



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
 PTR09024

PAGE
 1

ADDRESS CORRESPONDENCE TO ATTENTION OF:
 FRANK WHITTAKER
 304-558-2316

VENDOR

RFQ COPY
 TYPE NAME/ADDRESS HERE

SHIP TO

DIVISION OF PUBLIC TRANSIT
 BLUEFIELD TRANSIT SYSTEM
 1642 BLUEFIELD AVENUE
 BLUEFIELD, WV
 24701 304-327-8418

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
04/20/2009				

LINE	QUANTITY	UOP	CAT NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
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***** ADDENDUM NO. 2 *****

THIS ADDENDUM IS ISSUED TO PROVIDE THE ATTACHED VENDOR QUESTIONS & AGENCY RESPONSES, BID CLARIFICATIONS, ATTACHMENT A, ATTACHMENT B, ATTACHMENT C, ATTACHMENT D, ATTACHMENT E, ATTACHMENT F, ATTACHMENT G, ATTACHMENT H, AND ATTACHMENT K.

REQUEST FOR SUBSTITUTIONS WILL BE RECEIVED IN WRITING BY FRANK WHITTAKER IN THE PURCHASING DIVISION VIA FAX AT 304-558-4115 OR VIA EMAIL AT FRANK.M.WHITTAKER@WV.GOV. DEADLINE FOR SUBSTITUTION REQUESTS IS 04/28/09 AT 3:00 PM.

SUBSTITUTION REQUESTS WILL BE APPROVED OR DENIED BY ADDENDUM AFTER THE DEADLINE.

THE BID OPENING DATE AND TIME HAVE CHANGED TO:

BID OPENING DATE: 05/07/09
 BID OPENING TIME: 1:30 PM

0001

EA 968-20
 1
 PRE-ENGINEERED METAL AND BRICK CONSTRUCTION ADM.OFFI

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

GENERAL TERMS & CONDITIONS
REQUEST FOR QUOTATION (RFQ) AND REQUEST FOR PROPOSAL (RFP)

1. Awards will be made in the best interest of the State of West Virginia.
2. The State may accept or reject in part, or in whole, any bid.
3. All quotations are governed by the *West Virginia Code* and the *Legislative Rules* of the Purchasing Division.
4. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$125 fee.
5. All services performed or goods delivered under State Purchase Order/Contracts are to be continued for the term of the Purchase Order/Contracts, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods, this Purchase Order/Contract becomes void and of no effect after June 30.
6. Payment may only be made after the delivery and acceptance of goods or services.
7. Interest may be paid for late payment in accordance with the *West Virginia Code*.
8. Vendor preference will be granted upon written request in accordance with the *West Virginia Code*.
9. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
10. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
11. The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern all rights and duties under the Contract, including without limitation the validity of this Purchase Order/Contract.
12. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.
13. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, this Contract may be deemed null and void, and terminated without further order.
14. **HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, and available online at the Purchasing Division's web site (<http://www.state.wv.us/admin/purchase/vrc/hipaa.htm>) is hereby made part of the agreement. Provided that, the Agency meets the definition of a Cover Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.
15. **WEST VIRGINIA ALCOHOL & DRUG-FREE WORKPLACE ACT:** If this Contract constitutes a public improvement construction contract as set forth in Article 1D, Chapter 21 of the West Virginia Code ("The West Virginia Alcohol and Drug-Free Workplace Act"), then the following language shall hereby become part of this Contract: "The contractor and its subcontractors shall implement and maintain a written drug-free workplace policy in compliance with the West Virginia Alcohol and Drug-Free Workplace Act, as set forth in Article 1D, Chapter 21 of the West Virginia Code. The contractor and its subcontractors shall provide a sworn statement in writing, under the penalties of perjury, that they maintain a valid drug-free work place policy in compliance with the West Virginia and Drug-Free Workplace Act. It is understood and agreed that this Contract shall be cancelled by the awarding authority if the Contractor: 1) Fails to implement its drug-free workplace policy; 2) Fails to provide information regarding implementation of the contractor's drug-free workplace policy at the request of the public authority; or 3) Provides to the public authority false information regarding the contractor's drug-free workplace policy."

INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division.
2. **SPECIFICATIONS:** Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as **EQUAL** to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications.
3. Complete all sections of the quotation form.
4. Unit prices shall prevail in case of discrepancy.
5. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.
6. **BID SUBMISSION:** All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications: Department of Administration, Purchasing Division, 2019 Washington Street East, P.O. Box 50130, Charleston, WV 25305-0130



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
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DIVISION OF PUBLIC TRANSIT
 BLUEFIELD TRANSIT SYSTEM

1642 BLUEFIELD AVENUE
 BLUEFIELD, WV
 24701 304-327-8418

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
04/20/2009				

BID OPENING DATE: 05/05/2009 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
***** THIS IS THE END OF RFQ PTR09024 ***** TOTAL: _____						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

BLUEFIELD AREA TRANSIT
ADMINISTRATION AND MAINTENANCE FACILITY

Addendum Questions and Clarifications

4/13/09

Contractor questions are "This font". *Answers and Clarifications are in italic bold.*

1. Section 02466-1.3 Unit prices where are they put on Bid Form?
Bidders are advised to use the revised bid form with unit prices for caissons. Attachment A.
2. Need depth of Caissons?
See Attachment B, SK-1 and SK-2.
3. What is the total length of caisson shaft per shaft diameter to use on the bid?
See Attachment B for caisson information.
4. What testing & Inspecting is Contractor responsible for paying and which areas of testing & inspecting is the Owner paying for?
The contractor is responsible for all testing and inspecting costs delineated in the specifications, except where noted that the owner may require additional testing. Additional testing may occur if the owner is not satisfied that work has not been provided according to specified tolerances. The surcharge testing is not the responsibility of the contractor.
5. Page C12, Pre-engineered canopy note 3. Requires pinned base design for foundation. General note #1 states Austin Mohawk as manufacture they do not do pinned base design. Please advise.
A pinned base design is not necessarily required.
6. Specification Section 04810-2.2C reference polished ground faced concrete units. Where is this material to be used?
Polished ground faced concrete units are not used in this project.
7. *See Addendum No. 1 for the soils report.*
8. Please consider approving Cornell Iron Works as an acceptable manufacturer for overhead coiling doors.
Cornell Iron Works will be considered as a substitute, providing all specified properties are provided, including the full-width vision panels, noted on the drawings, which each manufacturer must provide.

9. Clarification, the door schedule has been revised to remove the stainless steel notations from the overhead doors and to revise the hardware sets to provide computer managed (CM) hardware. See Attachment "C", consisting of SK-3 for the revised door schedule, the revised hardware sets for Aluminum Entrances and Storefronts, Section 08411.3.6, and Hardware, Section 08710.3.8. Also, provide the CM locking system as noted by Schlage/Von Duprin, or equal.
10. Please provide brick, mortar colors and manufacture or provide a unit price? To get the appropriate color range for the project, brick products have been changed to lime/concrete based units. For bidding purposes, use the following items with architect to select color from full range of manufacturer's selections, or equal, as determined by architect:

<i>Drawing Notation</i>	<i>Use</i>
<i>Face Brick 1</i>	<i>Provide solid CMU, size 4x4x16, running bond, by Peerless Block & Brick, with integral color and water repellent by Grace, Crete, or other approved by architect. ASTM C90. Typical.</i>
<i>8x8 Brick 2</i>	<i>At curved wall, use size 4x4x8, stacked bond. Provide Astra-Glaze-SW+ by Trenwyth Industries, Cosmic Blue, 4x8x16, with center score dividing into 8x8 sections, running bond. Return corners at windows. At curved wall, use size 4x8x8</i>
<i>Bull Nose Stretcher 2</i>	<i>Provide cast stone to match bull-nosed profile in drawings with straight sections at least 4'-0" long, typical. Provide 8" long straight sections or continuous curved bull-nose at curved wall.</i>
<i>Mortar</i>	<i>Colored. See Spec.</i>

11. Is the one door in the storage building, which is door #300A to receive an electric motor operator and is this door part of the base bid or is it a separate alternate bid. *Door 300A is the only manual door. All others are motorized. It is part of the base bid.*
12. Sheet C8, Section, Concrete walk details, is stone 4" or 6" thick? *The aggregate at the concrete walk is 6" thick.*
13. Sheet C6, Fence detail states 18 LF between masonry supports for fence with two fence post between masonry supports. Site plan C2 scales as masonry support every 8 LF; clarify. *Provide the fence as detailed on sheet C6.*
14. Sheet C6, Gate detail shows masonry support, none is shown on Sheet C2 or site layout. *Provide the masonry supports as detailed on sheet C6.*

15. Sheet C2, Shows shed & concrete apron is this part of this contract, if so provide shed details.
See Storage Building, sheet A11.
16. Specification Section 02900 refers to trees and shrubs, there is no type of trees number of trees shown on plans. Clarify.
There are no trees or shrubs in the contract.
17. Sheet A1, Construction note No. 4, provide bus lift information so installation cost can be calculated.
The bus lift in the existing facility is a Rotary Lift, Model SM300-100, Capacity 30,000 lbs., Serial No. PAC 97C0002. Remove bus lift and reinstall in the new facility according to the manufacturer's written instructions. Jefferds Corporation in Saint Albans, WV (304) 755-8111, may have additional information as a local representative of Rotary Lift. See Attachment "G", for information only.
18. Clarification, sheet C6 - All street and parking areas facing the proposed building shall have a 6" concrete curb. 6" curbing shall also be utilized along the rear apron as shown.
19. Is the use of offsite dirt (from the adjacent property) acceptable as surcharge material?
The offsite dirt from the adjacent property may be used as long as it meets the specification requirements for surcharge material.
20. Provide a site sign with the American Recovery Act information, "TIGER" logo, see Attachment "D". Use the 84" wide sign dimensions. Note also that the Federal Transit Administration sign must be up on the first day of work on the job site.
21. Clarification, Sheet M2 - The one-hour wall separating the administration and maintenance occupancies was noted as a two-hour wall. Provide one-hour construction per architectural plans.
22. Clarification, Sheet E5 - The title should read "Systems Plan", not "Systems Allowance Plan."
23. The vault pass door will be a METAL 12"x14" hinged door, with CM Controlled hardware latches. The catch table will be sloped to allow vaults to gather out of reach from the vault pass door. See Attachment "E", SK-4.
24. TPO roofing will not be accepted as a substitute for EPDM for this project, as the project area has significantly more net heat days than net cooling days, and would result in increased operating costs for the owner.
25. The specification is calling for two Centria IW series wall panels. One of the panels are specified in a 20 gage. Will any substitutions be accepted for these panels? I am

attaching information on the MBCI Designer Series and FW profiles that are available in a 24 gage and 22 gage for your consideration on the project.

Substitutions would be considered for the panels only if all specified properties are provided. The IW-13A panel has a striated/rippled texture along the entire face of the panel which will reduce the appearance of oil canning. Any substitution panel for the IW-13A that does not match that property will be rejected.

26. The specification calls for a 22 gage roof panel. The standard for this type of standing seam panel is 24 gage. Is this acceptable?
Provide the specified roof panel.
27. Will liquid asphalt adjustment be applied to this job like other state projects?
No.
28. *Clarification, Ambi-rad Low Intensity Radiant Heating Systems will be considered an approved manufacturer for this project.*
29. Can a Roof Plan be provided stating membrane applications, details and wall sections?
See Roof Plan, sheet A3.
30. Can a Roof Plan with curbs and penetrations be provided?
See Roof Plan, sheet A3 and mechanical drawings.
31. As an Automated Logic Corp Provider, will HSC Industrial be accepted to bid on this project?
HSC Industrial will be allowed to bid, providing all other contract document requirements are met.
32. *Provide telephone system, surveillance system, and CCTV system with computer DVR controls as noted in Attachment "F".*
33. Sheet A1, Construction note No. 4, provide bus lift information so installation cost can be calculated.
The bus lift in the existing facility is a Rotary Lift, Model SM300-100, Capacity 30,000 lbs., Serial No. PAC 97C0002. Remove bus lift and reinstall in the new facility according to the manufacturer's written instructions. Jefferds Corporation in Saint Albans, WV (304) 755-8111, may have additional information as a local representative of Rotary Lift. Lift removal and reinstallation must be performed by a local Rotary Lift Authorized Dealer and the prime contractor must coordinate this with local dealer and is part of the contract. See Attachment "G", for information only.
34. *Provide site signage and electronic message board as noted in Attachment "H", SK-5.*
35. *Provide Concrete Washout Locations, SK-6, Concrete Washout Detail, SK-7, and revised Inlet Infiltration Protection Detail, SK-8, as noted in Attachment "K".*

36. Contractor will provide the product systems described in the attachments, or equal, with all parts, accessories, manuals, hardware, and software necessary to provide the Owner with fully functional systems for the owner's intended purposes. Contractor will also provide qualified trainers to provide training for the Owner's representatives to fully inform them on the systems and their use. Contractors are informed that the following attachments are included and are considered part of the contract documents:

<i>Attachment</i>	<i>Pages</i>
"A" Bid Form #15 Unit prices for the Caissons	A1
"B" SK-1 and SK-2, Caissons	B1-B2
"C" SK-3, Revised Hardware and Aluminum Door Hardware Schedules, and CM Hardware	C1-C7
"D" American Recovery Act Signage Information	D1-D7
"E" SK-4, Vault Pass Door	E1
"F" Telephone System, Surveillance System, And CCTV System with Computer DVR Control	F1-F3
"G" Rotary Lift Bus Lift Information, For Information Only	G1-G19
"H" SK-5, Site Sign and Message Center	H1-H2
"K" SK-6, Concrete Washout Locations SK-7, Concrete Washout Detail SK-8, Revised Inlet Infiltration Protection Detail	K1-K3

Bid Form #15

“Reference Specification Section 02466-Drilled Piers, Paragraph 1.3-Unit Prices: For each Caisson Type indicated, provide a single unit cost per lineal foot to be added to or deducted from the Base Bid. Caisson depth shall be verified and recorded as indicated in Paragraph 1.6.D-Survey Work. Contract amount will be adjusted by change order.”

Caisson Mark/Type	Caisson Diameter	Cost per Vertical Lineal Foot-Add or Deduct from Base Bid Numbers / Words	
C1	2'-0"	\$ /	dollars
C2	2'-6"	\$ /	dollars
C3	3'-0"	\$ /	dollars
C4	3'-6"	\$ /	dollars
C5	4'-0"	\$ /	dollars

ATTACHMENT "A"

41



MARK	LENGTH
1	29'-0"
2	28'-6"
3	28'-6"
4	27'-6"
5	27'-6"
6	27'-6"
7	27'-6"
8	27'-6"
9	27'-6"
10	27'-0"
11	25'-6"
12	24'-3"
13	24'-3"
14	24'-3"
15	24'-3"
16	24'-3"
17	24'-3"
18	20'-6"
19	20'-6"
20	20'-6"
21	20'-6"
22	16'-6"
23	16'-6"
24	14'-9"
25	14'-9"
26	14'-9"
27	14'-9"

CAISSON LENGTH SCHEDULE

NOTES:

1. SEE DRAWING SKI FOR CAISSON LOCATIONS.
2. SEE DRAWINGS S1 AND S1A FOR CAISSON DETAILS AND ADDITIONAL INFORMATION.
3. LENGTHS INDICATED SHALL BE FIELD VERIFIED.
4. SEE SPECIFICATIONS FOR UNIT COSTS.

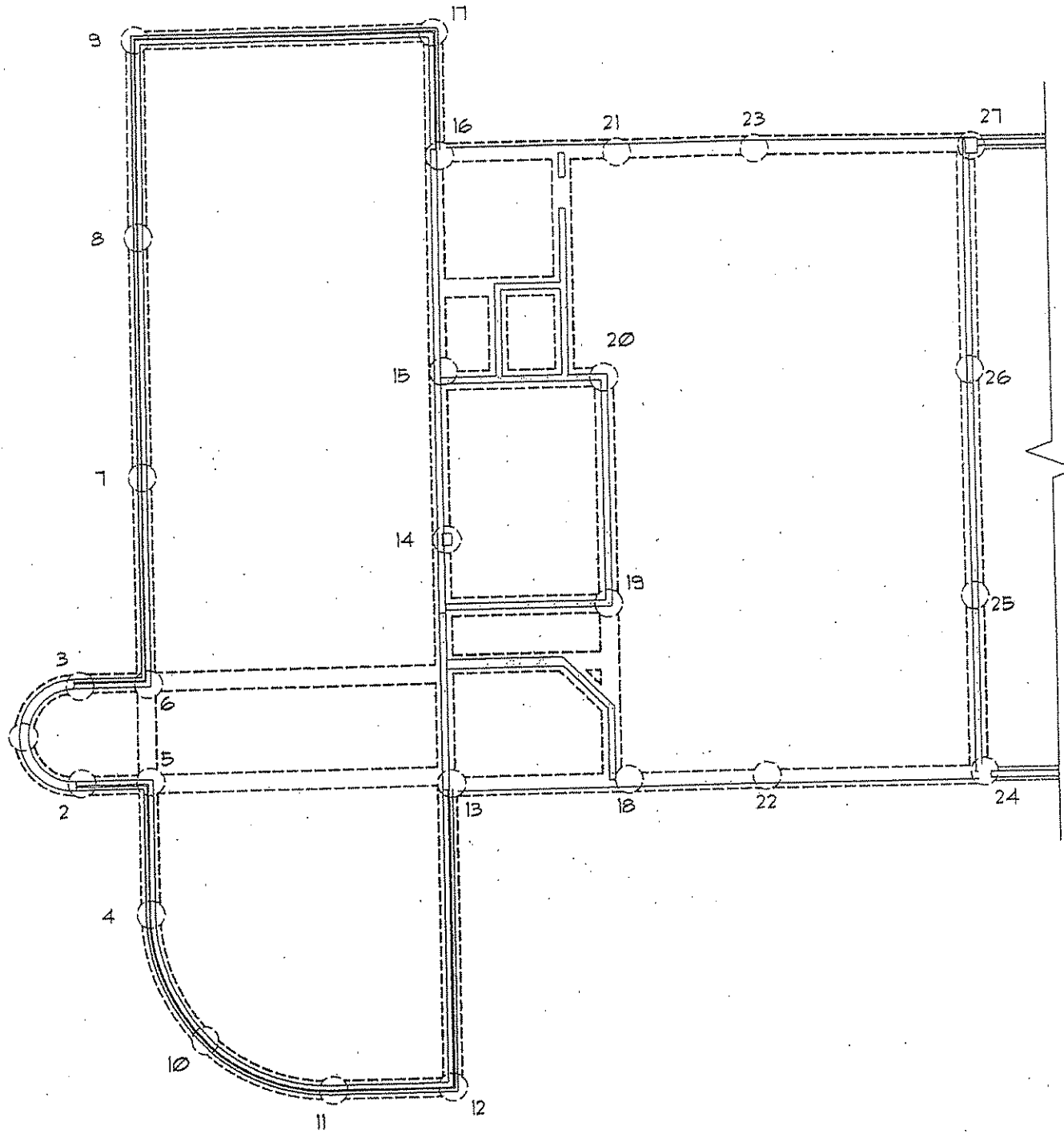
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 <p>Chopman Technical Group</p>	AIRPORT PLANNING / DEVELOPMENT ARCHITECTURE / INTERIOR DESIGN CIVIL ENGINEERING / SITE DEVELOPMENT ENVIRONMENTAL ENGINEERING LANDSCAPE ARCHITECTURE SURVEYING	SL Aibans, WV (304) 727-5501 Buckhannon, WV (304) 472-8914 Martinsburg, WV (304) 260-1222 www.chaptech.com	West Virginia Department of Transportation Bluefield Area Transit Administration and Maintenance Facility Bluefield, West Virginia	JOB NUMBER: 08050 SCALE: NTS DATE: APRIL 2009 DRAWN BY: DCH DESIGNED BY: DCH CHECKED BY: DCH
	SHEET NO. SK1			REVISION 

ATTACHMENT B

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FOUNDATION PLAN

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



AIRPORT PLANNING / DEVELOPMENT
 ARCHITECTURE / INTERIOR DESIGN
 CIVIL ENGINEERING / SITE DEVELOPMENT
 ENVIRONMENTAL ENGINEERING
 LANDSCAPE ARCHITECTURE
 SURVEYING

St. Albans, WV
 (304) 727-5501
 Buckhannon, WV
 (304) 472-6914
 Martinsburg, WV
 (304) 260-1222
www.chaptech.com

West Virginia Department of Transportation
 Bluefield Area Transit
 Administration and Maintenance Facility
 Bluefield, West Virginia

JOB NUMBER:	08050
SCALE:	NTS
DATE:	APRIL 2009
DRAWN BY:	DCH
DESIGNED BY:	DCH
CHECKED BY:	DCH
SHEET NO.	SK2
REVISION	

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DOOR SCHEDULE

DOOR NO.	SIZE	DOOR					FRAME			REMARKS
		MAT.	FINISH	ELEV.	LABEL	HDJL SET	MAT.	JAMB DEPTH	TYPE	
100A	3/0 X 7/0 X 1 3/4	ALUM	FR	A	-	1	ALUM	-	FR-1	INSULATED
100B	3/0 X 7/0 X 1 3/4	ALUM	FR	A	-	1	ALUM	-	FR-1	INSULATED
101A	3/0 X 7/0 X 1 3/4	ALUM	FR	A	-	2	ALUM	-	FR-2	
102A	3/0 X 7/0 X 1 3/4	WD	STN	D	-	3	HM	-	FR-3	
102B	3/0 X 7/0 X 1 3/4	WD	STN	D	-	3A	HM	-	FR-3	
102C	3/0 X 7/0 X 1 3/4	HM	PTD	B	-	10A	HM	-	FR-5	INSULATED
103A	3/0 X 7/0 X 1 3/4	WD	STN	C	-	4	HM	-	FR-4	
104A	3/0 X 7/0 X 1 3/4	WD	STN	C	-	4	HM	-	FR-4	
105A	3/0 X 7/0 X 1 3/4	WD	STN	C	-	4	HM	-	FR-4	
106A	3/0 X 7/0 X 1 3/4	WD	STN	C	-	4A	HM	-	FR-4	
107A	3/0 X 7/0 X 1 3/4	WD	STN	C	-	5	HM	-	FR-4	
108A	3/0 X 7/0 X 1 3/4	WD	STN	C	-	5	HM	-	FR-4	
109A	3/0 X 7/0 X 1 3/4	WD	STN	C	-	5	HM	-	FR-4	
110A	3/0 X 7/0 X 1 3/4	WD	STN	C	-	5	HM	-	FR-4	
111A	3/0 X 7/0 X 1 3/4	WD	STN	C	-	7	HM	-	FR-4	
112A	3/0 X 7/0 X 1 3/4	WD	STN	C	-	7	HM	-	FR-4	
113A	3/0 X 7/0 X 1 3/4	WD	STN	C	-	7	HM	-	FR-4	
114A	3/0 X 7/0 X 1 3/4	WD	STN	C	-	8	HM	-	FR-4	
115A	3/0 X 7/0 X 1 3/4	WD	STN	D	-	8	HM	-	FR-4	
116A	3/0 X 7/0 X 1 3/4	WD	STN	C	-	14	HM	-	FR-5	FRAME ALL AROUND
116B	1/0 X 1' 2" X 1 3/4	WD	STN	C	-	4	HM	-	FR-4	
117A	3/0 X 7/0 X 1 3/4	WD	STN	B	-	4	HM	-	FR-4	
117B	3/0 X 7/0 X 1 3/4	HM	PTD	C	-	10	HM	-	FR-5	INSULATED
118A	FR 3/0 X 7/0 X 1 3/4	WD	STN	C	-	11	HM	-	FR-4	
119A	3/0 X 7/0 X 1 3/4	HM	PTD	D	-	4	HM	-	FR-5	
120A	3/0 X 7/0 X 1 3/4	HM	PTD	C	-	7	HM	-	FR-5	
121A	3/0 X 7/0 X 1 3/4	HM	PTD	C	-	9	HM	-	FR-5	
122A	3/0 X 7/0 X 1 3/4	HM	PTD	C	-	6	HM	-	FR-5	
123A	3/0 X 7/0 X 1 3/4	HM	PTD	C	-	7	HM	-	FR-5	
124A	3/0 X 7/0 X 1 3/4	HM	PTD	C	-	6	HM	-	FR-5	
125A	3/0 X 7/0 X 1 3/4	HM	PTD	C	-	8	HM	-	FR-5	
127A	3/0 X 7/0 X 1 3/4	HM	PTD	B	60 MIN.	3	HM	-	FR-5	INSULATED
127B	3/0 X 7/0 X 1 3/4	HM	PTD	B	-	10A	HM	-	FR-5	INSULATED
127C	12/0 X 14/0	STL	FAC	E	-	NA	STL	-	-	INSULATED
127D	12/0 X 14/0	STL	FAC	E	-	NA	STL	-	-	INSULATED
127E	3/0 X 7/0 X 1 3/4	HM	PTD	C	60 MIN.	3	HM	-	FR-5	
127F	12/0 X 14/0	STL	FAC	E	-	NA	STL	-	-	INSULATED
127G	12/0 X 14/0	STL	FAC	E	-	NA	STL	-	-	INSULATED
127H	3/0 X 7/0 X 1 3/4	HM	PTD	B	-	10B	HM	-	FR-5	INSULATED
128A	3/0 X 7/0 X 1 3/4	HM	PTD	B	-	10B	HM	-	FR-5	INSULATED
128B	12/0 X 14/0	STL	FAC	E	-	NA	STL	-	-	INSULATED
128C	12/0 X 14/0	STL	FAC	E	-	NA	STL	-	-	INSULATED
128D	12/0 X 14/0	STL	FAC	E	-	NA	STL	-	-	INSULATED
128E	12/0 X 14/0	STL	FAC	E	-	NA	STL	-	-	INSULATED
128F	12/0 X 14/0	STL	FAC	E	-	NA	STL	-	-	INSULATED
128G	12/0 X 14/0	STL	FAC	E	-	NA	STL	-	-	INSULATED
128H	12/0 X 14/0	STL	FAC	E	-	NA	STL	-	-	INSULATED
128J	12/0 X 14/0	STL	FAC	E	-	NA	STL	-	-	INSULATED
128K	12/0 X 14/0	STL	FAC	E	-	NA	STL	-	-	INSULATED
128L	12/0 X 14/0	STL	FAC	E	-	NA	STL	-	-	INSULATED
128M	3/0 X 7/0 X 1 3/4	HM	PTD	B	-	10A	HM	-	FR-5	INSULATED
128N	3/0 X 7/0 X 1 3/4	HM	PTD	C	-	10	HM	-	FR-5	INSULATED
128O	3/0 X 7/0 X 1 3/4	HM	PTD	C	-	10	HM	-	FR-5	INSULATED
128P	12/0 X 14/0	STL	FAC	E	-	NA	STL	-	-	INSULATED
128Q	12/0 X 14/0	STL	FAC	E	-	NA	STL	-	-	INSULATED
128R	12/0 X 14/0	STL	FAC	E	-	NA	STL	-	-	INSULATED
128S	3/0 X 7/0 X 1 3/4	HM	PTD	C	-	10	HM	-	FR-5	INSULATED
200A	3/0 X 6 1/4 X 1 3/4	HM	PTD	C	-	12	HM	-	FR-5	INSULATED
201A	FR 3/0 X 7/0 X 1 3/4	HM	PTD	C	-	B	HM	-	FR-4	
201B	FR 3/0 X 7/0 X 1 3/4	HM	PTD	C	-	B	HM	-	FR-4	
201C	FR 3/0 X 7/0 X 1 3/4	HM	PTD	C	-	B	HM	-	FR-4	

DOOR ABBREVIATIONS

ALUM	ALUMINUM	FAC	FACTORY FINISH	PTD	PAINTED (FACTORY PRIMED)
ANOD	ANODIZED	HM	HOLLOW METAL	STL	STEEL
EXIST	EXISTING	HR	HOUR	STN	STAINED (FACTORY FINISH)
WD	WOOD	FR	MANUFACTURER'S STANDARD	SS	STAINLESS STEEL

DB050
SCALE
4-6-09
DND
DRAWN BY
CHECKED BY
DATE
JOB NUMBER
SCALE
DATE
DRAWN BY
CHECKED BY
SHEET NO.
REVISION

SK3

REVISED
DOOR SCHEDULE

PROJECT INFORMATION
West Virginia Department of Transportation
Bluefield Area Transit
Administration and Maintenance Facility
Bluefield, West Virginia

Sl. Albans, WV
(304) 721-5501
Buchannon, WV
(304) 472-8914
Martinsburg, WV
(304) 260-1222
www.chaptech.com

AIRPORT PLANNING / DEVELOPMENT
ARCHITECTURE / INTERIOR DESIGN
CIVIL ENGINEERING / SITE DEVELOPMENT
ENVIRONMENTAL ENGINEERING
LANDSCAPE ARCHITECTURE
SURVEYING



Area / Handed 2"

BLUEFIELD AREA TRANSIT AUTHORITY
ADMINISTRATIVE AND MAINTENANCE FACILITY

08050
4/09

3.8 DOOR HARDWARE SETS

Hardware Set No. 1 - Doors 100A, 100B

1 Ea	Cylinder	7PIN I C	626	BE
Balance of hardware by door manufacturer (ASF-1)				

Hardware Set No. 2 - Door 101-A

1 Ea	Electric Exit Device Trim	CM 993 PXX BP 17 SFS	626	VON
1 Ea	Exit Device	99EO	626	VON
1 Ea	Cylinder	7PIN I C	626	BE
Balance of hardware by door manufacturer (ASF-2)				

Hardware Set No. 3 - 102A, 127A-(rated), 127E-(rated)

3 Ea	Hinges	ECBB 1100 4 1/2 x 4 1/2	US26D	HA
1 Ea	Lockset	93K 7AB 14K S3 626		BE
1 Ea	Cylinder	7PIN I C	626	BE
1 Ea	Closer	8616 ARP SNBI DA FC 689		DM
1 Ea	Wallstop	409	US32D	RM
1 Set	Silencers			

Hardware Set No. 3A - 102B

3 Ea	Hinges	ECBB 1100 4 1/2 x 4 1/2	US26D	HA
1 Ea	Electronic Lockset	CM 5196 PXX BP 17 SFS	626	SCH
1 Ea	Cylinder	7PIN I C	626	BE
1 Ea	Closer	8616 ARP SNBI DA FC 689		DM
1 Ea	Wallstop	409	US32D	RM
1 Set	Silencers			

Hardware Set No. 4 - 103A, 104A, 105A, 106A, 117A, 119A

3 Ea	Hinges	EC 1100 4 1/2 x 4 1/2	US26D	HA
1 Ea	Lockset	93K 7R 14K S3	626	BE
1 Ea	Cylinder	7PIN I C	626	BE
1 Set	Silencers			
1 Ea	Wallstop	409	US32D	RM
Door	119A Only			
1 Ea	Floorstop	442	US26D	RM

Hardware Set No. 4A - 107A

3 Ea	Hinges	EC 1100 4 1/2 x 4 1/2	US26D	HA
1 Ea	Electronic Lockset	CM 5196 PXX BP 17 SFS	626	SCH
1 Ea	Cylinder	7PIN I C	626	BE
1 Set	Silencers			
1 Ea	Wallstop	409	US32D	RM

Hardware Set No. 5 - 108A, 109A, 110A, 112A

3 Ea	Hinges	ECBB 1100 4 1/2 x 4 1/2	US26D	HA
1 Ea	Lockset	93K 7R 14K S3	626	BE
1 Ea	Cylinder	7PIN I C	626	BE
1 Ea	Closer	8616 ARP SNB1 DA FC	US32D	DM
1 Ea	Wall Stop	409	US32D	RM
1 Set	Silencers			

BLUEFIELD AREA TRANSIT AUTHORITY
 ADMINISTRATIVE AND MAINTENANCE FACILITY

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 4/09

Hardware Set No. 5A - 116A

3 Ea	Hinges	ECBB 1100 4 1/2 x 4 1/2	US26D	HA
1 Ea	Electronic Lockset	CM 5196 PXX BP 17 SFS	626	SCH
1 Ea	Cylinder	7PIN I C	626	BE
1 Ea	Closer	8616 ARP SNB1 DA FC	US32D	DM
1 Ea	Wall Stop	409	US32D	RM
1 Set	Silencers			

Hardware Set No. 6 - 122A, 124A

3 Ea	Hinges	ECBB 1100 4 1/2 x 4 1/2	US26D	HA
1 Ea	Lockset	93K 7R 14K S3	626	BE
1 Ea	Cylinder	7PIN I C	626	BE
1 Ea	Closer	8616 ARP SNB1 DA FC	US32D	DM
1 Ea	Wall Stop	409	US32D	RM
1 Ea	Floor Stop	442	US26D	RM

Hardware Set No. 7 - 113A, 114A, 120A, 123A

3 Ea	Hinges	ECBB 1100 4 1/2 x 4 1/2	US26D	HA
1 Ea	Push Plate	70C 4 x 16	US32D	RM
1 Ea	Door Pull	107 x 70 C	US32D	RM
1 Ea	Closer	8616 ARP SNB 1 DA FC	689	DM
1 Set	Silencers			
1 Ea	Mop Plate (inside)	K1050 f x 0.050"	US32D	RM
1 Ea	Wall Stop	409	US32D	RM

Hardware Set No. 8 - 115A, 125A

3 Ea	Hinges	EC1100 4 1/2 x 4 1/2	US26D	HA
1 Ea	Latch Set (Passage)	93K ON 14K STK 626		BE
1 Ea	Silencers			
Door 125A Only				
1 Ea	Closer	8616 ARP SNB1 DA FC	US32D	DM

Hardware Set No. 9 - 121A

3 Ea	Hinges	EC1100 4 1/2 x 4 1/2	US26D	HA
1 Ea	Latchset (privacy)	93K OL 14 K STK 626		
1 Set	Silencers			

Hardware Set No. 10 - 117B, 128N, 129A, 129D

3 Ea	Hinges	ECBB 1100 NRP 4 1/2 x 4 1/2	US26D	HA
1 Ea	Exit Device	99L	626	VON
1 Ea	Cylinder	7PIN I C	626	BE
1 Ea	Closer	8616 ARP SNB1 DA FC	689	DM
1 Set	Weather Strip	303 AV 3684		PEM
1 Ea	Threshold	171A x 36N		PEM
1 Ea	Door Bottom	315 CN x 36"		PEM

BLUEFIELD AREA TRANSIT AUTHORITY
 ADMINISTRATIVE AND MAINTENANCE FACILITY

08050
 4/09

Hardware Set No. 10A - 102C, 127B, 128M

3 Ea	Hinges	ECBB 1100 NRP 4 1/2 x 4 1/2	US26D	HA
1 Ea	Exit Device	99EO	626	VON
1 Ea	Cylinder	7PIN I C	626	BE
1 Ea	Closer	8616 ARP SNB1 DA FC	689	DM
1 Set	Weather Strip	303 AV 3684		PEM
1 Ea	Threshold	171A x 36N		PEM
1 Ea	Door Bottom	315 CN x 36"		PEM
1 Ea	Electric Exit Device Trim	CM993 PXX BP 17 SFS	626	VON

Hardware Set No. 10B - 127H, 128A

3 Ea	Hinges	ECBB 1100 NRP 4 1/2 x 4 1/2	US26D	HA
1 Ea	Exit Device	99EO	626	VON
1 Ea	Cylinder	7PIN I C	626	BE
1 Ea	Closer	8616 DST SNB1 DA FC	689	DM
1 Set	Weather Strip	303 AV 3684		PEM
1 Ea	Threshold	171A x 36N		PEM
1 Ea	Door Bottom	315 CN x 36"		PEM
1 Ea	Electric Exit Device Trim	CM993 PXX BP 17 SFS	626	VON

Hardware Set No. 11 - 118A

6 Ea	Hinges	EC 1100 4 1/2 x 4 1/2	US26D	HA
1 Ea	Latchset (closet)	93K OZ 14K STK	626	BE
1 Ea	Surface Bolt (inactive leaf)	580-8	US26D	RO
1 Set	Silencers			

Hardware Set No. 12 - 200A

3 Ea	Hinges	ECBB1100 NRP 4 1/2 x 4 1/2	US26D	HA
1 Ea	Lockset	93K 7 AB 14K S3	626	BE
1 Ea	Closer	8616 ARP SNB1 FC	689	DM
1 Set	Weatherstrip	303 AV 3684		PEM
1 Ea	Threshold	171A x 36"		PEM
1 Ea	Door Bottom	315 CN x 36"		PEM

Hardware Set No. 13 - 201A, 201B, 201C

6 Ea	Hinges	EC1100 NRP 4 1/2 x 4 1/2	US26D	HA
1 Ea	Lockset	93K7R 14K S3	626	BE
1 Ea	Surface Bolt (inactive leaf)	580-8	US26D	RM
1 Set	Silencers			

Hardware Set No. 14 - 116B

2 Ea	Hinges	ECBB 1100 4 1/2 x 4 1/2	US26D	HA
1 Ea	Electronic Lockset	CM5196 PXX BP 17 SFS	626	SCH
1 Ea	Cylinder	7PIN I C	626	BE
1 Set	Silencers			

END OF SECTION 08710

C4

2. Alignment:

- a. Where surfaces abut in line, limit offset from true alignment to 1/16 inch (1.5 mm).
- b. Where surfaces meet at corners, limit offset from true alignment to 1/32 inch (0.8 mm).

B. Diagonal Measurements: Limit difference between diagonal measurements to 1/8 inch (3 mm).

3.4 FIELD QUALITY CONTROL

- A. Repair or remove work that does not comply with specified requirements.
- B. Testing and inspecting may be performed to determine compliance of replaced or additional work with specified requirements. If testing determines work to not comply with performance requirements, the Contractor will reimburse the Owner for the testing expenses.
- C. Aluminum-framed assemblies will be considered defective if they do not pass tests and inspections.

3.5 ADJUSTING

- A. Adjust operating entrance door hardware to function smoothly as recommended by manufacturer.
 - 1. For entrance doors accessible to people with disabilities, adjust closers to provide a 3-second closer sweep period for doors to move from a 70-degree open position to 3 inches (75 mm) from the latch, measured to the leading door edge.

3.6 ENTRANCE DOOR HARDWARE SETS

See Section 0870 "Door Hardware" for balance of hardware.

Door Hardware Set No. ASF-1

Door No. 100A and 100B; each to have the following:

Qty.	Item	Description	Manufacturer	Finish
1	Hanging Devices	Continuous Hinges	Kawneer	628/US28
1	Exit Devices	Panaline	Kawneer	628/US28
1	Operating Trim	Pulls (exterior of leaves)	Kawneer	628/US28
1	Closing Devices	Concealed Overhead Closer	Kawneer	628/US28
1	Stops	Stops	Kawneer	628/US28
1 set	Accessories	Weather Stripping	Kawneer	
1		Threshold	Kawneer	628/US28
1		Weather Sweep	Kawneer	
1	Latch Bolt	1850-505	Adams-Rite	628/US28
1	Cylinder	See Section 08710		
		See Section 08710 for balance of door hardware.		

Door Hardware Set No. ASF-2
Door No. 101A; each to have the following:

Qty.	Item	Description	Manufacturer	Finish
1	Hanging Devices	Continuous Hinges	Kawneer	628/US28
1	Exit Devices	See 08710		
1	Electronic Exit Trim	See 08710		
1	Closing Devices	Concealed Overhead Closer	Kawneer	628/US28
1	Stops	Stops	Kawneer	628/US28
1 set	Miscellaneous Items	Silencers	Kawneer	
	See Section 08710 for balance of door hardware.			

3.7 ALUMINUM STOREFRONT SYSTEM SCHEDULE

- A. Thermal framing system for all doors, frames and windows except, door 101A (non-thermal).

END OF SECTION 08411

Computer Managed (CM) Locking System

Specifications:

1. **Model and Function:** Schlage CM5500 Series Mortise Locks office function 1" AutoBolt (CM5591) or Approved Equal.
2. **Access Credential Reader:** Schlage Model P XK with HID Proximity Reader-Keypad, HID Prox Key Fobs and IButtons or Approved Equal.
3. **Power and Mode:** Battery powered and backup.
4. **Lever:** Schlage Model Rhodes 06 or Approved Equal.
5. **Handle:** Right Hand and Left Hand Reverse
6. **Emergency Override Cylinder:** Schlage Everest C123 Keyway cylinder or Approved Equal.
7. **Finish:** Satin Chrome 626 or Approved Equal
8. **Security Management System:** Schlage Robust Access Control System or Approved Equal with IRPDA to program doors, complete hardware and software to operate system or Approved Equal. This will allow management to track, secure and assign staff codes for access.
9. **Number of Doors:** Review plans for door locations.

DEALERS:

Browns Lock & Safe
210 W. Market Street
Charlottesville, VA 22902
(434) 295-2171

Commonweath Door & Hardware
1125 Intervale Drive
Salem, VA 24153
(434) 977-3994

Ingersoll Rand Security Technologies
5850 Waterloo Road Suite 140
Columbia, MD 21045
(410) 480-7098

3/23/2009

PROJECT FUNDING SOURCE SIGN ASSEMBLY AMERICAN RECOVERY AND REINVESTMENT ACT SIGN LAYOUT DETAILS

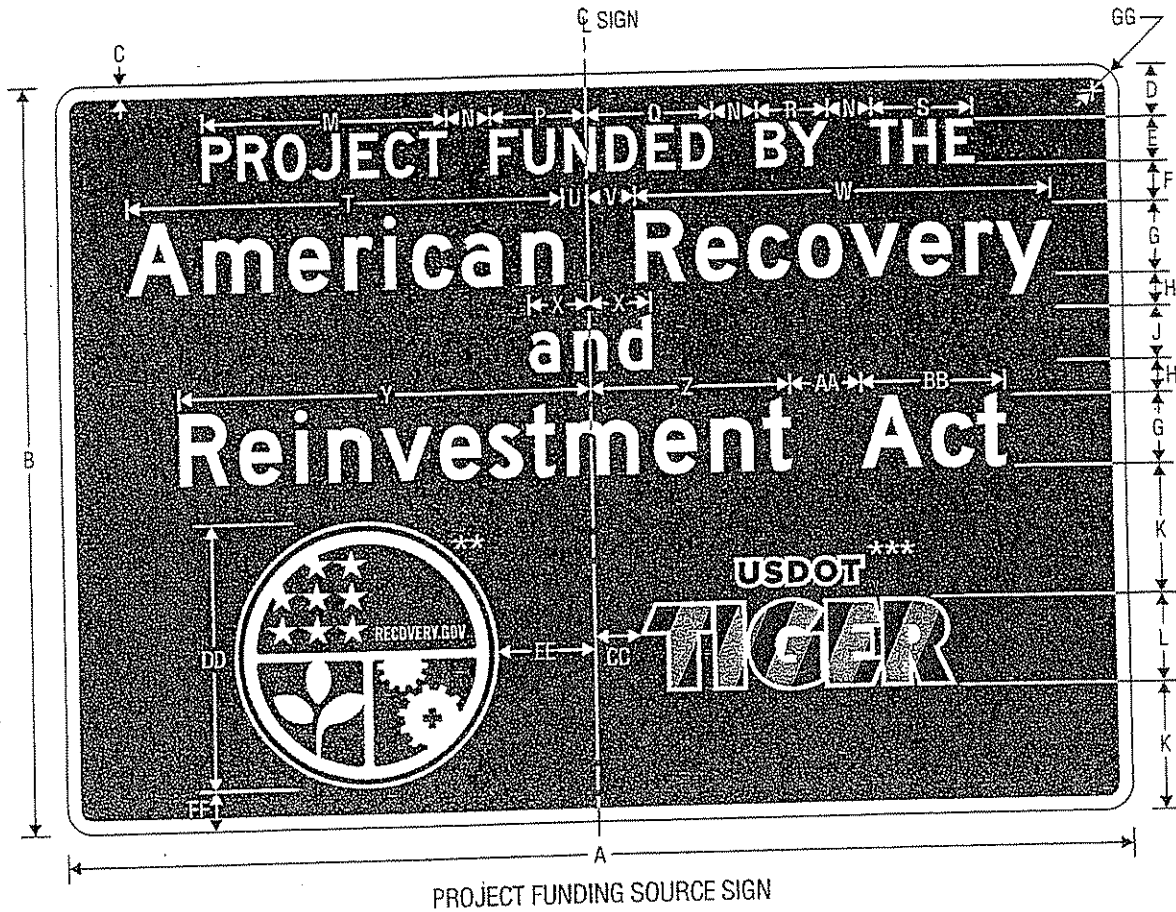
Orange Sign - Delete - NOT A Requirement



PROJECT FUNDING SOURCE
SIGN ASSEMBLY

3/23/2009

PROJECT FUNDING SOURCE SIGN ASSEMBLY AMERICAN RECOVERY AND REINVESTMENT ACT SIGN LAYOUT DETAILS



NOTE: SIGN SHALL NOT BE INSTALLED WITHOUT PROJECT FUNDING SOURCE PLAQUE (SEE SHEET 3).

Dimensions in inches

A	B	C	D	E	F	G	H	J	K	L	M	N	P
120	84	1.5	6	5 D	4.5	8 D*	3.75	6 D* (45LC)	14.5	10	27.917	5	10.831
84	60	1	5	4 C	3.5	6 C*	3	4 D* (βLC)	9.25	7	19.047	4	7.362

Q	R	S	T	U	V	W	X	Y	Z	AA	BB	CC	DD
14.087	8.106	11.556	49.42	2.742	5.258	46.904	6.812	46.76	22.472	8	16.288	5	30
9.484	5.162	7.763	31.722	2.415	3.585	30.552	4.542	30.911	14.737	6	10.175	4	21

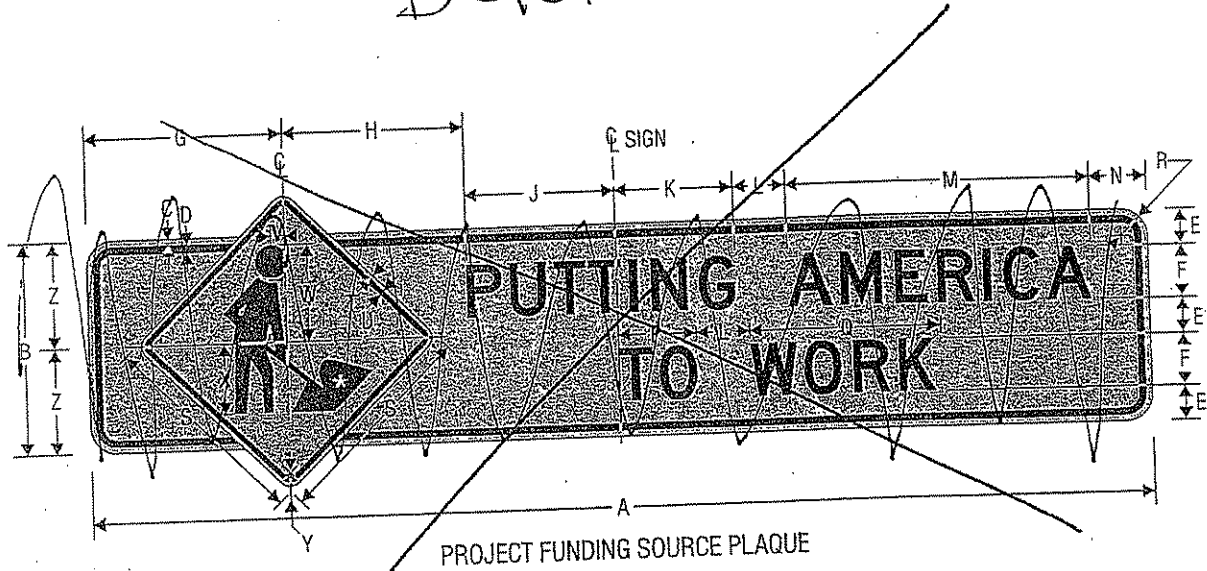
EE	FF	GG
11	4.5	3
7.5	2.25	2.25

* Increase character spacing 50%
 ** See Pictograph page 4
 *** See Pictograph page 5

COLORS: LEGEND, BORDER — WHITE (RETROREFLECTIVE)
 BACKGROUND — GREEN (RETROREFLECTIVE)

PROJECT FUNDING SOURCE SIGN ASSEMBLY AMERICAN RECOVERY AND REINVESTMENT ACT SIGN LAYOUT DETAILS

Delete



NOTE: PLAQUE SHALL NOT BE INSTALLED WITHOUT SIGN (SEE SHEET 2).

* See *Standard Highway Signs* Page 6-59 for symbol design.

Dimensions in inches

A	B	C	D	E	F	G	H	J	K	L	M	N	P
120	24	0.625	0.875	4	6 D	22.349	20.370	17.281	13.28	6	34.22	6.5	8.765
84	18	0.375	0.625	3.5	4 D	16.607	15.686	9.707	10.667	4	22.813	5	5.843

Q	R	S	T	U	V	W	X	Y	Z
21.013	3	24	0.375	0.625	1.5	11	8	1.5	12
14.009	2.25	18	0.375	0.625	1	7	6	1.5	9

COLORS: LEGEND, BORDER — BLACK
BACKGROUND — ORANGE (RETROREFLECTIVE)

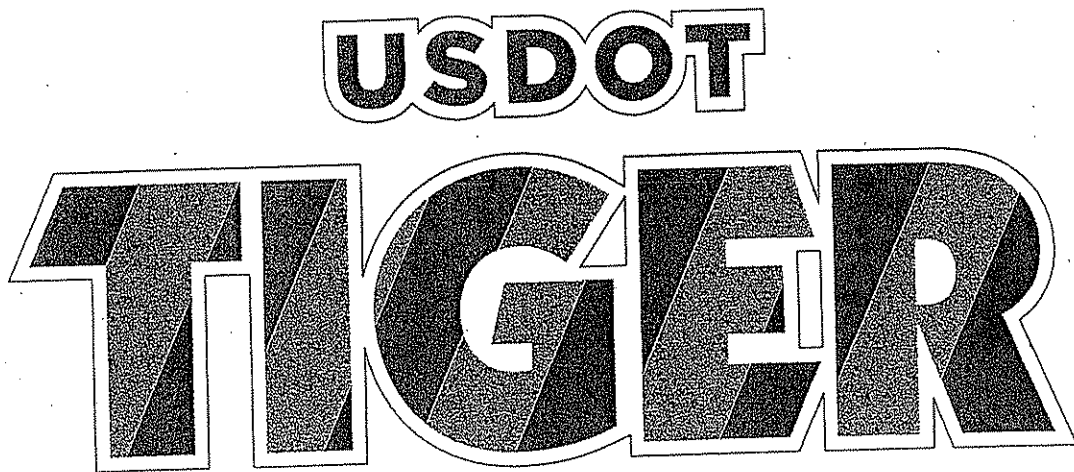
PROJECT FUNDING SOURCE SIGN ASSEMBLY AMERICAN RECOVERY AND REINVESTMENT ACT SIGN LAYOUT DETAILS



RECOVERY
Vector-Based, Vinyl-Ready Pictograph

- | | |
|--------------------------|---------------------------|
| COLORS: LEGEND, OUTLINE | - WHITE (RETROREFLECTIVE) |
| BORDER | - BLUE (RETROREFLECTIVE) |
| BACKGROUND (UPPER) | - BLUE (RETROREFLECTIVE) |
| BACKGROUND (LOWER RIGHT) | - RED (RETROREFLECTIVE) |
| BACKGROUND (LOWER LEFT) | - GREEN (RETROREFLECTIVE) |

**PROJECT FUNDING SOURCE SIGN ASSEMBLY
AMERICAN RECOVERY AND REINVESTMENT ACT
SIGN LAYOUT DETAILS**


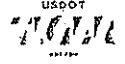


USDOT TIGER
Vector-Based, Vinyl-Ready Pictograph

- | | |
|-----------------|--------------------------------------|
| COLORS: OUTLINE | — WHITE (RETROREFLECTIVE) |
| USDOT LEGEND | — BLACK |
| TIGER DIAGONALS | — BLACK,
ORANGE (RETROREFLECTIVE) |

Listed below is a representation of the guidance and use for ARRA logos. A modified version of this will be posted to the public FTA website for downloading. It will NOT be necessary for grantees to request permission from the FTA regional offices to obtain. Grantees are directed to the public website as grants are awarded/obligated to download and use the logos in an appropriate manner.

American Recovery and Reinvestment Act Logos

LOGO	NAME	DOWNLOADABLE VERSIONS To save file to your computer, right-click on the underlined file and click on "Save Target As"	
	ARRA Logo	Web/Powerpoint version (PNG)	Print-ready version (AI)
	Tiger Logo	Web/Powerpoint version (PNG)	Print-ready version (AI)

ARRA/TIGER Logo Guidance for FTA Grantees

Are FTA grantees required to display any special signs or logos to identify ARRA funded projects?

Yes. On March 3, 2009, President Obama unveiled two logos which are to be used to identify all projects funded by Department of Transportation ARRA programs. The first logo represents Recovery.Gov and will be used government wide to show the public where their tax dollars are at work to promote economic recovery and reinvestment in the nation's infrastructure. The second logo is specific to the US DOT and includes the word TIGER, which stands for Transportation Investment Generating Economic Recovery. FTA will make available high resolution images suitable for reproduction for grantees to download to produce signs or decals to display on FTA funded ARRA projects.

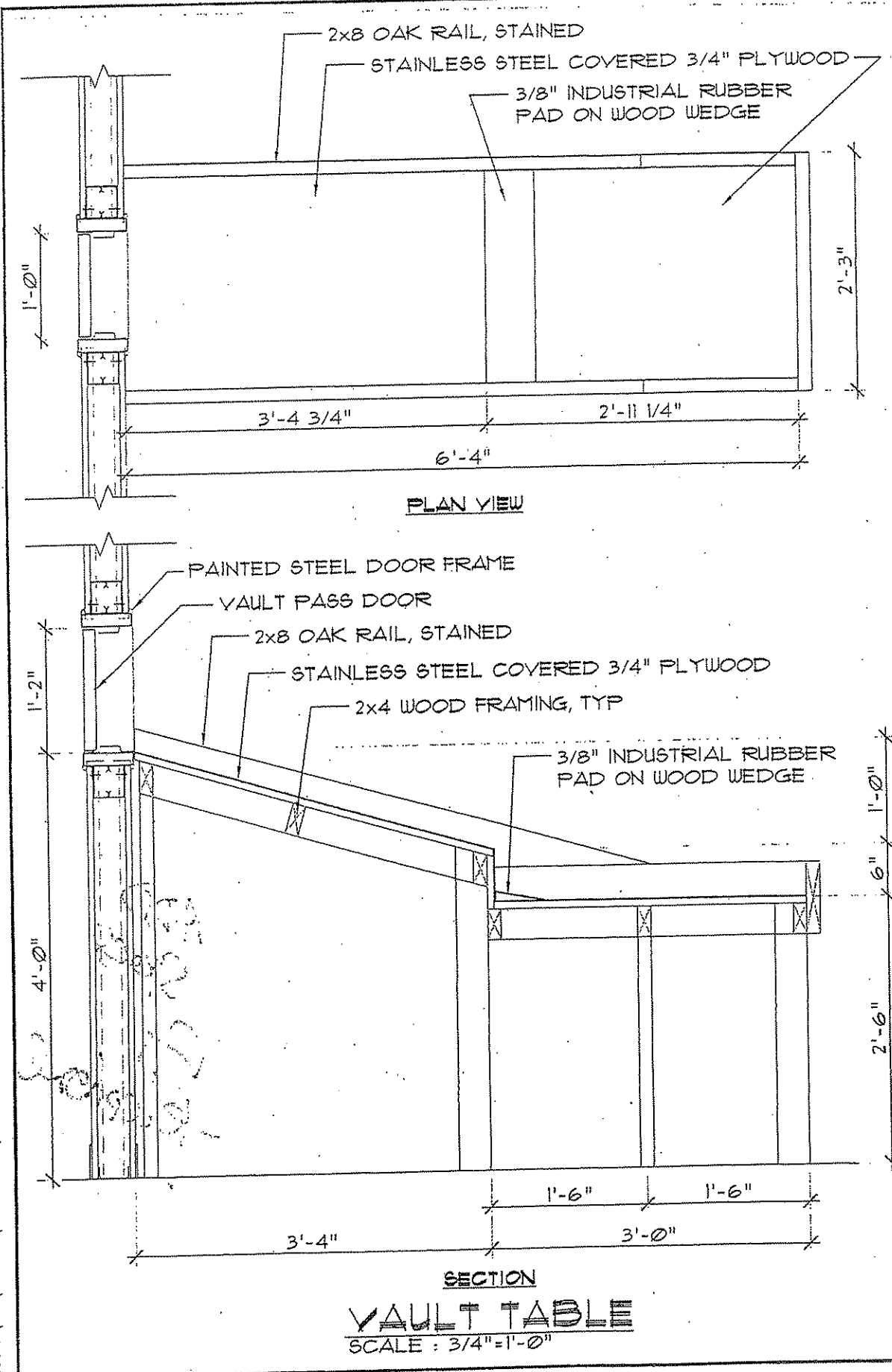
The grant agreement for each FTA ARRA grant includes a special condition as follows: Emblems. The Recipient agrees to identify projects supported by FTA by attaching the appropriate emblems as the Federal Government may require.

FTA strongly encourages grantees to prominently display both logos described above on all projects funded by the ARRA. Given the wide variability of transit projects, FTA does not specify a particular size or format of sign, but provides the following guidelines.

- Signs should be designed to maximize visibility of the logos and minimize any accompanying text.
- Minimal text may be included on the sign, for example, "This Project funded by" preceding the logos, or "This Station Improvement..." or "This Bus..." etc. as appropriate, but text is not required.
- The Recovery.Gov logo should be larger than the TIGER logo.
- Because the TIGER logo was designed to identify US DOT ARRA projects, it is not necessary to display the standard DOT triscalion seal in combination with the TIGER logo.
- It is not necessary to display the standard FTA mark in combination with the TIGER logo.
- Grantees may adapt placement of the logos and may design signs to be suitable to the specific project on which they are displayed, but may not alter the design and colors of the logos themselves.

- Signs at construction projects, for example facilities, should be placed where they are visible to passersby and to customers approaching the site.
- Revenue service vehicles may be identified by a decal and/or bumper sticker visible to the public and to boarding passengers.
- If a construction project involves roadways, grantees should use the guidance for road signs disseminated by the FHWA division offices.
- Safety concerns should be taken into consideration in the placement of signs, so as not to obscure traffic control signs, for example, or create a hazard.
- Grantees may use the Recovery.Gov and TIGER logos on paper documents and websites related to ARRA funded projects, for example bid documents and website postings of contract awards.
- The cost of producing and displaying the logos is an eligible project administration cost in FTA ARRA grants.

H:\projects\08\08050\addenum\08050-sk4-vaultsection.dwg, 4/10/2009 4:40:34 PM. dnd75



SECTION
VAULT TABLE
 SCALE : 3/4" = 1'-0"

JOB NUMBER:	08050
SCALE:	AS NOTED
DATE:	04-10-09
DRAWN BY:	DND
DESIGNED BY:	PAW
CHECKED BY:	PAW
SHEET NO.:	REVISION
SK4	

**VAULT TABLE
 DETAIL**

PROJECT INFORMATION
 West Virginia Department of Transportation
 Bluefield Area Transit
 Administration and Maintenance Facility
 Bluefield, West Virginia

<p>AIRPORT PLANNING / DEVELOPMENT ARCHITECTURE / INTERIOR DESIGN CIVIL ENGINEERING / SITE DEVELOPMENT ENVIRONMENTAL ENGINEERING LANDSCAPE ARCHITECTURE SURVEYING</p>	<p>St. Albans, WV (304) 727-5581 Buckhannon, WV (304) 472-0914 Marlinsburg, WV (304) 260-1222</p>	<p>Chapman Technical Group</p> <p>www.chaptech.com</p>
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Telephone System

Specifications and Features:

The telephone system to be a native network base system which can support NBX Call Control Protocol or Session Initiated Protocol that meets the following minimum requirements or equal:

1. (8) Analog PSTN telephone lines expandable;
2. (2) 10/100 Base-T Network Ports;
3. (4) Port-Voice Mail that will receive up to 400 hours of voice mail;
4. (2) Analog FXS ports;
5. Music on hold feature;
6. (1) RJ11 Paging connector
7. (2) 24 port 10/100/1000 Base T Ethernet Switches with the following capabilities:
 - a. Layer 3 routing
 - b. VLAN
 - c. QOS
8. (1) On-Line Un-interruptible (1500 VA) Power Supply with rack mounting kit;
9. 19" 2 post equipment rack;
10. (1) Music on hold player with 3.5 mm phone plug output;
11. (12) Network telephones with the following features;
 - a. (2) 10/100 Base t-Ethernet switch ports
 - b. Full Duplex speakerphone
 - c. Supports 802.3af Power Over Ethernet
 - d. Facilitates wall mount or desktop use
 - e. Wideband audio ready
 - f. Built in headset jack with total of (2) headsets
 - g. 18 programmable buttons
12. PA Paging System with following features;
 - a. (1) Paging control module
 - b. (2) Paging horns in maintenance bay and wash bay
 - c. Speakers in administrative section of building
13. System support by a local vendor shall be within 100 miles of office in order to provide support in-house within a 5 hours of support need;
14. Technician must provide complete installation as follows but not limited to all wiring pulls, connections, set up and programming to enable system to work completely for daily use in all areas of facility.
15. All power supplies and materials needed for the installation of the system in the locations defined on the building plans or as needed.
16. Vendor to supply one-day training on systems to employees.

CCTV System with Computer DVR Control

Specifications and Features:

A Digital Video Surveillance System with native open platform IP based which support the following:

1. **System:** Single server video surveillance solution with unlimited recording of 4-video from IP cameras and IP video encoders with analog cameras, and G-Max Type System or Approved Equal with live remote view technology, 16 camera PC based security camera system, and monitor with professional DVR package. Advanced Network Systems or Skyway Security System 1600 series or Approved Equal.
2. **Number of Cameras:** 16. Cameras shall be a network outdoor dome camera and shall incorporate 18x optical zoom, day/night functions, simultaneous motion 4-video streams and shall support resolutions up to 704x576 PAL. Indoor cameras must meet the same specs as above other than they must have up to 1280x1024 pixels. All cameras must be waterproof and have all wiring, outdoor and inside mounting brackets, and outdoor heating housing for cameras. Cameras to be color.
3. **Operating System:** Complete system must operate on Windows XP or Vista.
4. **Computer:** Vendor to supply a current computer with software already set up and programmed for operations.
5. **Features:** At a minimum the system must have: Schedule Management, Fast, Easy Date Schedule, Smart Saving during recording based on amount of movement, cameras can be remote controlled for panning tilting and zooming, Video Export, Storage minimum of 250GB, software to support user names and passwords.
6. All hardware, software and wiring for complete installation to be supplied. Contractor will supply the complete installation including pulling all wiring, connections, etc.
7. Warranty information to be supplied.
8. Power Supply to be included with installation for system and cameras.
9. Training, Manuals and Support to be included.
10. The system must be supported by a vendor that can be at the transit system within 24 hours after service call.
11. The complete system shall be supported by an annual product maintenance agreement for the first two years of service after complete installation that includes, but not limited to software updates, assurance and tech support.
12. System must be capable of storing (14) days of camera footage with server or Hard Drive capacity to meet the 14 day storage.
13. System support by a local vendor shall be within 100 miles of office in order to provide support in-house within a 5 hours of support need;

"FZ"

14. Technician must provide complete installation as follows but not limited to all wiring pulls, connections, set up and programming to enable system to work completely for daily use in all areas of facility.
15. All power supplies and materials needed for the installation of the cameras in the locations defined on the building drawings shall be supplied.
16. Vendor to supply one-day training of system to employees.

"F-3"

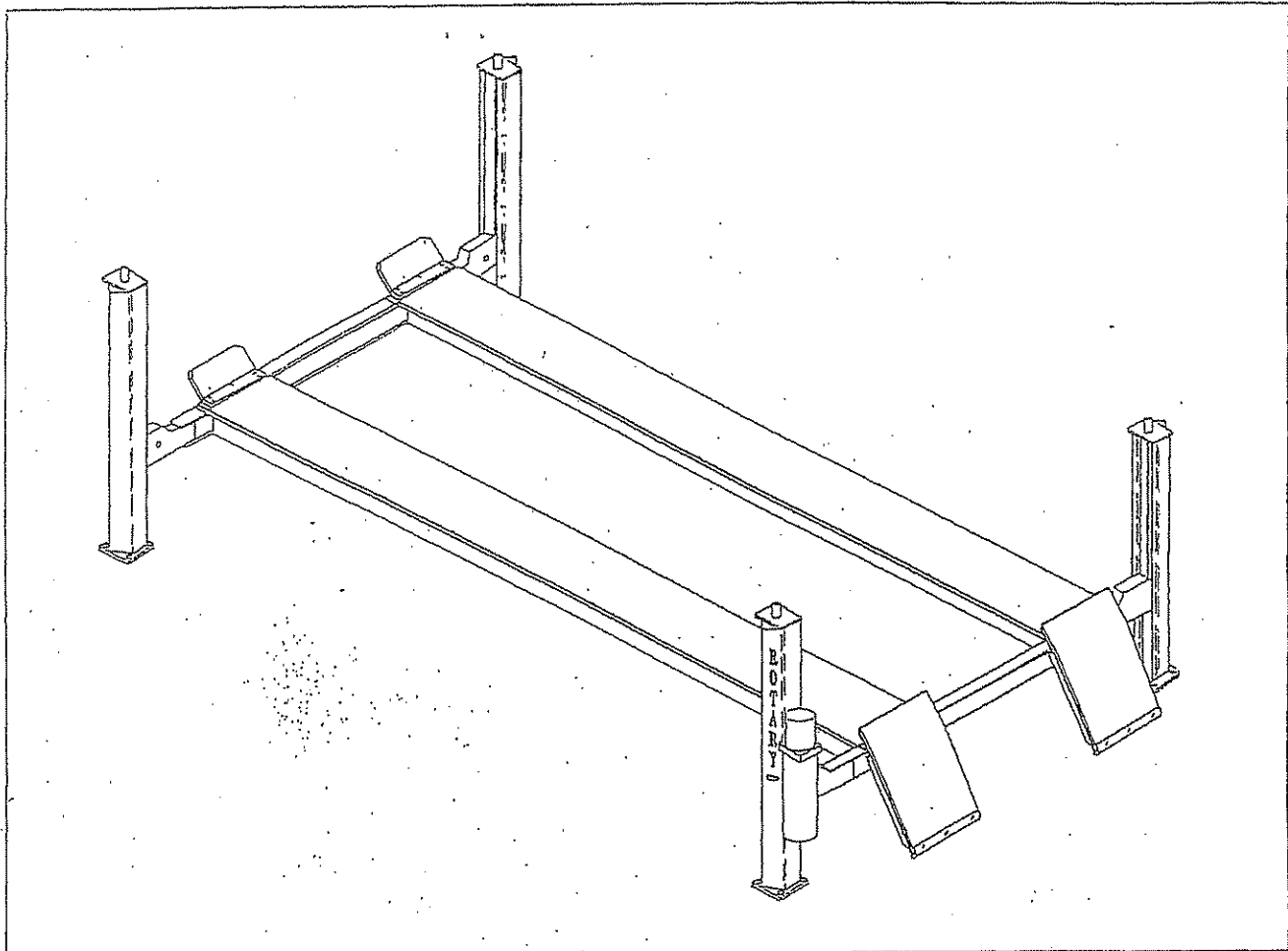


World Leader in Lift Systems

FOR INFORMATION ONLY
SIMILAR

MODELS: SM300-100/102
SM301-100/102
SM302-100/102

PARTS BREAKDOWN



IMPORTANT: When ordering parts or requesting service, always give exact model and power unit serial number. Model number is shown on nameplate attached to power unit column. Power unit serial number is located on side of reservoir.

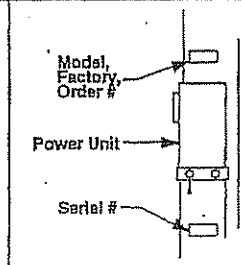
NOTES:

Switch 1329 AA 3 Ph
Switch CY025RC02241 1 ph P928

OWNER'S RECORD

Complete information at right and keep in a safe place.

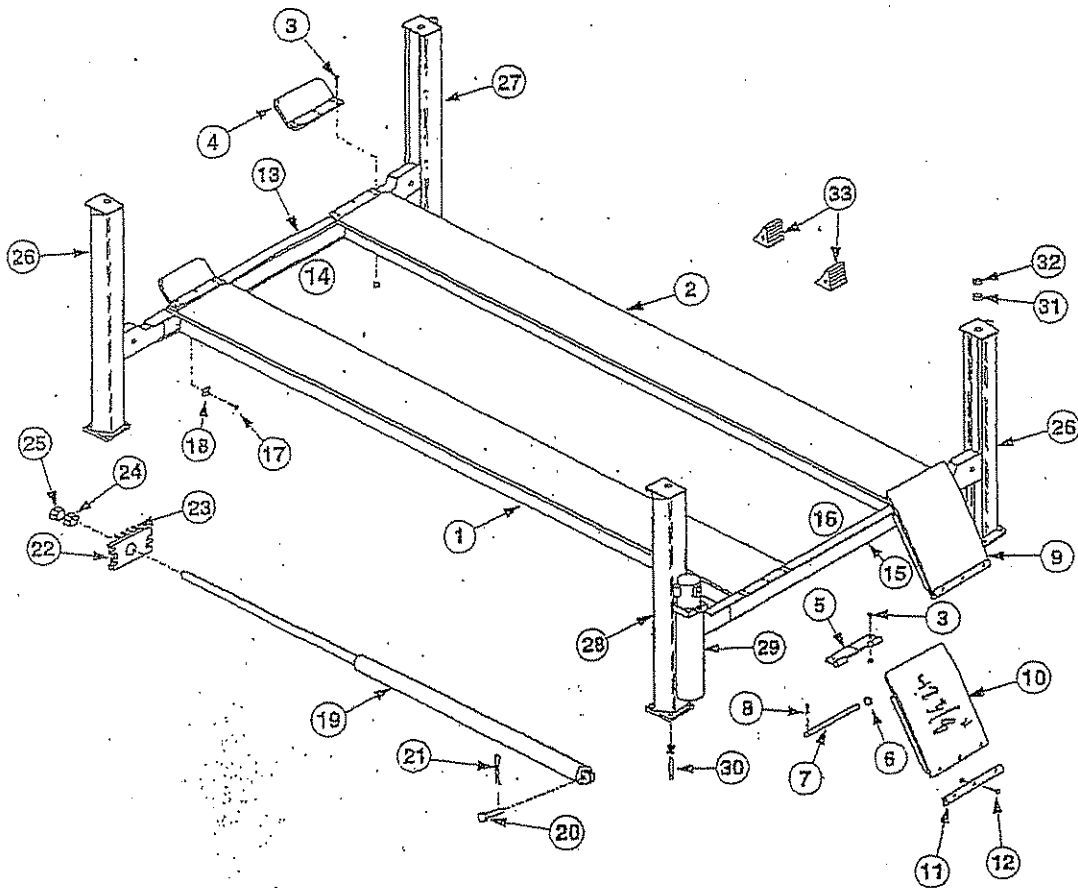
Date Installed 1 1
Installed in Bay # _____
Std Serial # P1132 P828-3P
3 ph. Serial # P1082 P782-3P
Factory Order # _____



NOTE: For Replacement Parts - See Your Nearest Rotary Distributor

ATTACHMENT "G"

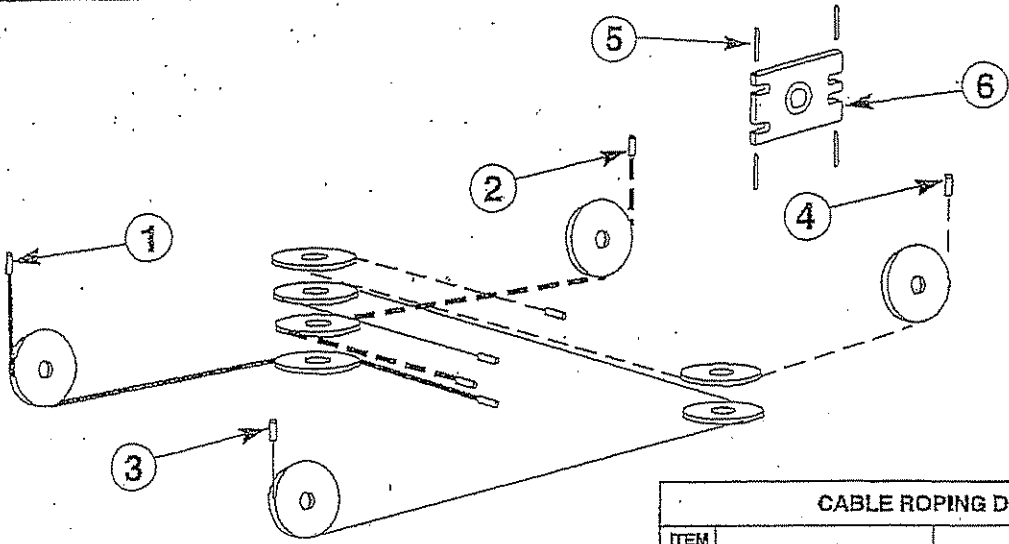
G1



Seal kit: 15474

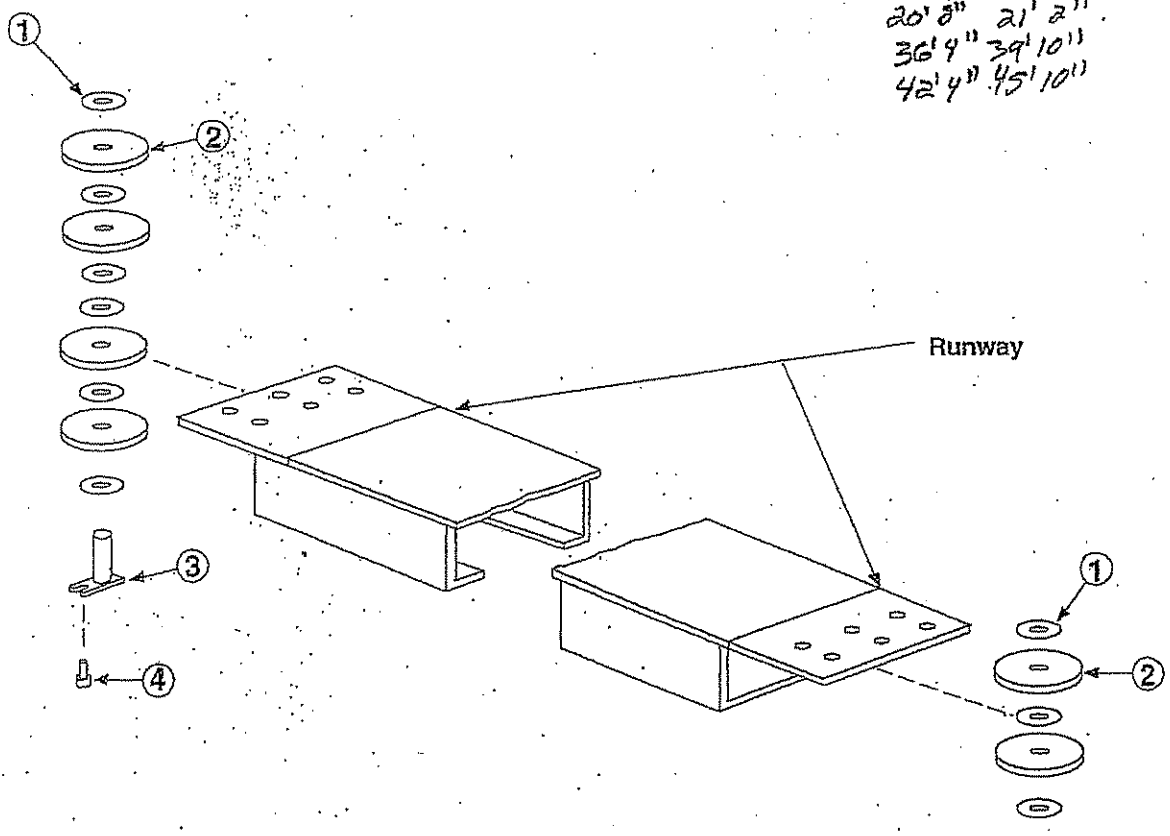
SM300, 301, 302 COMPONENTS

ITEM NO.	DESCRIPTION	PART NO.			ITEM NO.	DESCRIPTION	PART NO.
		SM300	SM301	SM302			
1	Left Hand Runway Assy. (includes: cylinder; cables; sheaves)	FC5366	FC5441	FC5442	17	3/4"-10NC x 2" Lg. Flange Cap Screw (Grade B min.)	40443
2	Right Hand Runway Assembly	FC5366-5	FC5441-5	FC5442-5	18	Plastic Shim	FJ716-B
3	5/8"-11NC x 2 1/2" Hex Cap Screw (High Strength)	40344			19	Hydraulic Cylinder	FC5781
4	5/8"-11NC McClean-Fogg Nut	40360			20	Clevis Pin	FC5225-23
5	Wheel Slide	FC5225-42			21	3/16" x 3" Collet Pin	41253
6	Hinge Assembly	FC5225-4P			22	Cable Pull Bar	FC5225-18
7	5/8" Pushnut Fastener	FC5179-4			23	Slide	FC5160-12
8	Hinge Pin	FC5225-39			24	1 3/4" - 5NC Heavy Hex Nut	40777
9	Ramp/Chock Weldment	41202			25	1 3/4" - 6NC Heavy Hex Jam Nut	40778
10	Ramp/Chock Weldment	FC5225-52			26	Right Hand Column	FC5455
11	Plastic Slide	FC5225-36			27	Left Hand Column	FC5454
12	#10-24NC x 3/4" Lg. PNHDM5	FC134-33			28	Power Unit Column	FC5456
13	#10-24NC Hex Nut	40630			29	Power Unit	Single Phase P82B
14	Front Yoke Weld	40630			30	Anchor Bolt	3 Phase P782
15	Rear Yoke Weld	FC5224-1			31	1 1/8"-7NC Hex Nut	FC5893-3
16	Rear Yoke Assembly (includes:latches)	FC5224			32	1 1/8"-7NC Hex Jam Nut	40788
		FC5225-1			33	Rear Wheel Chock	40770
		FC5225					FC537



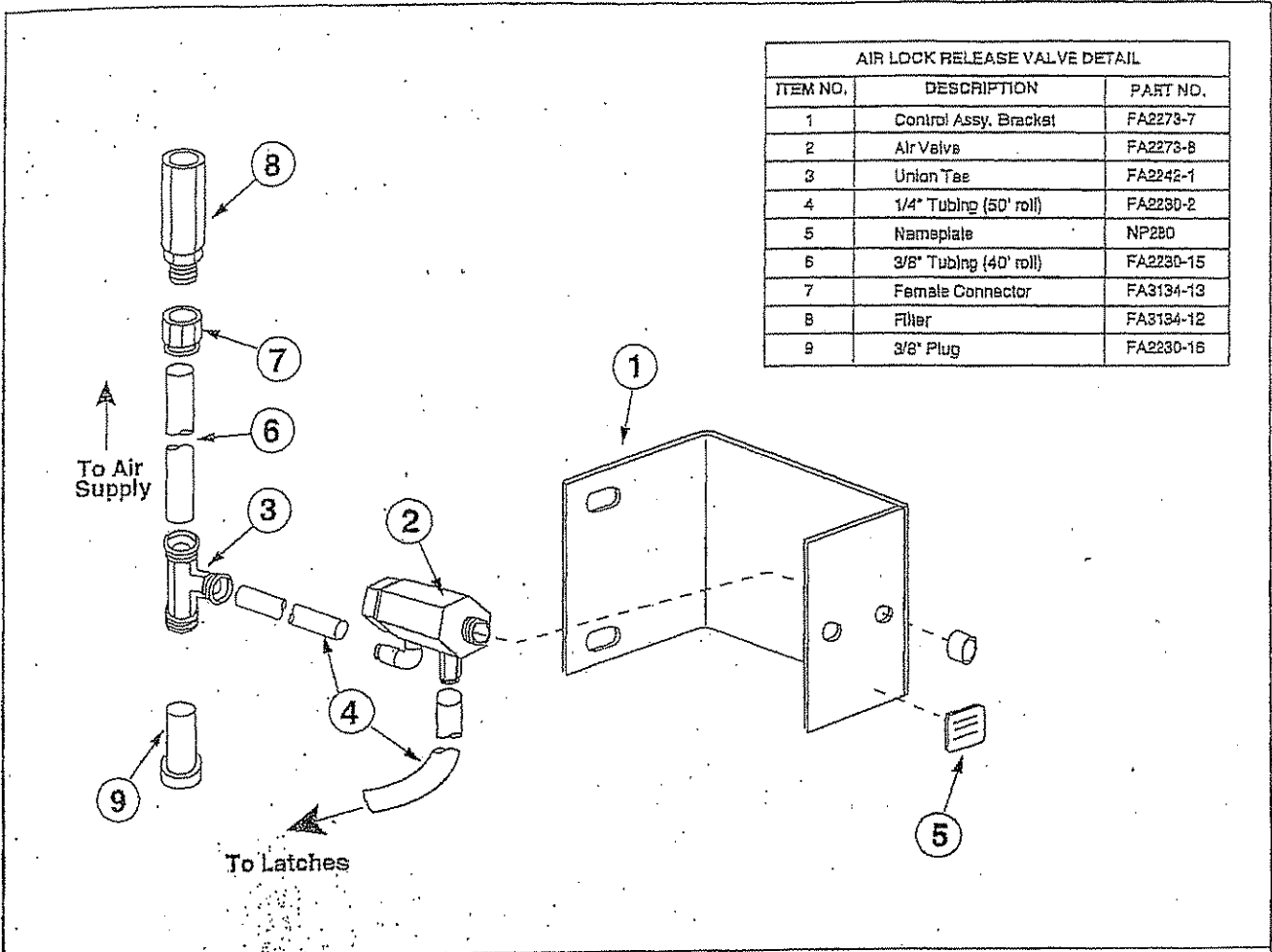
CABLE ROPING DETAIL				
ITEM NO.	DESCRIPTION	PART NO.		
		SM300	SM301	SM302
1	Left Front Cable	FC5225-4	FC5225-5B	FC5225-9A
2	Right Front Cable	FC5225-5	FC5225-6B	FC5225-9B
3	Left Rear Cable	FC5225-6	FC5225-9C	FC5225-9C
4	Right Rear Cable	FC5225-7	FC5225-9D	FC5225-9D
5	3/8" x 3 1/4" Lg. Spiral Roll Pin	14454		
6	Cable Pull Bar	FC5225-1B		

15' 2"
18' 2"
39' 10"
45' 10"

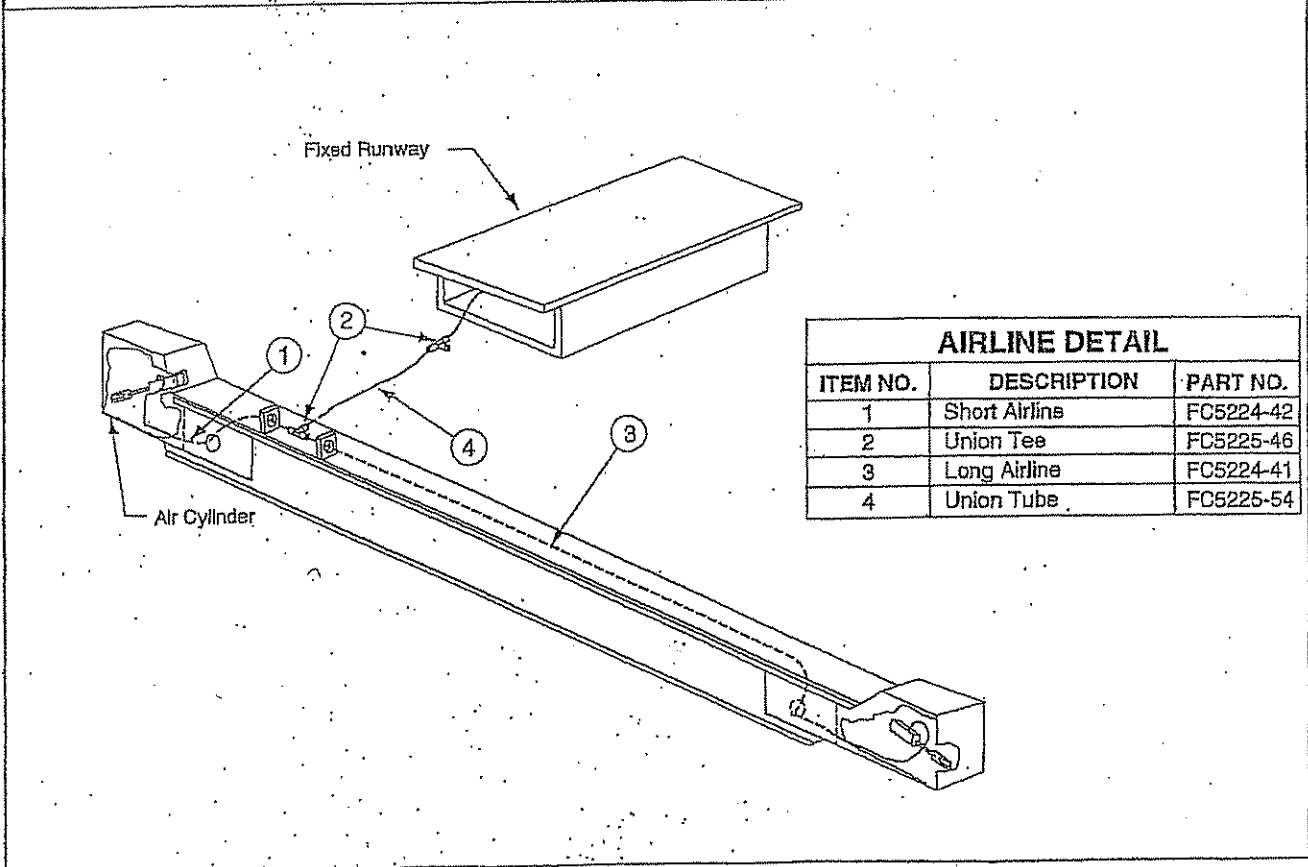


19' 8" 15' 2"
20' 8" 21' 2"
36' 9" 39' 10"
42' 4" 45' 10"

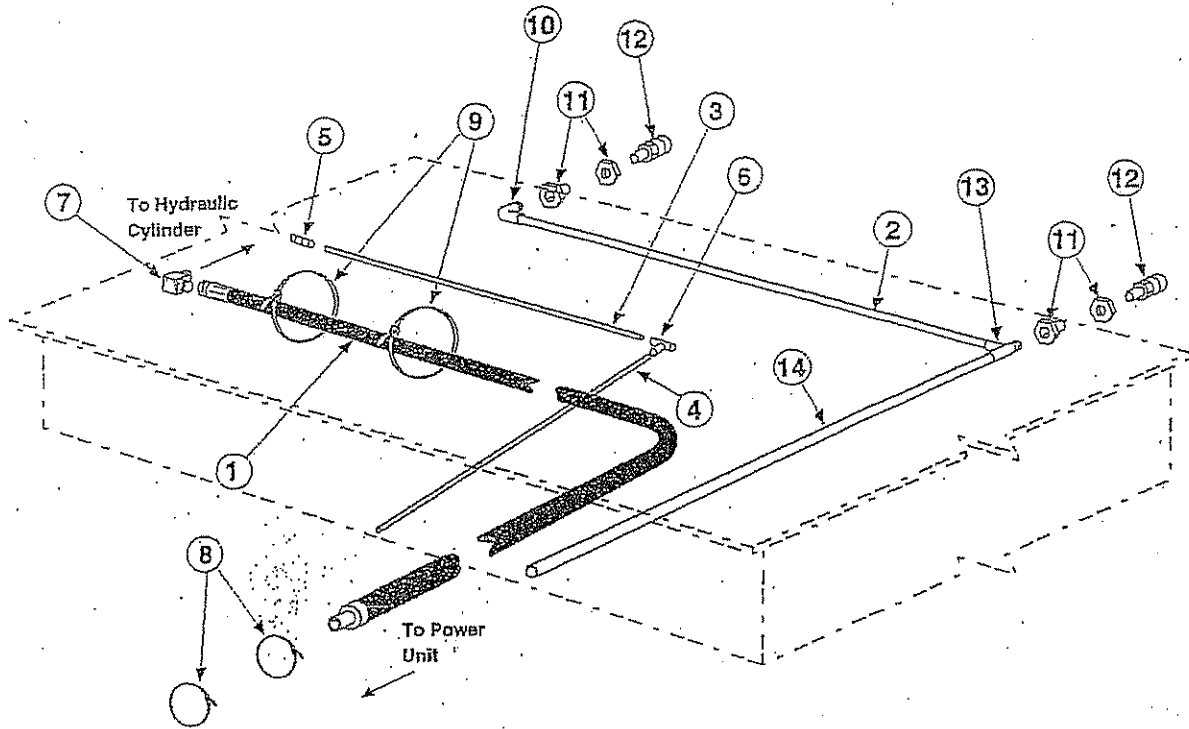
SHEAVE DETAIL		
ITEM NO.	DESCRIPTION	PART NO.
1	Bearing	FC5225-17
2	Sheave	FC5225-2
3	Sheave Pin Assembly	FC5225-3
4	5/16"-18NC x 1/2" HSBHCS	40225



AIR LOCK RELEASE VALVE DETAIL		
ITEM NO.	DESCRIPTION	PART NO.
1	Control Assy. Bracket	FA2273-7
2	Air Valve	FA2273-8
3	Union Tee	FA2242-1
4	1/4" Tubing (50' roll)	FA2230-2
5	Nameplate	NP280
6	3/8" Tubing (40' roll)	FA2230-15
7	Female Connector	FA3134-13
8	Filter	FA3134-12
9	3/8" Plug	FA2230-16



AIRLINE DETAIL		
ITEM NO.	DESCRIPTION	PART NO.
1	Short Airline	FC5224-42
2	Union Tee	FC5225-46
3	Long Airline	FC5224-41
4	Union Tube	FC5225-54



TUBING DETAIL

ITEM	DESCRIPTION	PART NO.			ITEM	DESCRIPTION	PART NO.
		SM300	SM301	SM302			
1	Hose	FC5225-16	FC5426-4	FC5427-4	8	Wire Tie	FJ7108-5
2	Long Runway Tube	FC5386-2	FC5441-2	FC5442-2	9	Cable Tie	FC5225-26
3	Main Tube	FC5426-5			10	Male Elbow	FC147-7
4	1/4" Supply Tube	FC5225-56			11	Connector	FC147-1
5	Union	FC5225-98			12	Coupler	FC147-15
6	Union Tee	FC5225-46			13	Male Run Tee	FC147-3
7	Elbow Adapter	FJ7224			14	3/8" Supply Tube	FC147-4



World Leader in Lift System

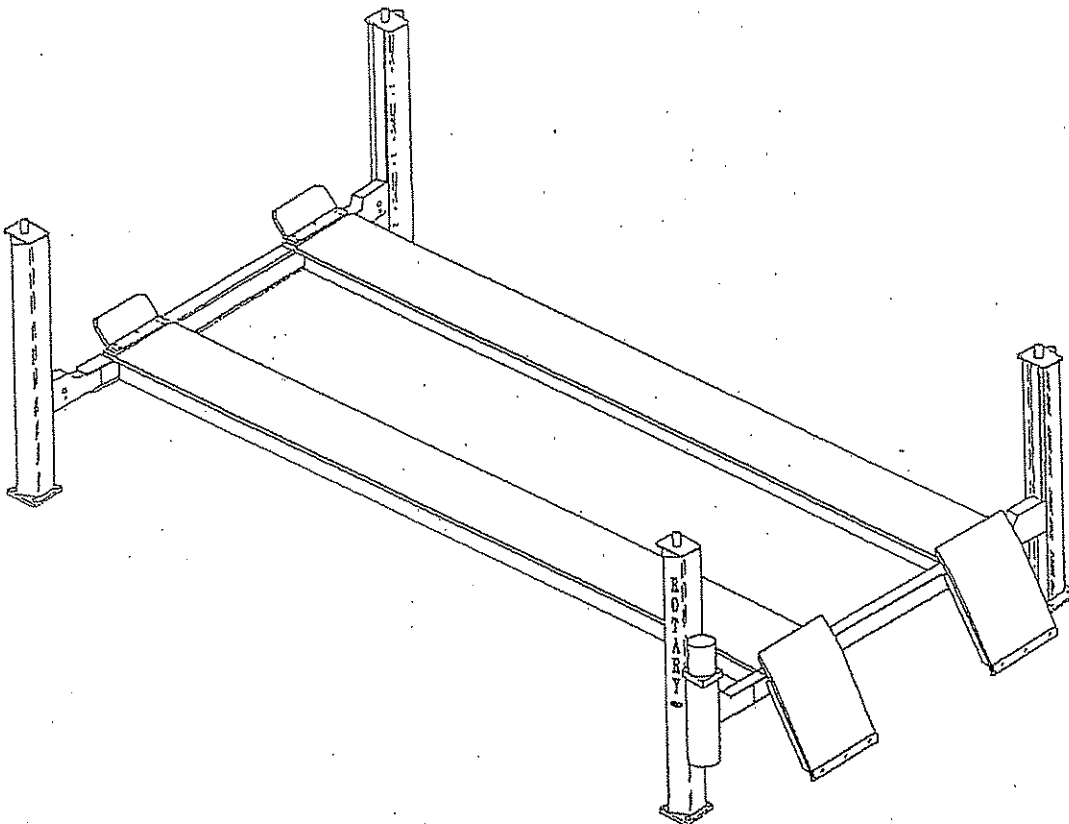
Model SM300-100 Series

Capacity 30,000 lbs.
(15,000 lbs. per axle)

Model SM300-100	235" Wheelbase
Model SM301-100	271" Wheelbase
Model SM302-100	308" Wheelbase

Four Post Heavy Duty Surface Mounted Lifts

Installation, Safety, Operation and Maintenance Instructions



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A DOVER INDUSTRIES
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Canada M6A 1Z4
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Fax: 1-(416) 256-3924

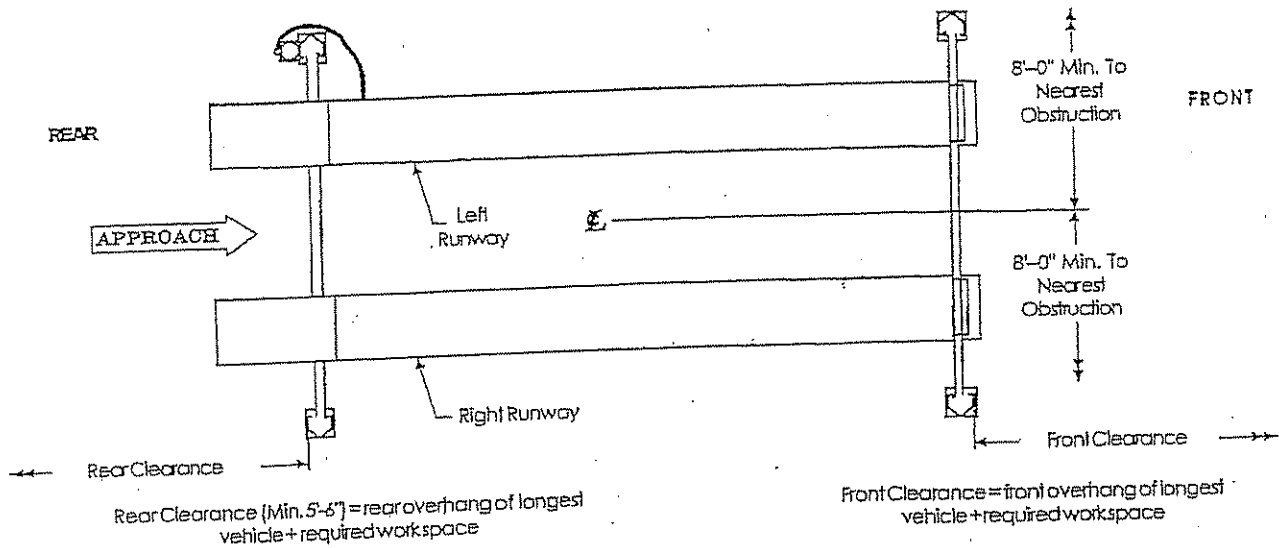
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IN30016
Rev C

INSTALLATION INSTRUCTIONS



Required Clearances

Fig. 1

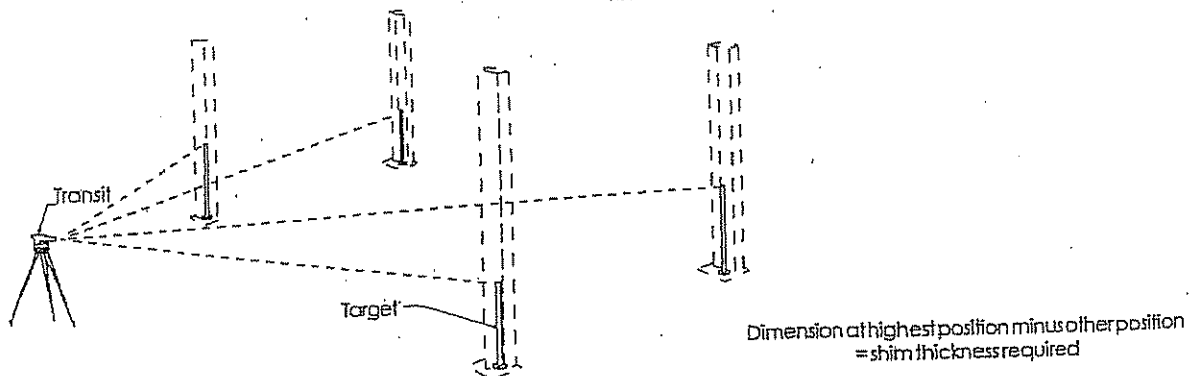
Read and understand installation instructions completely before starting with lift installation.

1. **Lift Location:** Use architect's plan when available to locate lift. Fig. 1 shows dimensions of a typical bay layout. For power unit at right front, rotate lift 180°, leaving ramp/chocks and wheel stops in original position. Lift floor area should be level.

WARNING DO NOT install on asphalt or other similar unstable surfaces. Columns are supported only by anchors in floor.

Note: If runway extensions are used, an additional 3'-0" of clearance must be added to end with extensions.

2. Ceiling or overhead clearance must be 80" plus height of tallest vehicle.
3. **Estimating Column Shim requirements:** In the following section, the terms "highest" and "lowest" refer to elevation of floor.
 - A. Mark locations where lift columns will be positioned in bay.
 - B. Place target at column positions and record readings, Fig. 2.
 - C. Find the highest of the four (4) locations. Find the difference between the reading at each of the remaining three (3) columns and the highest reading.
 - D. The difference is the estimated amount of shim thickness needed at each column.



Estimation Shim Requirements

Fig. 2

Cable Seating in Sheave Grooves

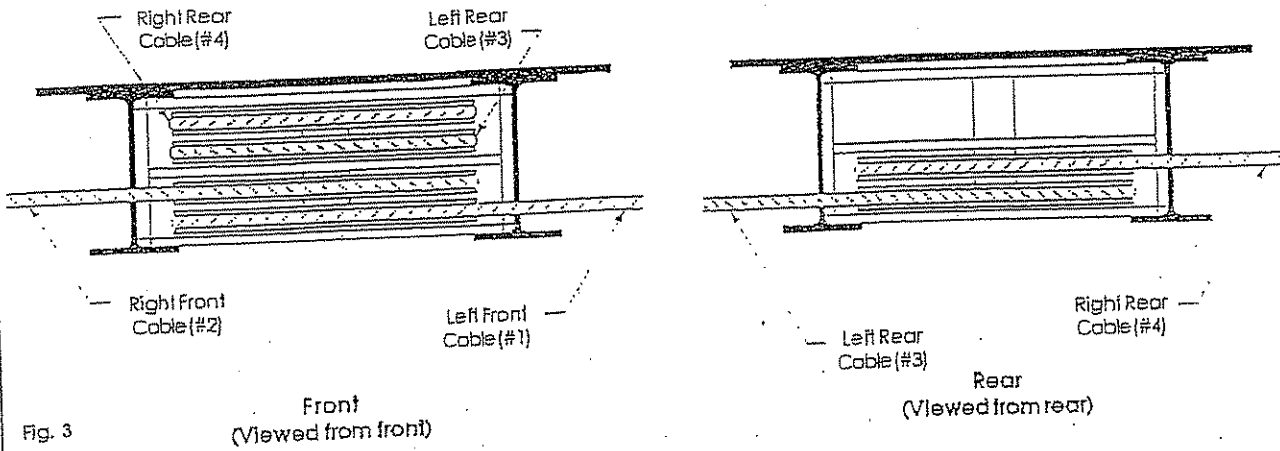


Fig. 3

E. Maximum shim thickness of 2" is possible by using shims and anchors provided with lift. If more shimming is required, consult factory for different shim package including longer anchor bolts.

4. Runway and Yoke Tube Assembly:

- A. Determine direction of approach in bay.
- B. Position left runway in bay with hydraulic cylinder hose connection to rear of bay. Cables and sheaves are pre-assembled in runway. Runway needs to be up off floor so shipping restraints can be removed from cable ends, air and hydraulic lines, and cylinder rod. Pull cables, air and fluid lines out for assembly. Make sure cables are in proper sheave grooves, Fig. 3.
- C. Position front and rear yokes at respective ends of runway, Fig. 1. Feed cable ends through yoke end, Fig. 4. Do not assemble sheaves in yoke ends at this time:

Feed Cable Ends Through Yoke End

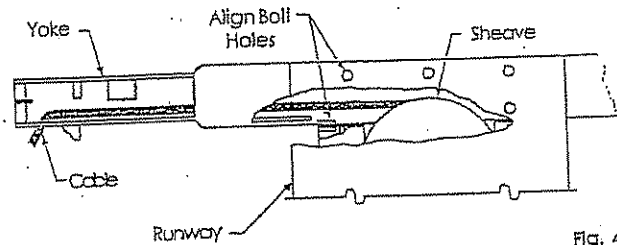


Fig. 4

- D. Lay right runway in place on yoke. Slide right runway toward outside of lift until holes in yoke and runway line up, Fig. 4. Hold runway in place and bolt on ramp/chock and wheel stops to runway using ten (10) 5/8" x 2 1/2" bolts and flange nuts. Square up yokes with runways using four (4) 3/4"-10NC x 2" lg. bolts and shims. Ramp/chocks go on rear, Fig. 5. Permanent wheel stops go on front of runway, Fig. 6. Repeat for left runway.

IMPORTANT Be sure cables are not crossed inside yoke

Ramp/Chock

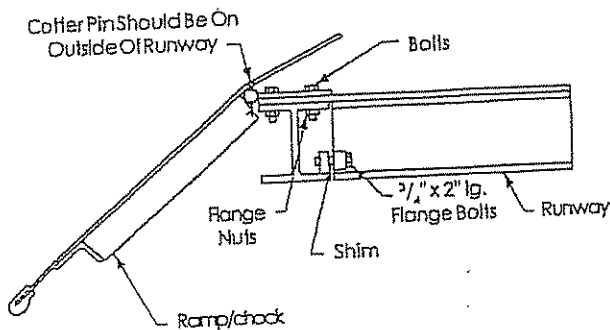


Fig. 5

Wheel Stop

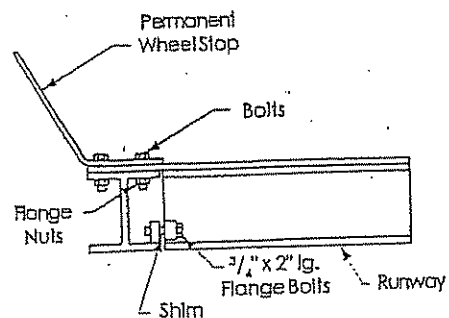


Fig. 6

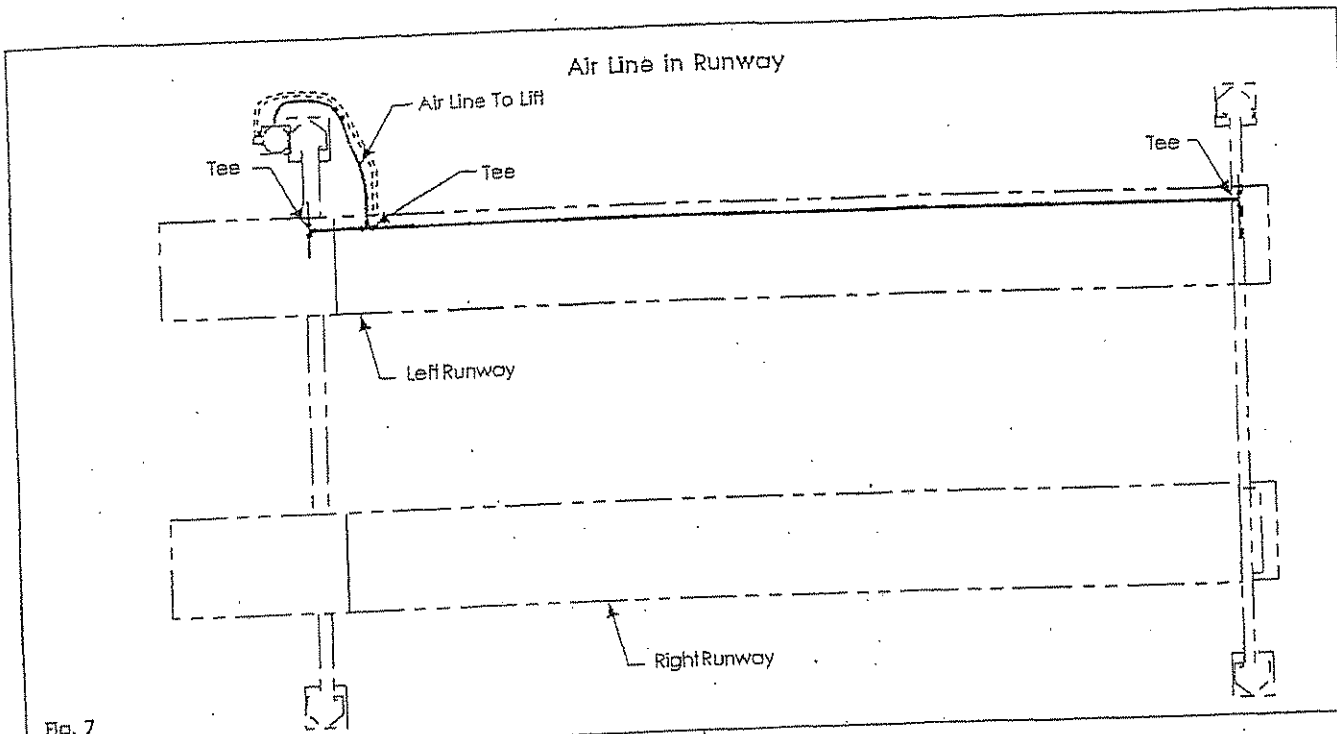


Fig. 7

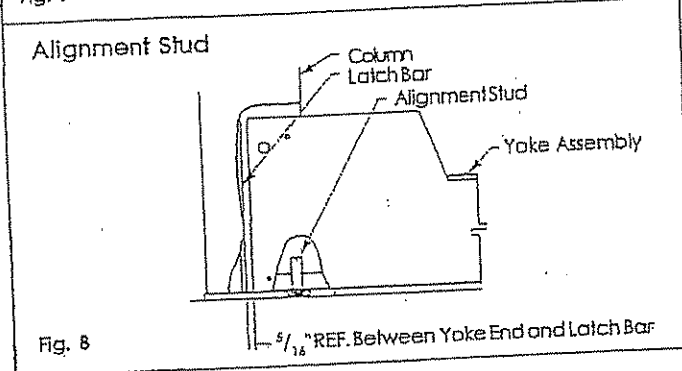


Fig. 8

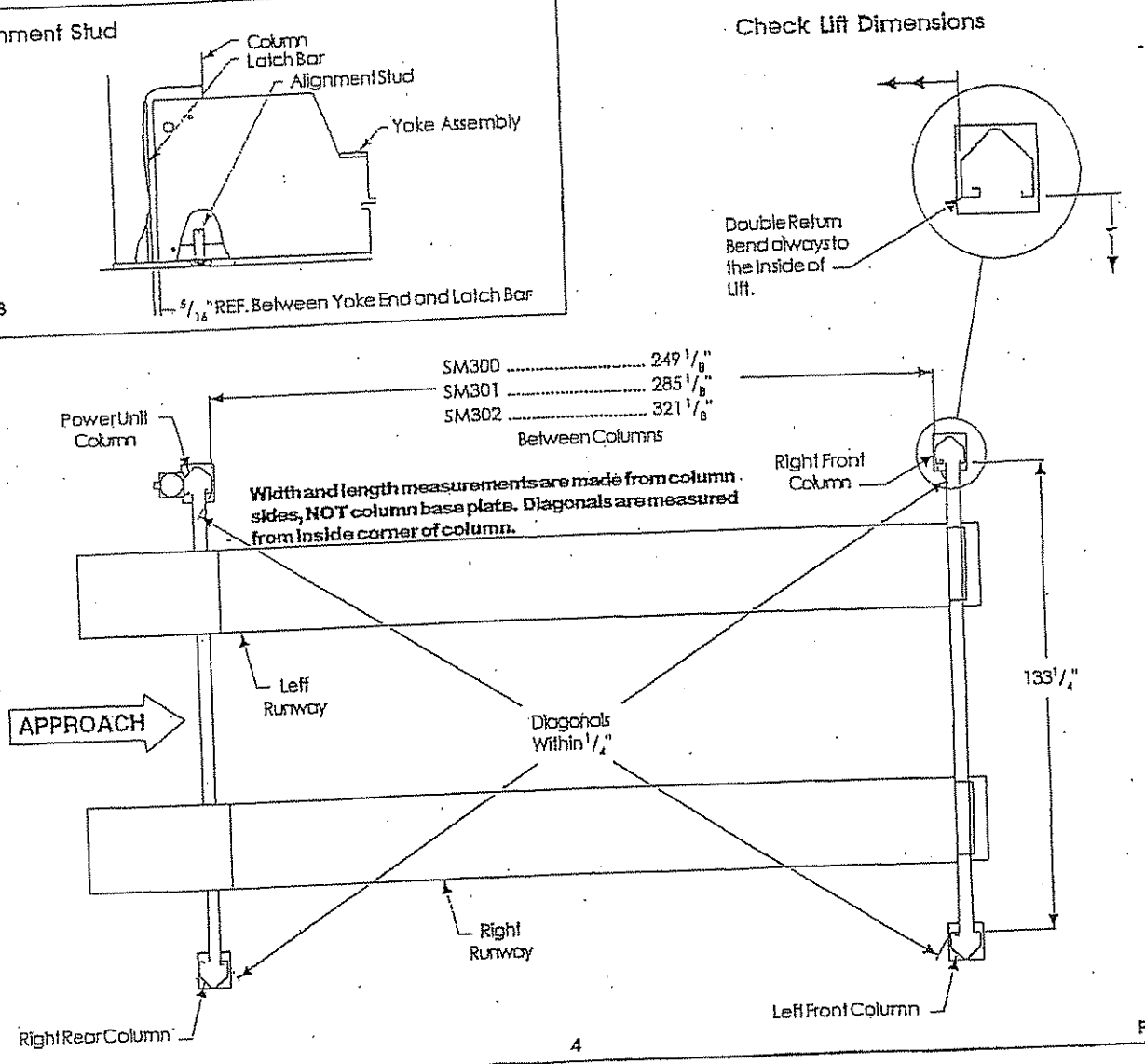


Fig. 9

G9

- E. Insert each end of the left runway's $\frac{1}{4}$ " air line into the Tee's connecting the locking latch air cylinders in each yoke, Fig. 7.
5. Columns: Place the power unit column at the left rear corner of the lift. The point where the hydraulic hose passes through side of left runway should be visible from this corner. Insert alignment stud through hole in yoke end and thread into base plate of column, Fig. 8. Repeat for other columns.

IMPORTANT The yoke/column alignment studs **MUST** be used for proper locking latch engagement, a gap of $\frac{5}{16}$ " max. to $\frac{1}{4}$ " min. must be maintained between column and yoke, Fig. 8.

Note: Columns are not interchangeable. They must be set at their respective corner of the lift. Column double return bend is always to inside of lift, Fig. 9.

Note: It may be necessary to remove Plastic Slider from Column Stop on yoke end, Fig. 10, before aligning yoke in column. After yoke is in column, reinstall Plastic Slider and secure with $\frac{1}{4}$ " tapping screw.

Plastic Slider

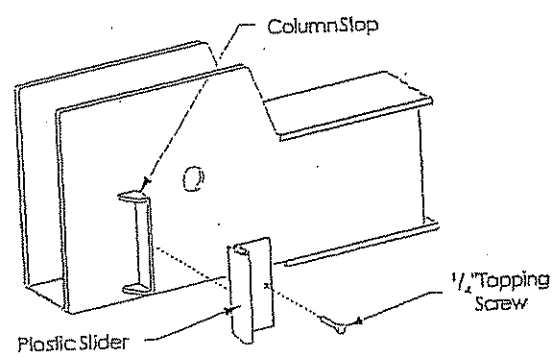


Fig. 10

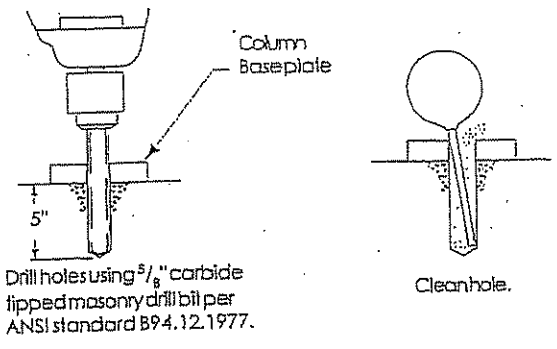
6. Anchoring:
Keep columns square to center line of lift. Check lift location in the bay, Fig. 1. Check dimensions side-to-side, front-to-rear, and diagonally. Diagonals must be equal to within $\frac{1}{4}$ ", Fig. 9.

For each column:

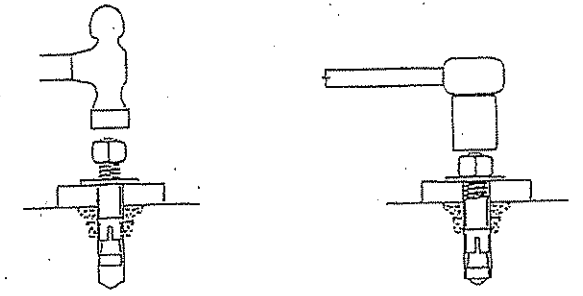
- A. Minimum recommended concrete specifications is 3,000 PSI, 5" thick and should sustain 2,000 lb. anchor load.
- B. Start with power unit column. Drill four (4) $\frac{5}{8}$ " diameter holes x 5" deep in concrete floor using base holes as guide, Fig. 11. Clean out hole. Repeat for other columns.
- C. Use shims provided to shim column base to plumb columns, first fore and aft then side to side. Use a 4' spirit level to check plumb of columns. Maximum shim thickness is 2", Fig. 12. If more shimming is required, consult factory for different shim package including longer anchor bolts.

- D. Insert base anchors, Fig. 11. Repeat for other columns. Tighten nuts. Recheck columns for plumb. Re-shim if necessary. Torque anchor bolts to 85 ft. lbs., Fig. 11. If anchor bolts do not hold when torqued to required amount, concrete must be replaced. Saw cut and remove 24" x 24" square area under each column base. Repour with reinforced # 3000 minimum concrete to depth of 6", keying new concrete under existing floor.

Anchor Installation



Drill holes using $\frac{5}{8}$ " carbide tipped masonry drill bit per ANSI standard B94.12.1977.



Slip on washer and run nut down, just past impact section of bolt. Drive anchor into hole until nut contacts base.

Tighten nut to 35-45 ft.-lbs.

Fig. 11

Shimming Column

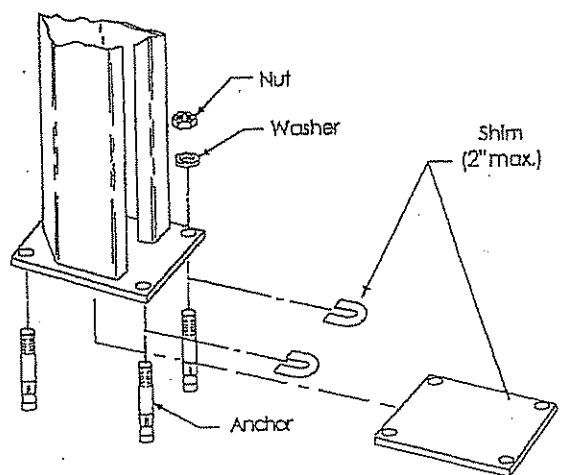


Fig. 12

G10

7. Cable Connection: Install yoke end sheaves, Fig. 13. Retain with sheave pin and $\frac{5}{16}$ " flat head machine screw. Attach each cable to column top plate with nut and jam nut. Install sheave covers on each yoke end, Fig. 13. Roping diagram shows a view of completed roping, Fig. 14.

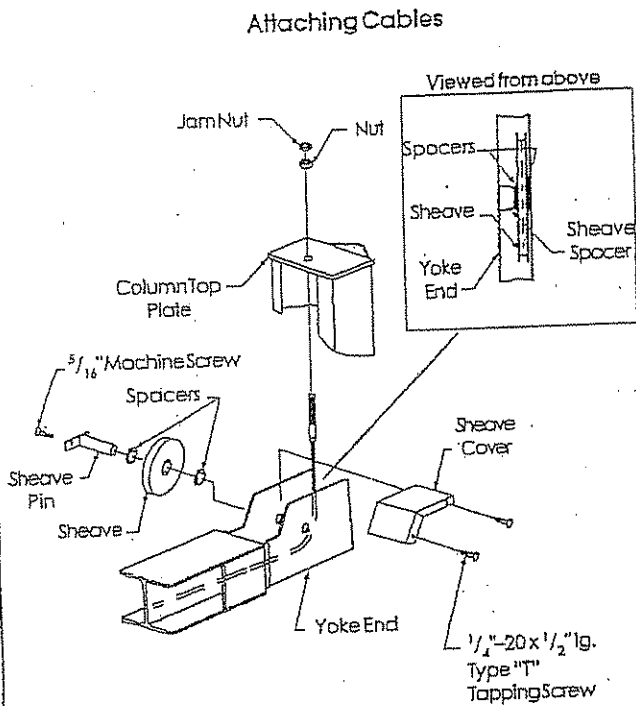


Fig. 13

8. Adjust Cable: Adjust all cables with lift fully lowered. Loosen cable jam nut. Tighten adjusting nut on cable stud on top of column until yoke end is raised $\frac{1}{4}$ ". Back off adjusting nut one (1) turn. Tighten jam nut. Do this for all four (4) cables. See Fig.13.

IMPORTANT Cables must fit in slack cable arm rollers, Fig. 15.

Cable in Slack Cable Arm Rollers

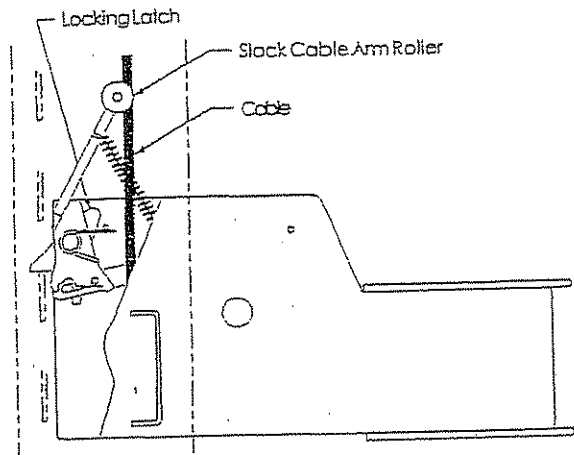


Fig. 15

9. Power Unit:
- Align Air Valve Bracket with holes in right side of column bracket, Fig. 16.
 - Put four (4) $\frac{5}{16}$ " x $\frac{3}{4}$ " lg. hex. bolts through holes in column bracket, using push-nuts to hold in place.
 - Mount power unit, with motor up, to the column bracket and install four (4) $\frac{5}{16}$ " lock washers and nuts.
 - Run hydraulic hose through slot in side of left hand runway and attach to output port on power unit, Fig. 17. **DO NOT** use Teflon tape.
 - Install enclosed capacity label on power unit, Fig. 18.

10. Electrical: Have a certified electrician run 230 volt single phase 60 Hz. power supply to motor, Fig. 19. Size wire for 25 amp. circuit. See Motor Operating Data table on opposite page.

Roping Diagram

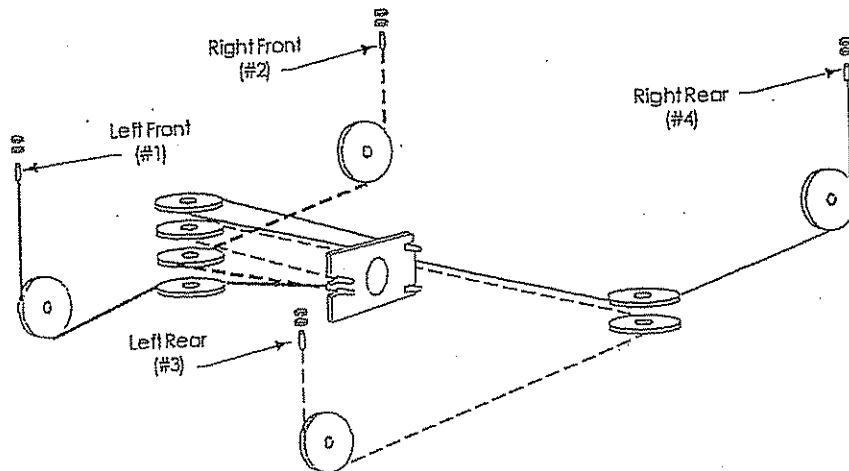


Fig. 14

Mount Power Unit

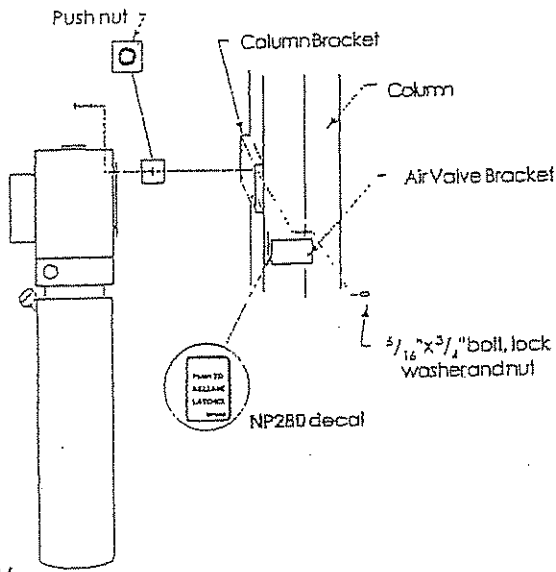


Fig. 16

Note: Motors utilizing 3 phase current available. Refer to wiring drawing in 3 phase power unit carton.

IMPORTANT

Use separate circuit for each power unit. Protect each circuit with time delay fuse or circuit breaker: single phase -25 amp.; 3 phase (230v) -15 amp.; 3 phase (460v) -8.75 amp. Wiring must comply with local electrical codes.

Note: Motor **CAN NOT** be run on 50Hz. line without a physical change in the motor.

Motor Operating Data Table

MOTOR OPERATING DATA - SINGLE PHASE		
LINE VOLTAGE OF POWER CO.	60 HZ	RUNNING MOTOR VOLTAGE RANGE
208V - 230V	60 HZ	197V - 253V

MOTOR OPERATING DATA - THREE PHASE		
LINE VOLTAGE OF POWER CO.	60 HZ	RUNNING MOTOR VOLTAGE RANGE
208V - 230V	60 HZ	197V - 253V
460V	60 HZ	414V - 506V

Hydraulic Hose

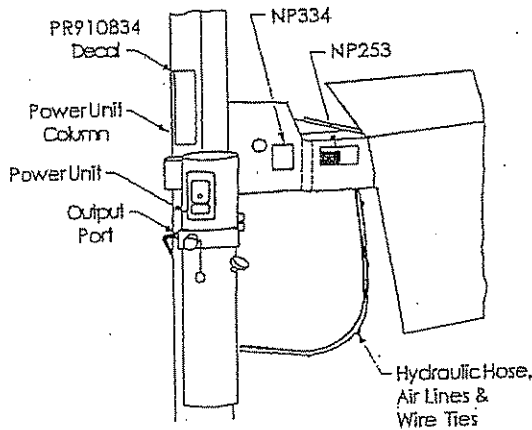
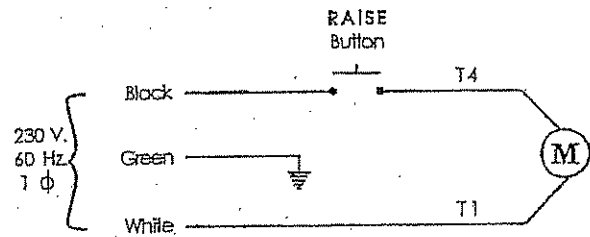


Fig. 17

WARNING

Risk of explosion. This equipment has internal arcing or sparking parts which should not be exposed to flammable vapors. It should not be located in a recessed area or below floor level.

Wiring Diagram



Install Capacity Label

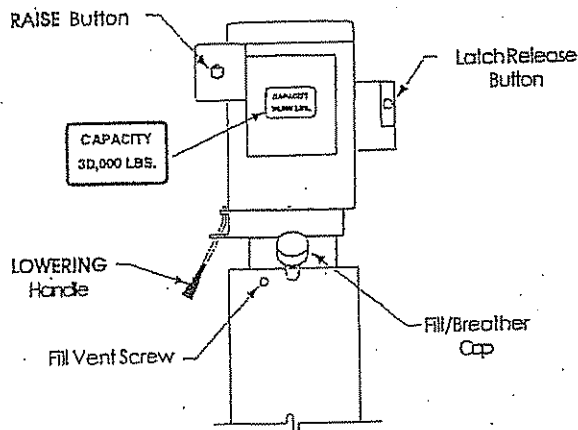


Fig. 18

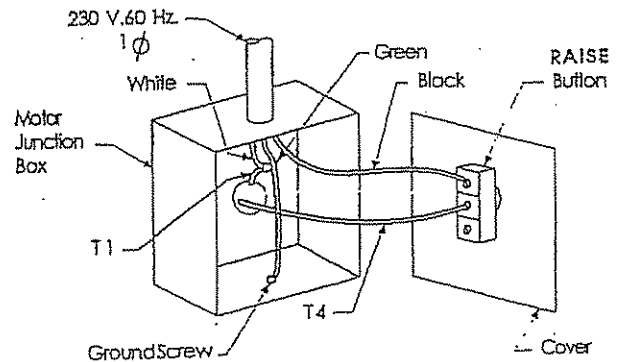


Fig. 19

11. Fluid Filling:

CAUTION If fill/breather cap, Fig. 18, is lost or broken, order replacement. DO NOT substitute with a solid plug.

- A. System capacity is twenty-two (22) quarts. Use Dexron III ATF. Remove fill/breather cap and fill vent screw, Fig. 18.
- B. Pour in twenty-two (22) quarts of fluid.
- C. Replace fill/breather cap and vent screw.
- D. Start motor and raise lift to full rise. Lower the lift onto the locking latches.
- E. Remove alignment studs from all four (4) column bases, Fig. 8.

IMPORTANT Lift must be fully lowered before changing or adding hydraulic fluid.

12. Connecting Air Supply:

Note: Locking latches require 100 p.s.i. min to 120 p.s.i. max. air pressure

IMPORTANT Filter/regulator/lubricator is recommended between air source and lift. The absence of a filter will void all warranties on pneumatic components.

- A. Connect air valve to Reducing Tee, Fig. 22. Cut provided 1/4" air line tubing with sharp blade to length as required. Tubing must be cut square with no burrs.

Note: To assemble air line tubing into fitting, use firm, manual pressure to push tubing into fitting until it bottoms, Fig. 21. If removal of the air line tubing from the fitting is ever required, hold Push Sleeve in (against fitting) and, at the same time, pull out on tubing.

IMPORTANT Tubing must bottom out in valve or fitting (approx. 3/4") or it will leak.

Seating Air Line Tubing

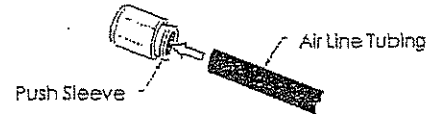


Fig. 21

- B. Use Housing Collar to secure the Air Valve to the Air Valve Bracket, Fig. 22.
- C. Attach enclosed NP280 decal ("PUSH TO RELEASE LATCHES") below button on air valve bracket, Fig. 16.
- D. Run 1/4" air line from air valve to the slot in the fixed runway. Cut airline to length required and attach to Tee in runway, Fig. 20.
- E. Connect Reducing Tee to female connector, Fig. 22, using 3/8" air line tubing. Attach filter to female connector and connect into existing facility air supply. Make sure plastic plug is in bottom opening of Reducing Tee.
- F. Check for air leaks by depressing air valve. Repair as required.
- G. Use provided cable ties to tie air line to hydraulic hose between power unit and lift.
- H. Actuate air valve and check latch operation on all four (4) corners. When releasing locks, the locking latch should pull back flush with yoke end to clear the latch bar located in all four (4) columns, Fig. 23. Adjust, if required, by removing cotter pin and washer holding Slotted Bracket on locking latch and screwing Slotted Bracket in to move it toward the air cylinder. After adjustment, replace washer and secure Slotted Bracket with a NEW cotter pin. Tighten jam nut. Apply Loctite® to jam nut to hold in place.
- I. Use cable ties provided to tie 3/8" air supply to electrical supply conduit at approximately 2'-0" intervals.

Air Line in Lift

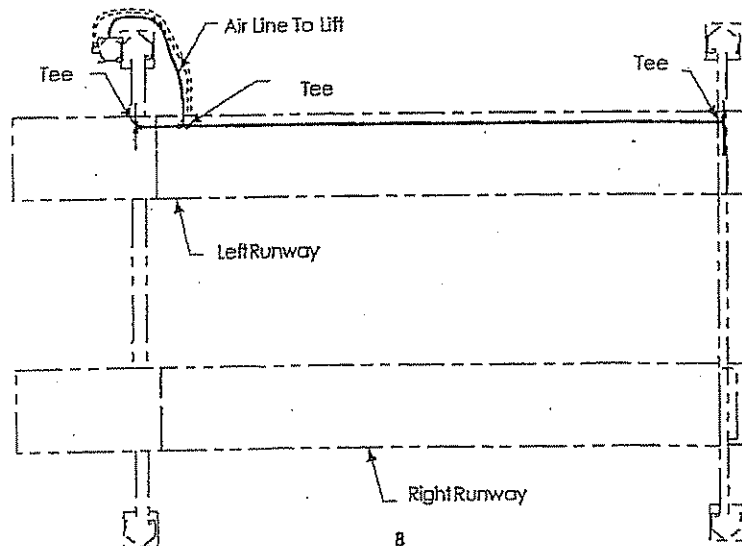


Fig. 20

Connect Air Supply to Air Valve

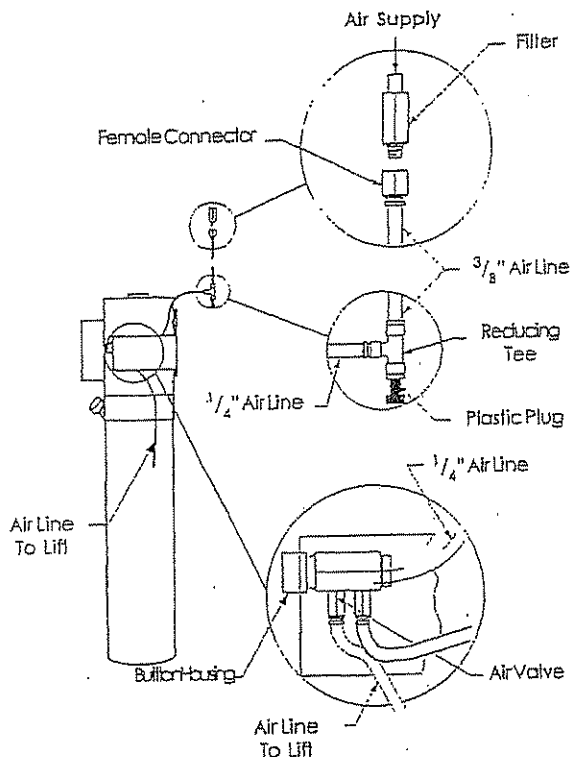


Fig. 22

Locking Latch Adjustment

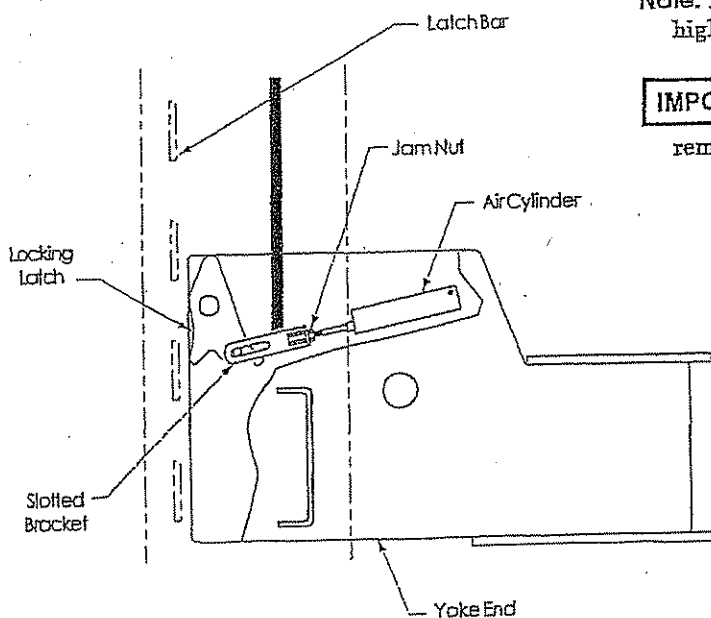


Fig. 23

13. Bleeding: Raise and lower lift six (6) times. The cylinder is self-bleeding. After bleeding system, replace fill vent screw.

Note: Some fluid may be exhausted from the cylinder breather vent during bleeding of the system.

14. Pressure Test: To pressure test, run lift to full rise and run motor for approximately five (5) seconds. Stop and check all hose connections. Tighten or reseal if required. Lower lift. Check fluid level in reservoir. Fill as required per instructions in Step 11.

15. Final Adjustments:

- A. Load vehicle, such as a 3/4 ton pickup or van, onto lift.
- B. Raise lift as high as it will travel (full height). As the lift is raised, note in which rear column locking latch clicks into latch bar slot first.
- C. Adjust cable in other rear column so that its locking latch clicks into slot at same time as the first column.

CAUTION There must be a minimum of two (2) threads above the nut after adjustment.

- D. Raise lift again. This time listening for the first front latch to click into place. Adjust this column's cable so that its latch now clicks simultaneously with the rear columns.
- E. Do the same for the remaining front column.
- F. Tighten jam nuts and lower lift.

Note: latches may not click in at the same time when vehicle is being raised. They should be close. Be sure all four (4) corners have passed the locking latch bar slot before lowering lift on locking latches.

Note: Replace any missing hardware with Grade 5 or higher.

IMPORTANT Cotter pins are usually good for one time use only. Replace any cotter pin, if removed, with a new cotter pin.

OPERATING INSTRUCTIONS

WARNING To avoid personal injury and/or property damage, permit only trained personnel to operate lift. After reviewing these instructions, get familiar with lift controls by running the lift through a few cycles before loading vehicle on lift. Observe and heed SAFETY and WARNING labels on the lift.

Loading:

1. Lift must be fully lowered and no one in service bay while the vehicle is brought on lift.
2. Drive vehicle onto lift and center it on runways. At all times, be sure rear wheels are forward of the ramp/chocks and the ramp/chocks will clear tires when the lift is raised, Fig. 25. Driver and passengers must exit before raising.
3. Place triangular wheel chocks on each side of one rear tire, Fig. 25.

Raise Lift:

1. Push the RAISE button on the power unit. Release button at desired height, Fig. 26.
2. Lower onto locks.

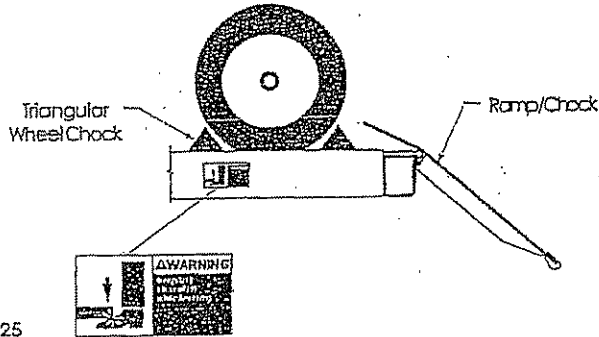


Fig. 25

Before Lowering Lift:

Be sure no one is in the lift area and that all tools, tool trays, etc. have been removed from under the lift.

WARNING The runways, ramps and connecting yokes at each end of lift are designed to rest on the floor when fully lowered. Observe pinch point warning decals.

To Lower Lift:

Note: If button on air valve is released, the latches will automatically reset to the engaged position.

1. If lift has been resting on the locking latches, lift must be raised high enough for all four latches to clear the latch bar slots inside the columns.
2. Push the latch release button on power unit, Fig. 26, to disengage all four (4) locking latches.
3. Keeping the latch release button depressed, push lowering valve handle on the power unit to lower lift, Fig. 26. Lowering speed can be controlled by the force applied to the lowering valve handle.
4. Observe lift and vehicle to be sure lift is level while being lowered. If not, STOP. Repeat Steps 1 through 4.
5. Fully lower lift, remove the triangular wheel chocks and check to be sure area is clear before removing vehicle from lift, Fig. 25.
6. If your lift is not operating properly, DO NOT use until adjustments or repairs have been made by qualified lift service personnel.

CAUTION Keep hands clear of yoke ends while the lift is being raised or lowered, Fig. 27.

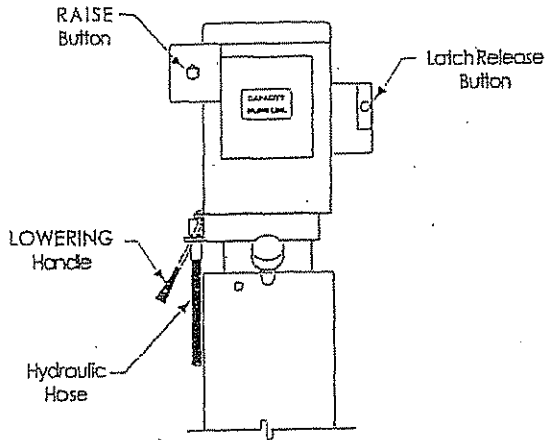


Fig. 26

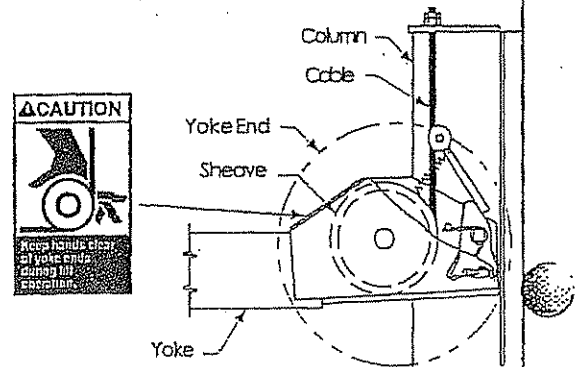


Fig. 27

MAINTENANCE INSTRUCTIONS

WARNING If you are not completely familiar with automotive lift maintenance procedures, STOP: Contact factory for instructions.

To Avoid Personal Injury, permit only qualified lift service personnel to perform maintenance on this equipment.

- Use only genuine Rotary Replacement Parts for repairs.
- Always: Raise lift when cleaning floor area.
- After First 2 Weeks of Usage: Check cable adjustment per instructions on page 6. Continue to check cables per maintenance schedule below.
- After First 2 Weeks of Usage: Check torque on the column anchor bolts per instructions on page 5. Continue to check anchor bolts per maintenance schedule that follows.
- Daily: Check all column, lift/runway attaching bolts for tightness.
- Daily: Check cables and sheaves for wear. Replace worn parts as required.
- Daily: Inspect front wheel stops and ramp/chocks for damage or excessive wear. Replace as required.
- Daily: Check locking latch operation and reset. Adjust per instructions or repair if required.

WARNING If slack cable arm is bent, replace immediately. Refer to illustration below.

- Monthly: Check torque on the column anchor bolts per specifications - see page 5.
- Monthly: Check cable. Adjust per instructions on page 6.
- Semi-Annually: Check fluid level of lift power unit and refill if required, page 8, step 11. If fluid is required, inspect all fittings, hoses, and seals. Repair as required.

IMPORTANT Cable adjustment should be checked by a Rotary Authorized Installer after the first 50 loaded lift cycles and after 300 loaded lift cycles.

Replace Bent Slack Cable Arm

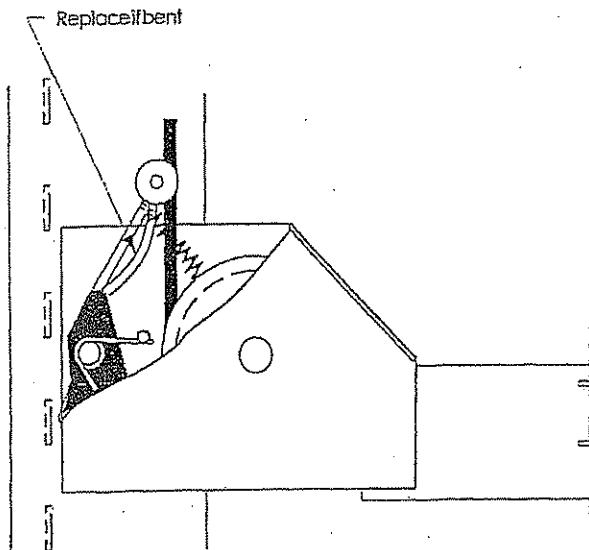


Fig. 28

TROUBLESHOOTING

TROUBLE	CAUSE	REMEDY
Motor does not run.	<ol style="list-style-type: none"> 1. Check fuse or circuit breaker. 2. Check for correct voltage to motor. 3. Inspect all wiring connections. 4. Switch burned out. 5. Motor windings burned out. 	<ol style="list-style-type: none"> 1. Replace blown fuse or reset circuit breaker. 2. Supply correct voltage to motor. 3. Repair and insulate all connections. 4. Replace switch. 5. Replace motor.
Motor runs but will not raise lift.	<ol style="list-style-type: none"> 1. Open lowering valve. 2. Pump sucking air. 3. Suction stub off pump. 4. Low fluid level. 	<ol style="list-style-type: none"> 1. Repair or replace lowering valve. 2. Tighten all suction line fittings. 3. Replace suction stub. 4. Fill tank with Dexron III ATF.
Motor runs—raises unloaded lift but will not raise vehicle.	<ol style="list-style-type: none"> 1. Motor running on low voltage. 2. Trash in lowering valve. 3. Improper relief valve adjustment. 4. Overloading lift. 	<ol style="list-style-type: none"> 1. Supply correct voltage to motor. 2. Clean lowering valve. 3. Replace relief valve cartridge. 4. Check vehicle weight and/or balance vehicle weight on lifts.
Lift slowly settles down.	<ol style="list-style-type: none"> 1. Trash in check valve seat. 2. Trash in lowering valve seat. 3. External fluid leaks. 	<ol style="list-style-type: none"> 1. Clean check valve. 2. Clean lowering valve. 3. Repair external leaks.
Slow lifting speed or fluid blowing out filler breather cap.	<ol style="list-style-type: none"> 1. Air mixed with fluid. 2. Air mixed with fluid suction. 3. Fluid return tube loose. 	<ol style="list-style-type: none"> 1. Change fluid to Dexron III ATF. 2. Tighten all suction line fittings. 3. Reinstall fluid return tube.
Lift going up unlevel.	<ol style="list-style-type: none"> 1. Cables out of adjustment. 2. Lift installed on unlevel floor. 	<ol style="list-style-type: none"> 1. Adjust slack out of cable. 2. Shim lift to level columns (Not to exceed 2"). <p style="margin-top: 10px;">Note: Maximum shim thickness of 2" is possible by using shim kit. Contact your Product Service Consultant for ordering information.</p>
Lift stops short of full rise or chatters.	<ol style="list-style-type: none"> 1. Low on fluid. 	<ol style="list-style-type: none"> 1. Check fluid level and bleed cylinder page 8, step 11. If fluid is required inspect all fittings, hoses, and seals. Repair as required.
Anchors will not stay tight.	<ol style="list-style-type: none"> 1. Holes drilled oversize. 2. Concrete floor thickness or holding strength not sufficient. 	<ol style="list-style-type: none"> 1. Use a fast setting cement to pour into oversize holes and reset anchors or relocate lift using a new bit to drill holes. 2. Break out old concrete and repour new pads for lift. See page 5, step 6.
Lift will not lower.	<ol style="list-style-type: none"> 1. Insufficient air supply to lift. 2. Latches out of adjustment. 	<ol style="list-style-type: none"> 1. Check air pressure. Air supply to lift should be between: Min. 100 p.s.i. and Max. 120 p.s.i. Check all lines and fittings for leaks or crimps. Repair or replace as required. 2. Check latches per page 8, step 12(H).

G17

NOTES

G18

ROTARY IDENTIFICATION

At Completion of Installation, Place ROTARY Decal on Lift as Shown Below

Decal Location: Locate Rotary Decal on approach side of right rear column. Clean area where decal is to be placed. Remove backing from decal. Position and apply on column and press flat.

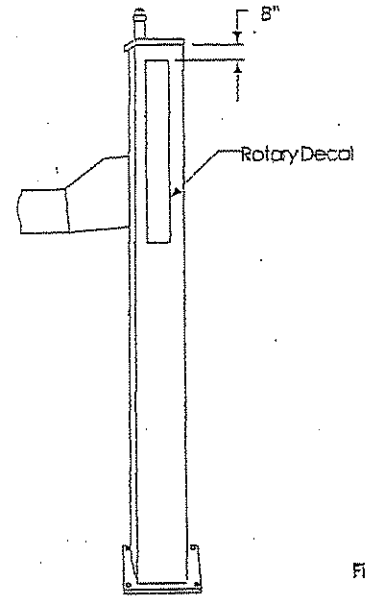


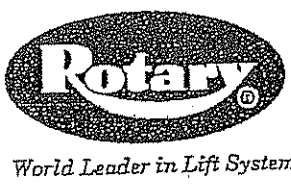
Fig. 29

Mr. Installer: Please return this booklet to literature package and give to lift owner/operator.

Trained Operators and Regular Maintenance Ensures Satisfactory Performance of Your Rotary Lift.

Contact Your Nearest Authorized Rotary Parts Distributor for Genuine Rotary Replacement Parts. See Literature Package for Parts Breakdown.

This equipment Complies with American National Standards E-153.1



World Headquarters:
ROTARY LIFT
A DOVER INDUSTRIES
COMPANY
2700 Lorler Drive
Madison, IN 47250 USA
Phone toll-free: 1-800-445-5438
1-(812)273-1422
FAX toll-free: 1-800-822-6502
1-(812)273-6502
<http://www.rotary-llt.com>

For Canada:
DOVER CORP. CANADA,
INC.
ROTARY LIFT DIVISION
130 Bridgeland Avenue, Unit 210
Toronto, Ontario
Canada M6A 1Z4
1-(416)256-4100
Fax: 1-(416)256-3924

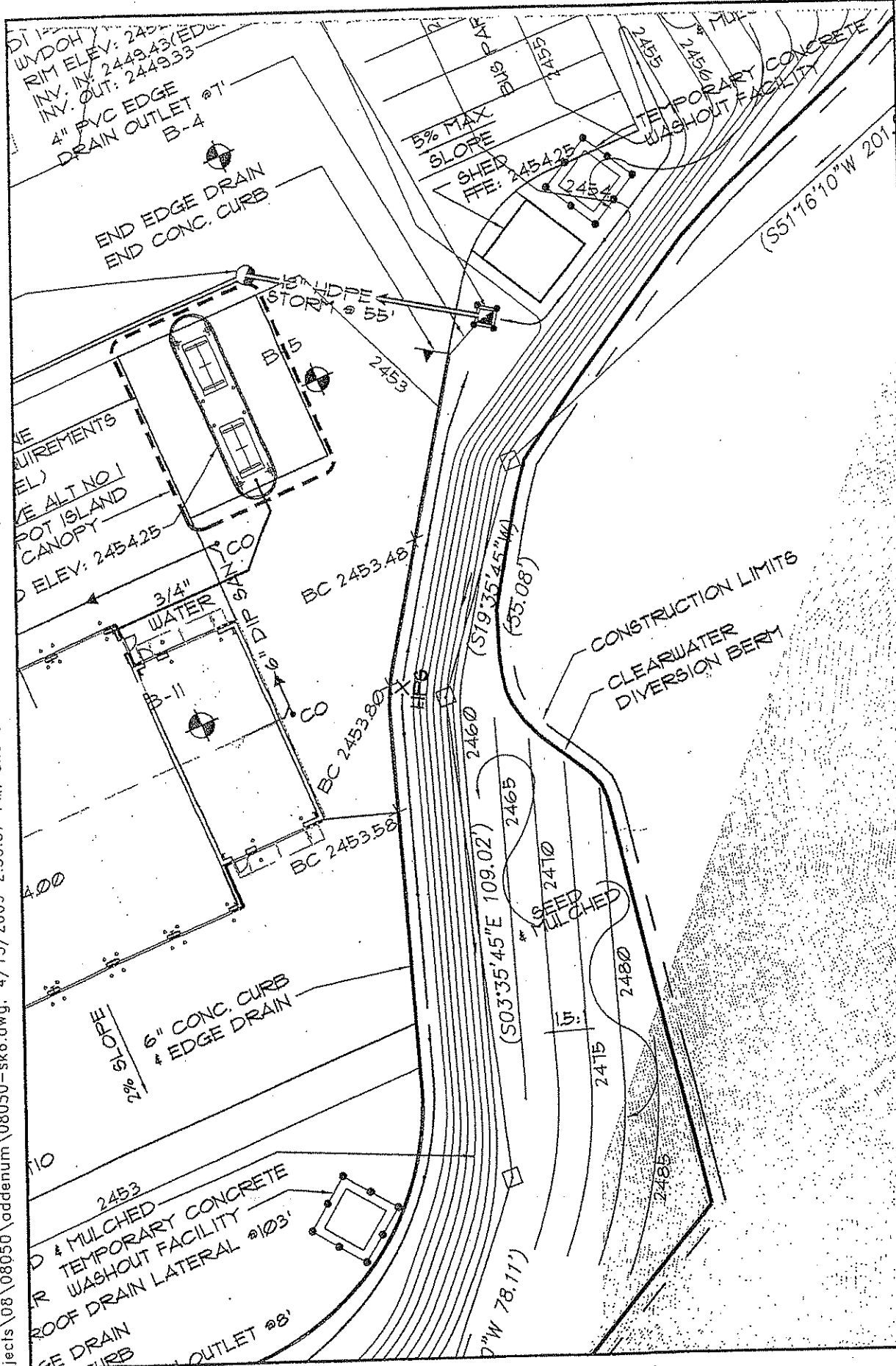
For United Kingdom &
Republic of Ireland:
ROTARY LIFT LIMITED
Madison House
2 Park Road
Dartford, Kent DA1 1SL
+44 (0) 1322 223323
Fax: +44 (0) 1322 222454

Rows	Columns	Case		Char. Height Per Line	4 Char's Per Line	Max Current (Amps)	Weight	Rows	Columns	Case		Char. Height Per Line	4 Char's Per Line	Max Current (Amps)	Weight
		H" x W"	H" x W"							H" x W"	H" x W"				
16	96	11" x 5'6"	11"/1	16/2	2.76	69.3 lbs.	64	96	3'8" x 5'6"	21"/1	16/8	11.06	164.1 lbs.		
16	128	11" x 7'4"	7"/1	21/2	3.69	93.2 lbs.	64	128	3'8" x 7'4"	14"/3	21/8	14.75	194.5 lbs.		
16	160	11" x 9'2"	4.9"/2	26/2	4.61	109 lbs.	64	160	3'8" x 9'2"	10.5"/4	26/8	18.43	246 lbs.		
16	192	11" x 11'0"	3.5"/2	32/2	5.53	124.7 lbs.	64	192	3'8" x 11'0"	7"/5	32/8	22.12	498 lbs.		
32	96	1'10" x 5'6"	22.4"/1	16/4	5.53	91.7 lbs.	80	96	4'7" x 5'6"	4.9"/10	16/10	13.82	201.8 lbs.		
32	128	1'10" x 7'4"	14"/1	21/4	7.37	110.5 lbs.	80	128	4'7" x 7'4"	3.5"/10	21/10	18.43	248.6 lbs.		
32	160	1'10" x 9'2"	10.5"/2	26/4	9.22	140 lbs.	80	160	4'7" x 9'2"	7"/7	26/10	23.04	513 lbs.		
32	192	1'10" x 11'0"	7"/3	32/4	11.06	158.7 lbs.	80	192	4'7" x 11'0"	4.9"/10	32/10	27.65	586 lbs.		
48	96	2'9" x 5'6"	4.9"/4	16/6	8.29	137.9 lbs.	96	256	5'6" x 14'8"	3.5"/13	42/12	17/230V	1017 lbs.		
48	128	2'9" x 7'4"	3.5"/5	21/6	11.06	173.2 lbs.	NOTE: Many more sizes are available, up to 5'7" x 15' (96 rows x 256 columns). Approximate dimensions, power and weight - call your Adaptive dealer for architectural drawings. Due to continuing product innovations, all specifications are subject to change without notice.								
48	160	2'9" x 9'2"	21"/1	26/6	13.82	211.1 lbs.									
48	192	2'9" x 11'0"	14"/2	32/6	16.59	238.2 lbs.									
			10.5"/3												

- Pixel (LED) Color:** Red or amber, 256 shades (grayscale)
- Pixel Pitch:** 17.5mm / .70", single LED
- Pixel Luminance:** Viewable in direct sunlight
- Viewability:** 90° or 125°
- Character Set:** International character set, block (sans serif), decorative (serif), upper/lower case, slim, wide, double wide, and shadow
- Message Capacity:** 95 different messages can be stored and scheduled to be displayed according to time and date.
- Message Presentation:**
 - 27 unique presentation styles
 - Automatic centering in any mode
 - User programmable logos and graphics
 - Programmable hold times up to 6 minutes
 - Calendar scheduling
- User Animations:** BMP and GIF file formats
- Temperature Accuracy:** ±1° F Typical (optional temperature probe)
- Clock/Date:** Time in 12/24-hour formats, date in multiple formats
- Battery:** Lithium battery for time/date/message retention during power interruptions for at least 1 year
- Serial Communication Interface:** Standard RS232 and RS485
Options: On site wireless, telephone or fiberoptic modem - factory tested, configured and installed inside the AlphaEclipse case.

- Special Features:**
 - Sealed enclosure design prevents external contamination penetration and filter maintenance
 - Industry standard 64MB compact flash memory for message storage
 - Comprehensive remote diagnostic program
 - External temperature probe (optional)
 - Internal AC power switch for servicing
 - Light colored case, designed to limit solar heat rise internally
 - Automatic thermal protection
 - Auto night time dimming (8 levels)
 - Communications:** Alpha® Communication Protocol
 - Power:** 115/230 VAC ± 10% - 50/60 Hz single phase
 - Case Material:** UL50 Type 3R, IP44 aluminum cabinet
 - Limited Warranty:** Five-year limited factory depot parts warranty
 - Agency Approvals:** FCC Part 15, Class A, ANSI/UL 60950, CAN/CSA C22.2 60950-1-03, C-ETL-US listing mark and CE Marking
 - Operating Temperature:** -40° to 122°F / -40° to 50°C
 - Mounting:** Steel mounting angle, design facilitates welding, bolting, or riveting techniques.
 - Module/Case Dimensions:**
 - Front access to all components
 - Cantilever hinged door for ease of service
 - 10" deep including steel mounting brackets
- *NOTE: Many more sizes available to 5'7" x 15' - consult your Adaptive dealer.

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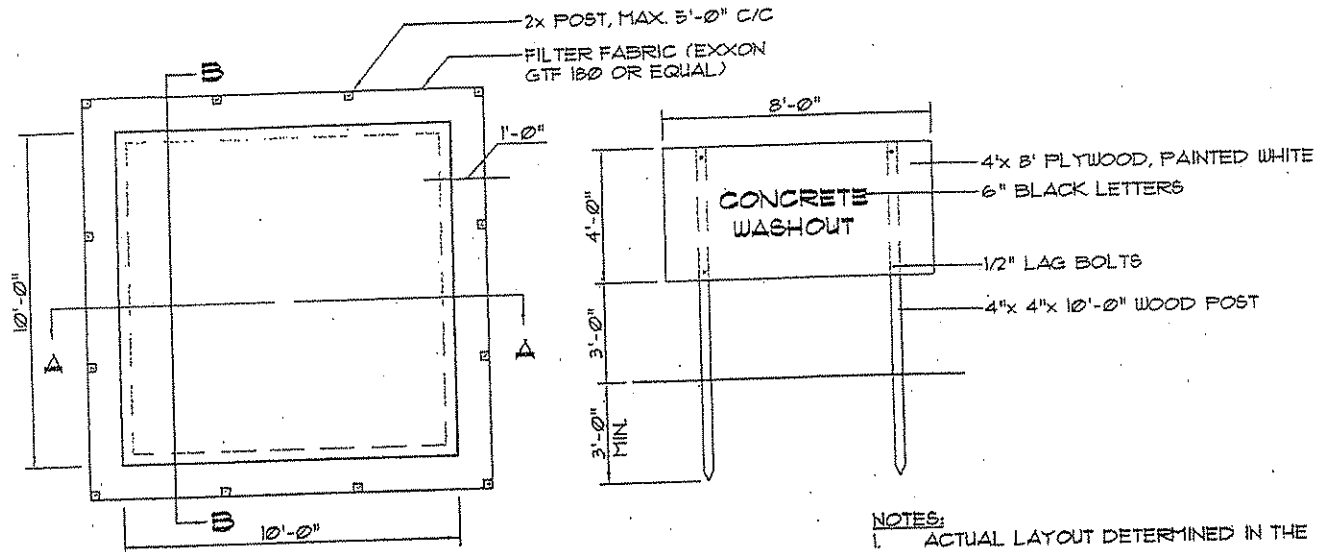
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SCALE:	AS NOTED
DATE:	APRIL 2009
DESIGNED BY:	DND
CHECKED BY:	MCD
CHECKED BY:	CONCRETE
SHEET NO.:	SK6
REVISION:	

CONCRETE WASHOUT LOCATIONS

PROJECT INFORMATION
 West Virginia Department of Transportation
 Bluefield Area Transit
 Administration and Maintenance Facility
 Bluefield, West Virginia

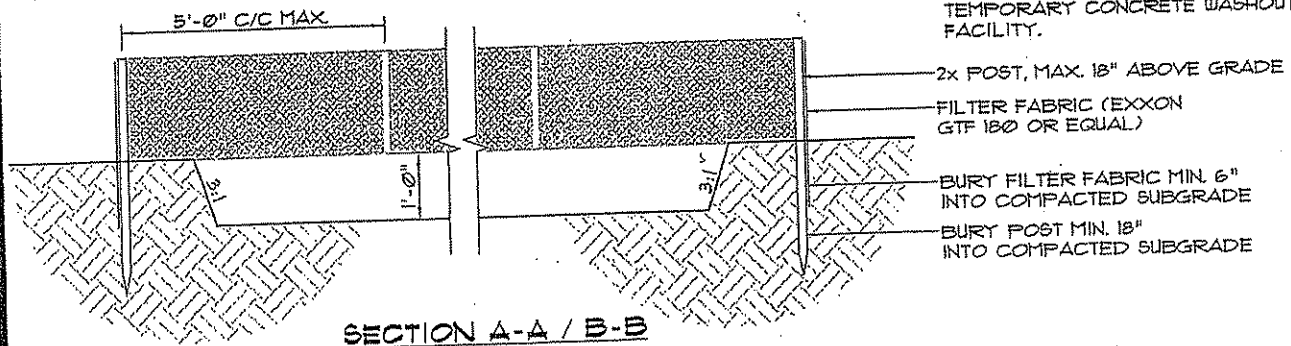
ST. ALBANS, WV
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BUCKHANNON, WV
 (304) 472-9914
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 (304) 286-1223
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 AIRPORT PLANNING / DEVELOPMENT
 ARCHITECTURE / INTERIOR DESIGN
 CIVIL ENGINEERING / SITE DEVELOPMENT
 ENVIRONMENTAL ENGINEERING
 LANDSCAPE ARCHITECTURE
 SURVEYING



NOTES:

1. ACTUAL LAYOUT DETERMINED IN THE FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 5'-0" OF THE TEMPORARY CONCRETE WASHOUT FACILITY.



SECTION A-A / B-B

CONCRETE WASHOUT DETAIL

SCALE: NTS

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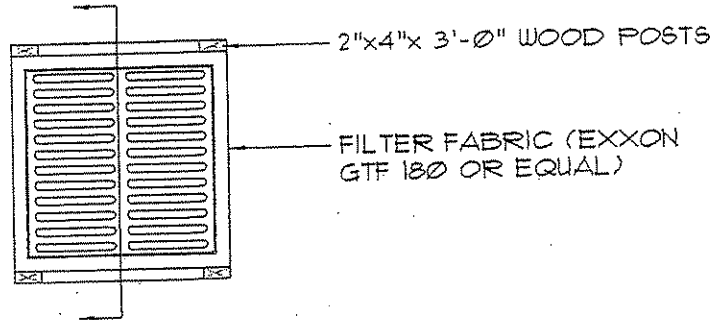
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 (304) 472-8914
 Martinsburg, WV
 (304) 260-1222

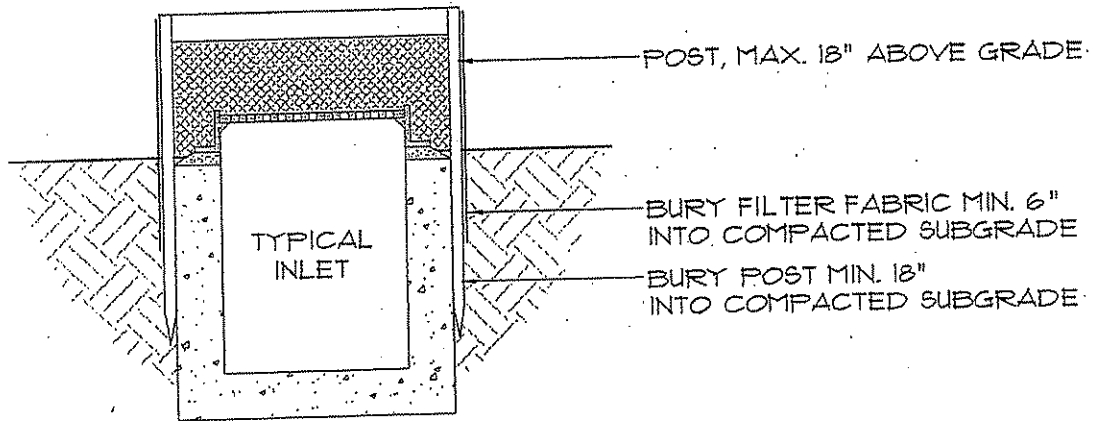
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CHECKED BY:	MGD
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REVISION	



PLAN



SECTION

INLET INFILTRATION PROTECTION

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

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 Bluefield, West Virginia

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