

Pedestrian Safety Task Force, July 21st, 2015

Bus Stop Placement Criteria

The past...

- No criteria
- Little to no planning or design
- One size fits all approach
- Not data driven





August 2014

Criteria for Bus Stops

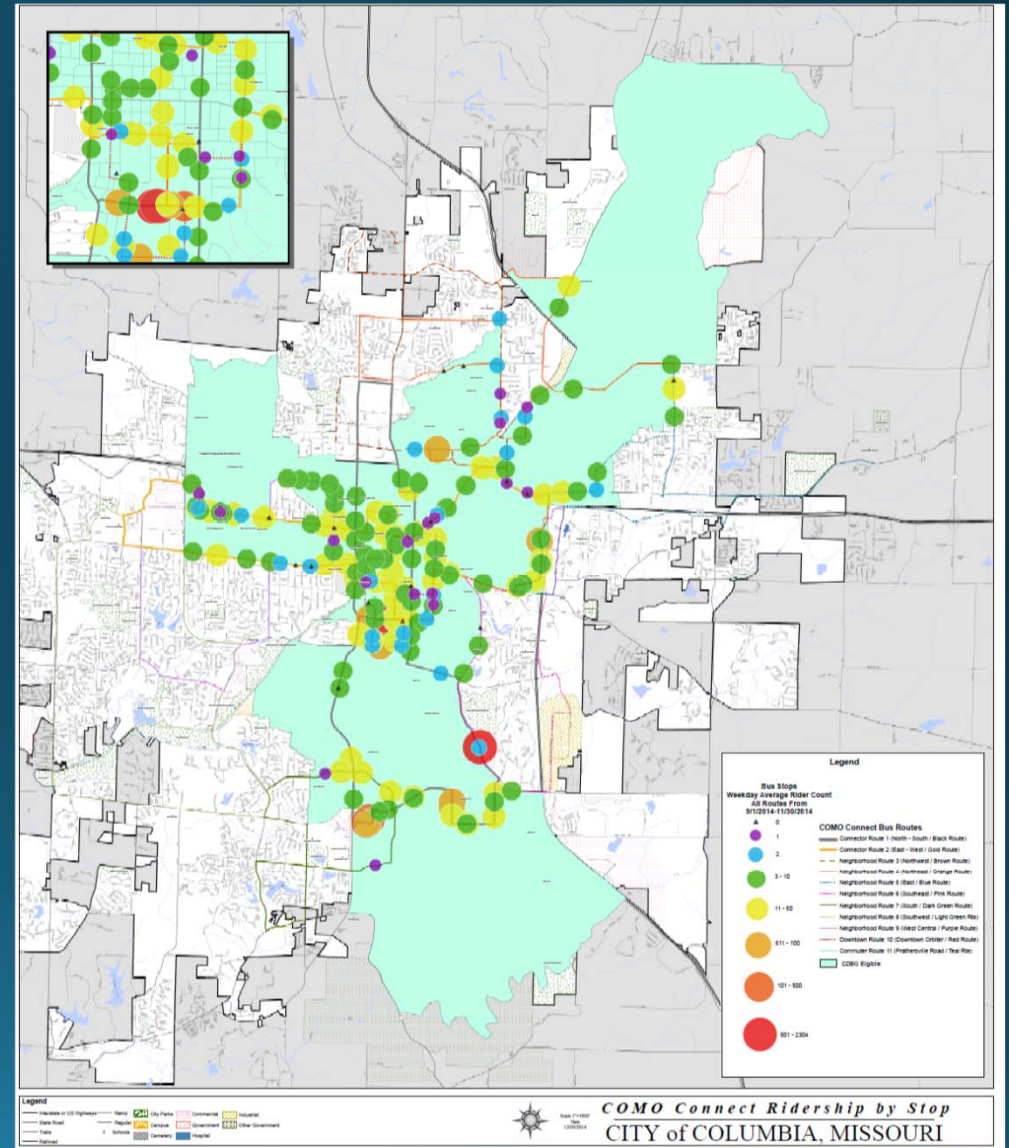
Safety

- Street lighting
- Boarding & alighting area
- Sidewalk access
- Near light-controlled intersections or near crosswalks
- Bus safety / traffic issues

Access

- Near high frequency destinations
- ADA accessible
- Sidewalk access
- At or near intersections or street corners for better access in inclement weather
- Bus accessibility / operations

Stop Ranking Reports and Heat Maps



New Criteria for Bus Stops

Safety

- Street lighting
- Boarding & alighting area
- Sidewalk access
- Near light controlled intersections or near crosswalks
- Bus safety / Traffic issues

Access

- Near high frequency destinations
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FTA Guidance

Released this Spring

TCRP SYNTHESIS 117

Better On-Street Bus Stops



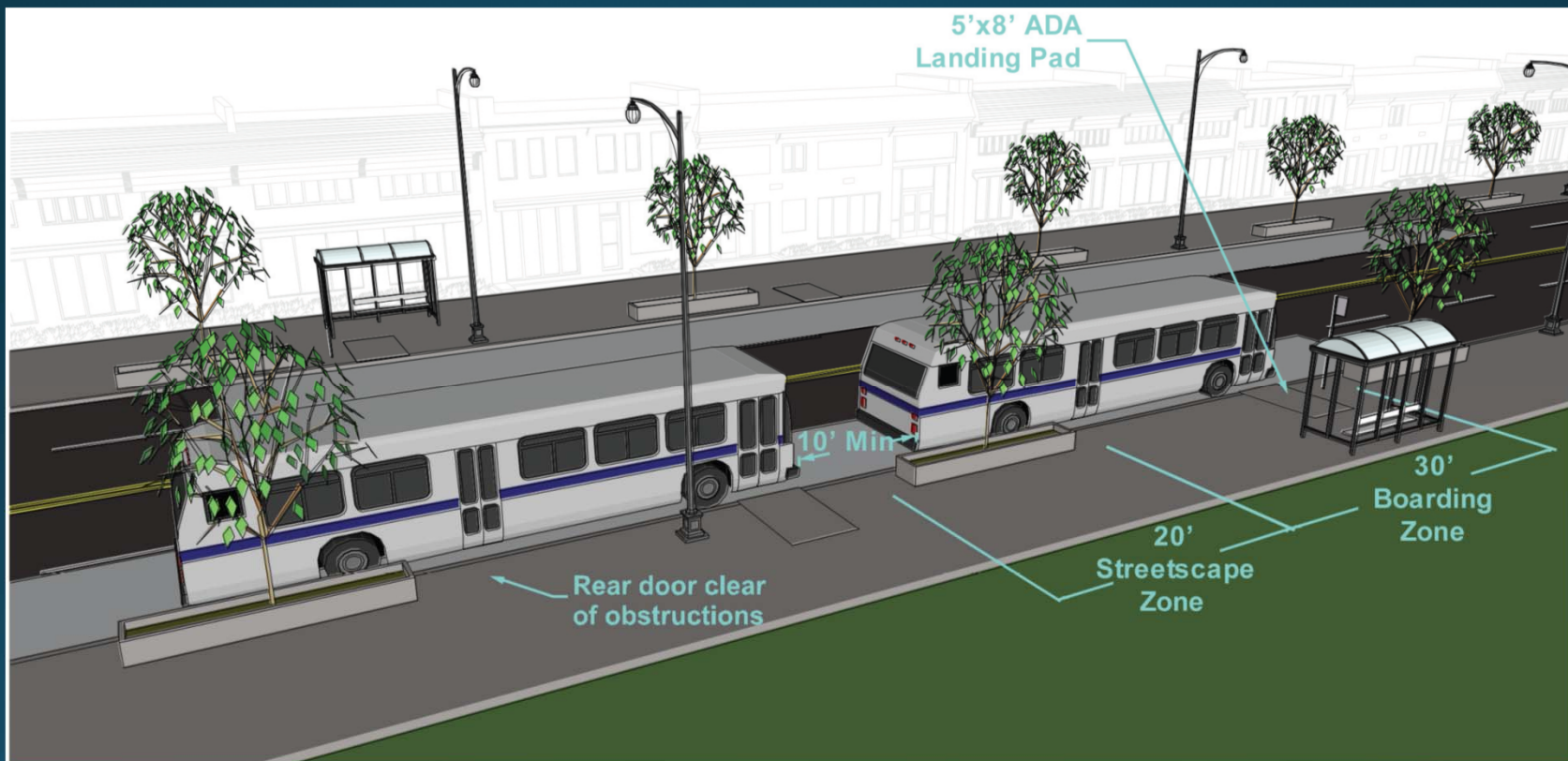
A Synthesis of Transit Practice

TRANSPORTATION RESEARCH BOARD
OF THE NATIONAL ACADEMIES

TRANSIT
COOPERATIVE
RESEARCH
PROGRAM

Sponsored by
the Federal
Transit Administration

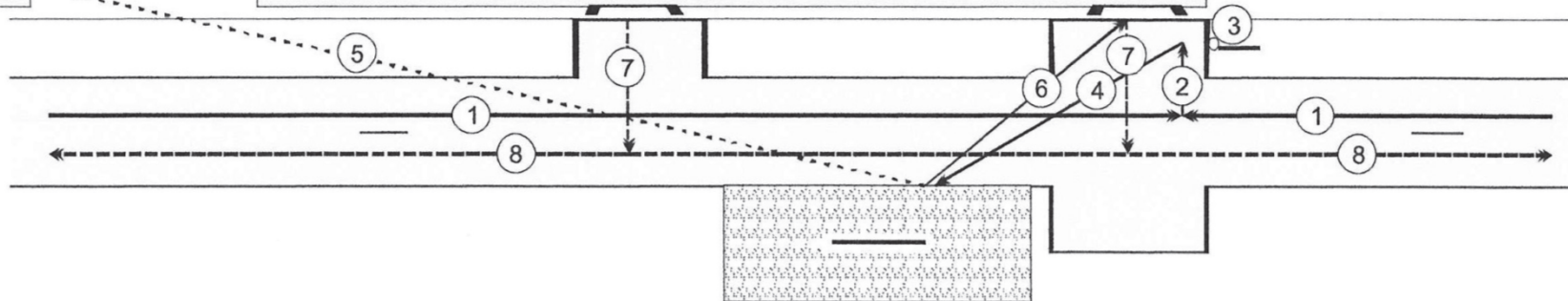
FTA Guidance



FTA Guidance

Arriving Bus

Stopped Bus



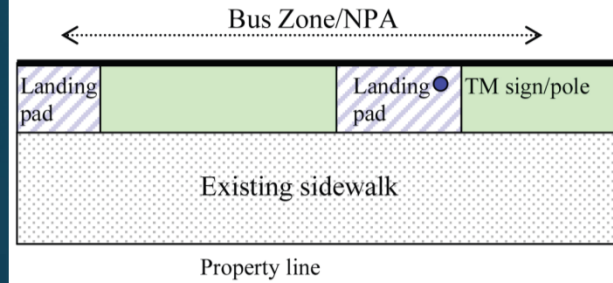
Movements/Activities of Bus Passenger at Bus Stop

- | | |
|---|---------------------------------|
| ① Approaching bus stop | ⑤ Receiving cue of arriving bus |
| ② Locating stop | ⑥ Preparing to board bus |
| ③ Confirming stop/obtaining information | ⑦ Loading / Unloading |
| ④ Accessing shelter or bench | ⑧ Leaving bus stop |

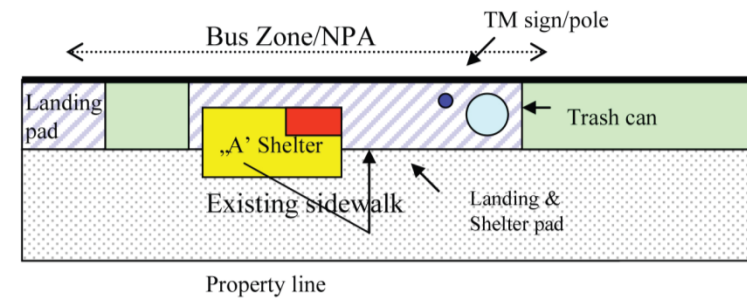
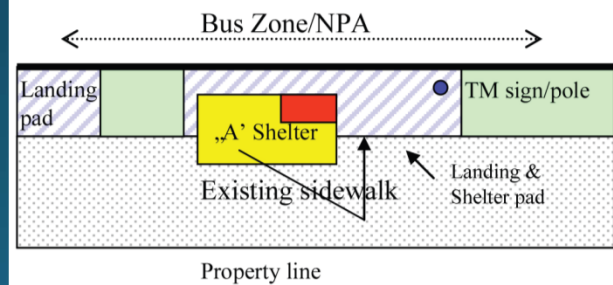
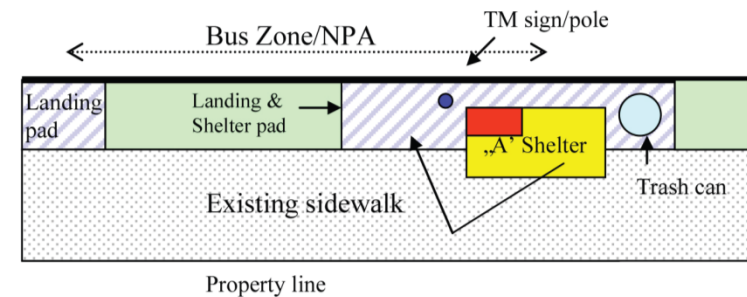
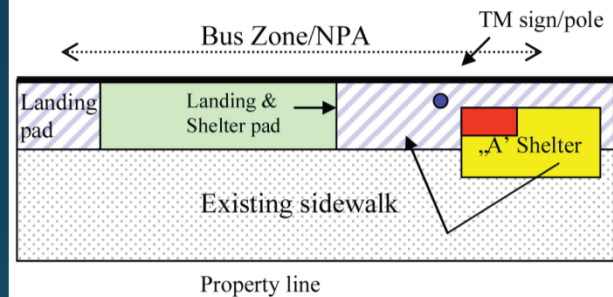
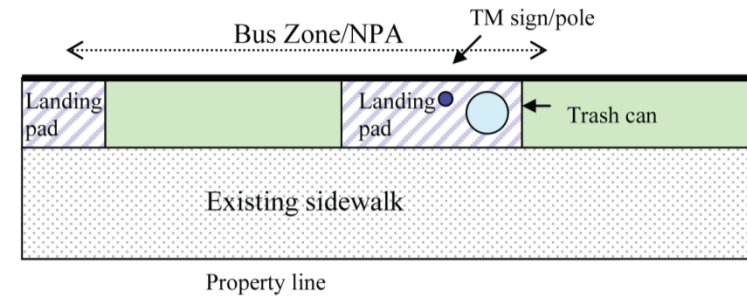
FTA Guidance

Bus stop design: Sidewalks with furnishing zones

Basic



Expanded

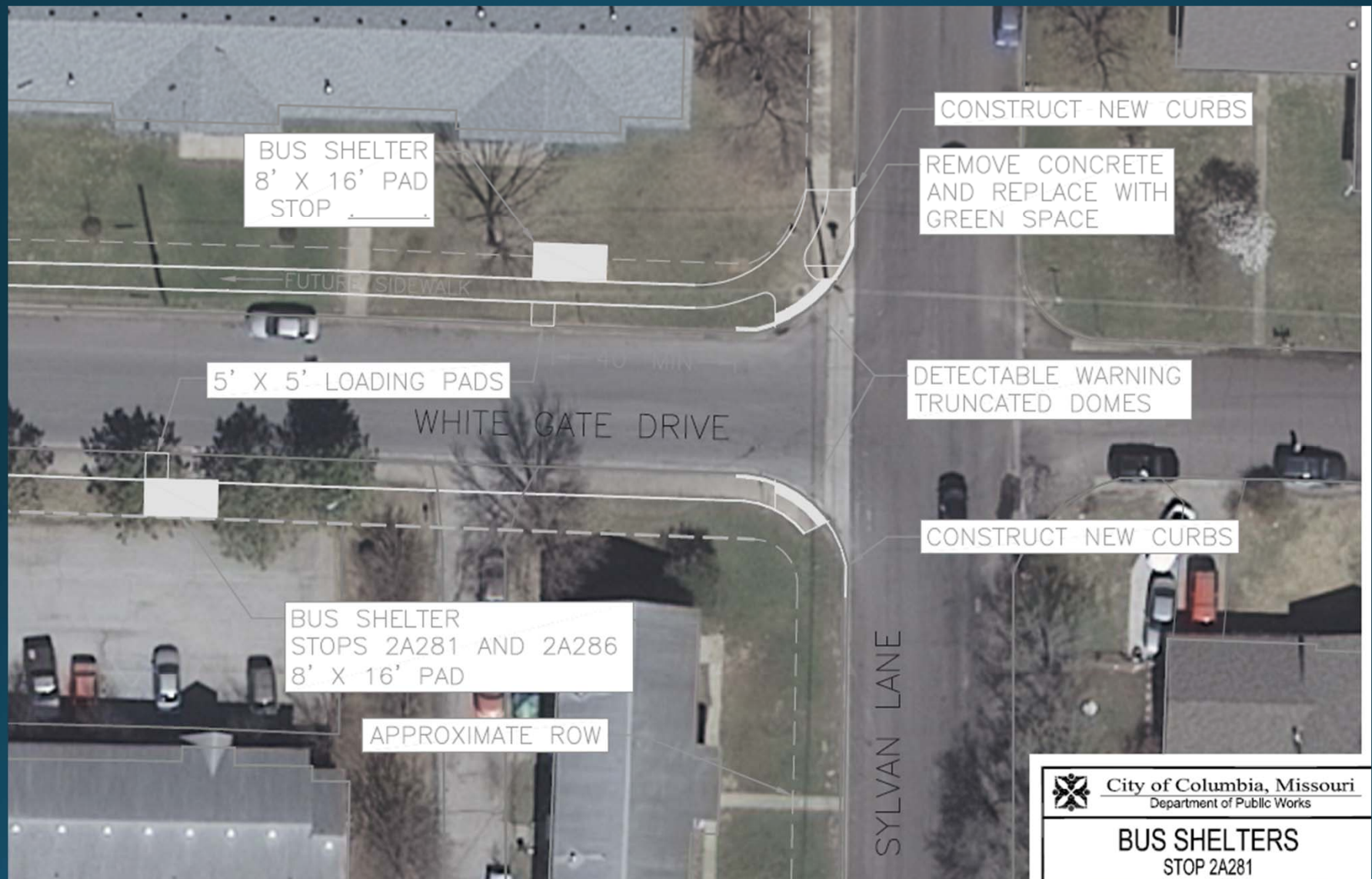


Challenges

- Funding
- Sidewalks access Citywide
- Right of Way
- Stability
- Safety vs. Access balance

Improvements





New Shelter Designs



THE FAB COLLAB
RJ BALDWIN, CHASE JOHNSON,
DUY TRAN + LINDSAY WEBB
MU ARCH 514123

CONCEPT

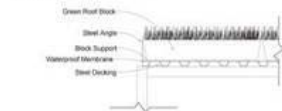
The Fab Collab iteration of the Columbia Transit System bus stop redesign is based on versatility, modularity, and sustainability. With aesthetics catching the eye of riders and art aficionados alike, the design solution will put a new face on the city's public transportation system. A living art gallery displaying Columbia's local artists will be featured at every stop.

GREEN INITIATIVES

The planned overhaul of the current Columbia Transit System bus shelters is backed by green design initiatives and sustainable technologies. The modularity of the bus shelter design is a cost effective approach to sustainable design. All exterior panels are based on a 4'x8' template and are all fastened to one another and the underlying structure by glass friction clamps. All panels are interchangeable allowing for a customizable shelter layout. Various works of art can be displayed on each section and if damaged, the repair process is as simple as unfastening and replacing them.

ENERGY: The consideration of a more efficient approach to saving electricity was acknowledged by the introduction of solar panels into our design solution. Photovoltaics will be located on a dual axis rotating panel located above the exterior bike storage area. Each set of solar panels will be site-specifically installed to maximize solar gain for each bus stop location. This system will be the source of power for the interior LED tube lighting for night use.

WATER: Sustainability is capitalized on our green roof system. Two thirds of the rooftop will be composed of green roof blocks to collect a large amount of rainwater and any runoff from the three portions of the roof, including the backwash sloping canopy at top, will be collected by a gutter system and then displaced among the surrounding site.



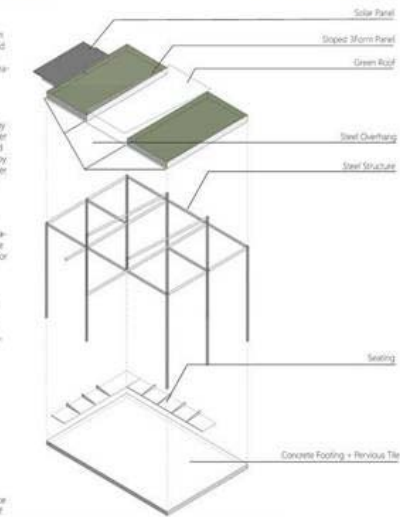
INDOOR AIR QUALITY: Circulation will be controlled by the open entry space up front and cross ventilation will be governed by perforated kick plates at the base of all transparent panels and through the open canopy at the rooftop.

COST ESTIMATE

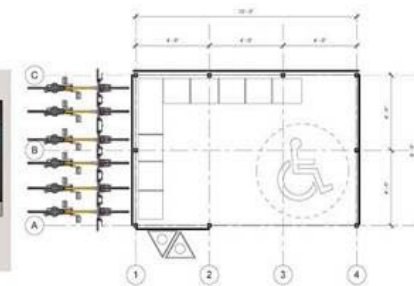
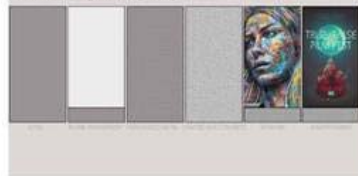
Item	Manufacturer	Quantity	Price	Total	Location
8' x 12' Steel Decking (20 gal)	New Dimension Building Systems	1	\$200	\$200	Travis, MO
7' x 12' Steel Deck	Steel Deck	4	\$50	\$200	Travis, MO
2' x 12' x 12' Glass Clamps	Steel Deck	1	\$20	\$20	Westwood, MO
4' x 8' Glass Aluminum Seal	Steel Deck	8	\$10	\$80	Travis, MO
8' x 12' Steel Deck Panel	Steel Deck	4	\$50	\$200	Travis, MO
10' x 12' Steel Deck Panel	Steel Deck	1	\$100	\$100	Travis, MO
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2' x 12' x 12' Glass Clamps	Steel Deck	1	\$20	\$20	Westwood, MO
4' x 8' Glass Aluminum Seal	Steel Deck	8	\$10	\$80	Travis, MO
8' x 12' Steel Deck Panel	Steel Deck	4	\$50	\$200	Travis, MO
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MANUFACTURERS



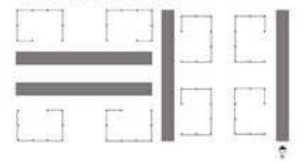
PANEL OPTIONS



CONNECTION DETAILS



ORIENTATIONS



New Shelter Designs



New Shelter Designs



Bus Stop Viewer

<http://intra-test.columbia.mo.gov/gisdev/comoconnectviewer/>

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