead shall not interfere with the visibility of the third brake light.

Proposed bulkhead shall be reviewed for acceptance prior to pilot model inspection by the Equipment Division. The bulkhead shall have a forward extension mounted to the driver's side, of sufficient size to support the base of the warning light and this extension shall have a gusset.

Frame rails shall be prepared by cleaning, priming and final painting.

The body shall be attached to the truck chassis using four (4) U-bolts, or bolt thru, lock nuts, and appropriate shear plates as required to comply with manufacturer's standards.

Body Components:

Shall have three (3) compartments on curb side and three (4) compartments on road side. COMPARTMENTS SHALL BE 15" DEEP.

The front curbside compartment shall have two (2) adjustable shelves.

The top road side compartments shall have one (1) adjustable shelf each.

There shall be a drip rail above all doors.

The top left and right area's of the forman's body shall be covered with aluminum diamond deck (unpainted), and sealed all around.

Piano hinge is unacceptable.

All door and compartment hinges shall be cadium plated rod with zinc cast hinge block and nylon bushing or stainless steel heavy duty strap hinge with nylon or Teflon bushings and automotive type rubber door seals.

Vertical compartment doors shall have a limiting device, shock type or steel lock strap type.

Horizontal compartment doors that open up shall utilize a gas shock to assure door stays in open position, min 135° opening angle.

Horizontal compartment doors that open down shall have a removable limiting device, steel lock strap type.

Rubber bumpers shall be placed on the body to stop all horizontally opening doors that open downward to keep them from damage.

Each compartment shall be equipped with one stainless steel bolt on latch, Rivit on latches are unexceptable.

All compartments shall be keyed alike, with no two individual completed units having the same keys.

Each unit shall have an step bumper made from minimum 1/8" reinforced steel and equipped with bustin steel grip graiting, minimum step surface 9" x 27" (ref:Knaphide used 94J Bustin Steel bar bumper). The platform on top of the bumper shall be Bustin aluminum No. NST4 full size, or Bustin 628 steel, or Ohio Grating or IKG Industries serrated swage lock, with end band. The outer step edge must be serrated in lieu of plain, smooth metal edge. All edges shall be banded (skirting) on the outer perimeter. Overlay is not acceptable.

Two, 2" deep x 10" wide steps hung by 6" long 3/4" diameter cables shall be mounted, one under each side of bumper. Both hung 12" in from edge of bumper, step shall be Bustin steel grip grating.

A 12" non-slip grab handle on top of each cabinet at rear shall also be provided to assist operators when climbing into rear of body. (anti-slip tape is unacceptable)

There shall be a stainless steel grab handle on each rear side of the utility body to assist the operator in entering and exiting the bed area, Non-skid paint or rubber shall be utilized, (non-skid tape is unacceptable). Ref: Non skid paint, Gamma Laboratories (Tel. 304-489-2828.)

All compartment floors shall be covered with yellow DriDek (Tel: 800-348-2398).

Any area likely to be stepped on shall be covered with non-skid paint.

There shall be a total of six galvanized non rusting metal recessed D-ring style swiveling hold downs on the floor of body. One tie down in each corner of the body and the remaining two spaced evenly in the center of the body against the outer edge close to the walls each tied into a crossmember. REF EQN-1083

Hazardous or Flammable Materials Storage:

There shall be 2 curbside cabinets 1 right front and 1 top center capable of storing flammable or hazardous materials such as (gas cans, aerosal cans, chainsaws, oil containers, compressed gas cylinders, paint cans etc.) Also on each of these 2 cabinets a sticker needs placed on the outside of the door referencing that they are capable of storing flammables. REF: EQN-1089B

Compartment lighting:

Each compartment shall have the Vista Compartment lighting System (Tel: 219-264-0711). The 3/8" LED rope lighting sections shall be mounted on the inside of each compartment door and shall occupy space on the left, top, and right of each compartment. Rope sections shall extend full lenght of compartment on left and right sides. All compartments lighting shall be controlled by a single illuminated rocker switch mounted within easy reach of the driver. All wiring shall be secured using "P" type clamps 12" maximum between securment points.

Construction:

All body parts are to be electrically full welded into one integral body.

For all threaded connections at least two (2) full threads shall be visible beyond the nut.

The fuel tank fill shall be positioned in such a way to ensure the filler nozzle can be set on automatic and nozzle will support itself with unrestricted flow.

Exhaust:

All tool boxes above any exhaust tailpipe or within close proximity of muffler, DPF, etc. shall receive a heat shield plate to the box in order to protect it. Exhaust shall be extended to the outer most edge of the installed body.

Mud Flaps:

Mud flaps front and rear of rear tires, unmarked, full width of tires, and gusseted.

Length shall be consistent with the unloaded rear axle height, And in accordance with the PA State Inspection Laws.

The Flaps in front of the rear tires shall be constructed of 0.1406 in (10 gauge) steel.

The Flaps at the rear, of the rear tires, shall be constructed of 0.1406 in (10 gauge) steel, and include a rubber flap using 3 bolts and flat steel backed plates.

Electrical:**Whelen Light Kit Part # PADOTSY5, Kit contains the following lighting.**

1 - R10PADOT Light Bar to be mounted to the driver's side of the bulkhead. In no case shall the light bar be mounted on the roof of the vehicle.

4 - IONAD Amber warning lights grommet mounted 2 will be grill mounted per EQN-115 and 1 on each side of the bed per EQN-120M

4 - IONGROM Grommet mounts for the IONAD light.

2 - M6AD Amber warning lights per EQN - 120M

2 - M6BTTD Stop, Tail, Turn lights per EQN - 120M

2 - M6BUD Back-up lights per EQN - 120M

2 - M6 Series 3 Lamp Black Housing, vertical

10 - W441D Harness side mating Deutsch connectors.

The above lights are supplied with male and female Deutsch connectors that shall be utilized to connect the vendor supplied harness to each light source.

1 - Pioneer Tripod pedestal flood light with coiled cord and plug to be supplied in the cab. Work Light receptacle shall be wired and mounted in the rear of the truck and one receptacle on the left front of the body. Work light receptacles shall have a constant 12 volt power supply, circuit to be properly protected and have a chassis ground. Remote mounting location to be determined at pilot inspection.

Body builder to supply remaining marker and ICC lighting, they shall be protected against damage and shall also be shock mounted.

Connections shall be water tight. All Body lighting shall be LED.

All Amber Warning lights and Light bar shall be on a single lighted, permanently labeled toggle switch located in the dash.

License plate lighting shall specifically be a Truck light 36 series PN# 36140C LED lamp with light bracket PN#36710

Body wiring shall be Grote, Trucklite, or Prior Approved Equal.

There shall be no splices outside of a sealed box or fixture.

There shall be a seven-way trailer (Pin Type) receptacle mounted on rear filled with dielectric grease. Per EQN - 80A

A color-coded electrical wiring chart and schematic shall accompany each body.

All wires shall be in a protective covering. Any loose hanging wires are unacceptable.

Front bulk head mounted LED Arrow board: A Traffcon Bulkhead power tilt Rack shall be used to support a Trafcon MB3-15 PLWA wireless remote, power tilt arrow board. Rack and board shall be mounted high enough to ensure the beacon light is not hidden or its view is obstructed in any way. Beacon light mounting shall be moved to the center of the bulk head verses the drivers side when mounted with out an arrow board. REF EQN-120W. It shall be the awarded vendor's responsibility to ensure that electrical "draws" do not exceed manufacturer's specifications in order to avoid excessive battery drain when the unit is parked.

Bed Liner:

Center Cargo Area shall have a Linex brand sprayed bed liner no substitutes. Shall cover floor and all sides including tailgate interior. Shall be a minimum of 150 Mils. Thickness. Material shall have No VOCs and be applied utilizing a high pressure spray. D-ring hold downs shall not be sprayed.

Safety:

Vendor shall supply a first aid kit, that meets requirements of ANSI Z308.1-2015 Class A. The Kit shall in a weather proof steel case and placed in the front compartment on the drivers side with a sticker applied to the outside of the door stating the location of the first aid kit. There shall be a bracket designed to fit underneath the first shelf that the first aid kit will slide into to allow quick access to it. There will also be a first aid sticker placed on the shelf. REF: EQN-171 Drawing. REF: Arbill Industries Inc. 215-501-8450

Paint:

Body priming and painting to ensure full coverage to all areas of the body

Color of the body, including inside and outside of compartments, and the bed, shall be cab manufacturer's standard safety or school bus yellow, or optional PennDOT yellow DuPont F9885 for shade. (Powder Coat, if available from factory.) **It will be the responsibility of the successful vendor to ensure color of the body matches the cab.**

All metal surfaces to be painted shall be cleaned and prepared by abrasive blasting to 1-1/2 mil profile in accordance with Steel Structure Painting Council Standard SSPC-SP-6.

A rust preventative treatment shall be applied.

Conspicuity tape on body as per EQN-127A. Red/white on sides of body and cab,

Alternating Red / Yellow Reflective sheeting shall be mounted diagonally (45 degree angle) on the rear of body as per EQN-120K.

ICC Rear Under ride Protector, hitch and grip strut ladders shall be painted black.

Front lower leading edge of cabinets shall have a minimum 12 inch high aluminum diamond plate for chip resistance.

HITCH:

There shall be a hitch installed, Per EQN-202B, there shall be provisions made to hook up a breakaway cable. The Upper Portion Of Hitch Shall Be Painted With Non-Skid Paint If extending to or outside body perimeter and is likely to be stepped on. Below hardware shall be supplied in truck cab. Hitch and below receiver parts shall not interfere with any part of the bumper or body no matter what configuration on the mounting plate is used.

| | Buyers Products (216-974-888) | Wallace Forge Company (800-328-1203) |
|--|--------------------------------------|---|
| Combo Ball Hitch W/ 2 inch Hard Chrome Ball: | BH8-2000 | 23071911 |
| Pintle Mounting Plate: | PM-87 | 2200170 PADOT |
| Bolt Kit: | 8520 | 2117240 |
| Hitch Pin: | HP6253 WC | HP58412 |

Body Specifications:

| | |
|--------------------------------|---|
| Length (O.D.): | 112.4" |
| Length (I.D.): | 110" |
| Width (O.D.): | 95" |
| Cargo area floor width (I.D.): | 64" |
| Floor Construction: | 12 Gauge steel deck-plate floor |
| Side and end rails: | 5 3/4" Formed steel side and end rails with square corners |
| Long sills: | 6", 8.2# structural steel channel long sills gusseted to every cross member |
| Cross members: | 5 3/4" high formed steel cross members on 18" centers |
| Tailgate: | 15" hinged steel tailgate with rubber coated chain retainers |
| Toolbox construction: | 14-gauge 2-sided; A40 galvanized steel with rotary slam action latches with keyed alike lock cylinders and compartment weather-proofing (Piano hinge is NOT ACCEPTABLE) |
| Curbside toolboxes: | 80.38" L x 23" H x 15.25" D (CSR) 32" L x 46" H x 15 1/4" D (CSF) Horizontal box to have 1 latch handle and (2) latch catch points per door |
| Roadside toolboxes: | 32" L x 18" H x 15.25 D (CSRU) 55.97" L x 23" H x 15.25" D (RSR) 56.41" L x 23" H x 15.25 D (RSF) 32" L x 18" H x 15.25 D (RSFU) 32" L x 18" H x 15.25 D (RSRU) |
| Bulkhead: | All horizontally opening doors shall utilize two doors, one folding up and one folding down. Special tapered bulkhead 10 gauge punched. Bottom half on bulkhead 18" high full width of cargo area bulkhead. Top half shall be 19" high with tapered sides. |
| Possum belly compartment: | Full length possum belly located between long sills to include lockable-hinged access door. |
| Splash shields: | Steel splash shields in front of rear wheels. |

Shovel Storage Basket:

Shovel basket to be constructed with minimum .100 in aluminum pre-punched pan, all edges to have hem and minimum three (3) exterior cross supports for added strength.

Storage basket to be 10 in high x 20 in wide x 96 in long and mounted on top of street side compartment, per attached drawing. REF: EQN - 134

Drawings:

| | | | | |
|-----------|---------|----------|---------|------------------------------|
| EQN-80A | Revised | 08-02-18 | sheet 1 | WIRING DIAGRAM |
| EQN-115 | Revised | 07-03-12 | sheet 1 | GRILL MOUNTED WARNING LIGHTS |
| EQN-120HS | Revised | 08-26-14 | sheet 1 | FORMAN BODY |
| EQN-120K | Revised | 06-10-14 | sheet 1 | TYPICAL REFLECTIVE SHEETING |
| EQN-120M | | 09-28-11 | sheet 1 | CREW CAB BODY LIGHTING |
| EQN-127A | Revised | 01-02-09 | sheet 1 | CONSPICUITY TAPE |
| EQN-134 | Revised | 01-11-06 | sheet 1 | SHOVEL BASKET |
| EQN-202B | Revised | 07-27-16 | sheet 1 | HITCH: WEIGHT DISTRIBUTING |
| EQN-171 | | 07-21-16 | sheet 1 | FIRST AID KIT LOCATION |
| EQN-1083 | | 05-24-18 | sheet 1 | D-RINGS |
| EQN-1089B | | 06-18-18 | sheet 1 | HAZARD WARNING STICKER |

Installation Practices

All lights shall meet all Federal and State regulations.

All wire splices shall be insulated with heat shrink materials or removable connectors that create a water tight connection.

All wires shall be securely fastened with no wires hanging or protruding where they are exposed to the risk of damage.

All junction boxes shall be located inside of the utility body, in a location that will not compromise storage space. For easy accessibility, junction boxes must not be obstructed in any way.

All electrical connections shall be treated with di-electric grease. All wiring shall be secured using "P" type clamps at intervals not to exceed 12" between securement points.

All wires shall be in a protective covering and protected from chaffing, rubbing and getting pulled or torn from external sources.

Any alterations / relocation to fuel fill, DEF tank, exhaust, Etc. to allow installation of body shall be made in a professional manner using new materials.

Any place steel and aluminum contact each other Mylar or an approved equal shall be used as a buffer.

Laminate rubber is unacceptable. All vertical and horizontal seams of the body sides shall utilize full penetration welds in accordance with standard welding practices as set forth by the American Welding Society and sealed water tight to create one integral body. All corners shall be angled or rounded for safety and all weld splatter removed. All mounting procedures shall be in accordance with NTEA standards.

The use of any of the following items or practices WILL NOT BE ACCEPTED.

Non-steel fittings on hydraulic pressure lines.

Excessive use of elbows on hydraulic lines.

Use of thread tape on hydraulic fittings.

Use of galvanized fittings or components on hydraulic system.

Improper hydraulic line size.

Use of high-pressure hose for hydraulic suction line.

Scotchlok-type wire splices.

Non-insulated wire splices.

Improper hose or wire routing near exhaust, over-sharp edges or through holes without grommets, or sharp edges.

Improperly prepared, primed and painted surfaces.

Non-fused electric circuits.

Hydraulic circuits without pressure relief protection.

Loose hanging wires that are not secure or are pulled tight so they are suspended with no support.

**Truck-Sign, 19,500 lb., 2WD, Diesel, Cab and Chassis, 11 Foot body
With Automatic Transmission**

**Truck, Sign, Regular Cab, Diesel (064305)
Truck, Sign, With Crane, Regular Cab, Diesel (064405)
Truck, Sign, With Aerial Bucket, Regular Cab, Diesel (064505)
Truck, Sign, Extended Cab, Diesel (064525)
Truck, Sign, With Crane, Extended Cab, Diesel (064535)
Truck, Sign, With Aerial Bucket, Extended Cab, Diesel (064545)**

This dual-rear wheel model chassis shall be a manufacturer's standard cab model, which is engineered, certified and capable of towing a trailer, without brakes. 19,500 Lb. GVWR minimum with the manufacturer's rating certified on door. Chassis shall accommodate the specific body options referenced within this specification.

NOTE: REFER TO PCID1075 FOR DELIVERY AND WARRANTY REQUIREMENTS

Unit Shall Include the Following Optional Equipment:

Alternator: Manufacturers largest / heaviest duty available.
Air bags: Driver and passenger.
Air Conditioning: Standard.
Am/Fm Radio: Standard.
Manual Windows/Locks: Standard.
Seats: Shall be equipped with Vinyl 40/20/40 seats with center work console, Foam Padded with Seatbelts. (Cloth is Unacceptable)
Daytime Running Lights: (Aftermarket acceptable)
Blue Tooth: Standard

Electrical:

Whelen Light Kit Part # PADOTSY5, Kit contains the following lighting.

1 - R10PADOT Light Bar to be mounted to the driver's side of the bulkhead. In no case shall the light bar be mounted on the roof of the vehicle.

4 - IONAD Amber warning lights grommet mounted 2 will be grill mounted per EQN-115 and 1 on each side of the bed per EQN-120M

4 - IONGROM Grommet mounts for the IONAD light.

2 - M6AD Amber warning lights per EQN - 120M

2 - M6BTDD Stop, Tail, Turn lights per EQN - 120M

2 - M6BUD Back-up lights per EQN - 120M

2 - M6 Series 3 Lamp Black Housing, vertical

10 - W441D Harness side mating Deutsch connectors.

The above lights are supplied with male and female Deutsch connectors that shall be utilized to connect the vendor supplied harness to each light source.

1 - Pioneer Tripod pedestal flood light with coiled cord and plug to be supplied in the cab.

Work Light receptacle shall be wired and mounted in the rear of the truck and one receptacle on the left front of the body. Work light receptacles shall have a constant 12 volt power supply, circuit to be properly protected and have a chassis ground. Remote mounting location to be determined at pilot inspection.

Body builder to supply remaining marker and ICC lighting, they shall be protected against damage and shall also be shock mounted. Connections shall be water tight. All Body lighting shall be LED.

All Amber Warning lights and Light bar shall be on a single lighted, permanently labeled toggle switch located in the dash.

License plate lighting shall specifically be a Truck light 36 series PN# 36140C LED lamp with light bracket PN#36710

Body wiring shall be Grote, Trucklite, or Prior Approved Equal.

There shall be no splices outside of a sealed box or fixture.

There shall be a seven-way trailer (Pin Type) receptacle mounted on rear filled with dielectric grease. Per EQN - 80A

A color-coded electrical wiring chart and schematic shall accompany each body.

All wires shall be in a protective covering. Any loose hanging wires are unacceptable

ENGINE

| | |
|----------------------------|---|
| Diesel Engine: | Manufacturer's highest available horsepower and torque rating, standard or optional diesel engine, to include, immersion in-block type engine heater for water cooled engines, with water-proof plug and flush mounted in front sheet metal, engine oil cooler. |
| Front Bumper: | Chrome, Black, or Argent. |
| Fuel Tank: | Manufacturer's highest capacity standard tank, frame mounted (Tank filler positioned to ensure that filler nozzle can be set on automatic and nozzle will support itself, with unrestricted flow). |
| Exhaust pipe: | Exhaust pipe shall extend to outer edge of the body. |
| Limited Slip Differential: | Standard. |
| Lubricants: | Shall be synthetic where available, with drain plugs identified or painted red. (Engine oil excluded). |
| Rear Axle Ratio: | Shall be 4.88. |
| Rearview mirror: | Manual day/night |
| Tinted Windshield: | Manufacturers standard |
| Tires: | Truck and Body Company shall ensure that proper sized tires and wheels for GVWR are supplied. Tires shall be radial, all season mud and snow type tread. |
| Transmission: | Automatic Heavy duty with PTO provision with auxiliary oil cooler. NOTE: Electric shifted PTO and hydraulic pump shall be transmission mounted and be for use in stationary and mobile applications Trailer and Handling Package: To include rear stabilizer bar if available from the manufacturer as standard or optional equipment. |
| Exhaust: | All tool boxes above any exhaust tailpipe or within proximity of muffler, DPF, etc. shall receive a heat shield plate to the box to protect it. Exhaust shall be extended to the outer most edge of the installed body. |
| Mirrors: | Mirrors shall be manufacturer's standard heavy duty convex mirrors (aftermarket convex spot mirror acceptable) with extendable arms. |
| Paint: | Manufacturer's standard safety or school bus yellow. |

OPTION :

STATE WIDE RADIO:

Vehicle electrical and electronics will conform to the Federal Communications Commission 47 C.F.R. Part 15 so as not to interfere with the operation of the PennDOT Land Mobile Radio, which is an authorized radio station under 47 C.F.R. Part 90.

Radio Antenna: There shall be a roof mount base, PCTEL model BMATM/NC25 and a VHF StiCO Roof-FT-NITI-M whip shall be cut to 18.0 inches per manufactures cut sheet. Assembly shall be mounted to the center of the cab roof (not to interfere with any cab shield), with the antenna cable routed to underneath the dash. There shall be a minimum of 4 feet of antenna cable coiled at the base of the floor to allow for connection of radio on spreader control pedestal. Antenna shall be prewired with a UHF MALE connection. **(No substitute, standardization).**

Power Distribution Center: There shall be a 4-way power/ground distribution center located on the underside of the dash for connection of the state radio. The lugs shall be configured in the following manner: (1) lug shall be a 30 ampere constant hot circuit, (1) lug shall be a 10 ampere ignition controlled circuit. (2) lugs shall be chassis ground. All connections shall be enclosed in a weatherproof enclosure.

OPTION:

Power windows, Power Locks, Power and heated mirrors with manual extendable arms

OPTION:

FLOCS System per EQN-351A.

OPTION: Yellow, Ref: Dupont F9885 for shade. If aftermarket, paint shall be OEM quality, including but not limited to door jams and under hood etc. Warranty shall be the same as OEM manufactures warranty.

Unit Shall Also Include the Following Equipment:

- There shall be installed, a step bar REF: Bustin RB002 or RB003 or prior approved equal, must be length of cab entry area on both sides. REF: EQN-170 drawing.
- There shall be an ECCO model 450 back-up alarm, shock mounted.
- There shall be a 4.5 inch LED dome light, with switch, installed and centered over the front seat that can operate with the ignition switch in the off position. (Ref: Optronics part number# OPTILL22CB or approved equal).
- All switches shall be permanently labeled and backlit.
- There shall be two (2) front tow hooks, installed.
- There shall be an emergency triangle warning kit, with storage box, mounted in cab.
- There shall be a minimum 5 LB. 3A:40B:C type fire extinguisher, rechargeable with vehicle mount, installed in the cab for easy and quick access. A label shall be applied to the outside of the door closest announcing its location for easy access
- Manufacturer's standard heavy-duty rubber floor covering.
- 12 VDC to 120 VAC 1800-watt power inverter, REF: Dimensions Pure Sine Inverter (651-270-1971) model 12/1800N
- Hyd Post pounder and puller (Ref: Reliable Equipment sign driver, PN# REL-SPD, puller REL-SPP) Flat face o-ring quick coupler shall be utilized compatible to hook to hydraulic lines.

HITCH:

- There shall be a hitch, as per EQN-202B. The upper portion of hitch shall be painted with non-skid paint if extending to or outside body perimeter and is likely to be stepped on. All below components shall be supplied within the cab. Hitch and below receiver parts shall not interfere with any part of the bumper or body no matter what configuration on the mounting plate is used

| | <u>Buyers Products</u> | <u>OR</u> | <u>Wallace Forge Company</u> |
|---|------------------------|-----------|------------------------------|
| Combo ball hitch with 2 inch hard chrome ball: | BH8-2000 | | 23071911 |
| Pintle mounting plate: | PM-87 | | 2200170 PADOT |
| Bolt kit: | 8520 | | 2117240 |
| Hitch pin: | HP6253 WC | | HP58412 |

(064305), & (064525): SIGN BODY: Sign body shall be furnished as per EQN-483, Type I and the specification below.

- The body and compartments shall be comparable to the Stahl model 129 or Warner S129MDWSP (dual wheel) 11foot sign body (steel).
- The bulkhead shall be reinforced for severe duty.
- Compartment tops and rear of body shall be a minimum of 14 gauge, zinc coated.
- The load-bed floor shall be a minimum 12 gauge tread-plate floor, zinc coated, or Electra-life coating.
- Compartment doors shall be double paneled with reinforcement and automotive type rubber door seals around the entire perimeter. Hinges shall be stainless steel or have nylon bushings riveted to body. Piano type hinges are unacceptable.
- Compartments shall have paddle lock or slam latches made of stainless steel. Handles shall be in a recessed section. All latches should be bolted on no rivets.
- All vertical doors shall have a positive locking system to ensure doors will not blow closed on the operator due to wind. All horizontal doors shall be fitted with a limiting device to ensure that the door will not contact the body when open.
 - Compartment A (front) approx. 18 x 37 x 21 with (2) adjustable material tray with dividers.

- Compartment B approx. 18 x 42 x 21 with (1) adjustable material tray with dividers.
 - Compartment C approx. 18 x 42 x 21 with (1) adjustable material tray with dividers.
 - Compartment D approx. 15 x 51 x 18.
 - Compartment A shall have 2 locking stainless steel paddle handles. Compartments B, C, D & E will have (1) each.
 - Compartment E approx. 13.50 x 20 x 14.
 - Post bin shall be approx. 129" x 21" x 8" with a reinforced front bin wall. The door shall be bottom hinged. There shall be a second post in approx. 4" x 24" x 48" located in the center of the rear body, below the cargo area.
- There shall be a grab handle extending approx. 12" above the catwalk and mounted to both sides with anti-skid paint.
 - There shall be a grip strut step bumper approx. 14" deep, two, 2" deep x 10" wide steps hung by 6" long 3/4" diameter cables shall be mounted, one under each side of bumper. Both hung 12" in from edge of bumper, step shall be Bustin steel grip grating. Receiver (2" square) mounted in or under bumper, in either case; it shall be a Class III hitch. There shall be "D" rings (2) for safety chain connection.
 - There shall be two grip strut steps on each side of the rear body to allow access to the grip strut catwalk that extends the width and length of the lower rear right side compartment top. A positive locking system shall be incorporated to ensure platform cannot over extend or accidentally extend while traveling. Lock shall be able to be operated from ground level only. When the platform is extended out there should also be a locking system that will not allow the platform to go in. Lock shall also be operated from ground level.
- Compartment G approx. 33 x 55.75 door opening and be 35" deep with (1) front hinged door. There shall be vertical sign holders on 2" centers to fit the entire width and height throughout the compartment.
 - Compartment H approx. 15" x 45" door opening, approx. 35" deep, minimum. There shall be a shelf mounted 16" from the top
 - Compartment J approx. 26" x 49" door opening, 35" deep. There shall be three (3) pull-out material trays mounted in the rear half of compartment. Trays shall be evenly spaced. The forward half of the compartment shall have vertical sign holders on 4" centers covering the entire height and depth of compartment.
 - Compartment K approx. 20" x 42.75" door opening, 37" deep. Shall house the two 50' hydraulic tool hose reels, the 1600 watt inverter and the Whelen portable work light

OR

- Compartment A (front) approx. 18.88 x 48.50 x 21 with (2) adjustable material tray with dividers
 - Compartment C1 approx. 18.88 x 25.18 x 21 with (1) adjustable material tray with dividers
 - Compartment C2 approx. 18.88 x 25.18 x 21 with (1) adjustable material tray with dividers
 - Compartment D approx. 15.38 x 27 x 18
 - Compartment A shall have 2 locking stainless steel paddle handles. Compartments C1, C2, D & E will have (1) each.
 - Compartment E approx. 13.50 x 20 x 14
 - Post bin shall be approx. 100" x 21" x 8" with a reinforced front bin wall. The door shall be bottom hinged. There shall be a second post in approx. 4" x 24" x 48" located in the center of the rear body, below the cargo area.
- There shall be a grab handle extending approx. 12" above the body and mounted to both sides.
 - There shall be a grip strut step bumper (not installed) approx. 14" deep. Receiver (2" square) mounted in or under bumper, in either case it shall be a Class III hitch. There shall be "D" rings (2) for safety chain connection.

- There shall be two grip strut steps on each side of the rear body to allow access to the grip strut catwalk that extends the width and length of the lower rear right side compartment top. Cat walk shall be extendable over the side of the body by use of a release lever that is accessible from the ground. A positive locking system shall be incorporated to ensure platform cannot over extend or accidentally extend while traveling. Lock shall be able to be operated from ground level only. When the platform is extended out there should also be a locking system that will not allow the platform to go in. Lock shall also be operated from ground level.
- Compartment G approx. 26 x 55.75 door opening and be 37" deep with (1) front hinged door. There shall be vertical sign holders on 2" centers to fit the entire width and height throughout the compartment.
- Compartment J approx. 26.88" x 49" door opening, 37" deep. There shall be three (3) pull-out material trays mounted in the rear half of compartment. Trays shall be evenly spaced. The forward half of the compartment shall have vertical sign holders on 4" centers covering the entire height and depth of compartment.
- Compartment K approx. 20" x 42" door opening, 35" deep. Shall house the two 50' hydraulic tool hose reels, the 1600 watt inverter and the Whelen portable work light.

(064405) & (064535) : SIGN BODY WITH CRANE: Sign body shall be furnished as per EQN-483, Type II and the specification below.

- Same as Type I except unit shall be fitted with a minimum 3,200 lb crane, mounted on a reinforced compartment on the load bed front. Autocrane 3203PRX or IMT 1015 or equal. Manual pull out and crank down out riggers shall be provided along with a boom rest.

(064505) & (064545) : SIGN BODY WITH AERIAL BUCKET: Sign body shall be furnished as per EQN-483, Type III and the specification below.

- Same as Type I except unit shall be fitted with a telescopic fiberglass upper boom hydraulic aerial lift.
- Height shall be a minimum of 30 feet ground to bottom of bucket.
- Reach from centerline of rotation shall be a minimum of 20 feet. Rotation shall be 370 degrees (non-continuous).
- Platform bucket capacity shall be a minimum of 300 LBS.
- Platform bucket shall be fiberglass with a minimum of one step.
- Bucket shall be minimum 24 inch x 24 inch x 42 inch high.
- There shall be a bucket platform cover for inclement weather.
- There shall be hydraulic feather able controls located in/on the bucket to allow 1) up/down, 2) rotate, 3) extend/retract, 4) tilt, 5) engine speed control for hydraulic tool circuit, 6) engine start/stop.
- There shall be override protection provided at the lower control station.
- Platform bucket shall have a tool tray and safety harness.
- There shall be a hydraulic power tool outlet at the bucket platform. The hydraulic power tool circuit shall be capable of operating tools rated at 7 to 9 GPM.
- The hydraulic tank and circuits shall be properly sized to allow the hydraulic tools to be operated with the telescoping boom at full extension.
- There shall be an emergency electric operating system with DC pump and motor and all necessary hardware and fittings.
- Hydraulic system shall be a transmission driven PTO pump. Regardless of design, hydraulics shall be on demand live hydraulics always stationary or mobile.
- The pedestal/mainframe, turntable/turret and lower boom shall be steel weldment or tube/s formed into box structures. All pins and fasteners used in conjunction with the lift shall be plated. Only graded bolts are acceptable.
- All necessary structural adaptability shall be material and labor with the truck chassis made to ensure a compatible system capable of severe duty service.
- The unit shall be fitted with a system to eliminate boom creep and to lock cylinder in case of line failure.

- The unit shall be an Altec Model AT30G arm lift AF-TEL34FB/PT or HiRanger T292 or UTEM or prior to bid approved equal. (There shall be an internal, within boom, tool circuit. External reel is unacceptable.)
- 180° platform rotator is acceptable if supplied with no loss in bucket lift capacity.

SAFETY:

- The cab shall have conspicuity tape as Per EQN-127A.
- Alternating Red / Yellow Reflective sheeting shall be mounted diagonally (45 degree angle) on the rear of body as per EQN-120K.
- The body shall have conspicuity tape as Per EQN-483, sheet 4, and 5.
- Any area likely to be stepped on shall be covered with non-skid paint, tape is unacceptable.
- Vendor shall supply a first aid kit, that meets requirements of ANSI Z308.1-2015 Class A. The Kit shall in a weather proof steel case and placed in the front compartment on the drivers side with a sticker applied to the outside of the door stating the location of the first aid kit. There shall be a bracket designed to fit underneath the first shelf that the first aid kit will slide into to allow quick access to it. There will also be a first aid sticker placed on the shelf. REF: EQN-171 Drawing REF: Arbill Industries Inc 215-501-8450

DRAWINGS:

| | | | | |
|----------|---------|----------|--------------|-----------------------------|
| EQN-170 | | 07-19-16 | sheet 1 | RUNNING BOARDS |
| EQN-80A | Revised | 08-02-18 | sheet 1 of 1 | WIRING DIAGRAM |
| EQN-115 | Revised | 07-03-12 | sheet 1 of 1 | GRILL WARNING LIGHTING |
| EQN-120K | Revised | 06-20-14 | sheet 1 of 1 | TYPICAL REFLECTIVE SHEETING |
| EQN-120M | Revised | 09-28-11 | sheet 1 of 1 | CREW CAB BODY LIGHTING |
| EQN-127A | Revised | 01-02-09 | sheet 1 of 1 | CONSPICUITY TAPE |
| EQN-202B | Revised | 07-27-16 | sheet 1 of 1 | HITCH: WEIGHT DISTRIBUTING |
| EQN-351A | Revised | 06-19-13 | sheet 1 & 2 | FAST LUBE OIL CHANGE SYSTEM |
| EQN-483 | Revised | 08-29-14 | sheet 1 – 8 | SIGN TRUCK-STANDARD CAB |
| EQN-171 | | 07-21-16 | sheet 1 | FIRST AID KIT LOCATION |

8/20/2021 JAH

(064900) Truck-Tow, 19,500 lb., Standard Cab and Chassis
With Automatic Transmission

Truck, Tow, 19,500 lb. (064900)

This dual-rear wheel model chassis shall be a manufacturer's standard cab model, which is engineered, certified and capable of towing. 19,500 lb. GVWR minimum with the manufacturer's rating certified on door. Chassis shall accommodate the specific body options referenced within this specification.

NOTE: REFER TO PCID 1075 FOR DELIVERY AND WARRANTY REQUIREMENTS

Unit Shall Include the Following Optional Equipment:

| | |
|----------------------------|---|
| Alternator: | Manufacturers largest / heaviest duty available. |
| Battery: | Manufacturers largest / heaviest duty, dual unit configuration. |
| Air bags: | Driver and passenger. |
| Air Conditioning: | Standard. |
| AM/FM Radio: | Standard. |
| Power Windows/Locks: | Standard. |
| Bench Seat: | Foam padded bench seat, with seat belts. (Cloth unacceptable). |
| Daytime Running Lights: | (Aftermarket acceptable) |
| Blue Tooth: | Standard |
| | |
| Diesel Engine: | Manufacturer's highest available horsepower and torque rating, standard or optional diesel engine, to include, immersion in-block type engine heater for water cooled engines, with water-proof plug and flush mounted in front sheet metal, engine oil cooler. |
| Fuel Tank: | Manufacturer's highest capacity standard tank, frame mounted (Tank filler positioned on body side panel to ensure that filler nozzle can be set on automatic and nozzle will support itself, with unrestricted flow and clear top deck ob body). |
| Limited Slip Differential: | Standard. |
| Lubricants: | Shall be synthetic where available, with drain plugs identified or painted red. (Engine oil excluded). |
| Mirrors: | Mirrors shall be manufacturer's standard heavy duty convex mirrors (aftermarket convex spot mirror acceptable) with extendable arms. Mirrors shall be heated with a switch mounted conveniently to the operator. OEM or aftermarket acceptable. (Reference: Power Vision Mirrors, www.powervisionmirrors.com .) |
| Paint: | Factory standard white, body shall be matched to cab shade of factory white, Option to paint Hot lime green, Ref: PPG color 46973. |
| Rear Axle Ratio: | Shall be 4:88 to and ensure the 19,500lb chassis rating |
| Suspension: | Multi-leaf design-tapered. 13,680 lb rear with helper springs and 7,000 lb front axle. Additional load suspension must be added. Timbren load boosters or equivalent. |
| Rearview mirror: | Manual day/night. |
| Tinted Windshield: | Manufacturers Standard |
| Tires: | Truck and Body Company shall ensure that proper sized tires and wheels for GVWR are supplied. Tires shall be radial, all season mud and snow type tread on drive axle and highway all season on steer axle. There shall also be clearance for tire chains on rear tires. |
| Transmission: | Automatic heavy duty with PTO provisions. Largest available transmission cooler. Note: Electric shifted PTO and hydraulic pump shall be transmission mounted and be for use in stationary and mobile applications. |

Unit Shall Also Include the Following Equipment:

- There shall be step running boards installed, REF: (BUSTIN PN# RB003) or prior approve equal must be length of cab entry area on both sides. REF: EQN-170 Drawing
- There shall be an ECCO model 450 back-up alarm, shock mounted.
- All switches shall be permanently labeled and backlit.
- There shall be a 4.5 inch LED dome light, with switch, installed and centered over the front seat that can operate with the ignition switch in the off position. (Ref: Optronics part number# OPTILL22CB or approved equal).
- There shall be two (2) front tow hooks, installed.
- There shall be an emergency triangle warning kit, with storage box, mounted in cab.
- Manufacturer's standard heavy-duty rubber floor covering.
- Full length clear hood mounted bug deflector (must be able to accommodate lettering).
- Heavy-duty cooling system.
- Lug wrench and handle.
- Standard jack and hydraulic jack (2 U.S. ton, Matco part number – AM200FJM or equal)
- Must have tow bar attachment device capable to be installed as needed on hydraulic crossbar for moving vehicles with no wheel/tires and have Grade 70 chains with hooks and T-hooks.
- Three (3) 5-GAL plastic cans (mounted).
- Plug-in jump start kit with 25 foot cables.
- 110 volt 2500-watt inverter for frequent use, securely mounted in rear compartment with 50 feet heavy duty cord reel, self-retracting with roller fair head. Cord reel shall be located inside a body compartment on the left side (driver) rear.
- Air compressor shall be minimum 150psi. high flow with a minimum 2.0-gallon tank. Compressor shall be mounted inside body compartment with all required safety features, wiring and plumbing to be operational. Tank drain shall be plumbed to exterior of body. REF. VIAIR high flow air source kit. There shall be 50 feet .50inch diameter heavy duty rubber hose reel, self-retracting. Hose reel shall be located inside a body compartment on the left side (driver) rear.
- **Note: Electrical cord and air hose shall exit the rear or top of body via roller fair head and provisions shall be made to include a pre-approved weather proof cover for the outlet and hose coupler. Ref. EQN-138**
- Mud flaps, front and rear, unmarked, total length of rubber shall be in accordance with PA state laws. Rear mud flaps shall cover both rear tires.
- One (1) pair snatch blocks.
- Safety chains shall be mounted to the wrecker body.
- There shall be a 3 Ton snatch block included

(064900): TOW TRUCK BODY: Tow truck body shall be furnished as per EQN-140, and the specification below.

- Min RBM 280,000 in-lbs, frame height to be 37" = + / – 1"
- Body construction to have min 12" deep fabricated sill channels to be mounted to truck frame.
- Body to be of modular three-piece design and structure.
- Body sides, (tool boxes to be of aluminum design).
Body to be color matched to cab (base coat /clear coat or urethane)
- Hydraulic tank to be part of sub frame and to be located near front of body for additional weight ballast. Oil Capacity to be 10 gal or greater with dipstick or sight **gauge, clean out cover or spin on filter, breather and heavy-duty magnetic drain plug(s).**
- Must have easy access to hydraulic controls from top of body for repairs and or inspection.
- All side compartment tool boxes must have full perimeter weather seal and employ hinges with lanyards for support and be of heavy duty design to except weight loads of

200Lbs or more. All tool boxes to have water drains. Latches must be of stainless steel rotary design. All tool boxes must have drip edge over doors.

- 24" tunnel tool box shall be affixed to chassis for wheelbase configuration. 24" Tunnel design tool box shall be made of aluminum and shall have all aluminum swing outdoors. All tool box doors to be keyed alike.
- All cabinets or compartments shall can store flammable or hazardous materials such as (gas cans, aerosol cans, oil containers, compressed gas cylinders, paint cans etc.) There shall also be a sticker placed inside the right front compartment door explaining the vented tool boxes. REF: EQN-1089A
- Compartment lighting. Each compartment shall have Vista Compartment lighting system (Tel: 219-264-0711). The 3/8 LED rope lighting sections shall be mounted on the inside of each compartment door and shall occupy space on the left, top and right of each compartment. Rope sections shall extend full length of compartment on left and right sides. All wiring shall be secured using "P" type clamps 12" maximum between securement. The power switch shall be illuminated dash mounted with 1 switch turning all compartment lights on.
- Body must have outside dual controls and an electronic lanyard remote control inside cab with 10' long cable for complete wheel lift operation while in motion. Must also have provisions for add-on wireless controls without changing existing valving.
- The boom of the truck needs to be of integrated design and have recovery capabilities, capacity to be min 8,000LBS.
- A dual cable hydraulic planetary winches with 9,000lbs capacity or greater shall be installed. 3/8" X 100 ft cable minimum standard with approved tensioner device and free wheel capabilities.
- Boom must have Hydraulic telescoping capabilities of 63" or greater. Boom lift cylinders must have a min bore of 3.50" with chrome shaft of 1.75" min STD and to be of dual lift design.
- Hydraulic system shall be a transmission driven PTO pump. Regardless of design, hydraulics shall be on demand live hydraulics always stationary or mobile.
- Truck chassis must have high idle control from cruise control or other approved electronic devices.
- Hydraulic system must use counterbalance valves to provide smooth operation and load holding when not in use.
- Wheel lift crossbar must employ hydraulic style "L" arms for attachment to the towed vehicle wheels or frame with a gear driven flow divider valve keeping arms synchronized under use. The wheel lift crossbar must be no higher than 3" and of setback design to provide maximum durability and clearance of towed vehicle components. Crossbar width shall be a min of 84" wide. All hydraulic hoses for under each must be totally concealed in a flexible track system and must not be exposed to the work area or under the motor vehicle when in use.
- L Arms must be of 155-degree rotation design to allow hook up of flat tires, and must be capable of clamping tires from 0" to 22" wheels. Wheel lift crossbar must include additional adapter package for using crossbar as a tow bar/sling for recovery work and to include all approved grade 70 chains and attachments. The under-lift extension cylinder must have a min reach of 70" and employ cushioned type hydraulics to allow self centering of the crossbar after use and returning to idle position for traveling in a vertical stored position. Crossbar must have full tilt capabilities as well as negative tilt of 10 deg should conditions prevail use. Body should employ dual safety chains attached to body by grade 8 bolts and fasteners or greater. Wheel lift must be able to accommodate trailer tow capabilities. Safety straps or basket straps for wheel lift will be required to handle all wheels to 22' diameter. Two pairs will be required (1) car set (1) truck/suv set.
- All pivot points to wrecker body and crossbar shall have independent lubrication points and have a reference manual enclosed in the delivery package for lubrication points.
- Truck chassis shall be equipped with wrap around rubber coated push bumper w/ grille guard painted to mach cab.

LIGHTS:

Whelen Model PASYS15 Ref. EQN-139

- Two (2) R10PADOT light bars, mounted to top outside edges of arrow board stand.
- Four (4) M6BTDD - stop, tail and turn with brush guards. Two (2) shall be mounted to the rear of the body and two (2) mounted to the rear bottom of the arrow board stand.
- Four (4) M6AD - amber warning with brush guards. Two (2) shall be mounted to the rear of the body and two (2) mounted to the rear bottom of the stand.
- Two (2) M6BUD - back up with brush guards, mounted to the rear of the body.
- Four (4) IONAD amber warning lights grommet mounted. Two (2) shall be mounted to the front grille and one (1) to each side of body.
- All amber warning lights shall be controlled with one permanently labeled light switch mounted in the dash
- Four (4) MPBW micro pioneers flood lights. Two (2) shall be mounted to the rear, below the body and two (2) to the rear bottom of the arrow board stand. Upper (arrow board stand) two (2) lights and lower (below body) two (2) lights shall have separate permanently labeled, lighted switches.
- One (1) pioneer flood work light with four mounting brackets. One (1) bracket lose in side compartment (to be mounted by receiving county) for storage. One (1) bracket shall be mounted to the front push bar bumper. Two (2) brackets shall be mounted, one to each side on top deck by wrecker controls. Light plugs shall be near light brackets. REF. EQN-139
- Magnetic tow lights with plug-in connector. Four prong plug shall be mounted in the rear of the wrecker body.
- The above lights are supplied with male and female Deutsch connectors that shall be utilized to connect the vendor supplied harness to each light source.
- There shall be a Truck-Lite Model# 36140C LED license plate light with light bracket PN# 36710 (Installed).
- License plate bracket rear, securely mounted to prevent damage.
- Body wiring shall be Grote, Trucklite, or Prior Approved Equal.
- Body builder to supply remaining marker and ICC lighting, they shall be protected against damage and shall also be shock mounted. There shall be no splices outside of a sealed box or fixture.
- Connections shall be water tight. All Body lighting shall be LED.

Vehicle Mounted Arrow Board: Ref. EQN-139

The vehicle shall be equipped with a programmable (directional arrows) LED arrow board that pivots 90 degrees controlled within the vehicle by a remote-control box. The board must be capable of being pivoted electrically by the operator. The board must be able to withstand vehicle speeds up to 65mph in the open or closed position. Any comparable board will be accepted but must first approved by PennDOT on PA Bulletin 15.

Only models that have been reviewed in accordance with this specification and for which a Certificate of Approval has been issued by the Department shall be used or offered for sale or use on any public highway within the Commonwealth. Ref: Bulletin 15, Section 901.

Arrow board manufacture must have a repair facility within Commonwealth. Unit must be approved and listed for use on PA Bulletin 15.

The 30 X 60-inch arrow board shall be corner post mounted, incorporated into the reinforced body sub frame. Arrow board stand shall be suitable to mount required lighting. Ref. EQN-139.

LABELING:

- Boom – “PARKWAY SERVICE PATROL”
- Doors – “PARKWAY SERVICE PATROL”
- Bug screen – “PARKWAY SERVICE PATROL”
- Stinger – “PENNDOT”

SAFETY:

- All lighting to be FMVSS 108 Lighting standard specification.
- The body and cab shall have conspicuity tape as Per EQN-140, sheet 1.
- The rear of wrecker body shall have RED/YELLOW reflective sheeting mounted at (45-degree angle) as Per EQN-140
- Any area likely to be stepped on shall be covered with non-skid paint, tape is unacceptable.
- The exhaust shall be diverted away from driver when connecting a downed vehicle to avoid asphyxiation of the operator; system shall not interfere with the operation of the body and equipment mounted on the chassis.
- Vendor shall supply a first aid kit in a weather proof steel case that meets requirements of ANSI Z308.1-2015 Class A. The Kit shall be placed loose in the cab with a sticker to be applied to the outside of the door at a later time stating the location of the first aid kit. REF: Arbill Industries Inc. 215-501-8450
- There shall be a minimum 5.0 LB. ABC type fire extinguisher, rechargeable with vehicle mount, installed in the cab for easy and quick access.
- There shall be 2A:10B: C fire extinguisher, rechargeable and mounted on body.
- There shall be a towing and hauling information decal or plate affixed to inside of cab, as per EQN 303.
- Counterbalance holding valves on both tilt & lift cylinders.
- Load check in all control valve work ports.
- 10-micron hydraulic filter installed in the return line with “service filter” over 25 psi pressure indicating gauge.

MANUALS

- The successful vendor shall furnish all applicable manuals at time of unit delivery:
- The manuals listed shall be official O.E.M. publications supplemented with technical manuals for all components as published by sub-vendors/manufacturers.
- Parts Manual presented must be a relative to "all" items utilized to build these units, with appropriate part numbers.
- Operator's manual per unit
- The following manuals shall be supplied as listed below
 - Parts
 - Service
 - Engine
 - Transmission (Automatic or Manual)
 - Body and Sub-frame (Parts and Service)
 - Complete set of manuals for any additional items/equipment added to a piece of equipment.
- Manuals may be supplied alone or in any combination as listed below
Online @ Manufacturers website.
PDF Thumb Drives

OPTION: FLOCS System per EQN-351A.

OPTION: **STATE WIDE RADIO:**
Vehicle electrical and electronics will conform to the Federal Communications Commission 47 C.F.R. Part 15 so as not to interfere with the operation of the PennDOT Land Mobile Radio, which is an authorized radio station under 47 C.F.R. Part 90.

Radio Antenna: There shall be a roof mount base, PCTEL model BMATM/NC25 and a VHF StiCO Roof-FT-NITI-M whip shall be cut to 18.0 inches per manufactures cut sheet. Assembly shall be mounted to the center of the cab roof (not to interfere with any cab shield), with the antenna cable routed to underneath the dash. There shall be a minimum of 4 feet of antenna cable coiled at the base of the floor to allow for connection of radio on spreader control pedestal. Antenna shall be prewired with a UHF MALE connection. **(No substitute, standardization).**

Power Distribution Center: There shall be a 4-way power/ground distribution center located on the underside of the dash for connection of the state radio. The lugs shall be configured in the following manner: (1) lug shall be a 30 ampere constant hot circuit, (1) lug shall be a 10 ampere ignition controlled circuit. (2) lugs shall be chassis ground. All connections shall be enclosed in a weatherproof enclosure.

DRAWINGS:

| | | | | |
|-----------|---------|----------|------------------|-----------------------------|
| EQN-104 | Revised | 08-07-08 | sheet 1 of 3 | TOW TRUCK |
| EQN-303 | Revised | 11-03-06 | sheet 1 of 1 | DECAL TOWING AND HAULING |
| EQN-351A | Revised | 06-19-13 | sheet 1 & 2 of 2 | FAST LUBE OIL CHANGE SYSTEM |
| EQN-140 | Revised | 7-18-16 | | TOW TRUCK |
| EQN-139 | | 05-26-16 | 2 sheets | LIGHTING SYSTEM |
| EQN-170 | | 07-19-16 | 1sheet | RUNNING BOARDS |
| EQN-138 | | 07-21-16 | | HOSE AND ELECTRICAL COVER |
| EQN-1089B | | 06-18-18 | | HAZARDOUS WARNING STICKER |

8/23/2021 JAH

SPECIFICATION

066200 - Van, Cutaway, Cargo Box, 2WD, Gasoline Engine, Automatic Transmission, Dual Rear Wheels

This Dual Rear Wheel Model, Shall Be A Manufacturer's Standard Model Vehicle, Capable Of Carrying Two (2) Passengers. 14,200 Lb GVWR Minimum. Manufacturer's Rating Certified On Door. Chassis to accommodate A 14 Foot Cargo Box Body.

Reference: Supreme Spartan Body, Dura Cube

Note: " Refer to PCID 1075 for Delivery, and Warranty Requirements".

Note : All up fitting shall be in accordance with the chassis manufacturers body builders up fitter manual.

The following additional items shall be supplied

Air Bags: Shall be equipped with manufacturers standard air bags.

Air Conditioning: Shall be equipped with manufacturers standard air conditioning.

Alternator: Shall be manufacturers largest / heaviest duty available.

Blue Tooth: Shall be equipped with manufacturers standard Blue tooth system.

Cruise Control: Shall be equipped with manufacturers standard Cruise Control.

Daytime Running Lights: Shall be equipped with manufacturers standard Daytime Running Lights. (Aftermarket Acceptable)

Differential: Shall be equipped with manufacturers standard Limited Slip Differential. Ratio to be selected at time of order from manufacturer's standard available ratios.

Engine: Shall be Manufacturer's highest available horsepower and torque rating, to include, engine oil cooler , and largest available engine cooling capacity.

Exhaust: Shall be capable of being extended by the body up fitter to the outer most edge of the installed body.

Front Bumper: Shall be Chrome, Black, or Argent.

Fuel Tank: Manufacturer's highest capacity standard tank frame mounted (Tank filler positioned to ensure that filler nozzle can be set on automatic and nozzle will support itself, with unrestricted flow.)

Lubricants: Shall be synthetic where available, with drain plugs identified or painted red. (Engine oil excluded)

Mirrors: Shall be manufacturers standard heavy duty outside mirrors with convex mirror (aftermarket convex spot mirror acceptable) and extendable arms, driver and passenger sides. Shall be equipped with manufacturers standard manual day / night rearview mirror.

Seats: Shall be equipped with Vinyl Bucket Seats, Foam Padded with Seatbelts. (Cloth is Unacceptable)

Suspension: Shall be equipped with trailer and handling package, to include front stabilizer bar, heaviest available front and rear suspension, and heaviest available differential.

Tires: Truck and Body Company shall ensure that proper sized tires and wheels for GVWR are supplied. Tires shall be radial, OEM's most aggressive / severe duty tire available from manufacturer.

Transmission: Shall be automatic with largest available auxiliary oil cooler.

Windshield: Shall be equipped with manufacturers standard tinted windshield.

Windows and Locks: Shall be equipped with manufacturers standard manual windows and door locks.

Step Bar: REF: Bustin (PN# RB003) or prior approved equal, must be length of cab entry area on both sides. (Installed) REF: EQN-170 Drawing.

Dimensions: Shall be a square front box measuring 14 feet in length, outside width shall be 96 inches, and the interior height shall be 78 inches.

Construction: Shall be constructed using 3/8 inch Fiberglass Reinforced Plywood.

Curb Side Door: Shall be a roll up design that is capable of being securely locked. Shall be full length and 48 inches in width. There shall be a step provided under curb side door to gain access to cargo box safely and to have three points of contact when entering.

Rear Door: Shall be a roll up design that is capable of being securely locked. Shall be full length and full width.

Cargo Access Door: There shall be an access door between the cab and cargo box. Shall be properly sealed and capable of being secured in place from either compartment.

Exhaust: All tool boxes above any exhaust tailpipe or within close proximity of muffler, DPF, etc. shall receive a heat shield plate to the box in order to protect it. Exhaust shall be extended to the outer most edge of the installed body.

Grab Handles: There shall be a stainless steel grab handle on each side of the rear and side access doors to assist the operator in entering and exiting the bed area, Non-skid paint or rubber shall be utilized, (non-skid tape is unacceptable). Ref: Non skid paint, Gamma Laboratories (Tel. 304-489-2828.)

Floor: Shall be as low as possible, wheel wells protruding into floor area is acceptable. Shall be constructed of 2 inch by 6 inch Shiplap Pine, Minimum.

E Track: There shall be an E Track Cargo securing system. There shall be 2 rows, evenly spaced, full length, on both side walls.

Rear Step Bumper: The heavy-duty rear bumper shall be constructed with a minimum of 1/8 inch reinforced steel. The size and strength shall be in accordance with the truck manufacturer's step design. The platform on top of the bumper shall be Bustin aluminum No. NST4 full size, or Bustin 628 steel, or Ohio Grating or IKG Industries serrated swage lock, with end band. The outer step edge must be serrated in lieu of plain, smooth metal edge. All edges shall be banded (skirting) on the outer perimeter. Overlay is not acceptable.

Paint:

Body priming and painting to ensure full coverage to all areas of the body

Color of the body, including inside and outside of compartments, and the bed, shall be cab manufacturer's standard safety or school bus yellow, or optional PennDOT yellow DuPont F9885 for shade. (Powder Coat, if available from factory.) **It will be the responsibility of the successful vendor to ensure color of the body matches the cab.**

All metal surfaces to be painted shall be cleaned and prepared by abrasive blasting to 1-1/2 mil profile in accordance with Steel Structure Painting Council Standard SSPC-SP-6.

A rust preventative treatment shall be applied.

Conspicuity tape on body as per EQN-127A. Red/white on sides of body and cab.

ICC Rear Under ride Protector, hitch and grip strut ladders shall be painted black.

Front lower leading edge of body shall have a minimum 12 inch high aluminum diamond plate for chip resistance.

Safety: Alternating Red / Yellow Reflective sheeting shall be mounted diagonally (45 degree angle) on the entire rear door as per EQN-120P.

First Aid Kit: Vendor shall supply a first aid kit in a weather proof steel case that meets requirements of ANSI Z308.1-2015 Class A. The Kit shall be placed loose in the cab with a sticker to be applied to the outside of the door at a later time stating the location of the first aid kit. REF: Arbill Industries Inc. 215-501-8450

Electrical:

Warning Lights shall be (8) Whelen model M6AD Lights with M6 Brush Guards, Mounted (2) per sides, Front & Rearward facing, in the upper most outside corners of cargo box. The Warning lights shall have a lighted, permanently labeled toggle switch located in the dash.

1 - Whelen PFP1PA Tripod pedestal work light with coiled cord and plug to be supplied in the cab. Work Light receptacle shall be wired and mounted in the rear of the truck. Work light receptacle shall have a constant 12 volt power supply, circuit to be properly protected and have a chassis ground.

Body builder to supply remaining Stop Tail Turn, Back Up, Marker and ICC lighting, they shall be protected against damage and shall also be shock mounted. Connections shall be water tight.

All Body lighting shall be LED.

License plate lighting shall specifically be a Truck light 36 series PN# 36140C LED lamp with light bracket PN# 36710

Body wiring shall be Grote, Trucklite, or Prior Approved Equal.

There shall be no splices outside of a sealed box or fixture.

There shall be a seven-way trailer (Pin Type) receptacle mounted on rear. Per EQN - 80A

A color-coded electrical wiring chart and schematic shall accompany each body.

There shall be 2 LED lights, mounted inside cargo box, evenly spaced to illuminate cargo box area, lights shall be on a separate switch located within the cargo box.

No wiring shall be left exposed or hung where it could be damaged by the elements or debris.

Mud Flaps:

Mud flaps rear of rear tires, unmarked, full width of tires.

Length shall be consistent with the unloaded rear axle height, And in accordance with the PA State Inspection Laws.

There shall be an ECCO Model 450 backup alarm, shock mounted. (Installed)

There shall be a seven-way trailer light receptacle, "Pin Type", securely mounted near rear trailer hitch area. Wired per EQN - 80A. Connections shall be sealed and water tight.

All switches shall be permanently labeled and backlit.

There shall be two (2) front tow hooks, installed.

There shall be an emergency triangle warning kit in each unit, in storage box and mounted in cab. EQN - 66A

There shall be a 5 LB. minimum 3A:40:BC fire extinguisher rechargeable with vehicle mount. Securely mounted in the cab for easy and quick access. A sticker on the door closest to the extinguisher shall be applied in the outside lower corner of the door to identify the location of the

There shall be a trailer hitch installed, as per EQN - 202B, the upper portion of hitch shall be painted with non-skid paint if extending to or outside body perimeter and is likely to be stepped on. (Tape is not acceptable.)

All the following shall be supplied and delivered in the cab. Buyers Products - Combo Ball Hitch W/ 2 inch Hard Chrome Ball BH8-2000, Pintle Mounting Plate PM-87, Bolt Kit 8520, Hitch Pin HP6253 WC. Or approved equal.

Safety

The cab shall have conspicuity tape as Per EQN-127A.

Any area likely to be stepped on shall be covered with non-skid paint, tape is unacceptable.

All handrails, ladders, and step configurations shall be built for three points of contact.

Options

Option : Install FLOCS system as per EQN: 351A.

Option : To be equipped with Power windows, Power door locks, and Power / Heated mirrors with manual extendable arms.

Option : Bidder must provide option pricing for "one" of the following.

Factory: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. Unit shall be painted PennDOT yellow in lieu of the OEM's original color. Using the same process as with OEM paint.

Aftermarket: Having unit bid painted PennDOT yellow. Reference DUPONT F9885 shade only. All surfaces shall be properly cleaned and prepared prior to paint. Paint shall be the same quality as factory paint. To include all areas of the unit including interior.

Option : Statewide Radio:

Vehicle electrical and electronics will conform to the Federal Communications Commission 47 C.F.R. Part 15 so as not to interfere with the operation of the PennDOT Land Mobile Radio, which is an authorized radio station under 47 C.F.R. Part 90.

Radio Antenna: There shall be a roof mount base, PCTEL model BMATM/NC25 and a VHF StiCO Roof-FT-NITI-M whip shall be cut to 18.0 inches per manufactures cut sheet. Assembly shall be mounted to the center of the cab roof (not to interfere with any cab shield), with the antenna cable routed to underneath the dash. There shall be a minimum of 4 feet of antenna cable coiled at the base of the floor to allow for connection of radio on spreader control pedestal. Antenna shall be prewired with a UHF MALE connection. (No substitute, standardization).

Power Distribution Center: There shall be a 4-way power/ground distribution center located on the underside of the dash for connection of the state radio. The lugs shall be configured in the following manner: (1) lug shall be a 30 ampere constant hot circuit, (1) lug shall be a 10 ampere ignition controlled circuit. (2) lugs shall be chassis ground. All connections shall be enclosed in a weatherproof enclosure.

Drawings:

| | | | | |
|----------|---------|----------|-------------|---|
| EQN-66A | Revised | 07-13-17 | sheet 1 | TRIANGLE STORAGE BOX AND BRACKET |
| EQN-80A | Revised | 08-2-18 | sheet 1 | WIRING DIAGRAM |
| EQN-120P | | 11-03-11 | sheet 1 | CARGO BOX REAR DOOR REFLECTIVE SHEETING |
| EQN-127A | Revised | 01-02-09 | sheet 1 | CONSPICUITY TAPE |
| EQN-202B | Revised | 07-27-16 | sheet 1 | HITCH: WEIGHT DISTRIBUTING |
| EQN-351A | Revised | 06-19-13 | sheet 1 & 2 | FAST LUBE OIL CHANGE SYSTEM OVERVIEW AND PARTS LIST |
| EQN-170 | | 7-19-16 | sheet 1 | RUNNING BOARDS |

Installation Practices:

All lights shall meet all Federal and State regulations.

All wire splices shall be insulated with heat shrink materials or removable connectors that create a water tight connection.

All wires shall be securley fastened with no wires hanging or protruding where they are exposed to the risk of damage.

All junction boxes shall be located inside of the utility body, in a location that will not compromise storage space. For easy accessibility, junctions boxes must not be obstructed in any way.

All electrical connections shall be treated with di-electric grease. All wiring shall be secured using "P" type clamps at intervals not to exceed 12" between securment points.

All wires shall be in a protective covering and protected from chaffing, rubbing and getting pulled or torn from external sources.

Any alterations / relocation to fuel fill, DEF tank, exhaust, Etc. to allow installation of body shall be made in a professional manner using new materials.

Any place steel and aluminum contact each other Mylar or an approved equal shall be used as a buffer.

Laminate rubber is unacceptable. All vertical and horizontal seams of the body sides shall utilize full penetration welds in accordance with standard welding practices as set forth by the American Welding Society and sealed water tight to create one integral body. All corners shall be angled or rounded for safety and all weld splatter removed. All mounting procedures shall be in accordance with NTEA standards.

The use of any of the following items or practices WILL NOT BE ACCEPTED.

Non-steel fittings on hydraulic pressure lines. Excessive use of elbows on hydraulic lines.

Use of thread tape on hydraulic fittings. Use of galvanized fittings or components on hydraulic system. Improper hydraulic line size.

Use of high-pressure hose for hydraulic suction line. Scotchlok-type wire splices.

Non-insulated wire splices. Improper hose or wire routing near exhaust, over-sharp edges or through holes without grommets, or sharp edges.

Improperly prepared, primed and painted surfaces.

Non-fused electric circuits.

Hydraulic circuits without pressure relief protection.

Loose hanging wires that are not secure or are pulled tight so they are suspended with no support.

STAINLESS STEEL SPREADER SPECIFICATIONS

Spreader option: Unit shall be equipped with a stainless steel under tailgate spreader with a self-leveling type spinner assembly. Spreader and spinner shall meet the following specifications and be installed. Mounting location of spreader and spinner to be determined at pre-build meeting.

NOTE: All references made to stainless steel shall be AISI Type 304 stainless steel.

7 gauge 0.1875-inch

10 gauge 0.1350 inch

Per EQN-9, EQN-3A

All nuts, bolts and hardware brackets, or angle stock, unless otherwise specified, shall be stainless steel (no substitutes), with all edges deburred and rounded.

DIMENSIONS:

Overall width of vertical trough end plate shall be 96 inch.

Overall height shall be approximately 18 inch.

Overall depth shall be approximately 18 inch.

Inside trough width opening shall be 81 inch + or - ½ inch. Per EQN-9.

TOP COVER:

Two-position top cover. When raised, normal spread mode. When lowered with spreader not in use, allows full dump-over capability.

Spreader material, full width, shall be a minimum 0.135-inch thick stainless steel.

Properly secured to prevent material leakage in spreading positions.

AUGER:

Per: EQN-6, EQN-3 and EQN-29, auger shall be bevel cut. (Material is specified in drawing.)

AUGER BEARING:

1-1/4-inch shaft diameter.

2 bolt flanged type ends self-aligning, anti-friction, thrust, re-lube type, with retaining collar with set screw with Zerk fitting cover, eccentric type, or equal, per EQN- 10.

AUGER MOTOR:

NOTE: The auger motor is a standard, no substitute. It is the responsibility of the successful Vendor to ensure that the spreader's assembly is designed and manufactured in such a way as to ensure compatibility and serviceability with the Department's hydraulic system/s.

Auger Motor: White Hydraulics: Model RE (no substitution), with a 50-pulse auger motor sensor installed. Kit # W80509

Displacement cu in: 32

Housing: 08 (A style 4 bolt)

Output Shaft: 14 1-1/4 inch straight

Rotation: 1 clockwise

Options: 25 Options

Note: Porting is 7/8 inch 'o' ring

Fitting Per EQN-9

STAINLESS STEEL SPREADER, URETHANE SPINNER ASSEMBLY:

Spinner frame (Hanging) self-leveling type

Urethane spinner disc shall be per EQN-9B No Substitute without prior approval.

DISC:

Ref: C.U.E. Inc. Spinner Part #CC1229S per EQN-9B (No substitute without prior approval).

HUB:

REF: C.U.E., Inc., hub Part #20559-0650 (4 bolt type hub mounted to spinner disc with locking type nuts for use with spinner motor (bolt pattern shall match for referenced spinner). No Substitute without prior approval

SPINNER MOTOR:

Gerotor type hydraulic drive motor

Hydraulic port opening: ½ inch NPT.

Flange mount: 4 bolt.

Shaft keyway: 1 inch woodruff.

Displacement: 3.0 cubic inch/rev. maximum.

PAINT:

All carbon steel surfaces shall be properly prepared by thorough cleaning, removal of dirt, grease, rust and corrosion and shall be painted with proper undercoat and a sealer. All stainless steel shall be unpainted.

COUPLERS:

One (1) 1/2-inch spinner - 5100-S5-10B Aeroquip female or Parker 6125-08 female, no substitute.

One (1) 3/4-inch auger - 5100-S5-12B Aeroquip female or Parker 6125-12 female, no substitute.

One (1) 1 inch return - 5100-S5-16B Aeroquip female or Parker 6125-16 female, no substitute.

Hydraulic couplers shall be anodized steel.

NOTE: All necessary hardware and fittings shall be supplied to ensure that the system is fully functional.

SAFETY:

Appropriate decals, instructional and WARNING/S, shall be provided and fixed.

There shall be a lock out system that will prevent the lower auger inspection pan from being lowered (opened) while the hydraulic line is connected to the auger motor.

Note: Lock out to be plumbed with 3/4 inch hoses and couplers.

TROUGH: Per EQN-9

There shall be hinged trough bottom with spring loaded latches.

Bottom shall be separate from the anti-spill/cover.

Separate one piece bottom shall be full spreader width, minimum 7-gauge stainless steel.

Separate anti-skid/cover plate shall be minimum 10-gauge stainless steel.

Bottom shall be properly secured to prevent material leakage in spreading positions.

Bottom shall be hinged by bolts or pins (stainless steel) with a minimum of three (3) center hinge points and two (2) end points. End pieces, one piece formed front wall and rear wall, shall be minimum seven (7) gauge stainless steel.

ANTI-FLOW PLATE OPENING:

Anti-flow plate shall be mounted over the trough opening.

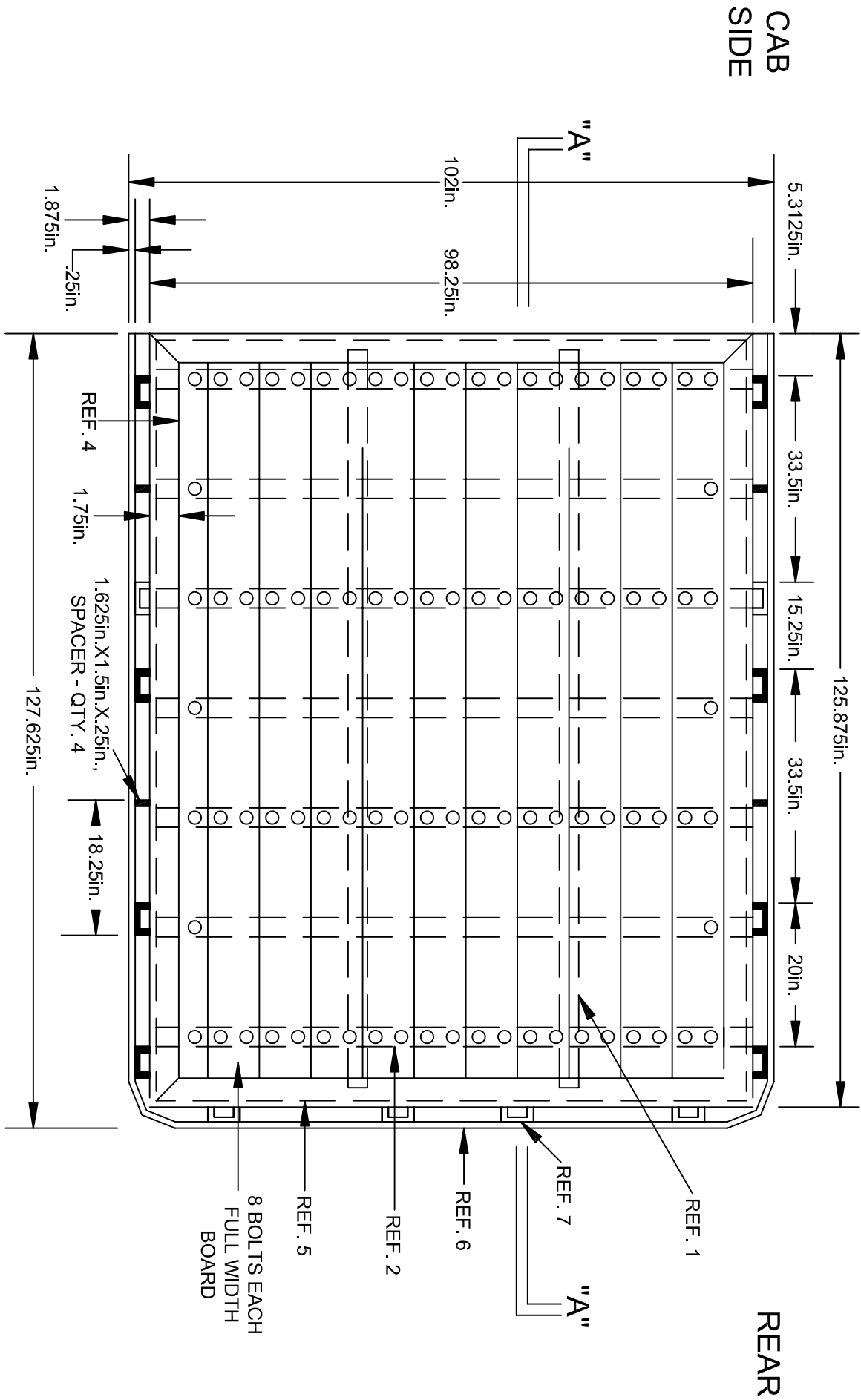
Anti-flow plate shall be arched to provide a minimum of 3/4-inch clearance between the shield and the outer periphery of the auger flight. Anti-flow plate shall butt against end plate. Anti-flow plate shall be minimum 10-gauge stainless steel. Anti-flow plate length shall be 14 inch.

Discharge opening shall be approximately 6-inch-wide by 7-inch-long rectangular opening.

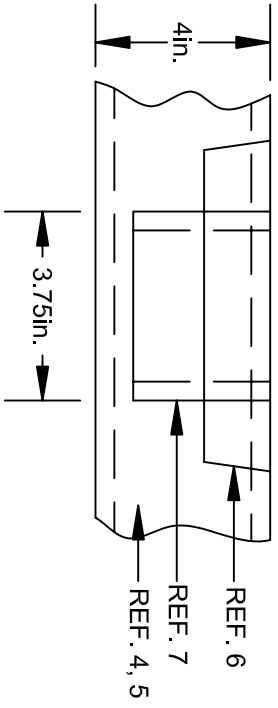
Discharge opening shall begin from end plate on roadside.

QUICK DETACH:

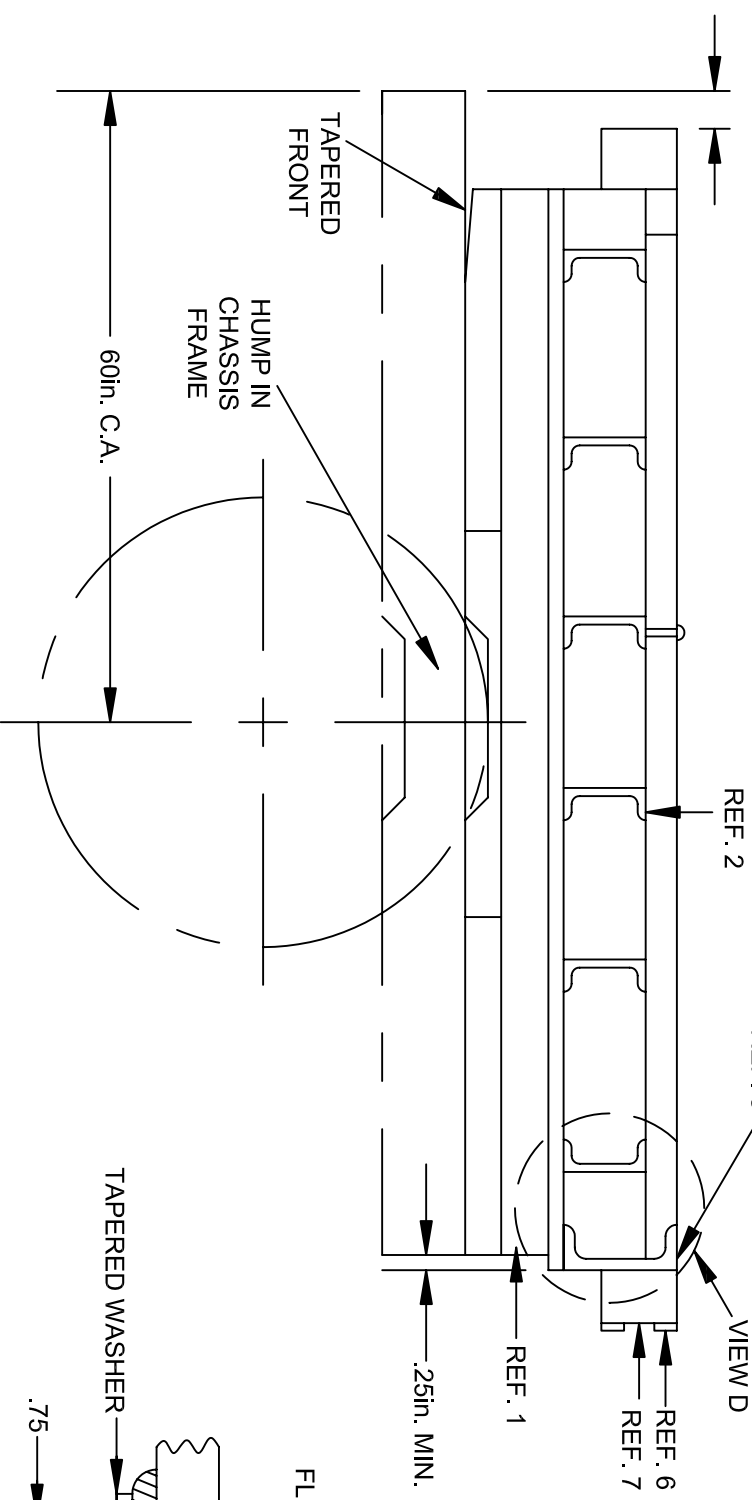
There shall be quick detach bracket per EQN-3A.



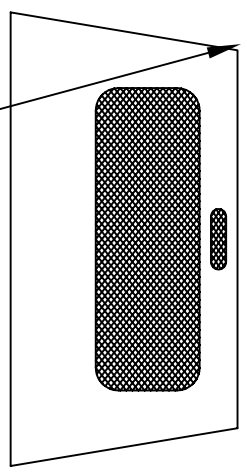
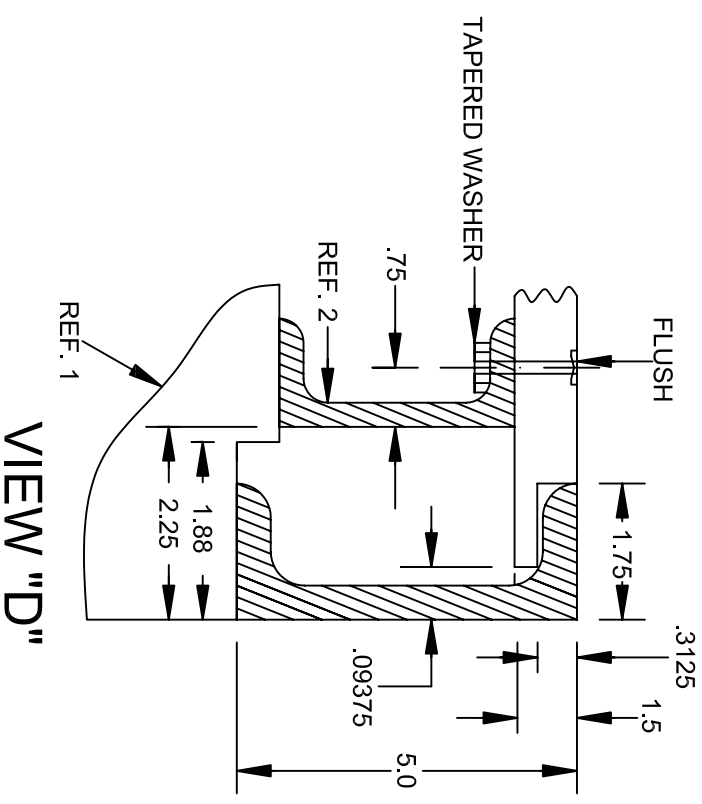
VIEW "A"



| PA DEPARTMENT OF TRANSPORTATION | | | |
|---------------------------------|----------|---|----------------|
| REVISIONS | | CREW CAB 17,000 & 11,000 lb. GWR TYPICAL FLAT BED BODY | |
| NO. | DATE | BY | |
| 1 | 05-04-07 | CJW | |
| 2 | 05-10-07 | KNH | DRAWN BY DLW |
| 3 | 08-01-08 | MHH | SCALE N/A |
| | | | DATE 12-17-97 |
| | | | CHECKED BY KGK |
| | | | SHEET 1 OF 4 |



NOTE:
ALL
DIMENSIONS
IN INCHES



WARNING LITE SHELF
WITH GUSSET

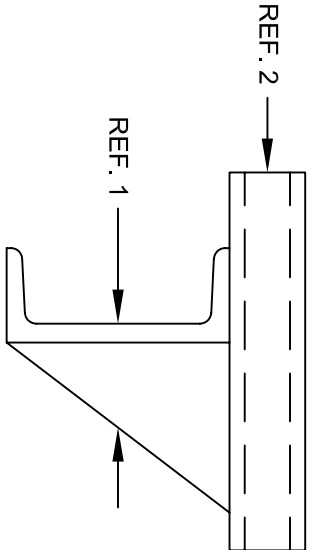
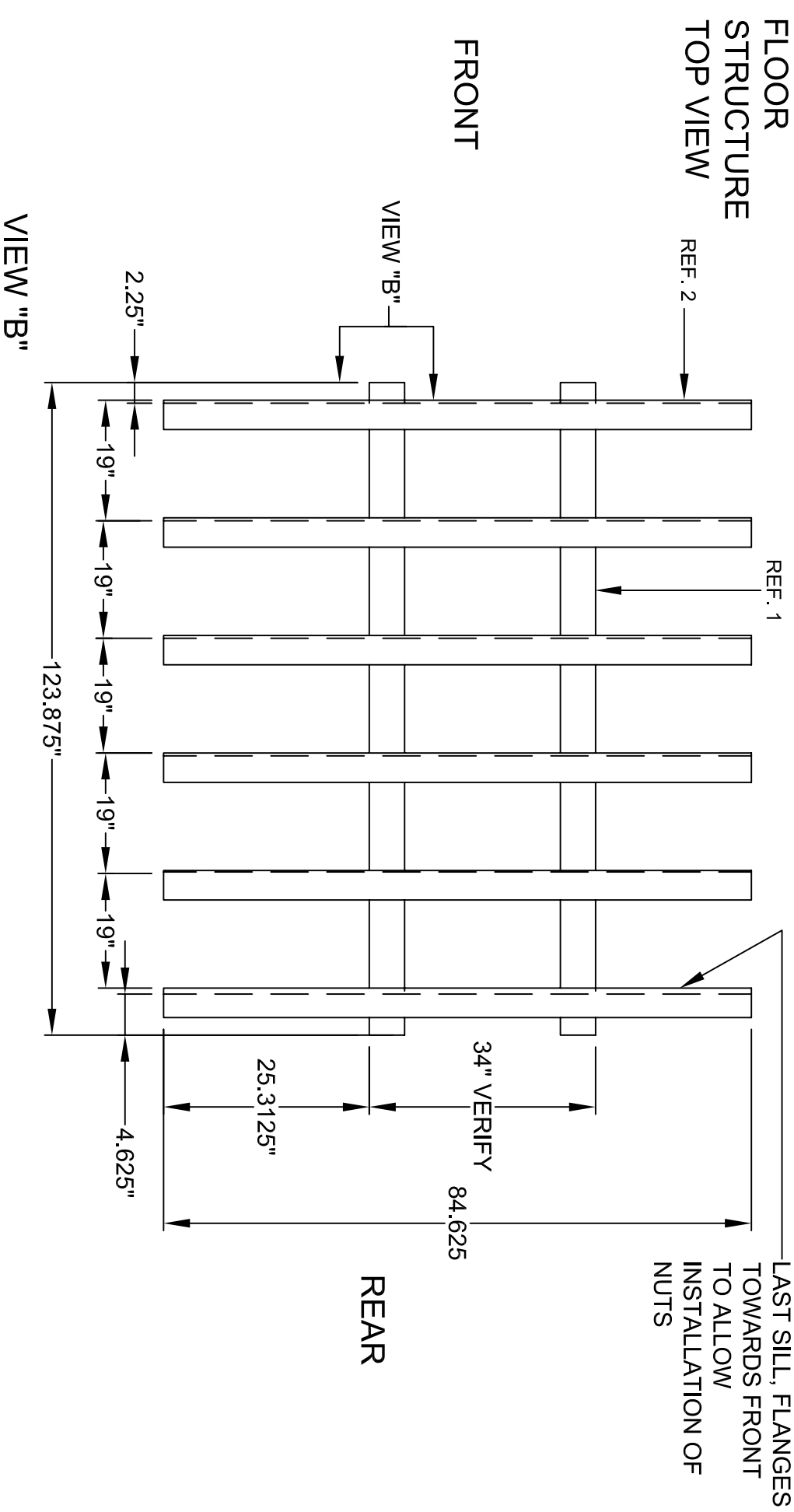


THE BULKHEAD EXPANDABLE METAL /
PREPUNCHED SHALL BE FULL WIDTH AND
HEIGHT WITH THE REAR WINDOW OF THE
VEHICLE. BULKHEAD SHALL BE
CONSTRUCTED IN SUCH A WAY AS TO NOT
OBSTRUCT LINE-OF-SIGHT WHEN USING SIDE
MIRRORS, REAR VIEW MIRROR OR THE THIRD
BRAKE LIGHT.

PA DEPARTMENT OF TRANSPORTATION

| REVISIONS | | | CREW CAB 17,000 & 11,000 GVWR TYPICAL FLAT BED BODY | | |
|-----------|----------|-----|--|-------|--------|
| NO. | DATE | BY | DATE | SCALE | SHEET |
| 1 | 05-04-07 | CJW | 12-17-97 | N/A | 2 OF 4 |
| 2 | 05-10-07 | KNH | | | |
| 3 | 08-01-08 | MHH | | | |
| 4 | | | | | |
| 5 | | | | | |

FLOOR STRUCTURE TOP VIEW



NOTE: ALL DIMENSIONS IN INCHES

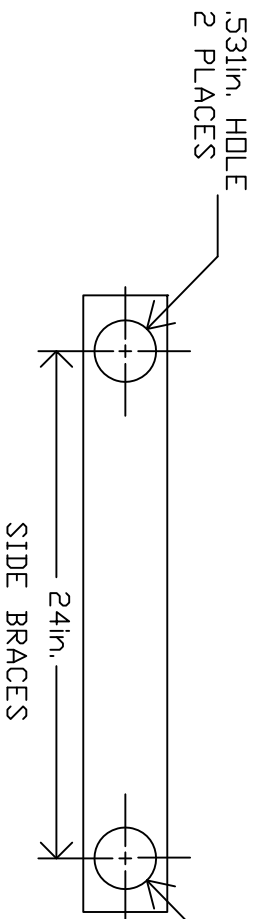
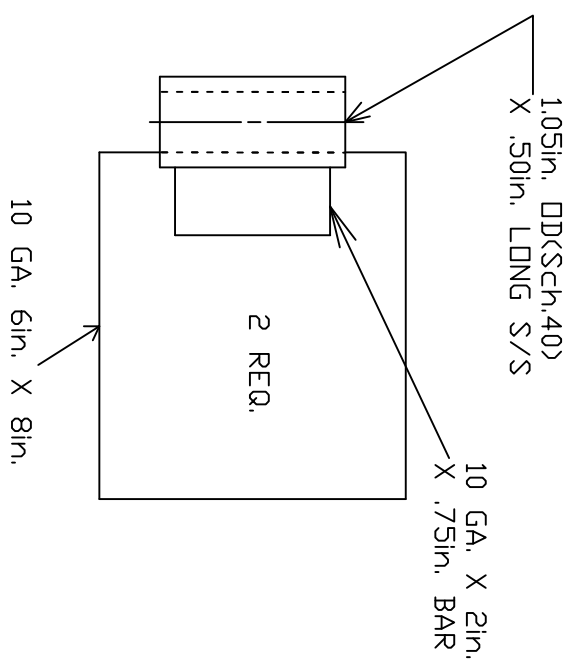
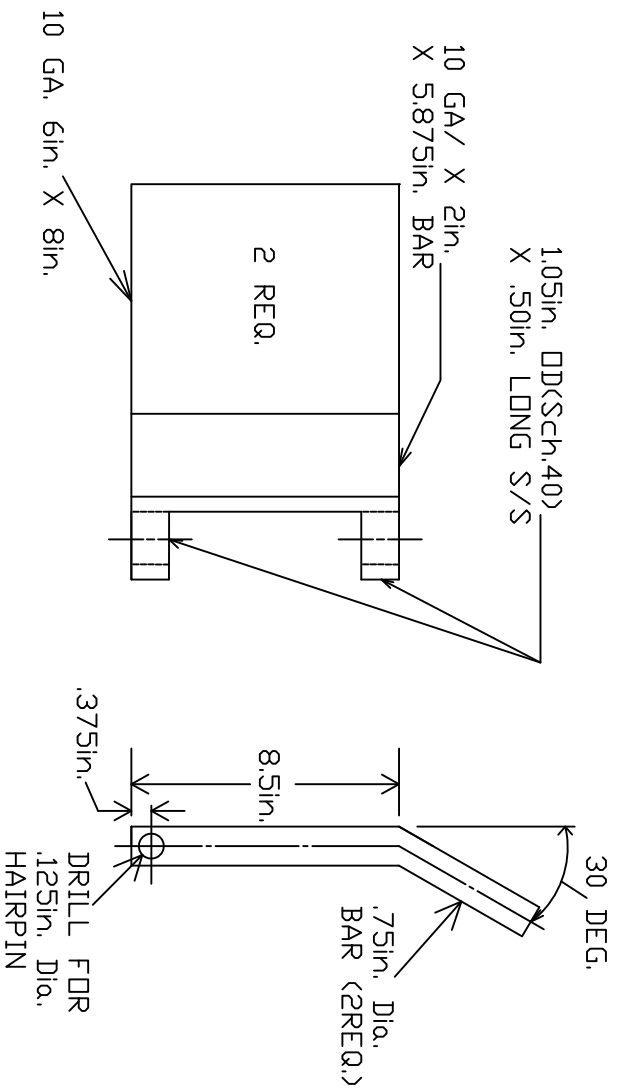
PA DEPARTMENT OF TRANSPORTATION

| REVISIONS | | | CREW CAB 17,000 & 11,000 GWR TYPICAL FLAT BED BODY | | |
|-----------|----------|-----|---|-------|--------|
| NO. | DATE | BY | DATE | SCALE | SHEET |
| 1 | 05-04-07 | CJW | 12-17-98 | N/A | EQN-2C |
| 2 | 05-10-07 | KNH | | | |
| 3 | 08-01-08 | MHH | | | |

| MK | REQ'D | DESCRIPTION |
|-----|-------|--|
| 1 | 2 | 5" CHANNEL @ 6.7#X.38" LG |
| 2 | 7 | 3" CHANNEL @ 4.1#X.84.625" LG |
| 3 | | |
| 4 | 12 | .1875" PLATE X 5.50" X 9" GUSSET |
| 5 | | |
| 6 | | |
| 7 | 2 | 5" CHANNEL @ 6.7#X97-.25" LG RUB RAIL |
| 8 | | |
| 9 | 2 | 5" CHANNEL @ 6.7#X85" LG |
| 10 | 2 | .25" X 1.56" FLAT X86 - .25" BINDER RAIL |
| 11 | 16 | 11GA 1.5" X 3.5 INSIDE DIM POCKET (FORMED) |
| 12 | 2 | |
| 12A | | |
| 13 | 2 | 3' X 3.5" X 20" OAK SILLS |
| 14 | | |
| 15 | | |
| 16 | 4 | .1875" PLT X 4.5" X 9" GUSSET FRONT REAR |
| 17 | 2 | |

PA DEPARTMENT OF TRANSPORTATION

| REVISIONS | | CREW CAB 17,000 & 11,000 lb. GVWR TYPICAL FLAT BED BODY | |
|-----------|---------|--|---|
| NO. | DATE | BY | |
| 1 | 4-20-07 | KNH | |
| 2 | 5-04-07 | CJW | SCALE N/A EQN-2C |
| 3 | 5-10-07 | KNH | DATE 12-17-97 CHG'D BY WHM SHEET 4 OF 4 |
| 4 | 8-01-08 | MHH | |

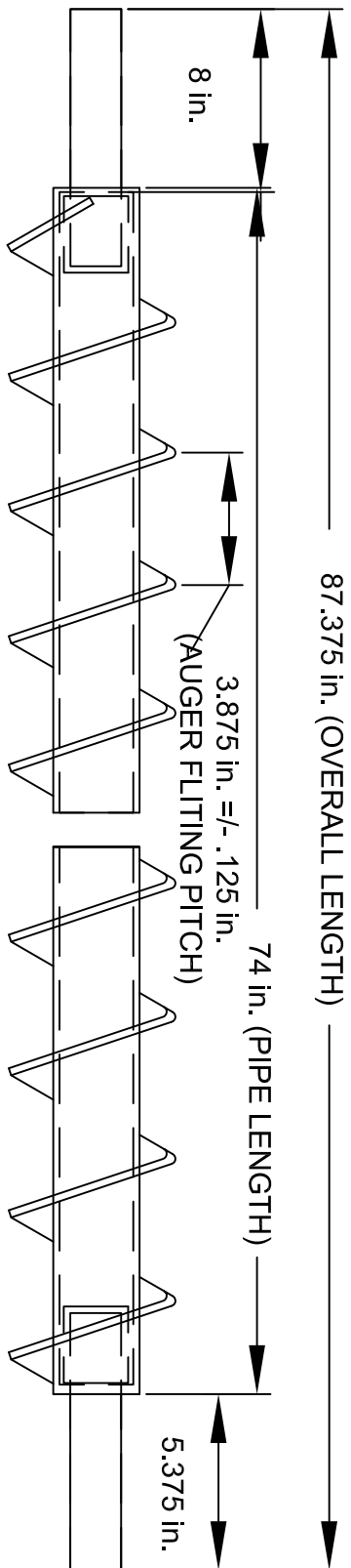


.125in. X 1.50in. X 26in. HANGER
BRACE (2 REQ.) W/TWD (2) .50in. X 1.25in.
STAINLESS STEEL BOLTS AND NUTS.
DRILL FOR .125in. HAIR PIN (STAINLESS
STEEL, LENGTH AS REQUIRED, QTY. 4).

- NOTES:
1. ALL DIMENSIONS IN INCHES
2. MATERIAL OF CONSTRUCTION: STAINLESS
STEEL THROUGHOUT, AISI TYPE 304.

PA DEPARTMENT OF TRANSPORTATION

| REVISIONS | | QUICK DETACH SPREADER KIT | |
|-----------|----------|------------------------------|-------|
| NO. | DATE | BY | SCALE |
| 1 | 01/05/98 | DLW | N/A |
| 2 | 05/23/02 | DWG | N/A |



HELICOID FLIGHT (RIGHT HAND)
 SINGLE CONTINUOUS SCREW TYPE
 (BAR SIZE, BEFORE ROLLING, TO BE
 SUCH THAT FLITING O.D. IS AS SHOWN
 IN END VIEW AT RIGHT, AND OUTER
 EDGE THICKNESS IS AS SHOWN IN
 FLITING THICKNESS SPECIFICATION)

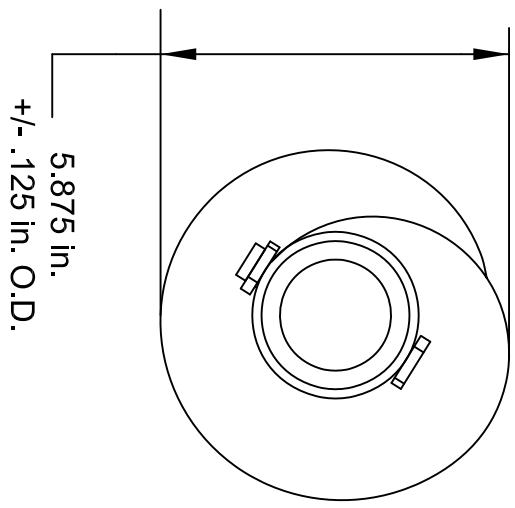
VIEW SHOWING COMPLETE
 AUGER WELDMENT

2 in. (2.375 O.D.)
 SCHEDULE 80 (.20 in. WALL)
 CARBON STEEL PIPE
 (PIPE SIZE E.R.W. TUBING ACCEPTABLE)

- SPECIFICATION NOTES**
- PIPE PORTIONED WORTH (WITH WELDED FITTING) TO BE STRAIGHT TO GIVE MAXIMUM OF .20 IN. TOTAL RUNOUT
 - BOTH STUB SHAFT CENTERLINES TO LIE ON PIPE CENTERLINE TO GIVE MAXIMUM OF .20 IN. TOTAL RUNOUT
 - ALL SURFACES OF SLEEVE, SHAFT, AND OTHER PIPE WHICH MAKE CONTACT WITH EACH OTHER TO BE COATED WITH ANTI-SEIZE COMPOUND
 - SHAFT IS REMOVED, AND NOT USED, WHEN AUGER IS USED IN A DIRECT DRIVE APPLICATION

| DO NOT SCALE DRAWING TOLERANCES (UNLESS OTHERWISE NOTED) | |
|--|--|
| FLAME CUTTING, NIBBLING & WELDING | +/- .060 |
| SHEARING & FORMING | +/- .030 |
| PUNCHING | +/- .020 |
| HOLE DIAMETERS | + .015/- .005 |
| ANGLES | +/- 2 DEG |
| DECIMAL MACHINING | 0.0- +/- .040 0.00- +/- .020 0.000- +/- .005 |

IMPLIED TOLERANCES DO NOT APPLY
 TO REFERENCE DIMENSIONS



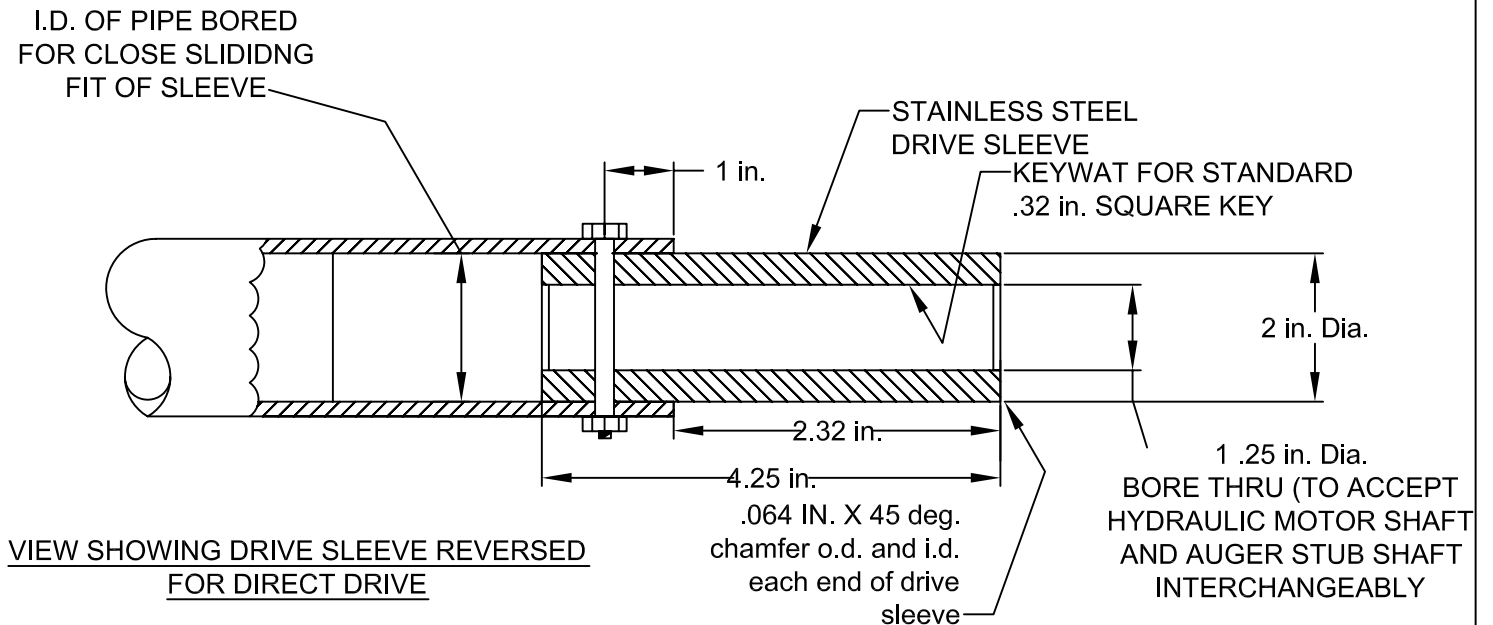
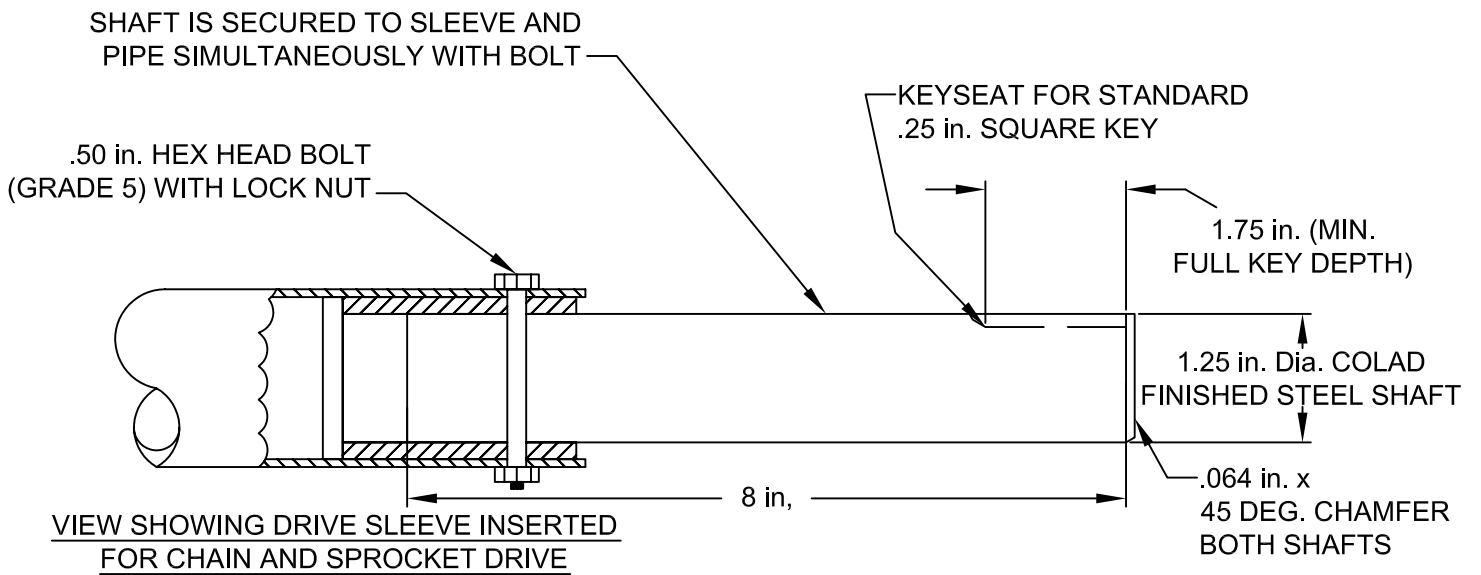
PA DEPARTMENT OF TRANSPORTATION

REVISIONS

| NO. | DATE | BY | DESCRIPTION |
|-----|----------|-----|-------------|
| 1 | 01-09-98 | DLW | |
| 2 | 05-28-02 | DWG | |
| 3 | 9-14-07 | BAG | |

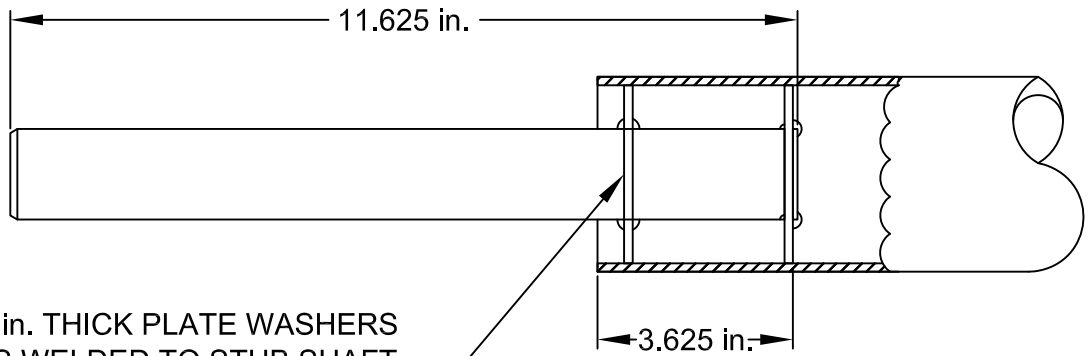
PennDOT SPREADER AUGER DETAIL
 (S/S & RUBBER TROUGH)

| | | | | |
|----------|----------|---------|-----|--------------|
| DRAWN BY | DLW | SCALE | N/A | EQU-6 |
| DATE | 01-09-98 | CHKD BY | WHM | SHEET 1 OF 3 |



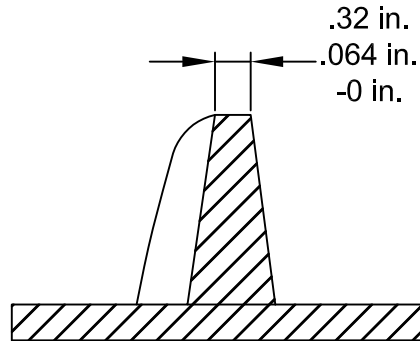
PA DEPARTMENT OF TRANSPORTATION

| REVISIONS | | | PennDOT SPREADER AUGER DETAIL (S/S & RUBBER THROUGH) | | | |
|-----------|----------|-----|---|----------|-----|--------------|
| NO. | DATE | BY | DRAWN BY | SCALE | N/A | EQN-6 |
| 1 | 01-09-98 | DLW | | | | |
| 2 | 05-28-02 | DWG | DLW | | | |
| 3 | 9-20-07 | BAG | DLW | 01-09-98 | WHM | SHEET 2 OF 3 |



.125 in. THICK PLATE WASHERS
CONTINUOUS WELDED TO STUB SHAFT
AND AUGER PIPE

WASHERS TO FIT I.D. OF PIPE WITH
CLOSE SLIDING FIT SO NO FLEXING
OF SHAFT EXISTS AFTER FINAL WELDING



**FLITING THICKNESS SPECIFICATION
(BEFORE HARDSURFACING)**

.125 in. (MINIMUM)
HARDSURFACE

CONTINUOUS WELD
BOTH SIDES OF
FLITING



OUTER FLITE PERIPHERY CONTINUOUSLY
HARDSURFACED WITH ABRASIVE RESISTANCE
WELDING ROD (OR WIRE) EQUIVALENT TO
STUDY 121 (ROCKWELL HARDNESS C-44),
AND TO BE FULL WIDTH OF FLITING
THICKNESS AT OUTEREDGE

WELDING AND HARDSURFACE SPECIFICATION

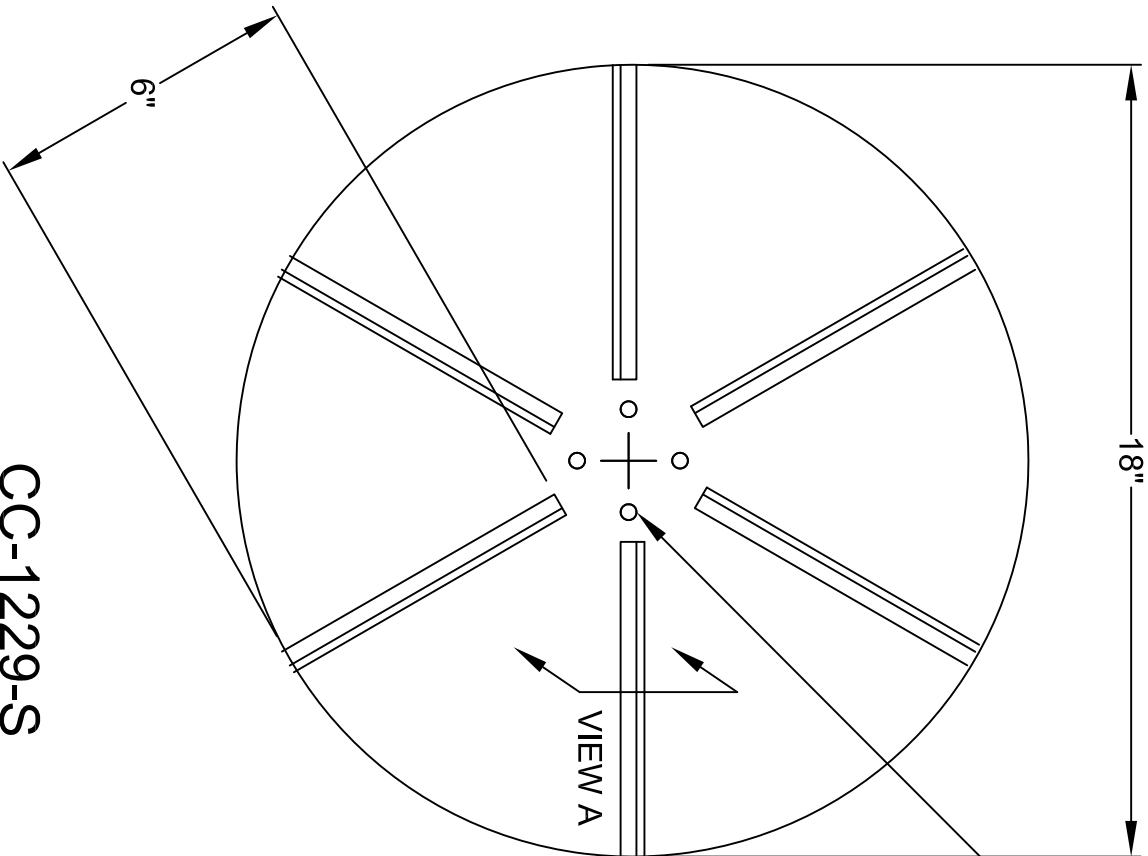
PA DEPARTMENT OF TRANSPORTATION

REVISIONS

| NO. | DATE | BY |
|-----|----------|-----|
| 1 | 1-09-98 | DLW |
| 2 | 05-28-02 | DWG |
| 3 | 09-20-07 | BAG |

PennDOT SPREADER AUGER DETAIL
(S/S & RUBBER THROUGH)

| | | | | |
|----------|----------|----------|-----|--------------|
| DRAWN BY | DLW | SCALE | N/A | EQN-6 |
| DATE | 01-09-98 | CHK'D BY | WHM | SHEET 3 OF 3 |

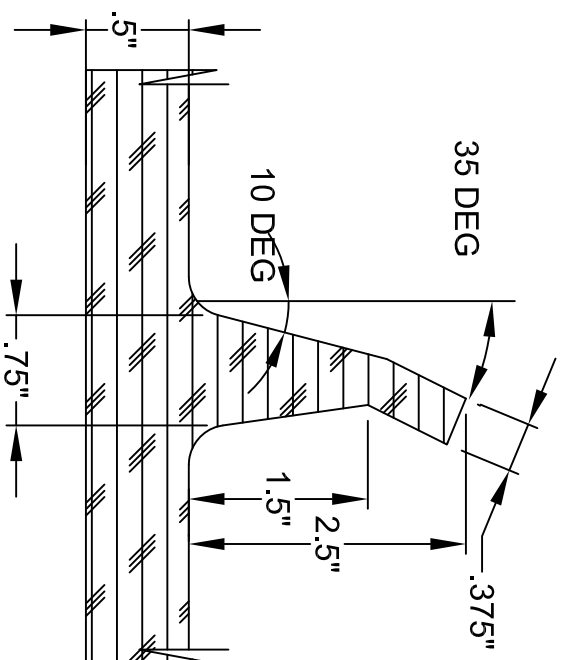


CC-1229-S

.375 Dia. HOLE REINFORCED WITH STEEL WASHERS (4) PLACES ON 4" B.C.

NOTES:

1. MATERIAL 80 DURO. URETHANE
2. WEIGHT 8.1 lbs. PER PIECE
3. ROTATION: COUNTER CLOCKWISE
4. ALL DIMENSIONS IN INCHES.



PA DEPARTMENT OF TRANSPORTATION

REVISIONS

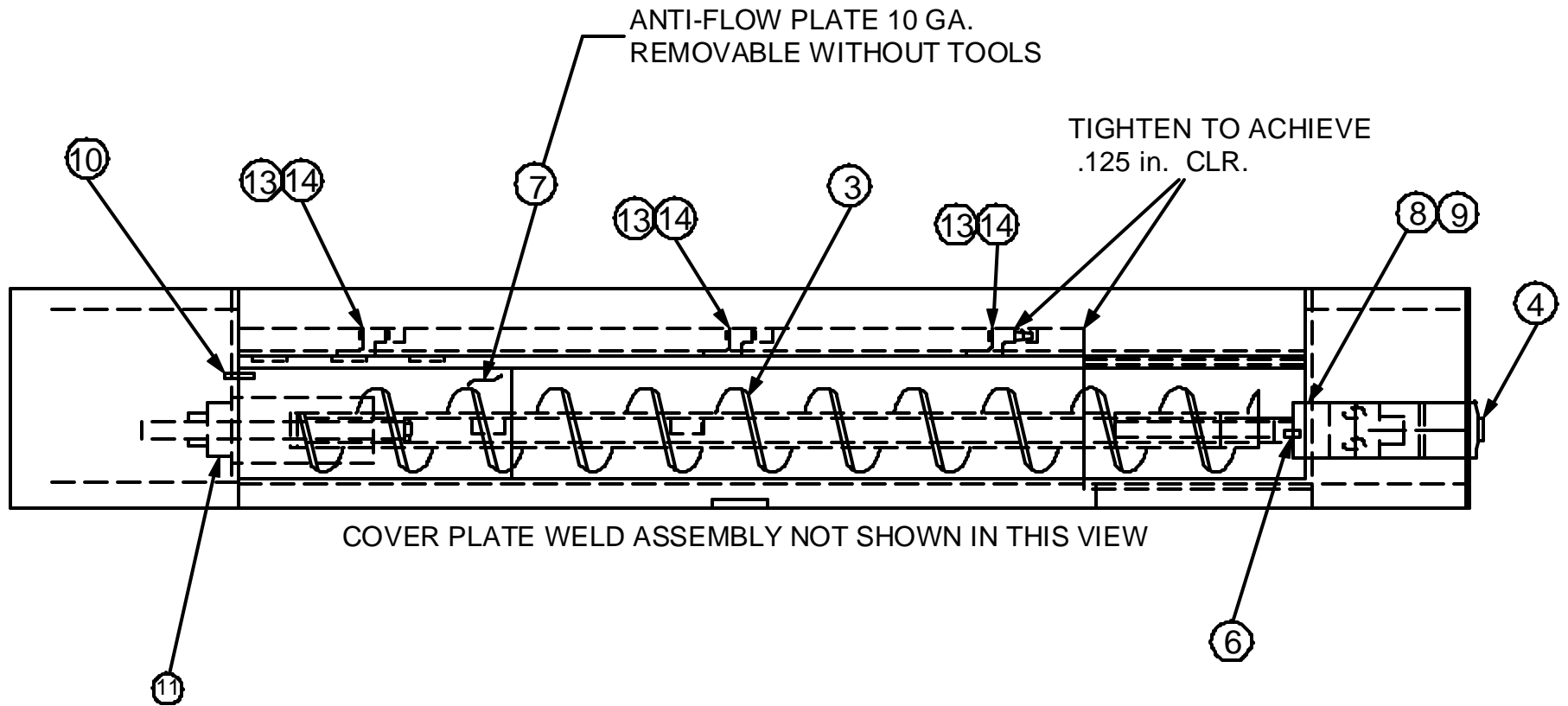
| NO. | DATE | BY | SPINNER / SPREADER TAILGATE URETHANE |
|-----|----------|-----|---|
| 1 | 06-03-02 | DWG | |
| 2 | 05-23-07 | CJW | |
| 3 | | | |

C.U.E. Inc
 11 Leonberg Township
 16066 U.S.A.

| SCALE | EQN-9B |
|-------|--------|
| N/A | |

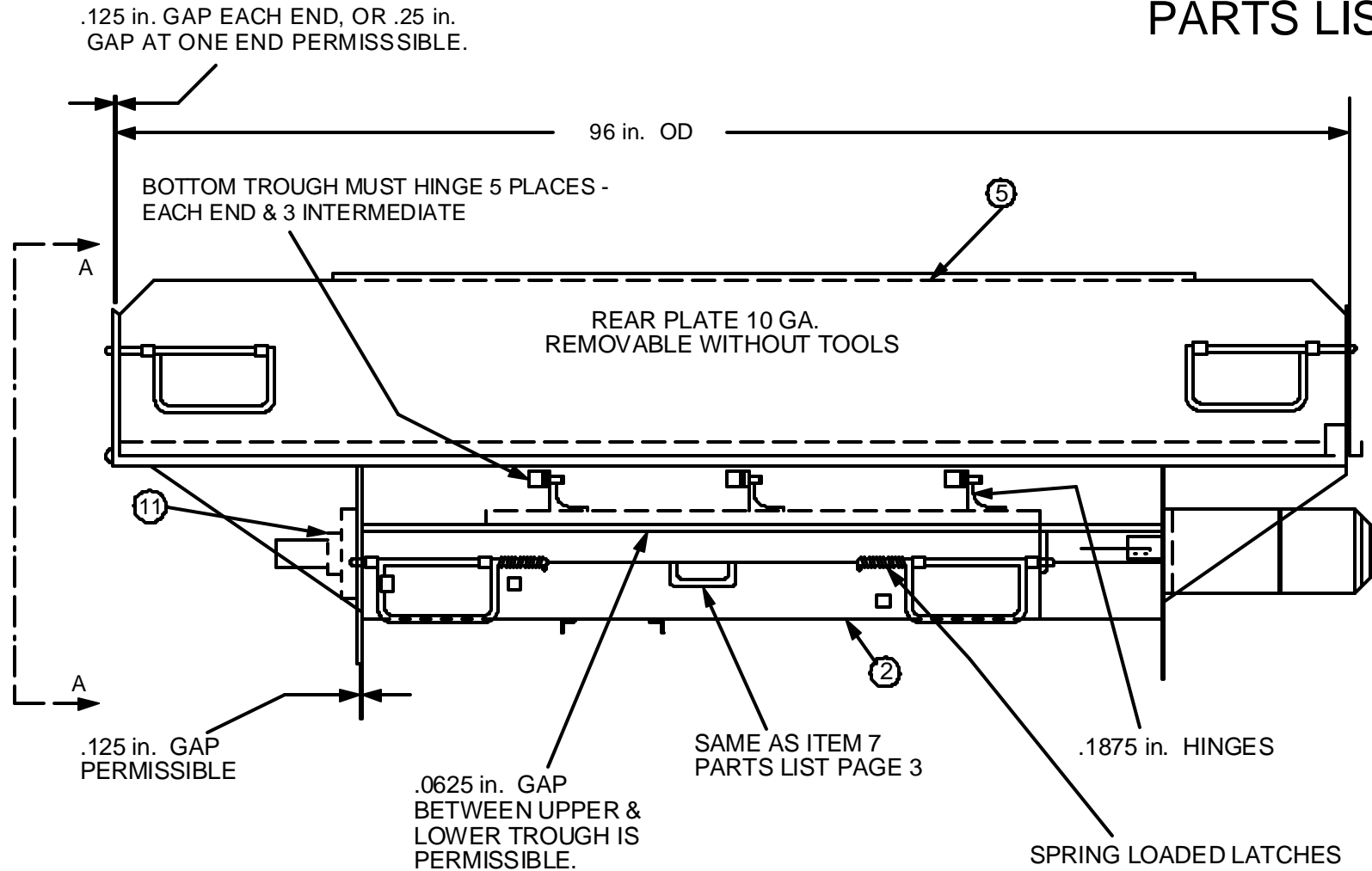
| DATE | CHK'D BY | SHEET |
|----------|----------|--------|
| 02-03-98 | WHM | 1 OF 1 |

PARTS LIST A



| REVISIONS | | | COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF TRANSPORTATION | | | |
|-----------|----------|-----|--|-----|---------------|----------|
| NO. | DATE | BY | STAINLESS STEEL SPREADER WITH QUICK DISCONNECT SPINNER | | MATERIAL | |
| 1 | 01/10/96 | SWW | | | | |
| 2 | 02/03/98 | DLW | | | | |
| 3 | 06/03/02 | DWG | DRAWN BY | DLW | SCALE | N / A |
| 4 | | | CHKD | WHM | DATE | 02/03/98 |
| 5 | | | | | | |
| | | | | | DRW NO. EQN-9 | |
| | | | | | SHEET 1 OF 5 | |

PARTS LIST A

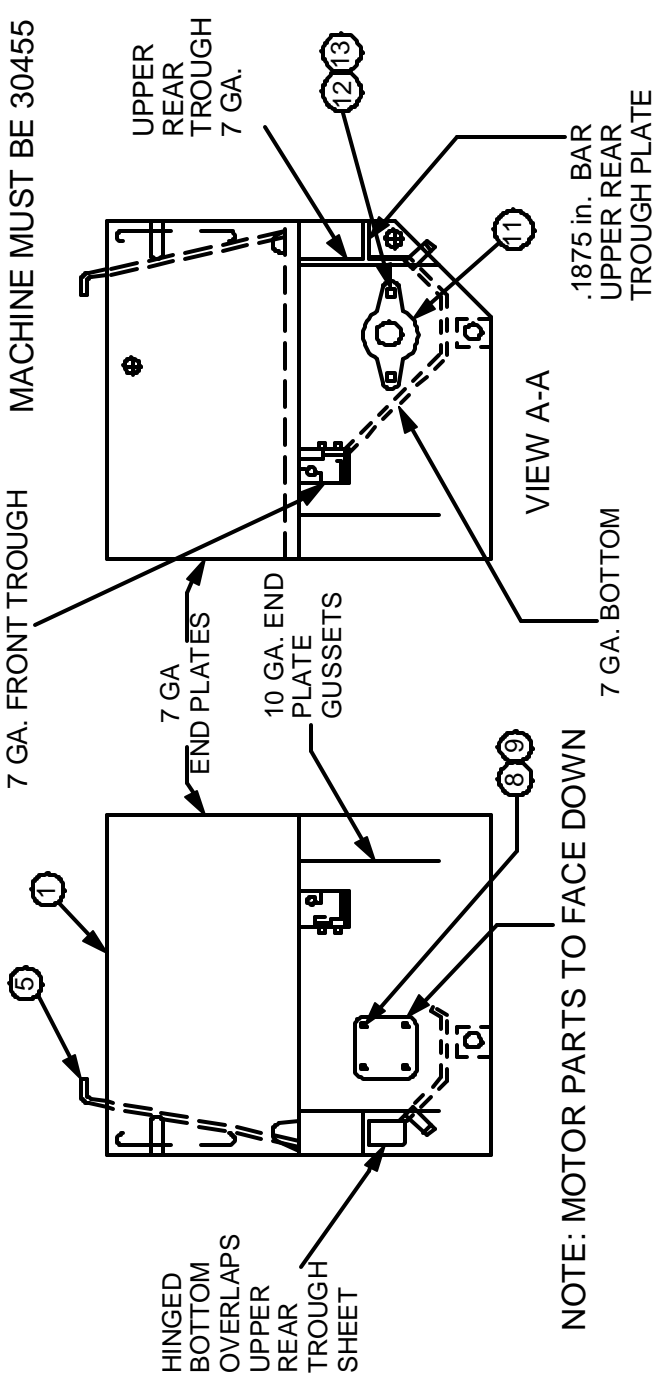


NOTE:

OVERALL HEIGHT AND DEPTH 18 in.
 INSIDE TROUGH WIDTH OPENING 81 in.
 + or - .50 in.

| REVISIONS | | | COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF TRANSPORTATION | | | |
|-----------|----------|-----|--|---------------|---------------|--|
| NO. | DATE | BY | STAINLESS STEEL SPREADER WITH QUICK DISCONNECT SPINNER | | MATERIAL | |
| 1 | 01/10/96 | SWW | | | | |
| 2 | 02/03/98 | DLW | | | | |
| 3 | 06/03/02 | DWG | DRAWN BY DLW | SCALE N / A | | |
| 4 | | | CHKD WHM | DATE 02/03/98 | DRW NO. EQN-9 | |
| 5 | | | | | SHEET 2 OF 5 | |

PARTS LIST A



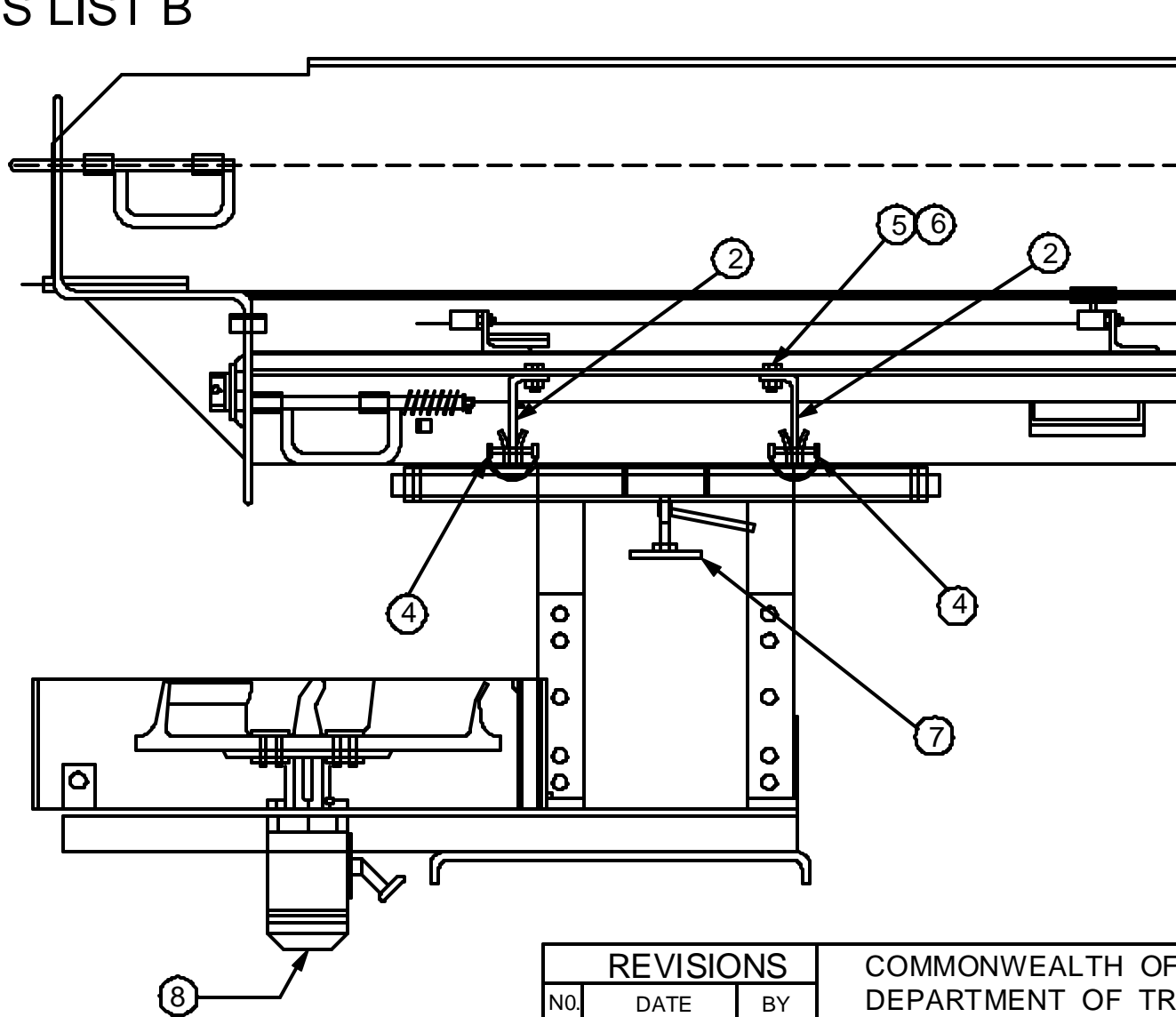
PARTS LISTING FOR PAGES 1, 2, & 3.

| PARTS LIST A | |
|--------------|--|
| ITEM | QTY. NAME |
| 2 | 1 LOWER TROUGH ASSEMBLY |
| 3 | 1 AUGER ASSEMBLY |
| 4 | 1 AUGER MOTOR |
| 5 | 1 COVER PLATE ASSEMBLY |
| 6 | 1 SOCHD CUP PT SET SCR .3125 in. - 18 NC x .25 in. |
| 7 | 1 GATE OPENING BAFFLE WELD ASSEMBLY |
| 8 | 4 HEX HEAD CAP SCREW .375 in. - 16 NC x .75 in. |
| 9 | 4 LOCK WASHER .375 in. |
| 10 | 1 HAIRPIN COTTER (.20 in. x 1.875 in.) |
| 11 | 1 FLANGED BALL BEARING UNIT 2 BOLT MOUNTING 1.25 in. |
| 12 | 3 HEX HEAD CAP SCREW (.375 in. - 16 NC x 1.50 in.) |
| 13 | 6 HEX HEAD LOCK NUT (.375 in. - 16 NC - GRIPCO) |
| 14 | 3 HEX HEAD CAP SCREW (.375 in. - 16 NC x 1 in.) |

| REVISIONS | | COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF TRANSPORTATION | |
|-----------|----------|--|--|
| NO. | DATE | BY | |
| 1 | 01/10/96 | SWW | |
| 2 | 02/03/98 | DLW | |
| 3 | 06/03/02 | DWG | |
| 4 | | CHKD | |
| 5 | | | |

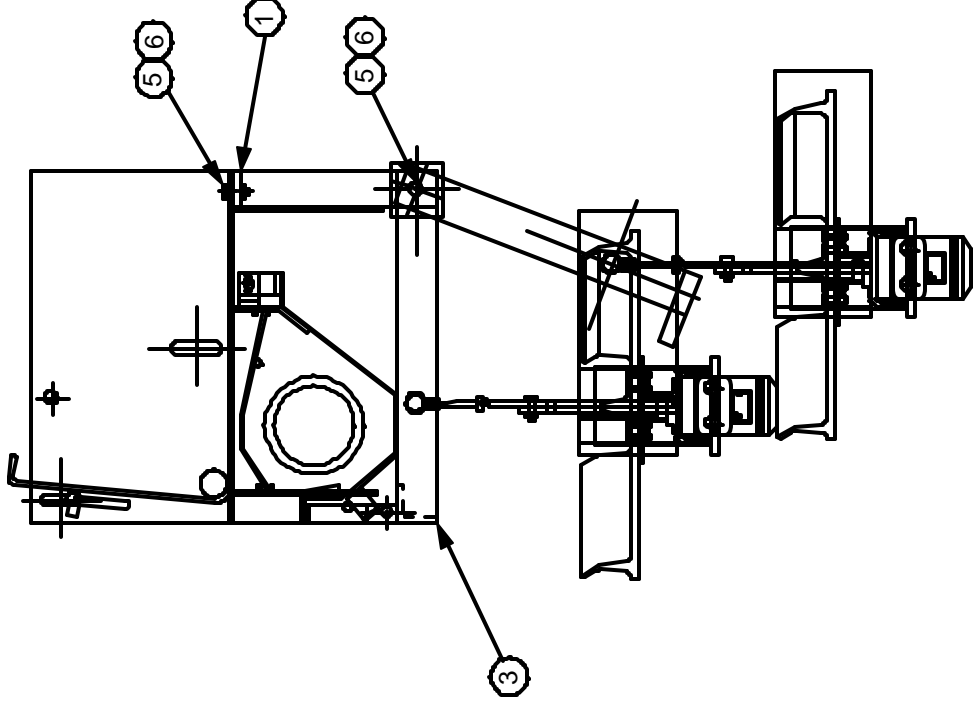
| | | | | |
|--|----------|-------|-----|--------------|
| DRAWN BY | DLW | SCALE | N/A | MATERIAL |
| DATE | 02/03/98 | | | |
| STAINLESS STEEL SPREADER WITH QUICK DISCONNECT SPINNER | | | | DRW NO. |
| | | | | EQN-9 |
| | | | | SHEET 3 OF 5 |

PARTS LIST B



SPINNER MUST HINGE DOWN SEPARATELY FROM BOTTOM TROUGH. ALL BRACKETS MUST BE BOLTED TO SPREADER AND PINS MUST BE ATTACHED WITH CHAINS.

| REVISIONS | | | COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF TRANSPORTATION | | |
|-----------|----------|-----|--|---------------|---------------|
| NO. | DATE | BY | STAINLESS STEEL SPREADER WITH QUICK DISCONNECT SPINNER | | |
| 1 | 01/10/96 | SWW | | | |
| 2 | 02/03/98 | DLW | | | |
| 3 | | | DRAWN BY DLW | SCALE N / A | MATERIAL |
| 4 | | | CHKD WHM | DATE 02/03/98 | DRW NO. EQN-9 |
| 5 | | | | | SHEET 4 OF 5 |



PARTS LISTING FOR PAGES 4.

| ITEM QTY. | | NAME |
|-----------|---|---|
| 1 | 1 | FRONT BRACKET WELD ASSEMBLY (SHOWN 5 OF 5) |
| 2 | 2 | REAR CLIP |
| 3 | 1 | HANGER - HINGE WELD ASSEMBLY |
| 4 | 1 | SAFETY SNAP PIN |
| 5 | 6 | .50 in. - 13 NC LOCKNUT GRIPCO SS |
| 6 | 6 | .50 in. - 13 NC x 1.25 in. LG HEX HEAD CAP SCREW SS |
| 7 | 1 | .50 in. ROUND STOCK SS (HANDLE) |
| 8 | 1 | SPINNER MOTOR |
| 9 | 1 | SPINNER REF: EQN-9B |

PARTS LIST B

REVISIONS

| NO. | DATE | BY |
|-----|----------|------|
| 1 | 01/10/96 | SWW |
| 2 | 02/03/98 | DLW |
| 3 | 06/03/02 | DWG |
| 4 | | CHKD |
| 5 | | |

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STAINLESS STEEL SPREADER WITH
QUICK DISCONNECT SPINNER

| DRAWN BY | DLW | SCALE | N/A | MATERIAL |
|----------|-----|-------|----------|---------------|
| CHKD | WHM | DATE | 02/03/98 | DRW NO. EQN-9 |
| | | | | SHEET 5 OF 5 |

DRIVE BEARINGS:

THE FOLLOWING SHALL INDICATE MINIMUM REQUIREMENTS INCLUDING ALL GENUINE PARTS, ACCESSORIES, EQUIPMENT, AND SAFETY FEATURES CONSIDERED STANDARD, WHETHER MENTIONED HEREIN OR NOT. THE VEHICLE SHALL COMPLY WITH ALL CURRENT APPLICABLE FEDERAL SAFETY STANDARDS AND OSHA REQUIREMENTS.

THE PURPOSE OF THESE SPECIFICATIONS IS TO DESCRIBE A BEARING CAPABLE OF BEING USED ON OUR TAILGATE SPREADERS.

UNLESS OTHERWISE SPECIFIED, EACH UNIT SHALL INCLUDE ALL SPECIFIED PARTS, MADE AVAILABLE FOR THE INDICATED MODEL BY THE EQUIPMENT MANUFACTURER.

SPECIFIED ITEMS NOT AVAILABLE THROUGH THE EQUIPMENT MANUFACTURER SHALL CONFORM TO THE BEST QUALITY STANDARDS KNOWN TO THAT PARTICULAR INDUSTRY.

EACH UNIT SHALL BE CLEAN, LUBRICATED, AND SERVICED READY FOR IMMEDIATE OPERATION.

PERFORMANCE:

THE PROPOSED UNIT SHALL BE IDENTICAL WITH THE STANDARD OR IMPROVED MODEL AND A CURRENT PRODUCTION UNIT IN USE BY THE INDUSTRY FOR THE PAST TWELVE MONTHS PRECEDING THIS BID OPENING.

IT SHALL BE THE RESPONSIBILITY OF THE BIDDER TO ASSURE THAT THE PROPOSED EQUIPMENT CONFORMS TO THE SPECIFICATIONS AND PERFORMS SATISFACTORILY ACCORDING TO THESE SPECIFICATIONS.

GRADE:

REFERENCE:AMERICAN FRICTION BEARING MANUFACTURERS ASSOCIATION #1, PRECISION

TYPE:

SELF-ALIGNING, ANTI-FRICTION, THRUST, RE-LUBE TYPE.

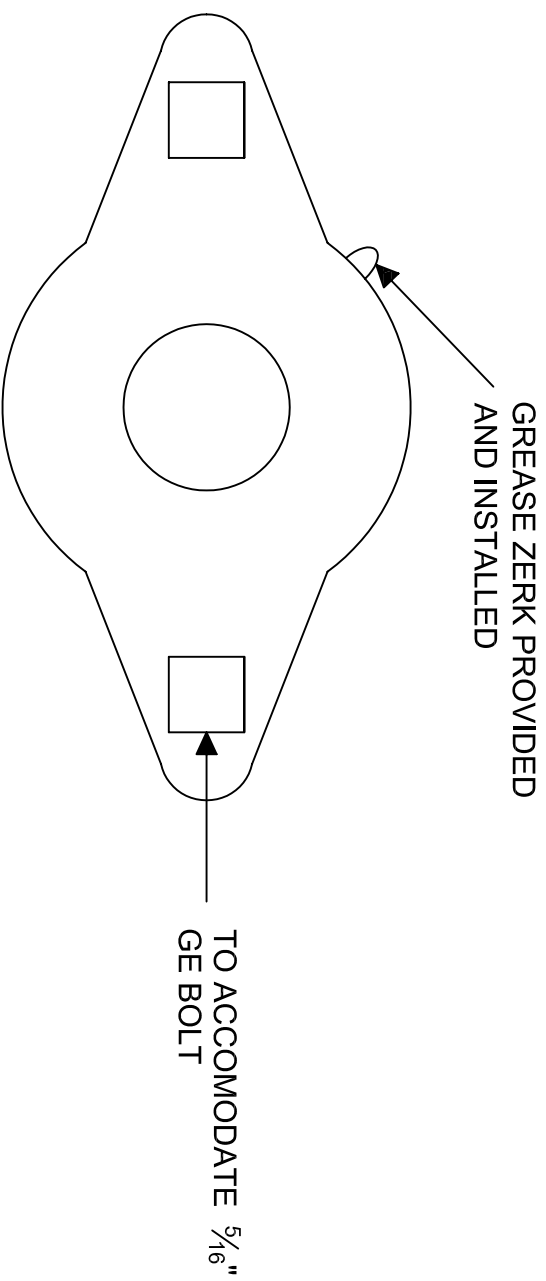
MOUNTING:

2 BOLT UNIT FLANGED UNIT TYPE. SEE DRAWING.

| PA DEPARTMENT OF TRANSPORTATION | | | |
|---------------------------------|------|------------------------------|--|
| REVISIONS | | SPREADER BEARING INFORMATION | |
| NO. | DATE | BY | |
| 1 | | KNH | |
| 2 | | | |
| 3 | | | |

| | | | | | |
|----------|----------|---------|-----|-------|--------|
| DRAWN BY | BAG | SCALE | N/A | EQN-# | 10A |
| DATE | 01-08-08 | CHKD BY | DMA | SHEET | 1 OF 2 |

MOUNTINGS:
 2 BOLT (SQUARE HOLES) FLANGED UNIT TYPE. SEE DRAWING.



SHAFT DIAMETER: 1"

LOCKING: RETAINING COLLAR SHALL BE ECCENTRIC WITH SET SCREW.

HOUSING: CASE, DUCTILE OR MALLEABLE IRON.

REFERENCE: SST MODEL #SAFTD-205-166-Q, IPTCI MODEL SALF205 16H4 OVEQUAL

NOTE: ALL SET SCREWS HOLDING BEARING COLLARS SHALL BE TREATED WITH LOCKTITE AND PROPERLY TORQUED.

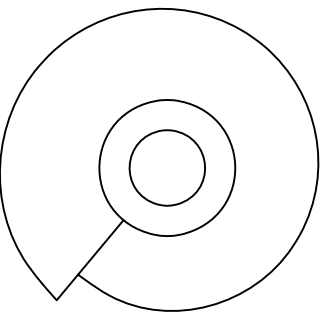
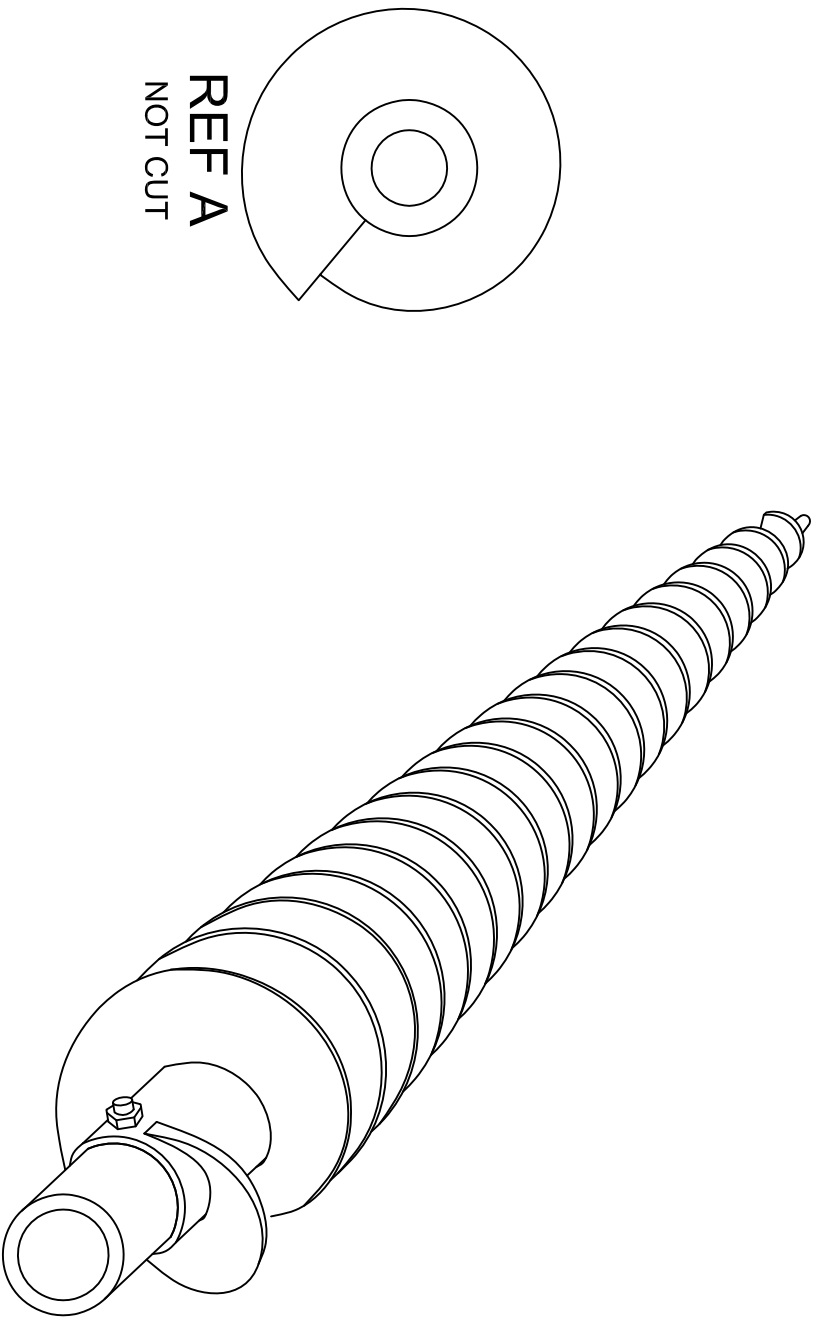
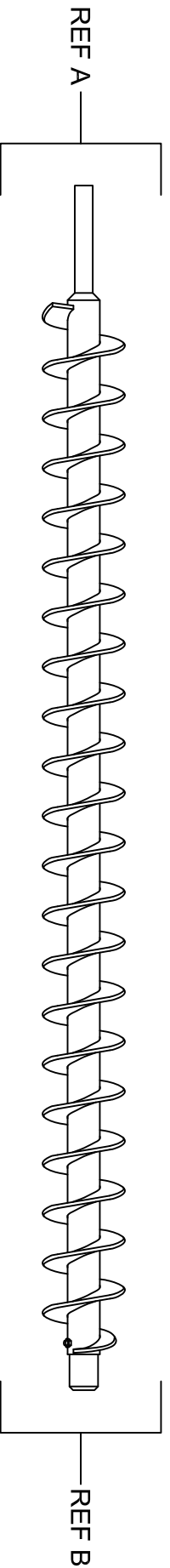
| REVISIONS | | | SPREADER BEARING INFORMATION | |
|-----------|------|-----|------------------------------|-------|
| NO. | DATE | BY | SCALE | EQN-# |
| 1 | | KNH | | |
| 2 | | | | |
| 3 | | | | |

| | | | | | |
|----------|----------|------------|-----|-------|--------|
| DRAWN BY | BAG | CHECKED BY | DMA | SHEET | 2 OF 2 |
| DATE | 01-08-08 | SCALE | N/A | EQN-# | 10A |

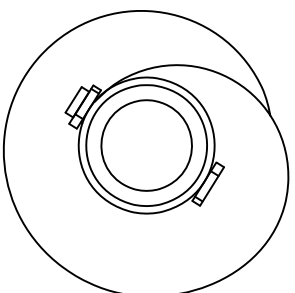
PA DEPARTMENT OF TRANSPORTATION

SPREADER BEARING INFORMATION

| | | | | |
|-----|------|-----|-------|-------|
| NO. | DATE | BY | SCALE | EQN-# |
| 1 | | KNH | | |
| 2 | | | | |
| 3 | | | | |



REF A
NOT CUT



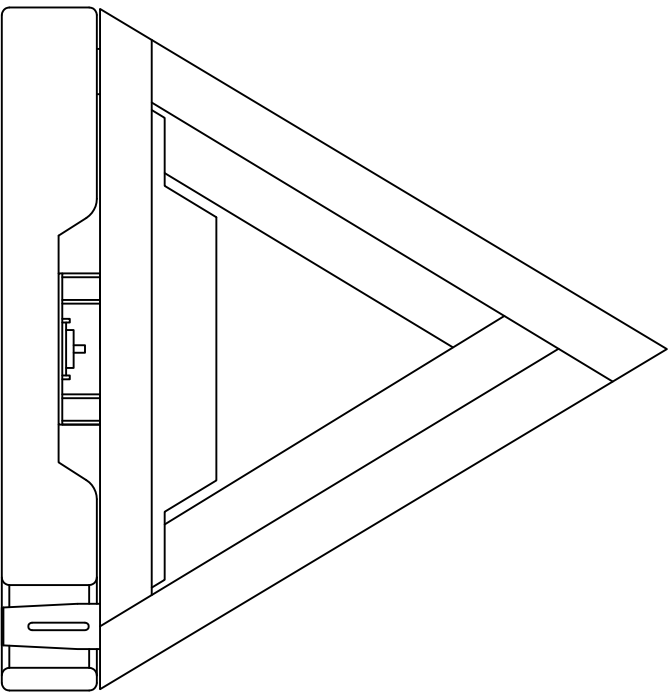
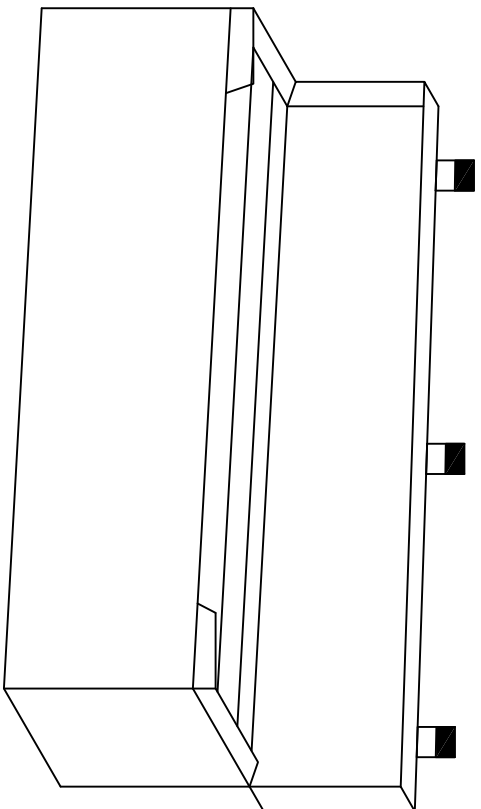
REF B
BEVEL CUT ON MOTOR
SIDE OF AUGER

PA DEPARTMENT OF TRANSPORTATION

| REVISIONS | | | BEVEL CUT AUGER | | |
|-----------|------|----|-----------------|--|--|
| NO | DATE | BY | | | |
| 1 | | | | | |
| 2 | | | | | |
| 3 | | | | | |

| | | | | | |
|----------|--|----------|----------|-----|--------------|
| DRAWN BY | | HMR | SCALE | N/A | EQN-29 |
| DATE | | 08-08-17 | CHG'D BY | | SHEET 1 OF 1 |

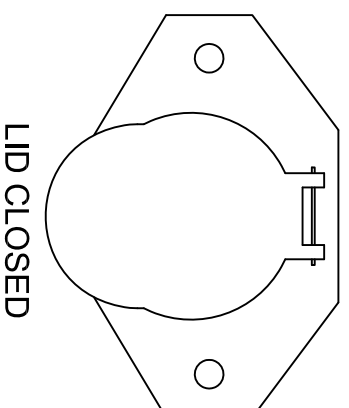
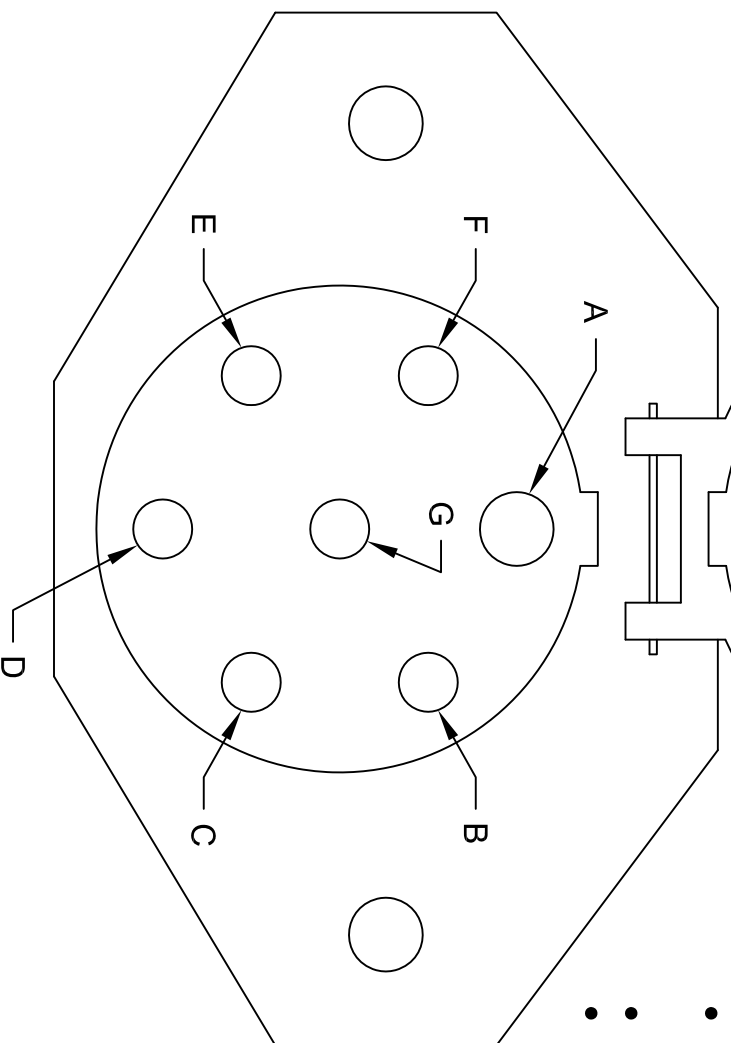
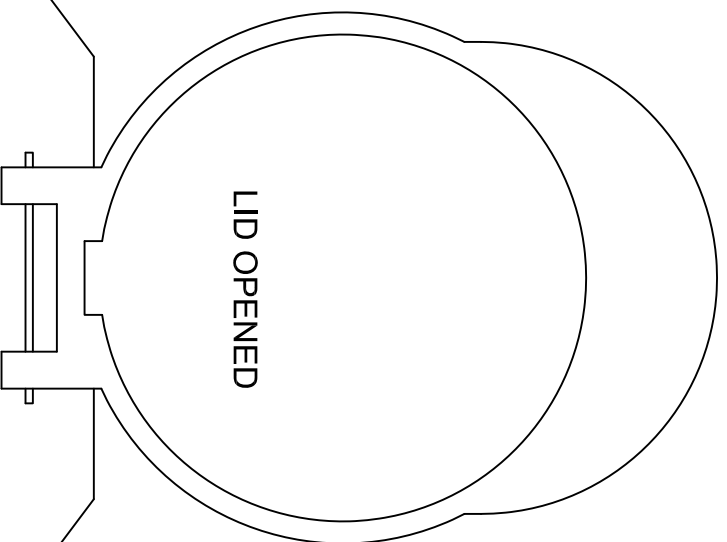
JAMES KING & CO.
 TRIANGLE PART #1005
 OR APPROVED EQUAL



PA DEPARTMENT OF TRANSPORTATION

| REVISIONS | | | DRAWN BY | | |
|-----------|----------|-----|----------|----------|---------|
| NO. | DATE | BY | SCALE | DATE | SHEET |
| 1 | 05-31-07 | KNH | W/HM | 04-23-92 | 1 OF 1 |
| 2 | 07-20-09 | TOD | N/A | RED | EQN-66A |
| 3 | 07-13-17 | HMR | | | |

**TRIANGLE STORAGE BOX AND
 BRACKET**



LID OPENED

NOTES:

- VIEW OF FEMALE CONNECTOR, STANDING AT REAR OF TRUCK, LOOKING AT THE CONNECTOR.
- BRAKE LIGHTS SHALL FUNCTION WITH TURN SIGNALS.
- WIRE SHALL BE 7 WAY (1-10 GAUGE; 6-12 GAUGE) PER ATA COLOR CODE, CLAMPED EVERY 18" MINIMUM.
- CONNECTION SHALL BE MADE USING FACTORY OEM TRAILER WIRING HARNESS.
- ALL CONNECTIONS SHALL BE WATER TIGHT.
- ALL PINS SHALL BE ROUND STYLE.

WIRING NOTES:

- A. WHITE: GROUND - 10
- B. BLACK: MARKER -12
- C. YELLOW: LEFT TURN & BRAKE - 12
- D. RED: STOP / BRAKE -12
- E. GREEN: RIGHT TURN & BRAKE - 12
- F. BROWN: TAIL - 12
- G. BLUE: ABS -12

PA DEPARTMENT OF TRANSPORTATION

REVISIONS

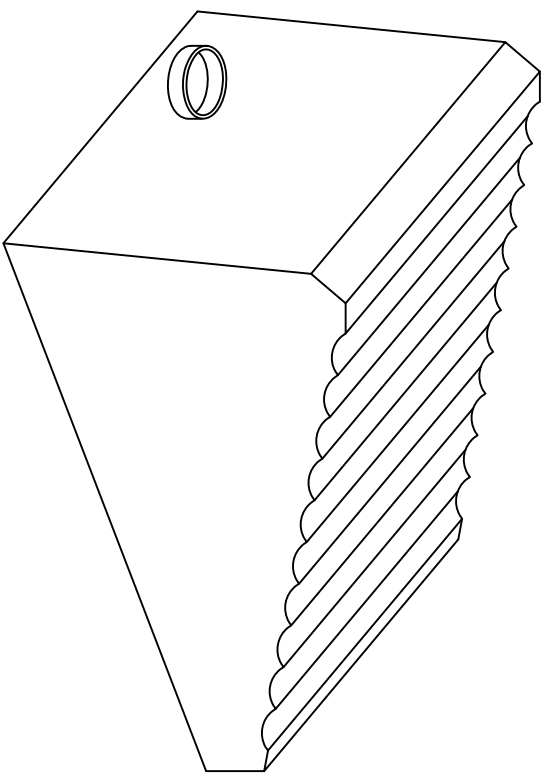
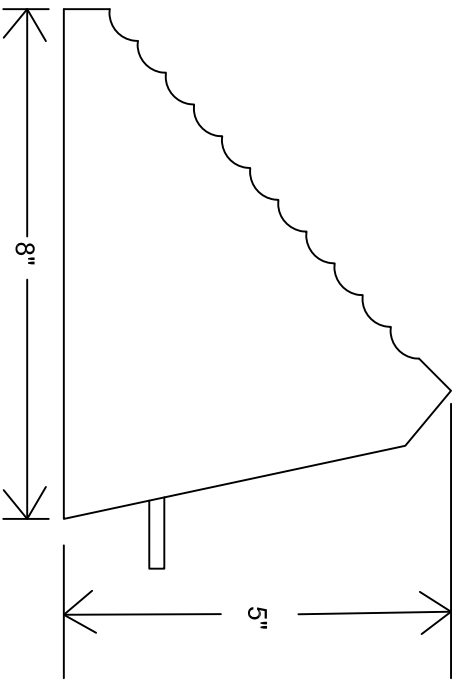
| NO. | DATE | BY | DESCRIPTION |
|-----|----------|-----|---|
| 1 | 08-02-18 | KBD | WIRING DIAGRAM / 7 WAY ROUND PIN FEMALE CONNECTOR |
| 2 | | | |
| 3 | | | |

WIRING DIAGRAM / 7 WAY ROUND

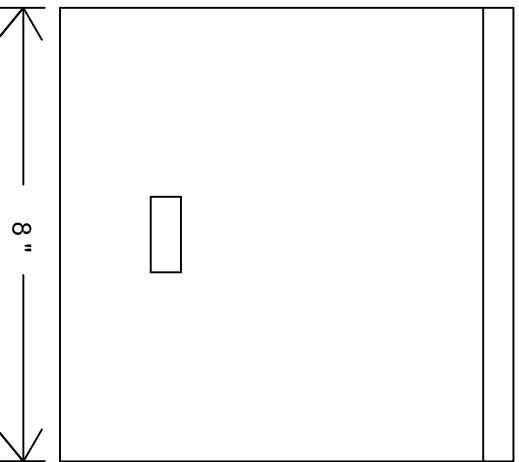
PIN FEMALE CONNECTOR

DRAWN BY JJB EQN-80A

DATE 08-02-16 SHEET 1 OF 1



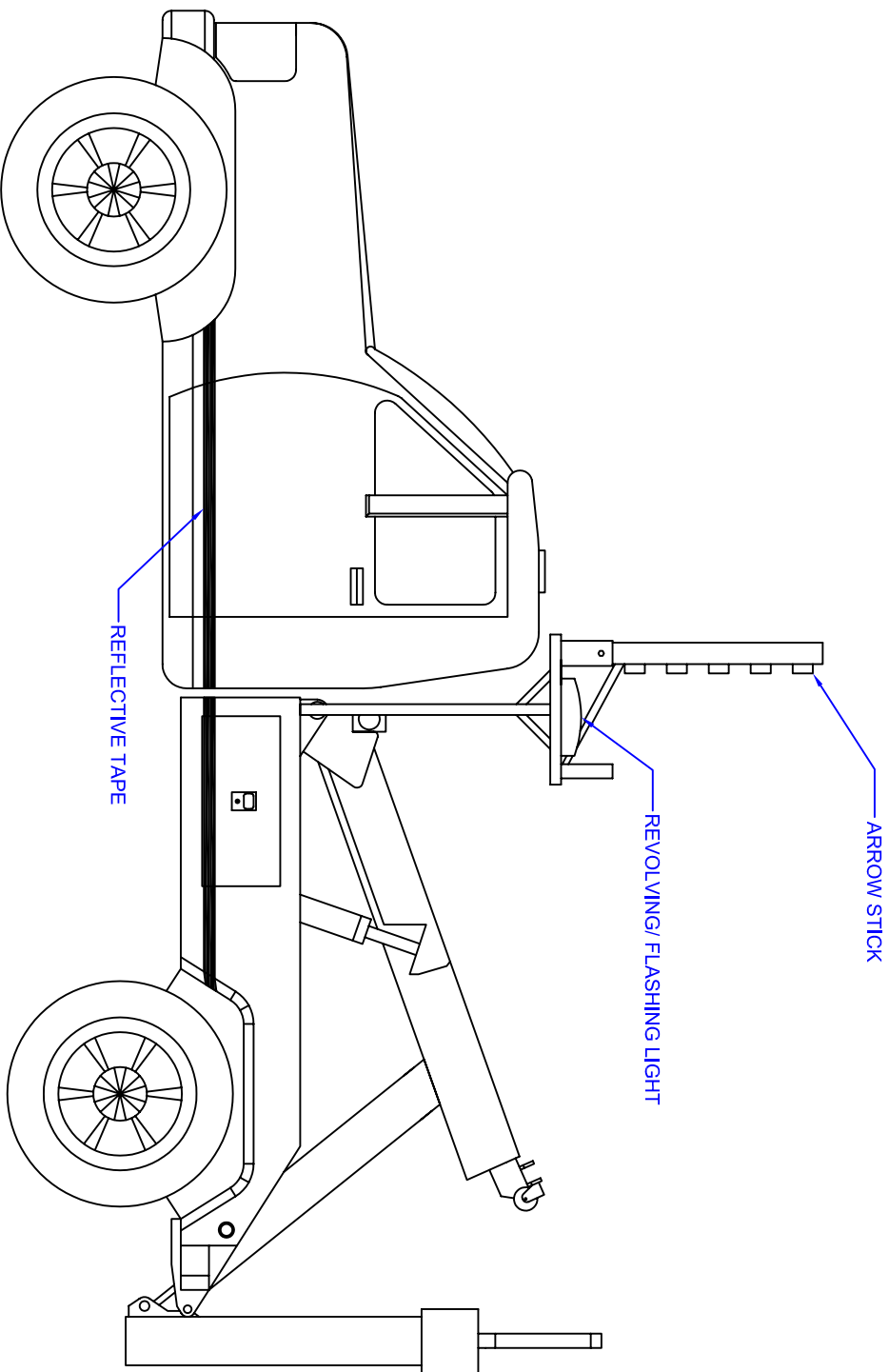
FINAL MOUNTING LOCATION SHALL BE DETERMINED AT THE PRE-BUILD MEETING. CHOCK HOLDERS SHALL BE ALUMINUM. TWO CHOCKS PER TRUCK SHALL BE SUPPLIED. CHOCKS SHALL HAVE 4 FEET OF $\frac{3}{8}$ INCH NYLON ROPE CONNECTING THE TWO CHOCKS TOGETHER.



PA DEPARTMENT OF TRANSPORTATION

| REVISIONS | | | 5" X 8" X 8" CHOCK AND HOLDER | | |
|-----------|------|----|-------------------------------|-------|---------|
| NO. | DATE | BY | DRAWN BY | SCALE | |
| 1 | | | JJB | N/A | EQN-82B |
| 2 | | | | | |
| 3 | | | | | |

DATE 07-22-15 SHEET 1 OF 1



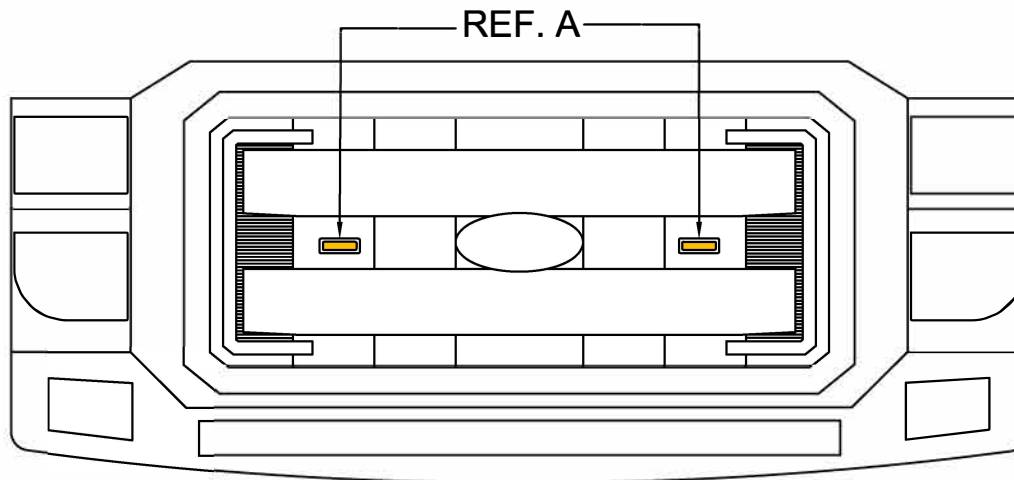
PA DEPARTMENT OF TRANSPORTATION

TOWTRUCK 17,500 LBS

| REVISIONS | | | |
|-----------|----------|-----|--|
| NO. | DATE | BY | |
| 1 | 07-17-07 | BAG | |
| 2 | 08-07-08 | MHH | |
| 3 | | | |

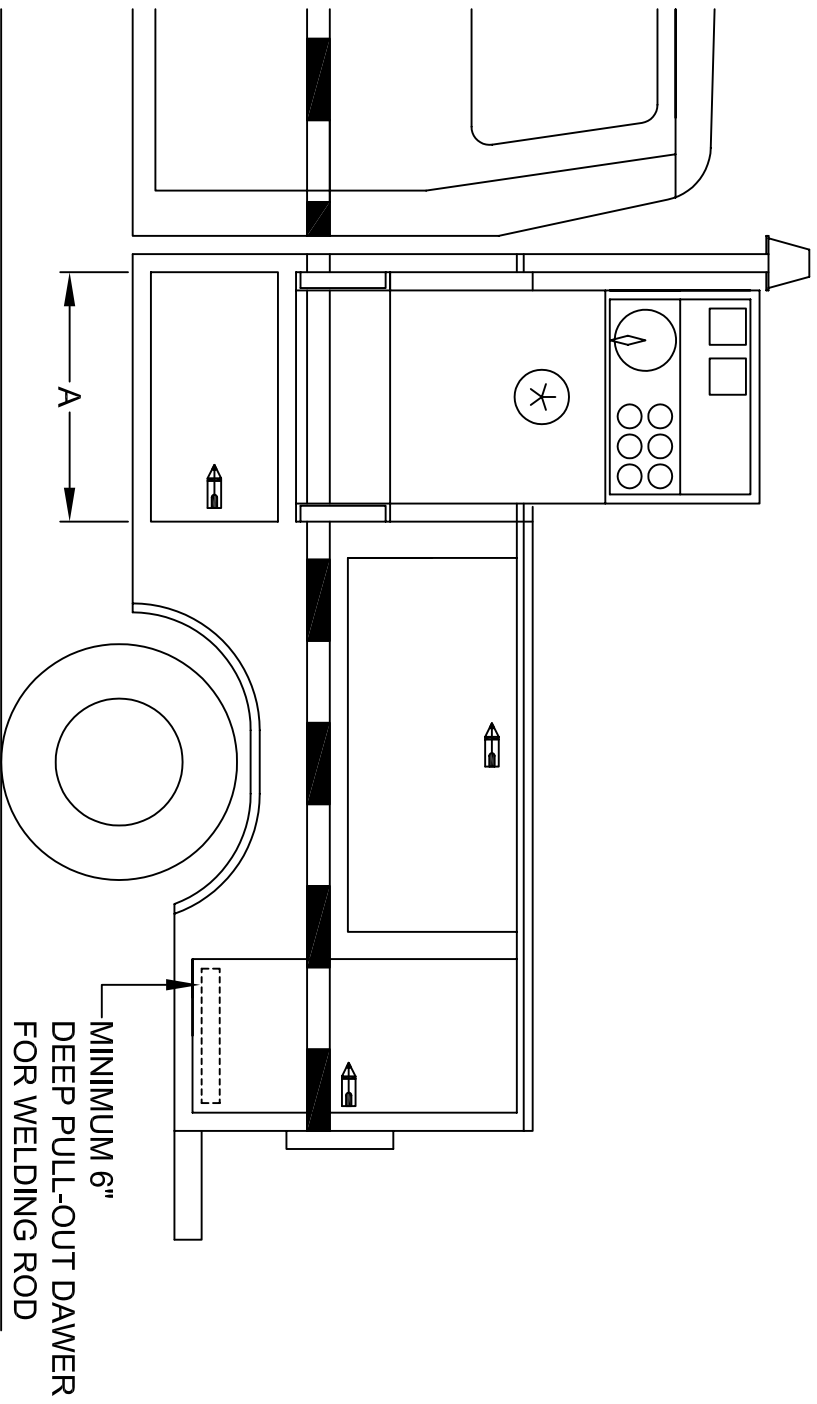
| | | | |
|----------|------------|-------|--------------|
| DATE | DRAWN BY | SCALE | EQN-104 |
| 08-25-98 | DJA | N/A | |
| | CHECKED BY | WHM | SHEET 1 OF 3 |

CREW CAB FRONT VIEW



A. MODEL # IONAD LIGHTS SHALL BE GROMMET MOUNTED ON THE GRILL. LIGHTS MOUNTED BEHIND GRILL ARE UNACCEPTABLE.

| PA DEPARTMENT OF TRANSPORTATION | | | | | |
|---------------------------------|------|----|-------------------------------|-----------|--------------|
| REVISIONS | | | CREW CAB GRILL LIGHT FIXTURES | | |
| NO. | DATE | BY | | | |
| 1 | | | | | |
| 2 | | | DRAWN BY MJW | SCALE N/A | EQN-115 |
| 3 | | | DATE 07-03-12 | CHK'D BY | SHEET 1 OF 1 |



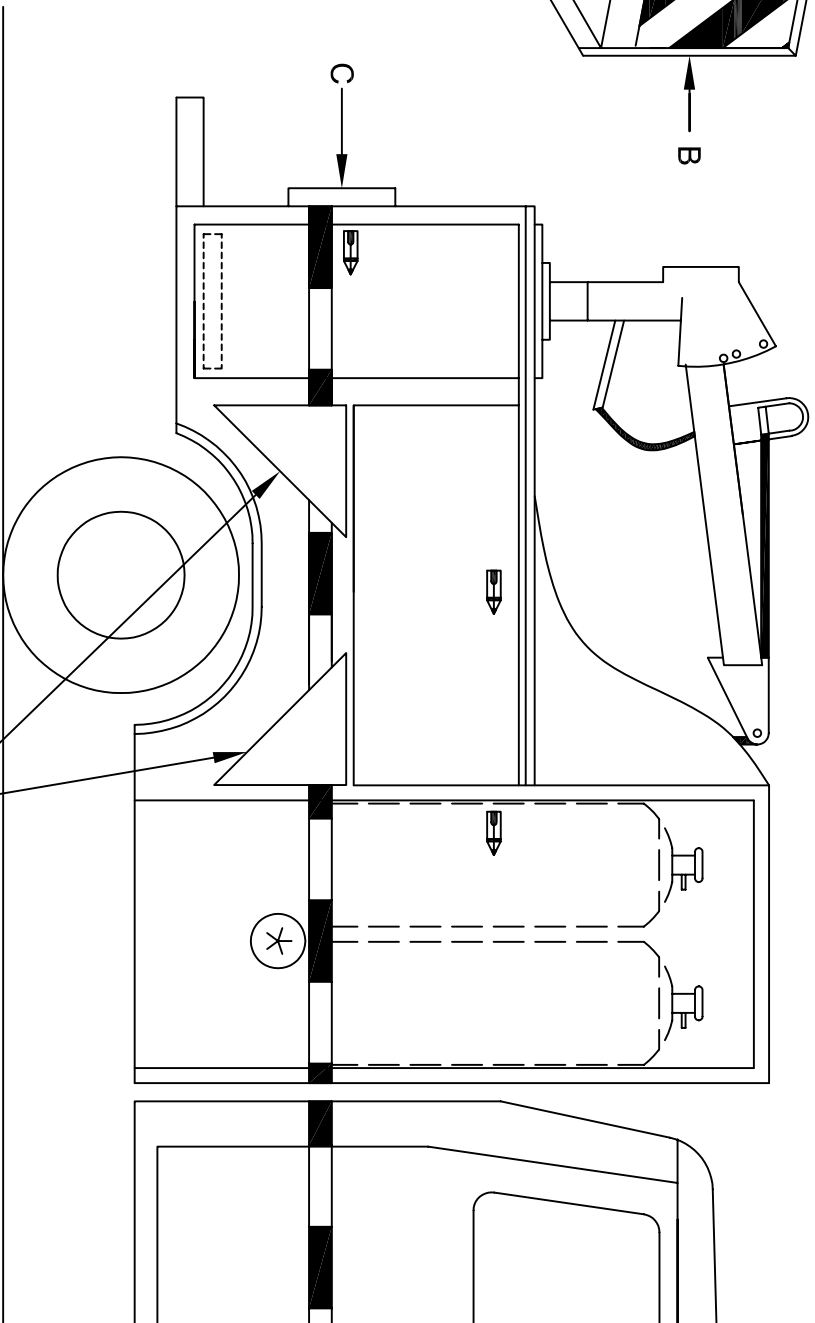
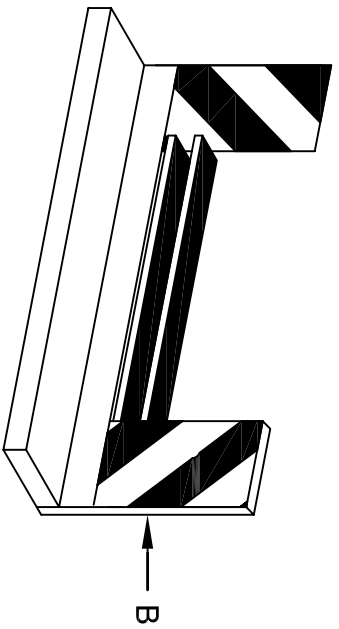
⊗ WELDER NOT INCLUDED IN SPEC.

- A) AREA SHALL BE OF SUFFICIENT SIZE AND MOUNTING TO ACCOMMODATE
- A MILLER BIG BLUE 50D OR A
- HOBART MEGA-ARC-4030D

PA DEPARTMENT OF TRANSPORTATION

| REVISIONS | | | WELD BODY STEEL | | |
|-----------|----------|-----|-----------------|----------|-----|
| NO. | DATE | BY | SCALE | DATE | BY |
| 1 | 05-09-03 | PJC | N/A | 03-02-98 | DLW |
| 2 | 03-07-07 | CJW | N/A | | |
| 3 | 09-28-11 | TOD | | | |

| | | | | | |
|-----|----------|-----|-------|----------|-----|
| NO. | DATE | BY | SCALE | DATE | BY |
| 1 | 05-09-03 | PJC | N/A | 03-02-98 | DLW |
| 2 | 03-07-07 | CJW | N/A | | |
| 3 | 09-28-11 | TOD | | | |



BUMPER SHALL BE A MINIMUM OF 15" DEEP X THE WIDTH OF THE VEHICLE.

⊗ BOTTLES NOT INCLUDED IN SPEC

CHOCK STORAGE

B - REFLECTIVE SHEETING TO BE 4 INCHES IN WIDTH AND ALTERNATE RED / YELLOW BANDS SPACED EVENLY ON REAR OF BODY. TAPE SHALL BE REFLEXITE DAYBRIGHT V92 CONSPICUITY SHEETING, RED - SRH14R, YELLOW - SRH14Y. INSTALLED.

C - MATERIAL SHALL BE RED/SILVER CONTINUOUS BACKING REFLEXITE CONSPICUITY 11 SYSTEM OR 3M SCOTCHLITE CONSPICUITY SHEETING SERIES 980.

PA DEPARTMENT OF TRANSPORTATION

REVISIONS

| NO. | DATE | BY | WELD BODY STEEL |
|-----|----------|-----|-----------------|
| 1 | 05-09-03 | PJC | |
| 2 | 03-07-07 | CJW | |
| 3 | 09-28-11 | TOD | |

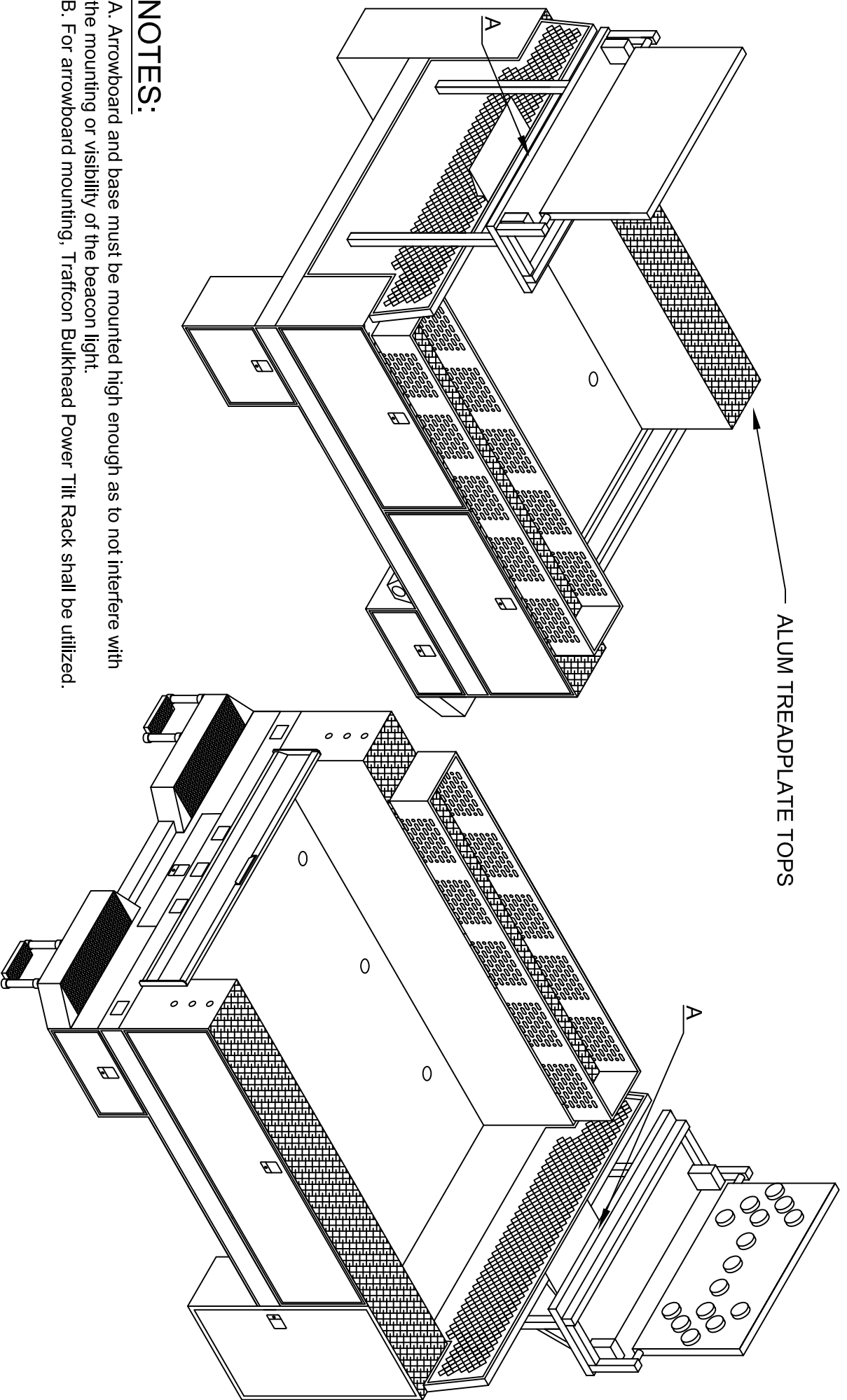
| NO. | DATE | BY | WELD BODY STEEL |
|-----|----------|-----|-----------------|
| 1 | 05-09-03 | PJC | |
| 2 | 03-07-07 | CJW | |
| 3 | 09-28-11 | TOD | |

| NO. | DATE | BY | WELD BODY STEEL |
|-----|----------|-----|-----------------|
| 1 | 05-09-03 | PJC | |
| 2 | 03-07-07 | CJW | |
| 3 | 09-28-11 | TOD | |

| NO. | DATE | BY | WELD BODY STEEL |
|-----|----------|-----|-----------------|
| 1 | 05-09-03 | PJC | |
| 2 | 03-07-07 | CJW | |
| 3 | 09-28-11 | TOD | |

| NO. | DATE | BY | WELD BODY STEEL |
|-----|----------|-----|-----------------|
| 1 | 05-09-03 | PJC | |
| 2 | 03-07-07 | CJW | |
| 3 | 09-28-11 | TOD | |

| NO. | DATE | BY | WELD BODY STEEL |
|-----|----------|-----|-----------------|
| 1 | 05-09-03 | PJC | |
| 2 | 03-07-07 | CJW | |
| 3 | 09-28-11 | TOD | |



NOTES:

- A. Arrowboard and base must be mounted high enough as to not interfere with the mounting or visibility of the beacon light.
- B. For arrowboard mounting, Traffcon Bulkhead Power Tilt Rack shall be utilized.

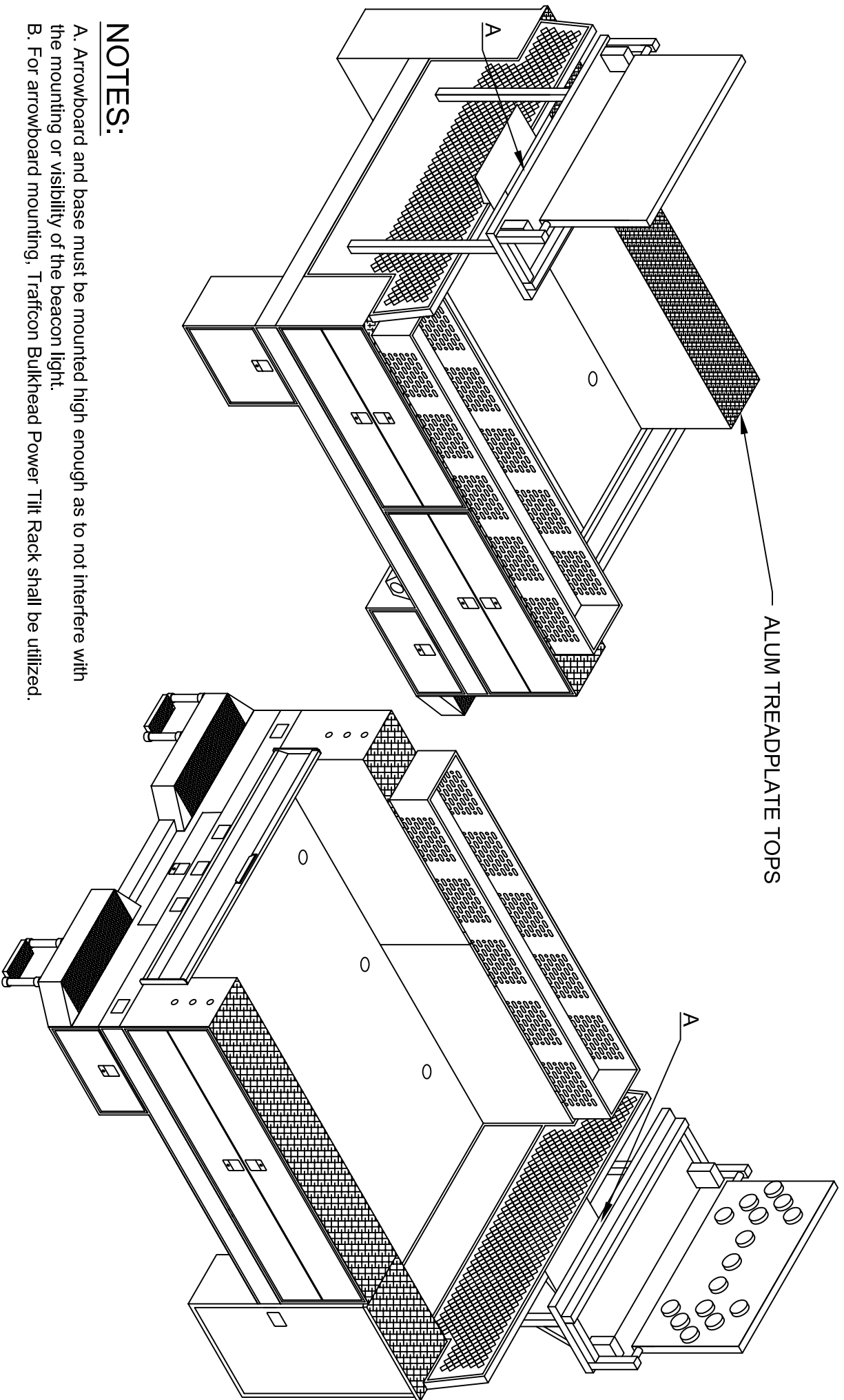
PA DEPARTMENT OF TRANSPORTATION

REVISIONS

| NO. | DATE | BY | ACT | SCALE | DATE |
|-----|----------|-----|-----|-------|------|
| 1 | 08-26-14 | ACT | | | |
| 2 | | | | | |
| 3 | | | | | |

FOREMAN BODY

| | | | | |
|----------|----------|---------|-----|--------------|
| DRAWN BY | MJW | SCALE | N/A | EQN-120H |
| DATE | 08-02-12 | CHKD BY | | SHEET 1 OF 1 |



NOTES:

- A. Arrowboard and base must be mounted high enough as to not interfere with the mounting or visibility of the beacon light.
- B. For arrowboard mounting, Trafficon Bulkhead Power Tilt Rack shall be utilized.

PA DEPARTMENT OF TRANSPORTATION

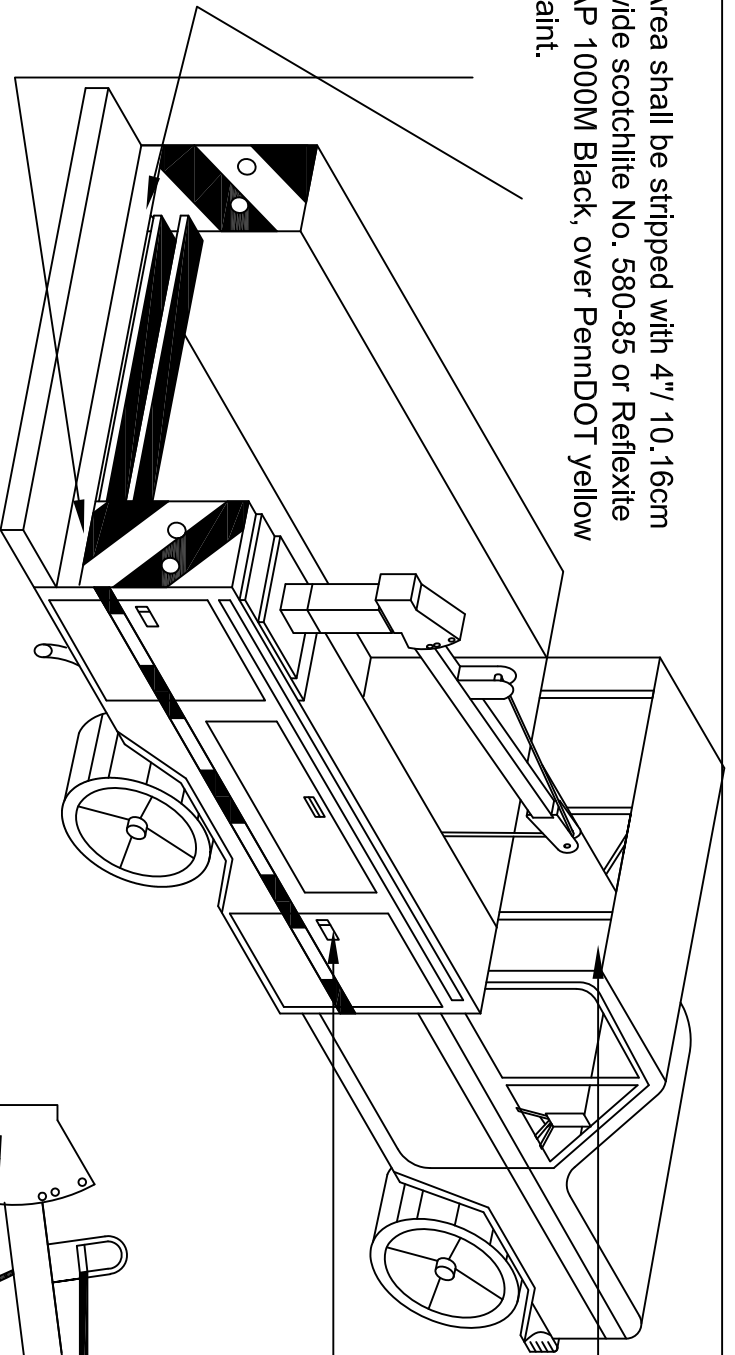
REVISIONS

| NO. | DATE | BY | ACT | SCALE | CHGD BY |
|-----|----------|-----|-----|-------|---------|
| 1 | 08-26-14 | ACT | | N/A | |
| 2 | | | | | |
| 3 | | | | | |

**SPLIT DOOR
FOREMAN BODY**

| | | | | |
|----------|----------|---------|-----|--------------|
| DRAWN BY | MJW | SCALE | N/A | EQN-120HS |
| DATE | 08-02-12 | CHGD BY | | SHEET 1 OF 1 |

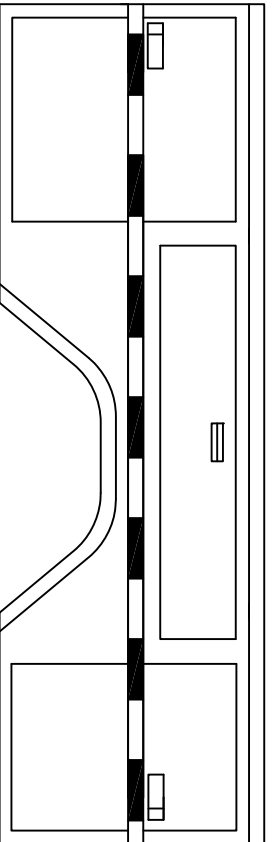
Area shall be stripped with 4" / 10.16cm wide scotchlite No. 580-85 or Reflexite AP 1000M Black, over PennDOT yellow paint.



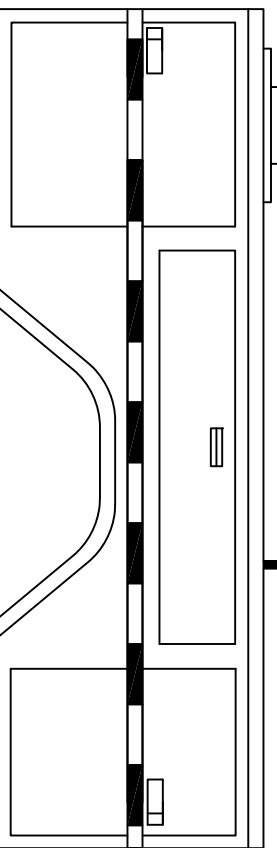
Regular etc.,
Curbside mounted

Material shall be red/silver continuous backing Reflexite Conspicuity II System or 3M Scotchlite Conspicuity Sheeting Series 980.

Street Side



Curb Side



Ⓐ- Area shall be stripped with 4" wide Scotchlite # 580-85 or Reflexite AP 1000 Black, over the PennDOT Yellow Paint.

Ⓑ- Material shall be red / silver continuous backing Reflexite Conspicuity 11 System or 3M Scotchlite Conspicuity Sheeting Series 980.

PA DEPARTMENT OF TRANSPORTATION

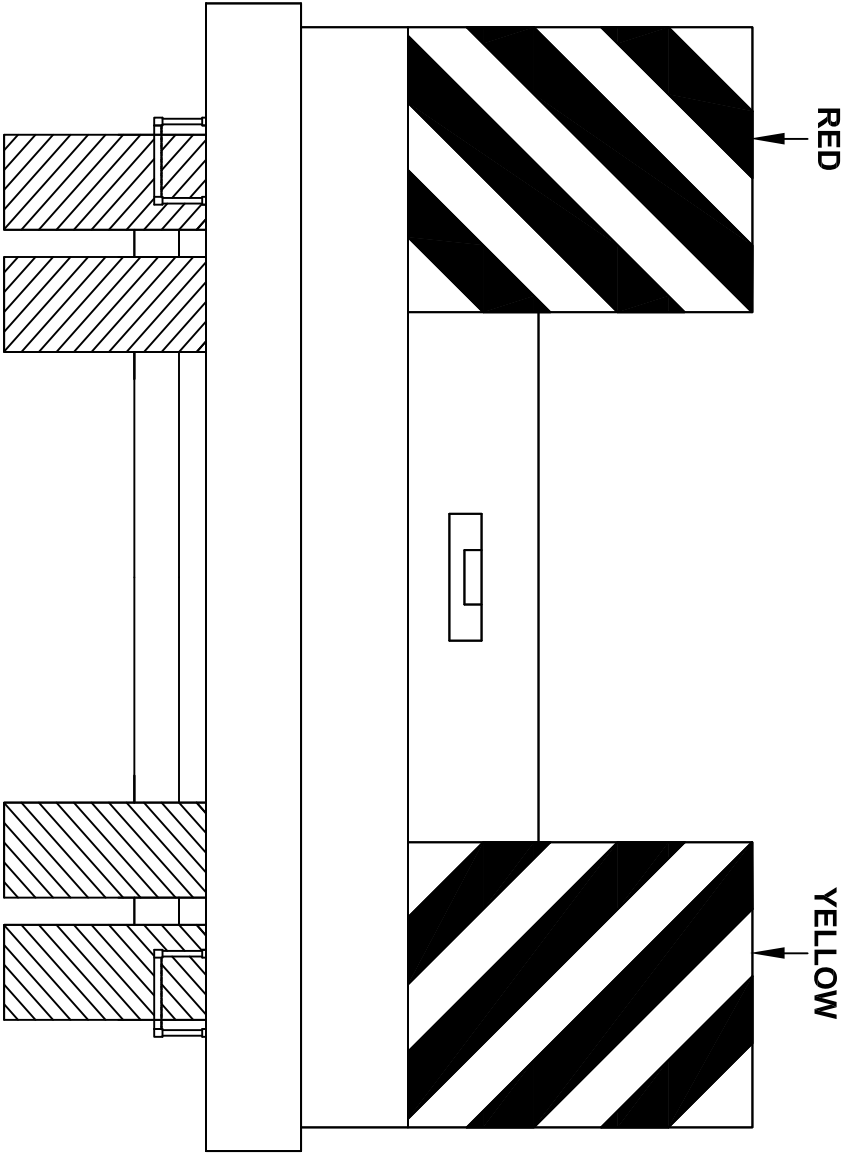
REVISIONS

| NO. | DATE | BY | DESCRIPTION |
|-----|----------|-----|-------------|
| 1 | 08-14-12 | MJW | |
| 2 | | | |
| 3 | | | |

9' SERVICE BODY

| | | | | |
|----------|--------|------------|-----|--------------|
| DRAWN BY | KNH | SCALE | N/A | EQN-120J |
| DATE | 4-6-07 | CHECKED BY | KGK | SHEET 1 OF 1 |

**REAR VIEW
(TYPICAL INSTALLATION)**



NOTE: REFLECTIVE SHEETING TO BE 4 INCHES IN WIDTH AND ALTERNATE RED / YELLOW BANDS SPACED EVENLY ON REAR OF BODY. TAPE SHALL BE REFLEXITE DAYBRIGHT V92 CONSPICUITY SHEETING. RED - SRH14R, YELLOW - SRH14Y. INSTALLED.

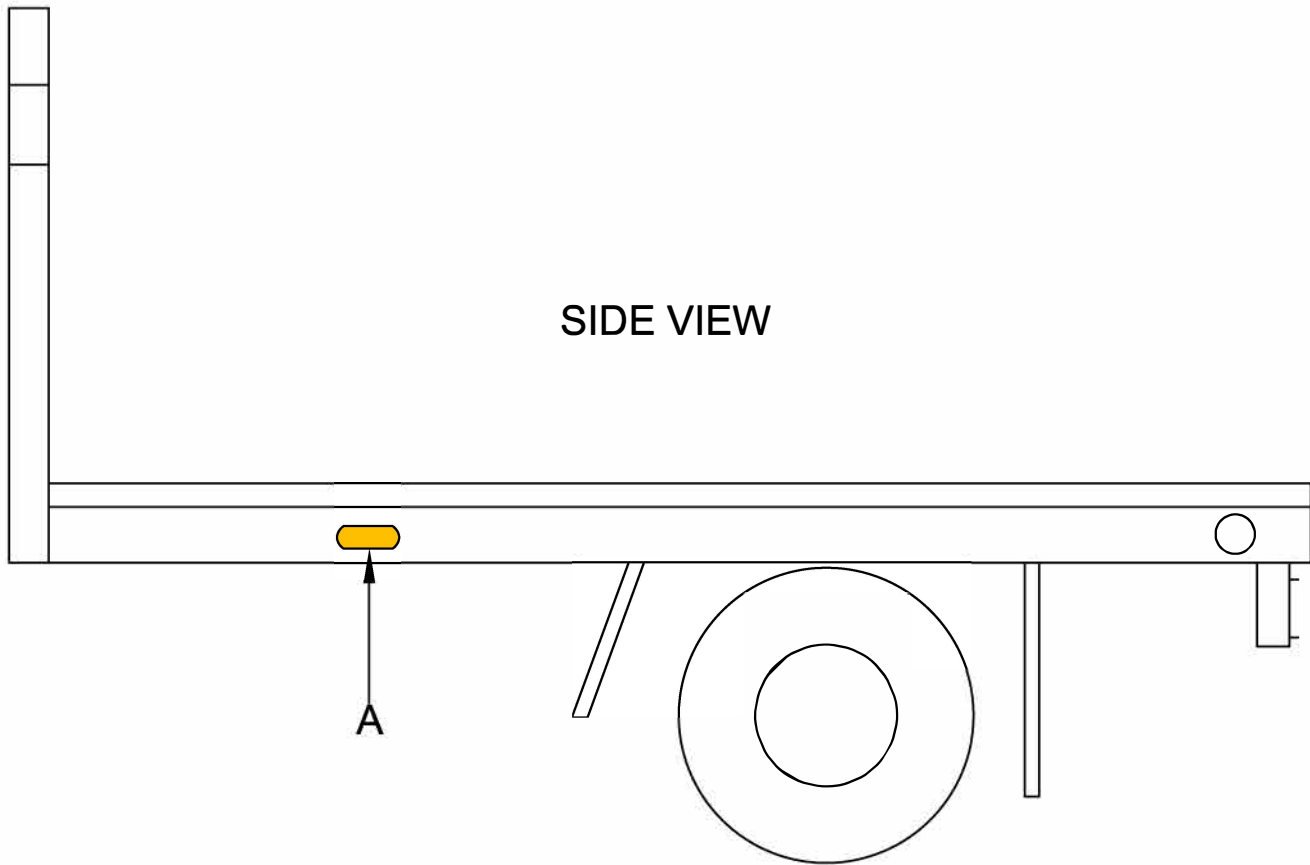
PA DEPARTMENT OF TRANSPORTATION

REVISIONS

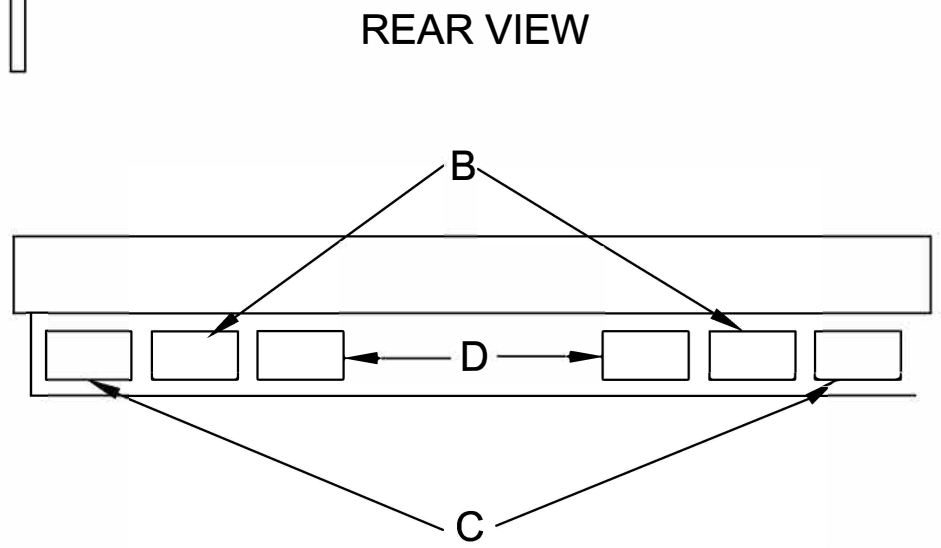
| NO. | DATE | BY |
|-----|----------|-----|
| 1 | 09-28-11 | TOD |
| 2 | 06-10-14 | ACT |
| 3 | | |

TYPICAL REFLECTIVE SHEETING

| DATE | DRAWN BY | SCALE | CHK'D BY | SHEET |
|----------|----------|-------|----------|-----------------------|
| 07-28-08 | MHH | N/A | TOD | EQN-120K SHEET 1 OF 1 |



SIDE VIEW



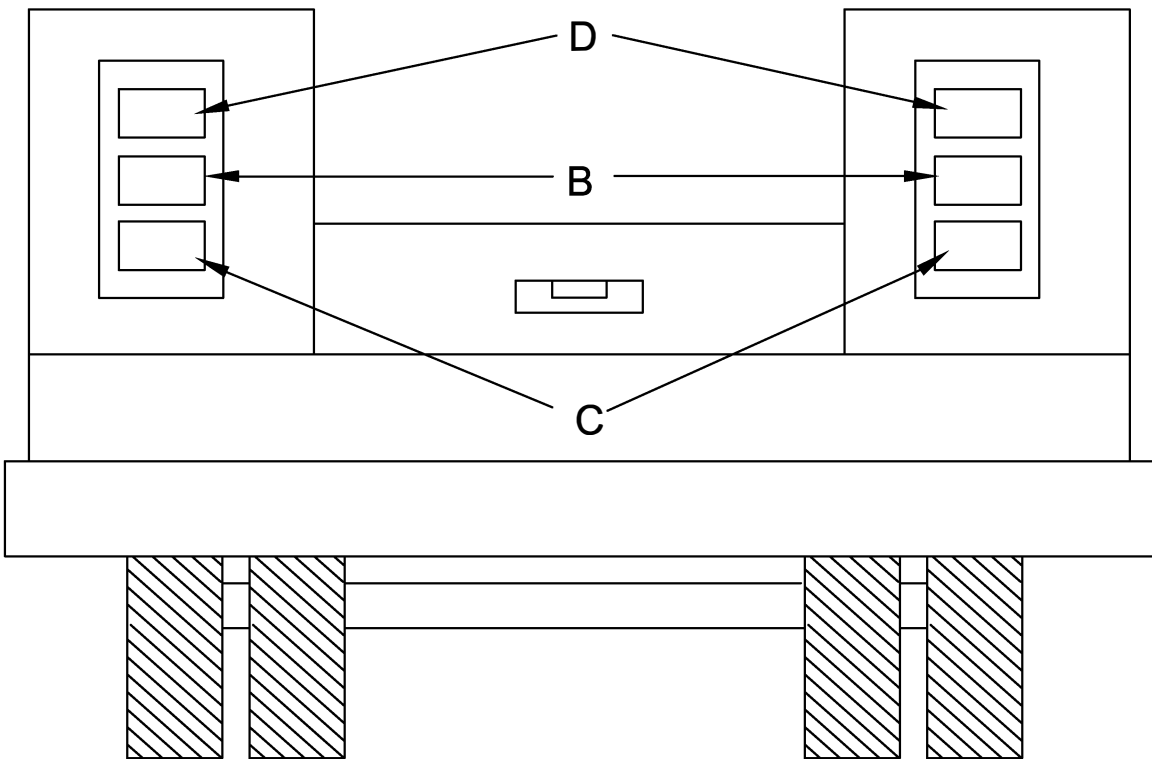
REAR VIEW

The purpose of this drawing is to show locations for Flat bed Body Lighting, Whelen part # PADOTSY7.

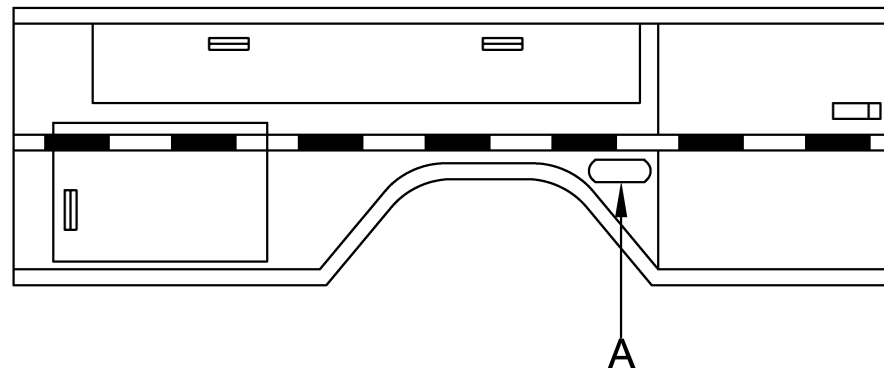
- A. IONAD Amber Warning Light, surface mounted, one each side.
- B. M6BUD Back up Lights with Brush Guards.
- C. M5BTTD Stop / Tail / Turn Lights with Brush Guards.
- D. M6AD Amber Warning Lights with Brush Guards.

| PA DEPARTMENT OF TRANSPORTATION | | | | | | |
|---------------------------------|------|----|------------------------|--------------|--------------|--|
| REVISIONS | | | Flat bed Body Lighting | | | |
| NO. | DATE | BY | DRAWN BY | SCALE | | |
| 1 | | | TOD | N/A | EQN-120L | |
| 2 | | | DATE 09/28/11 | CHR'D BY DMA | SHEET 1 OF 1 | |

REAR VIEW



Curb Side



The purpose of this drawing is to show locations for Crew Cab Body Lighting, Whelen part # PADOTSY5.

- A. IONAD Amber Warning Light, grommet mounted, one each side.
- B. M6BUD Back up Lights.
- C. M5BTDD Stop / Tail / Turn Lights.
- D. M6AD Amber Warning Lights.

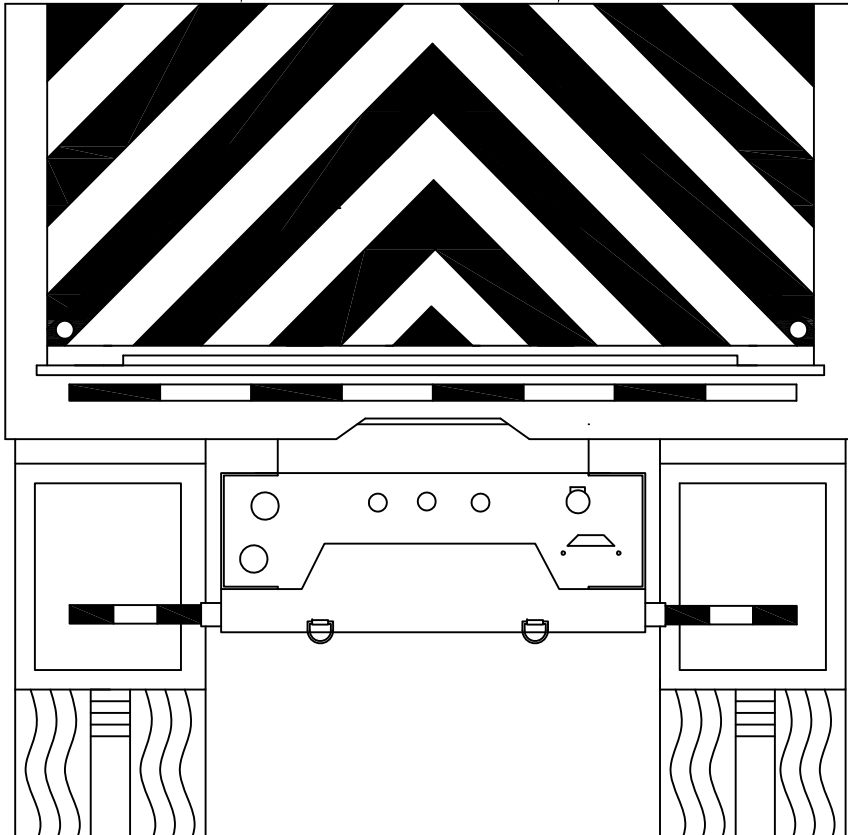
Note: Items B, C, & D are Flush mounted in Black Flange Housing #11-486152-000.

| PA DEPARTMENT OF TRANSPORTATION | | | | | | |
|---------------------------------|----------|----|------------------------|-------|--------------|--|
| REVISIONS | | | Crew Cab Body Lighting | | | |
| NO. | DATE | BY | DRAWN BY | SCALE | | |
| 1 | | | TOD | N/A | EQN-120M | |
| 2 | 09/28/11 | | | DMA | SHEET 1 OF 1 | |

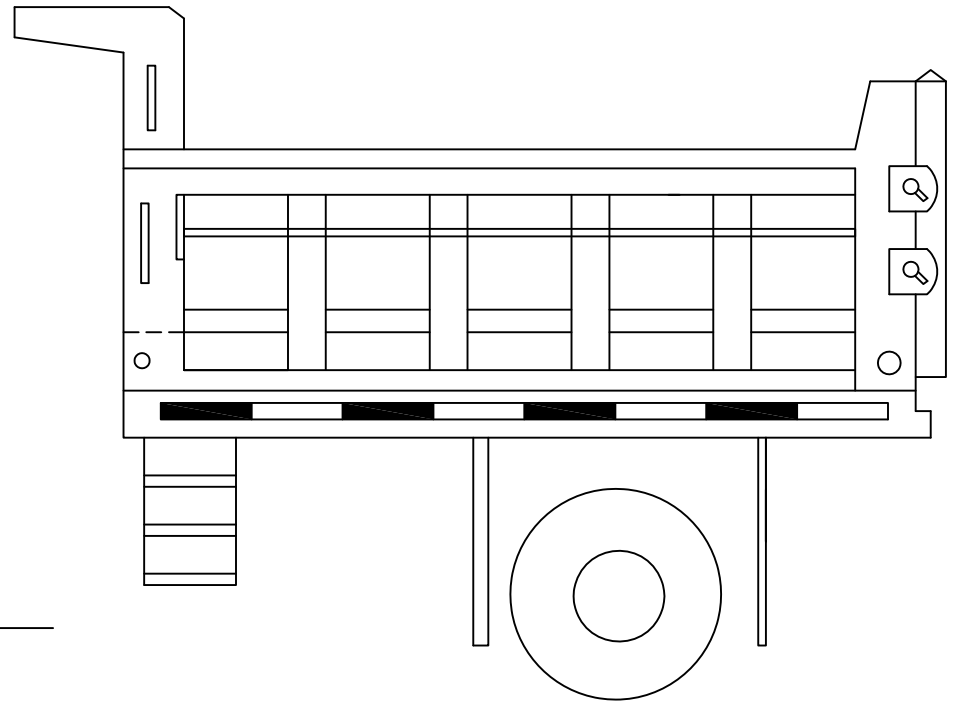
RED

A

YELLOW



A THE TAILGATE SHALL BE STRIPED AS SHOWN WITH 4" WIDE ALTERNATING RED/YELLOW BANDS CREATING A CHEVRON (INVERTED V) AT 45 DEGREE ANGLES, ACROSS THE GATE TO SERVE AS A SAFETY WARNING SYSTEM. TAPE SHALL BE REFLEXITE DAYBRIGHT V92 CONSPICUITY SHEETING. RED - SRH14R, YELLOW - SRH14Y.

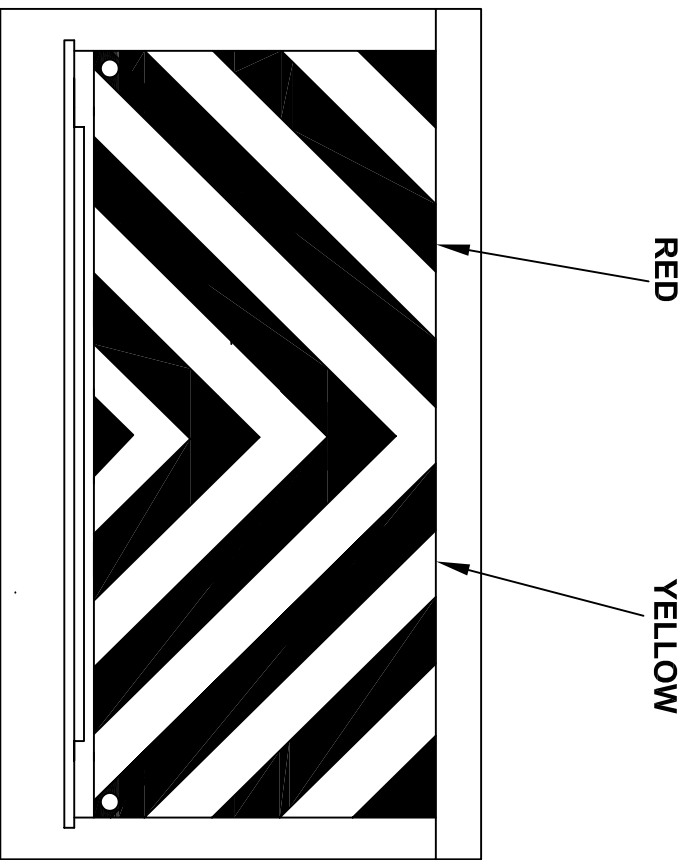


THIS DRAWING SHALL BE FOR TAILGATE CONSPICUITY REFERENCE AND WARNING LIGHTS ONLY, NOT TAILGATE CONSTRUCTION.

THIS VEHICLE SHALL COMPLY WITH THE RULES OF THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION (NHTSA). THE MOST CURRENT REGULATIONS SHALL BE ADHERED TO.

PA DEPARTMENT OF TRANSPORTATION

| REVISIONS | | | TAILGATE REFLECTIVE SHEETING / WARNING LIGHTS | | |
|-----------|----------|-----|---|----------|---------------------------|
| NO. | DATE | BY | | | |
| 1 | 08-14-12 | MJW | | | |
| 2 | | | DRAWN BY | TOD | SCALE N/A EQN-120N |
| 3 | | | DATE | 09-29-11 | CHK'D BY DAM SHEET 1 OF 1 |



A THE REAR ROLL UP DOOR SHALL BE STRIPED AS SHOWN WITH 8" WIDE ALTERNATING RED/YELLOW BANDS CREATING A CHEVRON (INVERTED V) AT 45 DEGREE ANGLES, ACROSS THE DOOR TO SERVE AS A SAFETY WARNING SYSTEM.

TAPE SHALL BE REFLEXITE DAYBRIGHT V92
 B CONSPICUITY SHEETING. RED - SRH4R, YELLOW - SRH4Y. TWO 4" SHEETS CAN BE COMBINED TO EQUAL THE 8" REQUIREMENT.

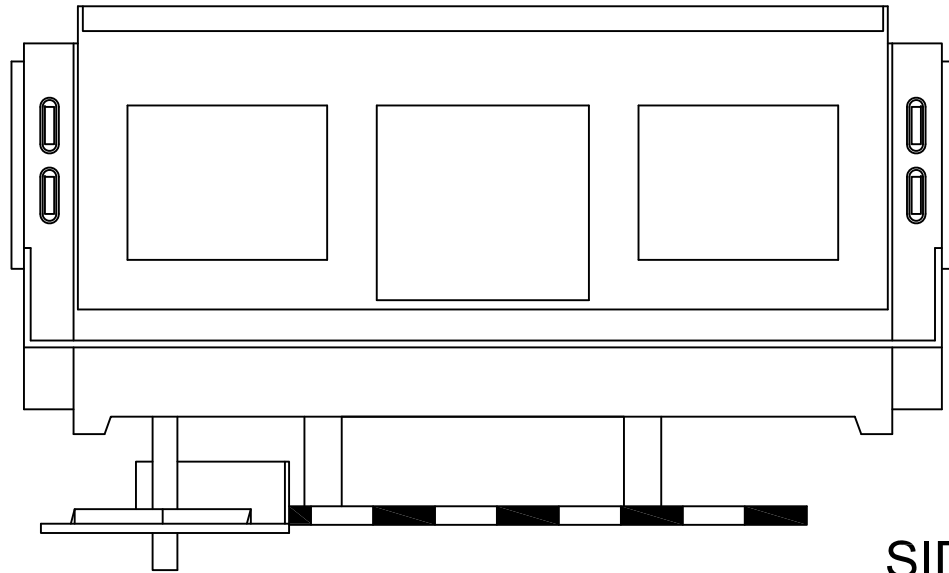
THIS DRAWING SHALL BE FOR CONSPICUITY REFERENCE ONLY, NOT BODY CONSTRUCTION.

THIS VEHICLE SHALL COMPLY WITH THE RULES OF THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION (NHTSA). THE MOST CURRENT REGULATIONS SHALL BE ADHERED TO.

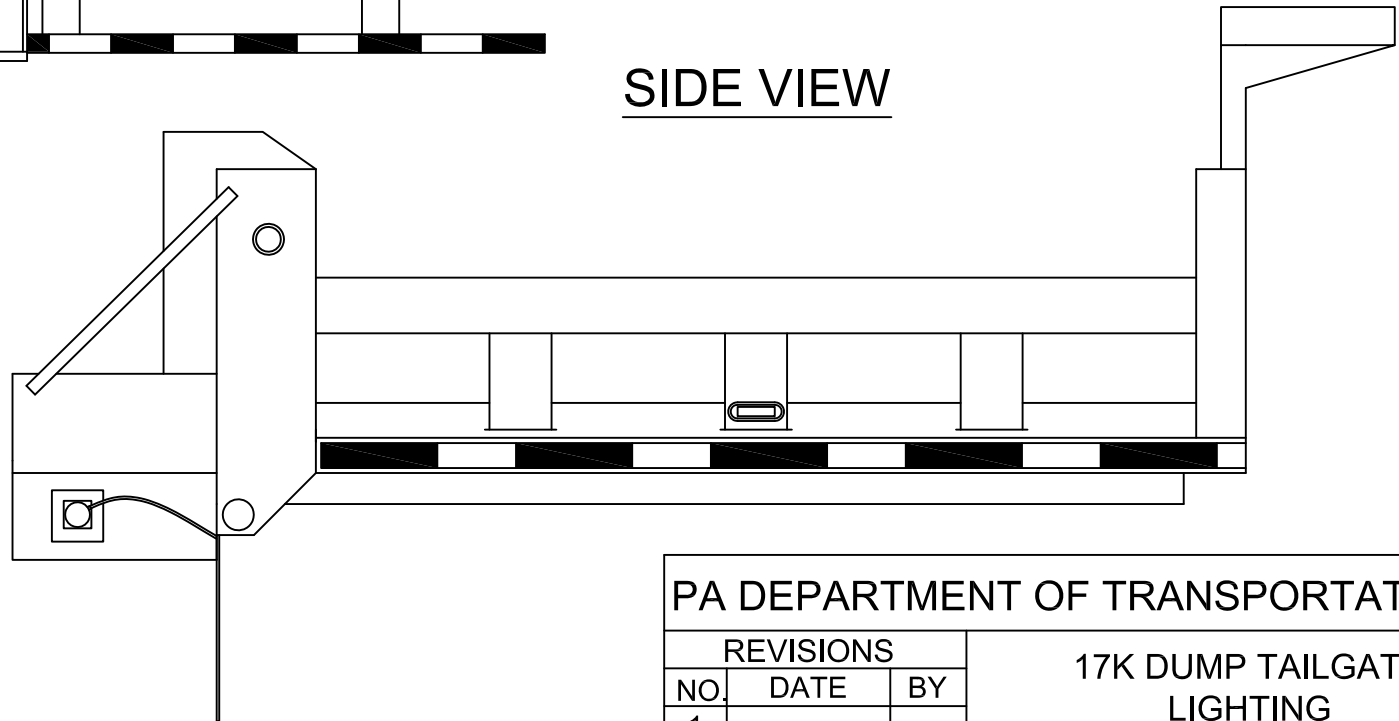
| REVISIONS | | | DRAWN BY | | |
|-----------|------|----|----------|-------|--------------|
| NO. | DATE | BY | DATE | SCALE | |
| 1 | | | TOD | N/A | EQN-120P |
| 2 | | | 11-03-11 | DMA | SHEET 1 OF 1 |
| 3 | | | | | |

PA DEPARTMENT OF TRANSPORTATION
CARGO BOX REAR DOOR REFLECTIVE SHEETING

BACK VIEW



SIDE VIEW



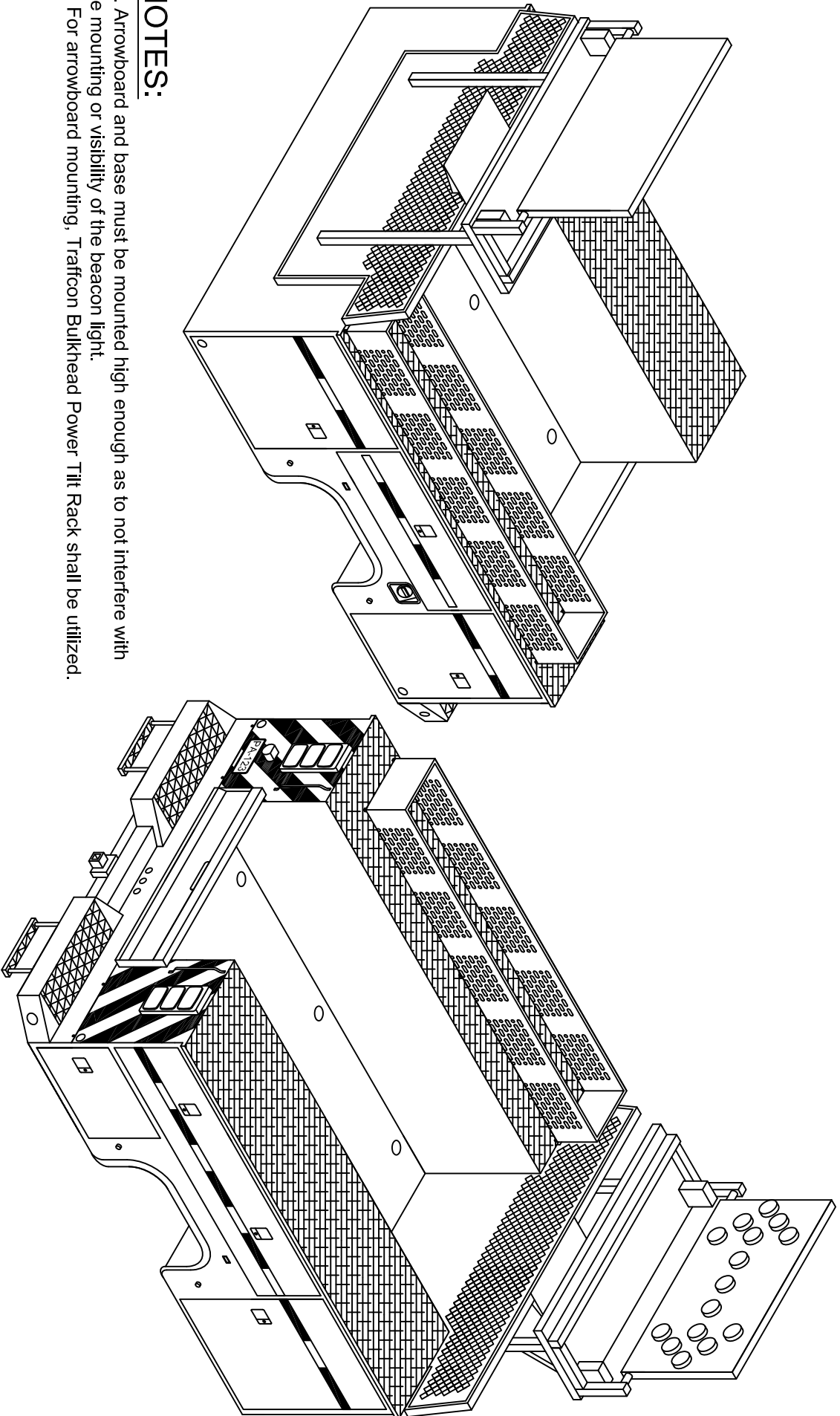
PA DEPARTMENT OF TRANSPORTATION

REVISIONS

| NO. | DATE | BY |
|-----|------|----|
| 1 | | |
| 2 | | |
| 3 | | |

17K DUMP TAILGATE
LIGHTING

| | | | | |
|----------|----------|----------|-----|--------------|
| DRAWN BY | MJW | SCALE | N/A | EQN-120U |
| DATE | 08-14-12 | CHK'D BY | | SHEET 1 OF 1 |



NOTES:

- A. Arrowboard and base must be mounted high enough as to not interfere with the mounting or visibility of the beacon light.
- B. For arrowboard mounting, Trafficon Bulkhead Power Tilt Rack shall be utilized.

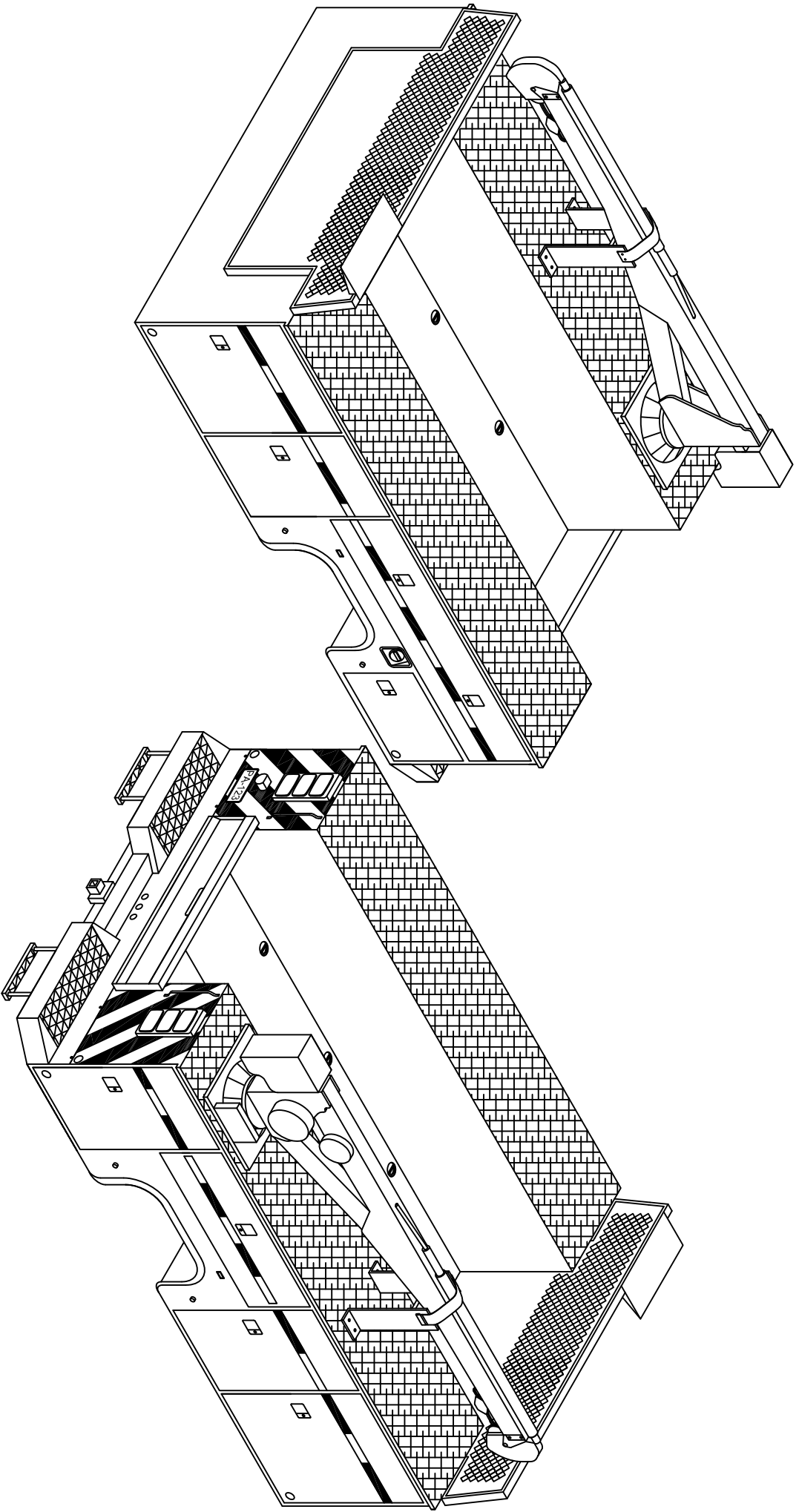
PA DEPARTMENT OF TRANSPORTATION

| REVISIONS | | | 9' SERVICE BODY WITH MOUNTED ARROW-BOARD | | |
|-----------|------|----|--|-------|------------|
| NO | DATE | BY | DRAWN BY | SCALE | EQN - 120W |
| 1 | | | ACT | N/A | |
| 2 | | | | | |
| 3 | | | | | |

DATE 06-23-14

CHG'D BY

SHEET 1 OF 1



PA DEPARTMENT OF TRANSPORTATION

11' SHOP BODY

| REVISIONS | | | |
|-----------|------|----|--|
| NO. | DATE | BY | |
| 1 | | | |
| 2 | | | |
| 3 | | | |

| | | | | |
|----------|----------|----------|-----|--------------|
| DRAWN BY | ACT | SCALE | N/A | EQN-120Y |
| DATE | 08-28-14 | CHK'D BY | | SHEET 1 OF 1 |

THIS VEHICLE SHALL COMPLY WITH THE RULES OF THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION (NHTSA) IN THAT:

THE MOUNTING HEIGHT OF THE HORIZONTAL STRIPES ARE RESTRICTED TO THE SAME HEIGHT AS OTHER RETROREFLECTIVE DEVICES CURRENTLY REQUIRED BY STANDARD NUMBER 108. THE CENTER OF THE MATERIAL MUST NOT BE LESS THAN 15in. ABOVE THE ROAD SURFACE, AND THE UPPER EDGE NOT MORE THAN 60in. ABOVE IT.

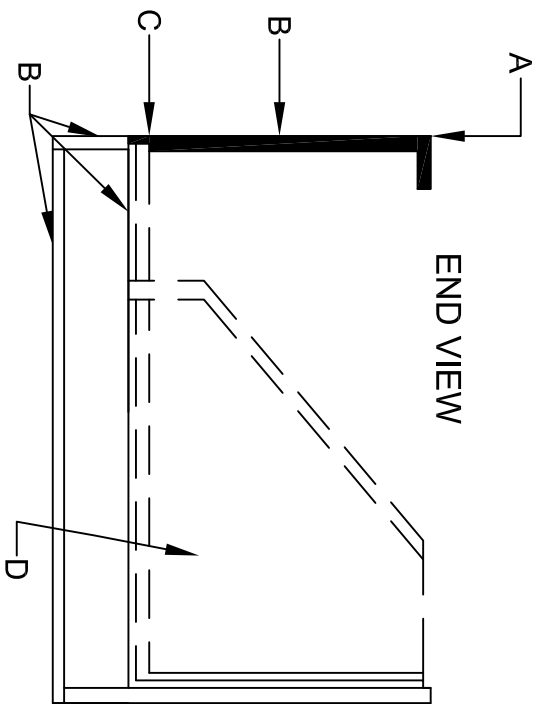
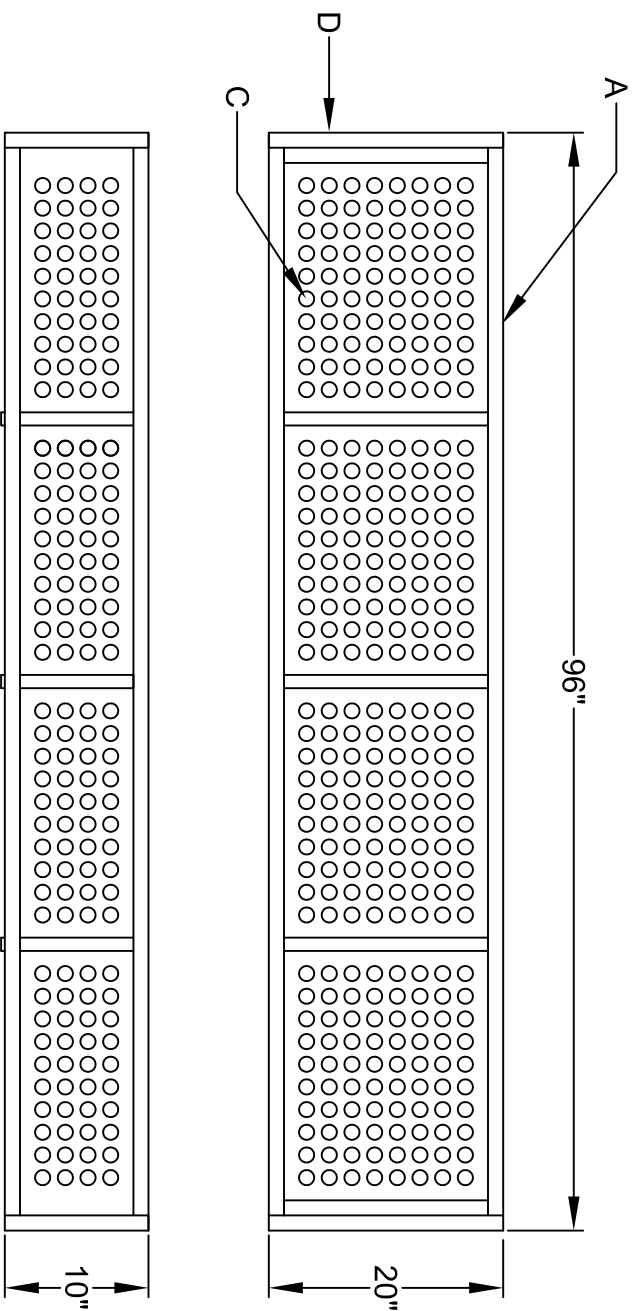
REFLECTIVE MATERIAL SHALL BE APPLIED TO THE HORIZONTAL BAR OF THE REAR UNDERIDE DEVICE IN ADDITION TO THE FLOOR LEVEL HORIZONTAL STRIPE. THE UPPER CORNERS ARE TO BE MARKED BY TWO 90 DEGREE ANGLE BRACKETS OF WHITE STRIPES 12in. BY TWO INCHES WIDE, INDICATING THE WIDTH AND HEIGHT OF THE TRAILER.

THE CONFIGURATION SHALL IDENTIFY THE VEHICLE AS TO ITS ESTIMATED SIZE AND THE CLOSING DISTANCE TO IT. THE DISTRIBUTION OF SPACES AND MATERIALS SHALL BE AS UNIFORM AS PRACTICAL AND INDICATE THE FULL LENGTH AND WIDTH OF THE VEHICLE. THE COLORS SHALL BE PLACED IN ALTERNATING SEQUENCE WITH MORE THAN TWO-THIRDS OF THE MATERIAL IN COLOR.

CONSPICUITY TAPE SHALL BE REFLECTORIZED. 2in. WIDE, MATERIAL SHALL BE APPLIED. MATERIAL SHALL BE RED/SILVER CONTINUOUS BACKING REFLEXITE CONSPICUITY II SYSTEM OR 3M SCOTCHLITE CONSPICUITY SHEETING SERIES 980.

THE MOST CURRENT REGULATIONS SHALL BE ADHERED TO.

| REVISIONS | | | CONSPICUITY TAPE STRIPING REQUIREMENTS | | |
|-----------|----------|-----|--|-------------|--------------|
| NO. | DATE | BY | DRAWN BY | SCALE | |
| 1 | 05-16-02 | DWG | DLW | N/A | EQN-127A |
| 2 | 11-03-06 | CJW | DATE 11-07-97 | CHKD BY DMA | SHEET 1 OF 1 |
| 3 | 01-02-09 | MHH | | | |



END VIEW

- MATERIAL LIST**
- A) .75" X .75" X .25" ALUMINUM ANGLE
 - B) 1.50" X .1875 ALUMINUM BAR
 - C) PRE-PUNCHED ALUMINUM
(TO BE PLACED ON BOTH SIDES AND BOTTOM)
 - D) .25" ALUMINUM TREADPLATE

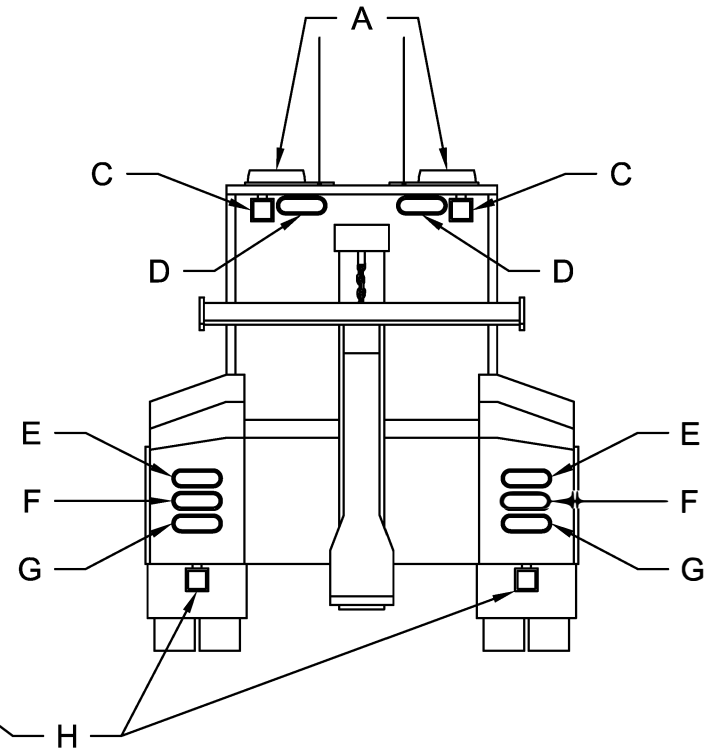
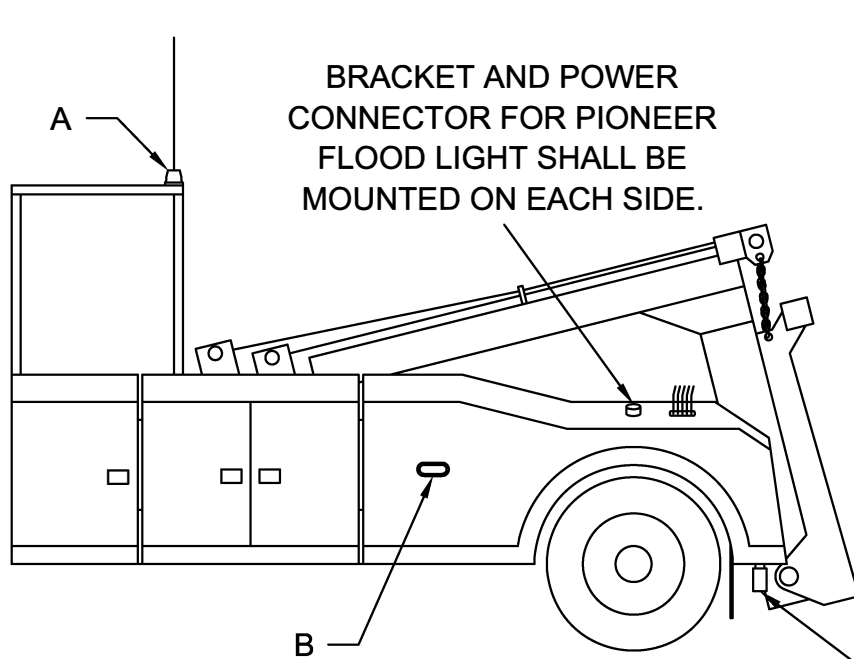
NOTE:
EXPANDABLE
METAL IS
UNACCEPTABLE

PA DEPARTMENT OF TRANSPORTATION

| REVISIONS | | | GENERAL UTILITY TOOL BASKET | | |
|-----------|----------|------|-----------------------------|-------|--|
| NO. | DATE | BY | DATE | SCALE | |
| 1 | 05-16-02 | DWVG | | | |
| 2 | 01-11-06 | CJW | | | |
| 3 | | | 04-18-00 | N/A | |

DRAWN BY GAH
SCALE N/A
EQU-134

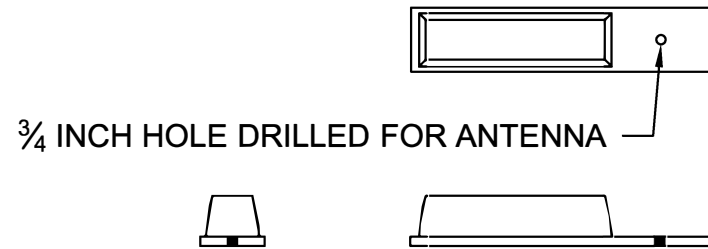
DATE 04-18-00
CHECKED BY RED
SHEET 1 OF 1



LIGHTING NOTES:

- A. TWO (2) R-10 LIGHT BARS MOUNTED TO THE ARROW BOARD BRACKET.
- B. TWO (2) IONAD WARNING LIGHTS GROMMET MOUNTED ONE ON EACH SIDE
- C. TWO (2) MICRO PIONEERS MOUNTED TO THE BOTTOM OF THE ARROW BOARD BRACKET.
- D. TWO (2) M6BTDD STOP, TAIL, AND TURN WITH BRUSH GUARDS MOUNTED TO THE BACK SIDE OF THE ARROW BOARD BRACKET.
- E. TWO (2) M6AD AMBER WARNING WITH BRUSH GUARDS MOUNTED TO THE REAR OF THE BODY.
- F. TWO (2) M6BUD BACK UP WITH BRUSH GUARDS MOUNTED TO THE REAR OF THE BODY.
- G. TWO (2) M6BTDD STOP, TAIL, AND TURN WITH BRUSH GUARDS MOUNTED TO THE REAR OF THE BODY.
- H. TWO (2) MICRO PIONEERS MOUNTED BELOW THE BODY BEHIND THE MUD FLAPS ON INDIVIDUAL SWITCHES.

REFERENCE A: R-10 LIGHT BAR



PA DEPARTMENT OF TRANSPORTATION

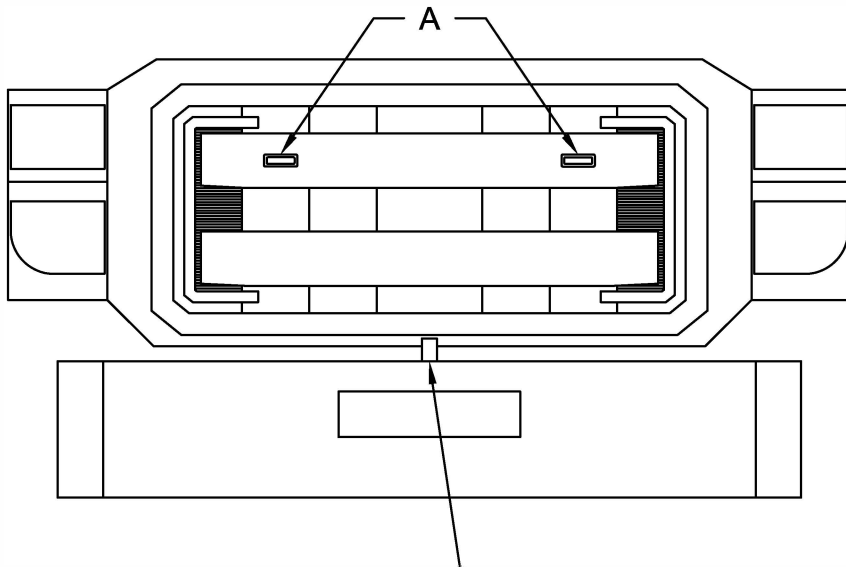
| REVISIONS | | | WRECKER WITH ARROW BOARD | | | | |
|-----------|------|----|--------------------------|----------|---------|-----|--------------|
| NO. | DATE | BY | | | | | |
| 1 | | | DRAWN BY | JJB | SCALE | N/A | EQN-139 |
| 3 | | | DATE | 05-26-16 | CHKD BY | | SHEET 1 OF 2 |

ARROW BOARD MOUNTING SYSTEM SHOWN IS FOR REFERENCE PURPOSES ONLY.
 ACTUAL MESSAGE BOARD MOUNTING SYSTEM SHALL BE DESIGNED TO NOT INTERFERE WITH BEACON LIGHTS, ANTENNA, OR CAB OF TRUCK. MOUNTING SYSTEM MAY BE INCORPORATED INTO PYLON.

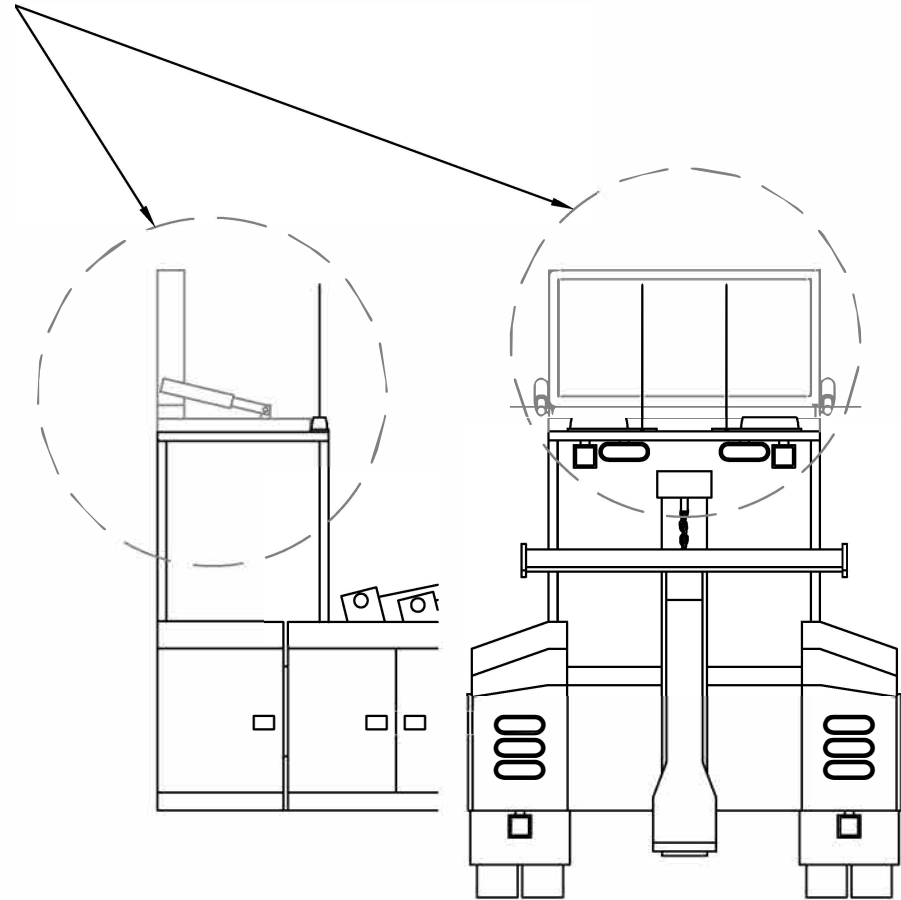
LIGHTING NOTES:

- A. TWO (2) IONAD WARNING LIGHTS. GROMMET MOUNTED TO THE FRONT GRILLE.

FRONT OF TRUCK



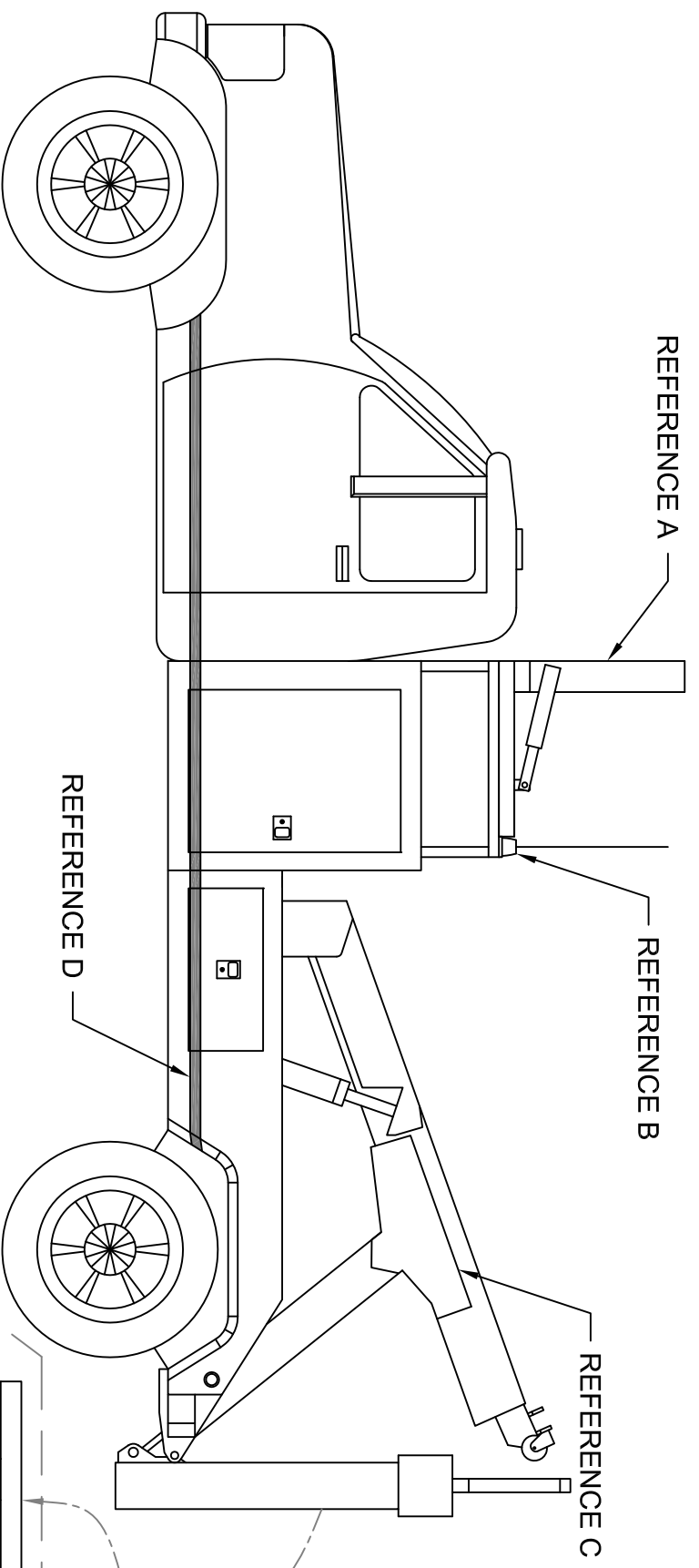
BRACKET AND POWER CONNECTOR FOR PIONEER FLOOD LIGHT SHALL BE MOUNTED ON FRONT PUSH BAR



CHASSIS SHALL BE DESIGNED WITH ADEQUATE SPACE FOR USE OF TIRE CHAINS.

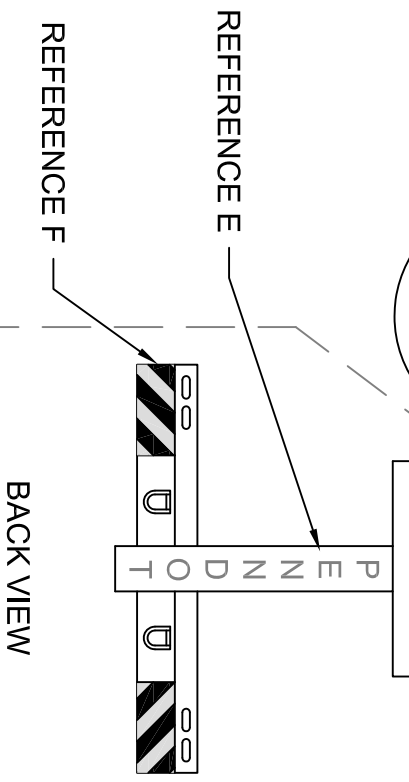
PA DEPARTMENT OF TRANSPORTATION

| REVISIONS | | | WRECKER WITH ARROW BOARD | | |
|-----------|------|----|--------------------------|----------|--------------|
| NO. | DATE | BY | DRAWN BY | SCALE | |
| 1 | | | JJB | N/A | EQN-139 |
| 2 | | | DATE | 05-26-16 | CHKD BY |
| 3 | | | | | SHEET 2 OF 2 |



NOTES:

- A. ARROW BOARD SHALL BE MOUNTED ABOVE CAB LEVEL AND SHALL NOT INTERFERE WITH BOOM ARM.
- B. TWO (2) R-10 LIGHT BARS MOUNTED TO THE ARROW BOARD BRACKET.
- C. DECAL SHALL BE PLACED ON SIDE OF BOOM ARM AND SHALL READ "PARKWAY SERVICE PATROL".
- D. REFLECTIVE TAPE SHALL BE PLACED LENGTH BODY. SHALL HAVE DECAL PLACED ON DOOR OF CAB. DECAL SHALL READ "PARKWAY SERVICE PATROL".
- E. DECAL SHALL BE PLACED ON BACK OF BOOM ARM AND SHALL READ "PENNDOT".
- F. REFLECTIVE SHEETING TO BE 4 INCHES IN WIDTH AND ALTERNATE RED / YELLOW BANDS SPACED EVENLY ON REAR OF BODY. TAPE SHALL BE REFLEXITE DAYBRIGHT V92 CONSPICUITY SHEETING. RED-SRH14R, YELLOW SRH14Y. INSTALLED.

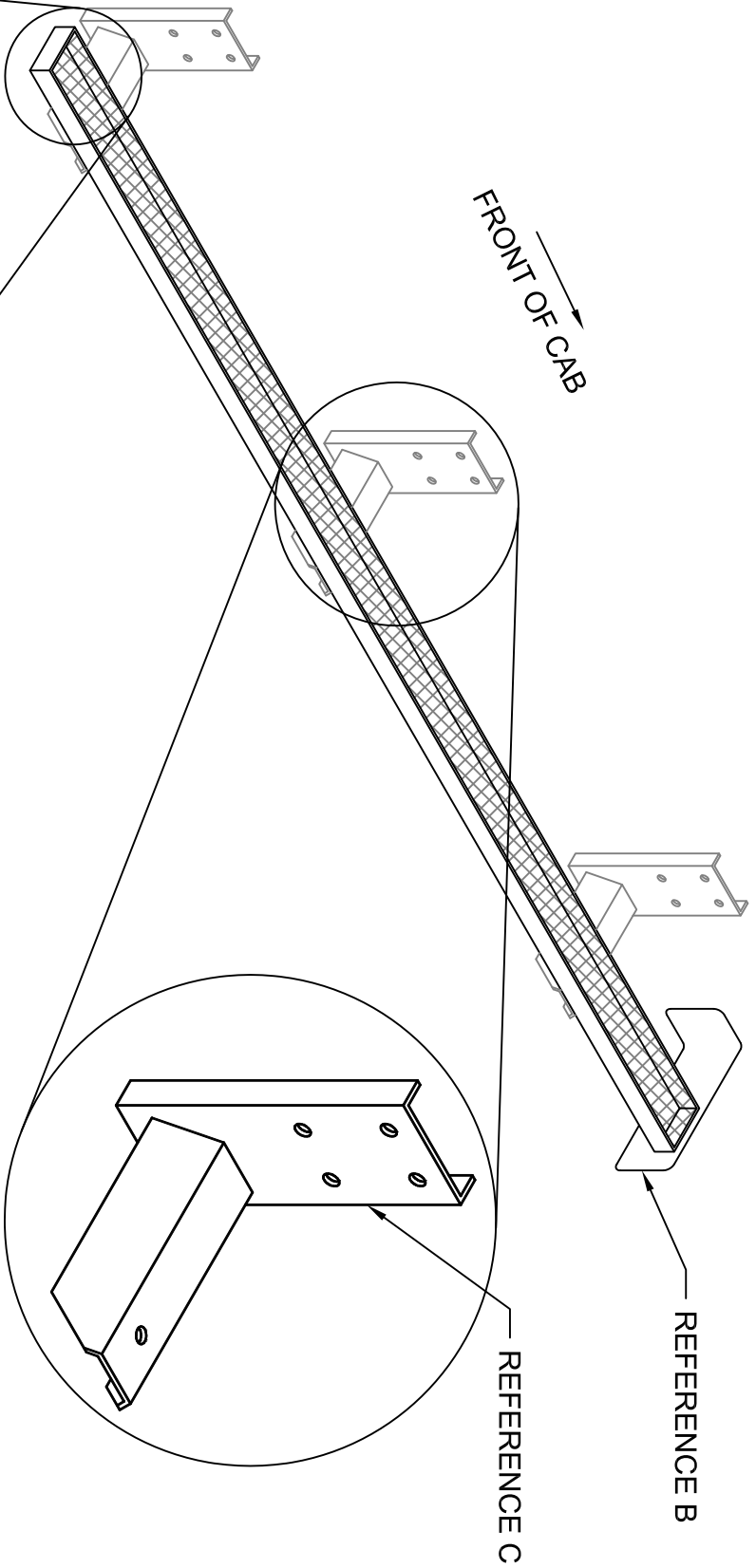


PA DEPARTMENT OF TRANSPORTATION

TOWTRUCK 19,500 LBS

| REVISIONS | | | |
|-----------|----------|-----|--|
| NO | DATE | BY | |
| 1 | 07-17-07 | BAG | |
| 2 | 08-07-08 | MHH | |
| 3 | 07-18-16 | JJB | |

| | | | | |
|----------|----------|------------|-----|--------------|
| DRAWN BY | DJA | SCALE | N/A | EQN-140 |
| DATE | 08-25-98 | CHECKED BY | WHM | SHEET 1 OF 1 |



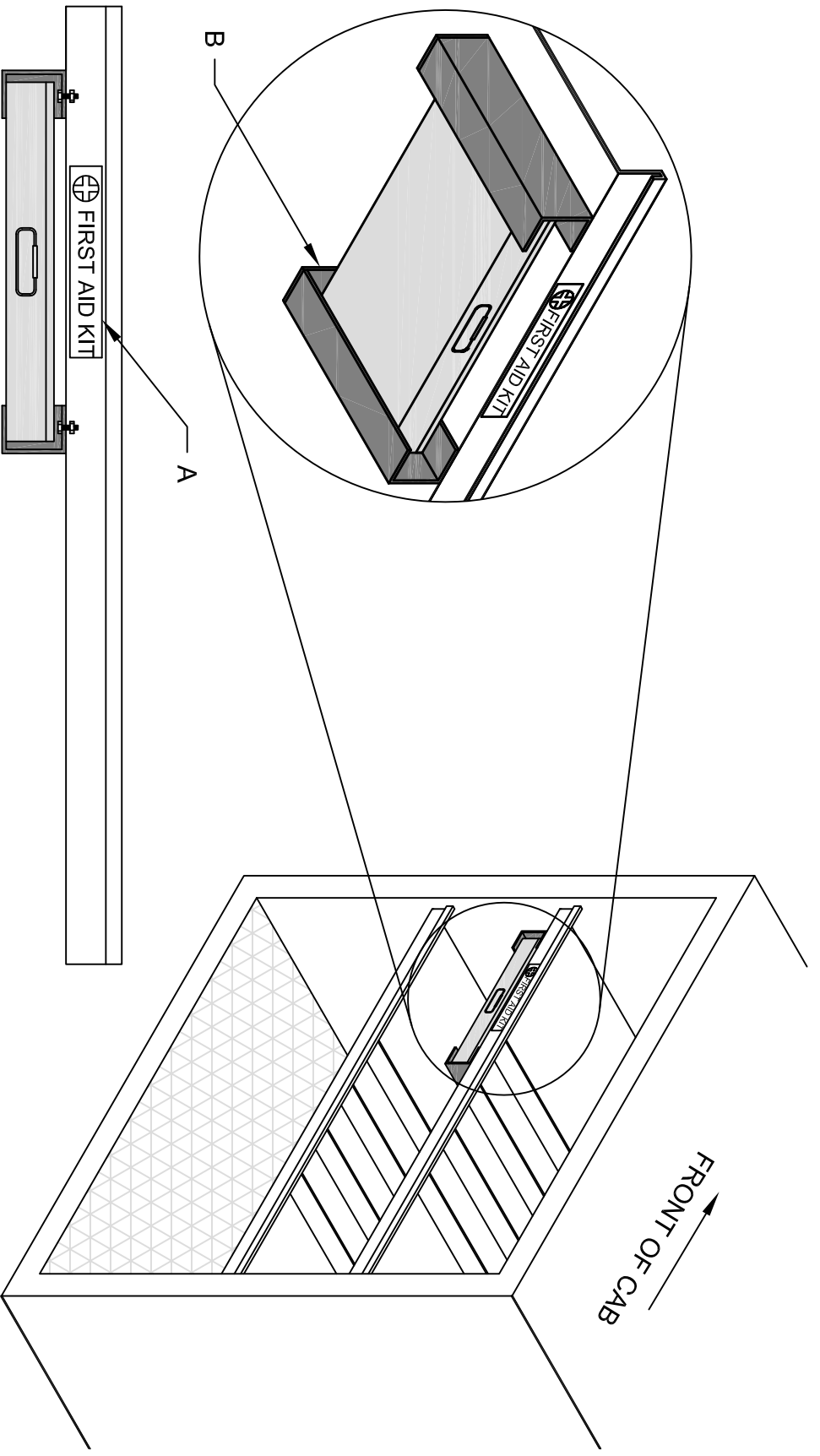
NOTES:
 SHALL EXTEND ENTIRE LENGTH OF CAB AND SHALL BE ADEQUATE TO SUPPORT 350 LBS MAN.

- A. RUNNING BOARDS SHALL BE MADE OF A BUSTIN STYLE GRIP MATERIAL WITH SERRATED EDGES.
- B. MUDGUARD SHALL BE FLUSH WITH THE FRONT WHEEL WELL.
- C. SHALL BE MOUNTED TO CAB USING ALUMINUM BRACKETS. ALL BOLTS SHALL BE STAINLESS STEEL.

PA DEPARTMENT OF TRANSPORTATION

| REVISIONS | | | RUNNING BOARDS | | |
|-----------|------|----|----------------|--|--|
| NO. | DATE | BY | | | |
| 1 | | | | | |
| 2 | | | | | |
| 3 | | | | | |

| | | | | | |
|--|----------|----------|----------|-----|--------------|
| | DRAWN BY | JJB | SCALE | N/A | EQN-170 |
| | DATE | 07-19-16 | CHG'D BY | | SHEET 1 OF 1 |



NOTES:

BRACKET SHALL BE MOUNTED UNDER FIRST SHELF, IN FORWARD MOST CABINET, ON DRIVERS SIDE OF VEHICLE.

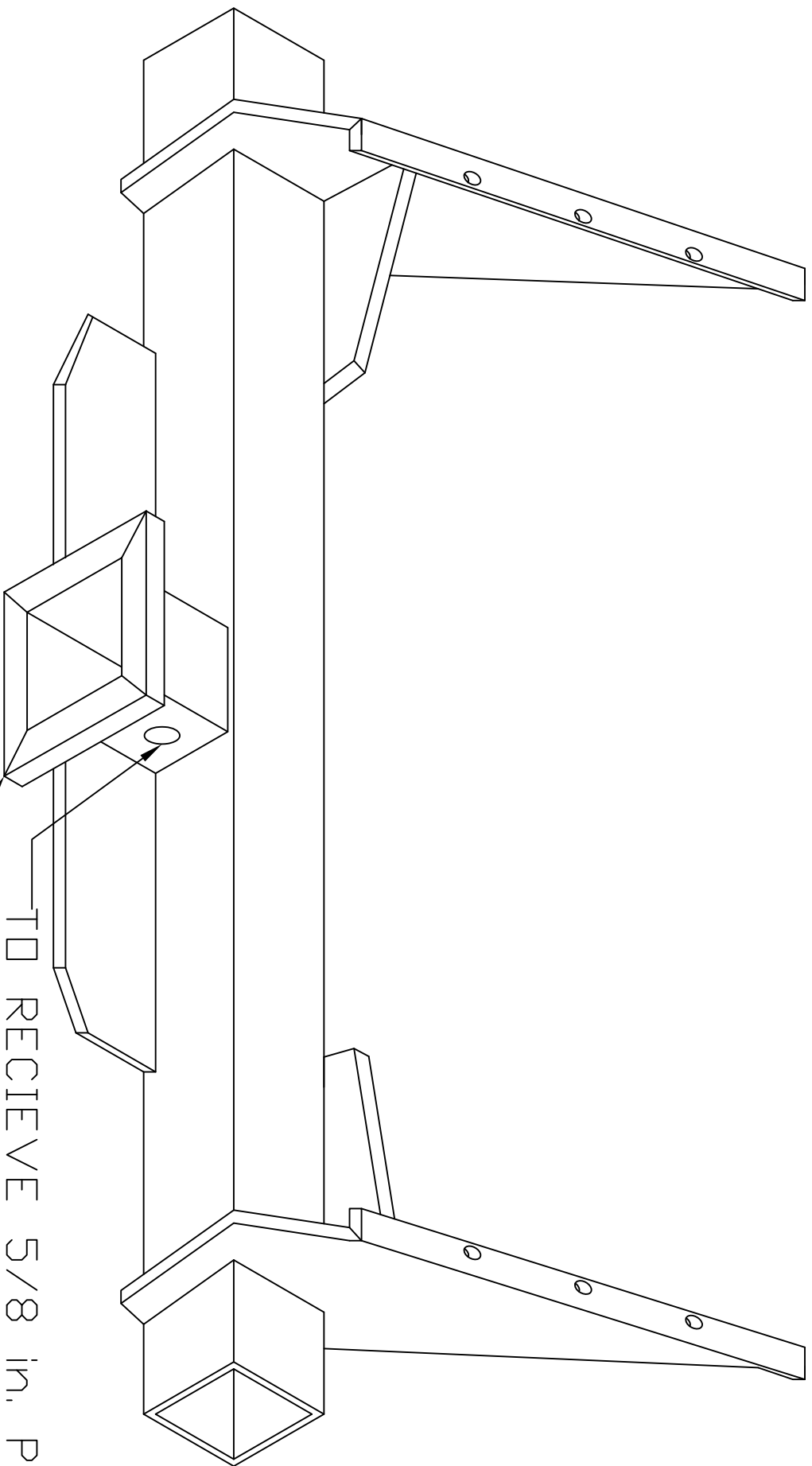
BRACKET SHALL BE DESIGNED TO SECURELY FIT ARBIL FIRST AID KIT (PN# SF00002155) AND SHALL ALLOW FOR QUICK EMERGENCY ACCESS TO KIT.

- A. STICKER SHALL BE PLACED ON SHELF ABOVE BRACKET AND SHALL READ "FIRST AID KIT".
- B. BRACKET SHALL BE DESIGNED TO MINIMIZE MOVEMENT OF FIRST AID KIT WHILE VEHICLE IS IN OPERATION.

PA DEPARTMENT OF TRANSPORTATION

| REVISIONS | | | FIRST AID KIT BRACKET | | |
|-----------|------|----|-----------------------|--|--|
| NO. | DATE | BY | | | |
| 1 | | | | | |
| 2 | | | | | |
| 3 | | | | | |

| | | | | | | |
|--|--|----------|----------|----------|-----|--------------|
| | | DRAWN BY | JJB | SCALE | N/A | EQN-171 |
| | | DATE | 07-21-16 | CHK'D BY | | SHEET 1 OF 1 |



Class IV hitch with a minimum 12,000lbs trailer weight capacity, weight distributing type hitch, mounted. Mfg. by Reese, Elkhart Indiana, or Draw-Tite Canton Michigan, or prior approved exact equal, no substitute on dimensions, standardization.

PA DEPARTMENT OF TRANSPORTATION

| REVISIONS | | HITCH | |
|-----------|----------|-------|---------------------|
| NO. | DATE | BY | WEIGHT DISTRIBUTING |
| 1 | 08/08/06 | CJW | DLW |
| 2 | 11-03-06 | CJW | SCALE N/A |
| 3 | 07-27-16 | JJB | DATE 12/31/97 |

SPECIFICATIONS LED WARNING LIGHTS

THE WARNING LIGHTS DESCRIBED HERIN WILL BE USED FOR OFF/ON ROAD EQUIPMENT SUCH AS CARS, TRUCKS, MOTOR GRADERS, LOADERS, ETC. REQUIRING SAFETY LIGHTS. THE FOLLOWING SPECIFICATION DETAILS A 360° HIGH QUALITY SELF-CONTAINED LED MINI LIGHTBAR FOR USE ON A VARIETY OF VEHICLE TYPES:

1. THE LED MINI LIGHT BAR SHALL MEET J845 MAY97, CLASS 1 IN AMER AND SHALL BE AMECA CERTIFIED. THE PERMANENT MOUNT LED MINI BAR SHALL FEATURE 14 MULTIPLE FLASH PATTERNS AND HAVE A MIMIMUM OF A SIX INCH PIGTAIL.
2. THE LED MINI LIGHTBAR SHALL FEATURE SOLID-STATE CIRCUITRY, POLARITY PROTECTION AND NO MOVING PARTS FOR HIGHEST DEGREE OF RELIABILITY. THE MINI LIGHTBAR SHALL BE 12 VDC NOMINAL, STANDARD. THE MINI BAR SHALL HAVE A PUBLISHED AVERAGE AMP DRAW OF 3.6 AMPS AT 12 VDC (10.8 AMP PEAK AMP DRAW). THE MINI LIGHT BAR SHALL ALLOW OPERATION WITHOUT DEGRADATION OF INTENSITY OR FLASH RATE BETWEEN 10-16 VDC.
3. THE LED LIGHTBAR SHALL FEATURE A HEAVY DUTY EXTRUDED ALUMINUM BASE. THE PERMANENT MOUNT LED MINI LIGHTBAR SHALL NOT EXCEED 5 3/32" IN HEIGHT, 17 1/4" IN WIDTH, AND 6 5/16" IN DEPTH. THE LED MINI LIGHTBAR SHALL HAVE A BUILT IN ELECTRONIC FLASHER. THE LED MINI LIGHTBAR SHALL BE CONSTRUCTED WITH SIX (6) 400 SERIES LINEAR SUPER-LED WITH DEUTSCH CONNECTOR MODULES RESULTING IN A TOTAL OF 72 SUPER LED'S. THE LED MINI LIGHTBAR SHALL USE BOLTS FOR PERMANENT MOUNTING. THE LED MINI LIGHTBAR DOME SHALL FEATURE A SMOOTH OUTER SURFACE AND MADE OF POLYCARBONATE MATERIAL.
4. THE LED MINI LIGHT BAR SHALL BE WARRANTED FOR SIXTY MONTHS BY THE MANUFACTURER FROM THE DATE INSTALLED.

| PA DEPARTMENT OF TRANSPORTATION | | | | | |
|---------------------------------|----------|-----|------------------------------|--------------------------|--------------|
| REVISIONS | | | LED WARNING LIGHT | | |
| NO. | DATE | BY | | | |
| 1 | 05-29-07 | KNH | | | |
| 2 | 07-30-08 | MHH | <small>DRAWN BY</small> DWG | <small>SCALE</small> N/A | EQN-210B |
| 3 | 01-07-10 | TOD | <small>DATE</small> 04-04-02 | <small>CHK'D BY</small> | SHEET 1 OF 3 |
| 4 | 04-05-12 | TOD | | | |

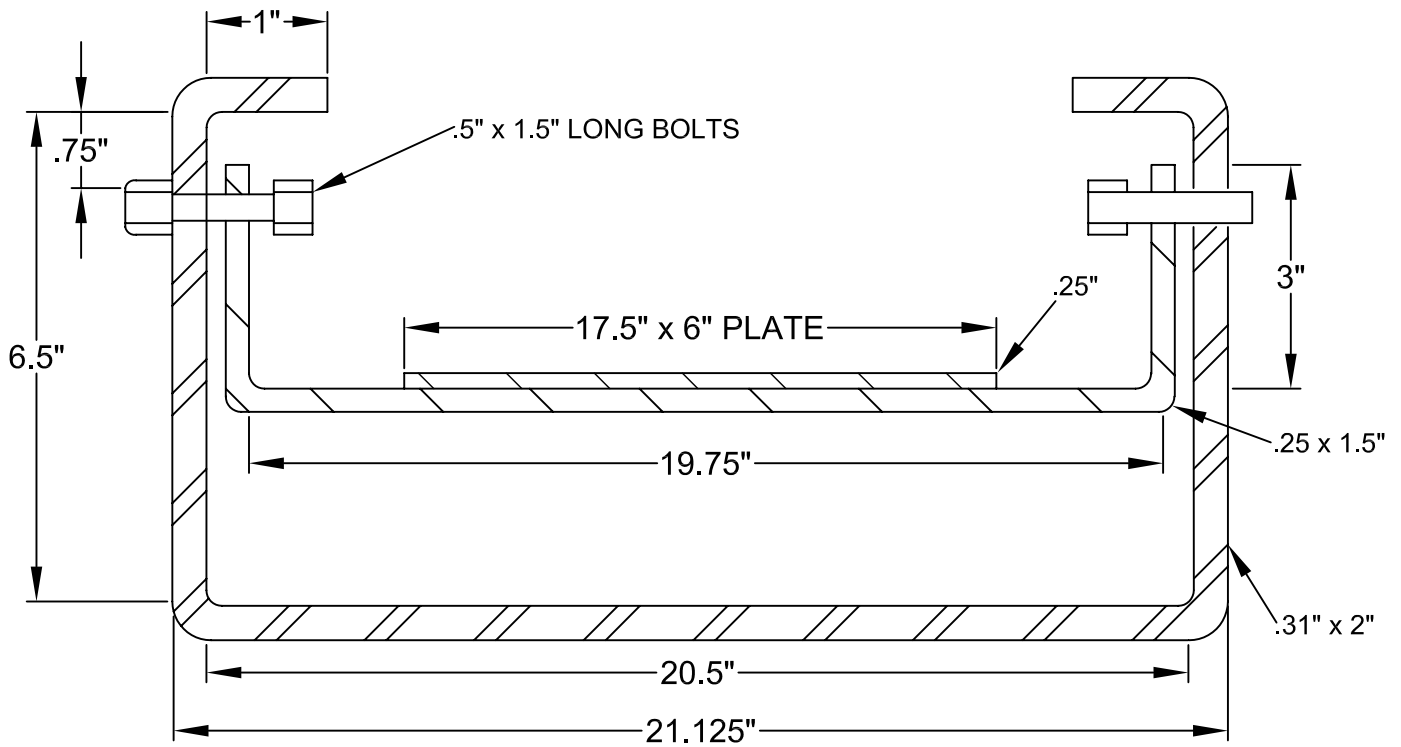
SPECIFICATIONS LED WARNING LIGHTS

5. UNIT MUST BE CAPABLE OF BEING MOUNTED ON A SURFACE, OR ON A SELF-LEVELING MOUNT. ALL MOUNTING HARDWARE AND ROOF MOUNTING BOLTS SHALL BE INCLUDED. A SOFT RUBBER GASKET OR MOUNTING PAD SHALL BE PROVIDED TO FORM A WEATHERPROOF SEAL BETWEEN THE HOUSING AND VEHICLE ROOF, AFFORDING MAXIMUM VIBRATION ISOLATION.

IMPORTANT: ANY EXCEPTION TO THE ABOVE SPECIFICATIONS MUST BE CLEARLY STATED IN YOUR BID OR IT SHALL BE CONSIDERED AS "NON-RESPONSIVE".

REFERENCE: WHELEN MODEL 01-0687181A1P OR A PRE-APPROVED EQUAL.

| | | | | | | |
|--|-------------|-----------|------------------------------|-----------------------------|--------------|--|
| PA DEPARTMENT OF TRANSPORTATION | | | | | | |
| REVISIONS | | | LED WARNING LIGHT | | | |
| NO. | DATE | BY | | | | |
| 1 | 05-29-07 | KNH | | | | |
| 2 | 07-30-08 | MHH | <small>DRAWN BY</small> DWG | <small>SCALE</small> N/A | EQN-210B | |
| 3 | 01-07-10 | TOD | <small>DATE</small> 04-04-02 | <small>CHK'D BY</small> TOD | SHEET 2 OF 3 | |
| 4 | 04-05-12 | TOD | | | | |



THE ALUMINUM WARNING LIGHT MOUNTING BRACKET SHALL BE A SELF-LEVELING TYPE OF SUFFICIENT WEIGHT TO KEEP OXCILLATION TO A MINIMUM. IT SHALL BE CONSTRUCTED TO BE IN BALANCE WITH THE WARNING LIGHT AND MAINTAIN THE LIGHT IN A HORIZONTAL POSITION WITH THE TRUCK BODY RAISED UP TO AN ANGLE OF 50 DEGREES. OUTER BRACKET SHALL BE EQUIPPED WITH *TEFLON, NYLON, OR BRONZE BUSHINGS IN PIVOTS AND STOPS TO PREVENT THE LIGHT FROM TIPPING MORE THAN 50 DEGREES FROM CENTER OF BRACKET. INNER BRACKET SHALL BE CONSTRUCTED WITHA A FULL SIZE MINIMUM .25in. THICK ALUMINUM PLATE WITH A DIAMETER EQUAL TO THE BASE OF THE LIGHT, AND A PIPE NIPPLE OR A SUITABLE DEVICE TO MOUNT THE LIGHT. THE INNER BRACKET SHALL BE SUPPORTED BY OFFSET BOLTS (ALUMINUM, BRASS, OR STAINLESS STEEL) PIVOTING IN THE OUTER BRACKET BUSHINGS. ONE OFFSET BOLT SHALL BE DRILLED TO ALLOW A WIRE TO PASS THROUGH FOR CONNECTION TO THE LIGHT. SPACER(S), IF NECESSARY, SHALL BE PROVIDED TO PREVENT SIDEWAY SWINGS.

PA DEPARTMENT OF TRANSPORTATION

| REVISIONS | | | HIGH VOLTAGE REVOLVING WARNING LIGHT | | |
|-----------|----------|-----|---|----------|--------------|
| NO. | DATE | BY | DRAWN BY | SCALE | |
| 1 | 07-01-03 | BLD | | | |
| 2 | 01-25-07 | CJW | DWG | N/A | EQN-210B |
| 3 | 07-30-08 | MHH | DATE 04-04-02 | CHK'D BY | SHEET 3 OF 3 |
| 4 | 01-07-10 | TOD | | | |

TOWING AND HAULING INFORMATION

VEHICLE MODEL _____
 VEHICLE EMPTY WEIGHT _____
 GVWR _____
 GCWR _____
 MAXIMUM WEIGHT _____
 FOR EQUIPMENT _____
 TOWED W/O BRAKES _____

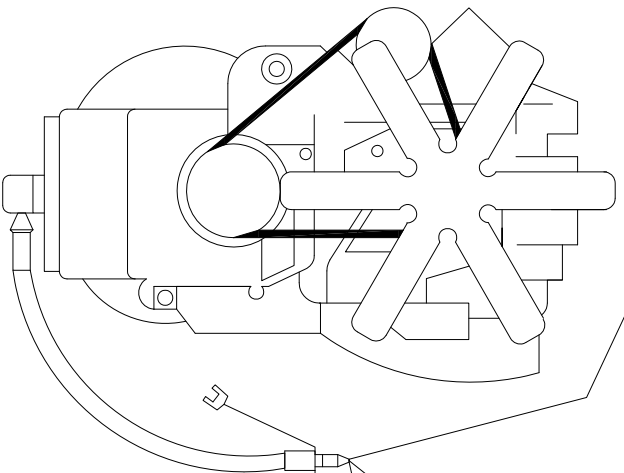
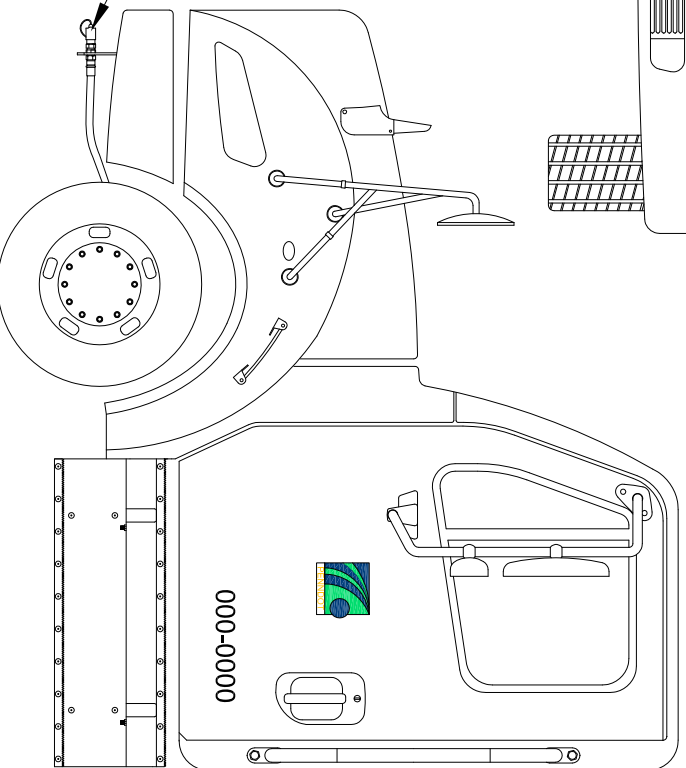
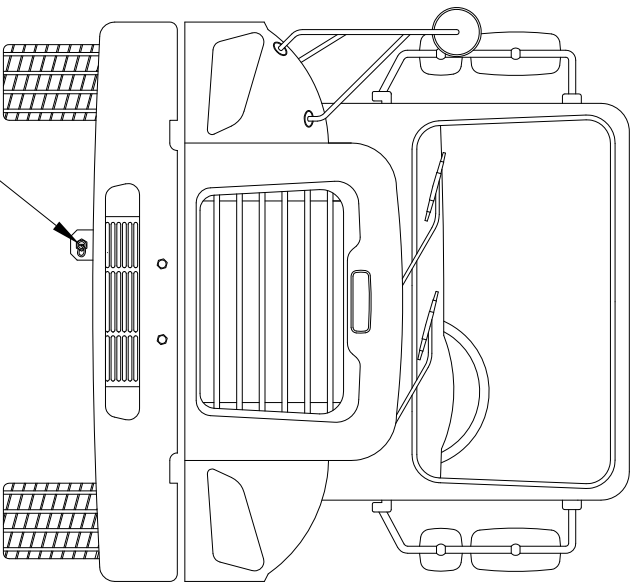
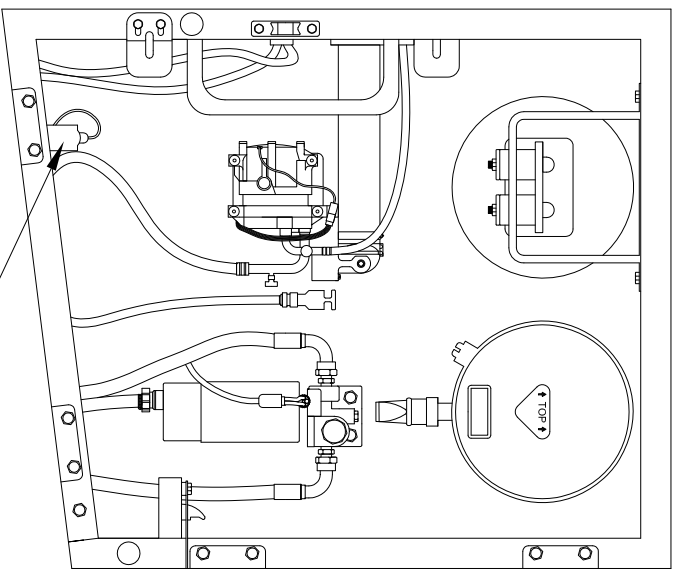
2.50 in.

4.00 in.

HAULING INFORMATION

A WEATHER PROOF DECAL OR METAL TAG SHALL BE INSTALLED IN THE CAB REFLECTING THE INFORMATION AS SHOWN ON THE EXAMPLE ABOVE.

| | | | | |
|--|----------|-----|---------------------------------------|----------|
| PA DEPARTMENT OF TRANSPORTATION | | | DECAL | |
| | | | TOWING AND HAULING INFORMATION | |
| REVISIONS | | | | |
| NO. | DATE | BY | | |
| 1 | 05-22-02 | DWG | | |
| 2 | 11-03-06 | CJW | | |
| 3 | | | | |
| | | | DRAWN BY | DLW |
| | | | SCALE | N/A |
| | | | DATE | 10-20-97 |
| | | | CHK'G BY | WHM |
| | | | SHEET 1 OF 1 | |



DISCONNECT
COUPLING
FLOCS
ENGINE KIT

PA DEPARTMENT OF TRANSPORTATION

REVISIONS

| NO. | DATE | BY | SCALE |
|-----|----------|-----|-------|
| 1 | 07-01-03 | BLD | N/A |
| 2 | 10-20-06 | CJW | N/A |
| 3 | 06-19-13 | JFM | N/A |

**FAST LUBE OIL CHANGE SYSTEM
OVERVIEW AND PARTS LIST**

| NO. | DATE | BY | SCALE |
|-----|----------|-----|-------|
| 1 | 07-01-03 | BLD | N/A |
| 2 | 10-20-06 | CJW | N/A |
| 3 | 06-19-13 | JFM | N/A |

1. CONTACT AEROQUIP WITH YOUR DRAIN PAN PLUG SIZE
2. AEROQUIP DEALER TELEPHONE NUMBERS:

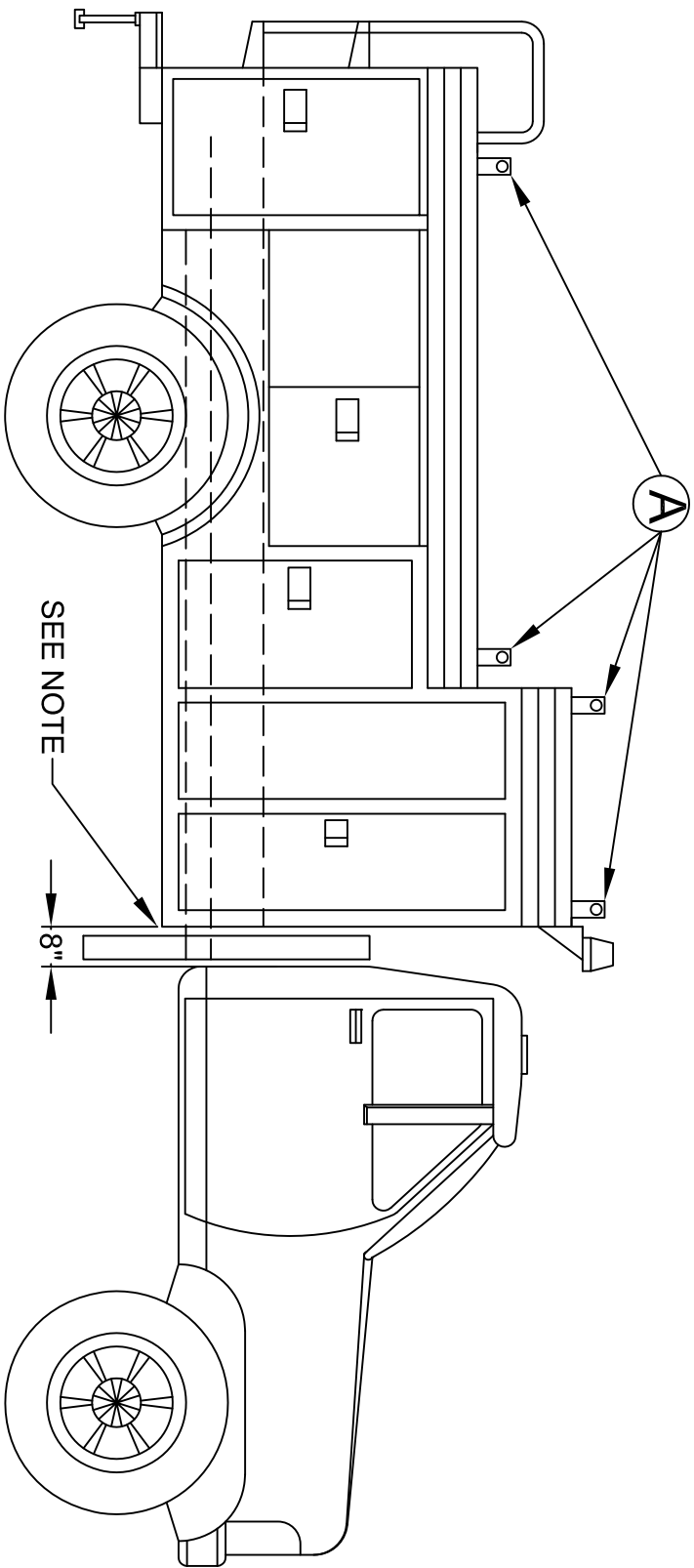
ADVANCED FLUID CONNECTORS..... 717-757-1068
 AIR BRAKE & POWER EQUIPMENT CO.. 717-622-6188
 AMERICAN BEARING & POWER..... 717-569-3291
 GOODALL RUBBER COMPANY 610-534-2100
 POWER DRIVES INC..... 814-833-8181
 R L MILLER INC..... 412-833-6800
 R L MILLER INC..... 814-456-8900
 SRG/BEVCO..... 610-358-3100
 VOTO MANUFACTURERS SALES CO.... 814-226-7101

FLOCS SHALL INCLUDE, BUT NOT LIMITED TO:

- A. DUST CAP 5657-12
- B. HOSE TO SUIT LENGTH
- C. HOSE FITTING TO SUIT
- D. ADAPTER TO SUIT
- E. HOSE CLAMP #900729-6
- F. BRACKET TO SUIT
- G. COUPLING 5602-12-12S

PA DEPARTMENT OF TRANSPORTATION

| REVISIONS | | | FAST LUBE OIL CHANGE SYSTEM OVERVIEW AND PARTS LIST | | |
|-----------|----------|-----|--|----------|----------|
| NO | DATE | BY | SCALE | CHK'D BY | |
| 1 | 07-01-03 | BLD | DLW | N/A | EQN-351A |
| 2 | 10-20-06 | CJW | | | |
| 3 | 06-19-13 | JFM | | | |



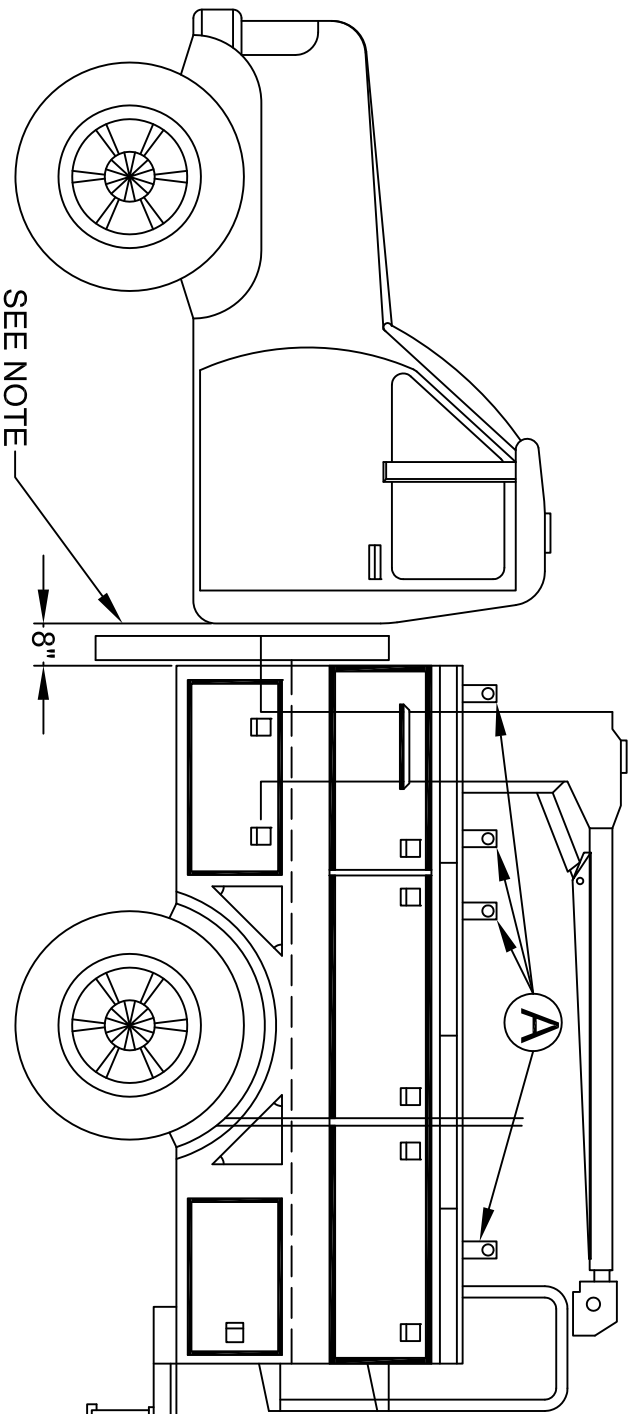
A 2" RUNG RAILING (WITH TOE GUARD), INTERCHANGEABLE FROM RIGHT TO LEFT SIDE. RIGHT SIDE (ONLY) INCORPORATES A PULL OUT EXTENSION. SHALL HAVE A POSITIVE SYSTEM OF LOCKING - FULL IN / FULL OUT.

- SIGN CREW TRUCK (TYPE I)
GENERAL SPECIFICATIONS
- ELECTRIC & HYDRAULIC POWER TO OPERATE EQUIPMENT
 - HYDRAULIC POUNDER & PULLER
 - UTILITY CARGO BOX

NOTE:OUTRIGGERS WILL NOT BE INSTALLED ON TYPES I & II. THE CARGO BOX WILL BE EXTENDED 8" FOR ADDITIONAL STORAGE OR AN ADDITIONAL COMPARTMENT WILL BE ADDED TO STORE LARGER SIGNS ACROSS THE ENTIRE WIDTH OF THE CAB.

| REVISIONS | | PA DEPARTMENT OF TRANSPORTATION | |
|-----------|----------|---------------------------------|-------------------|
| NO. | DATE | BY | |
| 1 | 08-04-08 | MHH | SIGN TRUCK |
| 2 | 09-28-11 | TOD | |
| 3 | 08-29-14 | ACT | |

| | | | | |
|----------|----------|----------|-----|--------------|
| DRAWN BY | DLW | SCALE | N/A | EQN-483 |
| DATE | 10-24-97 | CHK'D BY | WHM | SHEET 1 OF 8 |



SEE NOTE

8"

NOTE: OUTRIGGERS WILL NOT BE INSTALLED ON TYPES I & II. THE CARGO BOX WILL BE EXTENDED 8" FOR ADDITIONAL STORAGE OR AN ADDITIONAL COMPARTMENT WILL BE ADDED TO STORE LARGER SIGNS ACROSS THE ENTIRE WIDTH OF THE CAB.

SIGN CREW TRUCK (TYPE II)
GENERAL SPECIFICATIONS

- ELECTRIC & HYDRAULIC POWER TO OPERATE EQUIPMENT
- HYDRAULIC POUNDER & PULLER
- UTILITY CARGO BOX

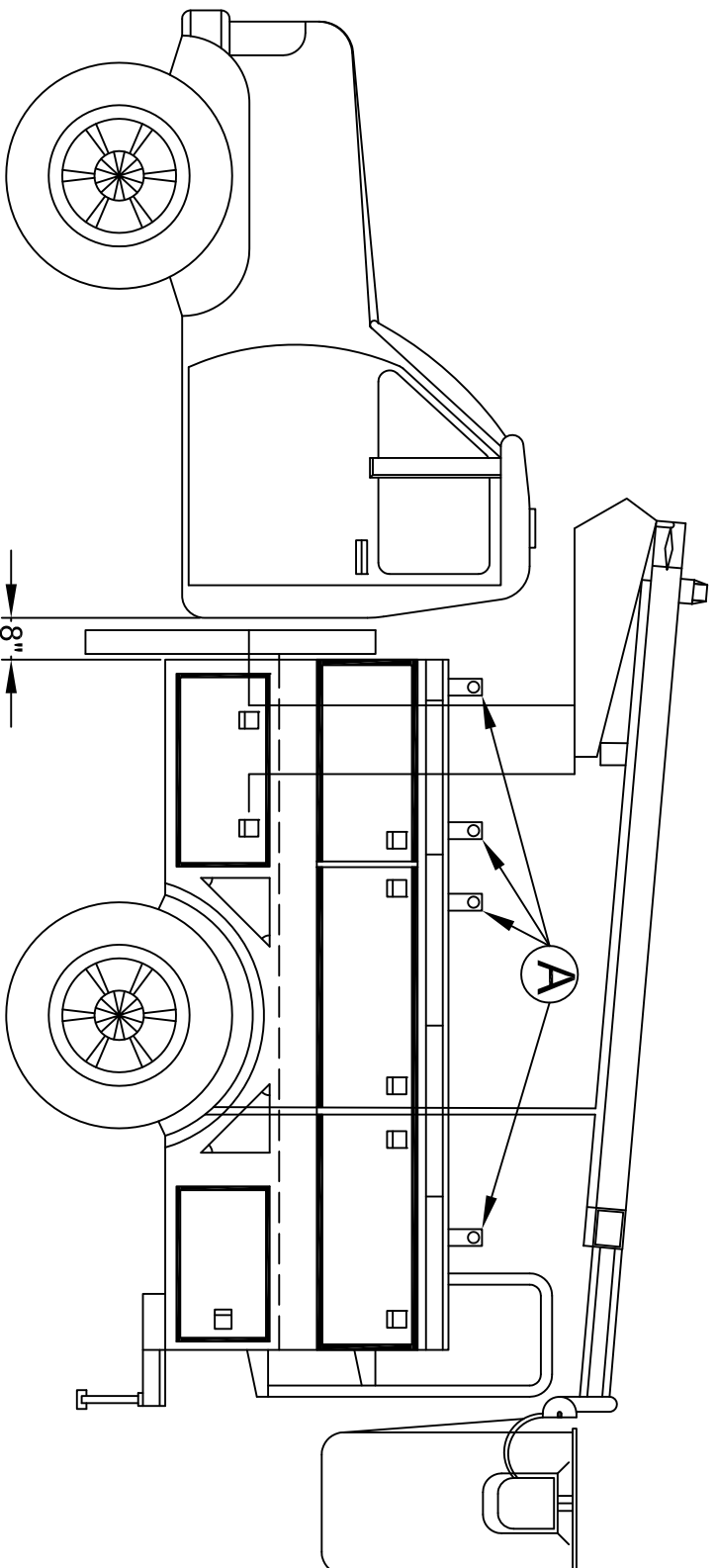
PA DEPARTMENT OF TRANSPORTATION

REVISIONS

| NO. | DATE | BY | SCALE |
|-----|----------|-----|-------|
| 1 | 08-04-08 | MHH | |
| 2 | 09-28-11 | TOD | |
| 3 | 08-29-14 | ACT | |

SIGN TRUCK

| | | | | |
|------------|-----|-------|----------|--------------|
| DRAWN BY | DLW | SCALE | N/A | EQN-483 |
| CHECKED BY | WHM | DATE | 10-24-97 | SHEET 2 OF 8 |



**SIGN CREW TRUCK (TYPE III) WITH LIFT BUCKET
GENERAL SPECIFICATIONS**

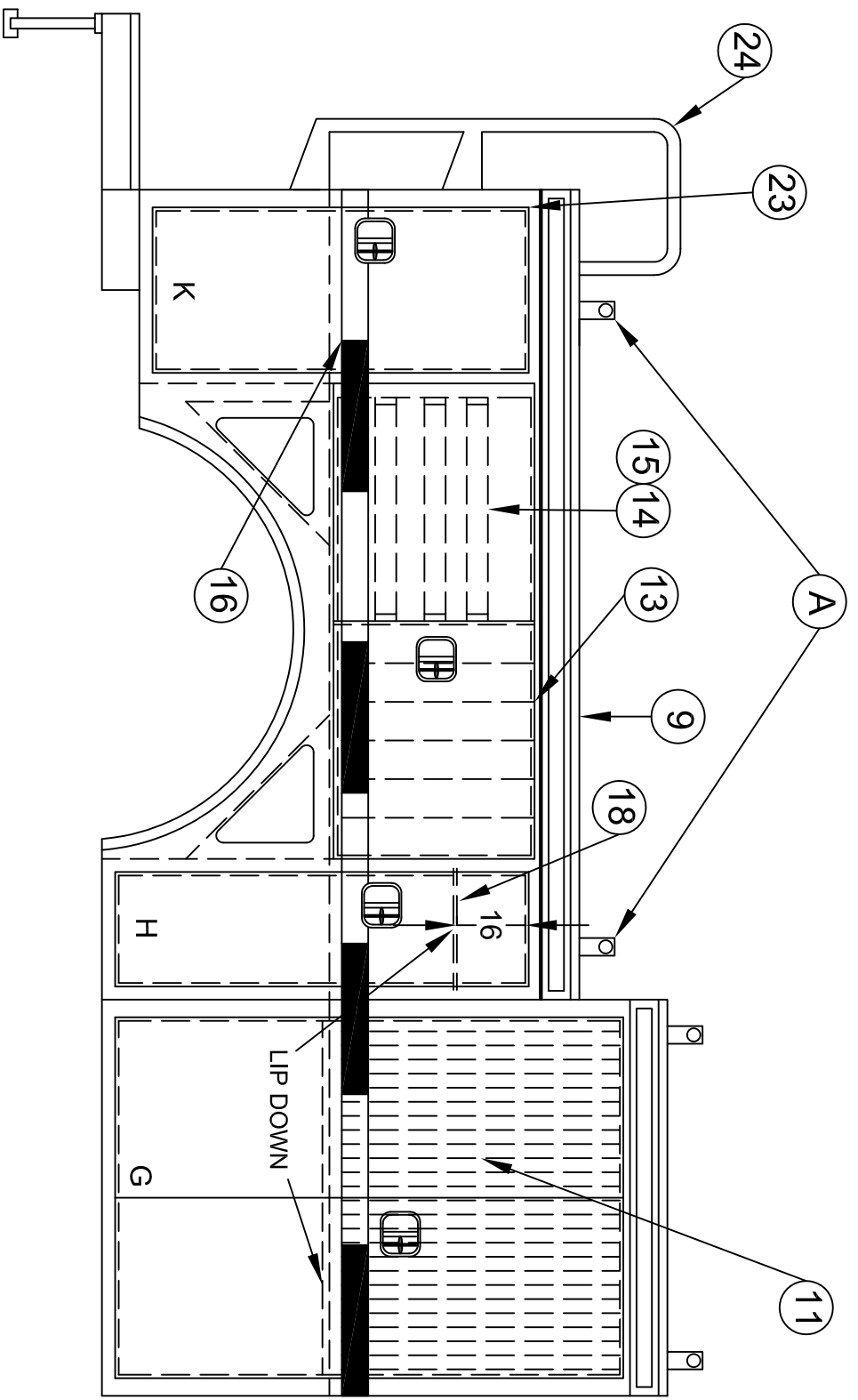
- ELECTRIC & HYDRAULIC POWER TO OPERATE EQUIPMENT
- HYDRAULIC POUNDER & PULLER
- UTILITY CARGO BOX

**NOTE:
SEE WRITTEN SPECIFICATIONS
FOR STAHL AND WARNER BODY**

PA DEPARTMENT OF TRANSPORTATION

| REVISIONS | | SIGN TRUCK | |
|-----------|----------|------------|--|
| NO. | DATE | BY | |
| 1 | 08-04-08 | MHH | |
| 2 | 09-28-11 | TOD | |
| 3 | 08-29-14 | ACT | |

| | | | | |
|----------|----------|----------|-----|--------------|
| DRAWN BY | DLW | SCALE | N/A | EQN-483 |
| DATE | 10-24-97 | CHK'D BY | WHM | SHEET 3 OF 8 |



REFLECTORIZED 2" WIDE MARKING SHALL BE APPLIED.
 MATERIAL SHALL BE RED / SILVER CONTINUOUS
 BACKING REFLEXITE CONSPICUITY II SYSTEM OR 3H
 SCOTCHLITE CONSPICUITY SHEETING SERIES 980.

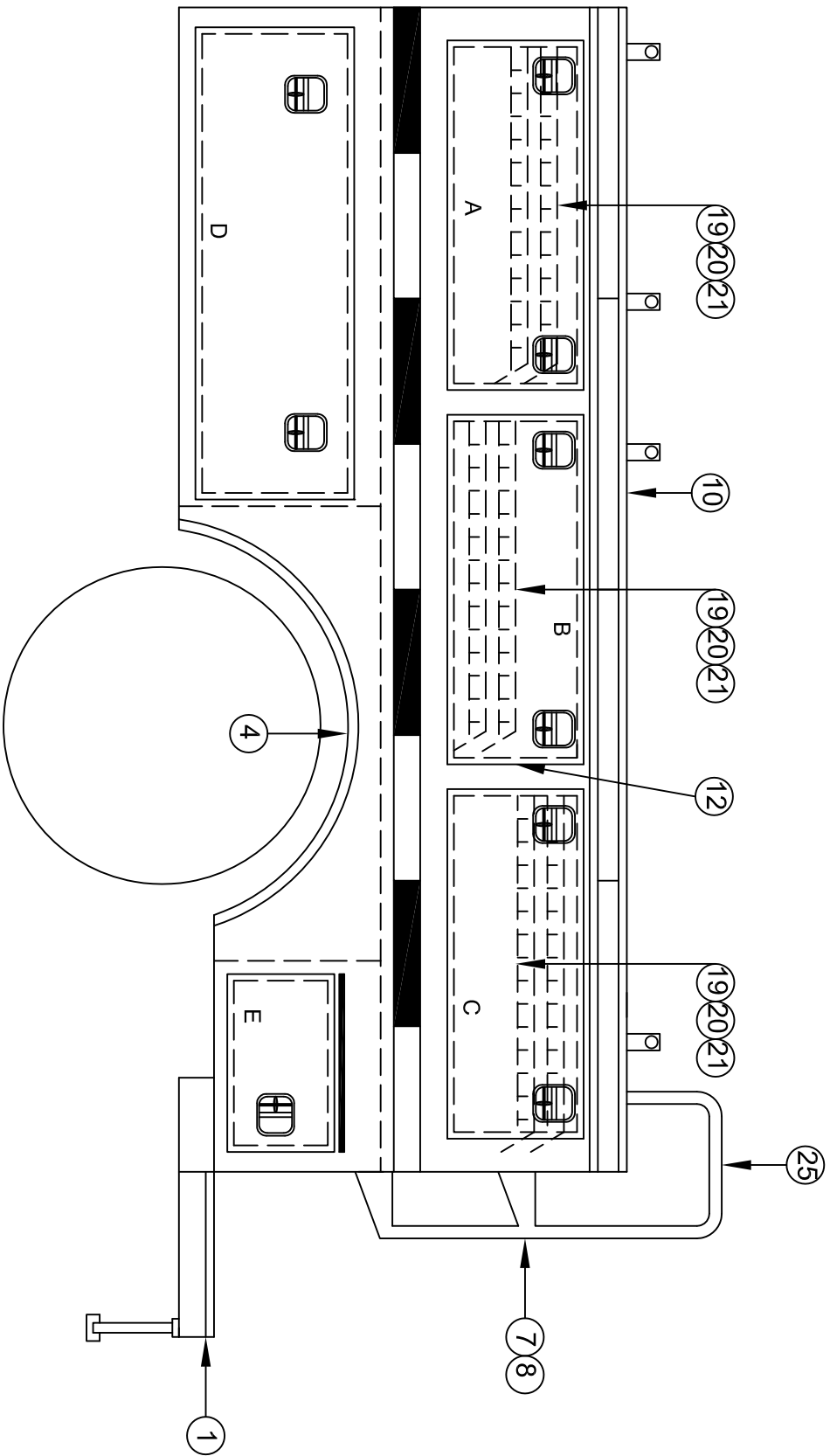
PA DEPARTMENT OF TRANSPORTATION

REVISIONS

| NO. | DATE | BY | SCALE |
|-----|----------|-----|-------|
| 1 | 08-04-08 | MHH | N/A |
| 2 | 09-28-11 | TOD | N/A |
| 3 | 08-29-14 | ACT | N/A |

SIGN TRUCK

| NO. | DATE | BY | SCALE |
|-----|----------|-----|-------|
| 1 | 08-04-08 | MHH | N/A |
| 2 | 09-28-11 | TOD | N/A |
| 3 | 08-29-14 | ACT | N/A |



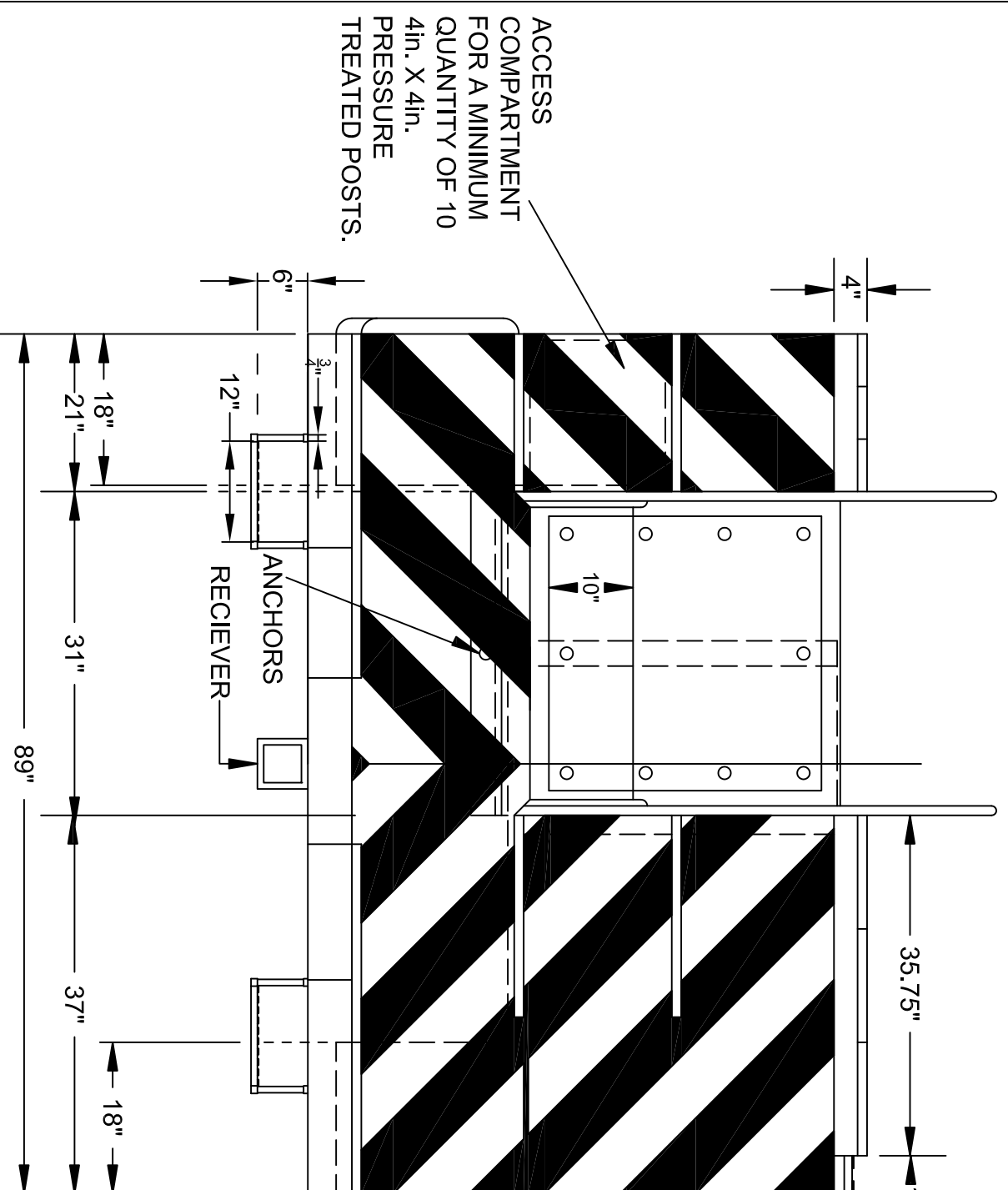
PA DEPARTMENT OF TRANSPORTATION

REVISIONS

| NO. | DATE | BY | DESCRIPTION |
|-----|----------|-----|-------------|
| 1 | 08-04-08 | MHH | |
| 2 | 09-28-11 | TOD | |
| 3 | 08-29-14 | ACT | |

SIGN TRUCK

| | | | | |
|----------|----------|------------|-----|--------------|
| DRAWN BY | DLW | SCALE | N/A | EQN-483 |
| DATE | 10-24-97 | CHECKED BY | WHM | SHEET 5 OF 8 |



RECEIVER SHALL BE EQN-202B (LOCATION SHALL BE DETERMINED BY HEIGHT OF BUMPER). THERE SHALL BE A TRAILER CONNECTOR PER EQN-81A. EQN-80A SHALL BE USED AS A GUIDELINE FOR WIRING.

PA DEPARTMENT OF TRANSPORTATION

| REVISIONS | | SIGN TRUCK | |
|-----------|----------|------------|--|
| NO. | DATE | BY | |
| 1 | 08-04-08 | MHH | |
| 2 | 09-28-11 | TOD | |
| 3 | 08-29-14 | ACT | |

| | | | | | | |
|--|--|----------|----------|----------|-----|--------------|
| | | DRAWN BY | DLW | SCALE | N/A | EQN-483 |
| | | DATE | 10-24-97 | CHK'D BY | WHM | SHEET 6 OF 8 |

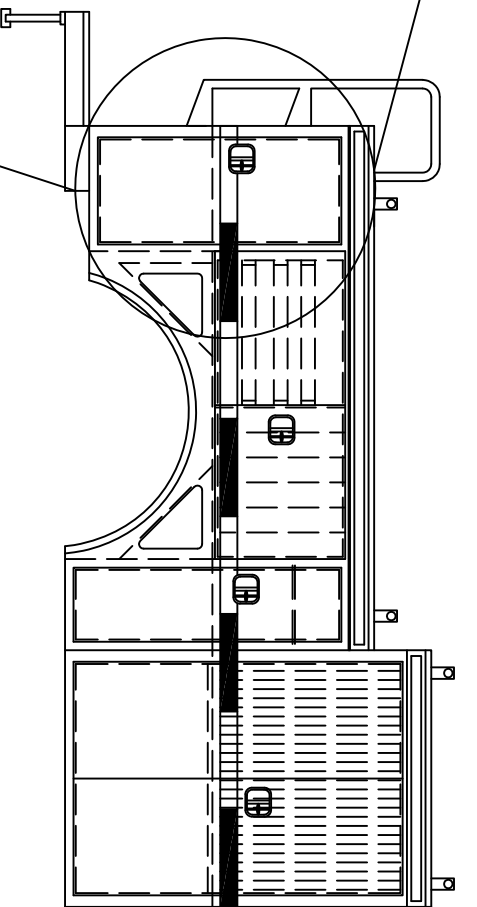
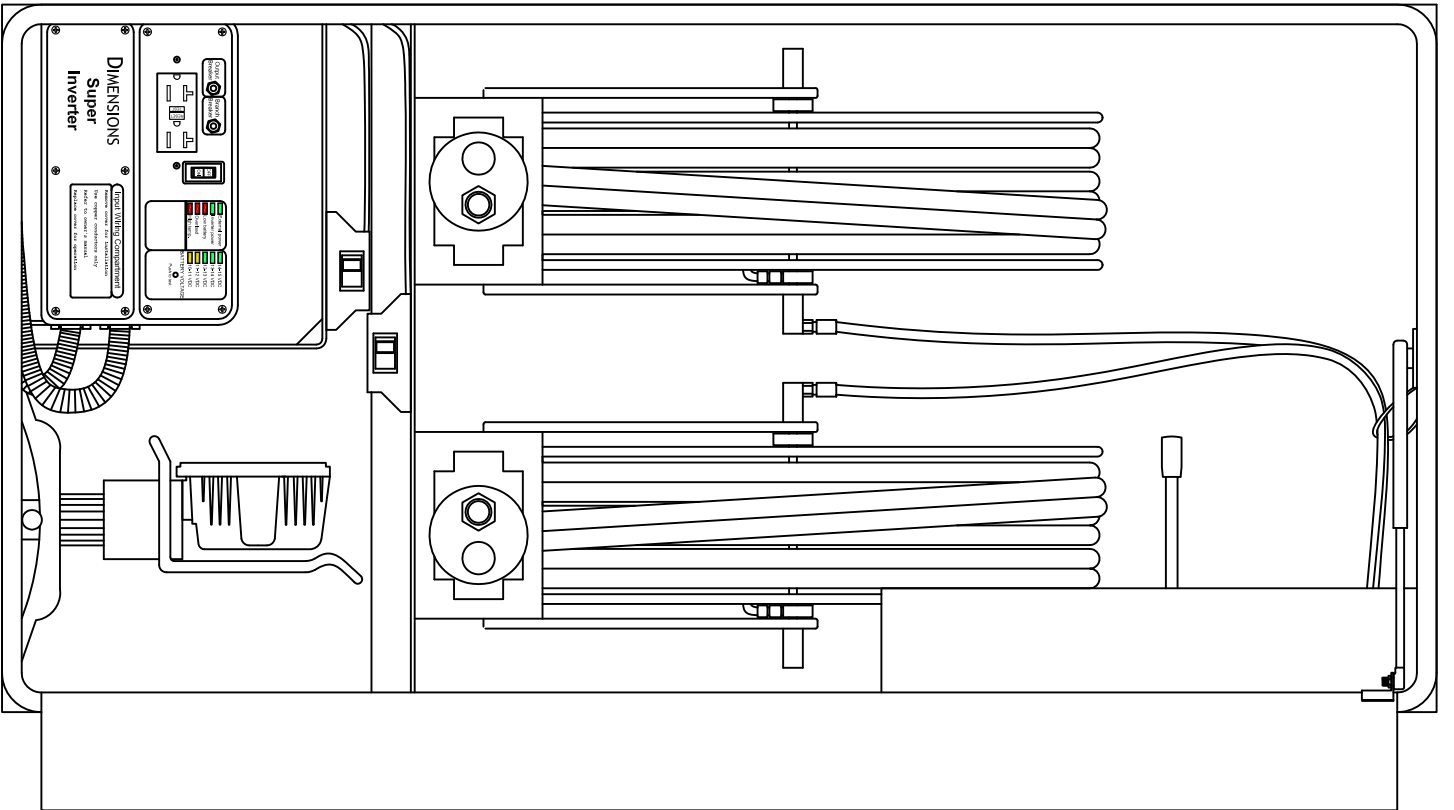
1. TOP PANELS & REAR END PANELS SHALL BE A MINIMUM OF 14 GA. ALL OTHER BODY PANELS SHALL BE A MINIMUM OF 16 GA. RUST RESISTANT STEEL.
2. SIDE DOORS SHALL BE DOUBLE PANELED, WITH BUILT IN DRAINAGE. DOORS SHALL HAVE MIN. 18 GA. OUTER SKIN AND MIN. 20 GA. INNER PANEL OF RUST RESISTANT STEEL. PIANO HINGE IS UNNACCEPTABLE FOR SIDE PANELS. THERE SHALL BE STEEL HINGE RODS EXTENDING THE ENTIRE LENGTH OF EACH SIDE DOOR.
3. DOORS SHALL HAVE RECESSED SLAM ACTION (ROTARY) LOCKS KEYED ALIKE, PER UNIT.
4. LOAD BED FLOOR SHALL BE A MIN. 12 GA. SAFETY TREADPLATE COATED WITH NON-SKID PAINT.
5. WHEEL WELLS SHALL BE FULLY LINED.
6. THERE SHALL BE RUBBER FENDERETTES.

| | | | |
|------|-----|-------|--------------------------|
| 25 | 2 | | GRAB RAIL |
| 24 | 1 | | TOP HINGE (BACK TO BACK) |
| 23 | 2 | | RUBBER DOOR BUMPER |
| 22 | 2 | | SHELF REINFORCEMENT |
| 21 | 4 | | SHELF REINF x 33.35 |
| 20 | | | ADJUSTABLE DIVIDERS |
| 19 | 4 | | ADJ. MAT'L TRAY |
| 18 | 1 | | TANK HOLDER SHELF |
| 17 | 1 | | FLAT PLATE DOOR |
| 16 | 2 | | SPACER PANEL |
| 15 | 3PR | | GRANT TRACK |
| 14 | 3 | | ROLL-OUT TRAYS |
| 13 | 1 | | SIGN STORAGE COMP |
| 12 | 3 | | SHELF CLIP INST |
| 11 | 1 | | SIGN HOLDER ASSEMBLY |
| 10 | 1 | | GRIPSTRUT PLATFORM |
| 9 | 1 | | GRIPSTRUT PLATFORM |
| 8 | 4 | | 31514 GRIPSTUT x 20.0 |
| 7 | 8 | | GRIPSTRUT END PLATE |
| 6 | 1 | | ACCESS PANEL |
| 5 | 1 | | M/G PLATE |
| 4 | 2 | | RUBBER FENDERETTE |
| 3 | 1 | | 4000 CRANE REINF. |
| 2 | 1 | | TAILBOARD - DROP - IN |
| 1 | 1 | | G/S "V" NOTCH BUMPER |
| ITEM | REQ | PART# | DESCRIPTION |

NOTE:HANDRAILS SHALL HAVE NON SLIP SURFACE (TAPE IS UNNACCEPTABLE).

PA DEPARTMENT OF TRANSPORTATION

| REVISIONS | | SIGN TRUCK | |
|-----------|----------|------------|---|
| NO. | DATE | BY | |
| 1 | 08-04-08 | MHH | |
| 2 | 09-28-11 | TOD | DRAWN BY DLW SCALE N/A EQN-483 |
| 3 | 08-29-14 | ACT | DATE 10-24-97 CHG'D BY WHM SHEET 7 OF 8 |



NOTES:

1. Two 50' hydraulic hose reels shall be mounted side by side to allow operators access to the quick couplers.
2. Inverter shall have a protective shell installed over the top and sides for protection.
3. Work light holder shall be mounted to the floor of the compartment.

PA DEPARTMENT OF TRANSPORTATION

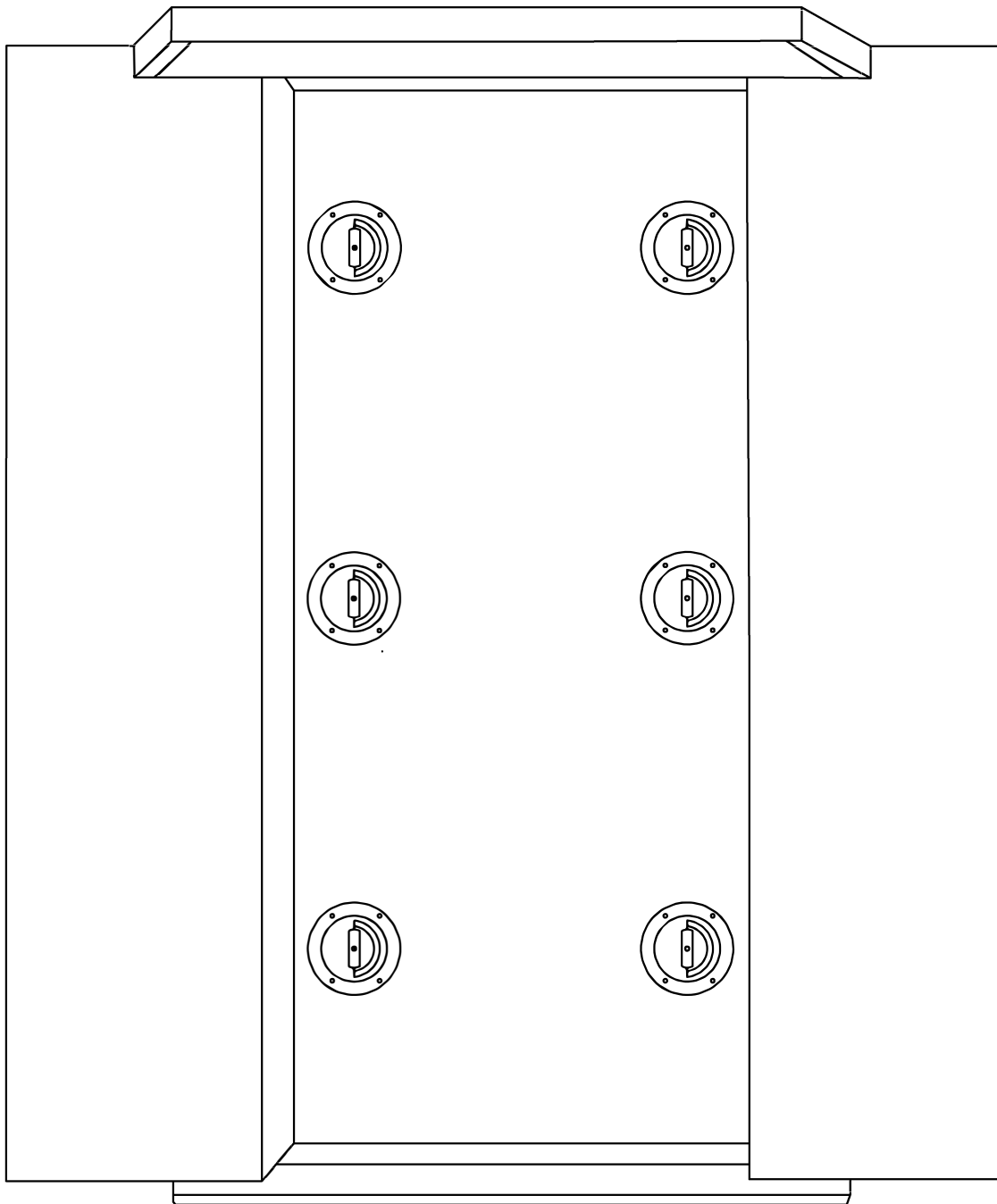
REVISIONS

| NO. | DATE | BY |
|-----|------|----|
| 1 | | |
| 2 | | |
| 3 | | |

SIGN TRUCK

REAR CABINET INSIDE

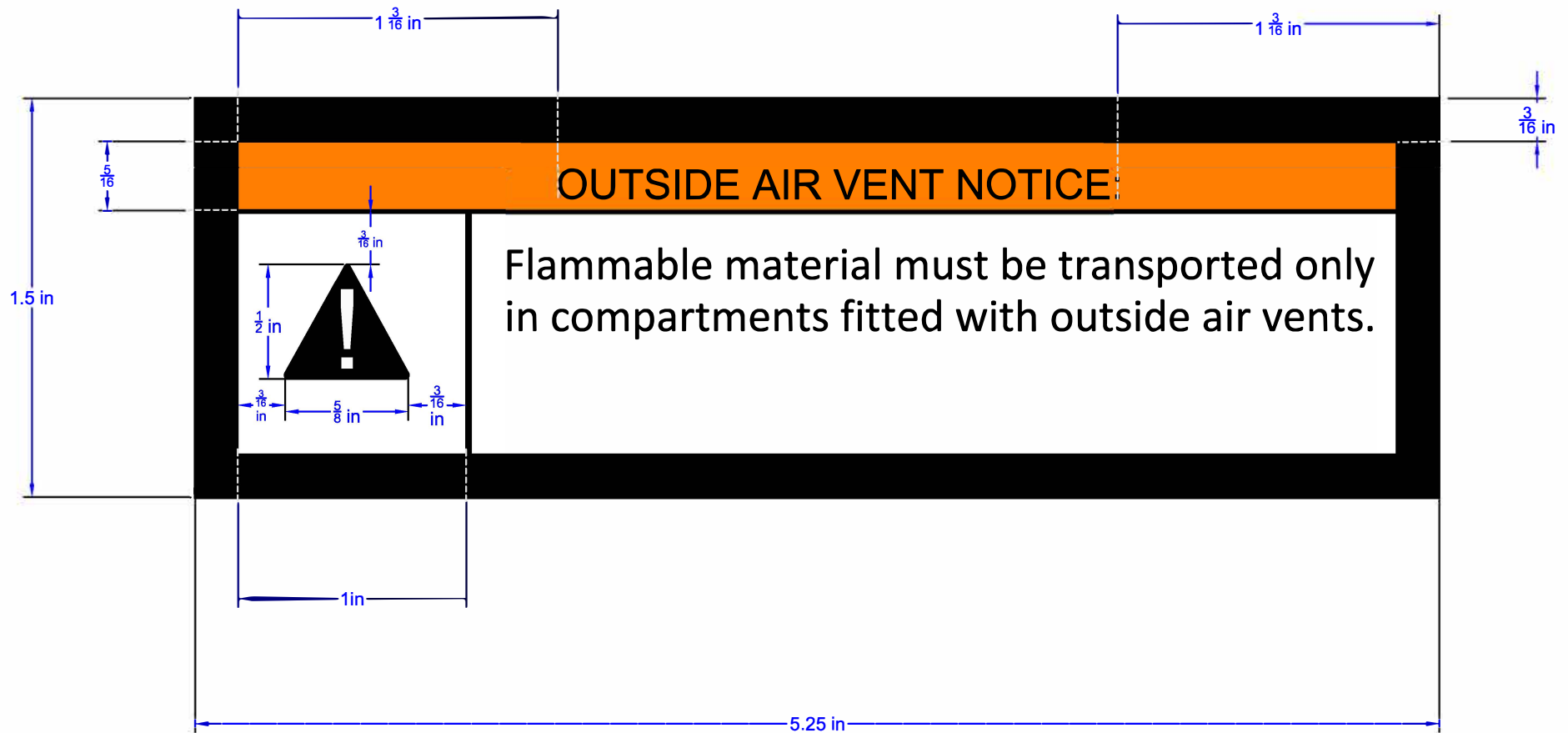
| NO. | DATE | BY | DRAWN BY | SCALE | CHECKED BY | EQN-483 |
|-----|------|----|----------|-------|------------|---------|
| 1 | | | ACT | N/A | | |
| 2 | | | | | | |
| 3 | | | | | | |



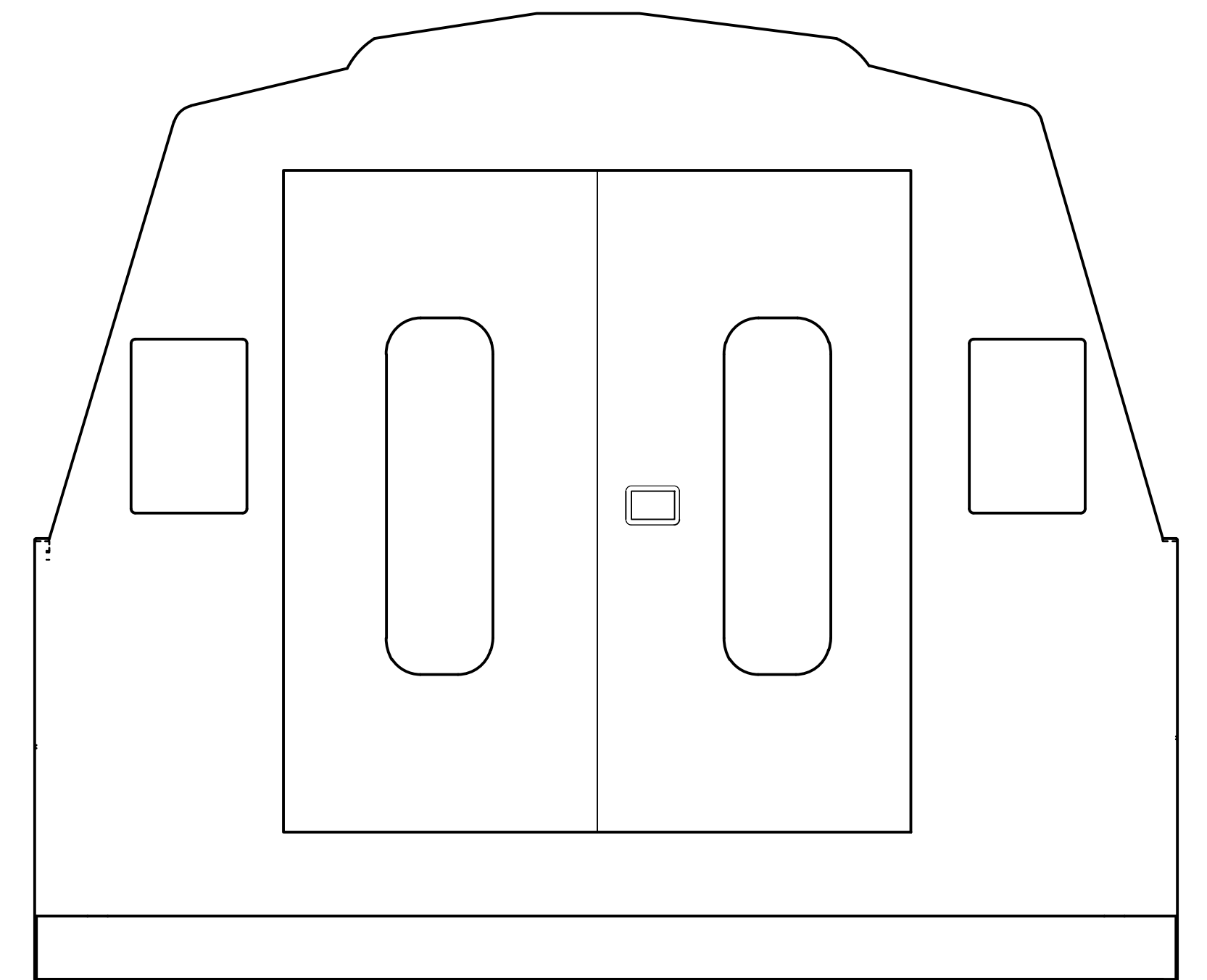
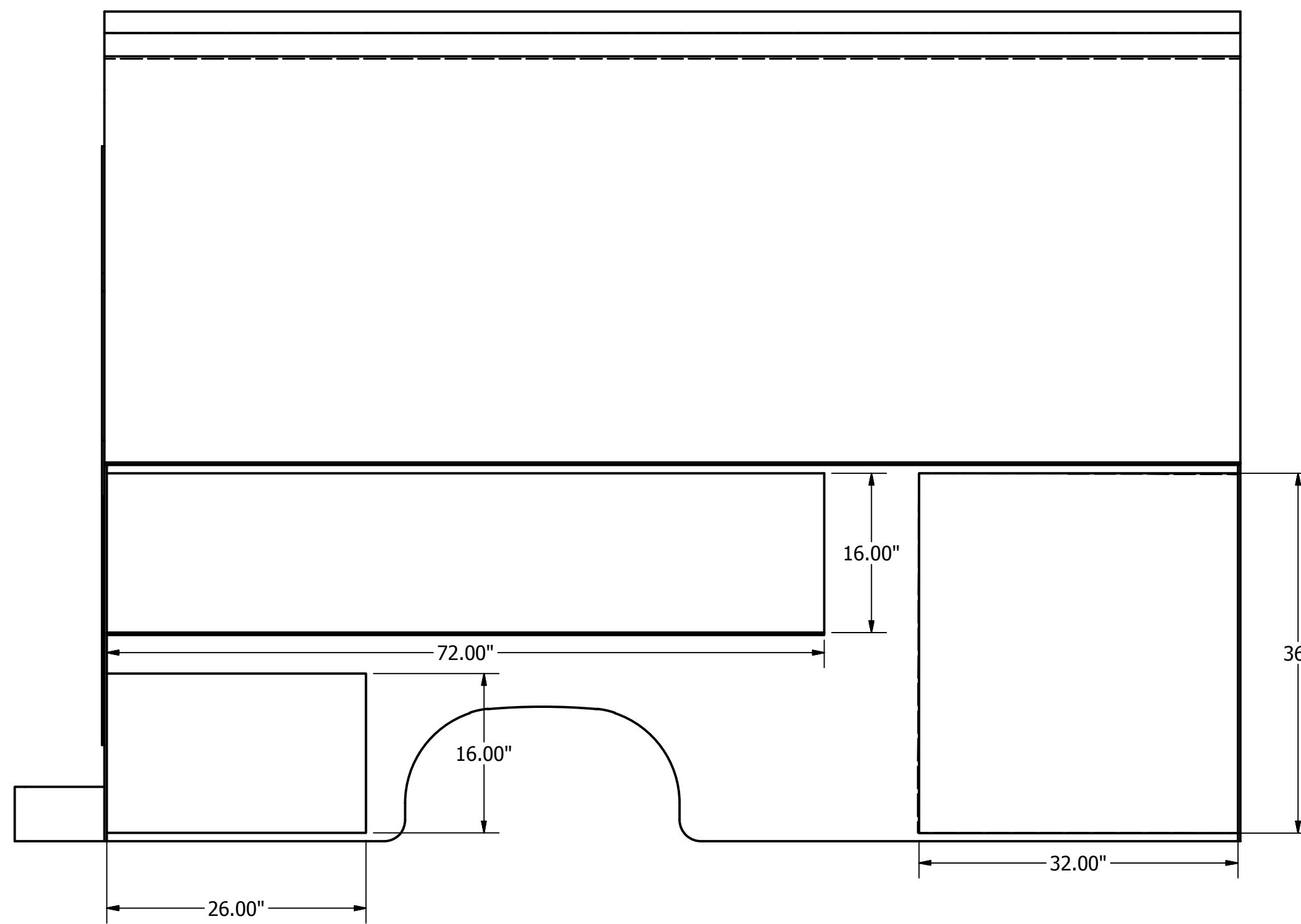
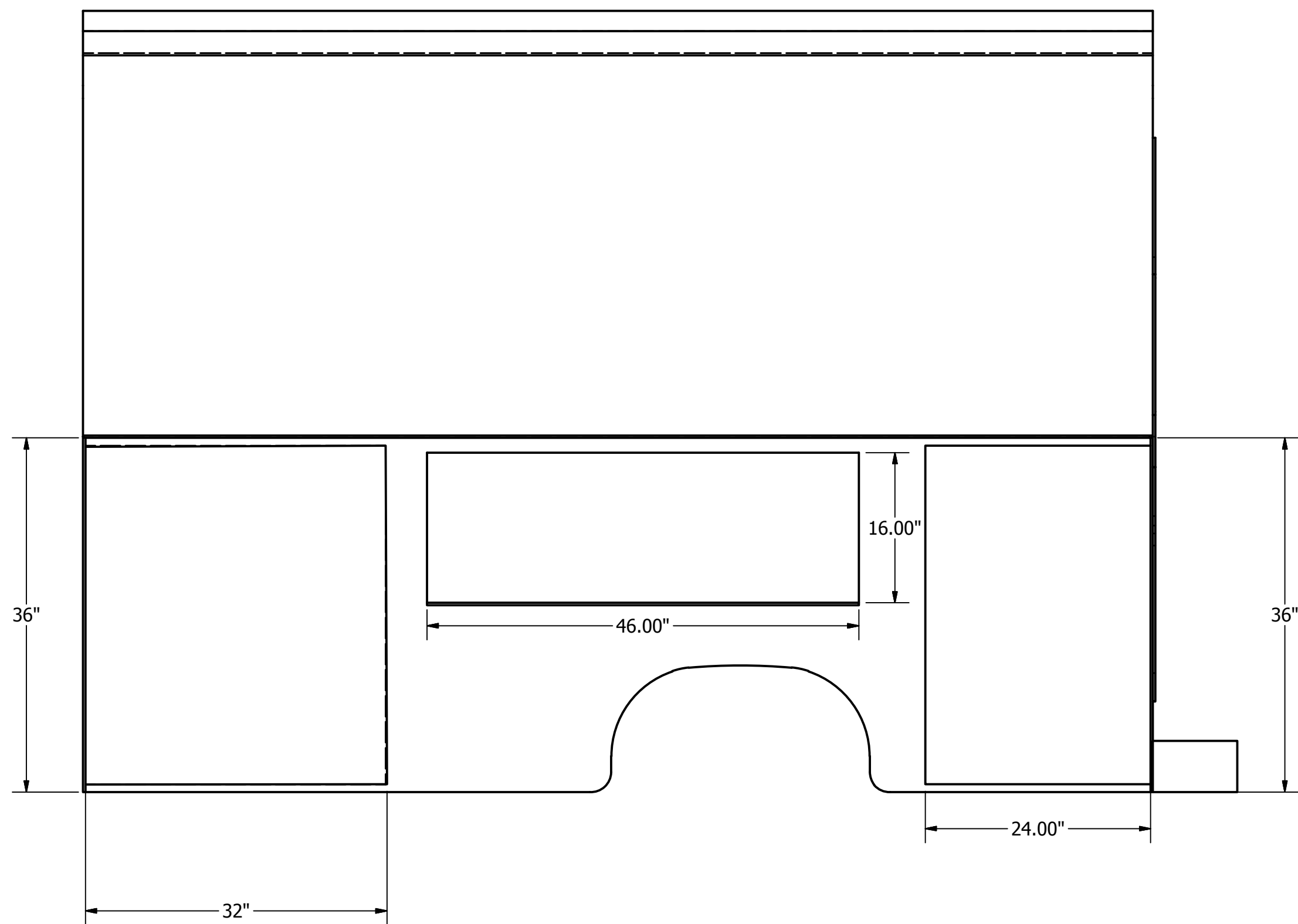
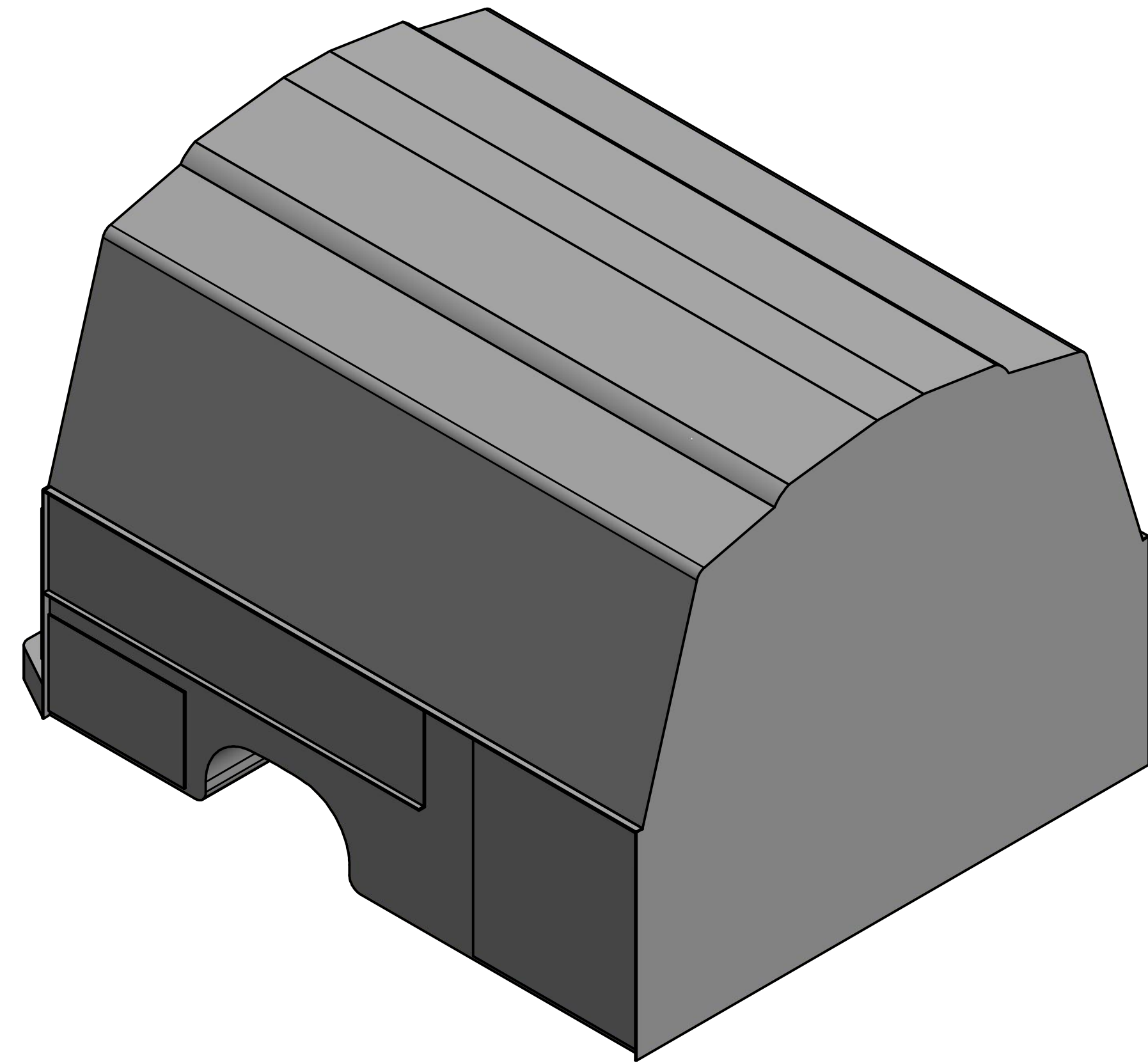
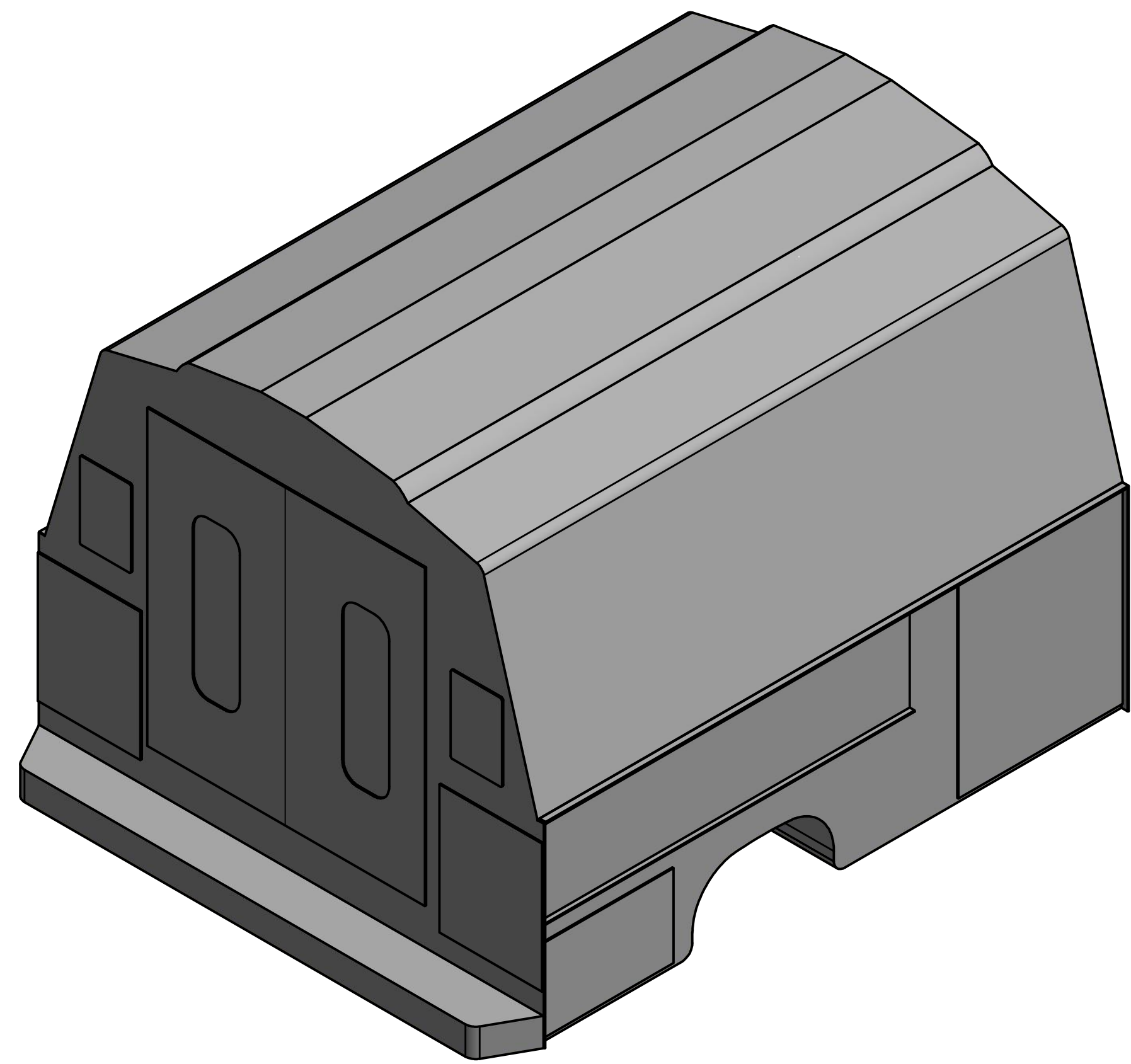
NOTE:
 D-Rings are evenly spaced on each side, the middle D-rings are evenly spaced between top and bottom set and placed at each cross member.

PA DEPARTMENT OF TRANSPORTATION

| REVISIONS | | | Weldment 7108D46J | |
|-----------|------|----|-------------------|----------|
| NO. | DATE | BY | SCALE | |
| 1 | | | | |
| 2 | | | DRAWN BY KBD | EQN-1083 |
| 3 | | | DATE 5-24-18 | CHK'D BY |



| PA DEPARTMENT OF TRANSPORTATION | | | |
|---------------------------------|------|---------|------------------------|
| REVISIONS | | | Warning Sticker Inside |
| NO. | DATE | BY | |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| DRAWN BY | | KBD | SCALE |
| DATE | | 6-18-18 | CHK'D BY |
| | | | EQN-1089-B |



| | | | | |
|----------|--------|-----------|---------------------------------|----------------------|
| DRAWN | Kdesai | 7/13/2018 | PA DEPARTMENT OF TRANSPORTATION | |
| CHECKED | | | TITLE | |
| QA | | | Survey Body Steel | |
| MFG | | | | |
| APPROVED | | | | |
| | | | SIZE | DWG NO |
| | | | D | Survey Body-2018.pdf |
| | | | | REV |
| | | | EON-1096 SHEET 1 OF 1 | |