



**CITY OF LA CENTER**  
**PUBLIC WORKS DEPARTMENT**  
210 East 4th Street  
La Center, WA 98629  
Ph: 360-263-7665 Fax: 360-263-7666

**REQUEST FOR BIDS: PARKING LOT LOCATED AT E 6<sup>TH</sup> STREET AND E. BIRCH AVENUE:  
SIDEWALK, DRIVEWAY APRONS & PAD FOR ADA ACCESS TO BUS**

The City of La Center, Washington is accepting bids until 2:00 PM on Thursday, October 3, 2024, via email at [tcoleman@ci.lacenter.wa.us](mailto:tcoleman@ci.lacenter.wa.us), Community Development & Public Works Director, or they can be hand delivered to 210 East 4<sup>th</sup> Street, La Center, Washington, 98629. An email receipt will be sent to those submitting via email. If you do not receive an email stating "received", your bid has not been received. The bid is for installing concrete for: three (3) driveway aprons, a bus stop pad, an ADA clear space pad and an ADA sidewalk access in parking lot. It also includes installing a drainpipe. State of Washington Prevailing Wage Laws will apply to any contract between the contracting company and the City of La Center.

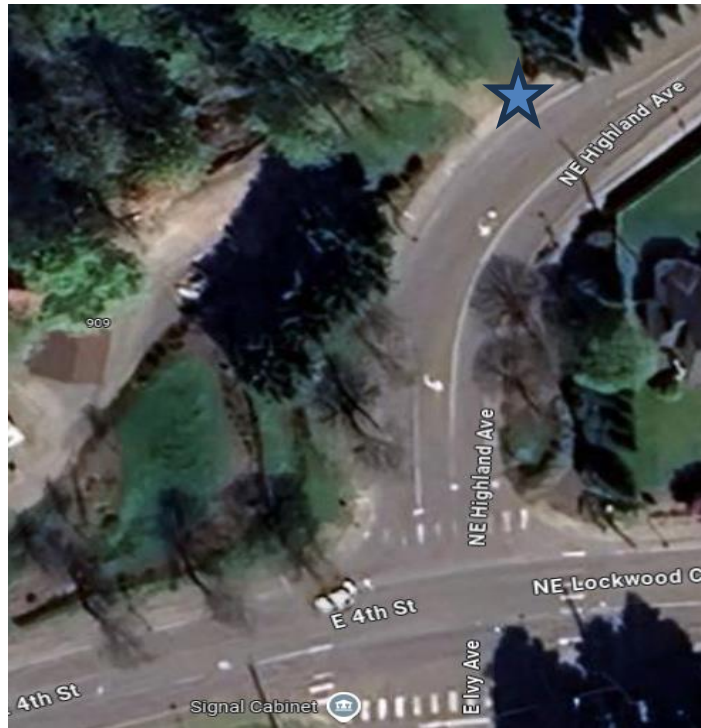
**Work:** See images below and attached drawings. It is the responsibility of the contractor to verify field measurements and quantities.

**PARKING LOT CORNER OF E BIRCH AVE AND E 6<sup>TH</sup> STREET**



Installing two driveway aprons, installing bus stop pad, ADA access pad, sidewalk with ADA access to bus, curb and gutter, and storm pipe.

### DRIVEWAY APRON OFF NE HIGHLAND AVE



Install a driveway apron off NE Highland Ave.

**Sites:** The contractor is fully responsible for verifying the measurements and quantities of the scoped work. The Bus Stop Sign, Garbage Can and Structure will be installed by others. There is a **MANDATORY site visit to bid this project, a sign in sheet will be provided.** There are two optional dates and times: September 19<sup>th</sup> at 4:30 PM or September 24<sup>th</sup> at 9 AM. Please send all questions to [tcoleman@ci.lacenter.wa.us](mailto:tcoleman@ci.lacenter.wa.us). We will provide an email response to all questions. No questions will be answered after September 26<sup>th</sup>, 2024.

**Bid Proposal:** Must include the following line-item breakdown and summary:

1. Mobilization	\$ _____
2. Driveway Apron off NE Highland Ave	\$ _____
3. Storm Pipe, Sidewalk with ADA access, curb & Gutter off E. 6 <sup>th</sup> Street	\$ _____
4. Driveway Aprons off E. Birch Ave & E. 6 <sup>th</sup> Street	\$ _____
5. All other concrete work for Parking lot ADA accessibility	\$ _____
6. Project Bond for Lump Sum Bid	\$ _____
7. Tax	\$ _____
8. Total Lump Sum Bid	\$ _____

**Schedule:** The contractor must complete work within 15 business days of a mutually accepted start date; work to be completed no later than November 15, 2024.

**Bid Documents:** Bids must be submitted in accordance with the outlined breakdown and schedule as noted above. This bid is posted on the city website located at <https://ci.lacenter.wa.us/city-departments/community-development/engineering/city-project-bids/>

**Bond:** Each bid shall be accompanied by a bid bond, postal money order, cash, cashier's check or certified check payable to the City of La Center in the sum of five (5%) percent of the bid amount, to be forfeited to the city by the successful bidder if he/she fails to enter into a contract and file an acceptable surety bond in the amount of 100% of the contract price within ten (10) calendar days of the award. The city reserves the right to reject any and all bids and to accept the bid deemed most advantageous to the City of La Center and to waive all informalities in the bidding.

The City of La Center Public Works, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

#### **City Business License**

Before beginning work you will need to obtain a city business license. The license can be obtained on the DOR website at [www.dor.wa.gov](http://www.dor.wa.gov) and apply for the business license for La Center.

#### **Wage Law Intents and Affidavits**

If awarded the project, the contractor and each subcontractor shall complete or have on file a current "Statement of Intent to Pay Prevailing Wages" (Form L&I Number F700-029-000) before payment will be made for work performed. An "Affidavit of Wages Paid" (Form L&I Number F700-007-000) shall be required upon final acceptance of the public works project by the City. These forms are available from Washington State Department of Labor & Industries and can be filed electronically at:

<http://www.lni.wa.gov/TradesLicensing/PrevWage/IntentAffidavits/File/default.asp>

The applicable prevailing wages for this project have an effective date of 10/1/2024 and are available electronically from the Washington State Department of Labor & Industries website.

All work will be conducted within Clark County.

#### **Insurance**

The Contractor shall obtain the insurance described in this section from insurers approved by the State Insurance Commissioner pursuant to RCW Title 48. The insurance must be provided by an insurer with a rating of A-: VII or higher in the A.M. Best's Key Rating Guide, which is licensed to do business in the state of Washington (or issued as a surplus line by a Washington Surplus lines broker). The Contracting Agency reserves the right to approve or reject the insurance provided, based on the insurer (including financial condition), terms and coverage, the Certificate of Insurance, and/or endorsements.

- B. The Contractor shall keep this insurance in force during the term of the contract and for thirty (30) days after the Physical Completion date, unless otherwise indicated (see C. below).

- C. If any insurance policy is written "on a claim" made form, its retroactive date, and that of all subsequent renewals, shall be no later than the effective date of this Contract. The policy shall state that coverage is claims made and state the retroactive date. Claims-made form coverage shall be maintained by the Contractor for a minimum of 36 months following the Final Completion or earlier termination of this contract, and the Contractor shall annually provide the Contracting Agency with proof of renewal. If renewal of the claims made form of coverage becomes unavailable, or economically prohibitive, the Contractor shall purchase an extended reporting period ("tail") or execute another form of guarantee acceptable to the Contracting Agency to assure financial responsibility for liability for services performed.
- D. The insurance policies shall contain a "cross liability" provision.
- E. The Contractor's and all subcontractors' insurance coverage shall be primary and non-contributory insurance as respects the Contracting Agency's insurance, self-insurance, or insurance pool coverage.
- F. All insurance policies and Certificates of Insurance shall include a requirement providing for a minimum of 30 days prior written notice to the Contracting Agency of any cancellation in any insurance policy.
- G. Upon request, the Contractor shall forward to the Contracting Agency a full and certified copy of the insurance policy(s).
- H. The Contractor shall not begin work under the contract until the required insurance has been obtained and approved by the Contracting Agency.
- I. Failure on the part of the Contractor to maintain the insurance as required shall constitute a material breach of contract, upon which the Contracting Agency may, after giving five business days' notice to the Contractor to correct the breach, immediately terminate the contract or, at its discretion, procure or renew such insurance and pay any and all premiums in connection therewith, with any sums so expended to be repaid to the Contracting Agency on demand, or at the sole discretion of the Contracting Agency, offset against funds due the Contractor from the Contracting Agency.
- J. All costs for insurance shall be incidental to and included in the unit or lump sum prices of the contract and no additional payment will be made.

#### **Additional Insured**

All insurance policies, with the exception of Professional Liability and Workers Compensation, shall name the following listed entities as additional insured(s):

- the City of La Center, and its officers, elected officials, employees, agents, and volunteers

The above-listed entities shall be additional insured(s) for the full available limits of liability maintained by the Contractor, whether primary, excess, contingent or otherwise, irrespective of whether such limits maintained by the Contractor are greater than those required by this Contract, and irrespective of whether the Certificate of Insurance provided by the Contractor pursuant to 1-07.18(3) describes limits lower than those maintained by the Contractor.

### **Subcontractors**

Contractor shall ensure that each subcontractor of every tier obtains and maintains at a minimum the insurance coverages listed in 1-07.18(5)A and 1-07.18(5)B. Upon request of the Contracting Agency, the Contractor shall provide evidence of such insurance.

### **Evidence of Insurance**

The Contractor shall deliver to the Contracting Agency a Certificate(s) of Insurance and endorsements for each policy of insurance meeting the requirements set forth herein when the Contractor delivers the signed Contract for the work. The certificate and endorsements must conform to the following requirements:

1. An ACORD certificate or a form determined by the Contracting Agency to be equivalent.
2. Copies of all endorsements naming Contracting Agency and all other entities listed in 1-07.18(2) as Additional Insured(s), showing the policy number. The Contractor may submit a copy of any blanket additional insured clause from its policies instead of a separate endorsement. A statement of additional insured status on an ACORD Certificate of Insurance shall not satisfy this requirement.
3. Any other amendatory endorsements to show the coverage required herein.

### **Coverages and Limits**

The insurance shall provide the minimum coverages and limits set forth below. Providing coverage in these stated minimum limits shall not be construed to relieve the Contractor from liability in excess of such limits. All deductibles and self-insured retentions must be disclosed and are subject to approval by the Contracting Agency. The cost of any claim payments falling within the deductible shall be the responsibility of the Contractor.

### **Commercial General Liability**

A policy of Commercial General Liability Insurance, including:

Per project aggregate  
Premises/Operations Liability  
Products/Completed Operations – for a period of one year following final acceptance of the work.  
Personal/Advertising Injury  
Contractual Liability  
Independent Contractors Liability  
Stop Gap / Employers' Liability  
Explosion, Collapse, or Underground Property Damage (XCU)  
Blasting (only required when the Contractor's work under this Contract includes exposures to which this specified coverage responds)

Such policy must provide the following minimum limits:

\$1,000,000	Each Occurrence
\$2,000,000	General Aggregate
\$1,000,000	Products & Completed Operations Aggregate
\$1,000,000	Personal & Advertising Injury, each offence

Stop Gap / Employers' Liability

\$1,000,000	Each Accident
\$1,000,000	Disease - Policy Limit
\$1,000,000	Disease - Each Employee

**Automobile Liability**

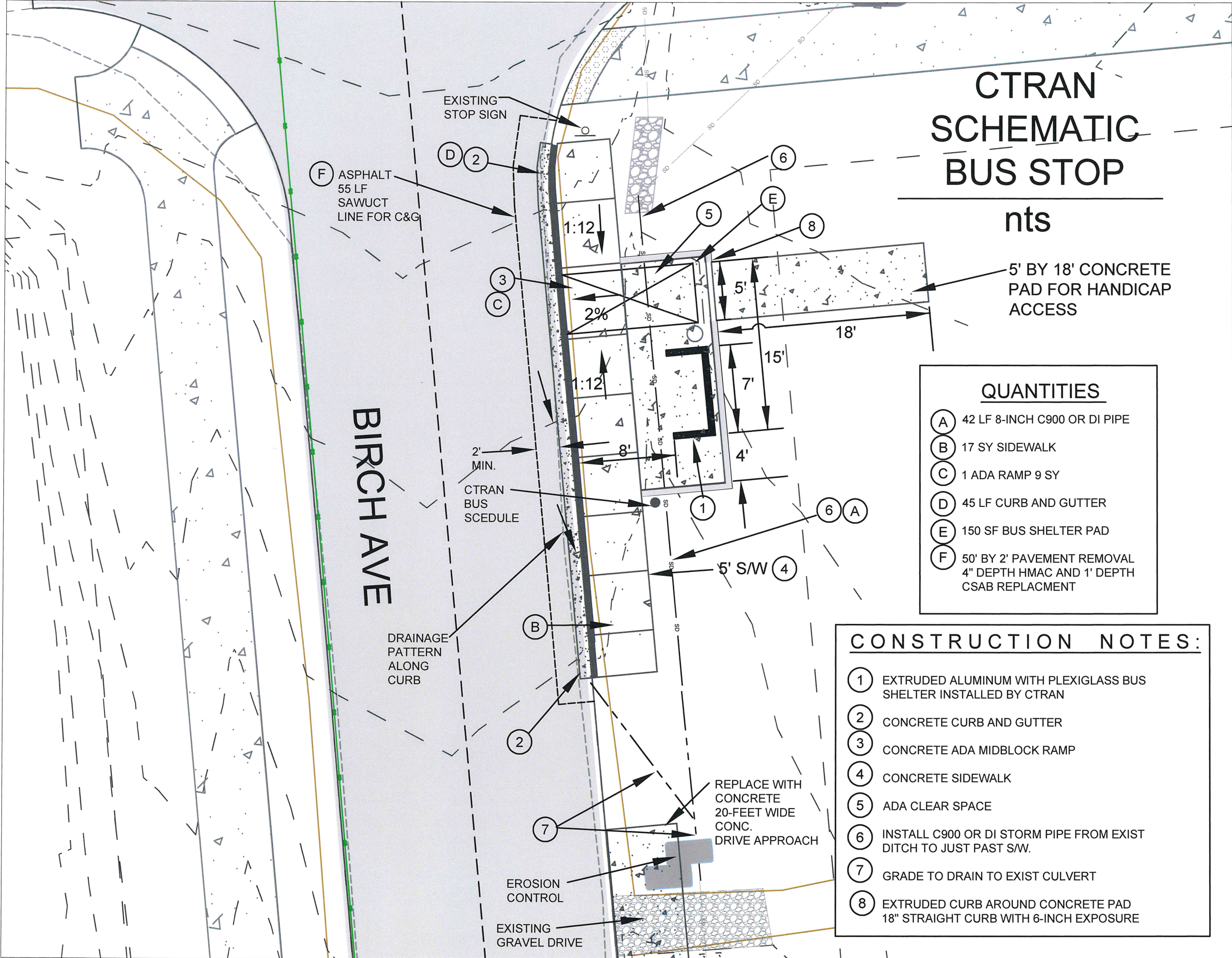
Automobile Liability for owned, non-owned, hired, and leased vehicles, with an MCS 90 endorsement and a CA 9948 endorsement attached if "pollutants" are to be transported. Such policy(ies) must provide the following minimum limit:

\$1,000,000	combined single limit
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**Workers' Compensation**

The Contractor shall comply with Workers' Compensation coverage as required by the Industrial Insurance laws of the state of Washington.





# CTRAN SCHEMATIC BUS STOP

nts

5' BY 18' CONCRETE  
PAD FOR HANDICAP  
ACCESS

## QUANTITIES

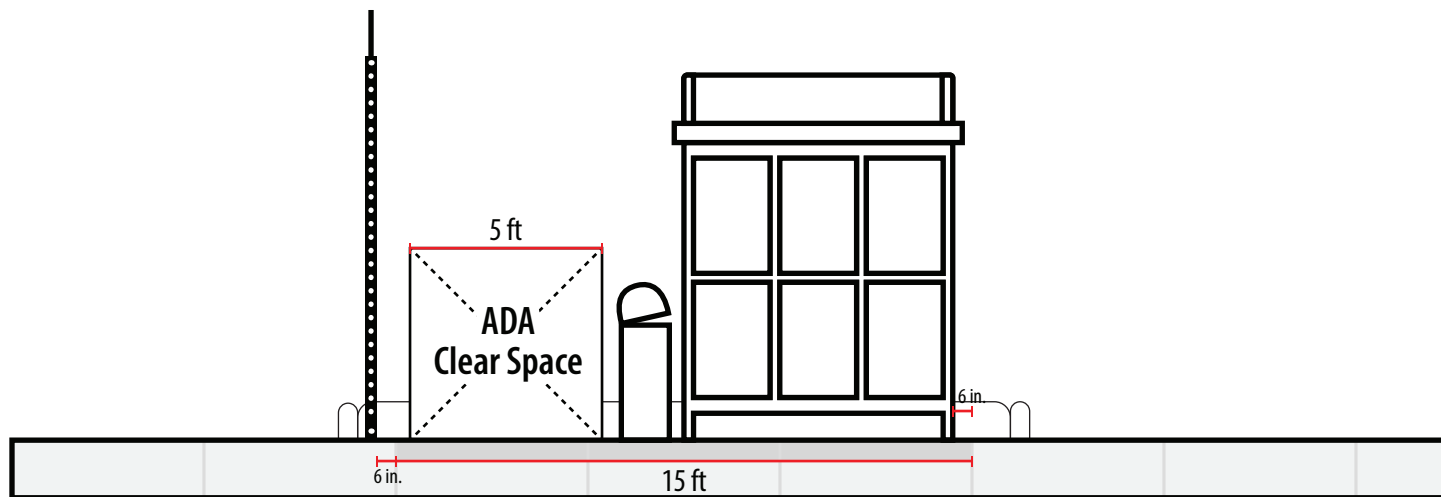
- (A) 42 LF 8-INCH C900 OR DI PIPE
- (B) 17 SY SIDEWALK
- (C) 1 ADA RAMP 9 SY
- (D) 45 LF CURB AND GUTTER
- (E) 150 SF BUS SHELTER PAD
- (F) 50' BY 2' PAVEMENT REMOVAL  
4" DEPTH HMAC AND 1' DEPTH  
CSAB REPLACEMENT

## CONSTRUCTION NOTES:

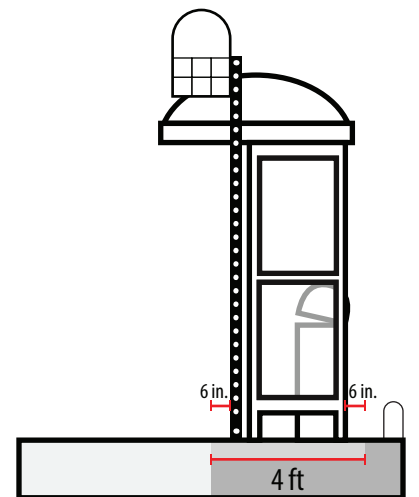
- (1) EXTRUDED ALUMINUM WITH PLEXIGLASS BUS  
SHELTER INSTALLED BY CTRAN
- (2) CONCRETE CURB AND GUTTER
- (3) CONCRETE ADA MIDBLOCK RAMP
- (4) CONCRETE SIDEWALK
- (5) ADA CLEAR SPACE
- (6) INSTALL C900 OR DI STORM PIPE FROM EXIST  
DITCH TO JUST PAST SW.
- (7) GRADE TO DRAIN TO EXIST CULVERT
- (8) EXTRUDED CURB AROUND CONCRETE PAD  
18" STRAIGHT CURB WITH 6-INCH EXPOSURE

# Northbound

### Front View

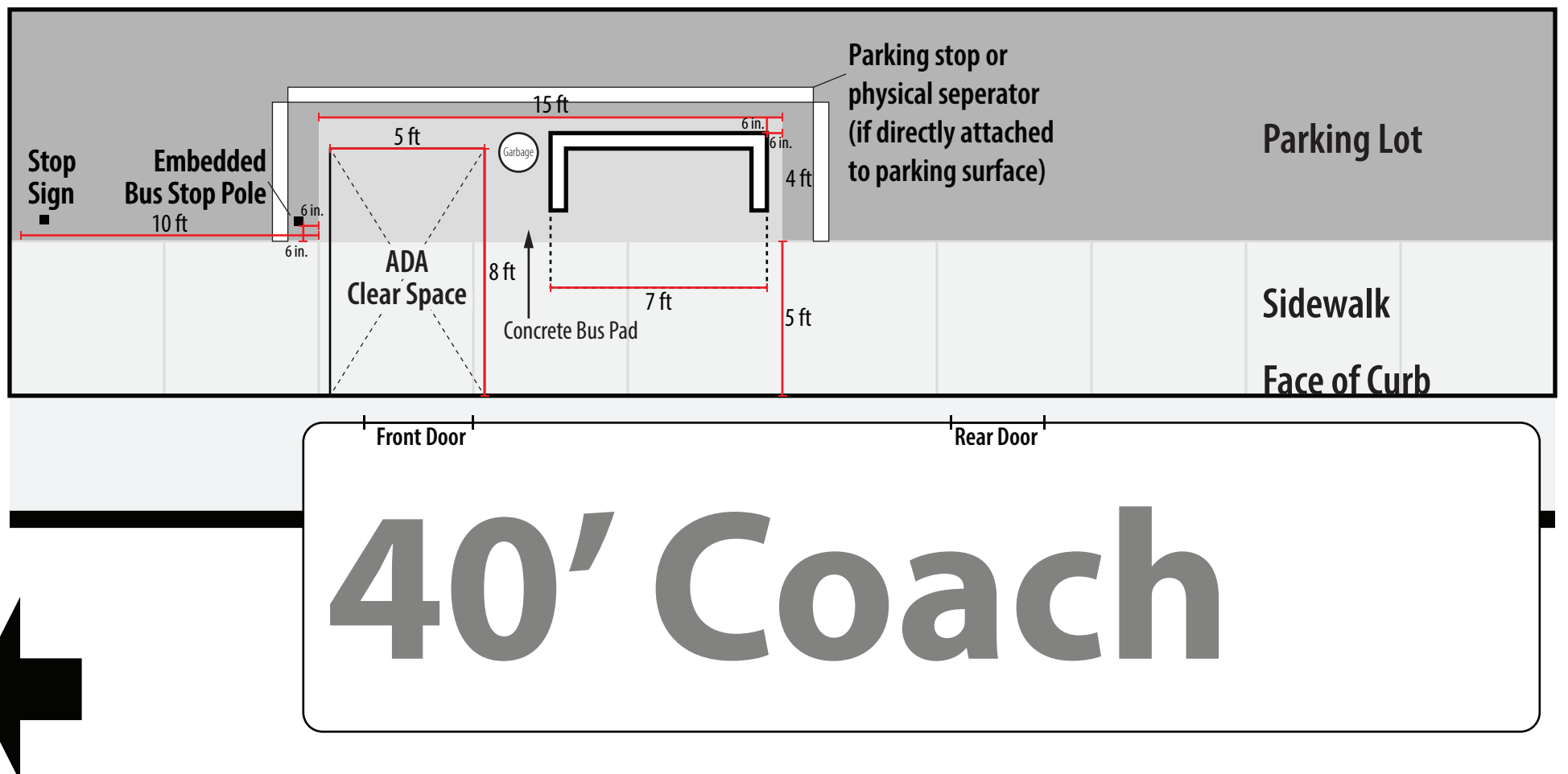


## Side View



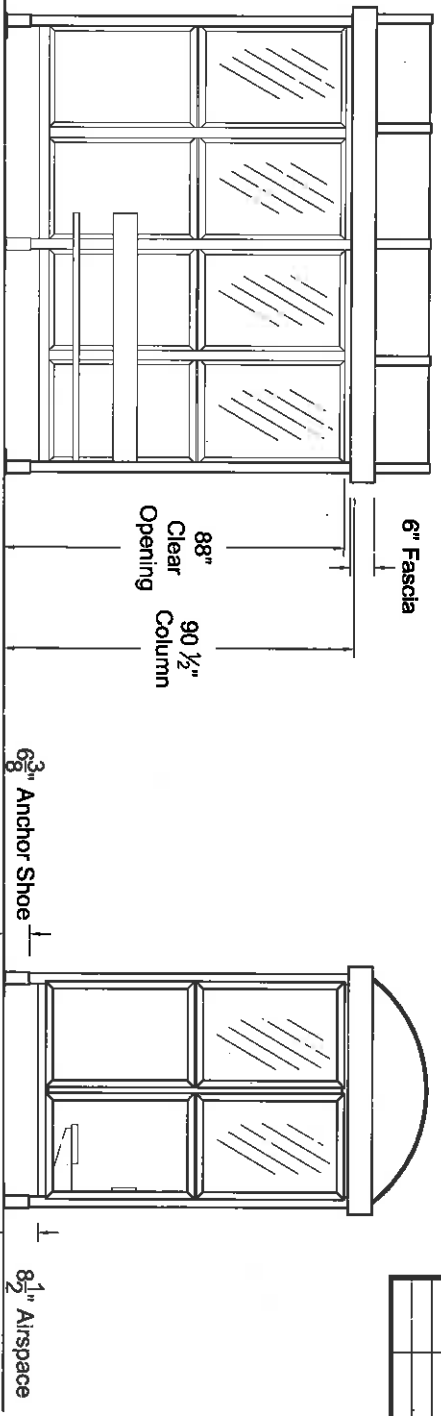
## Plan View

Scale: 1" = 5'



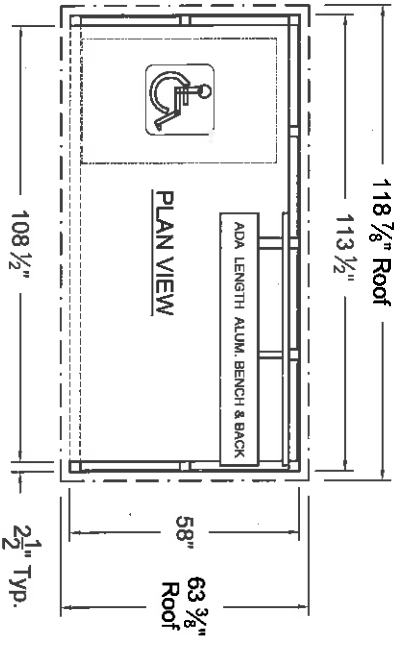


REVISIONS			
0-0-00	A:		BDI



FRONT ELEVATION

SIDE ELEVATION



PLAN VIEW

- NOTES (INITIAL APPROVAL WHERE INDICATED):
- FINISH IS CLEAR ANODIZED \_\_\_\_\_
  - ROOF IS BARREL-VAULT WITH 6mm OPAL POLYCARBONATE P.C.S.S. GLAZING \_\_\_\_\_
  - WALL GLAZING IS 1" CLEAR MAR-RESISTANT POLYCARBONATE - SIZE = 24" x 36" Typ. \_\_\_\_\_
  - ADA LENGTH ALUMINUM BENCH AND BACKREST \_\_\_\_\_
  - SEE QUOTE FOR OPTIONS \_\_\_\_\_
  - DESIGN IS PRELIMINARY, AND INTENDED TO COMPLY WITH SPECIFICATIONS IN ALL ASPECTS, AND PENDING CUSTOMER APPROVAL. ANY SIGNIFICANT DEVIATION FROM SPECIFICATIONS IS UNINTENTIONAL AND MAY BE DISREGARDED. PLEASE CONSULT THE FACTORY.

DUO-GARD INDUSTRIES, INC.  
Tel (734) 207-9700 Fax (734) 207-7995  
www.duo-gard.com

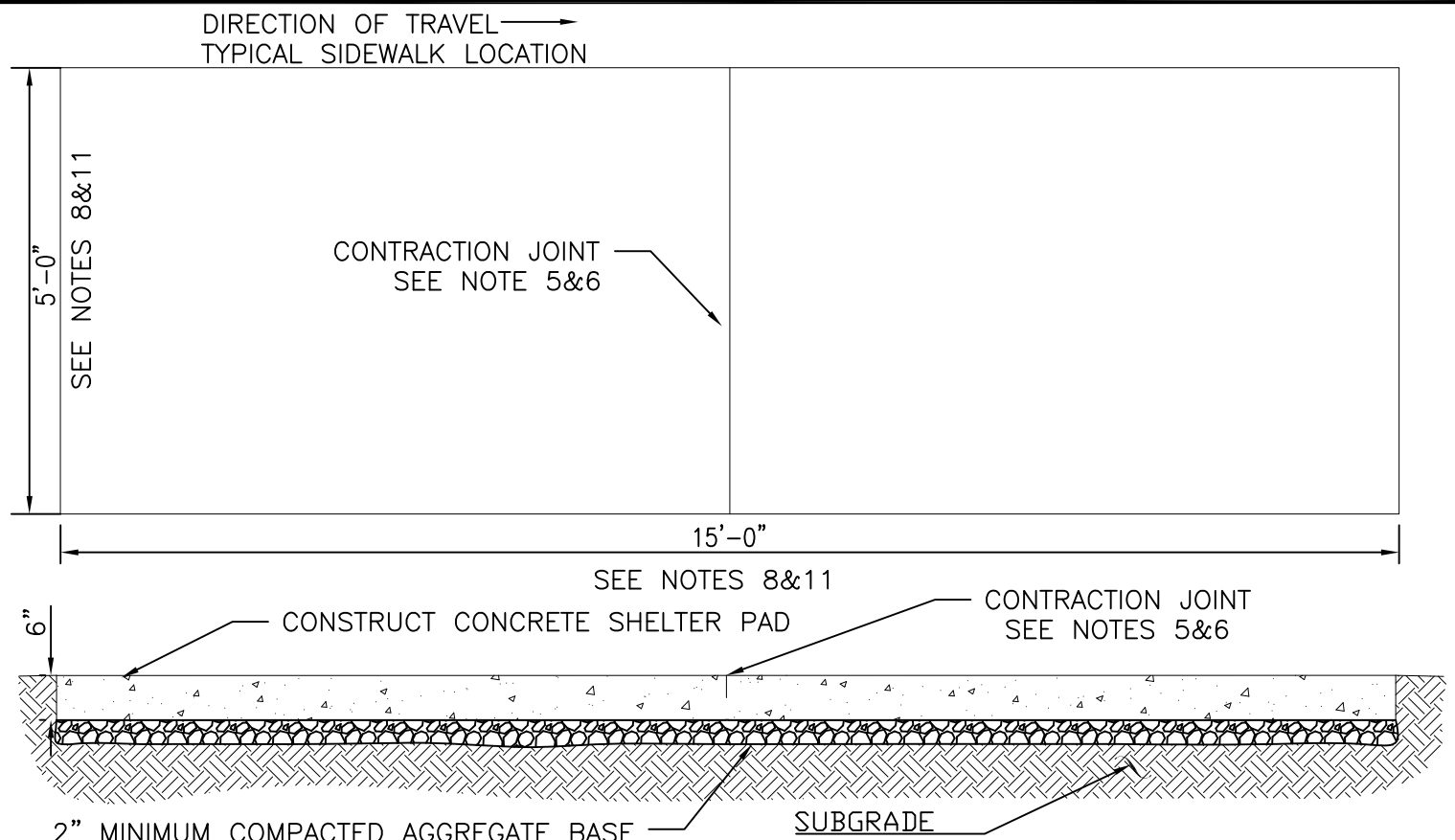
THIS DRAWING IS PROPRIETARY AND FOR THE SOLE USE OF OUR CUSTOMER AND MAY NOT BE COPIED OR REPRODUCED WITHOUT PRIOR WRITTEN CONSENT FROM DUO-GARD INDUSTRIES, INC. LEAD TIME BEGINS UPON RECEIPT OF SIGNED SHOP DRAWINGS.

APPROVAL SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

PROJECT NAME: C-TRAN

DESCRIPTION: 5' X 10' TRANSIT STYLE SHELTER

PRJ/ENG	PRJ/ MGR	DRWG DATE	REV1	REV2	SCALE	PAGE	OF	DRAWING #
RC	JW	6/3/14			n.t.s.	1	5	CTRAN510



**NOTES:**

1. CONCRETE SHALL BE 3000 PSI MINIMUM (CLASS 3000) PER WSDOT STANDARDS.
2. COMPACT 6" OF SUBGRADE AND AGGREGATE TO 95% OF MAXIMUM DRY DENSITY, OR AS DIRECTED BY PM.
3. SLOPE PAD TO DRAIN TO CURB (1% MINIMUM; 2% MAXIMUM).
4. FINISH SHALL BE MEDIUM BROOM PERPENDICULAR TO PEDESTRIAN TRAFFIC UNLESS OTHERWISE DIRECTED.
5. 2" SMOOTH FINISH BORDERS AROUND EACH SIDEWALK PANEL OR MATCH EXISTING BORDERS.
6. SEE CITY OF VANCOUVER CONCRETE JOINTS DETAIL T05-02 FOR SURFACE, CONTRACTION AND EXPANSION JOINT REQUIREMENTS.
7. ALL EXISTING EDGES SHALL BE SAWCUT.
8. SIDEWALK CLEARANCE ZONE IS 4' MINIMUM.
9. CHECK WITH C-TRAN FOR ADDITIONAL INFORMATION IN REGARDS TO SHELTER STYLE AND INSTALLATION.
10. MAINTAIN 2' CLEAR BETWEEN FACE OF CURB AND SHELTER. VERIFY LOCATION WITH C-TRAN PROJECT MANAGER.
11. DIMENSIONS MAY VARY. VERIFY WITH C-TRAN PROJECT MANAGER.

REV	HQ	DATE	BY	APPR	TRANSPORTATION SERVICES
					APPROVED BY: _____
					APPROVED DATE: _____



C-TRAN	STANDARD PLAN NUMBER
6" SHELTER PAD	P-01

REV HQ	DATE	BY	APPR	TRANSPORTATION SERVICES	  Lacey, WA   Seattle, WA   Portland, OR	C-TRAN	STANDARD PLAN NUMBER
				APPROVED BY: _____		FRONT & BACK LANDING PAD	P-03
				APPROVED DATE: _____			

## C-TRAN Accessibility Standards

The Americans with Disabilities Act (ADA) requires certain physical improvements, which are standard to all bus stops. All bus stops will require an access pad located at the front and rear doors of the bus. The access pad, an area 3 by 4 feet, is intended to accommodate the lift/ramp located on the bus as it meets with the bus pad pavement. The access pad need not be defined or marked on the pavement; however, clear space is necessary. It is crucial for the successful lift/ramp operation that the access pad runs parallel to the adjacent bus pad road grade. Typically, lifts move vertically to meet the adjacent grade within 1 to 3 feet of the bus. The lifts/ramps cannot accommodate horizontal torque. In addition to the access pad, a clear zone must be provided so an individual in a wheelchair can maneuver out/off of the lift/ramp and into the stream of pedestrian movements. The clear zone requires a minimum of a 5 feet by 8 feet area as measured from the back of the curb. The access pad can be part of the clear zone. The clear zone is not required to be marked or delineated. Other pedestrian uses may overlap both the access pad and the clear zone; however, to be ADA compliant, all obstructions must be located outside the 40 square foot area.

Accessible routes must interface with the bus stops and access pads. For a sidewalk to be considered accessible to a patron in a wheelchair, it must be a minimum of 3 feet wide with a passing space of 5 feet by 5 feet provided every 200 feet. A 5 foot wide sidewalk relieves the need for a passing area, provides the area required for two people in wheelchairs to pass and is the most comfortable width for accommodating a person in a wheelchair as well as other foot traffic. C-TRAN requires a minimum 5 foot wide sidewalk for access to all bus stops. All accessible routes shall be flush, with vertical changes in level no greater than half an inch. All surfaces must be stable, firm, and slip resistant. All sidewalks shall conform to the Washington State Department of Transportation Design Manual M-22-01 and all current supplements.

Bus stops and accessible routes shall not have a cross slope greater than 2 percent. The flatter the cross slope, the easier navigation, as long as adequate drainage is maintained. Longitudinal slopes along accessible routes shall be between one percent and 5 percent. Any slope greater than 5 percent is considered a ramp by ADA. For the most part, ramps shall not exceed 8 percent and shall have a minimum 5 feet landing every 2 1/2 feet of rise. If a ramp has a rise greater than 6 inches or a run longer than 6 feet, handrails are required on both sides.

All amenities provided to the general public must also be available to persons with disabilities. This includes seating areas, sheltered waiting and free movement around site fixtures. The required waiting space for persons with a wheelchair is 3 by 4 feet. If shelters do not provide a bench, adequate space must be provided for a person in the wheelchair to be completely covered. Shelters must

provide sufficient space for a person in a wheelchair to turn and exit the shelter. A 5 foot diameter space is required for a full turning movement. Site amenities and fixtures should have a clear space of 32 inches to 36 inches to allow for a wheelchair to pass.

In addition to provisions for the patron confined to a wheelchair, consideration should be given to the patron with visual or hearing impairment. Signs should utilize the graphic standard established by the ADA. Braille figures are encouraged for the visually impaired.

## Technical Description of Amenities Types

The following sections of bus stop layout diagrams and technical specifications are presented to provide specific installation instruction to C-TRAN staff integral to the placement, installation and maintenance of the stop environment as well as to assist developers and builders. They are designed to respond to existing conditions and incorporate only basic amenities. Variations and opportunities for innovation are exciting and plentiful.

### Bus Stops

#### **C-TRAN Pole and Bus Stop Signs -**

The pole/sign is the cornerstone of all bus stops. The placement must be considered carefully. Signs are present at all stops, including those which have shelters of any kind. Moreover, they are the most visible fixed asset of the agency; they reside in front of hundreds of businesses, industries and personal residences. In a very real sense, they are C-TRAN's promotional billboards. For a significant period, C-TRAN used square posts with sequential holes that were unique to the visually impaired community and several other jurisdictions now use this type of post. C-TRAN will use this traditional post wherever possible, but increasingly, there is a desire to be efficient by sharing posts with other purposes.

One single-sided flag sign shall be provided at all bus stops. Double sided



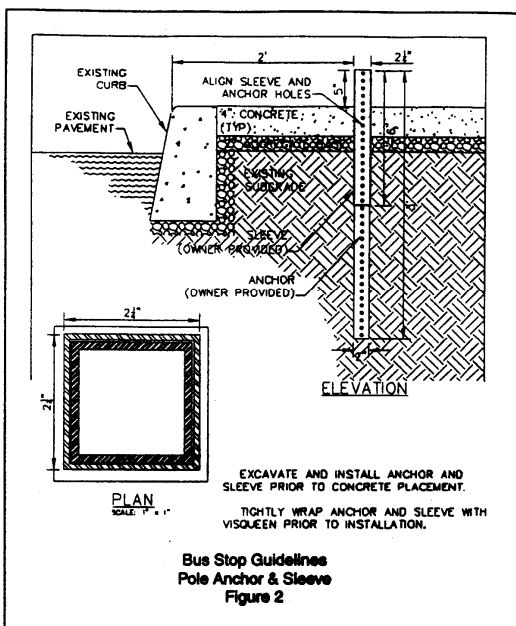


signs may be considered at a future time. All sign faces shall be of an eggshell matte, non-glare finish (11 to 19 degrees gloss on 60 degree gloss meter). All characters shall be dark colored displayed (C-TRAN currently uses blue and black for standard signage) on a light background. In some cases, C-TRAN shares bus stops with TriMet. In those cases, a simple C-TRAN emblem distinguishes the sign as a C-TRAN stop.

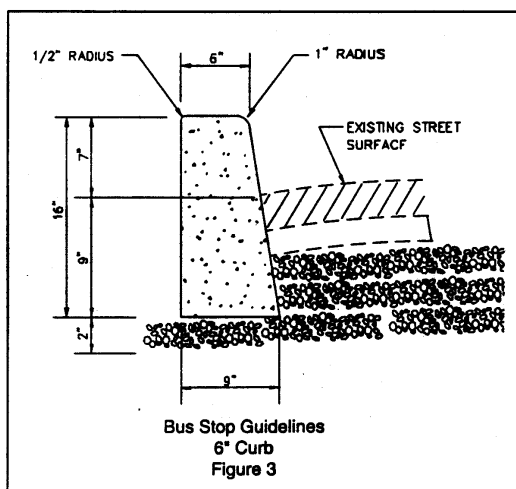
Characters shall have a width to height ratio between 3:5 and 1:1 and a stroke width to height ratio between 1:5 and 1:10. Numbers used for route designations are a minimum character height of 3 inches. The international sign of accessibility,



route identification, C-TRAN logo, and customer information number shall appear on all flag signs. All signs shall be a minimum of 12 inches by 16 inches and be shatter proof, scratch resistant, replaceable, self-extinguishing, vandal resistant, and resistant against UV and weather degradation. All signs shall be constructed for exterior use. All sign materials shall be corrosion, rust and rotting resistant, and resist discoloration. Extruded anodized aluminum with acrylic baked enamel finish, fiber reinforced composite material, fiberglass embedment, or equal are required.

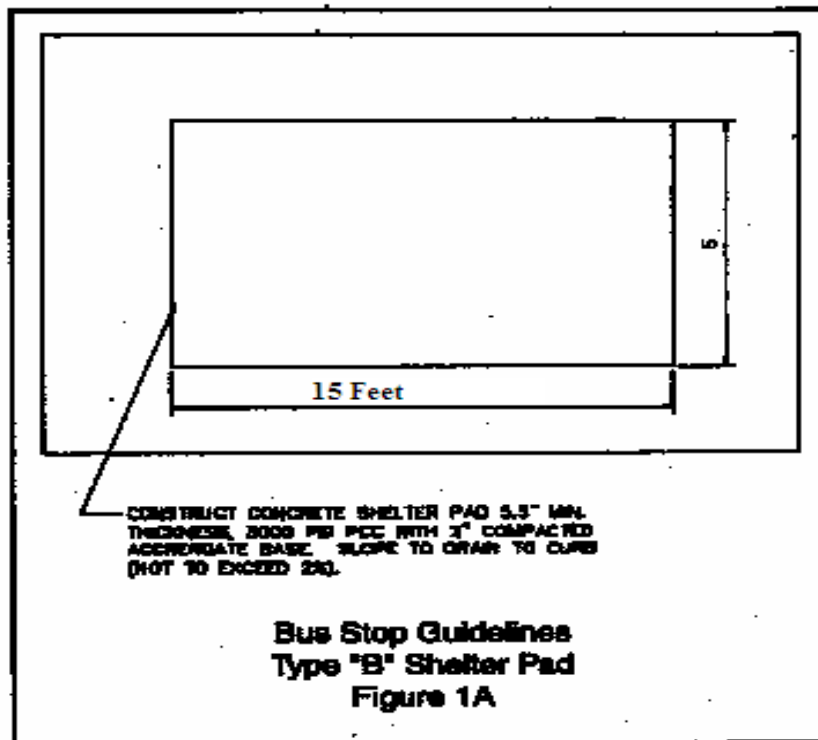
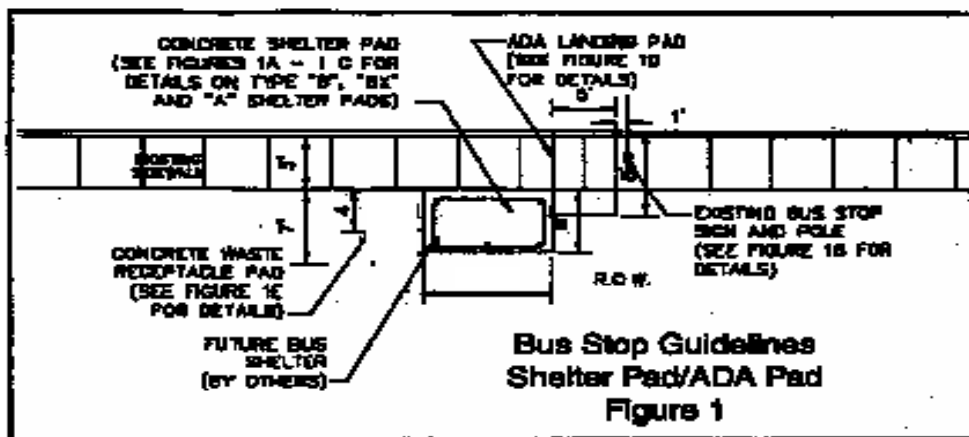


All flag signs shall be placed perpendicular to the road surface and shall be faced on the side from which the route will approach. The lowest edge of any sign or bracket shall be a minimum of seven feet from the pavement. Wherever possible, all flag signs shall be located 19 inches from the passenger loading pad centerline in the direction of traffic flow and setback a minimum of 2 feet from the back of curb or 3 feet from the road pavement when no curb and gutter are provided. No obstruction shall be located on either side of the sign. All flag signs shall be supported by a single post that is in compliance with all C-TRAN specifications. The supporting post shall be placed at the outside edge of the sidewalk or passenger loading pad and shall attempt to allow a minimum of 3 feet clear space to the inside edge of the paved surface.



# Landing Pads

C-TRAN typically has one or two accessory-pad variations to accommodate different configurations and components which may be installed. There are a number of variations deployed as these stops have been installed over a considerable time. Landing pads are usually separated from the sidewalk to promote general pedestrian flow.

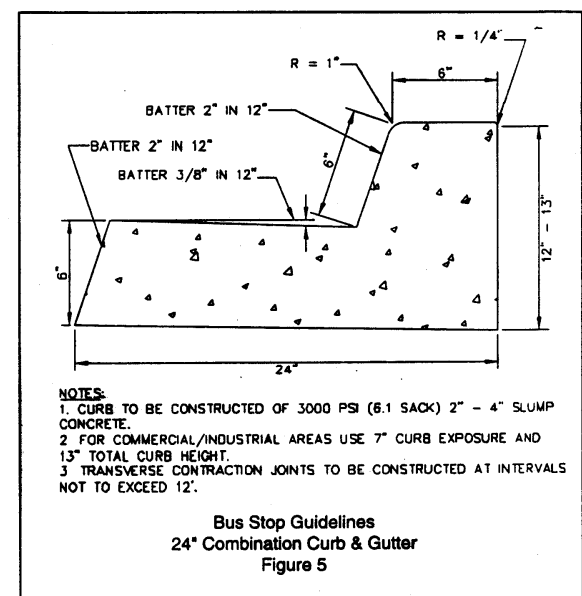
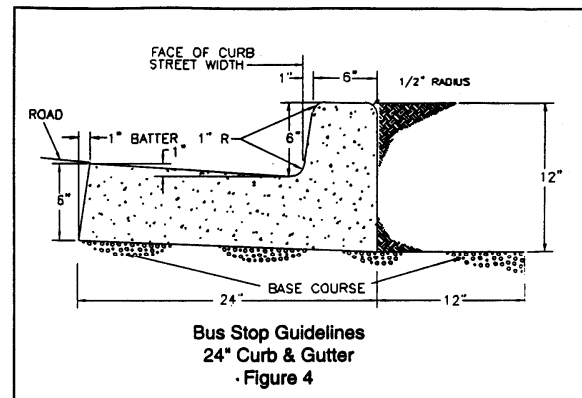


C-TRAN generally recommends that 5 feet of clearance be preserved on sidewalks to reduce potential pedestrian conflicts and limit congestion during boarding and deboarding.

C-TRAN prefers an ADA landing pad as a clear, level landing area of a minimum of 5 x 15 feet located adjacent to the C-TRAN bus stop sign. At new construction sites, C-TRAN requires ADA pads to be a minimum of 5 x 15 feet. Construction of ADA pads is pursued at locations where a connection to a pedestrian pathway is already present or planned.

A pad can be located on either side of the sidewalk, depending on available right-of-way space, utility poles, or buildings. In either case, a paved surface should be provided from the landing pad to the back face of the curb to enhance access and comfort. ADA mobility guidelines should be followed when street furniture is to be included on a waiting pad. A landing pad should accommodate a 5 (measured parallel to the street) by 8 foot (measured from the back face of the curb) wheelchair landing pad that is free of all street furniture and overhang. All passenger loading pads shall be a minimum of 33 feet by 9 feet.

Wherever possible, passenger-loading pads shall be parallel and adjacent to the drive lane or bus pull-off lane. All passenger-loading pads shall be accessible by a minimum 5 feet wide sidewalk. The sidewalk shall interface with the pavement edge. All passenger loading pads and accessible sidewalks shall not exceed a 5 percent longitudinal slope and a 2 percent cross slope. The passenger-loading pad shall slope the same as the road surface from a starting point 10 feet from the loading pad centerline and extending a minimum of 5 feet in the direction of traffic flow. The road and loading pad shall conform to the maximum 5 percent slope requirement at this point for a minimum of 5 feet.



## Benches



Benches are generally sited like bus shelters; however, they should not be placed closer than 3 1/2 feet from the curb or 6 feet from the curb when a travel lane exists immediately adjacent to the curb. The same clearance requirements placed on shelters apply here. Benches should be oriented towards the street or the direction

of the approaching bus.

Whenever possible, benches shall be a minimum of 3 feet long and have two end armrests and one center armrest. Bench backs are preferred, but optional. All benches shall be vandal resistant, impact and scratch resistant, weather and fade resistant, rot resistant, insect, and fungus resistant. All surfaces shall be a smooth finish. All edges shall be smooth, eased, rounded or chamfered. The benches may be made from a number of materials, however, C-TRAN would prefer to use 60 percent post consumer recycled material or other vandal resistant materials as they become available.

Wood polymer composite material, high impact post consumer plastic and recycled aluminum, galvanized steel, or recycled cast iron is recommended. Color shall be integral to material component (such as recycled grey), baked on powder, polyurethane enamel after welding or approved (by the Building and Grounds Division of C-TRAN) equal. To the maximum extent possible, all fasteners shall be stainless steel or plated, self-locking and hidden to deter unwanted removal and vandalism.

Wherever possible, all benches shall be affixed to the concrete passenger-loading pad by permanent embedment, surface plate, or gull wing attachment, or otherwise approved methods according to manufacturer's specifications. All

benches shall be located on an ADA compliant hard paved surface. Whenever feasible, benches shall be placed parallel to the road and shall be setback a minimum of 4 feet from the back of curb or 10 feet from the edge of pavement when no curb and gutter is provided.

## Bus Shelter

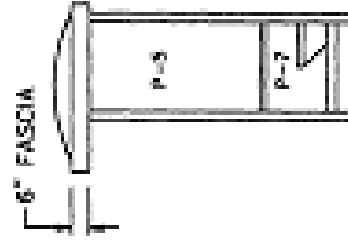
The bus shelter is a place where passengers can board or deboard from the bus, usually identified by the presence of a C-TRAN and/or sometimes a TriMet bus stop sign. It is a building or other structure constructed near a bus stop, to provide seating and protection from the weather for the convenience of waiting passengers. Shelter from the elements makes the transit experience more pleasant. The shelter's placement and its orientation to other elements is critical. A waiting or accessory pad is a paved area at a bus stop provided for bus patrons and can contain either a bench or a bus shelter. Amenities, such as trash receptacles or bike racks, can also be located on the waiting pad. The size of the waiting pad depends on several factors. The length and width of shelters and benches, clearance requirements for street furniture, location of wheelchair lift extension (front or back door of bus), and the length of the bus are common size-determining factors.

Generally, C-TRAN has three permanent shelters. Each is deployed under circumstances largely determined by the local environment.



### 2003 Typical C-TRAN Bus Shelter Types

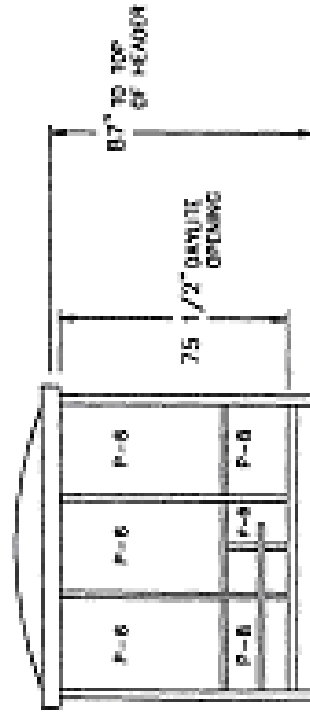
Shelter Type	Dimensions (in feet)	Construction Materials	Other Shelter Attributes
B	5 x 8 x 7	Extruded Aluminum Plexiglas	Basic shelter; sited in business and retail districts, residential neighborhoods, industrial and manufacturing areas, etc., and has full side panels.
A	5 x 8 x 7	Extruded Aluminum Plexiglas	Cantilevered version of B shelter; pursued when a B shelter is warranted but right-of-way is limited. This is the most common shelter.
CP	5 x 8 x 7	Curved Support Beams and Ballards	Glass top shelters also referred to as "Central Park Shelters". The general application for this type of shelter is in the area of downtown Vancouver which is formally designated as "Central Park".



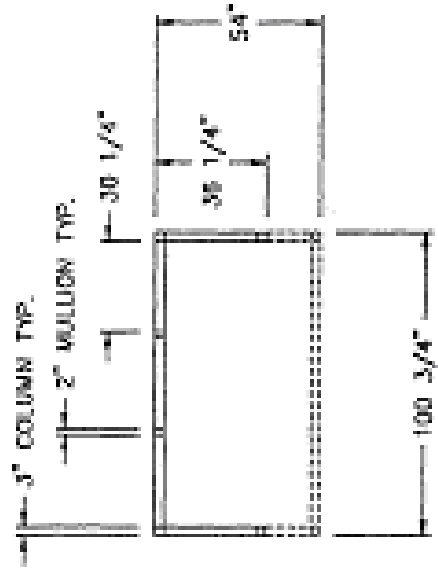
SIDE ELEVATION

EXACT GLAZING MEASUREMENTS  
 P-5 28" X 63"  
 P-6 27.25" X 52"  
 P-7 28" X 36.25"  
 P-8 27.25" X 18.25"

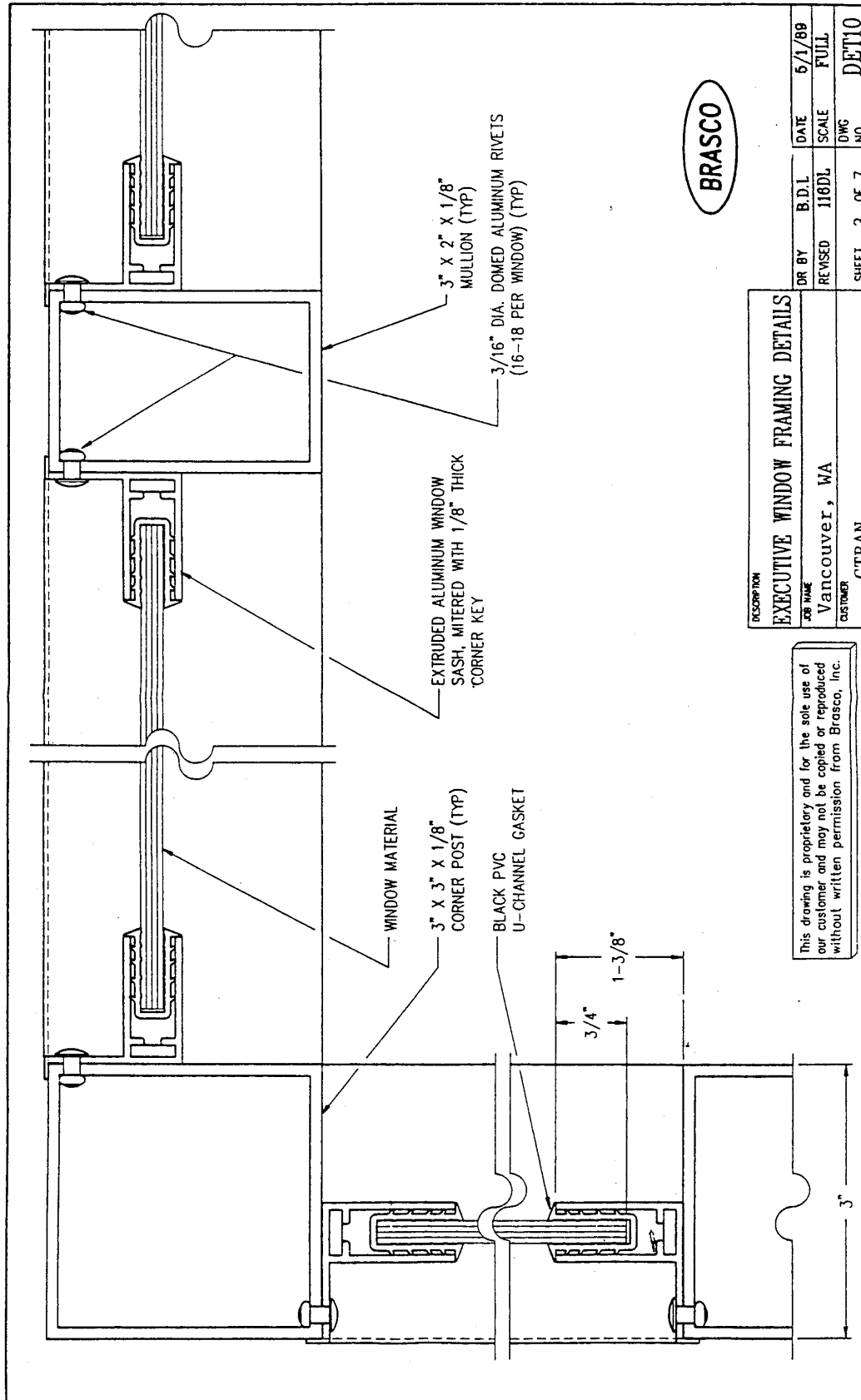
**C-TRAN A-TYPE Bus Shelter**  
 Contact Cliff Price @ 696-4494  
 with questions



FRONT ELEVATION



TOP ELEVATION

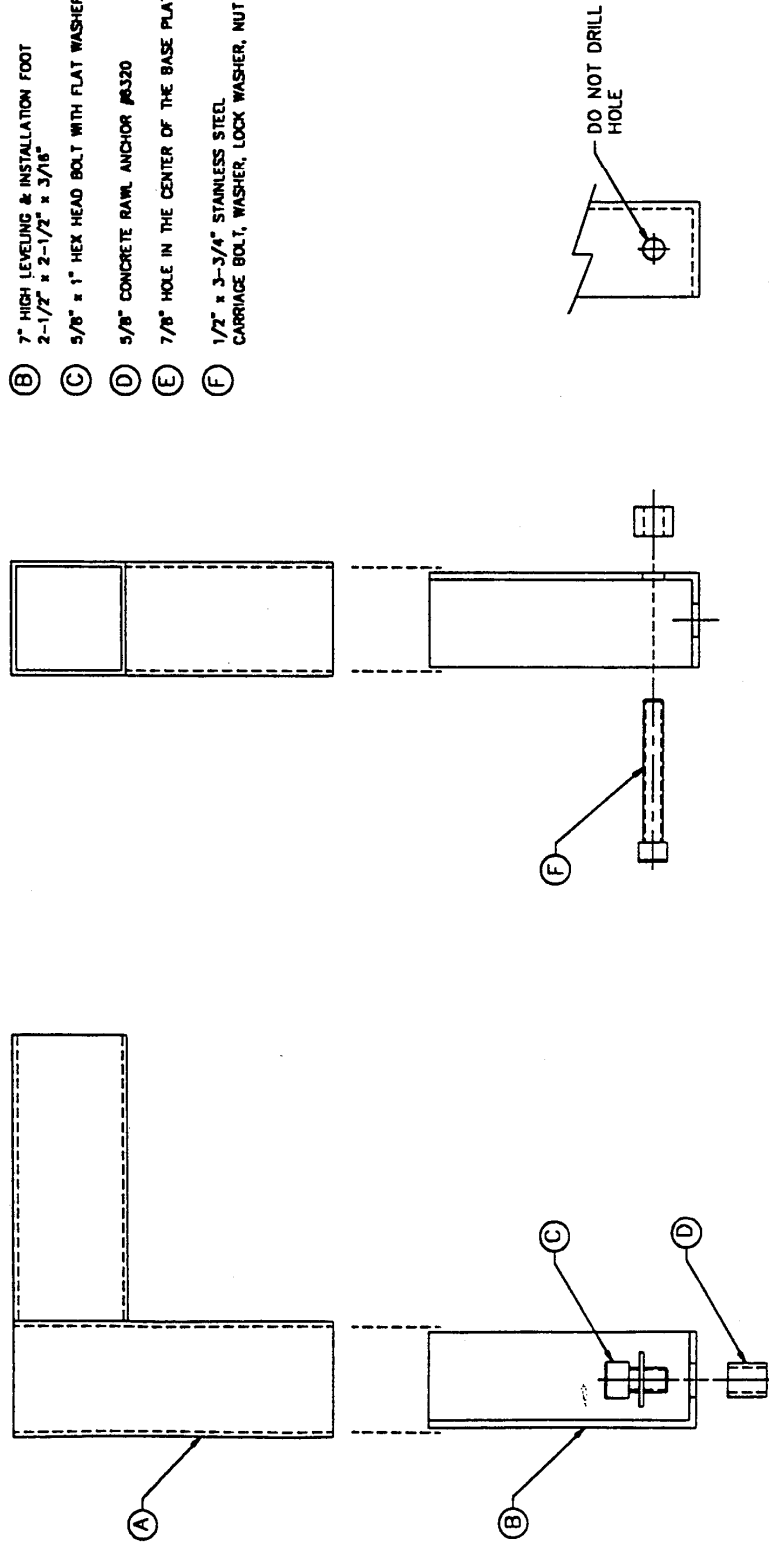


EXECUTIVE WINDOW FRAMING DETAILS			
DR BY	B.D.L	DATE	5/1/89
REVISED	116DL	SCALE	FULL
SHEET 3 OF 7		DWG NO.	DET10

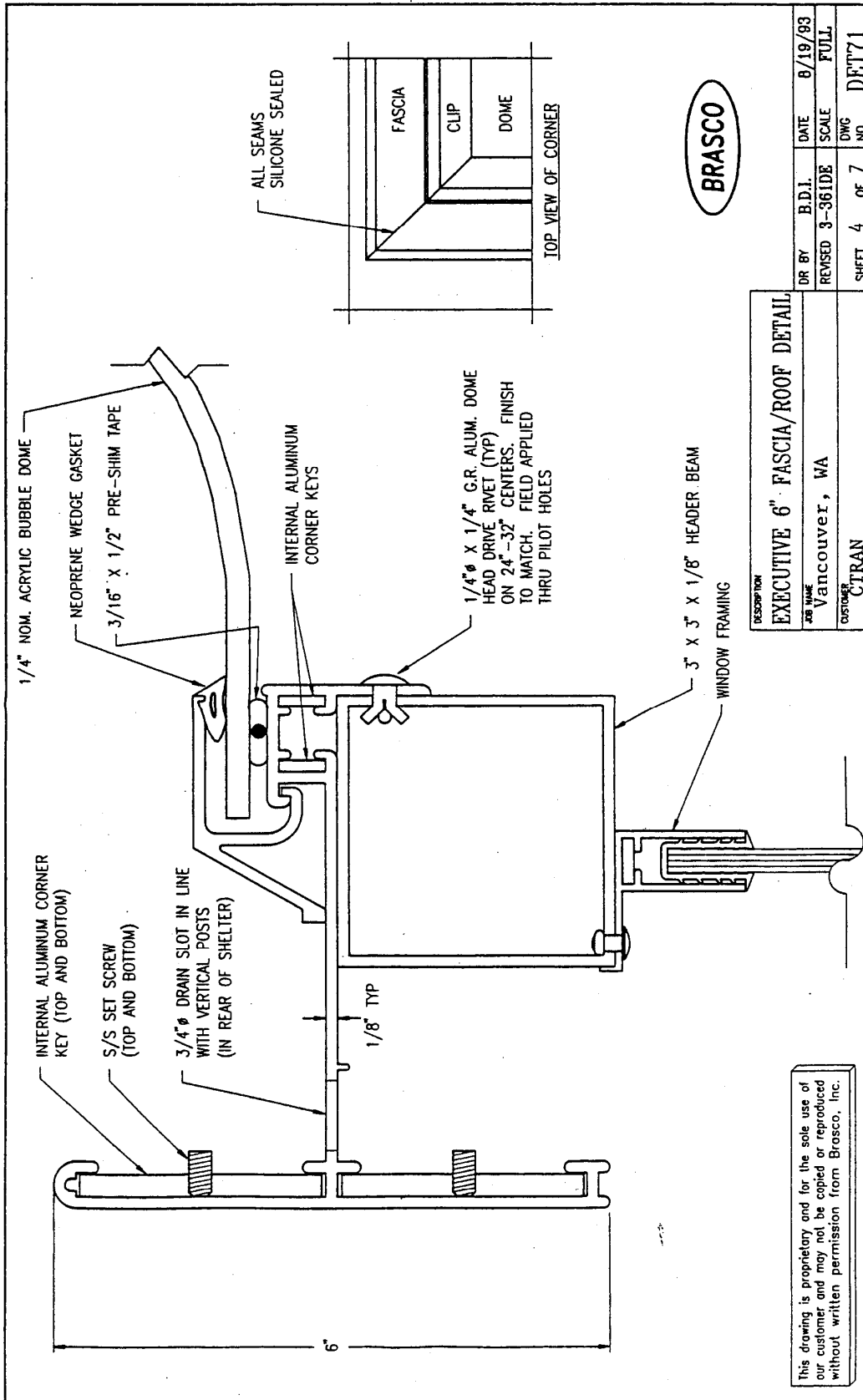
This drawing is proprietary and for the sole use of our customer and may not be copied or reproduced without written permission from Brasco, Inc.

# ALTERNATE ANCHOR DETAIL

- (A) 3" x 3" x .125 COLUMN TUBE
- (B) 7" HIGH LEVELING & INSTALLATION FOOT  
2-1/2" x 2-1/2" x 3/16"
- (C) 5/8" x 1" HEX HEAD BOLT WITH FLAT WASHER
- (D) 5/8" CONCRETE RAWL ANCHOR #320
- (E) 7/8" HOLE IN THE CENTER OF THE BASE PLATE
- (F) 1/2" x 3-3/4" STAINLESS STEEL  
CARRIAGE BOLT, WASHER, LOCK WASHER, NUT



C-TRAN CUSTOM ANCHOR SHOE	BRASCO INTL	PHONE: (313)921-9104
	8720 CHAMBERLAIN	FAX: (313)921-9442
DESCRIPTION	DR BY: M.L.	DATE: 9/18/96
JOB NAME: Vancouver, WA	REVISED:	SCALE: 1:1
CUSTOMER: C-TRAN	SHEET 7	OF 7
	DWG NO:	





# Technical Specifications for Bus Zones

There are two principle attributes to bus zones: “Maneuvering Areas” (which are particularly applicable to partnerships and demand response delivery systems i.e. Paratransit and “Connector” service), and “No Parking Areas” (particularly applicable when exercising relationships with jurisdictions for regular fixed route operations or specialized delivery systems such as the “Connector” service or Paratransit).

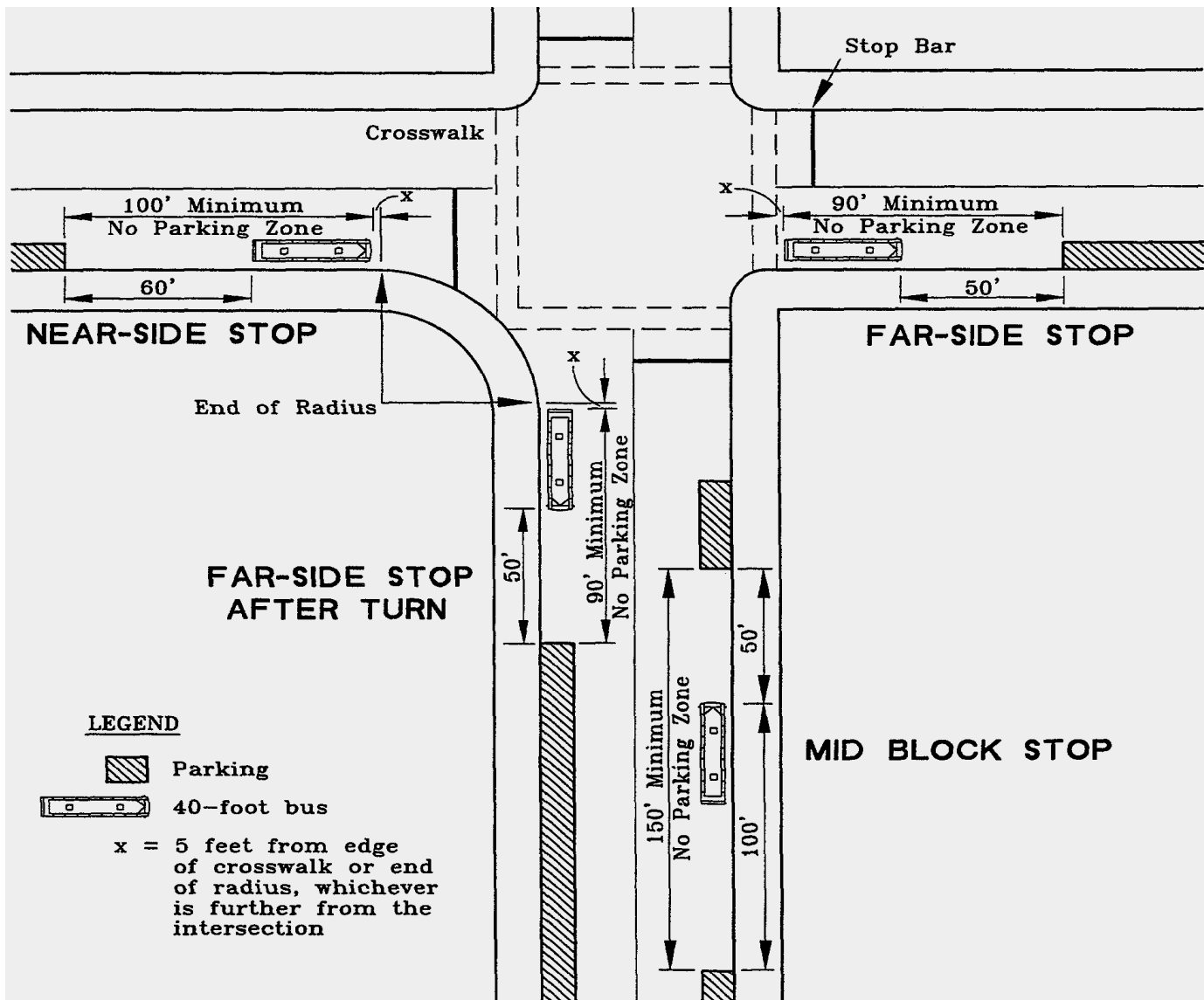


Technical specifications for each are provided for each in this section.

Bus Zones are street areas where automobile parking is prohibited so that a safe bus loading area is present. Typically, C-TRAN employs three principle approaches to bus zones:

- Near-side (NS) Bus Zones – Near-side Bus Stops are stops located immediately before an intersection in the direction of bus travel. A preferred NPA length is a minimum of measured feet from the bus stop sign. In extreme circumstances, NS bus zones can be shortened to 60 feet, however buses (tail swing resulting from clearance problems with parked vehicles) may not be able to clear the travel lane. At signalized intersections the bus should optimally stop a minimum of 5 feet, but C-TRAN prefers a 15 foot distance in most cases, from the pedestrian crossing so that approaching operators will be able to see pedestrians using the crosswalk. The area between crosswalk and bus stop must also prohibit parking.
- Far-side Bus Stops - Far-side bus stops are stops located immediately past an intersection in the direction of bus travel. A preferred NPA length is 90 feet measured from the crosswalk. In all instances, the rear of the bus must clear the crosswalk. Far-side zones can be shortened to 60 feet; however buses may not be able to clear the travel lane.
- Mid-block (AT or OP) Bus Zones – Mid-block stops are located in mid block locations typically relating to major trip generators. A NPA length is a minimum of 100 feet (with a preferred length of 150 feet measured from the bus stop sign). A minimum length for mid-block zones is determined on a site-by-site basis. These zones are infrequently used but are found on “super-blocks” often opposite of ‘T’ intersections in high-density areas and along mid- and lower density area roadways with few intersections.

## General Bus Zone Guidelines

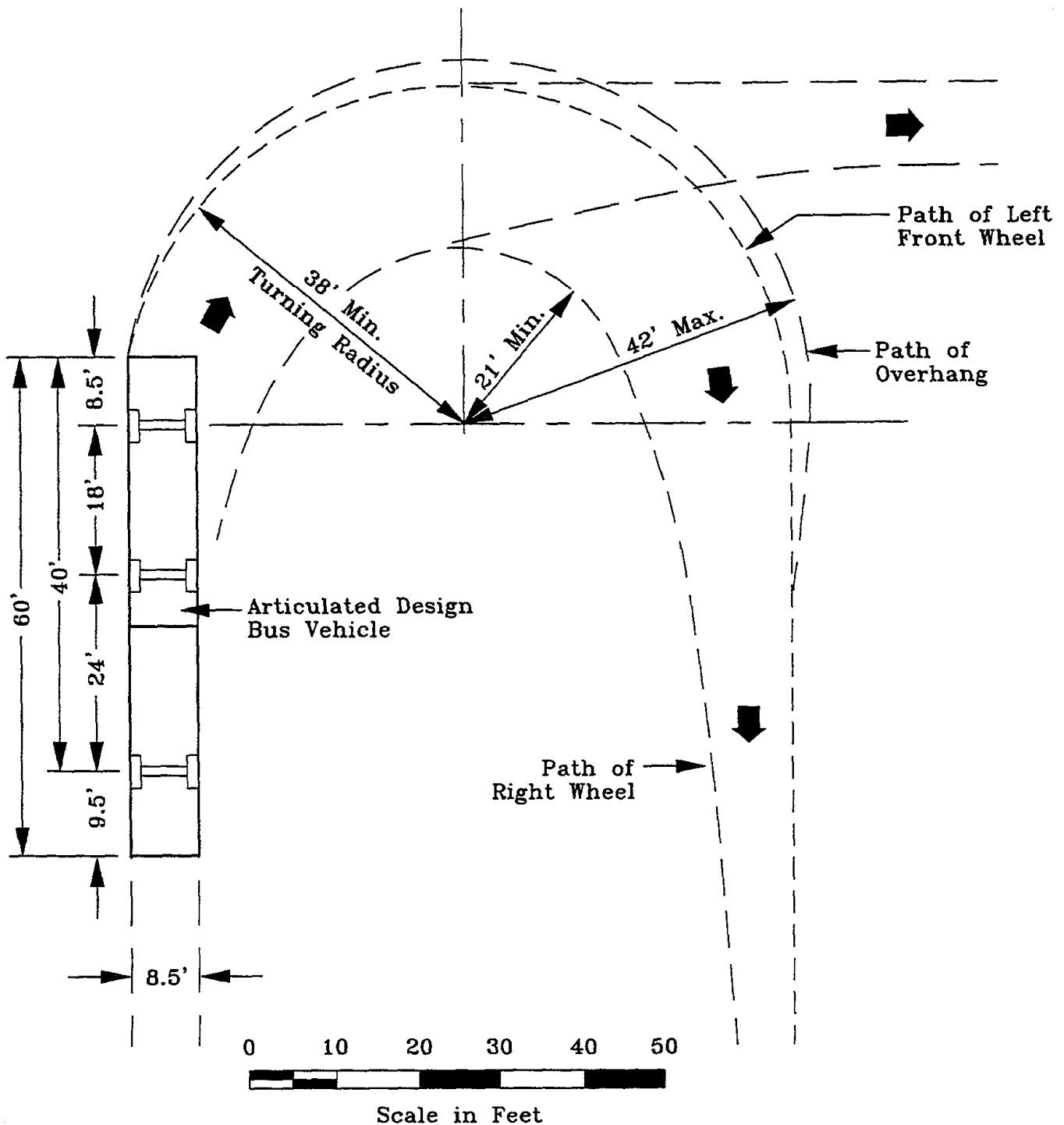


### Notes:

- 1) Add 20 feet to bus stop zones for an articulated bus.
- 2) Increase bus stop zone by 50 feet for each additional standard 40-foot bus or 70 feet for each additional 60-foot articulated bus expected to be at the stop simultaneously. See Table 3 for the suggested bus stop capacity requirements based on a range of bus flow rates and passenger service times.

The guidelines shown on the previous page typically apply to fixed route bus service operations while the following are better suited for offering advice for unconventional bus service systems.

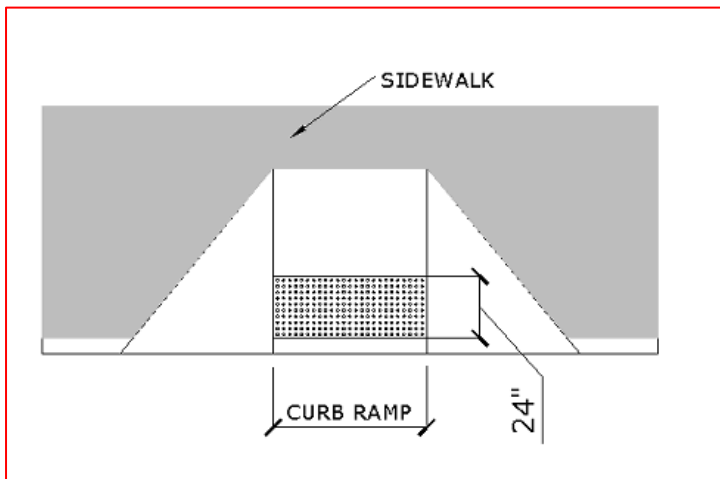
## Turning Radius Elements For Bus Loading Zones



**Curb ramps** - The following ADA compliant layouts offer a variety of curb ramps which might be constructed by either C-TRAN as part of a particular project,

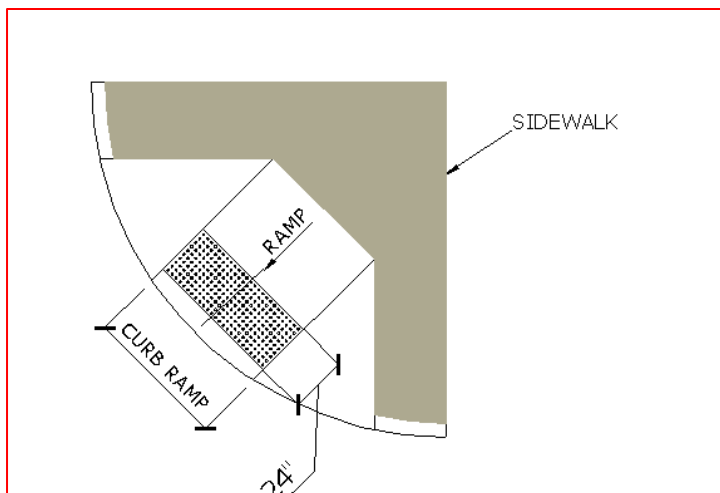
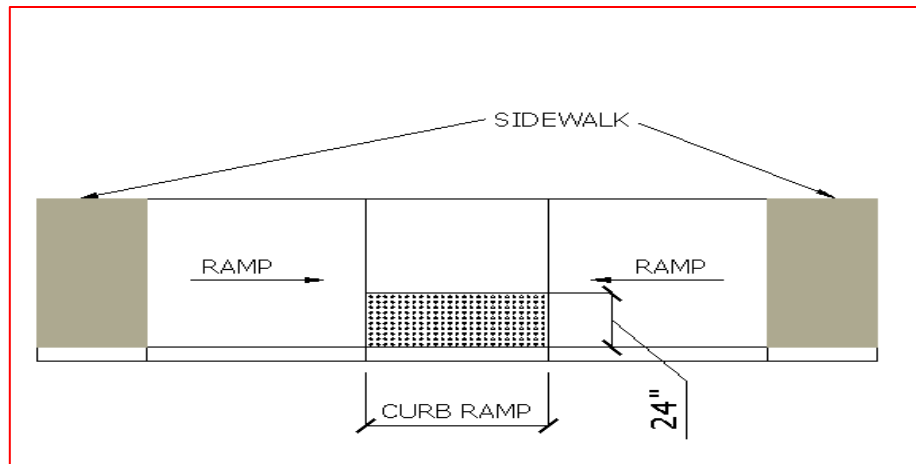
incorporated into a private development, or integrated into a roadway construction project. It is important to note that current ADA language is stipulating detectable warnings for each circumstance.

**Detectable Warnings** - Curb ramps at medians and refuge islands, and locations where medians and refuge islands are cut through level with the street at crosswalks, shall have *detectable warnings* complying with Section X02.5.7.



*Illustrates 24" deep detectable edge warning located near the street of the curb ramp. Otherwise all specifications are WSDOT Compliant*

Transition Ramp with Detectable Warning



Detectable Warning at Blended Curb

### **Detectable Paving**

In conjunction with the above schematics, a description of detectable paving shall be located for a length of 10 feet for the entire width of the sidewalk at the end of curvature of the passenger loading pad on both ends. Detectable paving shall be made of high contrast material, a minimum of 70 percent, to assist the visually impaired in recognizing the bus stop zone. Detectable paving shall be sloped with the sidewalk not to exceed 2 percent cross slope or 5 percent longitudinal slope. The interface between the sidewalk surface and the detectable paving shall be flush with no more than 1/4 inch vertical rise or gap. Contraction joints shall be provided at paving interface and as required by the manufacturer's specifications. All detectable paving surfaces shall be stable, firm and slip resistant and be constructed in accordance with the Washington DOT Standard Specifications for Construction of Roads and Bridges. Post-consumer products such as recycled lumber laid as decking or recycled select granular rubber safety surfaces are recommended. A textured and/or colored concrete finish is acceptable if it does not replicate, imitate, or match ADA warning pavements utilized at sidewalk/roadway interfaces. A random pattern is suggested to avoid possible confusion. All color pigments shall be permanent and integral to the material utilized. Asphalted paving is also acceptable (*Sources USDOT FTA Guidelines*).

### **Warning Pavement**

ADA compliant warning pavement shall be provided for a minimum width of 3 feet 6 inches for the entire length of all sidewalk or pedestrian circulation or waiting area interfacing vehicular travel ways if no curb and gutter or other form of barrier is provided. Warning pavement shall be sloped with the sidewalk and passenger-loading pad should not exceed 2 percent cross slope or 5 percent longitudinal slope. The interface between the sidewalk surface and road surface and the warning paving shall be flush with no more than 1/4 inch vertical rise or gap. Contraction joints shall be provided at paving interfaces and as required by the Washington DOT Standard Specifications. All warning pavement surfaces shall be stable, firm and slip resistant and be constructed in accordance with the Washington DOT Standard Specification for Construction of Roads and Bridges (*Sources USDOT FTA Guidelines*).

## **Technical Specification for Trash Receptacles**

All trash receptacles shall be vandal proof, impact and scratch resistant, weather and fade resistant, rot resistant, insect and fungus resistant and self-extinguishing. C-TRAN currently uses two major variations on trash receptacles. Larger concrete based trash cans are used in high traffic areas such as transit centers while standard high impact smaller versions are used for sheltered locations.

All receptacles shall have a non-corrosive, rigid removable and replaceable liner with a minimum 22 gallon capacity. Polyethylene plastic, stainless steel, or



aluminum is recommended. All receptacles shall have a rigid, removable lid with a minimum of a 10 inch opening in a flush, pitch-in or funnel style. Recycling sorting style openings and containers are encouraged for the separation of trash and cans. A polyethylene plastic, spun steel or recycled aluminum are recommended for receptacle lids. The lid shall be affixed to the container with hinges or an equivalent system and shall be locking. All receptacles shall be keyed alike. All receptacles shall have drainage holes in the base of the container. Any logo or plaque shall be flush mounted and bolted in place. Color shall be integral to material component, or approved equal. All fasteners shall be stainless steel or plated and self-locking or hidden to deter unwanted removal.

All trash receptacles shall be affixed to the shelter facilities by permanent embedment, surface plate, or gull wing attachment, according to manufacture's specifications. All trash receptacles shall be located on a hard paved surface. No portion of the trash receptacle shall extend into or onto lawn, grass, planted or soil surfaces. One trash receptacle shall be provided. The trash receptacle shall be positioned to allow for the continuation of an unobstructed sidewalk of at least 3 feet wide. Additional trash receptacles or larger capacity receptacles may be required, dependent on the bus stop type and/or the anticipated amount of trash.

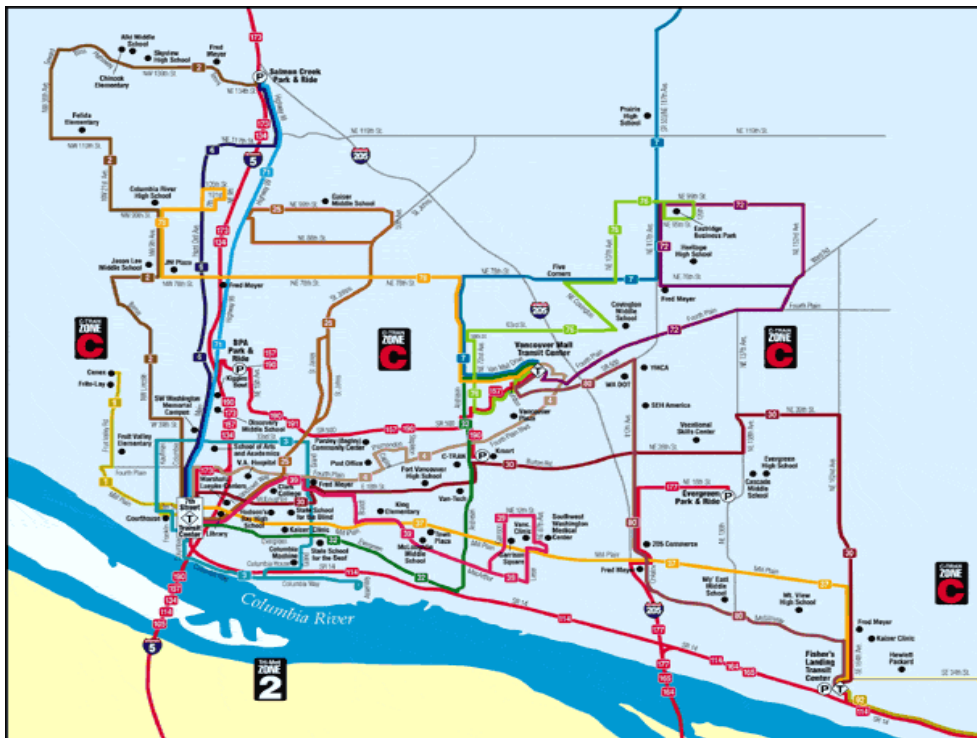
# Technical Specifications for Kiosks

All large kiosks will be located at major transit centers and will be located a minimum of 4 feet from the back of curb or feet from the edge of pavement when no curb and gutter are provided. Signs may be mounted on the bus shelter.

All route information signs shall be designed and constructed for exterior use. All signs, sign cases, and components shall be shatter proof, scratch resistant, replaceable, self extinguishing, vandal resistant and resistant against UV and weather degradation. All sign materials shall be corrosion, rust and rotting resistant and resist discoloration.

Small kiosks or route information signs shall be designed to facilitate information replacement and updating. All route information signs shall provide a transparent, shatterproof, impact and scratch resistant cover and protection for the information. All fasteners shall be concealed to deter vandalism.

## System Maps are displayed at Major Transit Centers with Schedule Information



route  
1

### Fruit Valley

#### Departure times to Frito-Lay

##### WEEKDAYS

6:05am	12:15pm
6:45	12:45
7:15	1:15
7:45	1:45
8:15	2:15
8:45	2:45
9:15	3:15
9:45	3:45
10:15	4:15
10:45	4:45
11:15	5:15
11:45	5:45
	6:15
	6:45
	7:15
	7:45
	8:15
	8:45

##### SATURDAY

7:45am	12:15pm
8:15	12:45
8:45	1:15
9:15	1:45
9:45	2:15
10:15	2:45
10:45	3:15
11:15	3:45
11:45	4:15
	4:45
	5:15
	5:45
	6:15
	6:45
	7:15
	7:45

##### SUNDAY/HOLIDAY

8:45am	12:15pm
9:15	12:45
9:45	1:15
10:15	1:45
10:45	2:15
11:15	2:45
11:45	3:15
	3:45
	4:15
	4:45
	5:15
	5:45

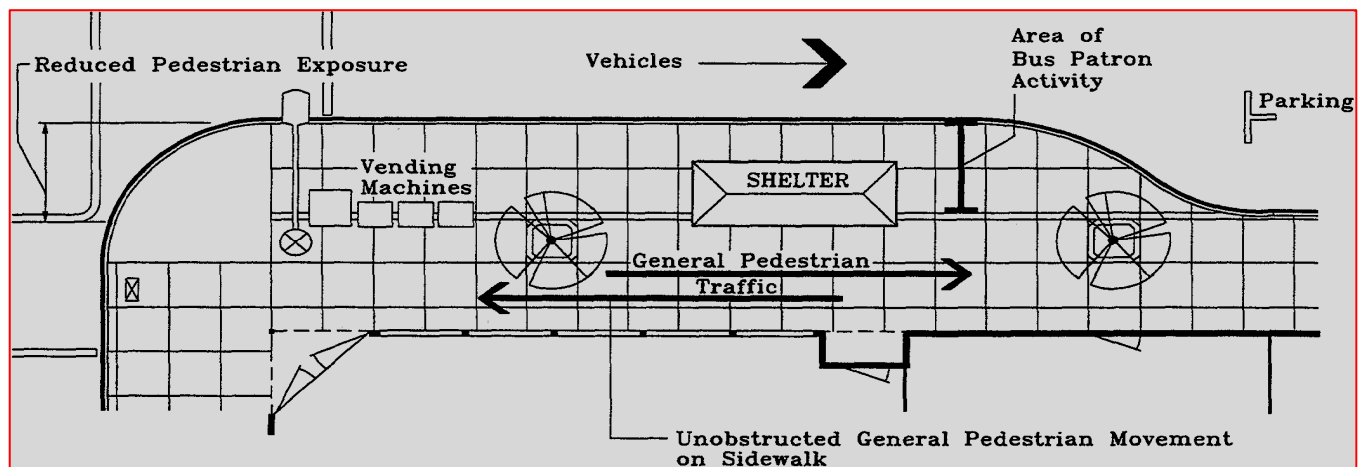
Bold times are PM runs.

All schedules are subject to slight variations due to weather, construction, traffic delays or heavy passenger loads. Thank you for your patience.

Customer Service:  
(360) 695-0123

Web Site:  
[www.c-tran.com](http://www.c-tran.com)





This illustration depicts a deployment of non-transit amenities (i.e. vending machines) in an unobstructed alignment with an existing shelter to allow for good pedestrian movements.

## Technical Specifications for Non-C-TRAN Amenities

The technical specifications for amenities outside the direct control of the transit agency are a highly esoteric and specialized exercise. Telephones are often pole mounted while others are self-contained booths. Vending machines can be built into buildings (such as ATM machines) for security purposes or deliberately obstructive (such as newspaper stands) to help promote the advertising value of the device. Lighting is often dictated by specific roadway covenants or façade improvement districts. Some lighting has even been explored directly by the C-TRAN in the form of solar powered shelters.

Examples of external amenities might include:

- a) Telephones
- b) Street Lighting
- c) Newspaper Racks
- d) Vending Machines
- e) Espresso Stands, Concession Carts or Food Vendors

Generally, the guidelines suggested here depict a common sense approach to dealing with issues of safety, customer conveniences and effective pedestrian movement. Moreover, suggested in these guidelines are direct partnerships with the agencies responsible for their installation and upkeep.